
Meridian 1 Options 21 through 81C

Fault Clearing Guide

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About this guide

Who should use this guide

This guide is intended for use by on-site technicians to clear faults on Meridian 1 Options 21 through 81.

How to use this guide

To use this guide, comply with the following steps:

1. Refer to the *Table of Contents*.
2. Locate the chapter *Start here to find faults*.
3. Follow the *Basic system fault finding* flow chart.

If the system develops a fault, the system will issue a message mnemonic that tells you what is wrong. For example **BSD0815**.

This guide is arranged so you can respond to system messages.

Refer to the *X11 System Messages Guide* (553-3001-411) for messages not included in this guide.

The use of *italics* in this guide

Italics are used to indicate a title.

Italic titles that contain capital letters are the exact titles. For example: *Automatic Call Distribution reference guide*

Italic titles that do not contain capital letters are generic titles. For example: *administration input/output guide*

In some cases it is not possible to exactly match the title of a referred Nortel Networks technical publication (NTP). For example the *Software input/output guide* NTP, the *X11 input /output guide* NTP, and the *DATA ADMINISTRATION INPUT/OUTPUT REFERENCE* NTP contain similar material but have different titles depending on the release. These NTPs are referred by the generic title *administration input/output guide*.

How the chapters of this guide work

Table of Contents

The *Table of Contents* is very compact as it lists only the chapter headings, in alphabetical order. The chapter heading begins with a message mnemonic. This arrangement allows you to quickly locate the chapters that match the system message.

Chapter table of contents

Chapters that contain many sections have a mini table of contents at the beginning of the chapter. The mini table of contents is called *In this chapter*. *In this chapter* is included so you do not have to return to the *Table of Contents* to locate a section within the chapter. This arrangement also keeps the *Table of Contents* compact and easy to use.

Header mnemonics

Large type size chapter mnemonics are included in the header at the top of the page. This chapter does not have a mnemonic. Therefore, all you see in this header is the page number and *About this guide*. The large type mnemonic is included for those of you who like to thumb through the pages to locate the chapter you need.

Message description and actions

Most of the system messages are mnemonic codes. Each mnemonic code has its own chapter. Every mnemonic code has a message description and an action. For example:

NPR000 LD 32 program identifier.

ACTION: The NPR program is loaded and ready for you to enter commands.

The actions are grouped into four broad classes, as follows.

- ◆ changing hardware components
- ◆ changing the response to administration programming
- ◆ contacting your technical support group
- ◆ information only, no action required

Chapter structure

Certain mnemonic messages indicate card or hardware faults. For example **IOD0060**. These chapters contain the following:

- ◆ a description of the card
- ◆ a graphic representation of the card
- ◆ a faceplate hexadecimal display description and action, if applicable
- ◆ the overlay load (LD) used to test the card
- ◆ messages pertaining to the card

All the information about the card is located in one area within the chapter.

Card faceplate hexadecimal displays

Card faceplate hexadecimal displays are found by locating the card name in the “Index of Cards” on page 11. The descriptions and actions for the display follows the card description.

How commands are represented

The overlay load (LD) command design allows you to scan the commands without reading the description. If you need to read it, the complete description is located to the right of the command.

The commands used to interact with each card are grouped together. Each group of commands are located after the description of the card.

Diagnostic column layout

The title bar, depicted below, appears at the top of each page containing diagnostic commands:

PE unit commands		
Command	Description	Release

The following explains the meaning of each heading in the title bar.

Command - This column shows the format of the input keyed on a DTE or telephone.

Description - This column explains the following:

- ◆ how the system components react to commands
- ◆ the structure of the lengthy output formats
- ◆ special instructions

Release - Release indicates the software package or machine type and earliest software release needed to use this command.

Commands are grouped according to the activity to be performed on a given entity (hardware, customer, route and so on). For example in LD 32 the commands STAT l s c u, DISU l s c u, and ENLU l s c u, are under the activity header *PE unit commands* (the black bar above the Command Description Release bar in this example).

The commands are in the order of use, as follows:

- ◆ status
- ◆ disable
- ◆ enable
- ◆ test, list or print

How TTY entries and print outs are represented

A system printout on a TTY is represented in this guide by Courier Bold font, as follows:

TIM061 09:00 9/3/1995 CPU0

An entry you type on the TTY keyboard is represented in this guide by Courier font, as follows:

STAT 10 0 5 14

Icons, precautionary messages, and flowchart symbols

These symbols and icons are used in the guide.

Icons and precautionary messages



CAUTION

This symbol alerts you to the risk of a service interruption.



WARNING

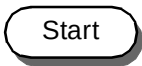
This symbol alerts you to the risk of causing electrostatic damage to components.

**DANGER**

This symbol alerts you to the risk of personal injury or death caused by electric shock.

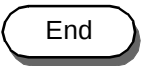
Flowchart symbols

This guide uses CCITT standard flowchart symbols.



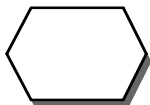
Start

Every flowchart begins with this symbol.

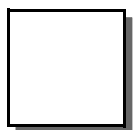


End

This symbol appears at the end of a pathway within a flowchart.



This symbol contains text explaining what you have to decide.



This symbol contains text explaining an action that you should take or information that you should know.

Terminology

Terminology is not explained within the text where it appears. Terminology is explained in the last chapter of this guide, *Terms and abbreviations*. This arrangement allows you to glean the information without pausing to read an explanation you may already understand.

If you have any suggestions for additions to this chapter, or this guide, please let us know.

Fax to: Terminology,

Dept. C555,

Nortel Networks

506-633-7314

Language standards and translations

This document is written to North American English standards. For versions of this document in other than North American English, please check with your supplier or with Nortel Networks. 

You should know this

In this chapter

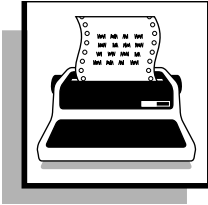
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Communicating with the Meridian 1

System terminal

You can exchange information within the systems through system terminals and maintenance telephones.



Communication with the Meridian 1 is accomplished by using a RS232 Data Terminal Equipment (DTE), or TTY as they are commonly called, to access the CPU. A DTE device can operate in the following two modes:

- ◆ receiving status and error messages from the Meridian 1 CPU
- ◆ transmitting input commands via the keyboard to the CPU

How many DTE Devices can interact with the system?

Many devices can receive status and error messages from the system. The Multi User Log In feature allows up to three devices to input to the Meridian 1. Without the Multi User Log In feature, only one device at a time can input commands to the system. To determine if your system has Multi User Log In, use LD 22 PRT PKG to check if package MULT_USER 242 is included in the software.

System message outputs

All systems output coded messages. This guide, in the appropriate sections, explains the codes and any required action. The Option 51C, 61C and 81 outputs coded system messages similar to all other systems, except for the Core messages. These Core messages are output in plain language.

Data output speed

Without the *Enhanced (I/O) Buffering* feature, if the same data is sent to more than one port, the throughput of each port equals the speed of the slowest device. For example, if a traffic report prints on two ports, one configured for 9600 baud and the other for 300 baud, the effective throughput of both ports is 300 baud.

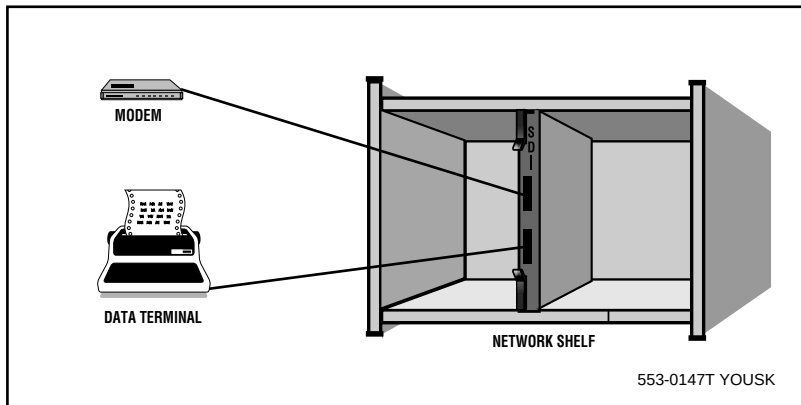
The Enhanced I/O Buffering feature for independent throughput provides the capability to output data at the speed set for each port, rather than the speed of the slowest port.

Local and remote access

You can access a Meridian 1 at the site or remotely. To gain local access to a Meridian 1, connect a system terminal directly to a Serial Data Interface (SDI) card. For remote access, a telephone line and a Data Circuit-Terminating Equipment (DCE), commonly called a modem, are required between the terminal and the SDI card.

A DTE or a DCE must remain permanently connected to an SDI port in order to provide a constant I/O interface to the system

The SDI card is located in a network shelf or module.



You should know this before you Log In

Log In allows you to access the overlay area. The overlay area is part of Meridian 1 memory and it is used to run maintenance and administration programs.

You can command the system to load one maintenance or administration program into the overlay area at a time.

To check for users in the overlay area, press the DTE keyboard return key. The system outputs one of the following:

- ◆ OVL111 nn TTY x shows an SDI device active in the overlay area
- ◆ OVL111 nn SL-1 shows a maintenance telephone active in the overlay area

- ◆ OVL111 nn IDLE/BKGD shows an idle system or a background routine running in the overlay area
- ◆ OVL000 shows that you activated Log In
- ◆ OVL111 nn FHWR shows the Localized Faulty Hardware Recovery feature is disabling faulty hardware. Unless it is absolutely necessary, do not log in until the FHWR is finished. If you do log in the FHWR will continue after you Log Out.

To Log In while another device is already active will cause that device to Log Out, unless the Multi User Log In feature is equipped.

There are two levels of password and either can be used to Log In.

- ◆ Level 1, a general password is used by service personnel.
- ◆ Level 2, an administrative password is used by the person responsible for the system, or the system administrator, to protect LD 17, the configuration record.

The initial or default password is 0000 or the system serial number, and should be changed subsequent to the first Log In.

Except for the Option 51C, 61C, 81 and 81C all keyboard inputs require uppercase text. The Option 51C, 61C, 81 and 81C will accept either uppercase or lowercase inputs.

If your systems has Limited Access Passwords (LAPW), and the Log In option LNAME_OPTION is changed from NO to YES, the Log In is as follows:

```
LOGI ADMIN1<cr>
```

```
PASS? XXXX
```

The ADMIN1 can be changed to a user name consisting of any combination of upper and lower case characters from four to sixteen with no spaces.

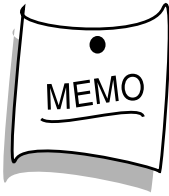
Use LD 22 PRT, PKG to print a list of your system packages. If you have package 164 LAPW, your system is equipped with Limited Access Passwords.

For more information, refer to the Fault Clearing Guide, Book 3 of 3, Management Applications.



How to Log In and Log Out

STEP	ACTION						
1	Log In. Type LOGI and then press the <i>return</i> or <i>enter</i> key. System responds by displaying PASS?						
2	Enter the password. Type level 1 or 2 password then press the <i>return</i> or <i>enter</i> key.						
3	The system's response. <table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>the system responds with > or OVL111 nn IDLE/BKGD</td><td>step 4</td></tr> <tr> <td>the system responds with anything else</td><td>negotiate with the other users for Log In rights</td></tr> </table>	If	Do	the system responds with > or OVL111 nn IDLE/BKGD	step 4	the system responds with anything else	negotiate with the other users for Log In rights
If	Do						
the system responds with > or OVL111 nn IDLE/BKGD	step 4						
the system responds with anything else	negotiate with the other users for Log In rights						
4	Select an overlay. Type LD XX then press the <i>return</i> or <i>enter</i> key. XX is the number of the program or load in which you want to work.						
5	Perform tasks When you are finished your tasks, do step 6.						
6	Stop the overlay. Type END or * * * * to end the program and reserve the overlay area for you for 20 minutes. * * * * aborts the program and the overlay area allowing the system to use the overlay area for daily routines. If you abort the current program when the system is running daily routines, you have to Log In again to use another program. If you END the current program you can use another program, without Logging In again.						
7	Log Out Type LOGO then press the <i>return</i> or <i>enter</i> key, to end the session. This allows the system to resume background routines.						
END							



Things to remember when you are in a load

- ◆ When the system prompts you for an input, you must press the return key before that input is processed.
- ◆ If the input is not correct, the system outputs an error code and reprompts you. The error codes are explained in this guide in the appropriate chapters. See the Table of Contents for chapter locations.
- ◆ The Line Mode Interface feature, allows the system to accept a backspace to correct an input. Without the Line Mode Interface feature, a backspace will cause a re-prompt.
- ◆ Maintenance diagnostic loads can be run coincidental with call processing.
- ◆ If you disable a line card, all the telephones connected to that card will be inoperative.

Meridian 1 Fault Management

Meridian 1 Fault Management Alarm Filtering, allows a technician to simplify and control messages from a Meridian 1 system and its Application Processors.

Meridian 1 Fault Management requires the package 243 Alarm Filtering. Use LD 22 PRT, PKG to printout your system packages.

Alarm filtering

Alarm definition

An alarm is an X11 system message.

A system alarm is a message that is not the direct result of operator actions. ERRxxx is an example of a system alarm.

An overlay alarm is a message that results from an operator's interaction with an overlay. SCHxxx is an example of an overlay alarm.

What is alarm filtering?

With alarm filtering, a terminal (DTE or DCE) can be configured to receive only those system messages that require intervention. Other system messages not filtered can be stored in the History File.

Alarm filtering is controlled by the contents of the Alarm Filter Table, configured in LD 17 and printed in LD 22. The Alarm Filter Table consists of the Alarm Filter List and the Exception List; a default table is provided. Messages that match an entry in the Alarm Filter List and *not* in the Exception List are sent to the system terminal.

For example, the Alarm Filter List might include CED+++, indicating that all CED messages are sent to the terminal. However, if the Exception List includes CED000, then CED000 is *not* sent to the terminal.

Filter limits

Only system alarms can be filtered. Traffic messages and overlay alarms, as well as SYSxxx and INIxxx messages, cannot be filtered and will always appear on maintenance terminals.

Number of entries in table

The maximum number of entries in the Alarm Filter Table is 50 alarms and 50 exceptions.

Output contents

Filtered output contains only the first line of the system message.

After a system reload

After a system reload, the system time and date must be reconfigured. If they are not, the time and date stamps for Meridian 1 alarms will be incorrect.

Output format for filtered alarms

All displayed system messages will appear in the following three-line format. The second and third lines are optional.

```
<severity><id><time><date><seq no><event><type>  
<TAB>Operator data:<operator data>  
<TAB>Expert data:<expert data>
```




Example of a formatted output

```
* SRPT0752 12/08/96 10:35:52 129012
   OPRDAT: 1 0 0
```

* = Alarm severity:

*** indicates Critical

** indicates Major

* indicates Minor

(blank) indicates None

SRPT= a unique identifier for the error, up to 10 characters

12/08/96 = date, DD/MM/YY

10:35:52 = time, HH:MM:SS

129012 = Sequence number of this alarm report

OPRDAT: = A 30-character field to help determine how to clear the fault

1 0 0 = loop 1, shelf 0, card 0

If there are no message parameters, OPRDAT will not be printed.

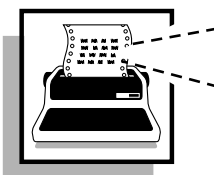
Implementation

Use LD17 to define alarm filters and exceptions on a per-system basis.

Print an alarm filter list and exception list

Use Overlay 22 PRT, ALARM.

A sample of the output produced appears below. The “MAJOR+” in the second line of the Alarm Filter Summary indicates that the alarm was escalated to a CRITICAL severity.



```
FMT_OUTPUT: ON
AF_STATUS: ON
```

LD17 – Configure Alarm and Exception Filter Data

Prompt	Response	Description
REQ	CHG	Change existing information.
TYPE	ALARM	Access the default Alarm Filter Table; system responds by displaying the current settings for the Formatted Output and Alarm Filter options as either ON or OFF: FMT_OUTPUT(ON or OFF) AF_STATUS(ON or OFF)
FMT_OUTPUT :	ON (OFF) <CR>	Enable Formatted Output printing. Disable Formatted Output printing. Retain current setting.
AF_STATUS :	ON (OFF) <CR>	Enable Alarm and Exception Filtering. Disable Alarm and Exception Filtering. Retain current setting.
A_FILTER :	NEW CHG OUT X <CR>	Create a new Alarm Filter entry. Change an existing entry. Remove an existing entry. Remove an existing entry. Exit Alarm Filter entry.
TRIGGER :	aa . . . aa <CR>	Enter string of up to 10 characters, containing the message mnemonic and the specific message number or the plus sign (+) to represent a range of numbers from 0 to 9. This identifies a message series to be displayed on a TTY with a LD 17 USER status of FIL. Retain the current value for this parameter.
SEVERITY :	Critical Major Minor (None) <CR>	Identify the severity of the alarm type to be filtered: Conditions that threaten operational status Serious but operational conditions Other error conditions Conditions with no severity rating Retain the current value for this parameter The severity level is used for output formatting and for potential escalation from Major to Critical.
— continued —		

LD17 – Configure Alarm and Exception Filter Data

Prompt	Response	Description
SUPPRESS:	0 – (5) – 12 7	Enter the number of times an alarm can occur within a 24-hour period before it is suppressed. 0 disables suppression. Using this threshold can reduce the number of redundant messages that appear at the terminal.
ESCALATE:	0 – (2) – 12 7	Enter the number of times a major alarm can occur before it is escalated to critical; 0 disables escalation.
A_FILTER:	<CR>	Exit Alarm Filter entry.
E_FILTER	NEW OUT X <CR>	Create a new Exception entry. Remove an existing entry. Remove an existing entry. Exit Exception entry.
TRIGGER:	aa . . . aa	Enter a string of up to 10 characters, containing the message mnemonic and the specific message number or the plus sign (+) to represent a range of numbers from 0 to 9. This identifies a message series not to be displayed on a TTY with a LD 17 USER status of FIL.
E_FILTER:	<CR>	Exit Exception entry.

ALARM FILTER SUMMARY

TRIGGER	SEVERITY	SUPPRESS	ESCALATE
DCH+++	MAJOR	005	001
ERR+++	MAJOR+	005	001
MSDL+++	MAJOR	005	001

EXCEPTION FILTER SUMMARY

TRIGGER
DCH100
OVL003

Printing an alarm summary

Use Overlay 02, prompt ASUM.

A sample of the output produced appears below:



```
FMT_OUTPUT: ON
AF_STATUS: ON
```

ALARM FILTER SUMMARY

TRIGGER	SEVERITY	COUNT
DCH+++	MAJOR+	020
ERR+++	MAJOR+	020
MSDL+++	CRITICAL	001

EXCEPTION FILTER SUMMARY

```
TRIGGER
ERR020
```

System Message Lookup Utility

The System Message Lookup Utility is available exclusively on Option 51C, 61C and 81 systems. This utility provides the ability to look up Meridian 1 alarm messages on-line. The utility accepts Meridian 1 alarm mnemonics and provides a descriptive explanation of the alarm. It supports Look Up Last Error and Look Up Any System Message.

Using the system message Lookup utility

At the > prompt, to activate Look Up Last Error, the user enters

```
err<cr>
```

The system looks up the last error and displays or prints the associated help text.

At the > prompt, to activate Look Up Any System Messages, the user enters

```
err ABCDxxxx<cr>
```

where ABCD is the message mnemonic and xxxx is the message identifier. The system looks up the specific error code and displays or prints the associated help text. If the system does not find the requested message, it issues the following message:

```
Unable to find help text for error: ABCDxxxx
```

If the message code entered is invalid (that is, it begins with a number; it has more than four alphabetic characters, or it contains special characters), the system issues the following message:

```
ABCDxxxx is not a valid error code
```

Each alarm has an associated counter that increments with each occurrence of the alarm and is reset as part of the daily routines. The Alarm Summary Report displays the status of these counters, which is an indication of the general stability of the Meridian 1 system.

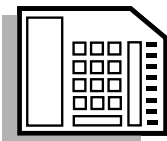
Exception filter list

The Exception Filter List is a list of specific alarm triggers.

TTY Output device

When a terminal is assigned with a USER type of FIL in Overlay 17, it receives filtered alarm output. In addition, if it can load overlays, the terminal receives the normal communications from the overlay, including any SCH messages. However, it does *not* receive MTC, BUG, and CSC messages.

Maintenance telephone



The types of telephones that can be maintenance sets

A Meridian 1 proprietary telephone can function as a maintenance telephone when you define its Class of Service as Maintenance Set Allowed (MTA) in the Multi-line Telephone 47 program (LD 11).

Why maintenance telephones are used

You can test the tone output of a Tone and Digit Switch by using a maintenance telephone to listen for an absence of the tone or its strength, clarity and frequency. You can check the voice path of a trunk with a maintenance telephone by dialing a trunk's TN to seize it and listen for the quality and strength of the returned dial tone. Both of the above can also be accomplished with a DTE or TTY; however, no matter how hard you press your ear to the DTE you cannot hear any tones.

Maintenance telephone inputs and outputs

The maintenance telephone can send input commands to the Meridian 1 and you can hear output tones from the maintenance telephone. If you want to see message responses from the system as a result of maintenance set inputs, a printer or DTE is required.

Overlay programs used with maintenance sets

A maintenance telephone allows you to send commands to the system through the following maintenance Overlay programs: LD 30, LD 32, LD 33, LD 34, LD 35, LD 36, LD 37, LD 38, LD 41, LD 42, LD 43, LD 45, LD 46, LD 60, LD 61, and LD 62.

Loads not accessible with maintenance sets

A maintenance telephone cannot access maintenance Overlays LD 31, LD 40, LD 48, LD 77, LD 92, and LD 96.

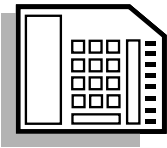
Entering commands on a maintenance set

To enter commands, press the keys on the maintenance telephone dial pad that correspond to the letters and numbers of the command. For example, to enter LD 42 *return*, key in 53#42##. The following table shows the translation from a DTE keyboard to a telephone dial pad.

Translation from keyboard to dial pad

Keyboard			Dial pad	
			1	1
A	B	C	2	2
D	E	F	3	3
G	H	I	4	4
J	K	L	5	5
M	N	O	6	6
P	R	S	7	7
T	U	V	8	8
W	X	Y	9	9
			0	0
			Space or #	#
			Return	##
			*	*
Note: There is no equivalent for Q or Z on a dial pad.				

Accessing an overlay by using a maintenance set



STEP	ACTION						
1	Start process. Press the prime DN key.						
2	Enable telephone as a maintenance set. Dial XXX91. xxx is the SPRE code. Use LD 21 to print CDB. Examine CDB for SPRE code.						
3	Check for busy tone. Dial ## <table><tr><th>If</th><th>Do</th></tr><tr><td>busy tone present</td><td>Dial * * * * to end this program and access the system Go to step 4</td></tr><tr><td>no busy tone is present</td><td>step 4</td></tr></table>	If	Do	busy tone present	Dial * * * * to end this program and access the system Go to step 4	no busy tone is present	step 4
If	Do						
busy tone present	Dial * * * * to end this program and access the system Go to step 4						
no busy tone is present	step 4						
4	Activate overlay program. Dial 53#XX##. xx represents the overlay program number.						
5	Perform overlay tasks Dial overlay input commands.						
6	Exit program and return telephone to the call mode Dial * * * * .						
							

Hardware maintenance tools

Hardware features help you perform maintenance tasks. These features or maintenance tools include the following:

- ◆ circuit card features that include card-level tests and status indicators
- ◆ CPU controls that allow control of common equipment functions
- ◆ system alarms that categorize the severity of a system fault
- ◆ system monitor indicators that identify power faults and temperature variations

Circuit-card faceplate features

Card test

A cardtest checks that a card is working correctly. Many cards perform a self-test upon power-up. When required you can force card-level tests through software commands.

Enable/disable switch

Most cards have a switch on the faceplate that enables or disables the hardware functionality of the card.

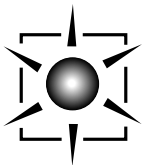
Whenever possible, before you remove a card, disable the software first using a maintenance overlay (LD xx), then disable the hardware by setting the enable/disable switch to “Dis”.

To hardware disable a card before you install it, set the switch to Dis. After the card is locked into position, set the switch to Enb, and then enable the software. To software disable and enable cards, refer to the procedures in *Software Maintenance Tools*.

Light Emitting Diode indicators

The card LED, regardless of shape, gives a visual indication of card or unit status as follows:

- ◆ green LED lit, indicates a card is operating normally
- ◆ green LED off, indicates a card is disabled or faulty



- ◆ red LED lit, indicates a card or unit is disabled or faulty, or no units are programmed in the data-base for this card
- ◆ red LED off, indicates a card is operating normally or no power is going to the card
- ◆ red LED lit on a dual processor system's Omega Interface card indicates the opposite processor is active
- ◆ red LED lit on a cabinet, indicates a power problem within the cabinet
- ◆ red LED lit on Option 81 Core to Network Interface (CNI) cards indicates the opposite processor is active.

Intelligent Peripheral Equipment (IPE) card LED

When an IPE card is inserted or cards containing a multiprocessing unit (MPU), the following occurs:

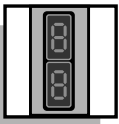
1. The card LED lights.
2. The card MPU does a self-test.
3. The LED flashes three times when self-test passes.
4. The LED remains lit until the card is configured.
5. The system CPU enables the card if a unit is programmed in the database.
6. The LED goes off.

If the LED operates in any other manner, such as continually flashing or remaining weakly lit, the card should be replaced.

When Option 51C, 61C and 81 common control cards are installed, a self-test runs. If the self-test completes successfully, the LED flashes three times then goes out.

Maintenance display code

Maintenance hexadecimal-code displays are located on the faceplate of some circuit cards. The Hex code explanations accompany the card descriptions. See the Index of Cards to locate the card descriptions.



Option 51C, 61C and 81 Maintenance display

The Option 51C, 61C and 81 maintenance display on the NT6D66 Call Processor (CP) Card shows two lines of information with up to 16 characters per line. The hexadecimal code and its definition are shown on the display. The following applies to the Option 51C, 61C and 81 display.

- ◆ each new code shown on a maintenance display overwrites the one before it
- ◆ all codes received on common-equipment displays are recorded; review them by printing the History File
- ◆ the 16 codes most recently displayed on a controller card stay in memory; review them and reset the counter through LD 30
- ◆ the 64 most recent displays on the Option 51C, 61C and 81 CP card stay in memory; review the displays on the active CP card through LD 135

CPU/IF Card faceplate controls

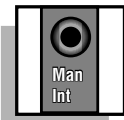
Switches and buttons on common equipment cards allow control of the CPU activity and the clearing of common equipment faults.

Manual Initialization button

Pressing the Manual Initialization (Man Int) button associated with the active CPU, will do the following:

1. The CPU will rebuild call dependent data in memory.
2. The CPU will test all common equipment and network type cards.
3. The CPU will enable any common equipment cards and network-type cards that were found disabled by the test; faulty cards remain disabled.
4. Common Equipment cards that cannot be enabled are listed in the initialize messages.

Established calls are unaffected. Calls in the signaling state such as off-hook and dialing, are aborted.



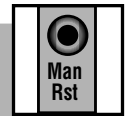


Normal/Maintenance switch

Dual-processor systems with CPU, IF or CP cards have a Norm/Maint switch on their faceplates. The Norm/Maint switch is in the Norm position when the system is operating normally. Switch to the Maint position for the following conditions:

- ◆ to force that processor to be the active one
- ◆ to keep the processors from switching when replacing common-equipment hardware on the inactive CPU
- ◆ to perform a parallel reload

Reload button



Rld or Man Rst buttons allow manual activation of the System Loader program. The System Loader automatically loads the system operating program from tape or diskette into the Random Access Memory (RAM). This process requires from two to 20 minutes to complete, during which time Call Processing stops. To reload on dual-processor systems, press both reload buttons at the same time.

Universal Equipment Module (UEM) Cover and card removal/installation

DANGER

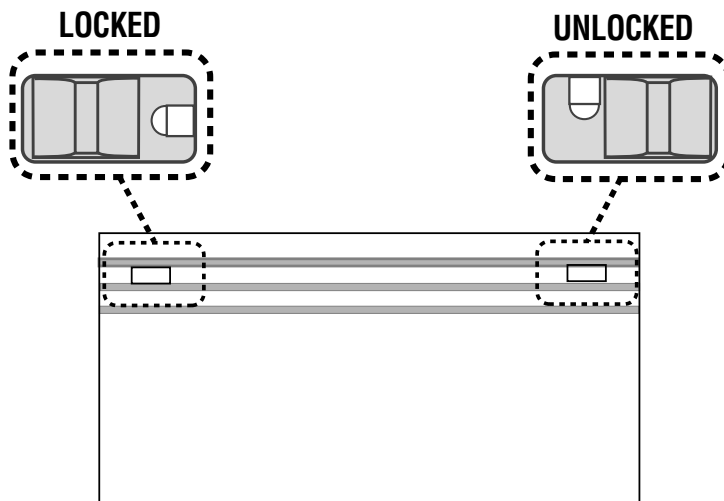


Module covers are not hinged. When removing a cover, do not let go of the cover as personal injury could result. Lift the cover away from the module and set it outside of the work area.

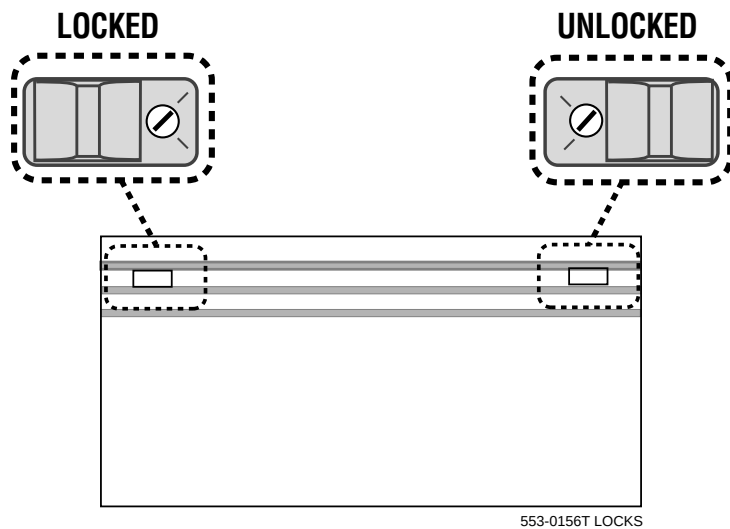
Removing a UEM Cover

To remove a module cover, perform the following steps.

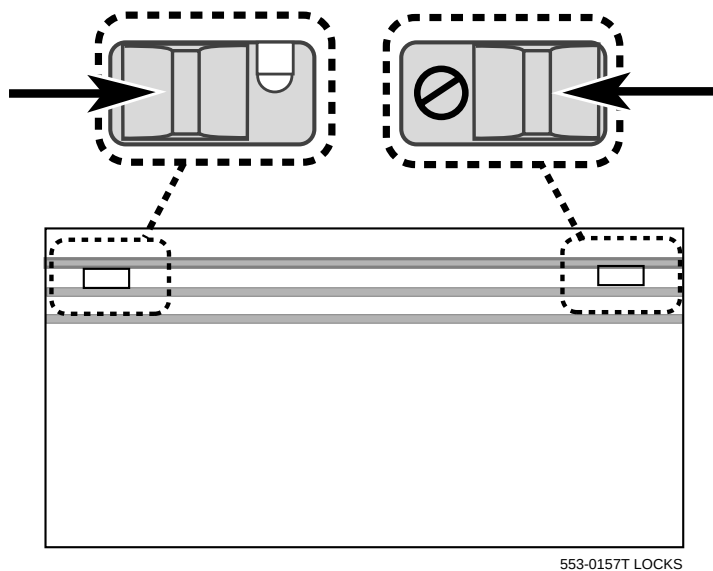
1. Using a flat blade screwdriver or coin, unlock cover locks.



553-0155T LOCKS



2. Push both latches toward the center of the cover and pull the cover toward you while lifting it away from the module.



Ensure that the lugs on the bottom of the UEM cover engage the slots in the module when installing a UEM cover. Push the top of the cover towards the module until the latches click into place.

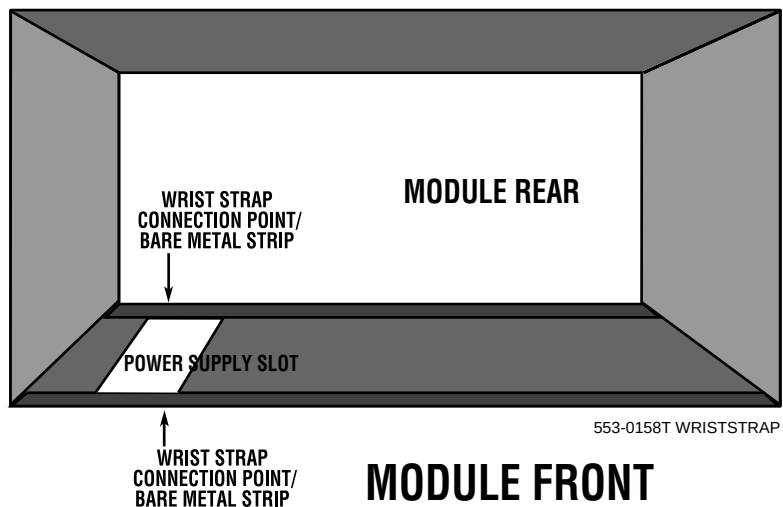
Using a wrist strap



WARNING

To avoid damage to circuit cards from static discharge, wear a properly connected antistatic wrist strap when you work on Meridian 1 equipment.

The following figure shows the recommended connection points for the wrist strap and the bare metal strips you should touch to discharge the static.



Handling circuit cards

Handle circuit cards as follows:

- ◆ Unpack or handle the cards away from electric motors, transformers, or similar machinery.
- ◆ Handle the cards by the edges only. Do not touch the contacts or components.
- ◆ Set cards on a protective antistatic bag. If an antistatic bag is not available, hold the card by the edges, locking levers, or set it in a card cage unseated from the backplane connectors.

- ◆ Store cards in protective packing. Do not stack cards on top of each other unless they are packaged.
- ◆ Keep cards installed in the system as much as possible to avoid dirty contacts and unnecessary wear.
- ◆ Store cards in a cool, dry, dust-free area.

Do this when you replace circuit cards

The following steps apply during the circuit-card replacement procedures.

1. Software-disable cards, if applicable, before they are removed.
2. Hardware-disable cards, whenever there is an enable/disable switch, before they are removed.
3. Hardware-enable cards, after they are inserted.
4. Software-enable cards after they are inserted to return them to service.

Keep in mind the following points:

- ◆ Turn off the circuit breaker or switch for a module power supply before the power supply is removed or inserted.
- ◆ In AC-powered systems, capacitors in the power supply must discharge. Wait five full minutes between turning off the circuit breaker and removing the power supply from the module.
- ◆ Return defective or heavily contaminated cards to a repair center. Do not try to repair or clean them.
- ◆ If the symptoms do not change after replacing a suspected faulty card, put the original card back.



Installation procedure

1. Open the protective carton and remove the circuit card from the antistatic bag. Return the antistatic bag to the carton and store it for future use.
2. Inspect the card components, faceplate, locking devices, and connectors for damage. If damaged, tag the card with a description of the problem and package it for return to a repair center.

3. Refer to the work order to determine the module and slot location for the card.
4. If there is an Enable/Disable (Enb/Dis) switch on the faceplate, set it to Dis.

**CAUTION**

Switches incorrectly set on common equipment circuit cards may cause a system failure.

5. Make sure that the switches or jumpers are set correctly.
6. If you are installing an NTND02 Misc/SDI/Peripheral Signaling (MSPS) Card, the Battery Pack Assembly must be attached as follows.
 - Position the battery pack on the component side of the MSPS card. From the back of the card, install the screws that secure the battery pack.
 - On the component side of the MSPS card, plug in the clip connector wired to the battery pack. Make sure the connector key is centered on J2.

Note that the battery will not be fully charged until 24 hours after installation in a powered system.

Circuit cards**DANGER**

Circuit cards may contain a lithium battery. There is a danger of explosion if the battery is incorrectly replaced. Dispose of the battery according to the manufacturer's instructions.

7. If you are installing one of the following cards, the QMM42 Security Data Cartridge must be attached.
 - NT6D63 I/O Processor (IOP) Card
 - QPC584 Mass Storage Interface (MSI) Card
 - QPC742 Floppy Disk Interface (FDI) Card

To install a data cartridge, plug it into the connectors on the component side of the host card and install the screw that secures the data cartridge.

The data cartridge and the system software diskettes have a label listing the feature packages, generic, release, issue and an ID number.

**CAUTION**

To avoid system failure, the ID number on the data cartridge must match the ID number of the system software.

8. If you are installing one of the following cards, the associated ROM card must be attached.
 - NTND01 Integrated CPU/Memory (ICM) Card
 - NTND31 ROM QPC579 CPU Function (FN) Card
 - NTND08 or QPC939 ROM
 - QPC687 CPU Card
 - QPC940 ROM

**WARNING**

When you install a ROM card, do not touch other components on the host card.

To install a ROM card, plug it into the connectors on the component side of the host card.

Note that for the NTND31 ROM Card, you must also install a screw and washer at each corner of the ROM card.

9. Squeeze the ends of the locking devices on the card and pull the tabs away from the latch posts and faceplate.
10. Insert the card into the card-aligning guides in the card cage. Gently push the card into the slot until you feel resistance. The tip of the locking device must be behind the edge of the card cage.

11. Lock the card into position by simultaneously pushing the ends of the locking devices against the faceplate.
12. If there is an enable/disable switch, set it to Enb.

Do not enable the switch on an NT8D04 Superloop Network Card or QPC414 Network Card until network-loop cables are installed.

System alarms

Attendant consoles display major and minor alarms.

Major alarms

A major alarm can only become active on attendant consoles if the consoles are cross-connected to an emergency transfer device. The conditions that trigger an emergency transfer are optional. Therefore the major-alarm display depends on the options chosen. The following is a list of emergency transfer conditions:

- ◆ call processing stopped due to a system reload
- ◆ loss of power without backup
- ◆ trip input with reserve battery
- ◆ loss of - 48V power supply
- ◆ loss of the 86V ringing generator
- ◆ high temperature shutdown
- ◆ transfer switch located on emergency transfer device is activated
- ◆ transfer switch located under the attendant console is activated

Minor alarms

Minor alarms are displayed on attendant consoles. The CPU activates the console minor alarm display by sending a message to the console. Minor alarms are triggered by inconsistencies in common equipment hardware and feature interactions. Due to the large number of features available with Meridian 1 systems, the minor alarms are almost always displayed. Minor alarms do not indicate specific faulty components or that an actual fault has occurred. The minor alarm can indicate that a system message may be present on a maintenance DTE. Monitoring system messages with DTE is a preferred method of fault detection, as the system message indicates a specific faulty area which then can be tested and resolved.

Remote alarms

A remote alarm is an extension of emergency-transfer function to another location. The Meridian 1 provides relay-contact closure across two remote-alarm lines. A monitoring site or test center can use this facility to generate alarm lights, bells or activate pocket pagers, indicating that an emergency transfer has occurred. The lights, bells and pocket pagers are not supplied with the Meridian 1.

Power and cooling monitors

System Monitor card

System Options 21, 21E, 51, 51C, 61, 61C, 71, and 81 are equipped with System Monitor cards which check the following:

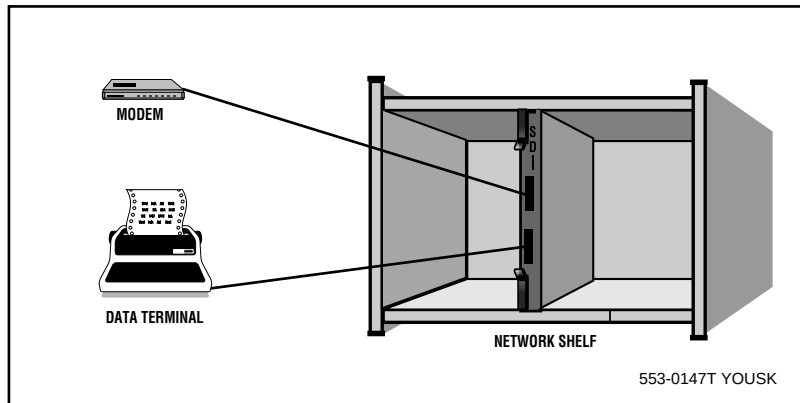
- ◆ column temperature
- ◆ cooling system status
- ◆ system voltage status
- ◆ controls line transfer states

Power Monitor card

Systems other than the Option series have a Power Monitor card, which generates a signal causing a message to appear on all SDI devices indicating a power problem. The Power Monitor card contains various LEDs indicating the specific power problem, fuse status, air flow status, temperature status and emergency transfer status.

Cabinet LED

Except for the SL-1S and ST, all systems have a LED at the top of the cabinet or a column which lights when there is a power problem.



Software maintenance tools

What are software programs?

All of the system software programs are assembled into two groups, resident and non-resident.

Resident programs

During system operation, certain programs reside in the system memory or RAM. These programs send messages to various TTYs when they detect faults. An example of resident programs are as follows:

- ◆ Bootstrap is used to load the system-loader program into RAM.
- ◆ System Loader is used to load the operating program from diskettes into RAM.
- ◆ Initialize is used to start call processing, rebuild part of memory and check for common-equipment faults.

- ◆ Workscheduler is used to determine what task is next and control all activities.
- ◆ Error Monitor is used to monitor call processing.
- ◆ Resident Trunk Diagnostic is used to monitor analog trunk calls.
- ◆ Overload Monitor is used to monitor excessive inputs from peripheral equipment.
- ◆ Traffic is used to monitor potential congestion problems.
- ◆ Overlay Loader is used to load the non-resident programs into the overlay area of memory.

Non-resident programs

During system operation, certain programs are loaded into the overlay area of the memory to be accessed by the workscheduler. These non-resident programs are commonly referred to as loads or overlays because a new program is overlaid on top of the old one. When loaded manually through the system terminal or maintenance telephone, these routines are used interactively with a command/response format. In this format, you enter a command that tells the system to perform a specific task. The system performs the task and sends system messages indicating the status or errors back to you. There are five basic types of resident programs, as follows:

- ◆ Service change routine is used to program the database.
- ◆ Print routines are used to generate system reports.
- ◆ Maintenance diagnostics are used to
 - disable, test, and enable specific equipment,
 - verify that a reported fault still needs to be cleared,
 - verify that a repair procedure has cleared a fault.
- ◆ Equipment data dump, updates changes to the customer data-base on diskettes.
- ◆ Software audit monitors the state of system software, and tries to clear software problems.

Non-resident programs are run concurrently with call processing and they can run continuously or on a scheduled basis.

Service change and print routines

The service change and print routines are listed in the administration input/output guide.

Maintenance diagnostics

Maintenance diagnostics are found in this guide. Application-specific diagnostics are located in the maintenance input/output guide.

Equipment datadump

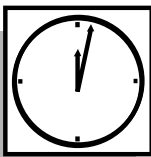
The equipment data dump routine information is located in the maintenance input/output guide.

Software audit

The software audit routine information is located in the maintenance input/output guide.

Background routines

Background routines are non-resident diagnostic programs that run along with call processing. Call processing takes precedence, or is in the foreground, and the diagnostic program is in the background. These run when no other program is loaded in the overlay area. The programs included in the background routine run repeatedly until there is another request to use the overlay area.



Daily routine overlay or midnight routines

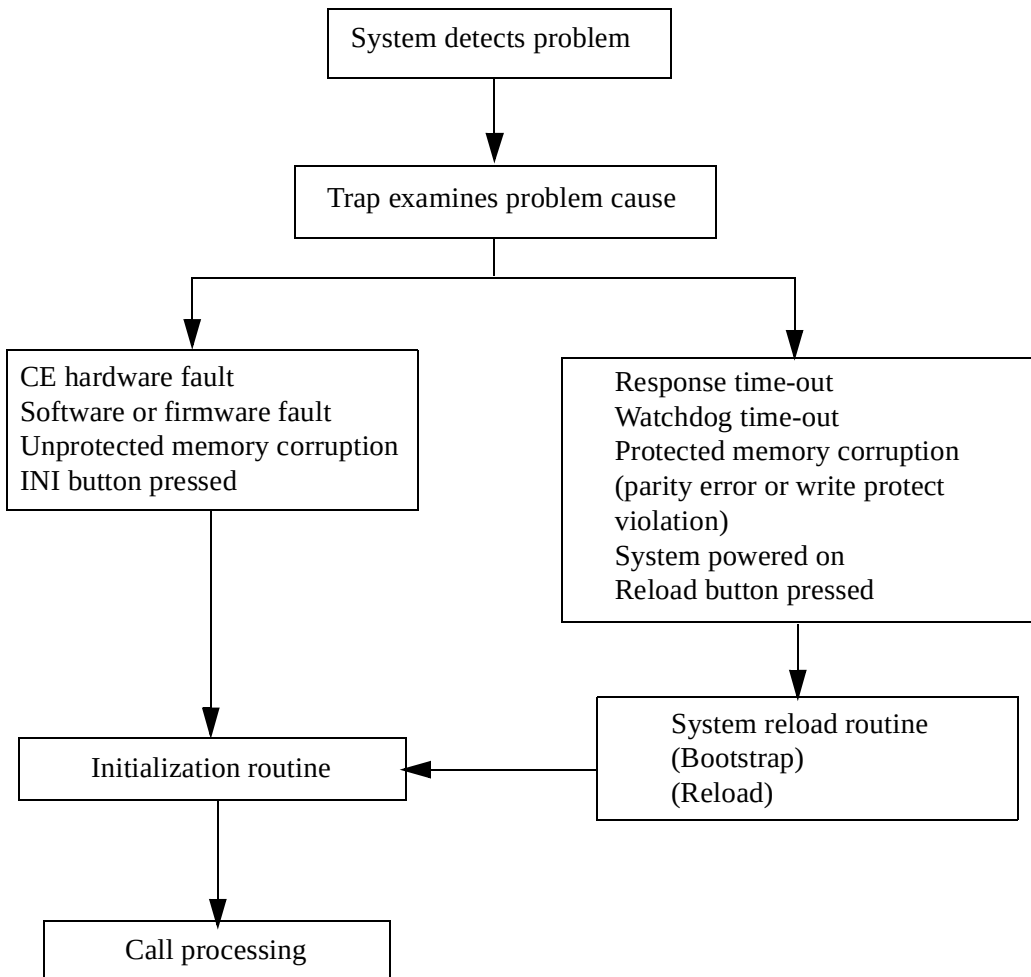
The daily routines are non-resident programs preset to run at midnight when a system is shipped. This is why they are commonly referred to as the midnight routine. The daily routine can be set to run once every 24 hours, at the time of least traffic for a particular business.

When it is time for the daily routine to start, the system cancels the background routine and if the overlay area is not in use by a manually loaded non-resident program, the daily routine will run.

Both the daily and background routines are selected in LD 17, the Configuration Record.

What the system does when things go wrong

The following diagram represents the method by which the system recovers call processing.



An explanation of the diagram follows.

Trap sequence routine

The processor is forced to execute a trap sequence when the system is powered on, or certain faults are encountered, or when the reload/reset buttons are pressed. The trap sequence routine will do the following:

- ◆ Determine, store and print the cause of the trap in an INI or SYS message, which the technician can use to help pinpoint the fault.
- ◆ Isolate and disable any faulty circuit cards. Determine whether to execute an initialization or a system reload. If appropriate, output an INI or SYS message to indicate faulty hardware components.
- ◆ Check the memory and if the call processing portion of memory is corrupted, an initialization takes place. If the system-operating or customer-database portion of memory is corrupted, a system reload takes place.

System reload routine

If the trap routine determines that a system reload is required it forces the CPU to run the bootstrap program. For this to occur, the following conditions must be present:

- ◆ system is powered on
- ◆ reset or reload buttons are pressed
- ◆ common-equipment fault obstructs processing, such as
 - response time-out
 - watchdog time-out
- ◆ memory contents are corrupted, such as
 - parity error
 - write protect violation (part of INI and SYS messages)

Dual processor systems contain two Function cards with the faceplate label Omega FN. The hardware (BTU) on the backplane into which the cards are plugged, identifies the FN cards as 0 and 1. The FN card 1 always starts the system reload routine. If FN card 1 does not start the routine, check for processor faults.

Common equipment, unless otherwise stated, includes all network-type cards such as those used in the network shelves.

Bootstrap program starts the system reload process

Common equipment card LEDs come on, and bootstrap directs FN card 1 to perform the following steps.

1. FN card 1 does a self test. If the test passes, the FN card 1 LED goes out.
2. FN card 1 tests first 32k portion of memory.
3. FN card 1 tests disk card register associated with FN card 1. If the test passes, the disk card LED goes out.
4. FN card 1 tests disk units. If the test passes, the disk unit LEDs flashes, indicating that System Loader instructions are loading from disk into memory.
5. When the System Loader instructions are all entered into the system memory, the System Loader will take over from the Bootstrap and provide the instructions for FN card 1.

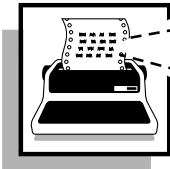
Note: If the above tests do not pass, a Hex code appears on the faceplate displays of the cards involved. Refer to the Index of Cards to locate each card Hex explanation.

System Loader continues the system reload process

1. FN card 1 tests software package compatibility, and, if not right, generates a message.
2. FN card1 enables SDI ports, allowing messages to be output.
3. FN card1 loads configuration record and memory test diagnostic.
4. FN card 1 tests memories. The memory card LEDs flash.
5. FN card1 tests switches control to FN card 0.
6. FN card 0 does a self-test. If the test passes, the FN card 0 LED goes out.

Note: If the self-test does not pass, FN card 1 resumes control and outputs a message indicating an FN card 0 fault.

7. FN card 0 tests memories. The memory card LEDs flash.
8. FN card 0, loads system operating software into the memory.
9. FN card 0, loads customer data-base into the memory.
10. When the system reload is completed a message is output as follows:



```
SYS000 000400 00000F FFFFF 00 CPU  
SYS100 CPU 0  
SYSLOAD RLS: xx  
ISSUE xx  
DONE
```

The above is an example of a clean sysload message indicating all hardware and software functioning as expected with no faults.

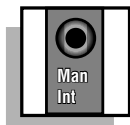
Note: The system loses the time and date during a sysload, except on an Options 51C, 61C and 81. You must reset the time and date using LD 02 after a sysload unless you have the Network Time Synchronization feature.

Short memory test to save SYS load time

To minimize sysload time, the Short Memory Test capability can be enabled in LD 17 (prompt SMEM). If the Short Memory Test is enabled, only one pass of memory testing is performed on a normal reload. If any subsequent system failure causes an automatic reload, the full six-pass Memory Test is performed on all memory in the system.

Note that a sysload completes so quickly on Options 51C, 61C and 81 that the Short Memory Test is not useful. The Short Memory Test package is not designed to be compatible with Options 51C, 61C and 81.

Initialization causes



The initialize program is run as a result of the following conditions:

- ◆ system load is complete
- ◆ corrupted call-processing memory is detected
- ◆ the MAN-INT button is pressed
- ◆ a software or firmware fault is detected
- ◆ a hardware fault in the common equipment is detected, such as I/O device faults, network or PE signaling, IGS faults, which adversely affect the Network/CPU Bus

Initialization routine

The Initialization program performs the following steps:

1. Saves the fault code or cause of the INI in the overlay area, allowing you to pinpoint the cause of the problem.
2. Erases the call-processing memory and rebuilds it from the network card memories.

Note: After the processor sets up the calls, they are controlled by the network card memories.
3. Tests all common equipment cards and finding any disabled which can be enabled, does so. Those which cannot be enabled are identified in the INI message.
4. If the initialization is associated with a system reload, the Peripheral Equipment Controller cards are tested to ensure they are enabled in software and a Superloop is defined for at least one segment of each PEC.
5. After the system reload, all required download information is sent to each digital telephone, and then the download flag is turned off to ensure that a manual initialization will not invoke the download process.
6. Any applicable patches for resident call processing software which have been saved on the disk are reloaded into the system.
7. Any new system parameters are downloaded to all XNET, PEC, NPD, and PE cards that require them.

8. All active SDI terminals print detailed messages on the cause of the INI, as follows:
 - the time of the INI
 - the last software instruction executed by the CPU
 - a list of faulty cards or components
 - INI fault codes are also output to the processor faceplate maintenance display
9. Logs out all I/O device users.
10. Updates the History File.
11. INI counter increments. If five or more initializations have occurred within 24 hours, all active patches are disabled.
12. Resumes call processing after the initialization procedure is completed.

Note: Initialize can be activated remotely by way of restricted access through debug software. This process includes saving the last initialization error codes in debug area, updating the patch save status in debug area and all of the above steps, except for the system reload steps.

Telephone call changes due to an initialization

Telephone call changes due to initialization are as follows:

- ◆ only established calls have an active voice path and remain connected
- ◆ incoming calls to an attendant console from the public exchange network that remain in a Ringing-in state will re-originate after initialization
- ◆ direct inward dialed and TIE trunk calls in a Ringing-in state are lost
- ◆ Conferenced calls, Hold, Music On-Hold, Call Transfer, Forward, Hunt are lost
- ◆ calls established on secondary DN's are reestablished on the prime DN

System operation changes due to an initialization

System operation changes due to initialization are as follows:

- ◆ activates minor alarm on console
- ◆ volume levels reset to default levels on some types of programmable sets
- ◆ CDR records for active calls and the hour's traffic data is lost
- ◆ incomplete programming changes are lost

ACD operation changes due to an initialization

ACD operation changes due to initialization are as follows:

- ◆ only established calls remain connected
- ◆ conferenced calls are lost, including calls under supervisor observation and emergency key calls are lost
- ◆ all calls in queue, such as RAN, Hold and Silence are lost. Incoming calls in RAN will be held for the duration of the initialization, and then released.

Agent changes - ACD agent changes due to initialization are as follows:

- ◆ active agents remain logged in
- ◆ idle agents are logged out
- ◆ make set busy (MSB) status is not affected

Reporting changes - ACD reporting changes due to initialization are as follows:

- ◆ ACD-D, that is, Meridian MAX loses transient data for typically one half hour
- ◆ ACD-C will lose non-printed data

Meridian link operation changes due to an initialization

Meridian link changes due to initialization are as follows:

- ◆ calls in the setup process are lost
- ◆ link will be down for approximately 30 seconds after system initialization

Meridian Mail changes due to an initialization

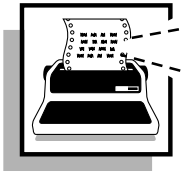
Meridian Mail changes due to initialization are as follows:

- ◆ all calls in the ACD queue to Meridian Mail are lost
- ◆ conferenced calls are lost
- ◆ calls using the conference feature, such as User Pressing Call Sender, are lost
- ◆ established calls to Meridian Mail will remain in progress, with Voice Recording active
- ◆ the CSL link will drop and voice channels may become locked out until manually disabled and reenabled
- ◆ DTMF phones will be able to send tones to Meridian Mail
- ◆ digital sets cannot access Meridian Mail features
 - CSL link will be down (EES off)
 - Switch is unable to generate tones (EES on)

Activating programs with the overlay loader

You can load programs manually by entering commands through the system terminal or maintenance telephone.

Once the program is loaded, the system outputs the program mnemonic (such as TRK for Trunk Diagnostic) on the system terminal.



Overlay input commands

After the Log In sequence and password, the overlay loader becomes active and accepts commands keyed from the SDI terminals. The overlay loader will respond to six commands as follows:

- ◆ **LD XX**— loads non-resident programs from tape or disk into the overlay area, and then the loaded program assumes control. *xx* represents the number of the desired non-resident program.
- ◆ **ENLT** — enables the tape interface or the MSI, FDU, MDU card
- ◆ **DIST** — disables the tape interface or the MSI, FDU, MDU card
- ◆ **STAT** — prints the status of the tape interface or the MSI, FDU, or MDU card
- ◆ **END** — ends the control of the current non-resident program without aborting the overlay area, allowing the person who is Logged In to maintain control
- ◆ ******** — aborts the current overlay program, allowing another program to be loaded into the overlay area. For example, if the Meridian 1 is in the midnight or daily routine phase, it will immediately put a diagnostic program into the overlay area, logging out the previous user.

History file, another place to find system messages

The History File consists of stored system messages in protected memory. A printer is normally connected to the system and each system message is printed as it is received. If there is no printer connected to the system or a printer malfunction occurs, the History File can act as a backup.

Messages types stored in history file

The messages stored are specified on a system basis and can be one or more of the following types:

- ◆ Customer Service Changes (CSC)
- ◆ Maintenance messages (MTC)
- ◆ Service Changes (SCH)
- ◆ software errors (BUG)
- ◆ Initialization and Sysload messages (INI and SYS)
- ◆ Traffic messages (TRF)

Erasing file contents

The content of the History File is erased during a SYSLOAD. It will also be erased if you change the length of the History File. The History File is located in protected data store, therefore the contents survive an initialization.

File overflow

If the History File is full, the first stored messages are replaced by incoming messages. If this happens, the system gives a “file overflow” message at the start of a printout so that you know some information is being replaced by newer messages.

Changing file length

You can change the length of the History File with the prompt HIST in the Configuration Record (LD 17). The maximum length of the file depends on the amount of protected data store available, which in turn depends on the number of system features that require protected data store.

Printing the history file

The contents of the file can be printed on demand by using LD 22. In the printout each message is prefaced by a% symbol, indicating that this message is history, rather than a real-time message.

For more information, refer to the Fault Clearing Guide, Book 3 of 3, Management Applications.

Patches

System software sometimes requires modifications, called patches. Patches are provided by Nortel Networks Technical Assistance Centers. To find out if your system has any patches, use the ISS command in LD 22. This causes the software generic and issue to be printed. A plus sign (+) next to the issue number means there is a patch in service. The enhanced maintenance feature does the following:

- ◆ allows patches to survive a sysload automatically
- ◆ permits patches on nonresident programs
- ◆ records all patches in the system
- ◆ allows data disks to be shipped with pre-loaded patches

If there is a problem with a patch, the CPU sends system messages with the mnemonic EHM to the system terminal or the History File.

Option 51C, 61C, 81 and 81C Differences

System reload

When Options 51C, 61C and 81 receive a system-reload signal, the sysload takes two to five minutes, depending on the size of the customer database. During the sysload, Options 51C, 61C and 81 perform a Core-shelf test, which includes self-tests on the CP and IOP cards. The results of the self-tests are displayed on the Liquid-Crystal Display (LCD) on the CP card, the hex display on the IOP card, and the system terminal. On the other Core cards, the LED blinks three times after a successful test.

Initialization

Options 51C, 61C and 81 typically perform an initialization in under 90 seconds. You can manually initialize only the active core side. The forced download to IPE takes a couple of minutes.

Overlays

In Options 51C, 61C and 81, the overlays reside in dynamic random access memory (DRAM) after they are loaded from the hard disk during an initial software load. Since they are always in resident

memory, the overlays can be loaded quickly. The software for the system is loaded onto hard disks within the Meridian 1 during assembly at the factory.

Natural-language core messages

An Options 51C, 61C and 81 can diagnose faults in field-replaceable units for all Core hardware, including cables. In case of a failure, a message in a natural language (such as English) appears on the system terminal and on the Liquid-Crystal Display (LCD) on the CP card.

Remote operation capabilities

Options 51C, 61C and 81 remote operation capabilities include remote access to both Core Modules, the ability to sysload, initialize, or put the system in a split mode, and the ability to upload and download the customer database. You can access the Core complex in each Core Module through the I/O ports on the CP cards. 

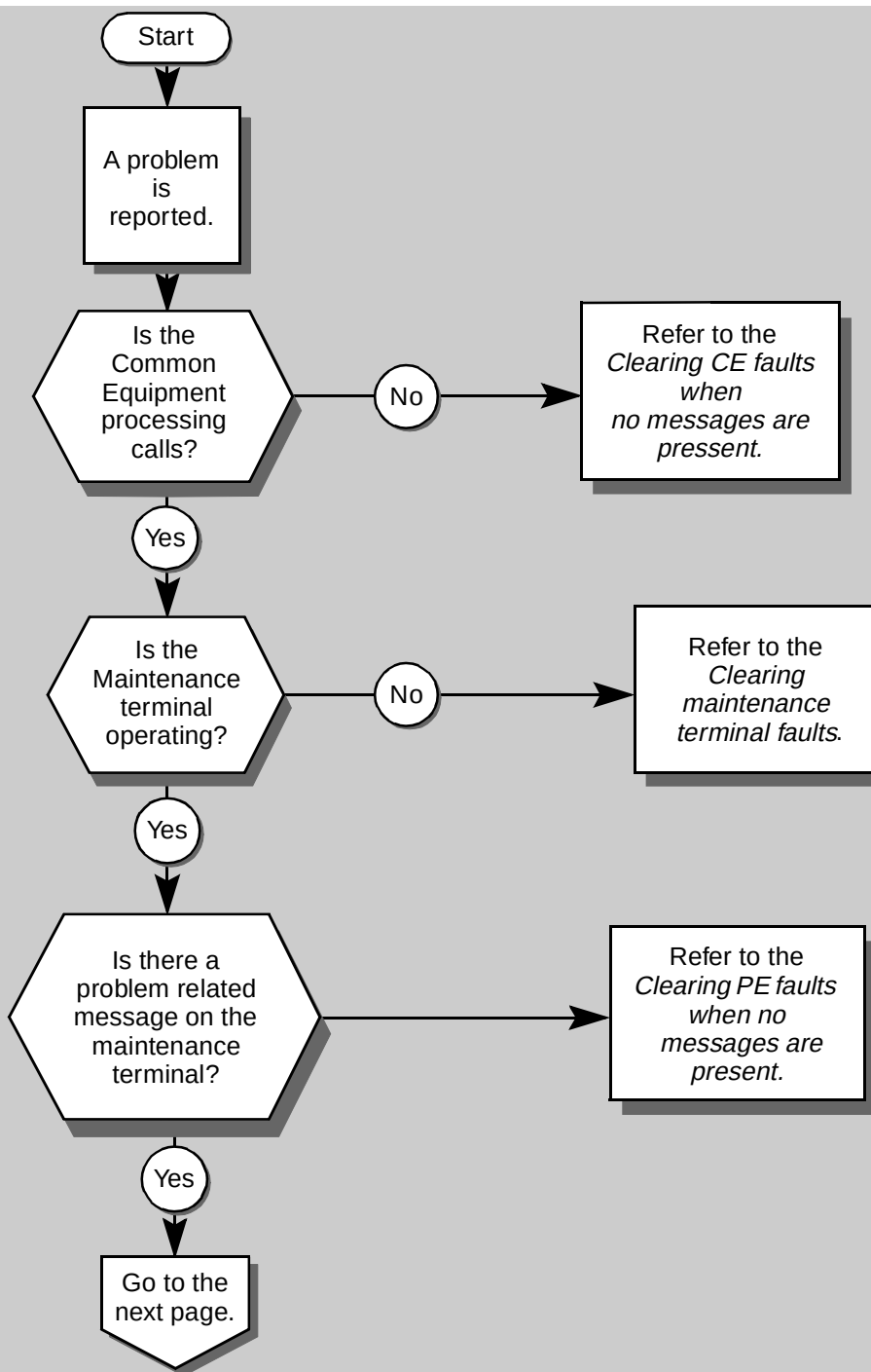
Start here to find faults

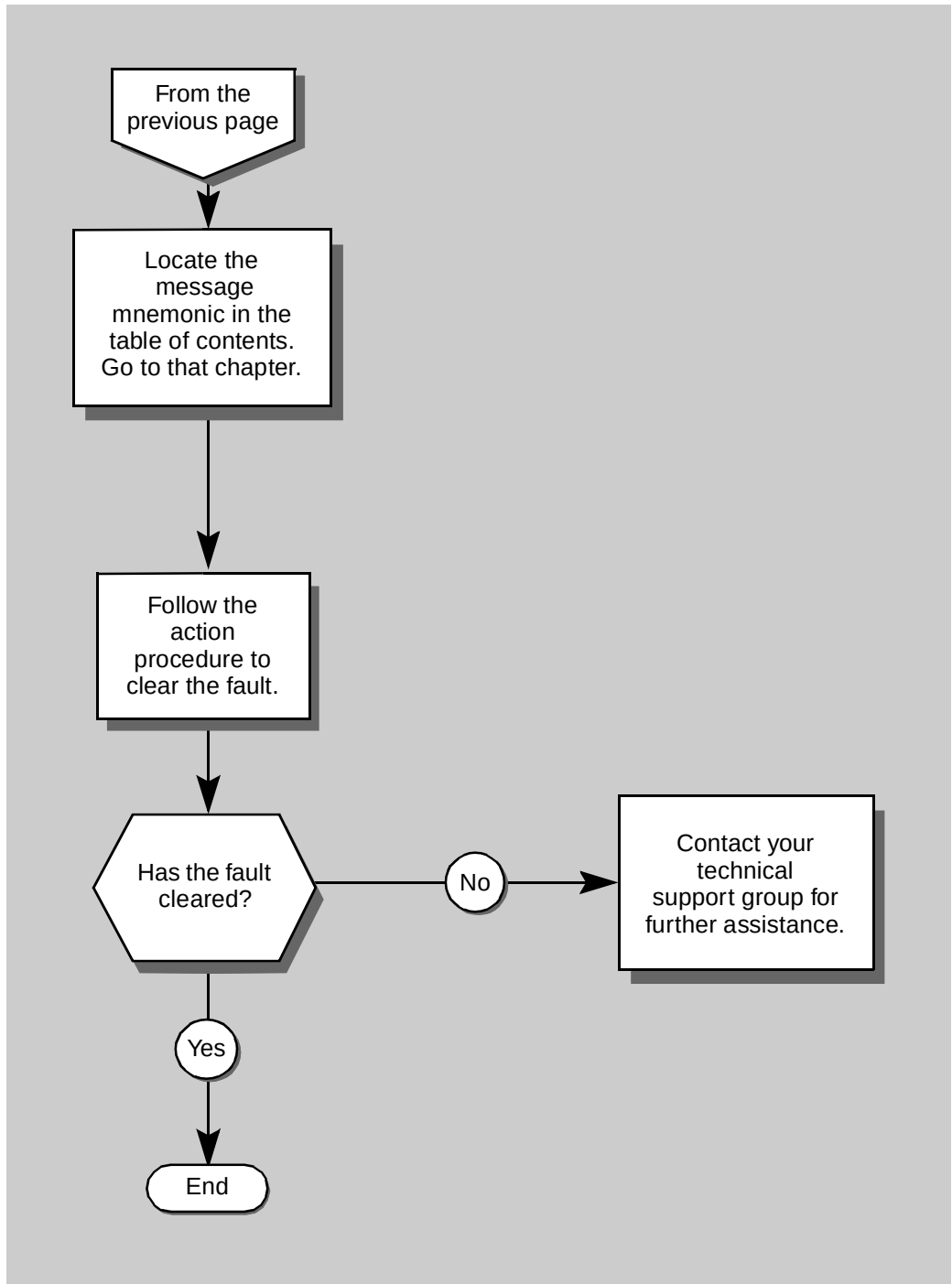
How to use this chapter

Follow the *Basic system fault finding* flow chart procedures. In most cases a fault is accompanied by a system message. For those rare conditions when there are no messages present or when the maintenance terminal will not operate, the *Basic system fault finding* flow chart procedures will direct you to the *Go to Clearing CE, PE or Maintenance terminal fault* sections.

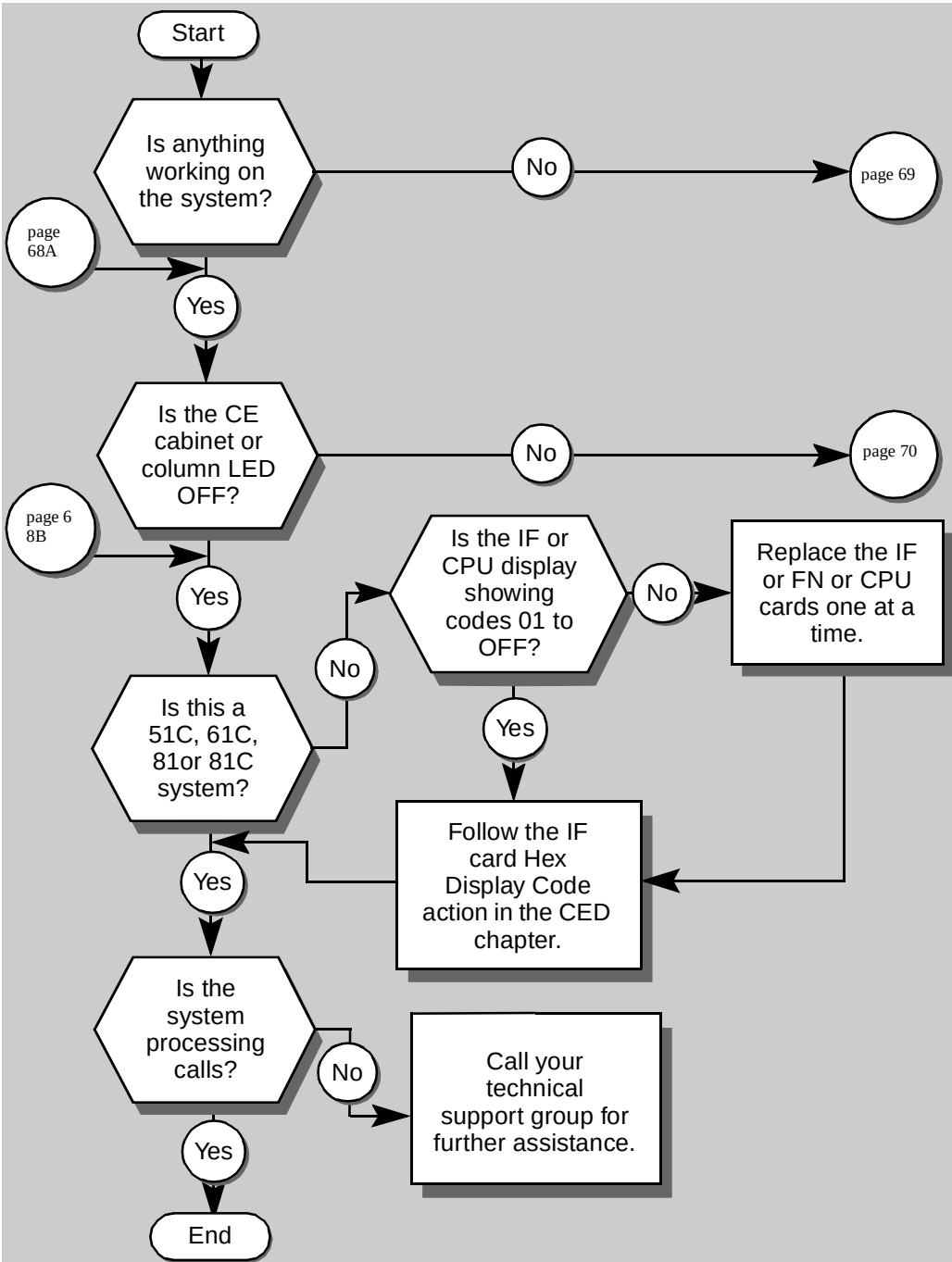
The *Go to Clearing CE, PE or Maintenance terminal fault* sections are comprised of high level flow charts. The PE flow chart is amplified by a more detailed step-action table. To clear the faults, you can use either the flow chart or the step-action table or a combination of both.

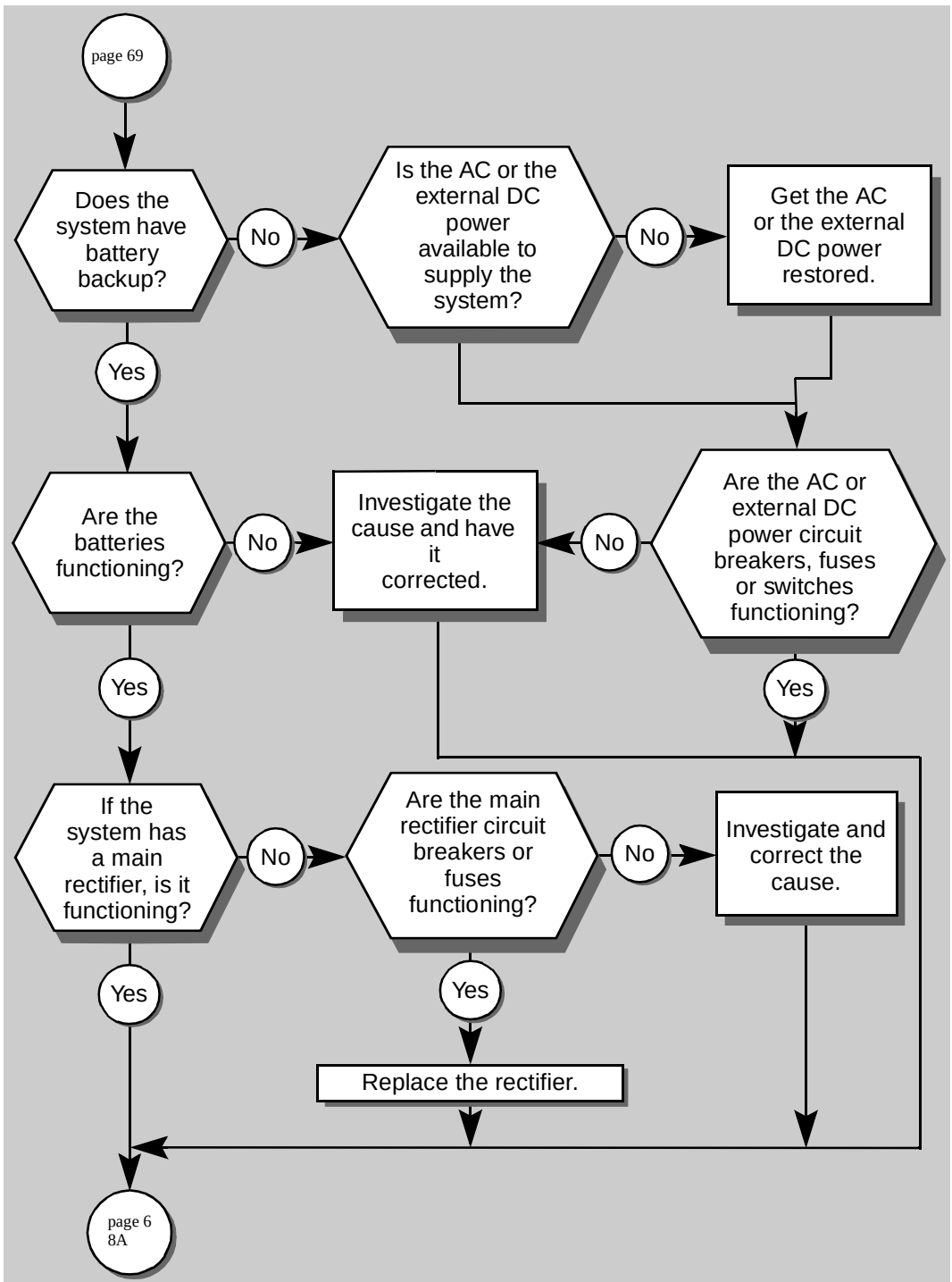
Basic system fault finding

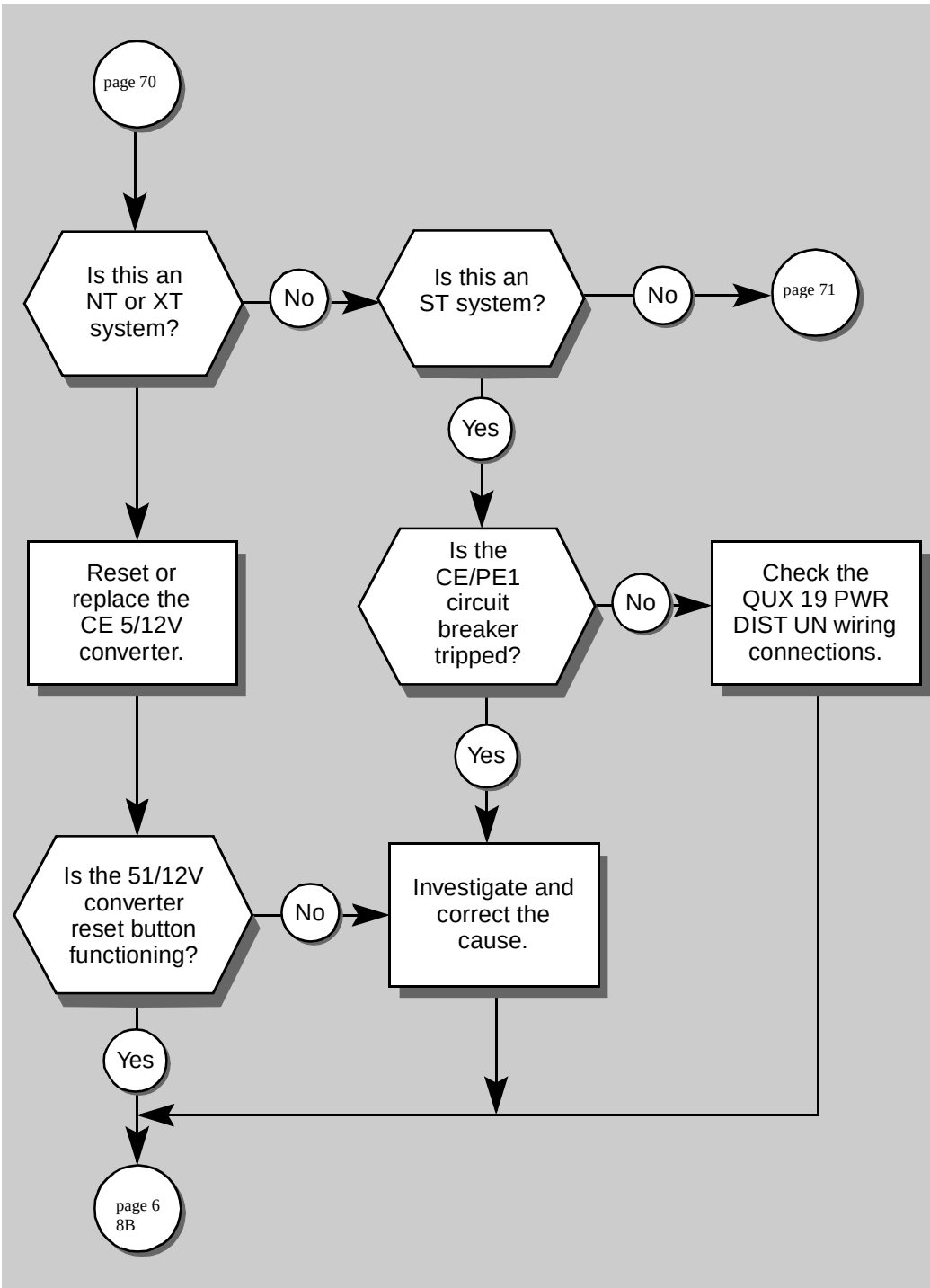


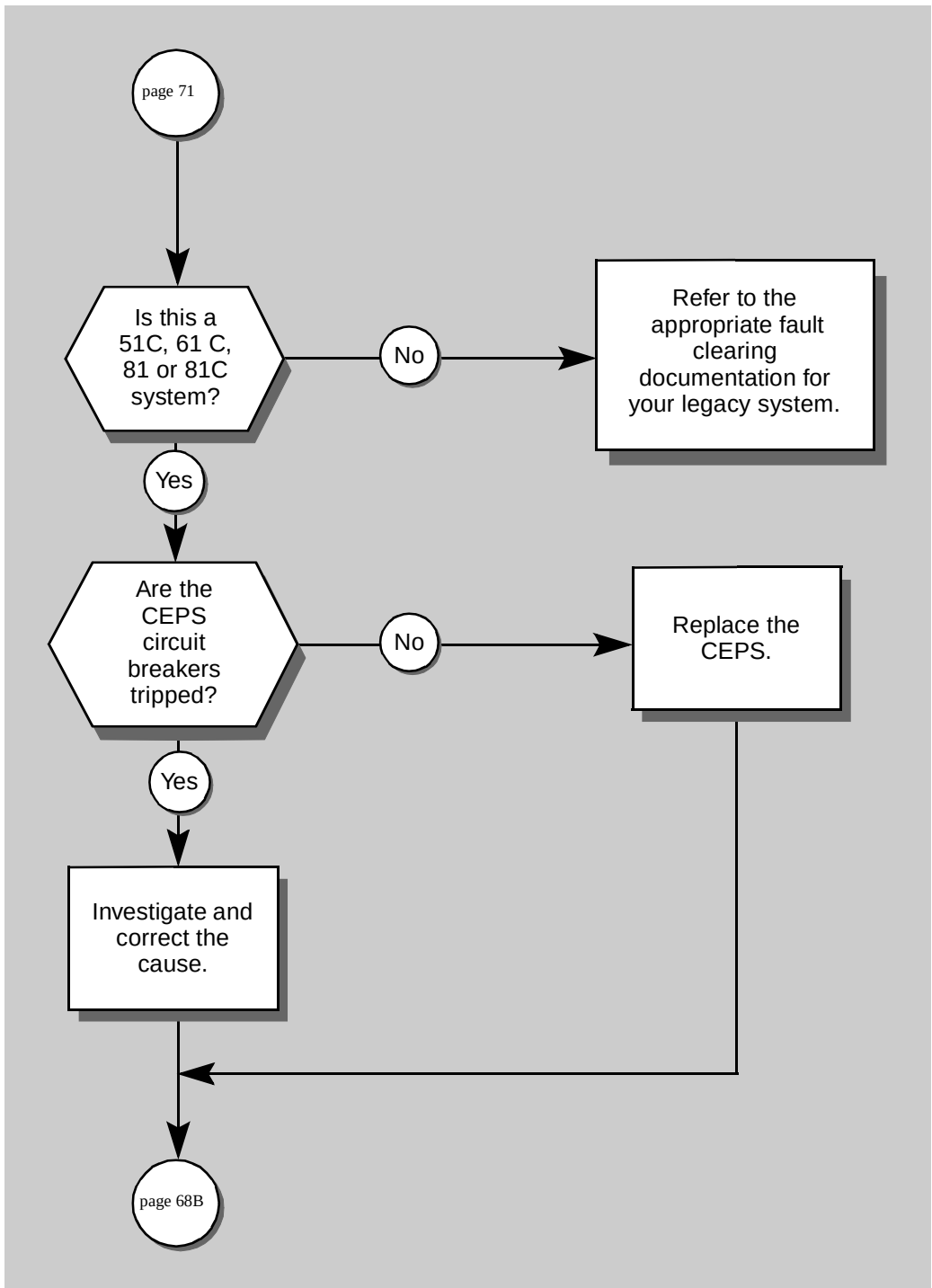


Clearing Common Equipment faults when no messages are present

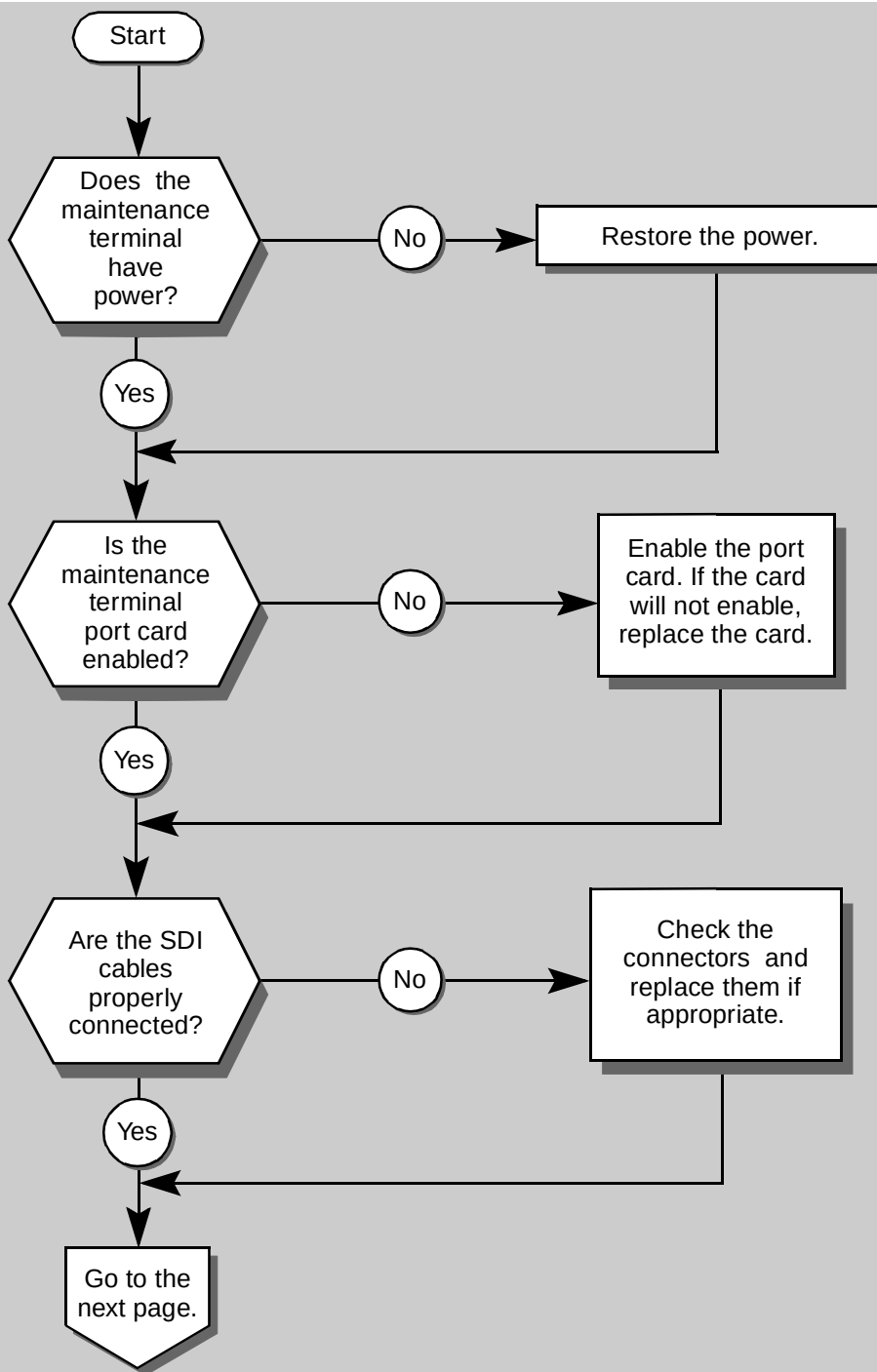


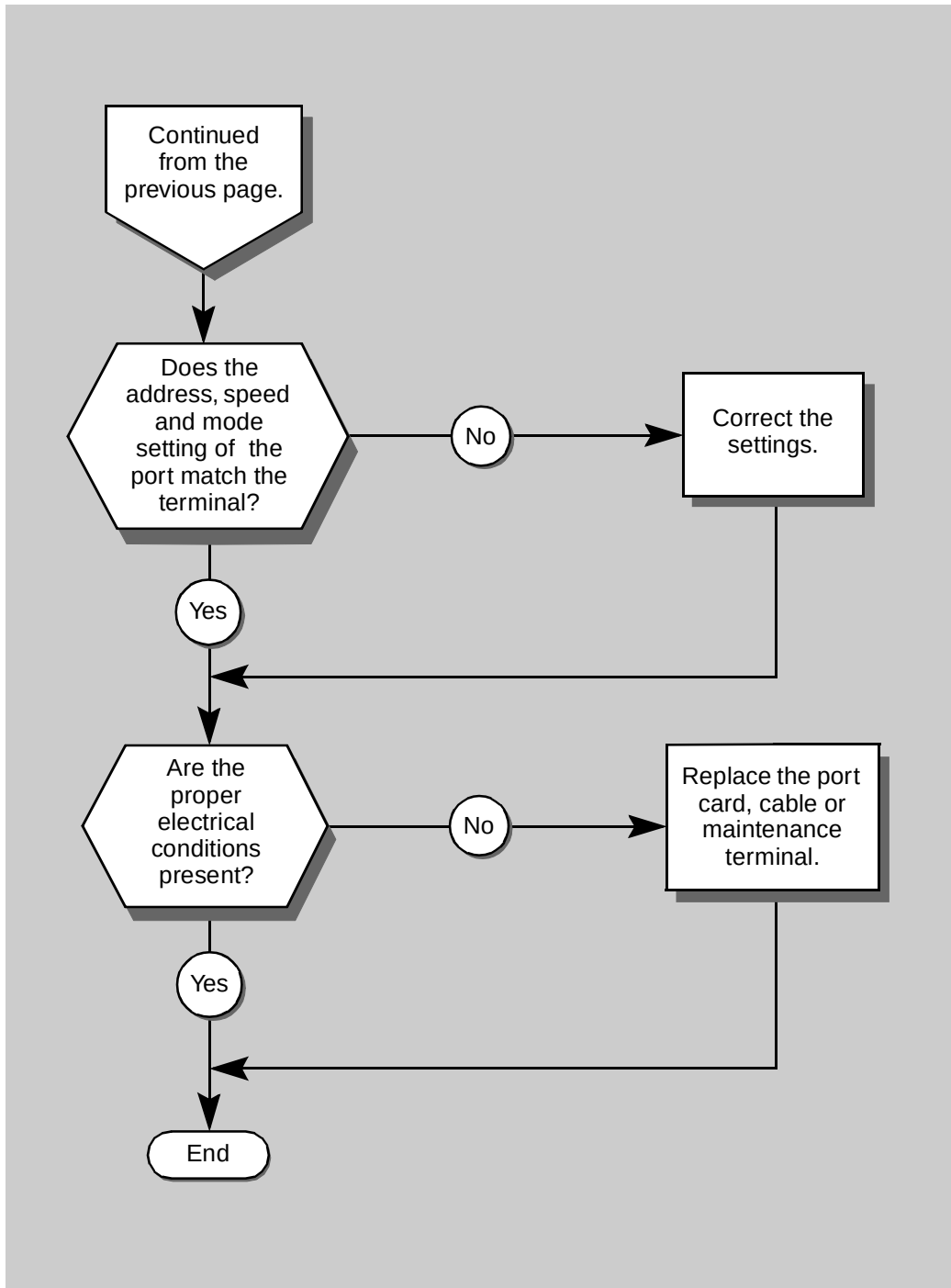




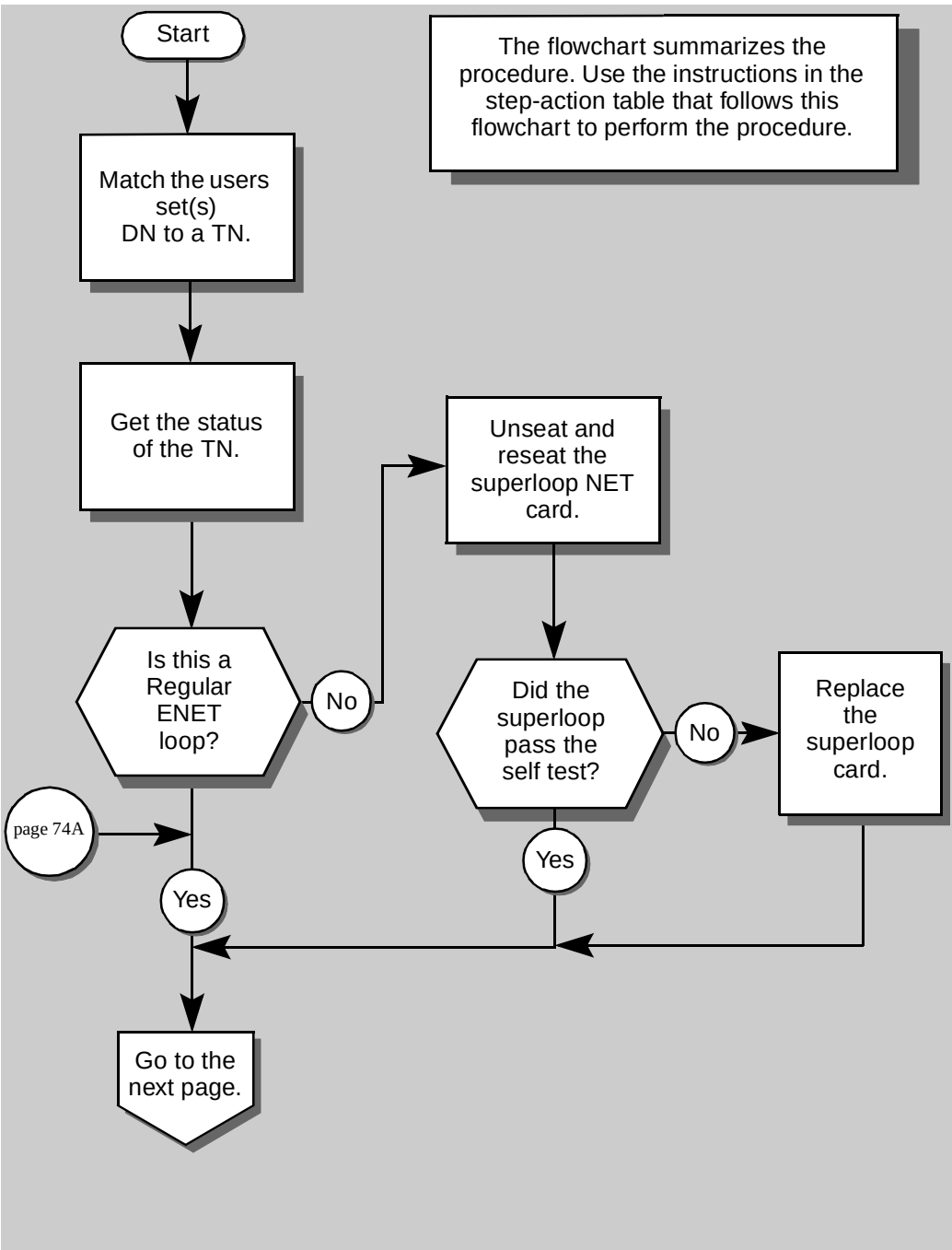


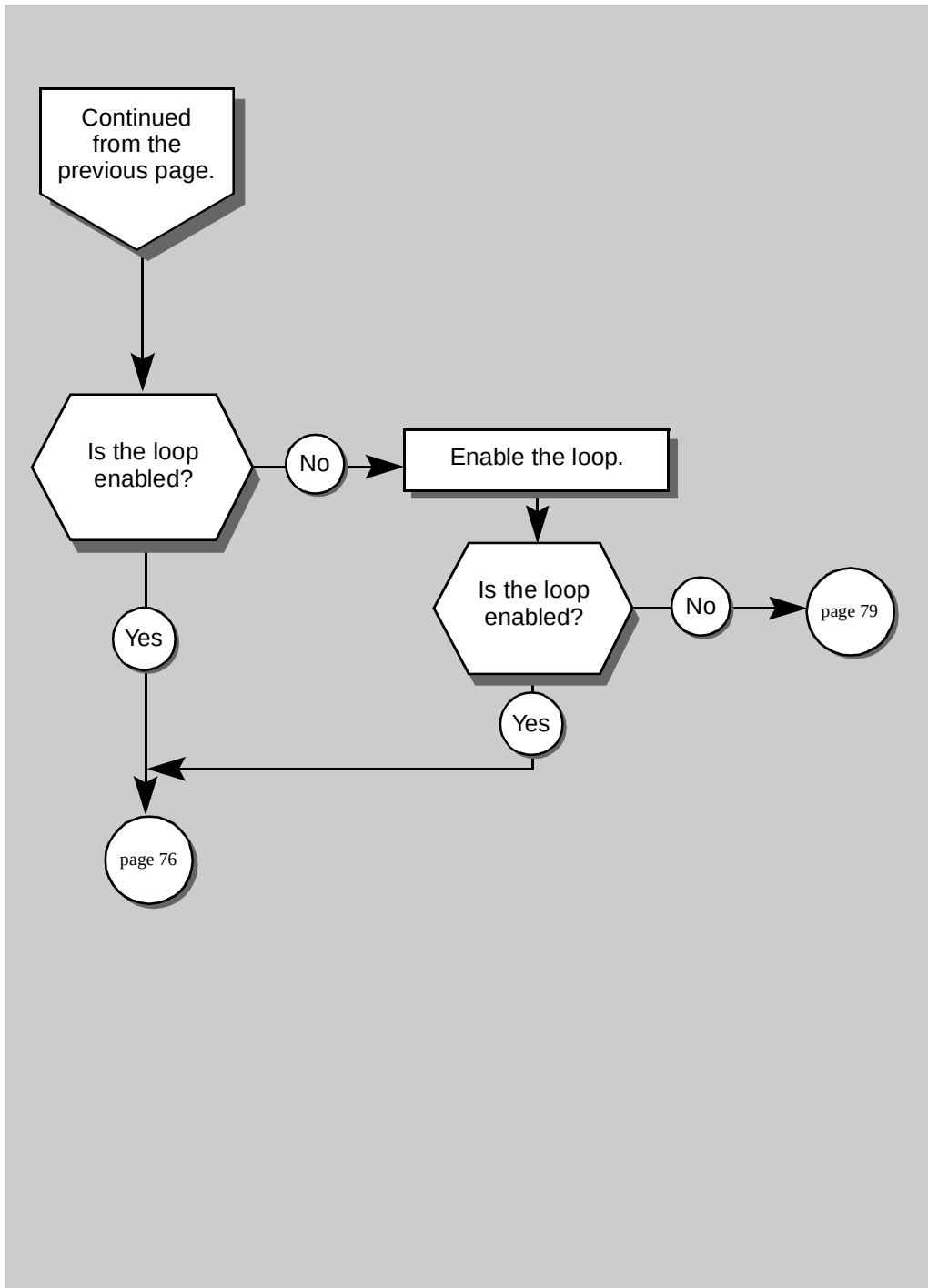
Clearing maintenance terminal faults

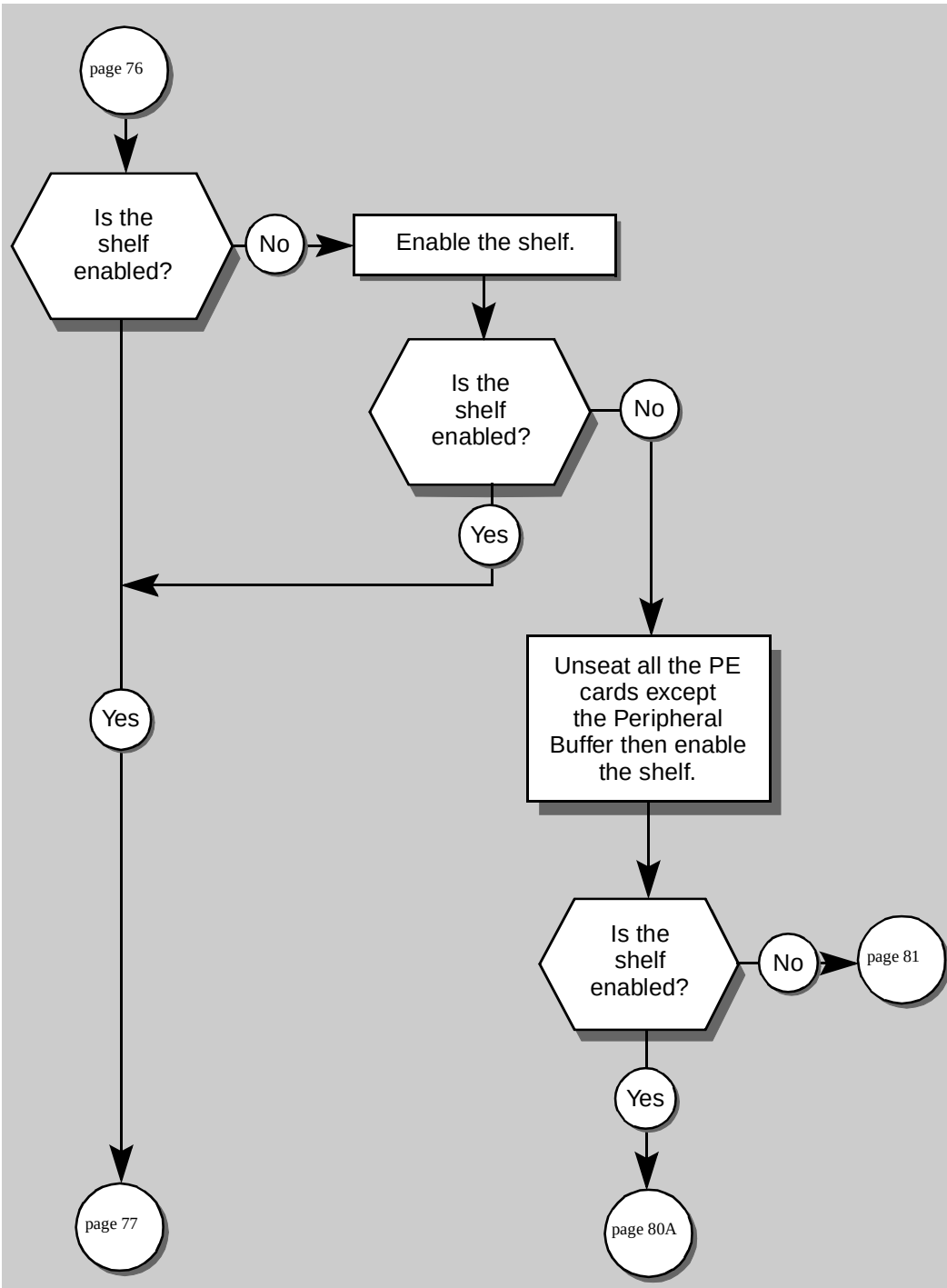


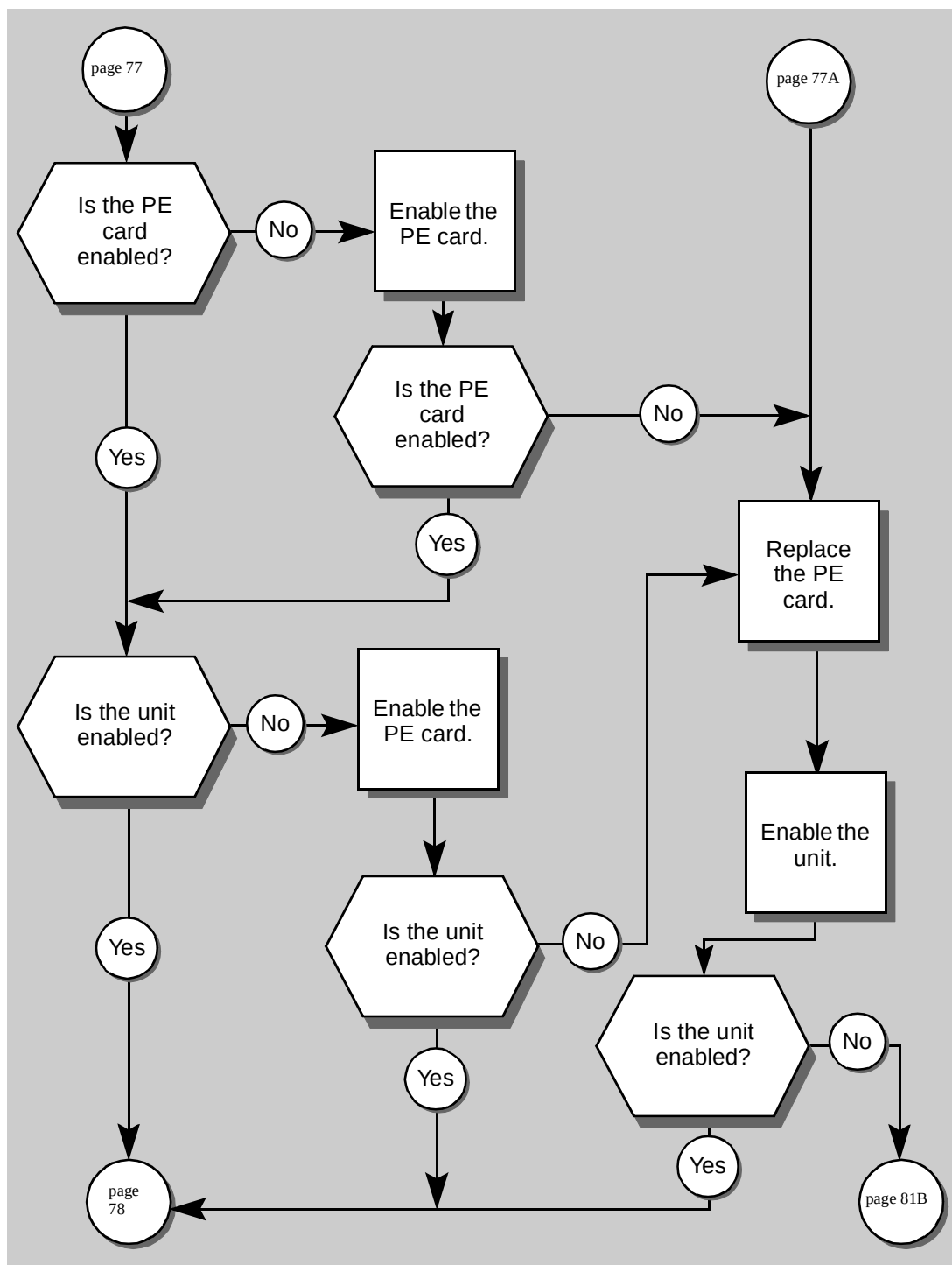


Clearing Peripheral Equipment faults when no messages are present



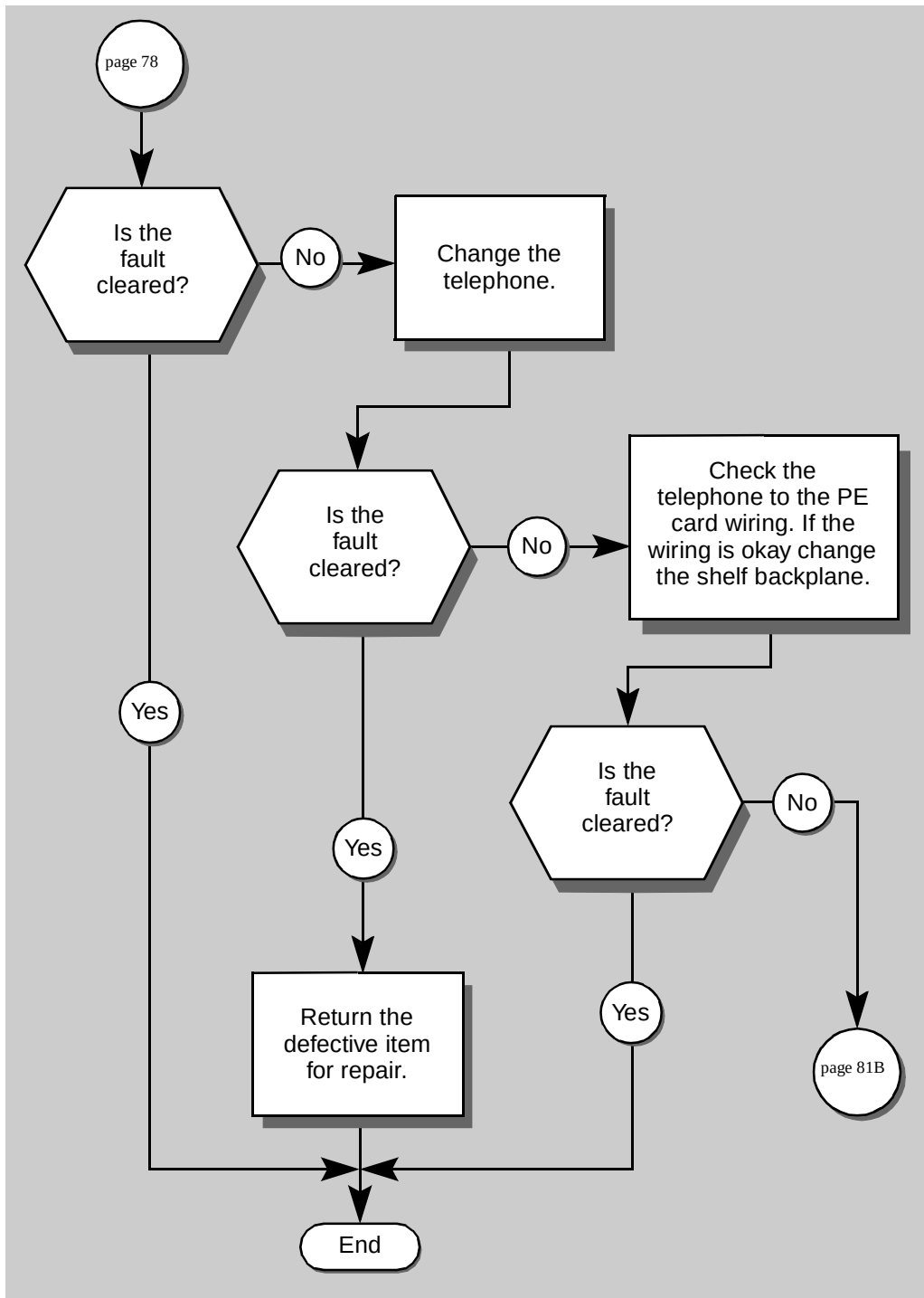


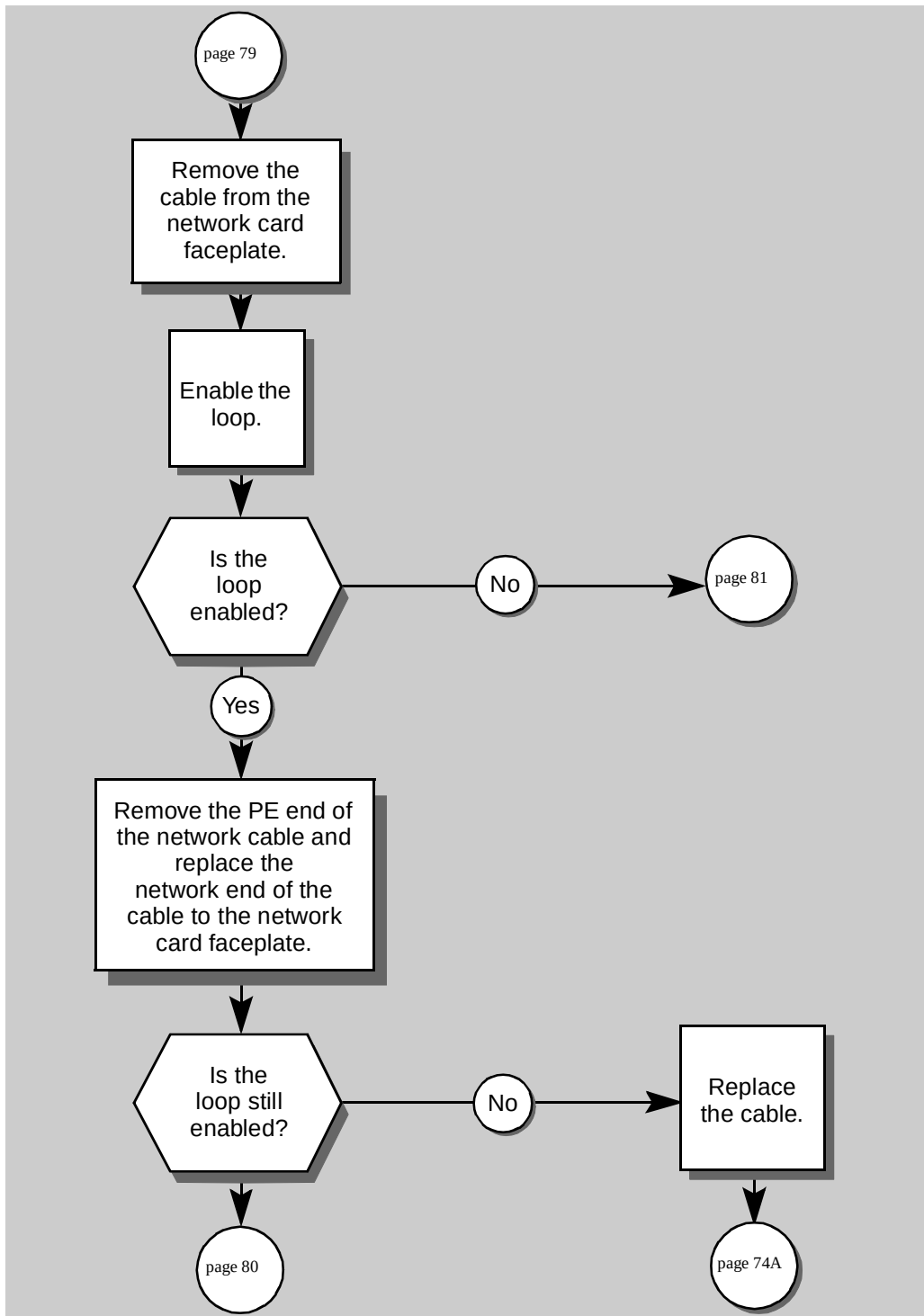


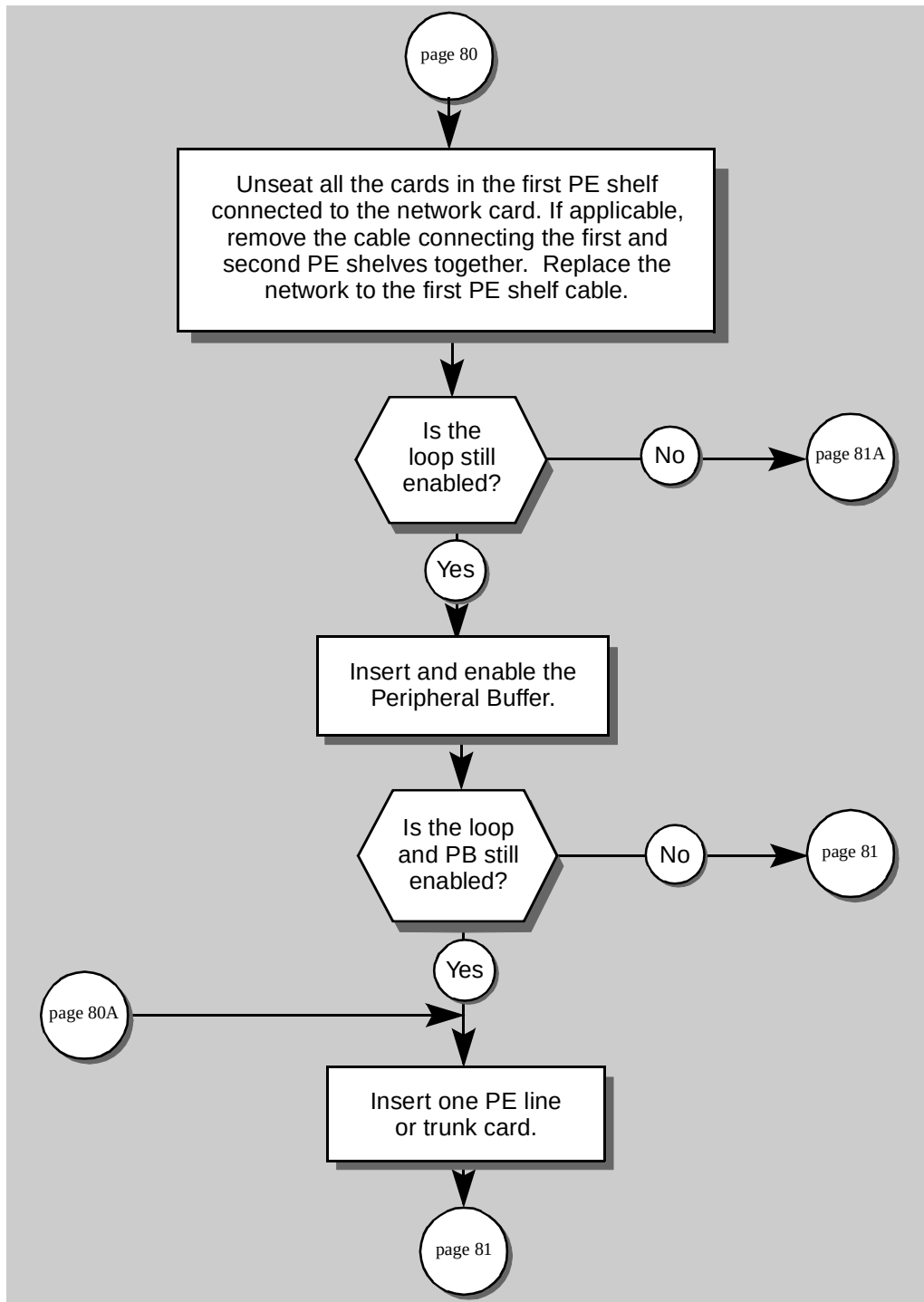


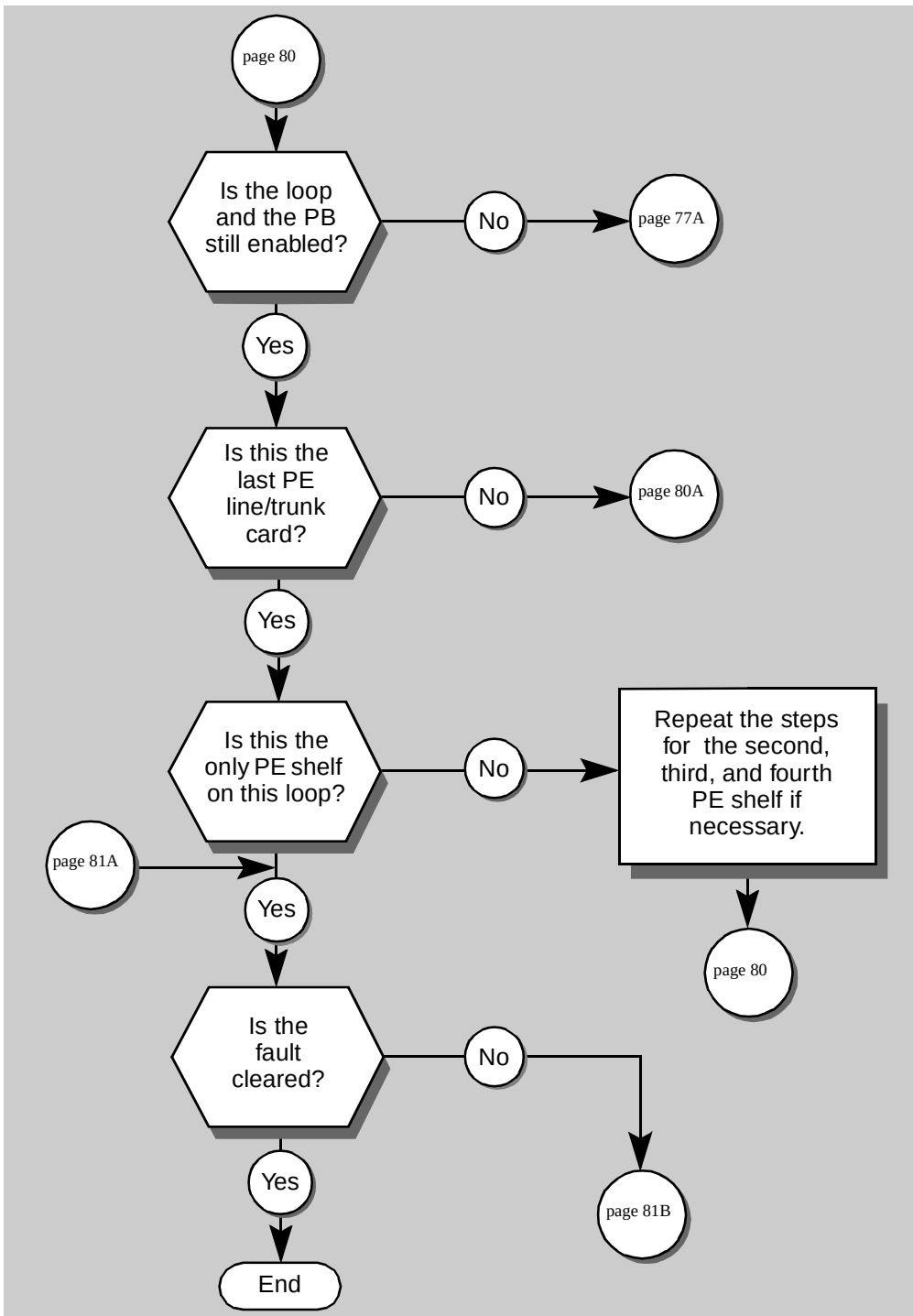
78 Start here to find faults

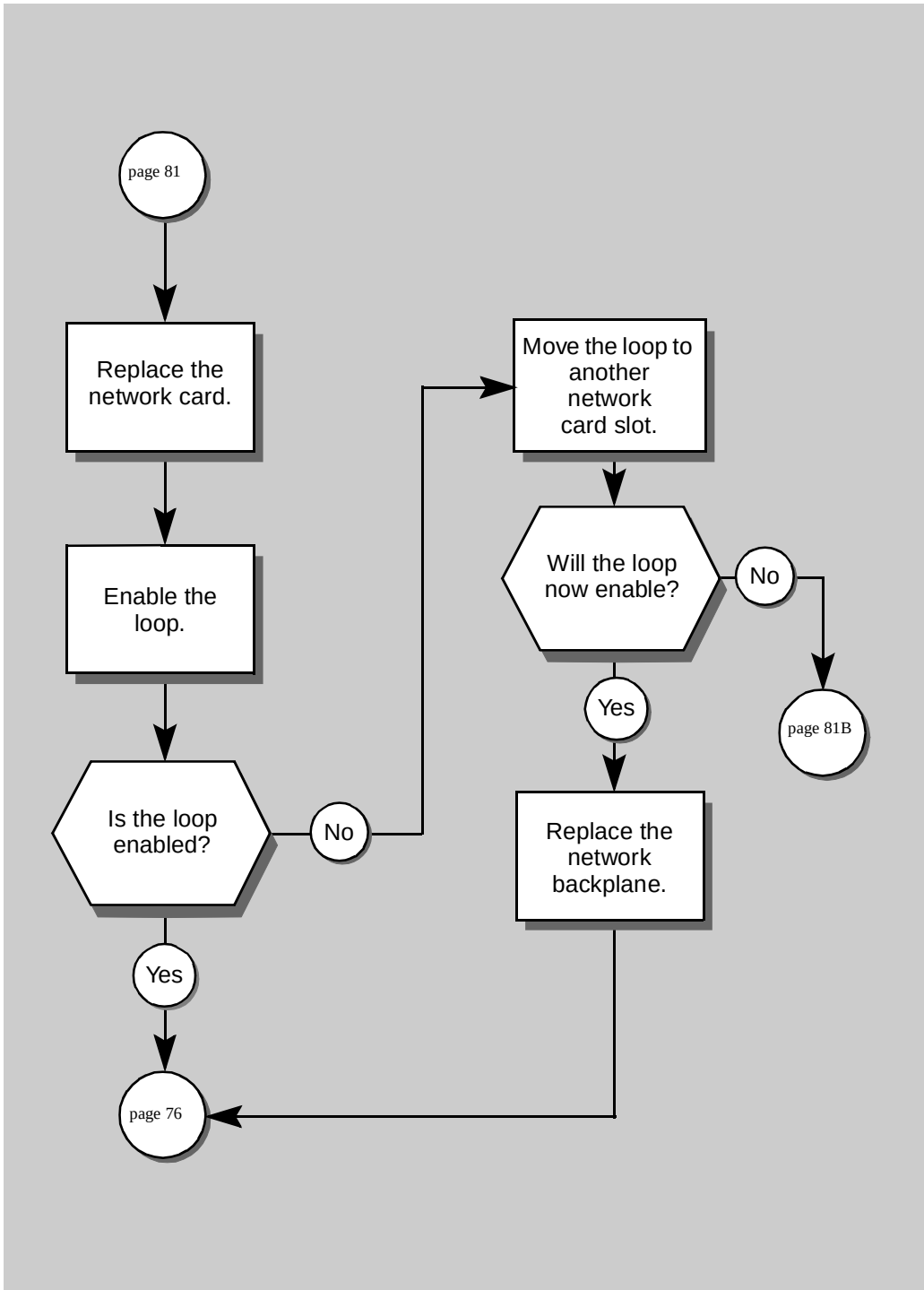
of 1182

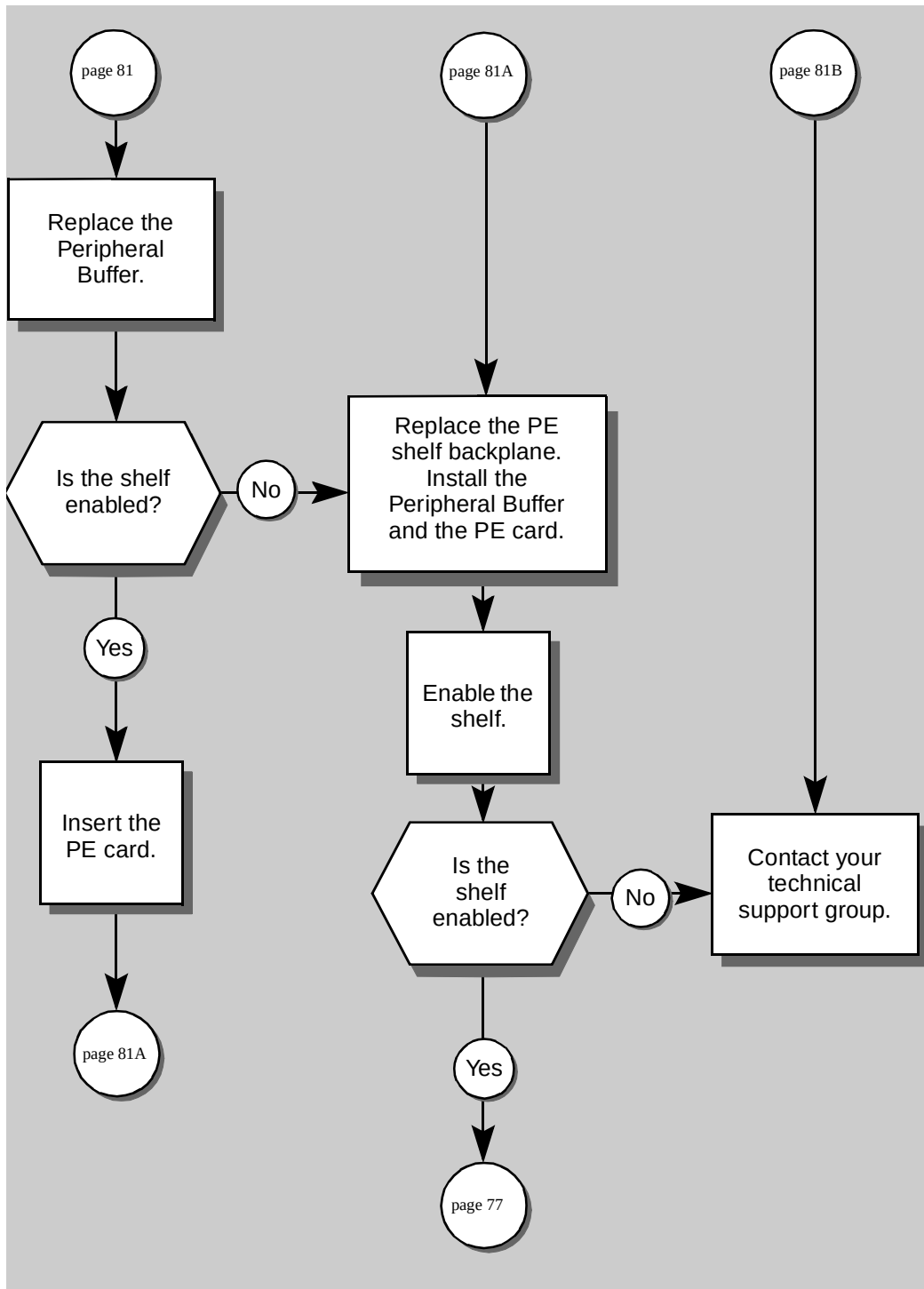












Clearing PE faults

STEP	ACTION	
1	Match the DN of the reported telephone to its TN	
	Use LD 20 or LD 22 TYPE = DNB	
2	Get status of TN	
	Use LD 32 STAT I s c u	
3	Analyze status of TN	
	If	Do
		
	loop is NT8D04	undefined
	loop is QPC414	step 4
	or QPC 376	
4	Analyze status of loop	
	If	Do
		
	loop disabled	step 9
	loop enabled	step 5
5	Analyze status of shelf	
	If	Do
		
	shelf disabled	step 23
	shelf enabled	step 6
6	Analyze status of card	
	If	Do
		
	card disabled	step 33
	card enabled	step 7
7	Analyze status of unit	
	If	Do
		
	unit disabled	step 38
	unit enabled	step 8
	— continued —	

STEP	ACTION	
8	Analyze status of unit	
	If	Do
	fault not cleared	step 40
	fault cleared	step 53
9	Enable loop	
	Use LD 32 ENLL1	
10	Analyze status of loop	
	If	Do
	loop enabled	step 5
	loop disabled	step 11
11	Isolate loop from the cable connecting it to the peripheral equipment. This will allow you to test the loop for faults.	
	Disconnect the cable from the network card faceplate.	
12	Enable loop	
	Use LD 32 ENLL	
13	Analyze status of loop	
	If	Do
	loop disabled	step 45
	enabled, loop passes test	step 14
14	Isolate cable from the peripheral equipment shelf. This will allow you to test the cable for faults.	
	Disconnect the cable from the peripheral buffer card faceplate, then reconnect the network card end of the cable removed in step 11.	
15	Analyze status of loop	
	If	Do
	loop disabled	step 50
	loop still enabled	step 16
— continued —		

STEP	ACTION						
16	Isolate the peripheral equipment shelf backplane and the peripheral buffer from the peripheral equipment cards. This will allow you to test the backplane and buffer for faults.						
	Unseat all peripheral equipment cards except the peripheral buffer from peripheral equipment shelf. If applicable, remove the cable connecting the buffer of first peripheral equipment shelf to the buffer of the second peripheral equipment shelf. Reconnect the cable to the buffer card faceplate removed in step 14.						
17	Analyze status of loop.						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>loop disabled</td><td>step 50</td></tr> <tr> <td>loop still enabled</td><td>step 16</td></tr> </table>	If	Do	loop disabled	step 50	loop still enabled	step 16
If	Do						
loop disabled	step 50						
loop still enabled	step 16						
18	Isolate peripheral equipment cards. This will allow you to test the card for faults.						
	Insert one peripheral equipment card.						
19	Wait approximately one minute after inserting a peripheral equipment card, then analyze status of loop and peripheral buffer.						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>loop or peripheral buffer disabled</td><td>step 35</td></tr> <tr> <td>loop and peripheral buffer still enabled</td><td>step 20</td></tr> </table>	If	Do	loop or peripheral buffer disabled	step 35	loop and peripheral buffer still enabled	step 20
If	Do						
loop or peripheral buffer disabled	step 35						
loop and peripheral buffer still enabled	step 20						
20	Test the remaining unseated peripheral equipment cards.						
21	Is this last peripheral shelf connected to this loop?						
22	Analyze status of fault						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>fault not cleared</td><td>step 51</td></tr> <tr> <td>fault cleared</td><td>step 53</td></tr> </table>	If	Do	fault not cleared	step 51	fault cleared	step 53
If	Do						
fault not cleared	step 51						
fault cleared	step 53						
23	Enable shelf (shelf is actually the peripheral buffer).						
	Use LD 32 ENLS I s.						
— continued —							

STEP	ACTION						
24	Analyze status of shelf						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>Peripheral buffer enabled</td><td>step 6</td></tr> <tr> <td>Peripheral buffer disabled</td><td>step 26</td></tr> </table>	If	Do	Peripheral buffer enabled	step 6	Peripheral buffer disabled	step 26
If	Do						
Peripheral buffer enabled	step 6						
Peripheral buffer disabled	step 26						
25	Isolate peripheral equipment line cards from the peripheral buffer and shelf backplane.						
	Remove all peripheral equipment line cards except the peripheral buffer						
26	Analyze status of shelf						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>Peripheral buffer enabled</td><td>step 19</td></tr> <tr> <td>Peripheral buffer disabled</td><td>step 27</td></tr> </table>	If	Do	Peripheral buffer enabled	step 19	Peripheral buffer disabled	step 27
If	Do						
Peripheral buffer enabled	step 19						
Peripheral buffer disabled	step 27						
27	Replace the peripheral buffer						
	Move peripheral buffer faceplate switch to DIS, remove peripheral buffer card, insert known good peripheral buffer card, move known good peripheral buffer faceplate switch to ENL, use LD 32 ENLS I s to enable peripheral buffer.						
28	Analyze status of shelf						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>Peripheral buffer enabled</td><td>step 30</td></tr> <tr> <td>Peripheral buffer disabled</td><td>step 29</td></tr> </table>	If	Do	Peripheral buffer enabled	step 30	Peripheral buffer disabled	step 29
If	Do						
Peripheral buffer enabled	step 30						
Peripheral buffer disabled	step 29						
29	Replace all peripheral equipment cards.						
	Re-seat peripheral equipment cards then proceed to step 6.						
30	Replace peripheral equipment shelf backplane.						
	Follow shelf installation procedures. Re-seat peripheral buffer and peripheral equipment line cards.						
31	Enable shelf.						
	Use LD 32 ENLS I s c.						
32	Analyze status of shelf						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>Peripheral buffer enabled</td><td>step 51</td></tr> <tr> <td>Peripheral buffer disabled</td><td>step 6</td></tr> </table>	If	Do	Peripheral buffer enabled	step 51	Peripheral buffer disabled	step 6
If	Do						
Peripheral buffer enabled	step 51						
Peripheral buffer disabled	step 6						
	— continued —						

STEP	ACTION
33	Enable peripheral equipment card.
	Use LD 32 ENLS I s c.
34	Analyze status of card
	If Do
	
	card enabled step 51
	card disabled step 6
35	Replace peripheral equipment card
	Remove peripheral equipment card, insert known good peripheral equipment card, use LD 32 ENLC I s c to enable peripheral equipment card.
36	Test peripheral equipment card unit
	Use LD 32 ENLC I s c u to enable peripheral equipment card unit.
37	Analyze status of unit
	If Do
	
	unit enabled step 8
	unit disabled step 51
38	Test peripheral equipment card unit.
	Use LD 32 ENLC I s c u to enable peripheral equipment card unit.
39	Analyze status of unit
	If Do
	
	unit enabled step 8
	unit disabled step 35
40	Test telephone
	Replace telephone
41	Analyze status of telephone
	If Do
	
	telephone working step 52
	telephone not working step 42
42	Test wiring from telephone to peripheral shelf.
	Replace defective or misplaced wiring
	— continued —

STEP	ACTION						
43	Analyze status of telephone						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>telephone working</td><td>step 53</td></tr> <tr> <td>telephone not working</td><td>step 51</td></tr> </table>	If	Do	telephone working	step 53	telephone not working	step 51
If	Do						
telephone working	step 53						
telephone not working	step 51						
44	Isolate additional peripheral equipment shelf backplanes and peripheral buffers from the peripheral equipment cards.						
	Do Step 16.						
	 Caution The following action will interrupt telephone service to the second 68 on this card.						
45	Test loop for fault.						
	Use LD 32 DISL I (both loops as applicable), move network card faceplate switch to DIS, remove network faceplate cables(s), remove network card, insert known good network card, replace network faceplate cable(s), move known good network card faceplate switch to ENL, use LD 32 ENLS I to enable loop(s).						
46	Analyze status of loop.						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>loop enabled</td><td>step 5</td></tr> <tr> <td>loop disabled</td><td>step 47</td></tr> </table>	If	Do	loop enabled	step 5	loop disabled	step 47
If	Do						
loop enabled	step 5						
loop disabled	step 47						
47	Test network card.						
	Move network card to another position and repeat step 45.						
48	Analyze status of loop.						
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>loop disabled</td><td>step 51</td></tr> <tr> <td>loop enabled</td><td>step 49</td></tr> </table>	If	Do	loop disabled	step 51	loop enabled	step 49
If	Do						
loop disabled	step 51						
loop enabled	step 49						
49	Replace network shelf backplane.						
	Use shelf replacement instructions and do step 5.						
	— continued —						

STEP	ACTION
50	Replace cable. Use cable replacement instructions and do step 5.
51	You need help. Contact your technical support group.
	

AML — LD 48 Application Module Link

How the AML works

An Application Module Link (AML) connects the Meridian 1 with applications such as Meridian Mail, Meridian Link and CCR. Enhanced Serial Data Interface (ESDI) or Multi-purpose Serial Data Interface (MSDL) cards provide these links.

LD 48 is used to maintain these links. AML messages are output to indicate command error and status conditions on these links.

AML and AMLM commands		
Command	Description	Release
AML status		
STAT AML (x)	Get AML status. This command outputs the status of layer two and layer seven of one or all configured AMLs. The designation (DES) of the AML is output if it has been defined for the port in LD 17. Examples: AML: 01 MSDL: 08 PORT: 00 LYR2: DSBL AUTO: OFF LYR7: DOWN DES: MERIDIAN_MAIL AML: 04 ESDI: 10 LYR2: EST AUTO: ON LYR7: ACTIVE	msdl-18
Disable AML		
DIS AML x	Disable AML x. Whenever the third parameter (LYR2, LYR7, etc.) is not typed, the overlay defaults the third parameter of the DIS command to LYR2. Therefore, this command is equivalent to DIS AML x LYR2. Refer to DIS AML x LYR2 command definition, for more information.	msdl-18
DIS AML x AUTO	Disable AUTO recovery on AML x (MSDL only). This command is not available for an ESDI AML.	msdl-18
DIS AML x LYR2	Disable layer two on AML x. MSDL Requirement: The MSDL card must be enabled. The AML link state can be any state other than the disabled state, and should not be in the process of self-test. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. MSDL Response: The AML link state is changed to the disable state. The MSDL port on which the AML is configured is disabled. ESDI Response: The ESDI port is disabled. The port must be idle.	msdl-18

AML and AMLM commands (continued)		
Command	Description	Release
Disable AML		
DIS AML x LYR7	Disable layer seven on AML x. The MSDL or ESDI card must be enabled. The AML layer two must be enabled and established, and AML layer seven must also be enabled. Example: ENL MSDL x followed by ENL AML x LYR2 followed by EST AML x followed by ENL AML x LYR7 must have been executed at an earlier time. Response: A request to disable the AML layer seven is issued. SL-1 will stop sending polling messages to the far-end.	msdl-18
DIS AML x MDL	Disable MDL error reporting on AML x (MSDL only). MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. MSDL Response: The MSDL AML loadware command to disable the debug monitor is sent to the MSDL card. This command is not available for ESDI AML.	msdl-18
DIS AML x MON	Disable monitor on AML x (MSDL only). MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. MSDL Response: The MSDL AML loadware command to disable the debug monitor is sent to the MSDL card. This command is not available for ESDI AML.	msdl-18

AML and AMLM commands (continued)		
Command	Description	Release
Enable AML		
ENL AML x	Enable AML x. For MSDL: If AUTO recovery is off, then this command is the same as the ENL AML x LYR2 command. If AUTO recovery is on, an attempt is made to establish the link (layer two) and the application (layer seven). For ESDI: This is the same as the ENL AML x LYR2 command.	esdi/ msdl-18
ENL AML x ACMS	Enable automatic set-up on AML x (ESDI only). This command is valid only for ESDI AML and is not available on the MSDL AML. It is equivalent to ACMS x command.	esdi-18
ENL AML x AUTO	Enable AUTO recovery on AML x (MSDL only). This command is not available for ESDI AML links.	msdl-18
ENL AML x FDL	Force download loadware to the MSDL card and enable AML x. MSDL Requirement: The MSDL card must be enabled. The AML link state must be in the disable state. All other MSDL AML links configured on the same MSDL card must be in the disable state. Example: ENL MSDL x must have been executed at an earlier time. MSDL Response: The MSDL AML loadware is downloaded to the MSDL card. While download is in progress a series of dots are output. Once the command is executed successfully the ENL AML x LYR2 command is executed automatically	msdl-18
ENL AML x LYR2	Enable layer two on AML x. MSDL Requirement: The MSDL card must be enabled. The AML link state must be in the disable state. Example: ENL MSDL x must have been executed at an earlier time. MSDL Response: The AML link state is changed to the release state. The MSDL port on which the AML is configured is enabled. If the ENL AML x command is executed successfully, and MSDL AML auto recovery is in the enable state, then the EST AML x is issued automatically. ESDI Response: The ESDI port is enabled. The ESDI card must first be disabled.	msdl-18

AML and AMLM commands (continued)		
Command	Description	Release
Enable AML		
ENL AML x LYR7	Enable layer seven on AML x. MSDL Requirement: The MSDL card must be enabled. The AML link should not be in the simulation mode. The AML layer two must be enabled and established, and AML layer seven must be disabled. Example: ENL MSDL x followed by ENL AML x LYR2 followed by EST AML x must have been executed at an earlier time. MSDL Response: A request to enable the AML layer seven is issued. Polling messages are sent to the far end. ESDI Response: Layer seven is enabled for the ESDI AML. The ENL AML x (LYR2) command must be completed successfully first.	msdl-18
ENL AML x MDL	Enable MDL error reporting on AML x (MSDL only). MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. MSDL Response: The MSDL AML loadware command to enable the MDL error reporting is sent to the MSDL card. This command is not available for ESDI AML links.	msdl-18
ENL AML x MON	Enable monitor on AML x (MSDL only). MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. MSDL Response: The MSDL AML loadware command to enable the debug monitor is sent to the MSDL card. This command is not available for ESDI AML links.	msdl-18

AML and AMLM commands (continued)		
Command	Description	Release

Establish layer two

EST AML x	Establish layer two on AML x. The layer two is established for the AML configured on the given MSDL port. The layer two is connected for the AML configured on the ESDI card. MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled and released. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. MSDL Response: The MSDL AML link state is changed into the established state. If EST AML x executes successfully, and provided that the MSDL AML AUTO recovery is enabled, next the ENL AML x LYR7 is executed automatically. ESDI Response: Layer two is connected for the ESDI AML. The port must be enabled first.	msdl-18

Release layer two

RLS AML x	Release layer two on AML x. The layer two is released for the AML link configured on the given MSDL port. The layer two is disconnected for the AML configured on the ESDI card. MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled and established. Example: ENL MSDL x followed by ENL AML x LYR2 followed by EST AML x must have been executed at an earlier time. MSDL Response: Prior to the execution of the RLS AML x, if the MSDL AML layer seven is enabled, the DIS AML x LYR7 is automatically executed. The MSDL AML state is changed to the release state. ESDI Response: The layer two is disconnected for the ESDI AML port. The port must be in the connected and idle state first.	msdl-18

AML and AMLM commands (continued)		
Command	Description	Release
Get address		
MAP AML (x)	Get physical address and card name of one or all AMLs. This command outputs the card name and physical card address and ports for one or all AMLs. This information is also output with the STAT AML command. For example: <pre> MAP AML AML: 05 ESDI: 04 AML: 12 MSDL:07 PORT:1 </pre>	msdl-18
Self test		
SLFT AML x	Self-test on AML x. This command runs the local loop back test for MSDL AML, and the ESDI self-test for the ESDI AML. MSDL Requirement: The MSDL card must be enabled. The AML layer two must be disabled. Example: ENL MSDL x must have been executed at an earlier time. MSDL Response: The MSDL AML local loop back test is executed and upon completion of the test the MSDL AML port is set to the disable state.	msdl-18
Switch		
SWCH AML x y	Switch active (x) and standby (y) AML. This is AML switchover, where x is the active AML switching to standby and y is the standby AML to become active.	msdl-18

AML and AMLM commands (continued)		
Command	Description	Release
Upload parameter		
UPLD AML x TBL x	Upload parameter table 1 to 4 from AML x (MSDL only). The MSDL AML maintenance error log table, is uploaded from the MSDL card and is displayed on the TTY screen. The parameter tables are: - TBL1 = AML maintenance error log table - TBL2 = AML downloaded parameter table - TBL3 = AML protocol error log table - TBL4 = AML traffic table MSDL Requirement: The MSDL card must be enabled. The AML layer two must be enabled. Example: ENL MSDL x followed by ENL AML x LYR2 must have been executed at an earlier time. Response: MSDL AML table is uploaded and is displayed on the TTY screen. This command is not available for the ESDI card.	msdl-18

AML messages

- AML0001 x **x** = AML number in decimal.
ESDI: To enable CSL, ESDI has to be in "BUSY" state.
ACTION: To bring the link up automatically, use the following commands in this order:
DIS AML x then ENL AML x and finally ACMS.
- AML0002 x **x** = AML number in decimal.
ESDI/MSDL: For SWCH AML n1 n2 command, both links should belong to the same VAS.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT CFN to check VAS. Ensure that this is where you want to switch.
- AML0003 x **x** = AML number in decimal.
ESDI/MSDL: For SWCH AML n1 n2 command, n2 should be in the STANDBY state.
ACTION: Use STAT AML to determine the ESDI/MSDL state.
- AML0004 x **x** = AML number in decimal.
No VAS ID exists for the given AML. Therefore layer seven cannot be enabled.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 17 CFN to program a VAS ID.
- AML0005 x **x** = AML number in decimal.
ESDI/MSDL: For SWCH AML n1 n2 command, n1 should be in the ACTIVE state.
ACTION: Ensure that you are switching from the active ESDI/MSDL to the standby ESDI/MSDL.
- AML0006 x **x** = AML number in decimal.
ESDI/MSDL: There is no response to polling message.
ACTION: Check the cables. Ensure the application is running. Refer to the application NTP for instructions to clear the problem. 

AMLM — LD 48 Application Module Link

How the AMLM works

An Application Module Link (AML) connects the Meridian 1 with applications such as Meridian Mail, Meridian Link and CCR. Enhanced Serial Data Interface (ESDI) or Multi-purpose Serial Data Interface (MSDL) cards provide these links.

LD 48 is used to maintain these links. AMLM messages are output to indicate command error and status conditions on these links.

AML and AMLM commands

Refer to the “AML — LD 48 Application Module Link” on page 91 for the AMLM commands.

AML messages

- AMLM0001 x Illegal card type on AML x. Only ESDI or MSDL cards are allowed.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0002 x For SMLP command, both ports must be in the loop back mode.
ACTION: Use the CNFG command first.
- AMLM0003 x The address of the ESDI status register on AML x is corrupt.
ACTION: Check the ESDI card switches. Refer to the *X11 Administration* (553-3001-311). Use LD 22 PRT CFN, to check the ESDI programming.
- AMLM0004 x To use the SMLP command, both ESDI ports must be in IDLE state.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0005 x Call-register timeout is not supported for MSDL AML.
ACTION: Contact your technical-support group.

- AMLM0006 x Automatic Set Up command not supported for MSDL AML **x**.
ACTION: For MSDL AML, first ensure the MSDL AML auto recovery is turned ON. Next enable the link using ENL AML **x**. This will establish and enable layer 7 for the MSDL AML.
- AMLM0007 x AML background AUDIT not supported for ESDI AML.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0008 Both of the MSDL AML links must be in the disabled state. Then the stimulation loop back command can be issued.
ACTION: Disable the links first, then try the stimulation loop back command again.
- AMLM0009 Loop back from ESDI to MSDL or MSDL to ESDI not allowed.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0010 x The MSDL AML command request is rejected since link **x** is already disabled.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0011 x The MSDL AML command request is rejected, since link **x** is already established.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0012 x The MSDL AML command request is rejected, since link **x** is already released.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0013 x The MSDL AML command request is rejected, since link **x** is already enabled.
ACTION: Ensure that this is the command you wanted to use.
- AMLM0014 x The MSDL AML command request is rejected, since link **x** is in process of self test.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- AMLM0015 x The MSDL AML command request is rejected, since link **x** is in process of establishing.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- AMLM0016 x The MSDL AML command request is rejected, since link **x** is in process of releasing.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- AMLM0017 x The MSDL AML command request is rejected, since link **x** is in process of disabling.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- AMLM0018 x The MSDL AML command request is rejected, since link **x** is in process of loadware downloading.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- AMLM0019 x The MSDL AML command request is rejected, since the link **x** is in process of auditing.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- AMLM0020 x The MSDL AML command request is rejected, since link **x** is in the disable state.
ACTION: Use the ENL AML **x** command first.
- AMLM0021 x The MSDL AML command request is rejected, since link **x** is not in the disable state.
ACTION: Use the DIS AML **x** command first.

- AML
M
0022 x The ESDI AML or MSDL AML command is rejected since it is not allowed at this point.
ACTION: Ensure that this is the command you wanted to use.
- AML
M
0023 x Data corruption. The ESDI AML IO priority number is corrupted on AML x.
ACTION: Check the ESDI card switch settings and cables.
- AML
M
0024 x There is no response from the ESDI card. The ESDI hardware may not be equipped.
ACTION: Check that the ESDI card is seated in the network shelf and that it is programmed properly.
- AML
M
0025 x Error: ESDI in permanent interrupt.
ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) to replace the ESDI card.
- AML
M
0026 x For ESDI self test, the port under test, port x, should be in IDLE state and the other port, port y, of the ESDI card, if it is defined, should be in the DISABLE state.
ACTION: Disable port y, then re-enter your original command.
- AML
M
0027 x The MSDL AML request is rejected, since the MSDL card is not operational.
ACTION: Make sure that the MSDL card enabled and re-enter the command.
- AML
M
0028 x Warning: AML x is disabled and will not recover. This is regardless of the fact that the AML auto recovery was previously turned to the ON mode. The MSDL AML loadware requested to disable the link, and since this type of disable is not recoverable, the Meridian 1 will disable the link and will not attempt to recover.
ACTION: You must manually enable the AML link to bring the link up again.
- AML
M
0029 Warning: The AML is disabled and will not recover, since the MSDL AML background AUDIT failed to recover from the failure. This is regardless of the fact that the AML auto recovery was previously turned to the ON mode.
ACTION: You must manually enable the AML link to bring the link up again.
- AML
M
0030 The reset command is not supported for the ESDI AML. The command is only supported for MSDL AML.
ACTION: Ensure that this is the command you wanted to use.
- AML
M
0031 The reset command is allowed only when the link is established, and no pending link tasks are queued.
ACTION: Ensure that this is the command you wanted to use.
- AML
M
0032 Since the link is resetting the outgoing AML command is not executed.
ACTION: Wait until the link reset activity is terminated, and then try the command again.
- AML
M
0033 Warning: The AML went into an audit. After the audit it was determined that the link should recover to the disable state. If the auto recovery is turned ON, then regardless of it, the AML will remain in the disable state and will not attempt to recover.
ACTION: Manually bring the link up. 

ATM — LD 92 Automatic Trunk Maintenance

How the ATM works

Automatic Trunk Maintenance (ATM) enables the Meridian 1 to be programmed to automatically schedule transmission and supervision tests on specified trunk groups terminating at the Meridian 1. ATM also reports the results to the maintenance system terminal.

Trunks that fail any of the tests are flagged so that rigorous tests can be performed manually using transmission test equipment. The system can be programmed to disable any of these flagged trunks, up to a configurable limit per trunk group, if they reach the programmable “out-of-service” threshold.

The ATM can be scheduled to run automatically and manually.

LD 92 tests TIE, CSA, WATS, FEX, DID and COT trunk groups automatically each day, at times scheduled in the ATM Schedule block. LD 92 also allows for the manual testing of trunks.

ATM commands		
Command	Description	Release
Test DTI Channel		
ATMC loop ch	Test DTI channel ch on specified loop.	atm-7
ATMC loop ch loop ch	Test specified DTI channel, with reference trunk. Test the specified DTI channel (loop and channel of the first field) with the reference trunk (loop and channel of the second field).	atm-7
Test route		
ATMR c r	Test route r of customer c. Accepts ADM Route number in R12+. When an ADM Route is entered, member numbers cannot be entered.	atm-7
ATMR c r m	Test route r of customer c with reference trunk member m.	atm-7
Test unit		
ATMU l s c u	Test specified unit. If the unit specified is an ADM trunk unit, no reference information can be entered.	atm-7
ATMU Y l s c u l s c u	Test specified unit, with reference trunk. Test the specified unit (l s c u of the first field) using the reference trunk (l s c u of the second field). If the unit specified is an ADM trunk unit, no reference information (L S C U) can be entered.	atm-7

ATM commands (continued)		
Command	Description	Release
Clear/Get “ring/no answer”		
CLRR c r	Clear “ring/no answer” count on route r for customer c. Clears the “ring/no answer” count for every trunk member in the ADM Route specified.	atm-7
CLRU l x c u	Clear “ring/no answer” count on specified trunk unit.	atm-7
Clear/Get “ring/no answer”		
PRTR c r	Get “ring/no answer” count for all members on route r for customer c.	atm-7
PRTU l s c u	Get “ring/no answer” count specified unit.	atm-7
Clear alarm		
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	atm-7
Termination		
END	Terminate test in progress. This command can be entered at any time.	atm-7

ATM messages

The Automatic Trunk Maintenance (ATM) program tests TIE, CSA, WATS, FEX, DID and COT trunk groups automatically each day at times scheduled in the ATM Schedule Block. The ATM program also allows for the manual testing of trunks.

Using the ATM message table to clear faults

To clear most trunk faults, the ATM action column suggests you use LD 36/41 overlays found in the TRK chapter. A few ATM actions require you to use overlay loads located in the *X11 Administration* (553-3001-311).

ATM0000 Program identifier.

ACTION: The ATM program is loaded and ready for you to enter commands.

- ATM0001 No schedule block exists.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If required, a schedule block can be programmed using LD 16 in the *X11 Administration* (553-3001-311).
- ATM0002 There is no schedule block for this hour.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If required, a schedule block for this hour can be programmed using LD 16 in the *X11 Administration* (553-3001-311).
- ATM0003 The ATM aborted because it cannot perform far to near test.
ACTION: Contact your technical support group and have the trunk at the far end checked.
- ATM0004 The user specified reference trunk does not meet the loss criteria for a reference trunk.
ACTION: Contact your technical support group.
- ATM0005 An illegal input character.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0006 A loop is out-of-range. Loops on multi group systems range from 0 to 159. Loops on single group systems range from 0 to 31.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0007 The shelf is out of range. Units 0 to 3 only are allowed.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. Refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- ATM0008 The Terminal Number translation (TNTRANS) failed on Tone Detector.
ACTION: Contact your technical support group.
- ATM0009 No tone detector is available to proceed onward.
ACTION: Contact your technical support group.
- ATM0010 **1** No Tone Detector is defined in the database.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. Refer to the *X11 Administration* (553-3001-311) and use LD 20 TDET to check for the Tone Detector. Next use Digitone receiver and tone detector administration, LD 13 to program the Tone Detector.
2 The Tone Detector failed the self-test.
ACTION: Use TDET in LD 34 to test the Tone Detector. If the Tone Detector does not pass the test, replace it as per steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 in this guide.
- ATM0011 Missing ATM route data.
ACTION: If required, ATM route data can be programmed using LD 16 in the *X11 Administration* (553-3001-311).

- ATM0015 The ATM received a wrong loop message.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- ATM0016 The tone detector is not maintenance busy when it should be; the system will set it.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- ATM0018 User specified reference trunk is not available.
ACTION: Contact your technical support group.
- ATM0020 Given trunk is unequipped.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If required, install a trunk card.
- ATM0041 c Customer **c** does not exist.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0042 c Customer number **c** is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0051 c r Customer **c**, Route **r** does not exist.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0052 c r Customer **c**, Route **r** has no member.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command or refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check route and member number. Correct route or member number in LD 14 trunk data block.
- ATM0053 c r Customer **c**, Route **r** has no ATM data.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If required, ATM route data can be programmed using LD 16 in the *X11 Administration* (553-3001-311).
- ATM0054 c r Cannot find any reference trunk for Customer **c**, Route **r** to perform near to far test.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If this message appears repeatedly or the problem persists, contact your technical support group.
- ATM0055 c r Customer **c**, Route number **r** is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0056 c r Member number is out-of-range for Customer **c**, Route **r**.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0057 c r Member number is not defined for specified Customer **c**, Route **r**.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command or refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the route and the customer number. Correct the route or the customer number in LD 16 route data block, or LD 15 customer data block.

- ATM0058 c r ATM aborted because this Customer **c**, Route **r** has FEDC equal to FEC.
ACTION: Check with your engineering group and refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the FEDC response. Correct the FEDC response in LD 16 route data block.
- ATM0059 c r For ATMU and ATMC commands, the test and reference trunk units cannot be the same.
ACTION: Ensure that this is the command you wanted to use.
- ATM0071 c r m
 Missing active Call Register during test of Customer **c**, Route **r**, Member **m**. The most probable fault is that the far end is On-Hook.
ACTION: Contact your technical support group and have the trunk at the far end checked.
- ATM0201 The last command is still in progress.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- ATM0202 Invalid argument(s).
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0203 Invalid command.
ACTION: Ensure that this is the command you wanted to use.
- ATM0204 Loop for first TN is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0205 Loop for second TN is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0206 Loop type for first TN is not supported by ATM.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0207 Loop type for second TN is not supported by ATM.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0208 Shelf for first TN is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0209 Shelf for second TN is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0210 Card for first TN is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0211 Card for second TN is out-of-range.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0212 Card for first TN does not exist in the database.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0213 Card for second TN does not exist in the database.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

ATM0214	Card type for first TN is not a trunk. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0215	Card type for second TN is not a trunk. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0216	Unit for first TN is out-of-range. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0217	Unit for second TN is out-of-range. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0218	Unit for first TN does not exist in the database. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0219	Unit for second TN does not exist in the database. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0220	Unit trunk type for first TN is not supported by ATM. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0221	Unit trunk type for second TN is not supported by ATM. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0222	Channel for first TN is out-of-range. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0223	Channel for second TN is out-of-range. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0224	Loop and Channel for first TN is invalid. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0225	Loop and Channel for second TN is invalid. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0226	Channel for first TN does not exist in the database. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0227	Channel for second TN does not exist in the database. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0228	Channel for first TN is not configured as a trunk. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0229	Channel for second TN is not configured as a trunk. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0230	Specified TNs not for same customer. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
ATM0231	Specified TNs not for same route. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

- ATM0232

Loop for first TN does not exist in the database.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0233

Loop for second TN does not exist in the database.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0235

Loop for first TN is not a superloop.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0236

Loop for second TN is not a superloop.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0240

TDET is restricted. Disk does not have Tone Detector package 65 enabled.
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service to reset the package restriction flag. You can use LD 22 PRT, PKG xxx to check the restricted status of the package.
- ATM0241

TN/Route tested is not an ADM TN/Route.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- ATM0242

RETEST. For TNs in IDLE_STATUS and ABRT_RESULT.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.

ATM0301 l s c u x y

The specified Tone Detector has failed testing due to faulty operation or lack of response. The x and y indicate the mode and test that failed.

x	y	Mode
0005	0001	Mode 1 precise busy tone
0005	0003	Mode 1 non-precise busy tone
0006	0001	Mode 1 precise overflow tone
0006	0003	Mode 1 non-precise overflow tone
0007	0001	Mode 1 ringback tone
0007	0003	Mode 1 any tone
0009	0001	Mode 1 undefined tone
0009	0003	Mode 2 undefined tone
0009	0005	Mode 4 test tone
0009	0007	Mode 3 test tone
0009	0009	Mode 3 test tone

ACTION: Use TDET in LD 34 to test the Tone Detector. If the Tone Detector does not pass the test, replace it following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 in this guide.

ATM0302 The specified Tone Detector cannot be used by ATM because it was unable to perform the self-test.

ACTION: Use TDET in LD 34 to test the Tone Detector. If Tone Detector does not pass test, replace it following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 in this guide.

ATM0304 No tone and digit switch is available for Tone Detector testing.

ACTION: Contact your technical support group. 

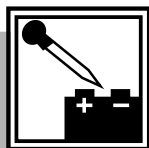
AUD — LD 44 Software Audit

How the AUD works

LD 44 monitors the system operation and provides an indication of the general state of the system operation. The program is concerned primarily with the system software. When a software problem is encountered, the program attempts to clear the problem automatically.

*CRINFO = Any Call Register (CR) information that follows an AUD message consists of: CR pointer, the progress mark word, and the originating and terminal numbers contained in the CR (4 words in total).

Maintenance tip



If faults are encountered that are hardware or software related, run software audit passes. AUD000 indicates there are probably, no problems. If a problem exists, investigate further. A hardware fault and an unrelated software fault can occur within the same Meridian 1.

AUD commands

Command	Description	Release
Run audit		
R x	Run audit, where x is the number of audit passes desired. Enter 0 for continuous auditing. R and x must be separated by a space or the system responds with the following. AUD REQ ERR AUDIT.	basic-1

AUD messages

Audit messages are not to be interpreted as hardware faults though certain codes can indicate hardware-related problems. For normal system maintenance, the audit outputs should be ignored when classifying and isolating faults.

Note: When audit outputs are excessive or continue to occur, the problem must be reported. Contact your technical support group.

AUD0000	One pass made by audit. No errors detected. System software OK. No action to be taken.
AUD0001	An attendant CR pointer is pointing outside the Call Register (CR) range. Source list or destination pointer set to nil. Terminal Number (TN), CR information, attendant loop and progress mark are output.
AUD0002	Attendant CR pointer is pointing to CR which does not contain its TN. Source list or destination list set to nil. TN, CR information attendant loop and progress mark are output.
AUD0003	Station active Call Register pointer is outside CR range. Active CR pointer set to nil. TN, CR information and progress mark are output.
AUD0004	Digitone receiver is pointing to CR which does not contain its TN. Active Call Register of Digitone receiver set to nil. TN, CR information and progress mark are output.
AUD0005	Station (line, trunk) pointing to CR which does not contain its terminal number. Active Call Register set to nil. TN, CR information and progress mark are output.
AUD0006	Given queue has incorrect block length. Length in queue block is corrected.
AUD0007	Given block was found in queue but QUEUE UNIT block pointer was incorrect. Queue is corrected. Block pointer, type, queue.
AUD0008	Conference pointer is pointing to CR outside of CR range. Conference pointer is set to nil. CR information, conference loop, conference slot and progress mark are output.
AUD0009	Conference pointer is pointing to CR which does not contain its conference loop, time slot or TN. Conference pointer is set to nil. CR information, conference loop, conference slot and progress mark are output. If repeated, fault may be in conference card.
AUD0010	Conference pointer is pointing to CR which does not have originating type as conference. ACTION: Contact your technical support group. TN, CR information and progress mark output. If repeated, fault may be in the conference card.
AUD0011	End pointer of queue not pointing to last CR in the queue. Relink. Head pointer, end pointer and queue output.
AUD0012	Link queue contains CR with its CR link outside of CR range. Relink. Head pointer, CR link, queue output.
AUD0013	The Call Register queue HEAD_PTR is not within the valid Call Register range. The queue will be rebuilt as an empty queue. QUEUE_BLOCK_PTR, HEAD_PTR, CRSTART, CREND, QUEUE.

AUD0014	Call Register not in expected queue. Link into queue. CR information, queue and progress mark output.
AUD0015	Trunk block contains incorrect TN. Correct TN.
AUD0016	CR should be unlinked. Unlinks CR. CR information and progress mark output.
AUD0017	Network even map is not the same as the network even audit map. Network map has been updated to match audit map. No action required. Output: Loop, network even map, and network even audit map.
AUD0018	Network odd map is not the same as the network odd map. Network map has been updated to match audit map. No action required. Output: Loop, network odd map, and network odd audit map.
AUD0019	Network audit indicates time slot is not in use but network memory is marked busy. Time slot is marked idle. Output: Slot address and memory contents are output. If AUD0019 is repeated, particularly without AUD0017 and AUT0018, the fault could be in the Peripheral Signalling card. ACTION: Check the Peripheral Signaling card.
AUD0020	Attendant loop is greater than the allowable maximum of five. ACTION: Contact operating company. CR information and progress mark output.
AUD0021	TN in CR does not have pointer to this CR. TN in CR cleared. CR information and progress mark output.
AUD0022	CR for Recorded Announcement (RAN) trunk is used with incorrect TN. CR is idled.
AUD0023	Digitone receiver still attached even though progress mark not ready or dialing. Digitone receiver made idle. CR information and progress mark output.
AUD0024	CR contains invalid Digitone receiver TN. Digitone receiver TN in CR cleared. CR information and progress mark output.
AUD0025	Entering debug mode on encountering error condition.
AUD0026	Circular link queue. Relinked. Queue is output.
AUD0027	Invalid AUXPM in Call Register. Call register information is output. The Call Register is idled.
AUD0028	Call Register (CR) has no pointer to it. The CR has been released. No action required. Output: CR information, TN and progress mark
AUD0029	Bad TN in CR. No action. Contact operating company. CR information, TN and progress mark output.
AUD0030	Call Register has type AIOD (Automatically Identified Outward Dialing) but CR is not in AIOD queue. CR is idled. CR information is output.
AUD0031	Junctor map is not the same as the junctor audit map. Junctor map is corrected. Junctor group, junctor map and junctor audit map are output.
AUD0032	Junctor audit indicates a timeslot is idle but the junctor memory is marked busy. Time slot is marked idle. Junctor address and memory contents are output.
AUD0033	Circular list of auxiliary Call Registers is broken. All known CR in the list are idled including the father CR. CR information, auxiliary CR ID, Process Type and Pointer to next auxiliary are output for each CR idled.

AUD0034	An auxiliary ARS Call Register points to a main Call Register which has an illegal main PM. The auxiliary CR is idled. CR information for the main CR and the auxiliary CR are output.
AUD0035	End of Call Detail Recording (CDR) queue reached without finding a CR for the port but the port pointer is not END_OF_QUEUE. The port pointer is set to END_OF_QUEUE. Port number is output.
AUD0036	The port is not a CDR port but the port pointer does not point to END_OF_QUEUE. The port pointer is set to END_OF_QUEUE. Port number is output.
AUD0037	The CDR queue is broken. The port pointer is set to the start of the CDR queue. Port number is output.
AUD0038	The first CR for a CDR port number has been found but the port pointer does not point to it. The port pointer is made to point to the CR. Port, CDR customer are output.
AUD0039	A CDR CR has invalid port bits set in the CR. Invalid bits are cleared. Port, CDR customer are output. Customer Data Block (CDB) should be checked for errors in data.
AUD0040	A CDR CR has been found with no port bits set while Auditing a port queue. The CR is idled. Output: port, CDR customer.
AUD0041	The successor of an RGAT CR has a higher priority than the CR itself. Successor priority is set to the CR priority. Output is 4 pairs of numbers, the first referring to the CR, the second to the successor. The pairs are RGAT priority, RGA_PM, ORIGIN and CR address.
AUD0042	Terminal does not match TN in Call Register. Terminal CR information output. RLA pointer pointing to the CR is cleared.
AUD0043	RLA Call Register pointer is not in Call Register range. Output: RLA_CR_PTR, CR information. RLA CR pointer is cleared.
AUD0044	CR with main Progress Mark of RLA_CONF_DISC found. Output: CR info. CR is idled.
AUD0045	RLA Call Register is found, but there are no pointers in the RLA block to this Call Register. Output: CR information. CR is idled.
AUD0046	Unable to TNTRANS RLA TN. Output: TN, CR information. CR is idled.
AUD0047	A talk slot is set in the Call Register but the RLA_CONF_TN is set in the RLA block while the pointer to the CR is RLA_INFO. Output: CR information. Talk slot is idled.
AUD0048	Either the originating or terminating TN is not set in an RLA CR with a talk slot. Output: CR information. Talk slot idled.
AUD0049	Unable to find protected loop block for Tone Detector (TD) slot in RLA CR. Output: TD SLOT and CR information.
AUD0050	Protected loop block found via TD slot in RLA Call Register but loop type is not TD loop. Output: PLOOP block, loop type, TD slot and CR information.
AUD0051	Protected loop block found via TD slot in RLA CR but ULOOP block pointer is nil. Output: PLOOP block, loop type, TD slot and CR information.
AUD0052	TD slot set in RLA CR but no valid TN can be found. Output: TD slot and CR information. CR is idled.
AUD0053	Unable to find the father CR for this CED son: this son CR is idle.
AUD0054	Main PM is CAS_INFO_TONE but the RLA_INFO pointer in the RLA block is not pointing to this Call Register. Output: CR information. CR is idled.

AUD0055	The main PM is neither ringing nor established but the pointer in the RLA block to this RLA Call Register is not RLA_DEST. Output: CR information. CR is idled.
AUD0056	Nil pointer to ACD_LIST or U_ACD_BLOCK. Output: Customer and ACD_LIST_PTR.
AUD0057	Queue ID of Automatic Call Distribution (ACD) queue is not ACD. Output: Customer, U-ACD-BLOCK-PTR, ACD queue type and queue ID. Queue ID corrected.
AUD0058	End pointer of ACD queue does not point to the last CR in the queue. Output: Customer, U_ACD_BLOCK_PTR and ACD queue type.
AUD0059	Queue length in ACD queue block differs from number in queue. Output: Customer, U_ACD_BLOCK_PTR and ACD queue type. Queue length corrected.
AUD0060	ACD queue contains CR with pointer out of CR range. Output: Customer, U_ACD_BLOCK_PTR, ACD queue type and CR link. ACD queue terminated at this CR.
AUD0061	QUEUE-IN of CR in ACD queue is not ACD. Output: Customer, U_ACD_BLOCK_PTR, ACD queue type and QUEUE_IN. QUEUE_IN corrected.
AUD0062	CR in given ACD queue but AUXPM does not match. Output: Customer, U_ACD_BLOCK_PTR, ACD queue type and CR information. AUXPM corrected.
AUD0063	Invalid ACD AUXPM. Output: Customer, U_ACD_BLOCK_PTR, ACD queue type and CR information. CR idled.
AUD0064	ACD CR has son CR but it is not a RAN CR. Output: CR information for son CR and father CR. Son CR is idled.
AUD0065	DNTRANS for ACD Call Register failed. Unable to find correct queue. Output: CR info, DIGIT_WORDS 0 . CR idled.
AUD0066	Nil pointer returned from DNTRANS for ACD CR. Unable to find correct queue. Output: CR info, DIGIT_WORDS 0 .
AUD0067	CR found in main ACD queue. Output: CR information. Call Register is idled.
AUD0068	ACD block linkage broken. Output: Customer and ACD index.
AUD0069	ACD CR not in correct queue. Output: CR information. CR linked into queue according to the AUXPM.
AUD0070	CR found with MAINPM_SPECIAL while process is ACD_RAN_PROCESS. Output: CR information. CR idled.
AUD0071	CR found with MAINPM_SPECIAL and invalid process. Output: CR information. CR idled.
AUD0072	Attendant terminal in CR has no pointer to this CR. CR was being used for special function. Output: CR information. CR idled.
AUD0073	Digit display CR with MAINPM_SPECIAL but not in 2 s queue. Output: CR information. CR idled.
AUD0074	TTR attached when no TTR should be present. Output: CR information and TTR-TN. TTR is idled.
AUD0075	Trunk detected in half-disconnect state but no timing is active on the CR. Output: CR information, Trunk TN and TRUNKPM. Release message sent to trunk, active CR set to nil, TN in CR cleared.

AUD0076	Music trunk has a bad Call Register in active CR. Output: CR information. The active CR is cleared.
AUD0077	Music CALLREG has a bad conference TN. Output: CR information. The Call Register is idled.
AUD0078	Music CALLREG has a bad AUXPM. Output: CR information. The Call Register is idled.
AUD0079	Music on hold has improper CALLREG. Output: CR Information. The Call Register is idled.
AUD0080	Music dialed connection has improper CALLREG. Output: CR information. The Call Register is idled.
AUD0081	Music source has improper CALLREG. Output: CR information. The Call Register is idled.
AUD0082	Message Call Register is not in the expected queue (.QU_AUX_HSOP or .QU_AUX_HSIP). Output: Call Register information.
AUD0083	Wandering message Call Register. Output: Call Register information.
AUD0084	Call Register in cadence queue was found to contain no originating party. Any ringing will be removed from the terminating party and the Call Register will be idled.
AUD0085	CR in attendant queue has AUXCR not equal to RAN_RAN_PROCESS: CR information and queue.
AUD0086	No wanted party call present for Break-In. Break-In bit in CONLOOP reset. Output: CR Information.
AUD0087	No attendant-destination CR found for Break-In feature. Console restored to state prior to Break-In. Output: CR Information.
AUD0088	Break-In CONLOOP reset.
AUD0089	Break-In indicated but no active attendant and loop. Console returned to state prior to Break-In. Output: CR Information.
AUD0090	CED son CR contains invalid digitone receiver TN. Digitone receiver TN in CR cleared. CR information and Digitone Receiver TNs (orig leg/ter leg) are printed.
AUD0099	Invalid MAINPM. Output: CR information. CR is idled.
AUD0200	Invalid ORIGIN in Group Call (except conference circuit.) Warning message. CR information is output.
AUD0201	No Group Call customer data. Idle CR information and customer number are output.
AUD0202	No unprotected Group Call data. Warning message. Customer number and group number are output.
AUD0203	CR has no pointer to Group Call data. Set GRP_ULPTR in CR. CR information, new ULPTR and old ULPTR are output.
AUD0204	CR number does not match GRP_CALL_CRPTR position. ACTION: Set new CR_NO. CR information, new CR_NO, old CR_NO are output.
AUD0205	Group Call ORIG_BIT has incorrect information. ACTION: Set GRP_ORIG bit in CR. CR information is output.
AUD0206	Group Call busy bit not set. ACTION: Reset busy bit only in ORIG call. CR information is output.

AUD0207	Cannot find group data pointer in CR. ACTION: Reset Group Call data in CR. CR information, OLD_ULPTR are output.
AUD0208	ACTION: Reset Group Call data in CR. CR information is output.
AUD0209	ACTION: Reset one group member in Group Call. Reset group data in CR and member data. CR information and member number are output.
AUD0210	No father CR for the NFCR process.
AUD0211	AUXCR of NFCR process not in CR range.
AUD0212	Invalid main PM for NFCR process.
AUD0213	A Ring Again call is in the TOF queue.
AUD0214	ORIG timer type is invalid and has been corrected as indicated: CRPTR CRWORD(0) BLOCKTYPE CURRENT_TYPE SHOULD_BE_TYPE or TIMING_BLK_PTR TN BLOCKTYPE CURRENT_TYPE SHOULD_BE_TYPE.
AUD0215	TER timer type is invalid and has been corrected as indicated: CRPTR CRWORD(0) BLOCKTYPE CURRENT_TYPE SHOULD_BE_TYPE or TIMING_BLK_PTR TN BLOCKTYPE CURRENT_TYPE SHOULD_BE_TYPE.
AUD0216	Call Register/timing block does not belong in this queue and has been removed. CRPTR CRWORD(0) BLOCKTYPE QUEUE_IN or TRK_TIMING_PTR TN BLOCKTYPE QUEUE_IN.
AUD0217	USTM CR was not in the low priority 2 second queue. It will be linked to the queue. CRPTR CRWORD(0) BLOCKTYPE QUEUE_IN.
AUD0218	USTM CR in the low priority 2 second queue has a bad ORIGIN. The CR will be idled. *CRINFO
AUD0219	Only trunk calls can be USTM timed. The CR will be idled. *CRINFO
AUD0220	The ORIGIN of the USTM CR was not a trunk. It will be corrected. *CRINFO ORIGIN
AUD0221	USTM_TIMING_CR in the trunk block does not point to the correct USTM CR. It will be corrected. *CRINFO USTM_TIMING_CR
AUD0222	An invalid USTM CR was encountered. The CR will be idled. *CRINFO USTM_TIMING_CR
AUD0223	No more USTM timing is required on this trunk. The timing will be terminated. *CRINFO
AUD0300	Invalid son type.
AUD0301	Signaling son register with invalid main PM in the Call Register.
AUD0302	Invalid testline type or index in CR.
AUD0303	CR not in customer data block.
AUD0304	Invalid testline PM in CR.
AUD0305	Invalid state type combination.
AUD0306	Invalid TN type for testline call.
AUD0307	TN's active CR does not point to CR.
AUD0308	DLI Channel was idled as a result of the network map Audit TERMINAL TN, GROUP/LOOP, DLI_CHANNEL (1-24)

AUD0309	DLI Channel used for CSL was found idle. Channel is forced to BUSY status. GROUP/LOOP
AUD0310	DLI Channel with DISABLED or MAINTENANCE-BUSY status was found idle. Channel is forced to BUSY status. GROUP/LOOP, DLI CHANNEL (1-24)
AUD0311	DLI Channel assignment data is inconsistent. Channel found BUSY is forced to IDLE status. GROUP/LOOP, DLI CHANNEL (1-24)
AUD0312	Assigned DLI Channel was found idle. Channel is forced to BUSY status. TERMINAL TN, GROUP/LOOP, DLI_CHANNEL (1-24)
AUD0313	Invalid screen state on M3000 TOUCHPHONE in dialtone queue. The valid state is DIALTONE state or CONFERENCE/TRANSFER/DIALTONE state. TERMINAL TN, QU_IN, TSET STATE, CRPTR, ORG TN, ORG TYPE, TERTN, TERTYPE
AUD0314	Invalid screen state on M3000 TOUCHPHONE in ringing queue when transfer indication is set. The valid state is TRANSFER RINGBACK or CONFERENCE RINGBACK state. TERMINAL TN, QU_IN, TSET STATE, CRPTR, ORG TN, ORG TYPE, TERTN, TERTYPE
AUD0315	Invalid screen state on M3000 TOUCHPHONE in ringing queue when transfer indication is not set. The valid state is RINGBACK state. TERMINAL TN, QU_IN, TSET STATE, CRPTR, ORG TN, ORG TYPE, TERTN, TERTYPE. This applicable on all phases.
AUD0316	DLI channel was still assigned to a station after the channel was either idled or reassigned. The assignment was cleared. BCS station TN, group/loop, DLI channel number (1-24).
AUD0317	A BCS station has an out-of-range channel assignment (greater than 24) probably due to data corruption of the unprotected BCS unit block. The assignment was cleared. BCS station TN, group/loop, DLI channel number (1-24).
AUD0318 DATA	Target TOF queue pointers to source TOF queue are incorrect. No action required, error has been corrected. Output data: Customer number, target and source ACD-DN.
AUD0319	LLC BLKING or LLC BLKING VAL is corrupted.
AUD0320	Target ACD-DN already answering calls for the maximum amount of source queues. Customer, Target ACD-DN, Source ACD-DN; No action required.
AUD0321	Cannot set ACD pointers for ORIGTN in the Idle Agent Queue. ACTION: Take CR out of the Idle Agent Queue.
AUD0322	Although the priority is set in the Call Register, there is no pointer to the Priority Agent Table in the Unprotected Data for the ACD data block. ACTION: Clear the Agent Priority in the CR. {Priority in CR} {Agent's Priority} {ACD-DN}
AUD0323	The Priority set in the Agent's block does not match the Priority in the Call Register for the Idle Agent Queue. {CR Priority} {Agent Block Priority} {Cust No} {ACD-DN}
AUD0324	The Priority Agent's Call Register is in queue, but the pointer for that priority in the Priority Agent Table equals END_OF_QUEUE. ACTION: Take the CR out of the Idle Agent Queue and put back in the proper place. {Priority} {Customer No} {ACD-DN}

- AUD0325 The Priority Agent's CR is in queue, but the pointer for that priority in the Priority Agent Table does not point to the last Call Register of that priority.
ACTION: Update the pointer in the priority agent table to point at the last CR of that priority. {Priority} {Customer No} {ACD-DN}
- AUD0326 Account Call Register found, but the package is not enabled. AUXPM OF .ACD_ACNT_ENTRY, BUT .ACD_ACCT_PKG RESTRICTED *CRINFO.
ACTION: Darken ACNT lamp, idle CR and clear pointer in agents block.
- AUD0327 ORIGTN of Account CR is not an ACD AGENT. *CRINFO.
ACTION: Darken ACNT lamp, idle CR and clear pointer in agents block.
- AUD0328 Agent is not active on an ACD call. *CRINFO.
ACTION: Darken ACNT lamp, idle CR and clear pointer in agents block.
- AUD0329 Account Key is not allocated to ACD set corresponding to Account Call Register. ORIGKEY in the ACNT CR is not an ACNT key. *CRINFO.
ACTION: Idle CR and clear pointer in agents block.
- AUD0330 Account key is found to be in an improper state. The ACNT key is dark, but NO_ACT_CODE_ENT is .TRUE. *CRINFO.
ACTION: Clear the NO_ACT_CODE_ENT field in agent's block.
- AUD0331 An FGD auxiliary Call Register is associated with an incoming FGDT trunk, but the trunk does not recognize this Call Register as its auxiliary CR. The FGD auxiliary CR is idled. Output data is AUX_FGD_CRINFO, FGD_TN, FGD_AUX_CR (address of CR and FGD fields in the AUX Call Register).
- AUD0332 DATA
An FGD auxiliary Call Register is associated with a terminal that is not an incoming FGDT trunk. The FGD auxiliary CR is idled. Output data is AUX_FGD_CRINFO, FGD_TN, FGD_AUX_CR (address of CR and FGD fields in the aux Call Register).
- AUD0334 Call Register found in main APL output queue. Call Register is idled. APL_NO, LINK_NO:CRPTR, CRWORD 0 - 3, *IMS_MSG
- AUD0335 An APL Call Register is floating around. Call Register is idled. APL_NO, LINK_NO:CRPTR, CRWORD 0 - 3, *IMS_MSG
- AUD0336 QUEUE_ID of Call Register in APL output queue is not APL. QUEUE_ID is corrected. APL_NO, QUEUE_ID
- AUD0337 The end pointer in APL output queue is not pointed to the last element in the queue. END_PTR is reset to point to the last element in the queue. APL_NO, LINK_NO:ENDPTR, CRWORD[0 -3], *IMS_MSG
- AUD0338 Queue length in APL queue block differs from number in queue. Queue length corrected. APL_NO, LINK_NO:ENDPTR, CRWORD[0 -3], *IMS_MSG.
- AUD0339 Queue contains CR with pointer outside of CR range. The queue is terminated at the previous block. APL_NO, LINK_NO:PROCESSINGPTR, CRWORD[0 -3], IMS_MSG.
- AUD0340 QUEUE_IN of APL CR is not APL. Reset QUEUE_IN to APL queue id. APL_NO, LINK_NO:PROCESSINGPTR, CRWORD[0 -3], *IMS_MSG.

- AUD0341 For empty queue, processing pointer is not equal to END_OF_QUEUE.
ACTION: Reset processing pointer to END_OF_QUEUE. APL_NO, PROCESSINGPTR, QUEUE_PTR.
- AUD0342 For empty queue, end pointer is not pointing back to queue data block.
ACTION: Reset end pointer to END_OF_QUEUE. APL_NO, ENDPTR, QUEUE_PTR
- AUD0354 Status update PM out-of-range.
- AUD0355 No ACD CR is associated with the main CR for telset messaging CR. *CRINFO
- AUD0360 LINK_Q_HDR is NIL (IMS package restricted), but APL port is configured.
- AUD0364 ACD Call Register has son Call Register but is neither a RAN nor a call park recall.
- AUD0367 No father Call Register linked to parked son CR. *CRINFO, PARKPM, CALL PARK ACCESS ID, PARKING PARTY TN, RECALL_ATTN_INDEX Son CR is idled.
- AUD0368 No son register linked to parked father CR. Son CR is idled. *CRINFO
- AUD0370 Data base of Server {VAS ID} cannot be audited. The Command and Status Link to the Server is disabled. {VAS ID} Note: parameters in decimal.
- AUD0371 Data base audit of Server {VAS ID} is stopped due to error when sending AUDIT CSL message on SL-1. {data element id} identifies the data element being audited when the message was sent. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0372 Data base audit of Server {VAS ID} is stopped when auditing given data element. There was no response from the Server to the SL-1 audit CSL messages. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0373 Data base audit of Server {VAS ID} is stopped by the Server audit program. {VAS ID} {cust no} Note: parameters in decimal.
- AUD0374 Error in the Server {VAS ID}'s data base for the given SL-1 administered data element was detected. The data has been added or modified. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0375 Server {VAS ID} audit removed given SL-1 administered data element from the Server's data base. The data element does not exist in the SL-1 data base. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0376 Error has been detected in the SL-1 data base for the given Server administered data element. The data has been added or modified. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0377 SL-1 audit removed given Server administered data element from the SL-1 data base. The data does not exist in Server {VAS ID}'s data base. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0378 Data base audit of Server {VAS ID} is stopped because there were not enough Call Registers available. {VAS ID} Note: parameters in decimal.
- AUD0379 ADDON_LINK of addon in the idle queue is not within the valid add-on range. The queue will be ended at the last valid addon. (Generic X08). LAST_ELEMENT, ADDON_LINK, QUEUE
- AUD0380 HEAD_PTR of the idle addon queue is out of valid addon range. The queue will be treated as an empty queue (X08). QUEUE_BLOCK_PTR, HEAD_PTR, CR_ADDON_START, CR_ADDON_ENQUEUE.

- AUD0381 Call Reference # does not match in U_CREF_TAB. Call Register being audited was pointing to an addon that was either in the idle queue or was not pointing back to this Call Register.
- AUD0389 The Agent's CR is not ordered correctly according to its priority in the Idle Agent Queue.
ACTION: Take the CR out of the Idle Agent Queue and put it back in the proper order. {Priority} {Customer No.} {ACD-DN}
- AUD0390 Data base mismatch has been detected in Server {VAS ID}'s data base for the given SL-1 administered data element. The error cannot be repaired by Audit.
ACTION: The craftsperson should load the appropriate Overlay program and remove the data. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0391 Data base mismatch has been detected in the SL-1's data base for the given Server {VAS ID} administered data element. The error cannot be repaired by Audit.
ACTION: The craftsperson should use the appropriate Server Administration program to remove the data. {VAS ID} {cust no} {data element id} Note: parameters in decimal.
- AUD0392 MSG CR in the UNP. Trunk block is nil, but active CR is not nil.
- AUD0393 MSG CR in the UNP. Trunk block is not nil, but active CR is nil.
- AUD0394 MSG CR and active CR in the UNP. Trunk block is nil, but active CR in the call reference table is not nil.
- AUD0395 MSG CR & active CR in the UNP. Trunk block is not nil, but MSG CR in the call reference table is nil.
- AUD0396 MSG CR in the call reference table is nil, but U_CALL_REF_# is not zero.
- AUD0397 MSG CR in the call reference table is not nil, but U_CALL_REF_# is zero.
- AUD0398 TNTRANS failed when MSG_CR = NIL.
- AUD0399 MSG_CR = NIL, but active CR = NIL.
- AUD0400 CREF_MSG_CR = NIL & C_CALL_REF = 0.
ACTION: Run Audit again. You may need to run Audit several times until AUD0400 no longer appears.
- AUD0401 Radio paging son Call Register in meet-me queue has no father. Call Register will be removed from the queue. RPA_SON_INFO.
- AUD0402 Radio paging father Call Register has no son in meet-me queue. The paging trunk will be idled. RPA_FATHER_INFO.
- AUD0403 Radio paging father Call Register has mainpm = .ringing but the auxpm of the son is not rpa_recall_attn. RPA_FATHER_INFO RPA_SON_INFO.
- AUD0404 The trunk in the tertn of the son Call Register is not a radio paging trunk. The trunk will be idled. RPA_FATHER_INFO.
- AUD0405 The trunk in the tertn of the son Call Register has an invalid system type for radio paging. The trunk will be idled. RPA_FATHER_INFO.
- AUD0406 The trunk in the tertn of the son Call Register has a non existent route number. The trunk will be idled. RPA_FATHER_INFO ROUTENO RPA_SON_INFO.
- AUD0407 The trunk in the tertn of the son Call Register is invalid. RPA_FATHER_INFO RPA_SON_INFO.

- AUD0408 The tetrn of the son Call Register is not a trunk. A normal station-to-station call will be established with the origtn and tetrn in the father Call Register. RPA_FATHER_INFO RPA_SON_INFO.
- AUD0409 The rpa_paged_dn in the father Call Register does not translate to the rap_psa_code in the son Call Register. The rpa_psa_code in the son Call Register will be changed to match the rpa_paged_dn in the father Call Register. RPA_FATHER_INFO RPA_SON_INFO.
- AUD0410 The Call Register used for post dialing has an invalid origtype. CRINFO.
- AUD0411 Call Register with auxpm .prep_for_accd is not being used for post dialing. CRINFO.
- AUD0412 Call Register used for post dialing does not have the auxpm = .prep_for_accd or .ffc_acod. CRINFO.
- AUD0413 Call Register is collecting radio paging digits but does not have an rpa_cc_pm value. CRINFO.
- AUD0416 No tone and digit timeslots are marked in the Call Register used for TDS signaling. CR is idled.
- AUD0417 ORIGTYPE says CR is TDCKT_CR but NWK_CALL_ID says CR is not used for signaling. CR is idled.
- AUD0418 CMF_TN of active CMF S/R not correct. CMF_TN set to terminal.
- AUD0419 MFE_TN of active MFE S/R not correct. MFE_TN set to terminal.
- AUD0420 A trunk was found to be in a lockout state. It will be idled. *CRINFO TRUNK_TN TRUNKPM
- AUD0421 A call with MAINPM = .BUSY was found not to have any tone given nor was it in any valid timing queue. The call will be given busy tone.
- AUD0422 a b c d e f g h i
- A call with MAINPM = .REORDER was found not to be receiving nor waiting for overflow tone. Overflow tone will be given. Where:
- a = CR Addr MAINPM/AUXPM
- b = Originating Type
- c = Originating TN
- d = Terminating Type
- e = Terminating TN
- f = QUEUE IN
- g = CR Dialed DN
- h = Digit Words (0)
- i = Queue Type
- AUD0423 AUDIT has detected an inconsistent DPNSS1 MWI table.
- ACTION:** The AUDIT program resets the inconsistent information. Make a software correction.
- AUD0441 A Call Register with MAINPM = .DIALING was not attached to the ORIGTN in the CR. CR has been idled = CRINFO.
- AUD0442 A Call Register with non-nil CRLINK does not have a QUEUE_ID. CRLINK has been set to NIL - CRINFO, CRLINK.
- AUD0443 CR has QUEUE_ID, but CR was not found in that queue. CR placed in queue indicated by queue ID. CRINFO, EXPECTED QUEUE, ACTUAL QUEUE.

- AUD0444 A dialing CR contains TRK to TRK connection with extended external ID, but CR is not in slow answer recall timing. CRINFO, EXPECTED QUEUE, ACTUAL QUEUE.
- AUD0445 Established CR is not pointed to by ORIGIN. CR will be idled. CRINFO
- AUD0446 Established CR is not pointed to by TERTN. CR will be idled. CRINFO
- AUD0447 Established TRK to TRK connection has extended external ID, but terminating trunk has not been answered and CR does not reside in QU_RING or QU_2S. CRINFO.
- AUD0448 Invalid TERTN found in procedure ringing. CRINFO.
- AUD0449 CR, with either MIX or 500 set as TER, cannot be found in the 100 ms or the ringing queue. The CR will be placed in the 100 ms queue. CRINFO, expected queue, actual queue.
- AUD0450 Established CR is not pointed to by TERTN. CR will be idled. CRINFO
- AUD0451 Incoming TIE/NWK trunk was found in HALFDISC, but was not being monitored. A disconnect attempt will be made on the trunk. CRINFO, TERMINAL.
- AUD0453 Incoming TIE/NWK trunk was found in an invalid state. One disconnect attempt will be made on the trunk. CRINFO, TERMINAL.
- AUD0454 Call Register with MAINPM = established does not have any TNs in the Call Register. CR is idled. CRINFO
- AUD0455 Call Register indicates it has an ARS SON CR, but no ARS SON can be found. CRINFO
- AUD0456 Call Register with MAINPM = RINGING is connected to the ORIGIN, but has a TERTN of zero. Disconnect attempt will be made on the ORIGIN. CRINFO
- AUD0500 A slot is reserved as a reusable slot for one channel and as a standard slot on another channel.
- AUD0501 A slot, which is shown as reserved as a reusable slot, is not reserved in any system data structure. This message is output with AUD017 and AUD018.
- AUD0502 Invalid MAINPM for CR with son CR for periodic Camp-On tone. CR information and MAINPM are output.
- AUD0503 No father CR is linked to the son CR. Call Register (CR) information is output, the son CR is idled.
- AUD0504 Invalid MAINPM for son CR periodic Camp-On tone. Call Register (CR) information and MAINPM are output.
- AUD0507 TN DN
- A DID number is wrongly associated with the set for (Hospitality Management). TN of set and DID number are printed. DID number is cleared
- AUD0515 x y TN1 TN2
- Slot y on Loop x has been reserved as a non-reusable slot for tn1, but can still be used on tn2. Procedure DTI_SLOT_AUD
- AUD0516 Y R Slot y is on a loop is reusable, but has a non-zero RESERV_COUNT value against it in the U_SLOT_SHARE_BLK. Procedure CHK_RESERV_COUNT. R = Reserve Count
- AUD0517 BKI_SECRECY_BIT. The Break-In with Secrecy (BKIS) bit is set while BKIS is not active. The BKIS bit is cleared.
- AUD0518 Less than 10 percent of the XMI message registers are in the idle queue.

- AUD0519 i c l A count of the XMI message registers having queue ID "I" do not match the field length for that queue's data block. i = queue ID, c = Count for message register, l = Length from the queue data block.
- AUD0520 i c The set pointers have failed for Virtual Network Services (VNS). i = VNS Index, c = Customer number.
- AUD0521 i c p a The CR pointer does not match the Virtual Network Services (VNS) Active CR. i = VNS Index, c = Customer number, p = CR Pointer, a = Active CR for VNS.
- AUD0522 i c m a In the Virtual Network Service application, there exists a VNS Index mismatch or Invalid call state. i = VNS Index, c = Customer number, m = Message CR, a = Active CR for VNS
- AUD0523 Invalid MAINPM for RADIO PAGING process. *CRINFO
- AUD0524 Unable to locate son CR when father CR indicates an RPA_PROCESS son type. *CRINFO
- AUD0525 Invalid main PM for RPA son CR. Main PM for the Radio Paging son should be Radio Page. *RPA_SON_INFO
- AUD0526 RPA state error. If RPA CALL bit is set, then RPA ANSWER cannot be set and vice versa. *CRINFO (Father)
- AUD0527 Son CR found when RPA call has been answered. *FATHER_SON_INFO
- AUD0528 RPA CALL bit is not set when father has an RPA Process son type. *FATHER_SON_INFO
- AUD0529 Father and RPA son do not have the same ORIGTNs. *FATHER_SON_INFO, ORIGTN of SON CR
- AUD0530 RPA father CR has trunk still attached while undergoing meet-me or recall timing. *RPA_SON_INFO
- AUD0531 The RPA son is not in the meet-me queue as expected. *RPA_SON_INFO
- AUD0532 The trunk is not a Radio Paging trunk. *FATHER_SON_INFO, RPA_CR_ROUTE_NUM in Son CR
- AUD0533 Main PM should only go to ringing when the RPA trunk is dropped. *RPA_SON_INFO, PROCESS_TYPE of RPA SON CR
- AUD0534 Invalid AUXPM for Single System RPA. AUXPM of RPA accessing is valid only for multisystem RPA configurations. *CRINFO
- AUD0535 Invalid AUXPM for RPA son when AUXPM of father CR is RPA accessing. *father_son_info
- AUD0536 RPA process son type expected when AUXPM of Main CR is RPA accessing. *CRINFO (Father)
- AUD0537 Invalid AUXPM for RPA package unequipped. *CRINFO (Father)
- AUD0538 Unable to find the father CR for this RPA son CR. *rpa_son_info
- AUD0539 Invalid Main PM when RPA package is not equipped. *rpa_son_info
- AUD0540 Son CR is not in the Meet-Me queue as expected. *rpa_son_info
- AUD0541 TERTN of Father CR should be an RPA trunk. *Father_Son_Info
- AUD0542 RPA son type is invalid for RPA_Answer state. *crinfo

AUD0543 TNtrans of the TERTN in Father CR failed. *crinfo
 AUD0544 RPA system PTR is nil. *Father_Son_Info
 AUD0545 SETCUSTPTRS failed. Unable to find customer pointers. *crinfo
 AUD0546 No RPA son type indicated in the Father CR. *crinfo
 AUD0547 SET ROUTE PTRS failed. Invalid route associated with the TERTN. *crinfo
 AUD0548 No ACD CR is associated with the MAIN CR for CCR process.
 AUD0549 Process type must be ICP_PROCESS (CCR).
 AUD0550 DN type is not a CDN.
 AUD0551 DN type is not an ACD DN.
 AUD0552 CCR restoration timeslice Call Register does not point to the call to be restored.
 AUD0553 The timeslice Call Register is not in the two second queue.
 AUD0554 Mainpm of ICP call which is presented to an agent should be .RINGING.
 AUD0555 ICP SON does not have a father CR.

AUD0557 DATA

Message CR does not match linkage in message CR table.

Output data:

Address of the message CR

TN in the message CR

Call reference number in the message CR

Linkage in message CR table

TN in the message CR linked from CR table

Call reference number in the message CR linked from CR table.

AUD0558 DATA

B-channel packet data nail up connection between DSL B-channel and Packet Handler is broken. The DSL B-channel TN is output with the following error code and additional data:

1 = No Call Register for nail up connection.

2 = TNTRANS on PRI channel TN failed. PRI Channel TN is also output.

3 = Invalid PRI loop type. PRI channel TN is also output.

4 = PRI channel is not dedicated for the connection. Channel TN is also output. 5 = Incorrect TRUNK PM. PRI channel TN is also output.

6 = Invalid Call Register contents. Address of the Call Register, types of both originating and terminating parties, type of call and MAIN PM are also output.

AUD0559 DATA

Invalid information transfer capability (BCAP). Output data: TN, call reference number and the BCAP value stored in the message CR.

AUD0560 DATA

Inconsistent message CR and CR linkages. Output data: DSL TN, call reference number and the following error code:

000001 = CR is missing and usage bit is not set. Message CR will be discarded. 000002 = Message CR is missing and usage bit is not set. CR will be discarded. 000005 = CR is missing. Message CR will be discarded and usage bit is cleared. 000006 = Message CR is missing. CR will be discarded and usage bit is cleared.

For 000001 and 000005, the call reference number and the cause value in the message CR are output. For 000002 and 000006, the AUX & MAIN PMs, the originating and terminating parties' TNs and the dialed DN (in Hex) in the CR are output.

AUD0561 DATA

Incorrect number of VCE/DTA calls. The number of calls stored is updated with the number of calls counted. Output data: DSL TN, type, number of calls counted and number of calls stored.

AUD0562 TN No DSL data. The TN is output.

AUD0563 The CCR_IVR_CR pointer in the CCR main Call Register does not point to its CCR IVR Call Register. The pointer will be set to point to the CCR IVR Call Register like it should. Procedure TERMCRPTR.

AUD0564 The main Call Register for a CCR IVR call connected to an IVR port is not in its CDN like it should be. Procedure TERMCRPTR.

AUD0570 The B CH link for printed {DCHNO} is blocked for outgoing calls (DCH_OTG_BUSY is set) and no outgoing call is active on the BCH link. Link is unblocked.

AUD0571 q qptr i n h

This XMI queue's data block is corrupted.

q = queue being audited

qptr = pointer to queue data block

If qptr is not NIL, the following fields are printed from the queue data block:

i = queue ID from queue data block

n = queue length from queue data block

hptr = pointer to head of queue

eptr = pointer to end of queue

AUD0572 q i mptr mln

This XMI message register has an invalid queue ID or link pointer.

q = queue being audited

i = message register's queue ID

mptr = message register pointer

mlnk = link to next message register in queue.

AUD0573 q This XMI queue is corrupted. q = queue being audited.

AUD0574 i mptr

This XMI message register has an invalid queue ID. i = message register's queue ID, mptr = message register pointer.

AUD0575 TCAP CR is in invalid state; it will be idled.

AUD0576 DATA

Call ID in CR does not match Call ID entry in internal table. Internal Table entry cleared. Output data appears as follows: {Call ID} {CUST} {CR} {MAIN & AUX PMs} {ORIGTYPE/TERTYPE} {ORIGTN} {TERTN} {QUEUE_IN} {CR_DIALLED_DN} {DIGITLOAD} {DIGITS...}

AUD0577 DATA

Call ID in Call Register does not have associated pointer in Call ID Table. Call ID field in CR set to zero. Output data appears as follows: {Call ID} {CUST} {CR} {MAIN & AUX PMs} {ORIGTYPE/TERTYPE} {ORIGTN} {TERTN} {QUEUE_IN} {CR_DIALLED_DN} {DIGITLOAD} {DIGITS...}

AUD0578 DATA

Table entry references CR with out of range Call ID. Call ID in CR set to zero and internal Table entry cleared. Output data appears as follows: {Call ID} {CUST} {CR} {MAIN & AUX PMs} {ORIGTYPE/TERTYPE} {ORIGTN} {TERTN} {QUEUE_IN} {CR_DIALLED_DN} {DIGITLOAD} {DIGITS...}

AUD0579 DATA

Internal Call ID Table entry references conference block which does not contain expected Call ID value. Internal Table entry cleared. Output data appears as follows: {U_CONF_PTR} {Call ID}

AUD0580 DATA

No conference exists for Call ID value in conference block. Associated entry in internal Call ID Table is cleared, as well as Call ID field in conf blk. Output data appears as follows: {U_CONF_PTR} {Call ID} {Conf Group}

AUD0581 DATA

Out of range Call ID associated with {Conf Group} found in conference block. Call ID field in conference block set to zero. Output data appears as follows: {U_CONF_PTR} {Call ID} {Conf Group}

AUD0582 DATA

Call ID in conference block associated with {Conf Group} does not have associated pointer in Call ID Table. Call ID field in conference block set to zero. Output data appears as follows: {U_CONF_PTR} {Call ID} {Conf Group}

AUD0583 DATA

The nail up of tandem connection is not correct. Recovery is performed. Output data appears as follows: {error number} {incoming PRI TN} {outgoing PRI TN}

Error numbers:

1 = no Call Register for the dedicated connection

3 = invalid PRI loop type

4 = PRI TN is not configured for tandem connection

5 = incorrect trunk pm

6 = invalid content at Call Register (content is printed)

8 = PRI TN does not match what is stored in the Call Register.

AUD0587

MF S/R pointing to CR which does not contain its TN. Active Call Register of MF S/R set to nil. TN, CDR information, and progress mark are output.

- AUD0588 MFK TN of active MFK S/R not correct. MFK TN set to terminal.
- AUD0589 Procedure AUDIT_DPNSS_ISDN: TNTRANS failed on DPNSS_TN field of the DPNSS ISDN CR. This Call Register is idled.
- AUD0590 Procedure AUDIT_DPNSS_ISDN: DPNSS_TN field of the DPNSS ISDN CR does not correspond to a trunk. This Call Register is idled.
- AUD0591 Procedure AUDIT_DPNSS_ISDN: DPNSS_TN field of the DPNSS ISDN CR does not correspond to a DPNSS trunk. This Call Register is idled.
- AUD0592 Procedure AUDIT_DPNSS_ISDN: DPNSS_TN field of the DPNSS ISDN CR is not correctly linked to the unprotected DPNSS channel block. This Call Register is idled.
- AUD0593 Procedure AUDIT_DPNSS_ISDN: ACTIVECR field of the unprotected DPNSS channel block is nil. This Call Register is idled.
- AUD0598 {ORIGTN} {Login TN}
- TN is registered as logged into Set Based Administration but its active CR does not have an SBA process, the login session and its resources are released.
- AUD0599 TN TN is registered as logged into Set Based Administration but its active CR does not have an SBA process, the login session and its resources are released.
- AUD0600 {TN} {MAINPM} {AUXPM}
- TN is registered as logged into Set Based Administration but its MAINPM and AUXPM do not contain valid values. They should be: MAINPM = DIALING and AUXPM = SBA_DIALING or MAINPM = SPECIAL and AUXPM = SBA_TIMEOUT
- AUD0601 TN IDX1 IDX2
- The session index being audited (idx1) contains TN as the logged in TN, however, the SBA_SESSION_IDX field in the SBA son CR contains a different session number (idx2). All resources associated with session (idx1) are released from the multi-user login tables.
- AUD0602 A TN or DN resource was found allocated to a Set Based Administration session which is no longer logged in. The resource is released
- AUD0604 Answered M911 Abandoned Calls cannot be .ESTABLISHED
- AUD0605 Illegal AUXPM for M911 Abandoned Call...should be .M911_CAB
- AUD0606 No SON CR for M911 Abandoned Call
- AUD0607 Unsuccessful check for an established EI conference: pointer AUXCR in Ublock of the Orig channel does not match the identified Unwanted CR of the EI conference.
- ACTION:** Force AUXCR the Unwanted's CR.
- AUD0608 Unsuccessful check for an established EI conference: pointer AUXCR in Ublock of the Unwanted channel does not match the identified Orig CR of the EI conference.
- ACTION:** Force AUXCR the Orig's CR.
- AUD0609 Unsuccessful check for an established EI conference: The SW could not identify the EI Originating party.
- ACTION:** If possible, revert the EI conference back to an ordinary conference. Clear EI flags and reserved slots if any.

- AUD0610 Unsuccessful check for an established EI conference: The SW could not identify the EI Wanted party.
ACTION: If possible, revert the EI conference back to an ordinary conference. Clear EI flags and reserved slots if any.
- AUD0611 Unsuccessful check for an established EI conference: The SW could not identify the EI Unwanted party.
ACTION: If possible, revert the EI conference back to an ordinary conference. Clear EI flags and reserved slots if any.
- AUD0617 Illegal ORIGTYPE or ORIGTN info in answered M911 Abandoned Call.
- AUD0618 The M911 AUX CR unprotected trunk block should not point to aux CR for an abandoned call.
- AUD0619 Unable to find the father CR for this L1MFC son CR. CRINFO is output. This CR is idle.
- AUD0620 {tn} {priority} {acd dn}
 An MQA ACD agent was found to have an invalid Priority value associated with an ACD DN. The priority was changed to equal the Priority value in the PRI field in the set's Protected Line Block (use OVL 20 to print TNB).
- AUD0621 {tn} {acd dn}
 An MQA agent was found to have a DN in its MQA data block which is not a valid ACD DN.
ACTION: Log out immediately and log back in specifying new ACD DNs.
- AUD0622 {tn} {acd dn}
 An MQA ACD agent was found to be serving an ACD DN that is not compatible with MQA. Specifically, one of the following prompts in OVL 23 is set for the ACD DN: IVMS, DSAC, IVR, IMS, or the DN is a CDN.
ACTION: Log out immediately and log back in specifying new ACD DNs to serve.
- AUD0623 cust route old_counter new_counter
 Actual number of idle trunks in route is different than number in idle-trunk-counter in route block. Counter is corrected.
ACTION: If AUD0623 occurs frequently, contact your technical support group.
- AUD0624 Busy ISPC link not associated to any end-user.
ACTION: Use overlays 60 and 80 to detect if any inconsistent connections exist. If so, run AUDIT again. If the corruption still exists, then remove and reconfigure the corrupted TNs.
- AUD0625 ISPC data structures corruption.
ACTION: Use overlays 60 and 80 to detect if any inconsistent connections exist. If so, run AUDIT again. If the corruption still exists, then remove and reconfigure the corrupted TNs.
- AUD0626 IDLE ISPC link associated to an end-user.
ACTION: Use overlays 60 and 80 to detect is any inconsistent connections exist. If so, run AUDIT again. If the corruption still exists, then remove and reconfigure the corrupted TNs.

- AUD0632 The VDN data structure is corrupted. Some VDN blocks may be lost.
ACTION: AUDIT has restored the recoverable VDN blocks. VDN blocks which have been lost must be recreated in LD 79.
- AUD0643 Invalid SFR feature is found from SFR call register.
ACTION: Contact your technical support group.
- AUD0644 Invalid Application VAS ID is found from an IAGT TN.
ACTION: Contact your technical support group.
- AUD0645 P_IAGT_BLK is not allocated for an IAGT TN. IAGT TN is deacquired.
ACTION: Contact your technical support group.
- AUD0646 IAGT_TERMINAL is updated due to mismatch with IAGT TN.
ACTION: Contact your technical support group.
- AUD0647 IAGT TN (control login ACD agent) is not linked to IAGT link.
ACTION: Contact your technical support group.
- AUD0648 Audit VAS ID is invalid.
ACTION: Contact your technical support group.
- AUD0649 The last IAGT TN pointer of the IAGT link is not referenced to the last IAGT TN from the IAGT link.
ACTION: Contact your technical support group.
- AUD0650 The TITH Call Register does not match the RAN Route data.
ACTION: Report the problem if the condition persists.
- AUD0651 The TITH CR is lost.
ACTION: Report the problem if the condition persists.
- AUD0652 RAN Broadcast Timeslice Call Register is not in the 128ms queue.
ACTION: Report the problem if the condition persists.
- AUD0653 The TITH Call Register is not in the 2S queue.
ACTION: Report the problem if the condition persists.
- AUD0655 Invalid attendant number in the priority buzz call register.
- AUD0656 Priority buzz call register should be linked to the unprotected attendant block.
- AUD0657 An Attendant Console can have only one priority buzz process call register associated with it.
- AUD0658 Attendant cannot be maintenance busy or position busy when it has a priority buzz call register associated with it.
- AUD0659 Analog Console associated with priority buzz call register is not supported.
- AUD0660 The priority buzz call register should be in the 2 seconds timing queue.
- AUD0661 Broadcast trunk list was found to be broken and was subsequently rebuilt.
ACTION: Report the problem if the condition persists.

AUD0662 Broadcast speechpath counts were found to mismatch and were subsequently realigned.

ACTION: Report the problem if the condition persists.

AUD0663 Tone Detector pointing to CR does not contain its terminal number. Active call register set to nil. Tn, CR information, progress mark and TDET_TN are output.

AUD0700 xxxx yyyy

Where xxxx = timeslot word and yyyy = junctor word. Mobility Audit is checking the MISP/EIMC nail up connection. It detected a timeslot reserved for an EIMC but the EIMC_TN is marked as .SLOT_NOT_USED.

ACTION: Disable the MISP and enable the MISP. 

BERR — Bus Error Monitor

How the BERR works

Bus Error Monitor is a resident program. BERR does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

These messages indicate errors with the various buses.

BERR messages

BERR0000	CP local slave BERR
	ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0001	CP IPB master data error
	ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0002	CP IPB master time out
	ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0003	CP IPB master error
	ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0004	CP local decode error
	ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.

- BERR0005 CP illegal access
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0006 CP BIC default BERR <address>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0007 CP BIC BERR: addr=a; BERRZ=b.
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0010 CP CMB triggered berr: addr = a
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0012 CP SRA DMA access berr: addr=a
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0016 CP SRA parity BERR <address>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0017 CP HPM timeout BERR <address>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0020 CP AP No response BERR <address>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0021 CP AP BIC IPB parity <address>, <ERRZ>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0022 CP AP local BERR <address>, <ERRZ>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

- BERR0023 CP AP BIC illegal access <address>, <ERRZ>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0024 CP AP BIC default BERR <address>, <ERRZ>
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0200 SIMM: Write Protection Violation
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0201 x y SIMM x y: Parity error at remote x y (address).
ACTION: Reseat the SIMMs. If the problem persists, replace the CP card.
- BERR0202 x y SIMM x y: Parity error at local x y (address).
ACTION: Reseat the SIMMs. If the problem persists, replace the CP card.
- BERR0203 x y SIMM x y: Unrecoverable memory or register Write error at x y (address).
ACTION: Reseat the SIMMs. If the problem persists, replace the CP card.
- BERR0204 x y SIMM x y: Unrecoverable memory or register Read/Write error at x y (address).
ACTION: Reseat the SIMMs. If the problem persists, replace the CP card.
- BERR0300 CNIP x y z: Address=a, BERZ=b
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0400 CNIB x y: IPB data parity error (write)
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0401 CNIB x y: Local Master parity error (read)
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0402 CNIB x y: Local Master Time out
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0403 CNIB x y: Local Master bus error
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

BERR0404	CNIB x y: IPB Event Interrupt Read ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0405	CNIB x y: Local Priority Request Asserted ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0406	CNIB x y: Unaligned ID Eprom Access ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0407	CNIB x y: Unaligned Event Interrupt Access ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0408	CNIB x y: Addr=a, PARERRZ=b, IPBNT=c, BERRZ=d, ERRZ=e ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware replacement</i> guide. If this message is not hardware related contact your technical support group.
BERR0500	HI EXC Self x: Restarting self due to Queue Corruption ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0501	HI EXC Self x: Retrying Bus Error Analysis ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0502 x	HI EXC Self x: TID: a, Action: b ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0503 x	HI EXC Self x: Action a ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.
BERR0504 x	HI EXC x: Task: x SUSPENDED ACTION: If this message identifies faulty hardware, replace it by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message is not hardware related contact your technical support group.

- BERR0505 x HI EXC x: Recovered from Bus error in ISR (Addr=a)
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0506 x HI EXC x: Starting Bus Error analysis of UNKNOWN (x) task.
 Addr=x Note: state of this *task* cannot be changed
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0507 x HI EXC x: Starting analysis of task x
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0508 x y HI EXC x: Completing analysis of task x. Decision: y
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0509 HI EXC x: Bus error in ISR. SR=a, PC=b, Addr=c, SSW=d
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0510 HI EXC x: Bus error in task x. SR=a, PC=b, Addr=c, SSW=d
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0511 HI EXC x: Restart of Task x was averted. Unknown address y has been remapped. Number of remapped addresses: z. Total number of remaps: n
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0512 HI EXC x: Address remap threshold exceeded.
ACTION: Restart system.
- BERR0513 HI EXC x: Address remap has been reinitialized
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BER R514 HI EXC x: Recovered from Bus Error at Addr=x
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

- BERR0515 HI EXC x: Analyzing task x. Recommendation: y
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0600 x y z
- NCB x y:
- ACTION:** Check Device x at address y in Group z. Check I/O device, network device, or PS card.
- BERR0601 x NCB x y: No Response from 3PE on Group a.
- ACTION:** Check both connectors on both ends of the CNI to 3PE cable. Be sure the 3PE Enable/Disable switch is Enabled (up), and switch settings are correct.
- BERR0700 EXCH: Total threshold exceeded; vector=a, PC=b, fault addr=c
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0701 EXCH: Threshold exceeded; vector=a, PC=b
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0702 EXCH: Total threshold exceeded; vector=a, PC=b, fault addr=c
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0703 EXCH: Total threshold exceeded; vector=a, PC=b
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0704 EXCH x: y in ISR. SR=a, PC=b, Addr=c, SSW=d
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0705 EXCH x: y in Task n. SR=a, PC=b, Addr=c, SSW=d
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0800 x y IOP x y: ERRZ reason register content: a
- ACTION:** If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

- BERR0801 x y IOP x y: BIC detected an IPB data parity error
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0802 x y IOP x y: IOP BIC detected a local data parity error
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0803 x y IOP x y: Local IOP bus timer timed out
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0804 x y IOP x y: IOP BIC received a local bus error
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0805 x y IOP x y: IPB attempted an Event interrupt read
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0806 x y IOP x y: Local IOP bus asserted priority request during an inbound cycle
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0807 x y IOP x y: IPB attempted an unaligned IDProm access
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0808 x y IOP x y: IPB attempted an unaligned Event interrupt
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0809 x y IOP x y: IOP window is disabled
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.
- BERR0810 x y IOP x y: Wrong IOP window size
ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

BERR0811 x y IOP x y: Wrong IOP substitution addr: x, addr should be: y

ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

BERR0812 x y IOP x y: Wrong IOP IPB match addr: x, addr should be: y

ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group.

BERR0813 x y IOP x y: Wrong IOP Top of Card addr: x, addr should be: y

ACTION: If this message identifies faulty hardware, replace it by following the steps in the *Hardware Replacement* (553-3001-520). If this message is not hardware related contact your technical support group. 

BIC — Bus Interface Circuit

How the BIC works

Bus Interface Circuit is a resident program. BIC does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

These messages are Test Failure messages for the Bus Interface Circuit (BIC) that provides the interfaces and protocols for the Inter-Processor Bus (IPB).

BIC messages

BIC0000 x y	BIC x y register read/write/verify test failed. ACTION: Contact your technical support group.
BIC0001 x y	BIC x y BIC/SRA interface IPBINT test failed. ACTION: Contact your technical support group.
BIC0002 x y	BIC x y BIC/SRA interface PARERR test failed. ACTION: Contact your technical support group.
BIC0003 x y	BIC x y arbitration test failed. ACTION: Contact your technical support group.
BIC0004 x y	BIC x y IRQ test failed. ACTION: Contact your technical support group.
BIC0005 x y	BIC x y timer test failed. ACTION: Contact your technical support group.
BIC0006 x y	BIC x y IOP event interrupt test failed. ACTION: Contact your technical support group.
BIC0007 x y	BIC x y CP self event interrupt test failed. ACTION: Contact your technical support group.

- BIC0008 x y

BIC x y initial conditions failure.
ACTION: Contact your technical support group.
- BIC0009 x y

BIC x y window test failure.
ACTION: Contact your technical support group.
- BIC0010 x y

BIC x y testing the ASIC.
ACTION: Contact your technical support group.
- BIC0011 x y

BIC x y card failed one or more BIC test.
ACTION: Reseat or replace the card. Contact your technical support group. 

BSD — LD 45 Background Signaling Diagnostic

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Before changing circuit cards, be aware of the procedures outlined in the section titled *Do this when replacing circuit cards*, found in the *Hardware maintenance tools* chapter of this guide.

The Background Signaling and Switching Diagnostic program (LD 45) tests peripheral equipment and is used to perform continuity tests on superloops.

Any telephone, terminal, console or card that fails the signaling test may be disabled by this program. To re-enable the device, see LD 32. If a device fails the signaling test and is disabled, it will be automatically re-enabled if it passes a subsequent signaling test, whether the test was manually requested or automatically initiated.

For superloops use LD 30 to test signaling and network memories.

This Overlay is not available on Option 11 systems. Use Overlay 30 (LD 30) to perform signaling tests on these systems.

Intergroup Switch (IGS) assignments

The following table shows the slot locations of the Intergroup switch (IGS) and 3 Port Extender (3PE) cards for each group.

- Group 0—QCA55 Cabinet
 - QSD39—Network Shelf 0 (front-left):
 - IGS 0 is in slot 12
 - IGS 2 is in slot 13
 - 3PE is in slot 14
 - QSD40—Network Shelf 1 (front-right):
 - IGS 1 is in slot 3
 - IGS 3 is in slot 2
 - 3PE is in slot 1
- Group 1—QCA55 Cabinet
 - QSD39—Network Shelf 0 (rear-left-bottom):
 - IGS 4 is in slot 12
 - IGS 6 is in slot 13
 - 3PE is in slot 14

QSD40—Network Shelf 1 (rear-right-bottom):

IGS 5 is in slot 3

IGS 7 is in slot 2

3PE is in slot 1

Group 2—QCA55 Cabinet

QSD39—Network Shelf 0 (rear-left):

IGS 8 is in slot 12

IGS 10 is in slot 13

3PE is in slot 14

QSD40—Network Shelf 1 (rear-right):

IGS 9 is in slot 3

IGS 11 is in slot 2

3PE is in slot 1

Group 3—QCA108 Cabinet

QSD39—Network Shelf 0 (front-right):

IGS 12 is in slot 12

IGS 14 is in slot 13

3PE is in slot 14

QSD39—Network Shelf 1 (front-right):

IGS 13 is in slot 12

IGS 15 is in slot 13

3PE is in slot 14

Group 4—QCA108 Cabinet

QSD40—Network Shelf 0 (rear-left):

IGS 16 is in slot 3

IGS 18 is in slot 2

3PE is in slot 1

QSD40—Network Shelf 1 (rear-left):

IGS 17 is in slot 3

IGS 19 is in slot 2

3PE is in slot 1

Intergroup Switch (IGS) to group number associations

To find the associated IGS number, cross-reference the transmitting group number and the junctor number. For example, transmitting group 2 and junctor 5 are associated with IGS 9.

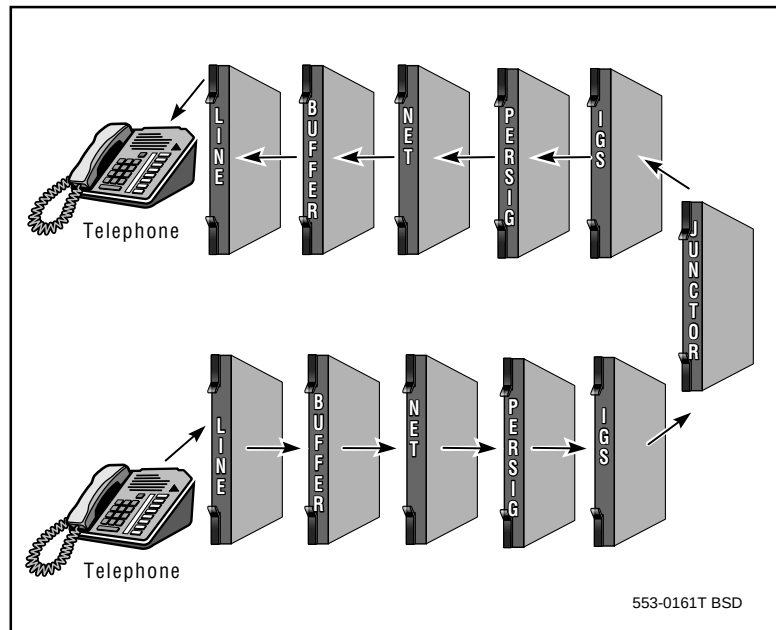
Transmitting Group:						
	0	1	2	3	4	
IGS Number:					Juncture number:	
	0	4	8	12	16	0, 4, 8, 12, 16, 20, 24, 28
	1	5	9	13	17	1, 5, 9, 13, 17, 21, 25, 29
	2	6	10	14	18	2, 6, 10, 14, 18, 22, 26, 30
	3	7	11	15	19	3, 7, 11, 15, 19, 23, 27, 31

How the BSD works

Continuity tests

BSD performs continuity of speech path tests between the following:

- ◆ network loops
- ◆ buffers
- ◆ line cards
- ◆ digital telephones
- ◆ Intergroup Switch (IGS)
- ◆ Clock Controller (CC) or System Clock Generator (SCG)
- ◆ Peripheral Signaling (PS)
- ◆ Segmented Bus Extenders (SBE) or Bus Extenders
- ◆ 3 Port Extenders (3PE)
- ◆ extender cables



After replacing any of the above listed components due to a suspected fault, run the continuity test to confirm the faults have been cleared.

Use LD 30 to test superloops.

Signaling test

The signaling test disables any digital telephone, terminal, console or card that fails. Passing a subsequent signaling test will automatically re-enable a failed device.

Note: For systems running Release 15 and later, signaling tests are performed in LD 30. Include LD 30 if LD 45 is run as a background or midnight routine. Including LD 30, improves fault isolation as LD 30 detects network memory faults before LD 45 runs continuity tests.

Running LD 45 in the background mode

When run in the background, LD 45 performs the following on all enabled network loops:

- ◆ tests continuity of the speech path between each network card and its associated PE shelves
- ◆ tests continuity of the speech path between all network cards
- ◆ identifies non functioning paths between network cards

Note: When LD 45 is running in the background, only new faults are output.

BSD message makeup

BSD output messages indicate test problems and fall into three categories.

- ◆ interactive messages reporting non-admissible user input
- ◆ Peripheral Equipment messages reporting PE condition
- ◆ Network messages reporting network shelf equipment conditions

The commands apply to both regular networks and superloops in the following table:

BSD commands		
Command	Description	Release
LD 45 commands		
NSIG	Perform the network memory and continuity tests (Release 14 and earlier)	basic-1
TEST (loop)	Perform a complete continuity test for one or all loops Unplugged cards are not tested for continuity	basic-1
XINF	Display the tag numbers of all running and completed continuity tests	xpe-15
XSTA x	Get the status of a manual continuity test with TAG = x	xpe-15
XSTP x	Stop a manual continuity test with TAG = x	xpe-15

Manual Continuity Test

The Manual Continuity Test (MCT) allows you to isolate intermittent faulty points reported by the Background Continuity Test (BCT). For example, BCT reports faults between A, B, and C. Run the MCT between A and B, and then between B and C to determine how often the failure occurs.

Manual Extended Continuity (XCON) test commands

The XCON command is used to test various communication paths on or between the following:

- ◆ NT8D04 Network
- ◆ NT8D01 Controller
- ◆ Multi-purpose ISDN Signaling Processor (MISP)
- ◆ S/T-Interface Line (SILC)
- ◆ U-Interface Line (UILC) cards

Only one XCON test at a time can be run on a superloop.

XCON Sub-prompts



TEST = 1 Network Card to Controller

Enter one of the XCON commands shown at the left. xpe-15

- XCON 0** Perform test once and print out results
 - XCON H hhh** Repeat Extended Continuity test for hhh hours (hhh = 1-255)
 - XCON M mmm** Repeat Extended Continuity test for mmm minutes (mmm = 1-255)
 - XCON S sss** Repeat Extended Continuity test for sss seconds (sss = 1-255)
- This test uses the Network Card (NT8D04) as a pattern generator and the Controller (NT8D01) as the detector.

Prompt	Response	Description
TEST	1	Network Card to Controller
PATT	x	pattern (x = 0-7)
TYPG	N	Network Card is generator
SUPL	loop	0-156 in multiples of four
SLOT	xxx	timeslot 2-31, 34-63, 66-95, 98-127
TYPD	P	Controller is detector
TN	l s c u	valid TN on the Controller
TAG	x	tag number (1-15) assigned by the system



TEST = 2 Controller to Network Card

Enter one of the XCON commands shown at the left. xpe-15

- XCON 0** Perform test once and print out results
- XCON H hhh** Repeat Extended Continuity test for hhh hours
(hhh = 1-255)
- XCON M mmm** Repeat Extended Continuity test for mmm minutes
(mmm = 1-255)
- XCON S sss** Repeat Extended Continuity test for sss seconds
(sss = 1-255)
- This test uses the Controller (NT8D01) as a pattern generator and the Network Card (NT8D04) as the detector.

Prompt	Response	Description
TEST	2	Controller to Network Card
PATT	x	pattern (0-7)
TYPG	P	Controller is generator
TN	l s c u	valid TN on the Controller
TPD	N	Network Card is detector
SUPL	loop	0-156 in multiples of four
SLOT	xxx	timeslot 2-31, 34-63, 66-95, 98-127
TAG	x	tag number (1-15) assigned by the system



TEST = 3 Network Card to different Network Card

- Enter one of the XCON commands shown at the left. xpe-15
- XCON 0

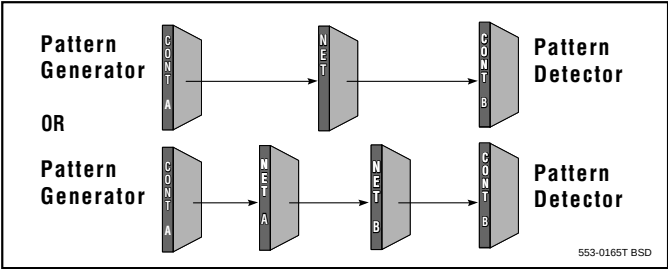
Perform test once and print out results
- XCON H hhh

Repeat Extended Continuity test for hhh hours
(hhh = 1-255)
- XCON M mmm

Repeat Extended Continuity test for mmm minutes
(mmm = 1-255)
- XCON S sss

Repeat Extended Continuity test for sss seconds
(sss = 1-255)
- This test uses the Network Card (NT8D04) as a pattern generator and another Network Card as the detector.

Prompt	Response	Description
TEST	3	Network Card to different Network Card
PATT	x	pattern (0-7)
TYPG	N	Network Card is generator
SUPL	loop	0-156 in multiples of four
SL0T	xxx	timeslot 2-31, 34-63, 66-95, 98-127
TYPD	N	Network Card is detector
SUPL	loop	0-156 in multiples of four
SL0T	xxx	timeslot 2-31, 34-63, 66-95, 98-127



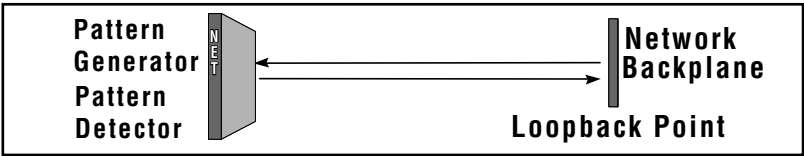
TEST = 4 Controller to different Controller

Enter one of the XCON commands shown at the left. xpe-15

- XCON 0** Perform test once and output results
- XCON H hhh** Repeat Extended Continuity test for hhh hours
(hhh = 1-255)
- XCON M mmm** Repeat Extended Continuity test for mmm minutes
(mmm = 1-255)
- XCON S sss** Repeat Extended Continuity test for sss seconds
(sss = 1-255)

This test uses a Controller (NT8D01) as a pattern generator and another Controller as a detector. The pattern is sent through one or two Network Cards (NT8D04).

Prompt	Response	Description
TEST	4	Network Card to Controller
PATT	X	pattern (0-7)
TYPG	P	Controller is generator
TN	l s c u	valid TN on the Controller
TYPD	P	Controller is detector
TN	l s c u	valid TN on the Controller
GSLT	xxx	timeslot 2-31, 34-63, 66-95, 98-127 on generator Network Card
DSL T	xxx	timeslot 2-31, 34-63, 66-95, 98-127 on detector Network card
JUNC	X	juncr if Network cards in different groups
TAG	X	tag number (1-15) assigned by the system

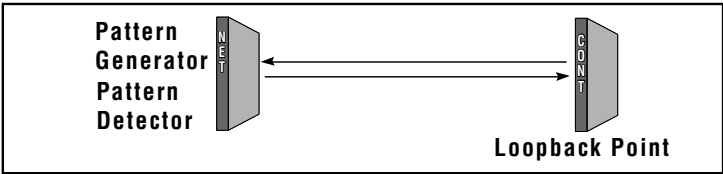


553-0167T BSD

TEST = 5 Network Card to Network Card (loopback at backplane)

- Enter one of the XCON commands shown at the left. xpe-15
- XCON 0** Perform test once and print out results
- XCON H hhh** Repeat Extended Continuity test for hhh hours
(hhh = 1-255)
- XCON M mmm** Repeat Extended Continuity test for mmm minutes
(mmm = 1-255)
- XCON S sss** Repeat Extended Continuity test for sss seconds
(sss = 1-255)
- This test uses the Network Card (NT8D04) as a pattern generator and detector. The pattern is sent to the network backplane and back.

Prompt	Response	Description
TEST	5	Network Card to Network Card (loop back at backplane)
PATT	x	pattern (0-7)
TYPG	N	Network Card is generator
SUPL	loop	0-156 in multiples of four
SLOT	xxx	timeslot 2-31, 34-63, 66-95, 98-127
TYPD	N	Network Card is detector
SUPL	loop	0-156 in multiples of four
SLOT	xxx	timeslot 2-31, 34-63, 66-95, 98-127
LBTY	N	through network backplane
TAG	x	tag number (1-15) assigned by the system

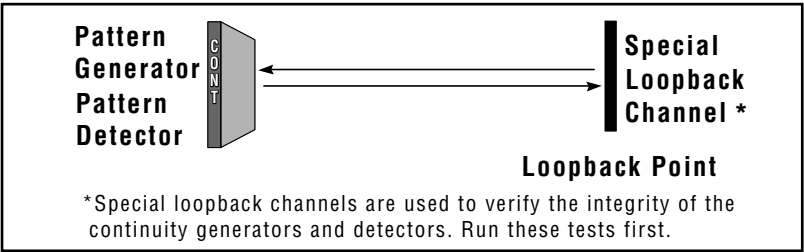


553-0168T BSD

TEST = 6
Network Card to Network Card (loopback through Controller)

- Enter one of the XCON commands shown at the left. xpe-15
- XCON 0** Perform test once and print out results
- XCON H hhh** Repeat Extended Continuity test for hhh hours
(hhh = 1-255)
- XCON M mmm** Repeat Extended Continuity test for mmm minutes
(mmm = 1-255)
- XCON S sss** Repeat Extended Continuity test for sss seconds
(sss = 1-255)
- This test uses the Network Card (NT8D04) as a pattern generator and detector.

Prompt	Response	Description
TEST	6	Network Card to Network Card (loop back through Controller)
PATT	x	pattern (0-7)
TYPG	N	Network Card is generator
SUPL	loop	0-156 in multiples of four
SLOT	xxx	timeslot 2-31, 34-63, 66-95, 98-127
TYPD	N	Network Card is detector
		0-156 in multiples of four
SLOT	xxx	timeslot 2-31, 34-63, 66-95, 98-127
LBTY	P	through Controller
LBTN	l s 99 0	valid TN on the Controller
TAG	x	tag number (1-15) assigned by the system



553-0169T BSD

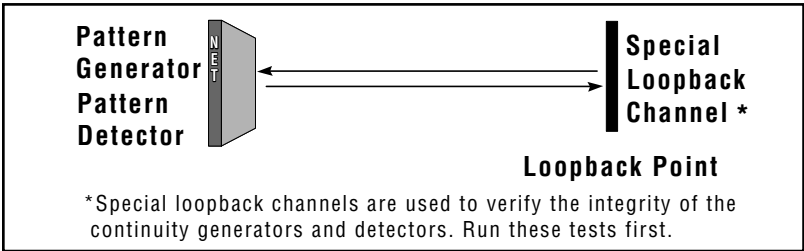
TEST = 7 Controller to Controller (special loopback channel)

Enter one of the XCON commands shown at the left. xpe-15

- XCON 0** Perform test once and print out results
- XCON H hhh** Repeat Extended Continuity test for hhh hours (hhh = 1-255)
- XCON M mmm** Repeat Extended Continuity test for mmm minutes (mmm = 1-255)
- XCON S sss** Repeat Extended Continuity test for sss seconds (sss = 1-255)

This test uses the Controller (NT8D01) as a pattern generator and detector. The pattern is looped back through a special loop back channel.

Prompt	Response	Description
TEST	7	Controller to Controller (special loop back channel)
PATT	x	pattern (0-7)
TYPG	N	Controller is generator
TN	l s 99 0	special Controller loop back channel
TAG	x	tag number (1-15) assigned by the system



553-0170T BSD

TEST = 8 Network Card to Network Card (special loopback channel)

Enter one of the XCON commands shown at the left. xpe-15

XCON 0 Perform test once and print out results

XCON H hhh Repeat Extended Continuity test for hhh hours
(hhh = 1-255)

XCON M mmm Repeat Extended Continuity test for mmm minutes
(mmm = 1-255)

XCON S sss Repeat Extended Continuity test for sss seconds
(sss = 1-255)

This test uses the Network Card (NT8D04) as a pattern generator and detector. The pattern is looped back through a special channel which is specified by timeslot 128.

Prompt	Response	Description
TEST	8	Network Card to Network Card (special loop back channel)
PATT	x	pattern (0-7)
TYPG	N	Network Card is generator
SUPL	loop	0-156 in multiples of four
SLOT	128	special Network loop back channel
TAG	x	tag number (1-15) assigned by the system

TEST = 9 Loop back test on Digital Subscriber Loop

	Enter one of the XCON commands shown at the left.	xpe-15
XCON 0	Perform test once and print out results	
XCON H hhh	Repeat Extended Continuity test for hhh hours (hhh = 1-255)	
XCON M mmm	Repeat Extended Continuity test for mmm minutes (mmm = 1-255)	
XCON S sss	Repeat Extended Continuity test for sss seconds (sss = 1-255)	
	This test uses the MISP as a pattern generator and detector. The pattern goes through the Network and Controller Card and is looped back at a single DSL. Both B- and D-channels are looped back.	

Prompt	Response	Description
TEST	9	Loop back test on Digital Subscriber Loop
PATT	x	pattern (0-7)
TYPG	N	Network Card is generator
SUPL	loop	0-156 in multiples of four
SLOT	128	special Network loop back channel
LBTY	3	DSL is requested for loop back
LBTN	l s c u	address of DSL
TAG	x	tag number (1-15) assigned by the system

TEST = 10 Loop back test on BRI line card

	Enter one of the XCON commands shown at the left.	xpe-15
XCON 0	Perform test once and print out results	
XCON H hhh	Repeat Extended Continuity test for hhh hours (hhh = 1-255)	
XCON M mmm	Repeat Extended Continuity test for mmm minutes (mmm = 1-255)	
XCON S sss	Repeat Extended Continuity test for sss seconds (sss = 1-255)	
This test uses the MISP as a pattern generator and detector. The pattern goes through the Network and Controller Card and is looped back at the line card level (for example, bus loop back). Both B- and D-channels are looped back.		

Prompt	Response	Description
TEST	10	Loop back test on BRI line card
PATT	x	pattern (0-7)
TYPG	5	MISP is generator
SUPL	loop	0-156 in multiples of four
SLOT	128	special Network loop back channel
LBTY	4	loop back at line card
LBTN	l s c d	address of DSL
TAG	x	g number (1-15) assigned by the system

Using the BSD message table to clear faults

To clear faults detected by the Background and Signaling Diagnostic, use the overlay loads located outside this chapter. To solve database programming errors, the action column in the BSD Message table in this chapter refers you to overlay loads in the *X11 Administration* (553-3001-311). For hardware faults, the action column refers you to diagnostic overlays found in this guide.

BSD messages

- p>BSD0000 The BSD program is loaded and ready for you to enter commands.
-
- ACTION:**
- Enter a command.
p>BSD0001 Invalid command.
-
- ACTION:**
- Check to make sure your data is correct and re-enter the command.
p>BSD0002 An attempt was made to enter a command while a previous TEST command was still being executed. The new command is ignored.
-
- ACTION:**
- Information only, no action required.
p>BSD0020 c The input buffer of the Peripheral Signaling (PS) card has overflowed during execution of the TEST command. Incoming signaling messages have been lost. The signaling test was terminated.
-
- ACTION:**
- Retry TEST command. This message does not indicate a fault.
p>BSD0021 c During a requested test of Peripheral Signaling (PS) card c, a large number of SL-1 line faults were detected, but the program did not have sufficient memory space available to it to record all these faults. Test of card c was terminated. This message does not necessarily imply a PS card fault. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.
-
- ACTION:**
- Retry the TEST command. If the same message appears, use STAT PER in LD 32 to get the status of the PS card(s). Use the ENLL command in LD 32 to enable any disabled disabled PS card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PS card(s) does not enable and the fault does not clear, replace the PS card(s) by following the steps in the
- Hardware Replacement*
- (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
p>BSD0022 During execution of a TEST command, the continuity test procedure encountered an “all channels busy” condition. One or more of the continuity tests were not performed.
-
- ACTION:**
- Re-enter the TEST command later. This message does not indicate a visit.
p>BSD0023 loop During execution of a TEST command, a message request generating/detecting patterns is not able to be sent to the NT8D04 network card
- loop**
- .
-
- ACTION:**
- Re-enter the command.
p>BSD0024 loop During execution of a TEST command, cannot query the continuity test result of the NT8D04 network card
- loop**
- .
-
- ACTION:**
- Re-enter the command.
p>BSD0080 c: s1 s2 sn
-
- The program has switched to CPU c; when this CPU is active. IGS card(s) s1, s2, etc. either do not respond or fail the memory test.
-
- Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. Compare lists of IGS cards with the corresponding list for the following BSD0080 and BSD0082 message. If the same IGS appears in both, the fault is likely on the IGS card indicated in the message.

ACTION: Use STAT IGS x in LD 39 to get the status of the IGS card(s). Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card(s) does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

2. If an IGS designation appears in this BSD0080 message only, or if there is no BSD0082 message, the fault can be on the CE EXT connecting CPU c to the Network Shelf. The CPU could not access the IGS because the extenders between them are faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card or 3 Port Extender card. Use ENL EXT x in LD 35 to enable any disabled extenders and run TEST in LD 45 to verify that the fault is cleared. If the extender card does not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0081 c: loop1 loop2 loop n

The program has switched to CPU c: when this CPU is active, Network **loop1**, **loop2**, etc. either do not respond or fail the memory test.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. Compare the list of network **loops** with the corresponding list for a BSD0083 message. If the same network loop appears in both BSD0081 and BSD0083, then the network card for the indicated loop can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable the loops and run TEST in LD 45 to verify that the fault is cleared. If that loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. If no network card on a particular network shelf responds, suspect a or b or c as follows:

a) The IGS card, as indicated in the message, can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

- b)** The cable, connecting the IGS card to the junctor, as indicated in the message, can be faulty.

ACTION: Replace the cable between the IGS card and the junctor by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

- c)** The Peripheral Signaling card for the shelf indicated in the message, can be faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide, to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable PS and run TEST in LD 45 to verify that the fault is cleared. If PS card does not enable and fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. If Clock Controller 0 is active to shelf 0 suspect a or b as follows.

- a)** The Clock Controller cable can be faulty.

ACTION: Replace the cable between the SCC card and the junctor by following steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

- b)** The cable between the network card and the Peripheral Buffer card, can be faulty.

ACTION: Replace the cable between PB card and Network card by following steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

4. If a network loop message appears in BSD0081 only, or if no BSD0083 message follows, the probable fault is on CE EXT connecting the CPU c to the Network Shelf.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and the 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0082 c: s1 s2 sn

The program has switched CPUs and CPU c has become the nonactive CPU. When CPU N was active prior to the switch, IGS cards s1, s2 etc. either did not respond or failed the memory test.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. Compare the list of IGS card with the corresponding list for the preceding BSD0080 message. If the same IGS card appears in both lists, the fault can be on the IGS card.

ACTION: Use STAT IGS x in LD 39 to get the status of the IGS card(s). Use ENL IGS x in LD 39 to enable any disabled IGS card(s) and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

2. If an IGS card appears in the message list for BSD0082 only, or if no BSD0080 message is present, suspect a or b as follows:
 - a) Any CE EXT connecting the network shelf on which the indicated network card is located, to the nonactive CPU.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and the 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- b) The cable, connecting the CE EXT to the network shelf on which the indicated network card is located, can be faulty.

ACTION: Replace the cable between the two extenders. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0083 c: loop1, loop2, loopn

The program has switched CPUs and CPU **c** is now the nonactive CPU. When CPU **c** was active prior to the switch, network **loop1**, **loop2**, etc. either did not respond or failed the memory test.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. Compare the list of network **loops** with the corresponding list for following the BSD0083 message. If the same network card appears in both lists, then the network card for the indicated loop can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. If no network card on a particular network shelf responds, the fault can be a or b or c as follows:

- a) The IGS on the network shelf can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of the IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards, and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

- b) The cable connecting the IGS to the network group, can be faulty.

ACTION: Replace the cable between the IGS card and the junctor by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- c) The Peripheral Signaling card for the shelf, can be faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS card. Use ENPS x in LD 32 to enable the PS and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. If System Clock Controller 0 is active to shelf 0 the fault can be a or b or c as follows:

- a) The SCC to the junctor board cable can be faulty.

ACTION: Replace the cable between the SCC card and the junctor by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the IGS chapter in this guide.

- b) The cable between the network card and the Peripheral Buffer card, can be faulty.

ACTION: Replace the cable between the PB card and the Network card, by following steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- c) The cable between the Peripheral Buffer cards, can be faulty.

ACTION: Replace the cable between the PB cards by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses, refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

4. If a network card appears in the message list for BSD0083 only, or if there is no BSD0081 message preceding, the probable fault can be a or b or c as follows.

- a) Any CE EXT connecting the network shelf to the nonactive CPU, on which the indicated network card is located, can be faulty.

ACTION: Check for BSD0081 message. Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- b) The cable connecting the CE EXT to the network shelf on which the indicated network card is located, can be faulty.

ACTION: Replace the cable between the two extenders. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0085 A possible CMA card fault.

ACTION: Use STAT CMA x in LD 35 to get the status of the CMA cards. Use ENL CMA x in LD 35 to enable CMA and run TEST in LD 45 to verify that the fault is cleared. If the CMA card does not enable and the fault does not clear, replace the CMA card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0086 c A possible CMA card fault.

ACTION: Use STAT CMA x in LD 35 to get the status of the CMA cards. Use ENL CMA x in LD 35 to enable CMA and run TEST in LD 45 to verify that the fault is cleared. If the CMA card does not enable and the fault does not clear, replace the CMA card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0090 The program has detected a power fault indication.

ACTION: Check the QPC84 power monitor LED indicators. If you need help, refer to the “PWR — Power and System Monitor” on page 851 in this guide.

BSD0101 p: loop1, loop2, loopn

The **loop1**, **loop2**, etc. on the same Peripheral Signaling card **p**, all fail the signaling test. Error code BSD0201 is implied for these loops. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The probable fault is the PS card, which is located on the same shelves as **loop1, loop2**, etc.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable PS and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. If the fault persists after the PS card is replaced, suspect a or b or c as follows.
 - a) The Miscellaneous Register card or IF card on the active CPU, can be faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate the Miscellaneous Register circuitry that can be combined with other circuitry on one card.

ACTION: Indiscriminate use of the following test command, especially during heavy telephone traffic periods, can cause the system to reload. Use TCPU in LD 35 to test the idle MISC circuitry or IF card. If the MISC circuitry or the IF card does not pass the test or the fault does not clear, replace it by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- b) The IGS cards located on the same shelves as **loop1, loop2**, etc., can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

- c) The network cards of **loop1, loop2**, etc., can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- d) The CE EXT connecting the active CPU to the affected PS card, can be faulty.

ACTION: Check and replace the Segmented Bus Extender card or the 3 Port Extender card by following the steps in the *Hardware Replacement* (553-3001-520). If this fails check the cable between the two extenders associated with the standby CPU and the network shelf, where the IGS card indicated in the message is located. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- e) Other network, conference or tone and digit switch (TDS) cards on the same shelf, can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the network loops. STAT L of LD 34 for TDS loops and STAT L of LD 38 for conference loops. Use ENLL l in LD 32 to enable network loops, ENLL L of LD 34 for TDS loops, and ENLL L of LD 38 for conference loops. Run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the following chapters:

- ◆ the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 for network assistance
- ◆ the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 for tone and digit switch assistance
- ◆ the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 for conference assistance

BSD0103 p

A fault is detected on outgoing signaling on peripheral signaling card **p**. Issue the TEST command several times. If this code reappears, PS card **p** is probably faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. If the fault persists after the PS card is replaced as follows, then suspect a.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable the PS card and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- a) The Miscellaneous Register card or IF card on the active CPU, can be faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Miscellaneous Register circuitry that can be combined with other circuitry on one card.

ACTION: Indiscriminate use of the following test command, especially during heavy telephone traffic periods, can cause the system to reload. Use TCPU in LD 35 to test the idle MISC circuitry or IF card. If the MISC circuitry or the IF card does not pass the test or the fault does not clear, replace it by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2. If the fault indication appears when one CPU is active but not when the other is active and the fault affects only one group, the probable fault is either a or b or c.

- a) The CE EXT connecting the affected group to the CPU which is active when the fault indication appears, can be faulty.

ACTION: Check and replace the Segmented Bus Extender card or the 3 Port Extender card by following the steps in the *Hardware Replacement* (553-3001-520). If this fails, check the cable between the two extenders associated with the standby CPU and the network shelf where the IGS card indicated in the message is located. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- b) The cable between the extenders or other CE EXT, can be faulty.

ACTION: Replace the cable between the two extenders. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- c) Other PS card(s) can be faulty.

ACTION: Use STAT PER in LD 32 to get the status of the PS cards. Enable any disabled PS card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

BSD0110 loop1, loop2, loopn

The **loop1**, **loop2**, etc. are unable to transmit speech to any loop on the other network shelf of that group.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group. Minor alarm lamp lit on attendant console. Suspect:

1. If there is only one terminal loop on the other shelf, the associated network card can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. If only one loop, for instance, **loop1** appears in the list, there can be a possible intermittent fault in the network for loop **loop1**.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. If only one loop, for instance, **loop1** appears in the list, there is the possibility of an intermittent fault in one of the Peripheral Buffers or Controllers connected to **loop1**. Replacement of these cards should be attempted starting with the one on the highest numbered PE shelf of the loop.

- a) One of the Peripheral Buffers or Controllers can be faulty.

ACTION: Use STAT l s in LD 32 to get the status of the Peripheral Buffer or Controller on loop1. Enable any disabled PB card. Run TEST in LD 45 to verify that the fault is cleared on the PB. Enable any disabled PB card. Use LD 32 XPCT x to test the controller card, or un-seat and re-seat the controller card to run a self-test to verify that the fault is cleared. Refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 for test results as shown on the controller faceplate display.

4. Cables **a** or **b** can be faulty.

- a) The cable between the network card and the Peripheral Buffer, can be faulty.

ACTION: Replace the cable between the PB card and Network card following steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- b) The cable between the Controller and the Superloop can be faulty.

ACTION: Replace the cable between the Controller backplane and the Superloop by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses, refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

5. The network card of **loop1**, **loop2**, for example, can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

6. The CE extenders cards can be faulty.

ACTION: Check and replace the Segmented Bus Extender card or the 3 Port Extender card by following the steps in the *Hardware Replacement* (553-3001-520); or the cable between the two extenders associated with the standby CPU and the network shelf, where the IGS card indicated in the message is located. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

7. The PS cards can be faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable PS and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39*

Intergroup Switch and System Clock” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

8. The CFN cards can be faulty.

ACTION: Use STAT L in LD 34 to get the status of the conference loops. Use ENLL l in LD 34 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 in this guide.

9. The TDS cards can be faulty.

ACTION: Use STAT L in LD 38 to get the status of the TDS loops. Use ENLL l in LD 38 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 in this guide.

10. The IGS cards can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of the IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

11. The CPU cards can be faulty.

ACTION: Indiscriminate use of the TCPU command, especially during heavy telephone traffic periods, can cause the system to reload. Use TCPU in LD 35 to test the idle MISC circuitry or IF card. If the MISC circuitry or the IF card does not pass the test, or the fault does not clear, replace it by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

BSD0111 g: loop1, loop2, loopn

The **loop1**, **loop2**, for example of group **g** could not transmit to any other group. The probable fault is on the IGS cards in group **g**.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

BSD0121 g: j1 j2 jn

Junctors **j1**, **j2**, etc. could be received by only one of the two network shelves of group **g**. The probable fault is in the cables between the Junctor board and the Intergroup Switch.

ACTION: Replace the cable between the IGS card and the junctor by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

BSD0130 s g j: loop1, loop2, loopn

The **loop1**, **loop2**, etc. could not be transmitted to group **g** through junctor **j** of IGS cards. Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The IGS card **s** can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of the IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

2. It is possible that an intermittent fault exists on group **g**, particularly if this message appears from time to time specifying different loops from one appearance of the message to the next. Probable fault is cable from IGS s to Junctor or IGS in the same position on group **g**.

ACTION: Replace the cable between the IGS card and the junctor by following steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If the fault is not cleared, use step 1 above to clear the IGS card fault. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

BSD0201 loop: s1 s2 sn

Two or more shelves **s1**, **s2** for example, on the same **loop** fail the signaling test. Error code BSD0301 is implied for these shelves.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. If **loop** is an RPE loop this can be faulty.

ACTION: Refer to the input/output guide. Use LD 33 and RPE NTP to test RPE loop.

2. The network card for **loop** can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable the loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. The **loop** cable to the PE shelves can be faulty.

ACTION: Replace the cable between the PB card and the Network card by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

4. The PS card associated with **loop** can be faulty. Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable the PS card and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

5. The Peripheral Buffer on shelf **s** of **loop** can be faulty.

ACTION: Use STAT l s in LD 32 to get the status of the PB card(s). Use ENLL l s in LD 32 to enable PB card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PB card does not enable and the fault does not clear, replace the PB card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- a) One or more of the cards on shelves **s1 s2** etc., can be faulty.

ACTION: Use STAT l s c in LD 32 to get the status of the PE cards. Use ENLL l s c in LD 32 to enable cards and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the PE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

6. The CE EXT connecting affected **loop** with active CPU can be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and the 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

7. The IGS cards in the same group can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS card(s) and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

8. All other network and conference loops can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the network loops, STAT L of LD 34 for TDS loops and STAT L of LD 38 for conference loops. Use ENLL l in LD 32 to enable the network loops, ENLL L of LD 34 for TDS loops and ENLL L of LD 38 for conference loops. Run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 for network help or the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 for tone and digit switch help, or the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 for conference help.

9. The TDS message cards can be faulty.

ACTION: Use STAT L in LD 38 to get the status of the TDS loops. Use ENLL l in LD 38 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 in this guide.

BSD0202 loop: s1 s2 sn

Continuity test failed from network **loop** to shelves indicated by **s1** and **s2**, for example. If the **loop** is an RPE loop, using Overlay 33 can aid in fault location.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The Peripheral Buffer card(s) on shelves **s1**, **s2** etc. can be faulty Use STAT l in LD 32 s to get the status of the PB card(s).

ACTION: Use ENLL l in LD 32 s to enable PB card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PB card does not enable and the fault does not clear, replace the PB card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. The interconnecting cable to PE shelves **s1**, **s2** etc. can be faulty.

ACTION: Replace the cable between the PB cards by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. The network card **loop** can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

4. The IGS cards in the same group as the **loop** can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

5. The CE EXT connecting the **loop** to the CPU can be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

6. The PS cards servicing the **loop** can be faulty. Refer to the *CED* chapter to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable the PS card and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

7. The CFN card **loop** can be faulty.

ACTION: Use STAT L in LD 34 to get the status of the conference loops. Use ENLL l in LD 34 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 in this guide.

8. The TDS card **loop** can be faulty.

ACTION: Use STAT L in LD 38 to get the status of the TDS loops. Use ENLL l in LD 38 to enable the loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 in this guide.

9. For superloops the continuity test failed from network card **loop** to Peripheral Controllers **s1** and **s2**. A fault can exist in a, b or c as follows.

- a) The Peripheral Controller can be faulty.

ACTION: Use XPCT x in LD 32 to test the Controller. If the Controller does not pass the test, replace it by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- b) The cables to the Peripheral Controller can be faulty.

ACTION: Replace the cable between the Peripheral Controller shelf backplane and the Superloop Network card by following the steps in the *Installation Guide*. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- c) The NT8D04 superloop Network card can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the superloop. Use XNTT l in LD 32 to test the superloop. If the superloop does not pass the test, replace it by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

BSD0203 loop: n

Memory test of **loop** failed, **n** speech channels on this loop are now disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support staff.

1. The network card **loop** can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. The IGS cards in the same group as the **loop** can be faulty.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

3. The CE EXT connecting the CPU to the network **loop** shelf can be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

4. The PS card servicing the **loop** can be faulty. Refer to the *CED* chapter to locate Peripheral Signaling circuitry that can be combined with other circuitry on one card.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of the PS cards. Use ENPS x in LD 32 to enable the PS and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “*NPR — LD 32 Checking loops, shelves, controllers, cards and units*” on page 721 in this guide.

5. All other network, conference and TDS cards in the same group as the **loop** can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the network loops, STAT L of LD 34 for TDS loops and STAT L of LD 38 for conference loops. Use ENLL l in LD 32 to enable network loops, ENLL L of LD 34 for TDS loops, and ENLL L of LD 38 for conference loops. Run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need assistance with the commands or system responses refer to the following chapters for help:

- ◆ the “*NPR — LD 32 Checking loops, shelves, controllers, cards and units*” on page 721 for network assistance
- ◆ the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 for tone and digit switch assistance
- ◆ the “*CNF — LD 38 Conference Circuit Diagnostic*” on page 339 for conference assistance

BSD0205 loop Continuity checker on the **loop** indicates a faulty network.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*NPR — LD 32 Checking loops, shelves, controllers, cards and units*” on page 721 in this guide.

BSD0206 loop: loop1 loop2 loopn

Loop unable to receive speech from **loop1**, or **loop2**, for example.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The network card for the **loop** can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*NPR — LD 32 Checking loops, shelves, controllers, cards and units*” on page 721 in this guide.

2. If only one loop, for instance, **1loop1** cannot be received, possible intermittent fault in network card for loop **1loop1** (particularly if any other loops cannot receive **1loop1** or if **1loop1** appears in a BSD0110 message).

ACTION: Use same procedure as number one above.

3. If only one loop, for instance, **1loop1** cannot be received, there can be a possible intermittent fault in one of the Peripheral Buffers connected to **1loop1**. Each Peripheral Buffer should be replaced in turn, starting with the one on the highest numbered PE shelf. The test should then be allowed to run for sufficient time to indicate whether the problem persists.

ACTION: Use STAT 1 s in LD 32 to get the status of the PB card(s). Use ENLL 1 s in LD 32 to enable the PB card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PB card does not enable and the fault does not clear, replace the PB card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

4. All other network, conference and TDS cards in the same group as the **loop** can be faulty.

ACTION: Use STAT 1 in LD 32 to get the status of the network loops, STAT 1 of LD 34 for TDS loops and STAT 1 of LD 38 for conference loops. Use ENLL 1 in LD 32 to enable network loops, ENLL 1 of LD 34 for TDS loops and ENLL 1 of LD 38 for conference loops. Run TEST in LD 45 to verify that the fault is cleared. If loop does not enable and fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 for network help or “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 for tone and digit switch help or “CNF — LD 38 Conference Circuit Diagnostic” on page 339 for conference help.

BSD0207 loop: j1 j2 jn

Juncture(s) **j1, j2**, for example, cannot be received by the **loop**.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support staff.

1. The network for **loop** is probably faulty.

ACTION: Use STAT 1 in LD 32 to get the status of the loops. Use ENLL 1 in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. An intermittent fault is also possible, particularly if multiple BSD0207 messages appear for several loops in the same group, each message specifying the same junctor(s) for example **j1** or **j2**. The fault in this case can be a or b as follows.

a) The IGS card(s) for group(s) associated with the **loop** and junctors **j1**, **j2**, for example can be at fault. Refer to the introduction for Intergroup Switch shelf locations, IGS and group number associations.

ACTION: Use STAT IGS x in LD 39 to get the status of IGS cards. Use ENL IGS x in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If IGS card does not enable and fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.

b) The IGS card(s) for originating group(s), on the same position as the **loop** can be at fault.

ACTION: Use the same procedure as 2. a) above.

BSD0208 loop: ts

Software network map indicates that timeslot **ts** of the **loop** is idle but network memory word for that slot is not idle. The indicated slot is marked busy in the software map and the current continuity test of the **loop** is abandoned.

There can be a possible software fault (similar to BUG0365). If a number of BSD0208 or BUG0365 messages appear all involving the **loop** or if a BSD0203 message appears involving the **loop**, the network for **loop** is probably faulty. Refer to the BSD0203 comments. If replacing **loop** does not clear fault, then contact your technical staff support.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

ACTION: Go to LD 32. Use the commands STAT l and ENLL l to identify and enable disabled loops. Replace the Network card if loops remain disabled. Contact technical support staff if replacing loop l does not clear the fault.

BSD0209 loop Network connection memory test of the **loop** detected an address decode fault. Frequently BSD0209 messages will appear in pairs; normally only one fault is actually present. Disable either loop by using program LD 32. If the LED lights on network card for that loop and not on any other network card, the fault is probably on the network card.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support staff.

1. The LED network card with the LED lit can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. The CE EXT connecting the active CPU to the shelf housing the network card, or the interconnecting cable, can be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

3. If disabling the loop results in an LED being lit on some other network, the probable fault is on the network on which the LED unexpectedly lit, or on cards listed in 2. above.

ACTION: Use same procedure as 1. above.

BSD0301 loop s: c1 c2 cn

Two or more PE cards **c1, c2** for example on same **loop** and shelf **s** all fail signaling test. Error code BSD0401 is implied for the cards listed. If a card number is preceded by a minus sign, one or more units on that card were disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support staff.

1. The Peripheral Buffer on shelf **s** of **loop** can be faulty.

ACTION: Use STAT l s in LD 32 to get the status of the PB card(s). Use ENLL l s in LD 32 to enable the PB card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PB card does not enable and the fault does not clear, replace the PB card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. One or more cards **c1, c2**, etc., can be faulty.

ACTION: Use STAT l s c in LD 32 to get the status of the PE cards. Use ENLL l s c in LD 32 to enable the cards and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the PE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. The **loop** cable to the PE shelf can be faulty.

ACTION: Replace the cable between PB card and Network card following steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

4. The network card for **loop** can be faulty.

ACTION: Use STAT l in LD 32 to get the status of the loops. Use ENLL l in LD 32 to enable loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

BSD0401 l s c: u1 u2 un

The Line or trunk or Digitone receiver card loop l shelf s failed the signaling test. If the card number c is preceded by a minus sign, the card was disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. A line card can be faulty.

ACTION: Use STAT l s c in LD 32 to get the status of the PE or IPE cards. Use ENLL l s c in LD 32 to enable the cards and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the PE or IPE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. A trunk card can be faulty.

ACTION: Use LDIC l s c u in LD 36 to list days since last call. Use STAT l s c in LD 36 to get status of card. Use ENLL l s c (u) in LD 36 to enable the trunk card or unit and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the trunk card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

3. A Digitone Receiver card can be faulty.

ACTION: Use STAT or SDTR in LD 34 to list the disabled DTR cards. Use ENLD l s c (u) in LD 34 to enable cards or units and run DTR l s c (u) in LD 34 to test the DTR card or the unit. If the cards or the units do not enable and the fault does not clear, replace the DTR card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 in this guide.

4. The Peripheral Buffer on loop l shelf s can be faulty.

ACTION: Use STAT l s in LD 32 to get the status of the PB card(s). Use ENLL l s in LD 32 to enable the PB card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PB card does not enable and the fault does not clear, replace the PB card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

5. If the message includes unit numbers, then two or more SL-1 or Digital line units failed the signaling test, for example **u1, u2**, on card **l s c**. Error code BSD0501 is implied for the telephones listed.

a) An SL-1, ISDLCL or DLC line card **l s c** can be faulty.

ACTION: Use STAT **l s c** in LD 32 to get the status of the PE/IPE cards. Use ENLL **l s c** in LD 32 to enable cards and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the PE/IPE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

b) The Peripheral Buffer on shelf **l s** can be faulty.

ACTION: Use the same procedure as step 4. above.

c) All SL-1 or Digital telephones associated with the units **u1, u2**, etc., could be faulty.

ACTION: Use DISU **l s c u** in LD 32 to disable the PE/IPE unit(s). Disconnect the suspected faulty telephone and reconnect a working telephone in its place. Use ENLU **l s c (u)** in LD 32 to enable unit(s). Try the telephone to see if it works. If the telephone is not working, check the wiring between the PE or IPE shelf backplane and the telephone. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

BSD0402 **l s c: u1 u2 un**

Two or more SL-1 or Digital line circuits **u1, u2**, etc. on card **l s c** failed the signaling test. The signal concentrator on the SL-1 line card also failed. Error code BSD0501 is implied for the telephones listed.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

If a unit number is preceded by a minus sign, the unit was disabled. There could be a fault on the following.

1. A SL-1, ISDLCL or DLC line card **l s c** can be faulty.

ACTION: Use STAT **l s c** in LD 32 to get the status of the PE/IPE cards. Use ENLL **l s c** in LD 32 to enable the cards and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the PE/IPE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. The Peripheral Buffer on loop **l** shelf **s** can be faulty.

ACTION: Use STAT **l s** in LD 32 to get the status of the PB card(s). Use ENLL **l s** in LD 32 to enable PB card(s) and run TEST in LD 45 to verify that the fault is cleared. If the PB card does not enable and the fault does not clear, replace the PB card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

BSD0501 l s c u

A SL-1 or Digital telephone associated with TN **l s c u** failed the signaling test. If the unit number **u** is preceded by a minus sign, the unit is disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. A SL-1 or Digital telephone can be faulty.

ACTION: Use DISU **l s c u** in LD 32 to disable the PE/IPE unit(s). Disconnect the suspected faulty telephone and reconnect a working telephone in its place. Use ENLU **l s c (u)** in LD 32 to enable unit(s). Try the telephone to see if it works. If the telephone is not working, check the wiring between the PE or IPE shelf backplane and the telephone. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. A line circuit on the SL-1 or ISDLc line card indicated, can be faulty.

ACTION: Use STAT **l s c** in LD 32 to get the status of the PE/IPE cards. Use ENLL **l s c** in LD 32 to enable cards and run TEST in LD 45 to verify that the fault is cleared. If the cards do not enable and the fault does not clear, replace the PE/IPE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

BSD0600 loop1 loop2 g

Loop1 and **loop2** etc., on group **g** could not transmit to any other group. The Intergroup Switch on the same shelf as **loop1 loop2** can be faulty.

ACTION: Use STAT IGS **x** in LD 39 to get the status of IGS cards. Use ENL IGS **x** in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

BSD0601 j1 j2 g

No loop tested on group **g** could receive from junctors **j1, j2**.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

3. The IGS cards from junctors indicated can be faulty.

ACTION: Use STAT IGS **x** in LD 39 to get the status of IGS cards. Use ENL IGS **x** in LD 39 to enable any disabled IGS cards and run TEST in LD 45 to verify that the fault is cleared. If the IGS card does not enable and the fault does not clear, replace the IGS card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

4. A 3PE card can be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable the extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and the fault does not clear, replace the extender card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

5. A SCG can be faulty.

ACTION: Refer to the *X11 Administration* (553-3001-311) and the *PRA/DCHI Maintenance Guide*. Use SSKC 0,1 in LD 60 to get the status of the clock cards. Use ENL CC 0,1 in LD 60 to enable the clock and run TEST in LD 45 to verify that the fault is cleared. If the clock does not enable and the fault does not clear, replace the clock controller card(s) by following the steps in the Clock Controller maintenance section of the *PRA/DCHI Maintenance Guide*.

BSD0602 loop A Digital Trunk Interface (DTI) or a Digital Link Interface (DLI) **loop** failed on the signaling test.

ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.

BSD0603 loop A previously faulty Digital Trunk Interface or Digital Link Interface **loop** passed the signaling test.

ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.

BSD0604 A manual continuity test number does not match data entered.

ACTION: Check to make sure your data is correct and re-enter the command.

BSD0606 It is not applicable to XNPD card.

ACTION: Check to make sure your data is correct and re-enter the command.

BSD0659 Cannot perform test on non-BRSC card. Loopback address must be a BRSC card TN plus a dummy unit number.

ACTION: Enter a BRSC card TN plus a dummy unit number. Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.

BSD0660 Cannot preform test on the ISDN line card or DSL. The BRSC BRI application that performs Layer 2 signalling processing for the line card or DSL must be in ENABLED state.

ACTION: Check the BRSC state and enable it if necessary. Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.

BSD0661 Cannot perform test on the BRSC.

ACTION: The BRSC BASE application must be in ENABLED state and the BRI application must be in MANUALLY DISABLED state. If the BRI application is enabled, disable only the application in LD32 with the DISC BRI command. If the BASE application is disabled, enable only the BASE application in LD 32 with the ENLC BASE command. Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.

- BSD0662 Input TN is already in another test. Enter another TN.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.
- BSD0663 Input DSL TN is undefined. Enter another DSL TN.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *PRA/DCHI Maintenance Guide*.
- BSD0664 Unable to test a phantom loop, as it does not physically exist. Phantom loops are defined for call redirection and do not require any associated hardware.
ACTION: For further information, refer to the *Software feature guide*, Phantom TNs.
- BSD0665 Fiber link status has been changed.
- BSD0800 A Command is being executed.
ACTION: Do not enter any more commands until the last one is finished.
- BSD0801 No call register available.
ACTION: Keep re-entering the command periodically until an idle register is available. If this message appears frequently, check the TFS004 Processor Load using LD 2. If you need help contact your Traffic Section or refer to the *Traffic Measurement: Formats and Output* (553-2001-450).
- BSD0802 No superloop network card.
ACTION: Check to make sure your data is correct and re-enter a command if applicable.
- BSD0803 No Controller card.
ACTION: Check to make sure your data is correct and re-enter a command if applicable.
- BSD0804 A requested time slot is busy.
ACTION: Keep re-entering the command periodically until an idle time slot is available.
- BSD0805 No time slots free on superloop. If test is run on E-1 or T-1, the timeslot may not be available because of the specific timeslot to a carrier allocation.
ACTION: Keep re-entering the command periodically until an idle time slot is available.
- BSD0806 The Loop back channel is not available.
ACTION: Keep re-entering the command periodically until an idle channel is available.
- BSD0807 Time out, waiting for network response.
ACTION: Re-enter the command until the network responds. If the network does not respond, replace the Network card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- BSD0808 A requested TN is busy.
ACTION: Use STAT l s c u in LD 32 to determine when the TN is idle. Re-enter the command when the TN is idle.
- BSD0809 A requested TN is maintenance busy.
ACTION: Use STAT l s c u in LD 32 to determine when the TN is idle. Re-enter the command when the TN is idle.

- BSD0810 A Specified Controller card does not belong to the specified Network card.
ACTION: Check to make sure the correct shelf number is entered.
- BSD0811 No terminal at that TN.
ACTION: Check to make sure your data is correct and re-enter.
- BSD0812 Digital terminal at that TN.
ACTION: Check to make sure your data is correct and re-enter.
- BSD0813 A slot on a requested junctor is busy.
ACTION: Keep re-entering the command periodically until an idle junctor is available.
- BSD0814 No junctors available for generate slot.
ACTION: Keep re-entering the command periodically until an idle junctor is available.
- BSD0815 Wait for a prompt.
ACTION: Be patient.
- BSD0816 Tags not available.
ACTION: Stop one of the other tests running or complete tests by using the XSTP command and start again.
- BSD0817 Cannot send Generate Message (resources cleaned up). The system is temporarily out of message registers.
ACTION: Keep re-entering the command periodically until an idle message register is available.
- BSD0818 Cannot send Detect Message (resources not cleaned up). The system is temporarily out of message registers.
ACTION: Keep re-entering the command periodically until an idle message register is available.
- BSD0819 Cannot send XMI Message. The system is temporarily out of message registers.
ACTION: Keep re-entering the command periodically until an idle message register is available.
- BSD0820 Last one-shot test is still running.
ACTION: Do not enter the commands until the test is finished, or stop the test with the XSTP 0 command.
- BSD0821 A tag number is idle.
ACTION: If this message appears repeatedly, contact your technical support group.
- BSD0822 A database error: pointer nil.
ACTION: If this message appears repeatedly, contact your technical support group.
- BSD0823 One-shot status not printed.
ACTION: Get the test status by using the XSTA 0 command.

- BSD0824 A Loop is disabled.
- ACTION:** Use ENLL loop in LD 32 to enable the loop. If the loop does not enable, replace the network card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide. Re-enter the original command.
- BSD0825 A Controller is disabled.
- ACTION:** Use ENXP x in LD 32 to enable the controller. If the controller does not enable, replace the controller card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide. Re-enter the original command.
- BSD0826 A TN is disabled.
- ACTION:** Use ENLU l s c u in LD 32 to enable the unit. If the unit does not enable, replace the PE card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide. Re-enter the original command.
- BSD0827 Unable to send a message to the MISP application.
- ACTION:** Refer to the input/output guide, LD 60 and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Check the state of the MISP card and the application(s).
- BSD0828 No available “MISP Expedited” output buffer. Cannot send message to MISP.
- ACTION:** Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0829 Cannot do loopback on a non-BRI line card.
- ACTION:** Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0830 The loop back test can only be performed between an MISP card and one of the BRI line cards assigned to it.
- ACTION:** Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0831 No response from the MISP.
- ACTION:** Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Try the command again, if the problem persists, use XSTP to terminate the test.
- BSD0832 Suspended tags refer to test cases where the network card did not acknowledge the reception of the test message. The Network card may have no recollection of the command, or the card was not able to communicate with the Meridian 1.
- ACTION:** Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Use the command XSTP to free the test case.
- BSD0833 Not able to send message to the MISP.
- ACTION:** Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Check the status of the MISP.

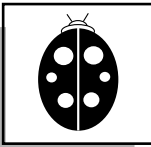
- BSD0834 No line cards defined at the given TN.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0835 All DSLs must be in disabled state.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0836 The network loop is not an MISP card.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0837 Test case number does not match its test data.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0838 Command not applicable to Network/DTR card.
ACTION: Use LD 60 in the input/output maintenance guide, and refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- BSD0839 DSInvalid L TN used or already in test.
- BSD0840 MPH application is not defined in this MISP loop.
- BSD0841 LBTY entered does not match with GEN TYPE.
- BSD0843 NWIF is not defined.
- BSD0844 State of IF for MPH application is not in MDIS EQUIP.
- BSD0845 Invalid MCU TN.
- BSD0899 Invalid input.
ACTION: Re-enter command.
- BSD0900 Command executing.
ACTION: Do not enter more commands until the last command is finished.
- BSD0901 No call register available.
ACTION: Wait and try the command again. If the problem persists, increase the number of call registers using LD 17.
- BSD0902 No Network card (NT8D04).
ACTION: Be sure you entered the correct shelf number.
- BSD0903 No Controller (NT8D01).
ACTION: Be sure you entered the correct shelf number.
- BSD0904 A requested timeslot is busy.
ACTION: Keep re-entering the command periodically until an idle time slot is available.
- BSD0905 All time slots on that superloop are busy.
ACTION: Keep re-entering the command periodically until an idle timeslot is available.
- BSD0906 A Loopback channel is not available.
ACTION: Keep re-entering the command periodically until an idle channel is available.

- p>BSD0907A XMI message was lost.
-
- ACTION:**
- Try the test again. If the problem persists, use STAT l in LD 32 to check the status of the Network card.
- BSD0908A requested TN is busy.
ACTION: Use STAT l s c u in LD 32 to determine when the TN is idle. Re-enter the command when the TN is idle.
- BSD0909A requested TN is disabled or maintenance busy.
ACTION: Use STAT l s c u in LD 32 to determine when the TN is idle. Re-enter the command when the TN is idle.
- BSD0910Controller (NT8D01) does not belong to that Network card.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 97 PRT, XPE to check the controller configuration.
- BSD0911No terminal at that TN.
ACTION: Check to make sure your data is correct and re-enter.
- BSD0912Digital terminal at that TN.
ACTION: Check to make sure your data is correct and re-enter.
- BSD0913Slot on requested junctor is busy.
ACTION: Keep re-entering the command periodically until an idle junctor is available.
- BSD0914No junctors available for generator slot.
ACTION: Keep re-entering the command periodically until an idle timeslot is available.
- BSD0915Wait for a prompt.
ACTION: Be patient, you are entering commands faster than the system can handle them.
- BSD0916No free tags.
ACTION: Stop one of the other tests running or complete tests by using the XSTP command and start again.
- BSD0917Could not send Generate message. The system is temporarily out of message registers.
ACTION: Keep re-entering the command until an idle register is available.
- BSD0918Could not send Detect message. The system is temporarily out of message registers.
ACTION: Keep re-entering the command periodically until an idle register is available.
- BSD0919Could not send XMI message. The system is temporarily out of message registers.
ACTION: Keep re-entering the command periodically until an idle register is available.
- BSD0920Last one-shot test is still running.
ACTION: Wait for the test to complete or stop it by using XSTP 0.
- BSD0921A tag number is idle.
ACTION: Use the XNIF command to get a list of completed and running tests.
- BSD0922A Database error: pointer is nil.
ACTION: If this message appears repeatedly, contact your technical support group.

- BSD0923 One-shot test status not printed.
ACTION: Get the test status by using the XSTA 0 command.
- BSD0924 Network card (NT8D04) is disabled.
ACTION: Use XNTT loop in LD 32 to test the superloop. Use ENLL l in LD 32 to enable the loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- BSD0925 Controller card (NT8D01) is disabled.
ACTION: Use XPCT x in LD 32 to test the Controller. If the Controller does not pass the test, replace it by following the steps in the *Hardware Replacement* (553-3001-520). Use ENXP x in LD 32 to enable the controller and run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- BSD0926 TN is disabled.
ACTION: Use STAT l s c in LD 32 to get the status of the PE/IPE cards. Use ENLL l s c in LD 32 to enable cards and run TEST in LD 45 to verify that the fault is cleared. If cards do not enable and fault does not clear, replace the PE/IPE card(s) by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide. 

BUG — Software Error Monitor

How the BUG works



Software Error Monitor is a resident program. BUG does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

The Software Error Monitor program continuously monitors call processing. When the call processing software detects information which is not in the correct format, or when invalid information is detected, a BUG message is output.

The second line of a BUG message, sometimes has a decimal TN or an SL-1 formatted TN right after the colon (:). The SL-1 formatted TN is referred to as a packed TN and the decimal TN, with spaces, is referred to as an unpacked TN. The packed TN is not a normal hexadecimal number, as its make-up is dependent upon the density of the PE cards used in the system. There are maintenance diagnostics that will convert packed TNs to unpacked TNs.

BUG messages are normally beyond the capabilities of anyone except Nortel Networks and licensee software engineers and code writers.

BUG messages

BUG0001 - to - BUG0480

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG0004 pd EUROMCID_HANDLER has been called with an invalid source parameter.

ACTION: Contact your technical support group.

BUG0006 pd MCID_ACT_REQ incorrect msgcr pointer.

ACTION: Contact your technical support group.

BUG0009 pd MCID-ACT-REQ incorrect state of the EUROISDN trk over which MCID is attempted, must be established or disconnected.

ACTION: Contact your technical support group.

BUG0014 pd MCID_ACT_REQ could not get a call register to handle MCID signalling (MCID_PROT_CR).

ACTION: Contact your technical support group.

BUG0016 pd MCID_ACT_REQ could not link the protocol cr to the msg cr.

ACTION: Contact your technical support group.

BUG0017 pd MCID_SND_FAC could not get a call register to build the facility msg.

ACTION: Contact your technical support group.

BUG0018 pd MCID_RCV_RES on reception of the result to an MCID request could not find the MCID protocol cr.

ACTION: Contact your technical support group.

BUG0019 pd MCID_RCV_RES checks on apdu received unsuccessfully.

ACTION: Contact your technical support group.

BUG0021 pd MCID_RCV_RES invalid value of rose component, must be ret-res, reject, ret-err.

ACTION: Contact your technical support group.

BUG0022 pd MCID_RET_ERR invalid tag for error value.

ACTION: Contact your technical support group.

BUG0026 pd MCID_RET_ERR invalid value of the error for MCID service.

ACTION: Contact your technical support group.

BUG0028 pd MCID_RCV_MSG unexpected msg sent during MCID process.

ACTION: Contact your technical support group.

BUG0029 pd MCID_SND_MSG unexpected message sent during MCID process.

ACTION: Contact your technical support group.

- BUG0031 pd MCID_IDLE_CR the MCID protocol call register is invalid.
ACTION: Contact your technical support group.
- BUG0032 NXT_TTR_GRP is corrupted. Value is reset. :TTR_GROUP,NXT_TTR_THIS_GRP
 <TTR_GROUP>.
ACTION: Contact your technical support group.
- BUG0480 followed by BUG0481
 These messages appear when attempting to LOGI to the system and trying to load any overlay.
ACTION: Try a parallel reload to clear memory fragmentation, then check for the same BUG messages.
ACTION: If messages still persist use LD 137 SWAP to exchange main and secondary database files, and Cold Start the non-active side again. Check for the same BUG messages.
- BUG0481 - to - BUG0769
 Software code descriptions.
 Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
 If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG0770 followed by BUG1321:0000 xxx
 TN translation failed.
ACTION: Use LD 22 PKG to print the list of software packages. Check to see if Package 70, Hot line Services, is included in the list.
ACTION: Check for analog (500/2500) telephones not programmed to access NARS/BARS through CLS/NCOS/TGAR.
- BUG0780 - to - BUG4035
 Software code descriptions.
 Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
 If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG1312 Distinctive ringing. If receiving a large quantity of messages, there could be a possible database mismatch of XCT cards, that is, if the system had Distinctive Ringing and was prompted to eliminate the feature.
ACTION: Do an initialization to clear the fault.
- BUG2001 The number of Digital TNs configured in the system is equal to or is less than zero.
ACTION: Contact your technical support group.
- BUG2002 The number of analog TNs configured in the system is equal to or is less than zero.
ACTION: Contact your technical support group.

- BUG4036 NIL pointer in procedure call.
ACTION: Do a SYSLOAD. On continued failure, contact your supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4037 Possible corruption of memory (global pointer).
ACTION: Do a SYSLOAD. On continued failure, contact your supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4038 Attempt to idle a Call Register with a NIL pointer.
ACTION: Do a SYSLOAD. On continued failure, contact your supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4039 Possible corruption of memory (global variable).
ACTION: Do a SYSLOAD. On continued failure, contact your supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4041 Possible corruption of memory (global variable).
ACTION: Do a SYSLOAD. On continued failure, contact your supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4042 Possible corruption of memory (data).
ACTION: Do a SYSLOAD. On continued failure, contact your supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4043 PSDL procedure called with an invalid command.
ACTION: Do a SYSLOAD; on continued failure, contact supplier. CAUTION: SYSLOAD interrupts call processing.
- BUG4044 - to - BUG4340
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG4248:000006
Procedure MAX. KEYLINKS passed. Unit type is not a BCS unit. Receiving this message during daily (midnight) routines.
ACTION: Use LD 32 to check that the PWR TNs on the attendant console are disabled and not in the idle state.
- BUG4341 TTY10BLK_PTL=NIL at FREE_U_X25_DATA.
ACTION: Investigate possible data corruption.
- BUG4342 U_DATA_BLK_PTR=NIL at FREE_U_X25_DATA.
ACTION: Investigate possible data corruption.
- BUG4343 X25_I_PTR=NIL at FREE_U_X25_DATA.
ACTION: Investigate possible data corruption.

- BUG4344 X25_O_PTR=NIL at FREE_U_X25_DATA.
ACTION: Investigate possible data corruption.
- BUG4345 U_X25_BLK_PTR=NIL at FREE_U_X25_DATA.
ACTION: Investigate possible data corruption.
- BUG4346 Invalid case at X25 handler.
ACTION: Investigate data corruption problem.
- BUG4347 Invalid X25 link with standby (CSLM). X25 link has no standby.
ACTION: Investigate data corruption problem.
- BUG4348 - to - BUG4374
 Software code descriptions.
 Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
 If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG4375 NIL ptr found at init_X25_VC.
ACTION: Investigate possible data corruption.
- BUG4376 X25_U_VC_ptr=NIC at update_V.
ACTION: Investigate possible data corruption.
- BUG4377 X25_U_blk_ptr=NIL at upd_lay3_state.
ACTION: Investigate possible data corruption.
- BUG4378 X25_U_VC_ptr=NIC at upd_data_xfer.
ACTION: Investigate possible data corruption.
- BUG4379 Invalid constant at flow handler.
ACTION: Investigate possible data corruption.
- BUG4380 No clr_call for PVC at DO_SND_CLR_IND.
ACTION: Investigate possible data corruption.
- BUG4381 - to - BUG4409
 Software code descriptions.
 Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
 If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG4410 A truncation error has occurred in OMEGA memory management. It was corrected.
ACTION: Investigate further.

BUG4411 - to - BUG4552

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

BUG4553 X25-SET-PTR failed.

ACTION: Investigate data corruption.

BUG4554 Invalid case # at X25 handler.

ACTION: Investigate data corruption.

BUG4555 Invalid LAY3 state at X25.

ACTION: Investigate data corruption.

BUG4556 X25_VC_Set_ptr failed at X25.

ACTION: Investigate data corruption.

BUG4557 IO BLOCKLINK=NIL at X25.

ACTION: Investigate data corruption.

BUG4558 U_CSL_PTR=NIL at X25.

ACTION: Investigate data corruption.

BUG4559 Device address=NIL.

ACTION: Investigate data corruption.

BUG4560 - to - BUG5109

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG5110 The CRPTR is not in range when a release is requested during an ATTN_RLS_CALL.

ACTION: Notify the attendant to release the SRC/DEST if this occurs. If the release is not allowed and the request is ignored, there could be a stuck path.

BUG5111 - to - BUG5178

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG5179 The SET_ROUTE_PTRS failed in the TIE_INC_INP procedure.

A forced release is needed because you may have a stuck trunk.

ACTION: Check the TN indicated in the CRPTR information for status.

BUG5180 - to - BUG5208

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

BUG5209 No father CR found when SON_CR processed in queue.

ACTION: Wait to receive a tone.

BUG5210 - to - BUG5396

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG5397 The code for executing the MSDL commands in overlays 37, 42, 48 and 96 received a failure return code from SET_MSDDL MISP_PTR.

ACTION: Check for MSDL database corruption.

BUG5398 - to - BUG5401

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG5402 x y The CSUBSTAT field on the MSDSL/MISP contained invalid data.

x = The MSDSL/MISP card number (in decimal).

y = The value that was invalid.

When the card in question is an MSDSL, one possible reason for this BUG message is that there are multiple cards in the system with the same device number as the MSDSL. Therefore when the read is performed to the register on the MSDSL, it may not be the MSDSL card that is responding. (This will not be the case for the MISP, as the device address is determined by its position in the network shelf.)

ACTION: Use LD 22 PRT to check the MSDSL device numbers. If any device numbers are the same, use LD 17 ADAN to change them.

BUG5403 - to - BUG5423

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages cause no problems, they can be ignored.

ACTION: Contact your technical support group.

BUG5416 Conference timeslot is not in a valid state. Conference will not be set up or town down properly. :Conference loop, timeslot, conference number, function.

ACTION: Contact your technical support group.

- BUG5417 Invalid number of conference members. Conference will not be set up or torn down properly. :Conference loop, timeslot, conference number, function members.
ACTION: Contact your technical support group.
- BUG5424 No alerter defined for Enhanced Call Trace so it cannot be rung.
ACTION: Define alerter by the prompt CTAL in LD 56.
- BUG5425 No background terminal defined and LD 15 CTBG option is set to Yes. The EMCT reports cannot be printed.
ACTION: Define a background terminal or change the CTBG option.
- BUG5426 - to - BUG5537
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages cause no problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG5538 A problem encountered when trying to setup MSDL pointers. TTY corruption on MSDL using STA application. In the LD 22 printout of the ADAN, CTYP shows ****.
ACTION: If a modem connection is used for the STA application, check the modem setting for no local echo, no modem status output, and dropping DCD when the modem disconnects.
ACTION: A system reload may be required to restore the I/O block table.
- BUG5539 - to - BUG6016
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG6017 A problem occurred when attempting to recover packages during cold start (option 81 only).
ACTION: Print out the list of equipped packages in LD 22. If it does not match the label, restart the system. If it does, use LD 17 to configure the current language as desired.
- BUG6018 The language setup information could not be recovered from the disk. Language is forced to English (option 81 only).
ACTION: Use LD 17 to configure the current language as desired.
- BUG6019 - to - BUG6050
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.

- BUG6051 The data in the language file has an incorrect format. The translation status is forced to NONE.
- ACTION:** First go to Load 17 and configure prompt TRNS with the desired option. Then do a data dump.
- BUG6052 - to - BUG6243
- Software code descriptions.
 Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
 If BUG messages do not cause problems, they can be ignored.
- ACTION:** Contact your technical support group.
- BUG6244 SETCUSTPTRS failed. Customer number and terminal are printed. Customer number is from the protected line block unless the terminal is a DTR, which takes it from its active call register.
- ACTION:** Print TN block (except DTR) and reconfigure if the customer number is not correct.
- BUG6245 - to - BUG7018
- Software code descriptions.
 Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
 If BUG messages do not cause problems, they can be ignored.
- ACTION:** Contact your technical support group.
- BUG6248 EvtEdt: Event Defaults Table does not exist.
- ACTION:** Contact your technical support group.
- BUG6249 EvtEdt: Cannot open Error Severity lookup file.
- ACTION:** Contact your technical support group.
- BUG6250 EvtEdt: Insufficient memory to build Event Defaults Table.
- ACTION:** Contact your technical support group.
- BUG6251 EvtEdt: Error severity lookup file is missing. Attempting to build a new one.
- ACTION:** Contact your technical support group.
- BUG6252 EvtEdt: Error Message lookup file is missing.
- ACTION:** Contact your technical support group.
- BUG6268 Bad entry to global procedure IAGT.
- ACTION:** Contact your technical support group.
- BUG6269 Invalid IAGT SFR feature.
- ACTION:** Contact your technical support group.
- BUG6270 Unable to remove acquired agent from IAGT link list.
- ACTION:** Contact your technical support group.
- BUG6271 Unable to set up U_CSL_PTR for an acquired IAGT agent.
- ACTION:** Contact your technical support group.

- BUG6272 P_IAGT_TN_BLK prt is not found for an acquired agent.
ACTION: Contact your technical support group.
- BUG6273 IAGT data pointer(s) are not found for an acquired IAGT agent.
ACTION: Contact your technical support group.
- BUG6281 DPNNS NS: an attempt has been made to find another termination for a call after a night service divert request. The MIANPM returned <NARS_CALL> is not proper. A TERTN should already have been found for this call at this stage
ACTION: Contact your technical support group.
- BUG6282 NS: a CCM has been received on a channel after a night service diversion.
ACTION: Ensure that the third party complies with the BTNR.
- BUG6284 During retrieval, the controlling channel in a Night Service process was not tagged as DPNSS1.
ACTION: Contact your technical support group.
- BUG6285 There is a mismatch in the new and old call.
ACTION: Contact your technical support group.
- BUG6286 Flags or pointers not properly set in a call register associated with DPNNS1 Night Service.
ACTION: Contact your technical support group.
- BUG6293 Incorrect input message received from the TDET when ARDL call processing.
ACTION: Contact your technical support group.
- BUG6294 Cannot spawn to reset power supply.
ACTION: If the problem persists, contact your technical support group.
- BUG6394 The VDN data structure is corrupted. Some VDN blocks may be lost.
ACTION: Run AUDIT to rebuild recoverable VDN blocks. Recreate VDN blocks that have been lost.
- BUG6395 The call register passed to the global procedure IED_CHK is nil.
ACTION: If the problem persists, contact your technical support group.
- BUG6396 G_GF_MSGCRPTR is nil, cannot build call-indp msg.
ACTION: Contact your technical support group.
- BUG6397 Unexpected process type in GF_CR.
ACTION: Contact your technical support group.
- BUG6398 The call register passed to the global procedure IED_CHK is nil.
ACTION: If the problem persists, contact your technical support group.
- BUG6399 In procedure RO_NO_CIM_RECVD, TER must be DPNSS as Route Optimization process is in operation on this side of the CR of the new call.
ACTION: Run AUDIT, as there may be unreleased CR and/or wrong channel states (new channel remains in a Route Optimization state).

- BUG6404 A network call park operation is tried from one node to another node for which the Call Park Networkwide feature is not defined.
ACTION: Contact your system administrator if the Call Park Networkwide operation is desired.
- BUG6405 Unable to remove the reserved agent son cr from the main cr.
ACTION: Contact your technical support group.
- BUG6406 Agent reserved son cr cannot be linked to NSBR call.
ACTION: Contact your technical support group.
- BUG6407 NSBR call cannot be terminated to a CDN.
ACTION: Contact your technical support group.
- BUG6438 Invalid message type is passed to procedure IAGT.
ACTION: Contact your technical support group.
- BUG6439 Invalid agent resync state is found.
ACTION: Contact your technical support group.
- BUG6440 Invalid IAGT is found from agent link list.
ACTION: Contact your technical support group.
- BUG6441 CRPTR is out of range. Output: TERMINAL.
ACTION: Contact your technical support group.
- BUG6442 <type of failure> <event/state> <parm1><parm2><parm3>
Call completion (CC) Supplementary Service. Software failure detected by CC QSIG protocol handler.
ACTION: Contact your technical support group.
- BUG6443 <cause> <source>
Call Completion Supplementary Service. Error detected by CC TERMINAL handler.
ACTION: Contact your technical support group.
- BUG6444 <type of error> (parms>
Call Completion (CC) Supplementary Service. Error detected by CC ETSI-T protocol handler.
ACTION: Contact your technical support group.
- BUG6445 <type of error> <type of gateway> <source in ssc_gateway>
Call Completion (CC) Supplementary Service. Error at a gateway node.
ACTION: Contact your technical support group.
- BUG6446 <protocol call-register pointer>
Call Completion (CC) Supplementary Service. Procedure FIND_USER_PTR failed.
ACTION: Contact your technical support group.

BUG6447 <protocol call register pointer>

Call Completion (CC) Supplementary Service. Procedure FIND_PRA_MSG_PTR failed.

ACTION: Contact your technical support group.

BUG6448 <protocol call register pointer>

Call Completion (CC) Supplementary Service. Procedure IDLE_PROT_CR failed.

ACTION: Contact your technical support group.

BUG6449 <RCAP id>

Call Completion (CC) Supplementary Service. Procedure HAS_RCAP failed. Invalid RCAP id.

ACTION: Contact your technical support group.

BUG6450 <source in sssc_utility <int1> <int2> <int3>

Call Completion (CC) Supplementary Service. Invalid parameter pointer passed in SSSC_UTILITY.

ACTION: Contact your technical support group.

BUG7019 MSYNC: Sync failure at address a (local = **b**; remote = **c**).

ACTION: Use the TEST CP command in OVL135 to try to recover memory shadowing.

BUG7020 - to - BUG7033

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7034 Manual INIT button disabled.

ACTION: Reload the system with the Manual reload button.

BUG7035 - to - BUG7041

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7042 x y Checksum error at address **x** caused by cold start.

ACTION: Reset the SIMM in SIMM slot **y**. If the problem persists, replace the CP card.

BUG7043 System recovery failure. Task = **n**.

ACTION: Reload the system with the Manual reload button.

BUG7044 Restart subsystem failure. No automatic restart.

ACTION: Reload the system with the Manual reload button.

BUG7045 - to - BUG7062

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7063

Failed in CMB access. Address: **n**.

ACTION: Reset or replace CP card.

BUG7064

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

BUG7065

Failed to spawn "TSWD" task.

ACTION: Reload the system with the Manual reload button. Reinstall software from the installation disks.

BUG7066 - to - BUG7068

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

BUG7069

Failed to allocate SWD memory.

ACTION: Reload the system with the Manual reload button.

BUG7070 - to - BUG7071

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

BUG7072

X CP database parse error(s) occurred.

ACTION: Restore the database from backup disks.

BUG7073 - to - BUG7076

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages cause no problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7077

CP database not found.

ACTION: Restore the database from the backup disk.

BUG7078 Local fault (parity) threshold exceeded. Performing switchover.

ACTION: Reset or replace the CP card.

BUG7079 Local fault (parity) threshold exceeded. Switchover failed.

ACTION: Reset or replace CP card.

BUG7080 - to - BUG7099

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

BUG7100 IPB database not found.

ACTION: Restore the database from the backup disk.

BUG7101 IPB database of an unexpected release.

ACTION: Restore the database from the backup disk.

BUG7102 IPB x database parse error(s) occurred.

ACTION: Restore the database from the backup disk.

BUG7103 - to - BUG7104

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7105 IPB card inserted did not fully seat IRQ disabled.

ACTION: Check card keying, or re-seat the card.

BUG7106 - to - BUG7221

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7222 Class <name> failed in init phase.

ACTION: Initialize the system with the manual INIT button.

BUG7223 - to - BUG7225

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored

ACTION: Contact your technical support group.

- BUG7226 HI directory not known to DLO.
ACTION: Reinstall the software from the installation disks.
- BUG7227 Corrupted HI directory name: <file name>.
ACTION: Restore the database from the backup disk.
- BUG7228 Cannot open directory <name>. Error number??
ACTION: Restore the database from the backup disks.
- BUG7229 Failed to copy from <drive> to <drive>.
ACTION: Check that the disk is in the correct drive.
- BUG7230 Failed to save <file name>. Error number??
ACTION: Check the CMDU power switch.
- BUG7231 - to - BUG7235
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages cause no problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG7236 Cannot locate HI data directory.
ACTION: Restore the database from the backup disk.
- BUG7237 - to - BUG7346
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG7347 Exception. restarting with code x.
ACTION: Check the CMDU power switch. Be sure the IP Enb/Dis switch is enabled.
Check both ends of the IOP SCSI cable and both CMDUs.
- BUG7348 - to - BUG7378
Software code descriptions.
Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.
If BUG messages do not cause problems, they can be ignored.
ACTION: Contact your technical support group.
- BUG7379 Failed to find the IOP that passed the self test.
ACTION: Be sure the IOP enable/disable switch is up. Re-seat or replace the security cartridge on the IOP.
- BUG7380 Failed to find the IOP that passed the self test. Switchover and restart will be attempted.
ACTION: Re-seat or replace the IOP.

BUG7381 Failed to find IOP on both sides.

ACTION: Reseat or replace both Hips. Be sure the enable/disable switches are up.

BUG7382 - to - BUG7431

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7432 Exception. Restarting with code x.

ACTION: Be sure the CMDU power is on. Check that the IOP Enb/Dis switch is up. Check both connectors of the IOP SCSI cable, and both CMDUs.

BUG7433 - to - BUG7463

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7464 Failed to find the IOP that passed the self test.

ACTION: Be sure the IOPEnb/Dis switch is up. Reseat or replace the security cartridge on the IOP.

BUG7465 Failed to find the IOP that passed the self test. Attempting switchover.

ACTION: Be sure the IOP Enb/Dis switch is up. Reseat or replace the security cartridge on the IOP.

BUG7466 Failed to find any IOP. Attempting switchover.

ACTION: Be sure the IOP Enb/Dis switch is up. Reseat or replace the security cartridge on the IOP.

BUG7467 Graceful switchover during IOP search was rejected.

ACTION: Be sure the IOP Enb/Dis switch is up. Reseat or replace the security cartridge on the IOP.

BUG7468 Failed to find any IOP on this side. Switchover was rejected.

ACTION: Be sure the IOP Enb/Dis switch is up. Reseat or replace the security cartridge on the IOP.

BUG7469 Failed to find IOP on both sides.

ACTION: Be sure the IOP Enb/Dis switch is up. Reseat or replace the security cartridge on the IOP.

BUG7470 - to - BUG7485

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7486 OS **x y** may not match “diskos” loaded from **z**.

ACTION: Check floppies in floppy drives.

BUG7487 OS **x y** does not match “diskos” loaded from **z**.

ACTION: Check floppies in floppy drives.

BUG7488 SEC Cartridge check failed.

ACTION: Check SEC Cartridge/Dongle. Proceeding without File System.

BUG7489 Attempt to select IOP/CMDU failed. File System may not be accessible.

ACTION: Check the IOP/CMDU. Use MAN INIT when ready.

BUG7490 - to - BUG7493

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7494 A may not match “diskos” loaded from **b**.

ACTION: Check floppies in floppy drives.

BUG7495 A does not match "diskos" loaded from **b**.

ACTION: Check floppies in floppy drives.

BUG7496 Failed to find the IOP.

ACTION: Reseat or replace IOP. Check that IOP enable/disable switch is enable (up).

BUG7497 - to - BUG7579

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages cause no problems, they can be ignored.

ACTION: Contact your technical support group.

BUG7580 RST: Remote access timed out.

ACTION: Change to SINGLE mode. Check to make sure that the CP to CP cable is properly connected, and that power on the remote side is not faulty. Also make sure the remote CP board is seated.

BUG7581 Number of SIMMs on both sides does not match.

ACTION: Be sure both sides have the same number of SIMMs installed. Verify the number of good SIMMs in the system by verifying the SYS0702 messages received during the cold start.

BUG7582 - to - BUG8999

Software code descriptions.

Certain faults will require gathering BUG messages and forwarding these messages to a Nortel Networks support group for resolution.

If BUG messages do not cause problems, they can be ignored.

ACTION: Contact your technical support group.

BUG9000 Global procedure PTU, returned invalid value. Module: MFC. Procedure: ACTV_UPF_CNI_PTU.

ACTION: Contact your technical support group.

BUG9001 Procedure called with an invalid source. Module: MFC. Procedure: PTU.

ACTION: Contact your technical support group.

BUG9002 Different values returned when procedure called twice in the same timeslice with the same parameters (for early check traffic pegging purposes). Module: NARS. Procedure: NARS_FIND_ROUTE.

ACTION: Contact your technical support group.

BUG9003 The parameters sent are incorrect; either the unprotected route pointer is NIL, or the value assigned to the TRK_BUSY_BIT is incorrect (must be zero or one). Note: the parameters are printed in the BUG message. Module: TRK. Procedure UPD_TRK_BUSY_BIT.

ACTION: Contact your technical support group.

BUG9004 An attempt was made to increment or decrement the idle trunk counter beyond its allowable range (0-254). Procedure: UPD_TRK_BUSY_BIT.

ACTION: Contact your technical support group.

BUG9005 Procedure is called during a PTU early check. Procedure: DIGPROC.

ACTION: Contact your technical support group.

BUG9006 Task spawn failed.

ACTION: If the problem persists, initialize the switch. If the problem continues, contact your technical support group.

BUG9007 A CDR call register has timed out after 5 minutes while waiting for PPM information from the trunk. That call register is idled

ACTION: Contact your technical support group.

BUG9008 Error occurred writing Alarm Management Database.

ACTION: Check the file and the hard disk.

BUG9009 Cannot make a Backup of the existing Alarm Management Database.

ACTION: Check the file and the hard disk.

BUG9010 Cannot close Alarm Management Database file.

ACTION: Check the file and the hard disk

BUG9011 Cannot create/open Alarm Management Database directory.

ACTION: Check the file and the hard disk.

- BUG9012 Cannot create Alarm Management Database directory.
ACTION: Check the file and the hard disk.
- BUG9013 <list type> <cust> <list>
Corruptions in MANP or DGCR list of CLIP list.
ACTION: Contact your technical support group.
- BUG9014 MMIH: Failure to spawn task <taskname>.
ACTION: Contact your technical support group.
- BUG9015 MMIH: Failure to create print task message queue.
ACTION: Contact your technical support group.
- BUG9016 MMIH: Failure to create semaphore for message buffer.
ACTION: Contact your technical support group.
- BUG9017 MMIH: Failure to create message buffer.
ACTION: Contact your technical support group.
- BUG9018 An mCIDR return error component (see Appendix C) has been returned with the indication 'invalidCallState'. This means that the network has received the mCIDRequest invoke component from the called party in a state other than the Active state (N10) or the Disconnect indication state (N12).
ACTION: If this is a frequent message, report the problem to your technical support group.
- BUG9019 A mCIDRequest return error component (see Appendix C) has been returned with the indication 'notIncomingCall'. This is considered a bug: mCIDRequest is not to be sent for outgoing calls.
ACTION: If this message appears frequently, report the problem to your technical support group.
- BUG9020 A mCIDRequest return error component (see Appendix C) has been returned with the indication 'supplementaryServiceInteractionNotAllowed'. This means that the MCID supplementary service is invoked when another supplementary service is already activated or has already been invoked. The Network does not allow this MCID supplementary service invocation in combination with the other supplementary service.
ACTION: Report the problem to your technical support group.
- BUG9023 Path replacement: problem when switching from the old to the new connection.
ACTION: Contact your technical support group.
- BUG9024 Path replacement protocol failure.
ACTION: Contact your technical support group.
- BUG9025 Path replacement: problem with the GF.
ACTION: Contact your technical support group.
- BUG9026 Path replacement: Invalid pointer.
ACTION: Contact your technical support group.
- BUG9027 Path replacement encoding/decoding problem.
ACTION: Contact your technical support group.

- BUG9079 Call Register idled still in RAN queue.
ACTION: Contact your technical support group if the condition persists.
- BUG9080 Call Register idled still in broadcast trunk list.
ACTION: Contact your technical support group if the condition persists.
- BUG9081 ORIGTN = 0 in a call waiting for RAN.
ACTION: Contact your technical support group if the condition persists.
- BUG9082 TERTN = 0 in a call linked to a RAN broadcasting trunk.
ACTION: Contact your technical support group if the condition persists.
- BUG9083 Data in the TITH Call Register and the RAN Route data block does not match.
ACTION: Contact your technical support group if the condition persists.
- BUG9084 It is not valid to send a Discard Buffer Message for APNSS configurations.
ACTION: Please check the configuration for D-Channel number n.
- BUG9085 The Layer 2 Reset Option (prompt L2_RST) does not apply for this type of package.
ACTION: Please check the configuration for D-channel number n.
- BUG9087 Call register pointer (CRPTR) passed to procedure BRDCST_UTILITY is out of range.
ACTION: Report the problem if the condition persists
- BUG9088 Music Broadcast trunk list is broken.
ACTION: Report the problem if the condition persists.
- BUG9089 The number of RAN connections available in the system is equal to less than 0.
ACTION: Report the problem and reduce the number of RAN connections until the problem disappears.
- BUG9090 The number of RAN Broadcast in route available in the system is equal to less than 0.
ACTION: Report the problem and remove broadcasting RAN route until the problem disappears.
- BUG9091 RAN waiting calls list is broken.
ACTION: Contact your technical support group if the condition persists.
- BUG9092 RAN trunk list is broken.
ACTION: Contact your technical support group if the condition persists.
- BUG9093 LISPTY_TN BRDCST_TN LISPTY_GROUP LISPTY-JUNC
Invalid junctor value in procedure BRDCST_GET_J when looking for a junctor for a RAN or Music Broadcast call. Parameters: LISPTY_TN, BRDCST_TN, LISPTY_GROUP, LISPTY_JUNC
ACTION: Contact your technical support group if the condition persists.
- BUG9094 BRDPTY_TN, LISPTY_TN, TALKSLOT_WORD, TALKJUNC_WORD
Attempt to write to NTWK memories with bad timeslot data (zero) avoided for a RAN of Music Broadcast call in procedure BRDCST_SETSPEECH. Parameters: BRDPTY_TN, LISPTY-TN, TALKSLOT_WORD, TALKJUNC_WORD
ACTION: Contact your technical support group if the condition persists.

BUG9095 GLOOP U_G_LOOP:PTRY

Network Loop pointer corruption in BRDCST_SETSPEECH. Parameters: GLOOPX, U_G_LOOP: PTRY

ACTION: Contact your technical support group if the condition persists.

BUG9120 GDLS_CALLPROC, GDLSHTPTR is undefined. Serious software fault which will affect system performance.

ACTION: Contact your technical support group.

BUG9121 GDLS_CALLPROC called with improper SOURCE value.

ACTION: Contact your technical support group.

BUG9123 No port type could be assigned to the TN which was invalid in previous ERR 1 message.

ACTION: Contact your technical support group.

BUG9124 IDLE pads could not be sent. Invalid IDLEFLAG value.

ACTION: Contact your technical support group.

BUG9125 PADS column is outside specified range (0-1). The TN and the PADS values are printed.

ACTION: Check the loss plan for out of range values and modify through the distributor and the manufacturer.

BUG9126 RPAD or TPAD column is outside specified range. The TN RPAD and TPAD are printed.

ACTION: Check the loss plan for out of range values and modify through the distributor and the manufacturer.

BUG9127 An invalid message type was received for a TN specified to receive PAD messaging. The TN and Message type are printed.

ACTION: Check card.db file used for mapping against published values in NTP and modify through the distributor and the manufacturer.

BUG9128 An empty (NULL) value was specified in the loss plan and could not be sent.

ACTION: Contact your technical support group.

BUG9129 An invalid message type was received for a TN specified to receive flexible level messages. The TN and message type are printed.

ACTION: Contact your technical support group.

BUG9130 An invalid message type was encountered when trying to retrieve the encoded message for a specified Receive or Transmit dB value. The message type is printed.

ACTION: Contact your technical support group if the problem persists.

BUG9131 A value smaller than -12dB RX was passed to be encoded but GDLS encoding tables start at this value. A value of -12dB was used instead.

ACTION: Check loss plan table for improvements.

ACTION: Note: Extreme values may be beyond the capabilities of the hardware device.

BUG9132 A value greater than +14dB RX was passed to be encoded but GDLS encoding tables finish at this value. A value of +14dB was used instead.

ACTION: Check the loss plan table for improvements.

ACTION: Note: Extreme values may be beyond the capabilities of the hardware device.

- BUG9133 A value smaller than -12dB TX was passed to be encoded but GDLS encoding tables start at this value. A value of -12dB was used instead.
ACTION: Check the loss plan table for improvements.
ACTION: Note: Extreme values may be beyond the capabilities of the hardware device.
- BUG9134 A value greater than +14dB TX was passed to be encoded but GDLS encoding tables finish at this value. A value of +14dB was used instead.
ACTION: Check loss plan table for improvements.
ACTION: Note: Extreme values may be beyond the capabilities of the hardware device.
- BUG9135 The default port type for the TN passed was not allocated.
ACTION: Contact your technical support group.
- BUG9136 The PLOOPTR for the TN passed for default port type allocation was invalid.
ACTION: Contact your technical support group.
- BUG9140 Call register removed from the RAN waiting queue still in the RAN waiting call register's list.
ACTION: Report the problem if the condition persists.
- BUG9141 A call is connected after the RAN re-started. The beginning of the announcement could be missed.
ACTION: Increase the delay between the two announcements on the RAN machine (up to 2 seconds), or reduce the maximum number of RAN connections.
- BUG9149 ACD DN was not found in agent's MQA data block whereas the TN of the agent appears in the position list of the ACD DN.
ACTION: AUDIT_POSITIONS
ACTION: Agent's TN is removed from the position list of the ACD DN. Loop variable is adjusted so that the TN can be audited in the same place where MQA agent's TN used to be. AGENT_ID is removed from ID_TBL if it exists, and from P_POSITION PTR.
- BUG9157 A problem occurred during QSIG Diversion.
ACTION: Report the problem along with the parameters output.
- BUG9159 The broadcast speechpath was not set-up.
ACTION: Report the problem if the condition persists.
- BUG9160 While idling a broadcast call the broadcast timeslot junctor was found to be empty.
ACTION: Report the problem if the condition persists.
- BUG9174 The problem occurs when the VI use the GF functionalities.
ACTION: Contact your technical support group.
- BUG9175 Attempting to format an invalid or unsupported DPNSS NSI string.
ACTION: FORMAT_NSI. Module DIO.
- BUG9176 CRM received in invalid Supplementary Service State.
ACTION: MWIGW_CRM_INPUT. Module DSS.

- BUG9177 Invalid GW_FUNCTION.
ACTION: MWIGW_SERVICE. Module IDAGW.
- BUG9178 Could not send a Facility (Request) message.
ACTION: RCVD_MWI_ISRM. Module IDAGW.
- BUG9179 Could not send a Facility message (either a Facility (Acknowledge) or a Facility (Reject)).
ACTION: RCVD_MWI_CRM. Module IDAGW.
- BUG9180 Could not send an ISRM containing a Message Waiting NSI string.
ACTION: RCVD_MWI_FAC_REQ. Module IDAGW).
- BUG9181 Could not send a CRM with a Clearing Cause of Acknowledge.
ACTION: RCVD_MWI_FAC_ACK. Module IDAGW.
- BUG9182 Could not send a CRM.
ACTION: RCVD_MWI_FAC_REJ. Module IDAGW.
- BUG9183 Could not send a Facility Reject message.
ACTION: Contact your technical support group.
- BUG9184 Could not send a Facility Reject message.
ACTION: MWIGW_FAC_PROB. Module IDAGW.
- BUG9185 Invalid direction for MCDN TCAP Diagnostic Code {-} DPNSS Clearing Cause mapping.
ACTION: MAP_DIAG_CC. Module IDAGW).
- BUG9186 Invalid new call state.
ACTION: MWIGW_SET_STATE. Module IDAGW.
- BUG9187 ITEMPTR is NIL.
ACTION: MWIGW_PARM_CHK. Module IDAGW.
- BUG9188 MCDN Message CR pointer is invalid.
ACTION: MWIGW_PARM_CHK. Module IDAGW.
- BUG9189 CRPTR is invalid.
ACTION: MWIGW_PARM_CHK. Module IDAGW.
- BUG9190 Invalid GW_FUNCTION.
ACTION: MWIGW_PARM_CHK. Module IDAGW.
- BUG9191 Could not map the digits for the OLI of the outgoing Message Waiting ISRM.
ACTION: MWIGW_GET_OLI. Module IDAGW.
- BUG9225 Corruption of word RINGSLOT_JUNC in the UBCS_BASICBLK has occurred.
ACTION: Contact your technical support group.
- BUG9234 Wrong parameters have been passed to MEET_HANDLER, MEET_RCV_MSG or MEET_HANDLER_NAS. Output: {x} = 1 MEET_HANDLER, 2 MEET_RCV_MSG, 3 MEET_HANDLER_NAS {y} = REQ value, {z} = DATA1 value
ACTION: Contact your technical support group.

BUG9235	Registration to GF of MCDN End to End Transparency has failed. ACTION: Contact your technical support group.
BUG9236	The message indicates a QSIG call transfer protocol failure. ACTION: Contact your technical support group.
BUG9237	QSIG call transfer. A problem exists with the GF. ACTION: Contact your technical support group.
BUG9238	QSIG call transfer. A pointer is invalid. ACTION: Contact your technical support group.
BUG9239	A problem exists with the QSIG call transfer encoding and decoding. ACTION: Contact your technical support group,.
BUG9258	An invalid state for incoming TWR1 call. Output data: trktn source tw_inc_pm. ACTION: Contact your technical support group.
BUG9259	The current maximum interface number was found to be invalid when using overlay 73 to add an interface to the D-channel list. ACTION: Contact your technical support group.
BUG9260	Itempointer is nil in TAIWAN_HANDLER. ACTION: Contact your technical support group.
BUG9262	This supervision type is not for Japan DID or CO. ACTION: Contact your technical support group.
BUG9263	The ACLI son call register is NIL. ACTION: Contact your technical support group.
BUG9265	The number of portables configured in the system has reached the limit. ACTION: Contact your technical support group.
BUG9266	A problem occurred during QSIG Call Transfer. ACTION: Report the problem.
BUG9267	Procedure DV_CLEAR_FLAGS: NIL pointer passed. ACTION: Contact your technical support group.
BUG9271	VNS processing was unable to release recourses by calling VNS_END_OF_DIAL. Possible system INI was prevented. 

CCED — LD 135 Core Common Equipment Diagnostic

In this chapter

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How the CCED works

LD 135 (Core Common Equipment Diagnostic) provides diagnostic and maintenance information for Option 51C/61C/81 machines. It provides a means of performing the following functions:

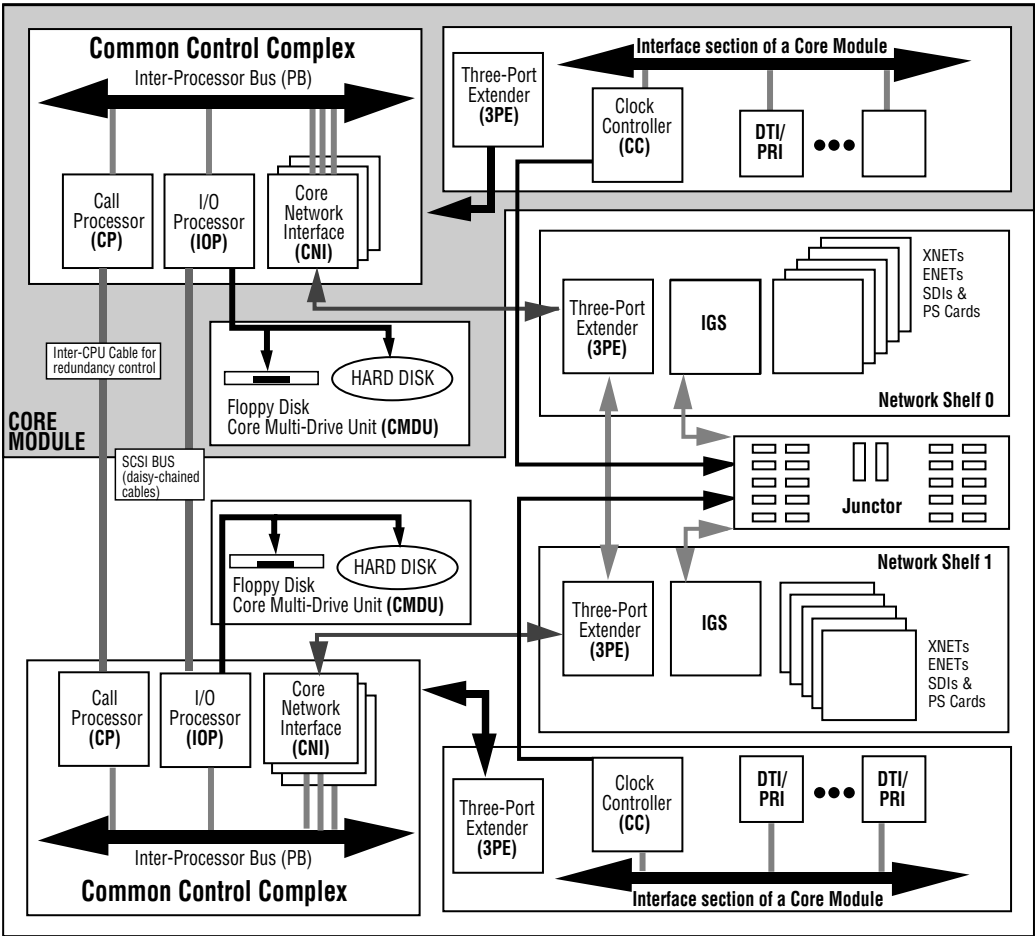
- ◆ clearing minor and major alarms
- ◆ clearing and printing maintenance display contents for the primary Core
- ◆ testing the idle Core
- ◆ displaying CP card status and ID
- ◆ enabling and disabling CNI cards
- ◆ displaying CNI card ID and status
- ◆ testing SIMMs, inactive CNIs, and standby Core during daily routines
- ◆ switching Cores when in redundant mode
- ◆ during midnight routines checking primary CNIs, checking for Core redundancy, and attempting to switch Cores

Common control complex

The common control complex (Core) consists of an Inter Processor Bus (IPB), Call Processor (CP), Input/Output Processor (IOP), Core to Network Interface (CNI), and Core Multi-Drive Unit (CMDU), all contained in a Core Module.

The Option 61C and 81 has two Core modules to provide redundancy. The Option 51C has only one Core module.

The diagram below depicts an Option 81 layout. The layout for the Option 51C and 61C is similar except there is only one CNI card for each Core Module.



553-0171T CCED

Inter-Processor Bus

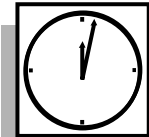
The IPB is a multi-master bus used by the CP to communicate with various core units. The address and data bus is capable of handling 32 bits.

Special circuit components

Bus Interface Chip — The BIC provides interface to the IPB, and replaces the Omega IF card. The BIC is found on all Core cards except CBT and CMDU cards.

System Resource ASIC — The SRA provides interrupt handling, timers and local bus arbitration on the CP. The SRA replaces part of the Omega FN card.

Changeover Memory Block — The CMB provides DRAM control and separate updating of memory (shadowing). The CMB replaces the CMA card.

CCED common commands		
Command	Description	Release
Clear maintenance displays and alarms		
CDSP	Clear maintenance displays. This command sets the maintenance display for the primary CP to blank.	51C/61C/81-19
CMAJ	Clear major alarm, and reset power fail transfer.	51C/61C/81-19
CMIN ALL	Clear minor alarm indication for all customers.	51C/61C/81-19
CMIN n	Clear minor alarm indication for customers.	51/C61C/81-19
Run midnight routines		
		
MIDN	Run midnight routines after LD 135 is aborted and TTY is logged out.	51C/61C/81-19

CCED common commands (continued)

Command	Description	Release

Split mode

SPLIT	Put a redundant (shadowed) system into single (non-shadowed) mode.	51C/61C/81-19

The active Core remains active. Use this command for parallel reload, and for diagnostics requiring split mode operation. Additionally, the standby (inactive) Core “wakes up” and does a system level INIT. When the command is successful, OK is printed. If it is not successful, an error message is printed.

This command has the same effect as putting both Cores into MAINT.

If a terminal is connected to the secondary Core's CPIO port, OS level start-up messages appear as well as INI messages. This is not an error, and is operating according to design.

If the disks are not synchronized, the command aborts, and an error message appears.

Restore redundancy

SHDW	Restore redundancy to a system put in single mode by the SPLIT command.

This command cannot be used unless the system is already SPLIT. This command MUST be entered by the CPIO port on the secondary CP.

This command puts the secondary CP to “sleep”. Once the secondary CP is asleep, the primary CP begins the process of updating the secondary CP's memories so they match the primary CP.

This command does NOT synchronize the contents of the CMDUs. Use LD 137 to synchronize the CMDUs.

When implementing this command, the following is output: WARNING: CP x will be put to SLEEP. Enter <YES> to continue, or press <return> to abort.

CCED common commands (continued)		
Command	Description	Release

Switch cores

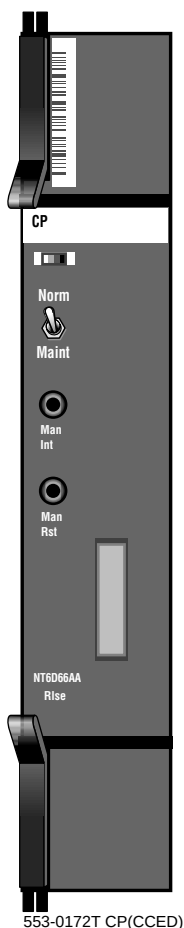
SCPU	Switch Cores. This command causes the inactive CP to become active. If the switchover is successful, OK is printed. If it is not successful, an error message is printed. If, when attempting to switch CPs, the system determines that the currently active side is better than the standby side, and a message appears on the TTY: FORCE? Enter <YES> to force SCPU to standby Core x. Press <Return> to abort SCPU. Entering Yes continues the switch. Entering a Carriage Return <CR> defaults to No and retains the currently active side.	51C/61C/81-19

Print core ID

IDC CPU	Print card ID for the active Core. The printout appears in the following format: x y pppppppppp rrssss cccccc x = Core number (0 or 1) y = Slot number (8-12) pppppppppp = PEC code rr = Release number ssss = Serial number ccccc = Comments (optional) .	51C/61C/81-19

CCED common commands (continued)		
Command	Description	Release
Test core		
TEST CPU	Test the inactive (standby) Core. This command performs NO tests upon the active (primary) Core. The Core Module Backplane, CP to CP cables, and memory are tested to ensure that Split mode can be entered safely. Then the CP is tested. The system enters split mode, runs the test, and returns to redundancy (memory shadowing). This may take a few minutes because of the time required to re-establish memory shadowing and contents. It is possible, during the test, that service may be interrupted if an error occurs on the single active Core. Output from this test is OK, or a CCED message. Refer to the specific message for more information. Testing the secondary (inactive) Core is done by performing a “reset” on the secondary Core. If a terminal is connected to the secondary Core's CPIO, cold start diagnostics are displayed on the terminal. This is not an error, and is operating according to design.	51C/61C/81-19

CP — Call Processor



Purpose

The CP card provides control and switching sequences for Option 51C, 61C, 81 and 81C.

Function

The CP performs a function similar to the Omega processor, as described in the *CED* chapter, in this guide, with the following exceptions:

- ◆ the CP has twice the real time capacity of the Omega processor and uses a 32-bit Motorola 68030 processor.
- ◆ The CP card of the Option 81C uses a 68040 processor. This CP card can be used on the Option 81.
- ◆ the CP provides six slots for up to 24 megabytes of memory, using 4 megabyte Single In-line Memory Modules (SIMM). CPs are factory equipped with 16 megabytes of memory. Core memory is separate making it less susceptible to data corruption than previous memory
- ◆ system reload does not affect the real time clock
- ◆ each CP has two serial data interface ports, which are active when the CP is active. One is used for maintenance diagnostics with a DTE, and the other with a DCE for remote use by NT

Features

The CP faceplate includes the following features:

- ◆ a two line 24 LCD for plain language maintenance messages. At the bottom of the LCD a small rectangle flashes to indicate the active CP
- ◆ a reload button, Man Rst, for system software reloading
- ◆ an LED which flashes three times to indicate a passed self test, and when steady lit indicates a disabled processor
- ◆ a manual initialize button, Man Int, associated with the active processor, which when pushed will rebuild part of the memory and check for CE faults
- ◆ a normal maintenance switch, Norm Maint, when set to Maint is used to force the processor active. This switch is also used when updating from one software release to another

CP faceplate hex codes

The NT6D66 Call Processor (CP) card in Options 51C/61C/81 utilizes plain text messages as well as Hex messages for system maintenance, messages status, and errors. The Table on the following page lists the different LCD messages that appear on the CP card faceplate. The standard Hex messages also appear on this LCD display.

BOOT ERROR: RPT. Init

System failed to initialize correctly.

ACTION: Contact your technical support group.

Card is AP: IDLE

Checking to determine if the system can be Split.

ACTION: Information only, no action required.

Exit CP-BUG

The debug program is being exited.

ACTION: Information only, no action required.

In CP-BUG

The debug program was entered.

ACTION: Information only, no action required.

SIOx Created

CP serial port **x** already exists.

ACTION: Contact your technical support group.

SIOx Init Fail

CP serial port **x** failed to initialize the device specific database.

ACTION: Contact your technical support group.

SIOx No Drv

No device driver associated with CP serial port **x**.

ACTION: Contact your technical support group.

Type CTRL-B to run CP-BUG debugger

Options 51C/61C/81 start-up. Output to CP port prior to loading the operating system.

ACTION: Contact your technical support group.

Core commands		
Command	Description	Release
CP Display		
DSPL	Get contents of maintenance display for the active Core. If the maintenance display is blank, BLANK is output.	51C/61C/ 81-19
DISPL ALL	Get contents of maintenance display for the active Core, and previous 63 displays.	51C/61C/ 81-19
CP and SIMM Status		
STAT CPU	Get the status and core numbers for both CPs. Possible responses are: ENBL = CP is running IDLE = CP is in standby DSBL = CP is disabled If the status is DSBL, one of the following OOS reasons is printed: 0 = CP card local bus parity threshold exceeded 1 = CP card sanity timeout threshold exceeded 10 = Secondary CP is not accessible 16 = Secondary CP has a major fault This command also prints out the results of the latest self-test, and the position of the Maint/Norm switch.	51C/61C/81-19
STAT MEM c m	Get status of SIMMs on both CPs. To get the status of a single SIMM, or a specific side enter the following information. c = Core (0 or 1) m = SIMM number (0-5) If m is not entered, status for all SIMMs is printed. If the status is Disabled (DSBL), the device is not accessible.	51C/61C/81-19

Core commands (continued)		
Command	Description	Release

Test CP

TEST LCD	Test the LCD display on the active CP card. The following test pattern is displayed on the active CP card's display:	51C/61C/81-19

8888888888888888
8888888888888888

ABCDEFGH IJKLMN OP
QRSTU VWXYZ123456
abcde fghij klmnop
qrstu vwxyz012345

The first two tests occur very quickly, so you may actually see only the third one.

Core to Network Interface

The CNI combines the functions of two Segmented Bus Extenders. Three CNI cards are used to connect the Core to five network groups.

Refer to the *CNI* chapter in this guide for a description of the CNI card.

CNI commands		
Command	Description	Release
Status CNI		
STAT CNI c s p	Get the status of all configured CNIs. Also prints the Network Group number of both ports on each CNI. To get the status of a specific CNI port, enter the following information. Entering only STAT CNI gets the status for all CNI ports. c = Core number (0 or 1) s = Slot number (8-12) p = Port number (0 or 1) If the P is not entered, the status of both ports is printed. If the status is DSBL (Disabled), one or more of the OOS reasons may appear. What actually appears are the numbers associated with the OOS text as follows: 0 = CP local bus parity threshold exceeded. Action: Contact your technical support group. 1 = CP card HPM time-out threshold exceeded. Action: Contact your technical support group. 8 = Unconfigured CNI card. Action: Refer to the <i>administration input/output guide</i>. Use LD7 CEQU to program CNI. 9 = Port has been disabled by craftsperson. Action: Information only. Take appropriate action as required.	51C/61C/81-19

CNI commands (continued)		
Command	Description	Release
Status CNI		
STAT CNI c s p continued	10 = Device is not accessible. Action: Install a CNI card following the steps in the <i>Hardware replacement</i> guide.	
	16 = CNI to 3PE cable 1 on specified card and port lost. Action: Check both connector ends of the CNI-3PE cable.	
	17 = CNI to 3PE cable 2 on specified card and port lost. Action: Check both connector ends of the CNI-3PE cable.	
	18 = 3PE power lost. Action: Check the power supply circuit breakers on the network shelf where the 3PE is located and reset then if required. If the circuit breaker trips replace the power supply card following the steps in the <i>Hardware replacement</i> guide. If the circuit breaker trips after replacing the power supply card, remove all the cards and reset the circuit breaker. If the circuit breaker trips after all the cards are removed, replace the shelf backplane following the steps in the <i>Hardware replacement</i> guide. If the circuit breaker does not trip after all the cards are removed, replace the Network shelf cards one at a time until the card causing the circuit breaker to trip is found, then replace the card(s) following the steps in the <i>Hardware replacement</i> guide	
	19 = 3PE has been manually disabled. Action: Information only. Take appropriate action as required.	
	20 = CNI card has been manually disabled. Action: Information only. Take appropriate action as required.	

CNI commands (continued)		
Command	Description	Release
Status CNI		
STAT CNI c s p continued	21 = Card test failed. Action: Replace the CNI card following the steps in the <i>Hardware replacement</i> guide. After replacing the card verify that the fault is cleared.	
	22 = Port test failed. Action: Replace the CNI card following the steps in the <i>Hardware replacement</i> guide. After replacing the card verify that the fault is cleared.	
	23 = Extender disabled by Meridian 1 initialization. Action: Use ENL CNI to enable the extender.	
	24 = Port interrupt line 0 disabled. Action: Contact your technical support group.	
	25 = Port interrupt line 1 disabled. Action: Contact your technical support group.	
	26 = Port interrupt line 2 disabled. Action: Contact your technical support group.	
	27 = Port interrupt line 3 disabled. Action: Contact your technical support group.	

CNI commands (continued)

Command	Description	Release

Test CNI port

TEST CNI c s p Test the CNI port. 51C/61C/81-19

c = Core number (0 or 1)

s = Slot number (8-12)

p = Port number (0 or 1) If the P is not entered, both ports are tested.

This command can test Standby CNIs as well as active CNIs that are out-of-service.

This may take a few minutes because of the time required to re-establish memory shadowing and contents. When the command is successful, **OK** is printed. If it is not successful, an error message is printed.

Disable CNI port

DIS CNI c s p Disable the CNI port. 51C/61C/81-19

c = Core number (0 or 1) This must be the standby side. Disable the active side if the CNI is not in service.

s = Slot number (8-12)

p = Port number (0 or 1)

Enable CNI port

ENL CNI c s p Enable the CNI port. 51C/61C/81-19

c = Core number (0 or 1)

s = Slot number (8-12)

p = Port number (0 or 1)

If the P is not entered, both ports, and the card itself are enabled. A port cannot be enabled if the card is disabled. Enabling the CNI card will also enable the 3 Port Extender card.

CNI commands (continued)		
Command	Description	Release

Print CNI ID

IDC CNI s	Print the card ID for the CNI on the active side. s = Slot number (8-12) The printout appears in the following format: x y ppppppppaa rrssss cccccc x = Core number (0 or 1) y = Slot number (8-12) pppppppp = PEC code aa = Attribute code rr = Release number ssss = Serial number ccccc = Comments (optional)	51C/61C/81-19

CCED messages

CCED0000	No errors detected. ACTION: Information only, no action required.
CCED0001	Invalid command. ACTION: Ensure that this is the command you wanted to use.
CCED0002	Invalid device name. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
CCED0003	Extra arguments. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
CCED0004	Insufficient arguments. ACTION: Check to make sure your data is correct and if applicable, re-enter the command. You may need to be more specific about the side and slot.
CCED0005	That device is already enabled. ACTION: Ensure that this is the command you wanted to use.
CCED0006	That device is already disabled. ACTION: Ensure that this is the command you wanted to use.
CCED0007	Core side numbers can only be 0 or 1. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
CCED0008	Invalid slot number. ACTION: Check to make sure your data is correct and if applicable, re-enter the command. Slot numbers must be in the range of 8 to 12.

- CCED0009 Specified device is not configured, and not responding.
ACTION: Configure the device using the appropriate overlay, and if applicable, re-enter the command. If the device is configured and is seated in the backplane but does not respond, replace the device by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the device verify that the fault is cleared.
- CCED0010 Specified device does not respond.
ACTION: If the device is configured and is seated in the backplane but does not respond, replace the device by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the device verify that the fault is cleared.
- CCED0011 Specified device is not configured.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the appropriate overlay to configure the device and re-enter the command.
- CCED0012 Unable to make the transition to split mode. The test is aborted.
ACTION: Check the cables on the core module backplane at 14A and 14C for bent pins or improper connections. Run TEST CPU to verify that the system will enter the split mode.
- CCED0013 Performing diagnostics.
ACTION: Wait for test completion(s) before continuing.
- CCED0014 Test failed because the system is unable to enter Split mode
ACTION: Check cables on the core module backplane at 14A and 14C for bent pins or improper connections. Run TEST CPU to verify that the system will enter the split mode.
- CCED0015 Operation failed because the system is only recognizing one CPU.
ACTION: Check the cables on the core module backplane at 14A and 14C for bent pins or improper connections. Check the system for redundancy. First, use STAT CPU to ensure that one CPU is running and the other is in standby; then use STAT in LD 137 to check for CMDU disk redundancy. If the fault does not clear, replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CCED0016 Invalid operand.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- CCED0017 Unable to restore redundancy.
ACTION: Check the cables on the core module backplane at 14A and 14C for bent pins or improper connections. Place the active CP into maintenance mode, and Sysload the secondary CP, allowing the prime CP to attempt to synchronize memories.
- CCED0018 Secondary side unable to complete test.
ACTION: Check the cables on the core module backplane at 14A and 14C for bent pins or improper connections. Place the active CP into maintenance mode, and Sysload the secondary CP, allowing the prime CP to attempt to re-synchronize disks.
- CCED0020 Cannot enter Split mode when disks are not synchronized.
ACTION: Use SYNC in LD 137 to re-synchronize the hard disks. If you need help with the commands or system responses refer to the “CIOD — LD 137 Core Input/Output Diagnostics” on page 291 in this guide.

- CCED0021 Cannot perform SHDW command from CP running call processing.
ACTION: Enter this command from the CPIO port on the secondary CP.
- CCED0022 Cannot use SHDW command without using the SPLIT command first.
ACTION: Use the SPLIT command to put the system into single mode.
- CCED0023 Cannot perform TEST when primary SIMM is faulty.
ACTION: Use the SCPU command to switch Cores (SCPU) and try again.
- CCED0024 Cannot perform TEST when secondary SIMM is faulty.
ACTION: Use the SCPU command to switch Cores and try again.
- CCED0025 Command is not applicable to single CPU system.
ACTION: Ensure that this is the command you wanted to use.
- CCED0027 Expansion Cabinet 'T' does not have survivable capability
- CCED0028 Expansion Cabinet 'T' already in survivable mode.
- CCED0029 Expansion Cabinet 'T' already in slave mode.
- CCED0030 Cannot execute the command as IP link to cabinet 'T' is down.
- CCED0031 Expansion Cabinet 'T' is in locked state.
- CCED0032 Expansion Cabinet 'T' is already in a locked state.
- CCED0033 Expansion Cabinet 'T' is already in a locked state.
- CCED0034 Another LOCK/UNLOCK command is in progress.
ACTION: Please wait.
- CCED0100 Error clearing major alarm.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If this message reappears contact your technical support group
- CCED0101 Unrecognized customer number.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 CDB to check the customer number. Check to make sure your customer number data is correct and if applicable, re-enter the command.
- CCED0102 x Unable to clear the alarm for customer x.
ACTION: Check to make sure your customer number data is correct and if applicable, re-enter the command.
- CCED0103 100 Base T hardware does not exist.
ACTION: Check if Base T daughter board is plugged in properly.
- CCED0200 CPU test failed.
ACTION: Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

- CCED0201 SRAM test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0202 HPM test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0203 SRA test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0204 BIC test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0205 CMB test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0207 DUART test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0208 TOD test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0209 PEROM test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0210 LCD test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0211 ASIC ICC test failed.
- ACTION:** Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

- CCED0212 SIMM number x failed self test.
ACTION: Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0213 Operation failed because the system is in maintenance mode.
ACTION: Use STAT CPU to verify that the CP card is not in the maintenance mode and then re-try the command.
- CCED0214 Cannot switch Cores (SCPU) because the secondary Core is faulty.
ACTION: Use TEST CPU, TEST IPB, TEST CNI to test the Common Control Complex. Use TEST CMDU, TEST IOP, TEST SCSI in LD 137 to test the Core Multi-drive Unit. Replace any faulty cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared. If this message reappears when trying to switch Cores, contact your technical support group.
- CCED0215 Unable to perform switchover.
ACTION: Use TEST CPU, TEST IPB, TEST CNI to test the Common Control Complex. Use TEST CMDU, TEST IOP, TEST SCSI in LD 137 to test the Core Multi-drive Unit. Replace any faulty cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared. If this message reappears when trying to switch Cores, contact your technical support group.
- CCED0216 Unable to lockout graceful switchover possibility.
ACTION: Try again. If this message reappears contact your technical support group.
- CCED0217 Cannot switch Cores (SCPU) because the core shelf resource is in use.
 A critical core shelf resource was being accessed when the SCPU command was entered.
ACTION: Try again. If this message reappears contact your technical support group.
- CCED0218 Cannot switch Cores because the standby core resource has a fault.
 One of the standby IPB devices has a fault.
ACTION: Use STAT CNI, STAT CPU, and STAT MEM commands to check cards on the Inter-processor Bus. Replace the faulty cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If the fault is not cleared, check the cables on the core module backplane at 14A and 14C for bent pins or improper connections.
- CCED0219 Cannot switch Cores (SCPU) because the standby net resource has a fault.
 One of the network shelves has a fault.
ACTION: Run LD 30 and LD 45 in the background to help identify network faults. If there are no further network faults and you still cannot switch Cores, use STAT CNI to verify that all CNIs are enabled. Use TEST CNI c s p test for faulty CNIs. Replace any faulty CNIs following the steps in the *Hardware Replacement* (553-3001-520). Use DIS CNI c s p and ENL CNI c s p to disable and re-enable the CNIs, then retry switching the Cores. If the Cores do not switch, contact your technical support group, as it is possible that the database file is in an OOS state.

- CCED0220 Cannot switch Cores (SCPU) because the system is not in redundant mode.
The system is currently running in single mode, so the SCPU command failed.
ACTION: Set the active CP Maint/Norm switch to Maint. Set the standby CP Maint/Norm switch to Maint. Press the Man Rst button on the standby CP and then switch the standby CP to NORM. Memories are synchronized when a DONE message appears. Set the active CP switch to Norm. Use STAT CMDU in LD 137 to check if CMDUs are synchronized and, if not, then use the SYNC command.
- CCED0221 Cannot SCPU because the memories are not synchronized.
ACTION: Place the Maint/Norm switch on the active CP to Maint, and press the Man Rst button on the standby CPU, allowing the active CP to synchronize memories. Re-enter the command.
- CCED0222 x Fault found during SCPU. System returned to side x.
ACTION: Use TEST CPU, TEST IPB, TEST CNI to test the Common Control Complex. Use TEST CMDU, TEST IOP, TEST SCSI in LD 137 to test the Core Multi-drive Unit. Replace any faulty cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared. If this message reappears when trying to switch the Cores, contact your technical support group.
- CCED0300 Invalid SIMM number.
ACTION: Use STAT CNI to get the SIMM number and re-enter the command.
- CCED0304 Memory test successful. All secondary SIMMs enabled.
ACTION: Information only, no action required.
- CCED0305 Memories are not synchronized.
ACTION: Wait a few minutes and try again.
- CCED0400 Port numbers can only be 0 or 1.
ACTION: Check to make sure your port number is correct and if applicable, re-enter the command.
- CCED0401 Cannot disable the CNI when it is active and in service.
ACTION: Use the SCPU command and re-enter the disable command.
- CCED0402 The far end extender did not respond and cannot be enabled.
ACTION: Use STAT CNI c s p and TEST CNI c s p to identify the extender. If appropriate, replace the 3PE card or the CNI card or the cable, following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared and try again.
- CCED0403 Cannot enable the port when the card is disabled.
ACTION: Check that the Enb/Dis switch CNI card faceplate is in the Enb position. Refer to the *X11 Administration* (553-3001-311). Use LD 17 to ensure the CNI card is configured correctly and then re-try the enable command.
- CCED0404 Cannot enable a port that does not have a group configured.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 17 to configure a loop for the group before enabling this port.

CCED0405 Cannot test the CNI card that is active and in service.

ACTION: Use the SCPU command to put the CNI card in standby mode and retry the command.

CCED0407 w x y z

Cannot enable CNI card/port w x y because of reason z.

For CNI cards, **w** = side and **x** = slot.

For CNI ports, **w** = side, **x** = slot, and **y** = port.

Reason **z** may be one of the following:

8 = Unconfigured CNI

9 = Port has been disabled by craftsperson

10 = Device is not accessible

16 = CNI to 3PE cable 1 on specified card and port lost

17 = CNI to 3PE cable 2 on specified card and port lost

18 = 3PE power lost

19 = 3PE has been manually disabled

20 = CNI card has been manually disabled

21 = Card test failed

22 = Port test failed

23 = INI disabled network

24 = READY interrupt is stuck for this group

25 = I/O interrupt is stuck for this group

26 = LINE interrupt is stuck for this group

27 = CNI maintenance interrupt is stuck for this group

ACTION: Replace the faulty CNI card following the steps in the *Hardware Replacement* (553-3001-520). Repeat the command to verify that the fault is cleared.

CCED0408 w x y

Will attempt to enable CNI card/port at the next switchover.

The CNI card or port has been noted as enabled. Because it resides on the standby side, it cannot actually be enabled until the standby side becomes active. For CNI cards, **w** = side and **x** = slot. For CNI ports, **w** = side, **x** = slot, and **y** = port.

ACTION: Information only, no action required. If the CNI needs to be enabled use the SCPU command.

CCED0409 x x loopback data errors on the MSB.

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0410 x y z

Event interrupt 0 test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0411 x y z

Event interrupt 1 test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0412 x y z

Event interrupt 2 test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0413 x y z

Event interrupt 3 test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0414 x y z

BIC test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0415 x y z

Loopback address errors.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0416 x y z

Loopback parity test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0417 x y z

Loopback address parity invert errors.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0418 x y z

Loopback data errors on LSB.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0419 x y z

Loopback data errors on MSB.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0420 x y z

Loopback data parity errors on LSB.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0421 x y z

Loopback data parity errors on MSB.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0422 x y z

Event interrupts occurring out of sequence.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0423 x y z

Event interrupts lost.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0424 x y z

Event interrupts time-out test.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0425 x y z

Read strobe test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0426 x y z

Write strobe test failed.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0427 x y z a

CNI port x y z a incorrect. Restored.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

a = EI

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0428 x y z a

CNI port x y z is in incorrect mode. Restoring to a mode.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

a = mode

ACTION: Replace the CNI card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0429 x y z

CNI port x y z remote device (3PE) is not accessible.

x = side (0-1)

y = slot (8-12)

z = port (0-1)

ACTION: Check both connector ends of the CNI-3PE cable. Be sure the 3PE Enb/Dis switch is in the Enb position. Use TEST CNI c s p to check the connections to and from the 3PE card.

CCED0500 IPB IRQ test failed. This may indicate a failure on the CP card.

ACTION: Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

CCED0501 IPB master arbitration test failed. This may indicate a failure on the CP card.

ACTION: Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.

- CCED0502 IPB event interrupt failed. This may indicate a failure on the CP card
ACTION: Replace the CP card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared by running this test again. If this message reappears contact your technical support group.
- CCED0503 x IPB backplane parity test failed.
ACTION: Contact your technical support group.
- CCED0505 x Fiber hardware does not exist.
ACTION: Check if Fiber Daughter Board is plugged in properly.
- CCED0506 Fiber pack failed loop back test.
ACTION: Check if the Fiber Receiver Pack and cable are installed properly. Might have to replace the Fiber Daughter Board.
- CCED0507 Cabinet has not been disabled.
ACTION: LD32 and DISS the cabinet
- CCED0508 The fiber pack has not been disabled.
ACTION: Disable the fiber pack.
- CCED0509 Cabinet is out of range.
ACTION: Re-enter the cabinet number
- CCED0760 Graceful switchover to side x requested.
ACTION: Information only, no action required. This message is normal when using the SCPU command and when LD 135 is included during daily (midnight) routines.
- CCED0761 Ungraceful switchover to side x requested.
ACTION: Check for faults on side opposite to side x.
- CCED0762 Graceful switchover to side x completed. Previous graceful switchover at <time>.
ACTION: Information only, no action required.
- CCED0999 LD135 internal error in file <name> at line <number>.
ACTION: Contact your technical support group.
- CCED1010 ERDN: SWO denied. Eth.Redundancy feature has already caused a SWO.
ACTION: Wait until the ethernet link on the current side becomes reliable: or disable ERDN feature in LD 137 if a switch-over is necessary.
- CCED1021 Port number out of range.
- CCED1022 IP link failed loop-back test. 

CED — LD 35 Common Equipment Diagnostic

In this chapter

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Before changing circuit cards, be aware of the procedures outlined in the “Do this when you replace circuit cards” on page 44, section found in *You should know this*

How the CED works

LD 35 is used to maintain the Central Processing Unit (CPU) and related cards. It can run in the background, during the daily routines, or be loaded manually to enter commands. Problems are reported by CED messages.

The CED overlay is used to do the following:

- ◆ clear the maintenance display
- ◆ switch CPUs in dual-CPU systems
- ◆ test the idle CPU in dual-CPU systems
- ◆ display the status of the CPU and buses
- ◆ enable, disable, test and display the status of memory and CMA cards
- ◆ enable, disable and display the status of CE extenders

When loaded during daily routines, memory modules are tested. If there are two CPUs, a CPU switchover is made.

This overlay applies to all systems **except** Options 51C, 61C, 81 and 81C. Refer to LD 135 for Core Common Equipment Diagnostics.

CED common commands		
Command	Description	Release
Clear display/alarm		
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1

Omega processor

The processor used in the Option 61, 71, Meridian SL-1NT and XT consists of the Omega Function (FN) and the Omega Interface (IF) card. The FN card acts as a central processing unit and the IF card provides a miscellaneous register capability.

The Option 21 and the Meridian 1 STE use a slightly different processor consisting of a combined CPU, and miscellaneous and memory circuits.

FN — Function



553-0173T FN(CED)

Purpose

The Function (FN) card, driven by Meridian 1 software commands, operates the system by providing the control and switching sequences required for the following:

- ◆ call processing — connecting phones and trunks
- ◆ PE processing — on, or off-hook and dialed DN's
- ◆ CE processing — administration and maintenance functions

Function

The software is loaded into the memory from mass storage upon system power-up, and during system operation the software is fed to the CPU through the CE buses. The SL-1 software is:

- ◆ written as people friendly High Level Source Code, then
- ◆ compiled into Opcode, and placed onto disk, loaded into memory, then
- ◆ assembled into a computer friendly Object or Machine code, which
- ◆ causes the CPU to operate in a sequence of eight states.

The FN card consists of six Am2901 four-bit bipolar microprocess or integrated circuits, capable of handling 24 bit words. The FN card has a fast RAM stack and associated circuitry which includes the following:

Arithmetic Logic Unit — (ALU) the main computing hardware of the CPU, performs the following:

- ◆ all manipulation of data
- ◆ addressing of data storage
- ◆ input and output control functions
- ◆ arithmetic or mathematical functions such as;
 - add
 - subtract
 - logic and decision functions such as And, Or, Shift, and Complement.

Sequencer — (SEQ) directs the ALU to operate in a sequence of eight states, by providing the ALU with the correct control signals from a Read-Only Memory (ROM). The eight states are:

- ◆ trap
- ◆ fetch (instruction or data)
- ◆ page and word address
- ◆ logic function (number crunching)
- ◆ read write
- ◆ address modification
- ◆ deferred fetch
- ◆ jump

The fetch task is performed by the IF card.

ROM — contains an interpreter program which converts the operation code into an object code. An object code is a collection of short instruction sequences or subroutines, used to operate the ALU. An interpreter is used so that hardware can be updated by changing the ROM daughter board, instead of making radical changes to the high level software instructions.

16 word register file — is used to hold instructions, data, and addresses. It contains work registers, an instruction counter showing the next instruction to be fetched, a program counter showing the next instruction to be executed, as well as other related information. The result of the executed instruction determines what the next step will be. This is done by allowing the CPU to fetch and execute the instructions in sequence to complete a task or modify the sequence to change the task as the situation warrants, using deferred fetch and jump to new routine.

Opcode instruction register — used to load the register file from a stack of instructions. Data transfers and manipulation are accomplished efficiently using a temporary holding area in memory, called a stack. This stack machine is very well suited to call processing, as it allows the CPU to do subroutines and return to its main program, and to move and manipulate data items smaller than a complete word. Data words are stacked upon one another, and are pushed into the stack and popped out of it. The system

has two locations; a main stack, used for data calculations and temporary storage, and a return address stack, which is used to remember the memory location for the next instruction after a subroutine has been executed.

The processors are arranged in a redundant configuration, with one in an active mode and the other in standby mode.

Features on FN card

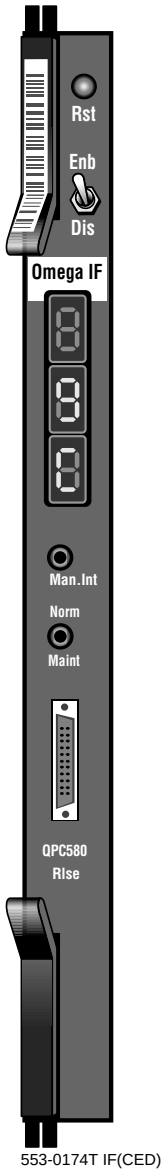
The Function card faceplate includes a 34 pin ribbon cable connector used for FN and IF control communications.

Features on Option 21 and STE/21E

The Option 21 and STE/21E CPU card face-plate features include the following:

- ◆ An LED, when lit indicates an inactive CPU or a malfunctioning or disabled CPU.
- ◆ The RS button, when pressed, causes the system to reload its software into memory. The system will not process calls until this operation is complete.
- ◆ The CPU cards used with the Option 21 and Meridian SL-1ST, MS, and S are equipped with an SDI port.
- ◆ The Option 21E and STE are equipped with a three element hex display, manual initialize button and a trickle charge circuit for a battery card mounted on the MPS/SDI card.

IF — Interface



Everything except the FN card(s), IF card(s) and memory is considered an input or output device, and these devices have to interrupt the processor for service.

Purpose

The IF card miscellaneous registers, continuously monitor the system for interrupt signals and fault indicators. When these occur the FN is informed so that appropriate action can be taken.

A Real Time Clock (RTC) is used to keep track of real time for the FN card which performs functions such as dial timing, and special tones.

The IF will send a HELP signal to the Omega CMA during a watchdog timeout, causing a processor changeover.

Function

Interrupt signals - An interrupt signal is an indication that an input or output device requires service or that there is an input message from the PE waiting to be processed. The FN suspends its workschedule and attends to these requests by executing an Interrupt Handler routine on the following priority basis:

Tape Handler — mass storage unit

I/O Handler — cards and devices

Loop Input Intrp Handler — loop ID, shelf-card-unit ID, messin, time stamp

Real Time Clock Handler — real time clock

Loop Output Handler — loop ID, shelf-card-unit ID, messout

Manual Interrupt — reset or reload button

Fault Indicators

Faults detected by the IF card are the result of the following conditions:

Response Timeout — a memory or input or output device has failed to respond with DUNIT to a read or write signal within 8 ms

Write Protected Violation — an attempt was made to write into a protected memory location

Watchdog Timer Runout — the FN has lost its sanity and cannot carry out an instruction due to a processor hardware fault or a software malfunction, and subsequently cannot reset the Watchdog timer within 1.024 seconds

Parity Error — a single bit parity error has been detected

When a fault is detected, the FN is forced to execute Trap Routine instructions held in the ROM. The fault can be isolated, corrected or a reloading of software and data from the storage device may take place. (For more information on the above process refer to “What the system does when things go wrong” on page 52, in the *You should know this* chapter.)

Features

The Interface card faceplate includes the following features:

- ◆ a LED, when lit indicates an inactive or disabled processor
- ◆ an Enb, Dis switch used to hardware disable the processor
- ◆ a Hex display indicating faulty components
- ◆ a manual initialize button, Man Int. When the Man In is pushed on the active processor will rebuild part of memory and check for CE faults
- ◆ a normal maintenance switch, Norm Maint, used to force the processor active or when updating from one software release to another
- ◆ a 34 pin ribbon cable connector used for FN and IF control communications

IF (MISC, CPU/MEM) faceplate hex codes

The hex codes are displayed as a result of CE faults. These codes will remain displayed until they are manually removed by diagnostic commands or are overwritten by another CE fault.

The hex code actions are useful when the processor cannot output a SYS or an INI message. If the system outputs a SYS or an INI message, follow that action.

Before you take any action on the following, be sure the displayed hex code is due to an existing fault and not left from a previous fault.

If the faceplate Hex code does not appear in the list below, refer to INI0006 hex, in the INI chapter, to locate a specific card.

01	1. Manual or power monitor interrupt on an NT, RT, XT, 51, 61, or 71. ACTION: Replace the IF or FN card(s) one at a time, following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing each card verify that the fault is cleared. 2. Manual interrupt or Power Monitor interrupt on an XN. ACTION: Replace the FN, CT, MISC card(s) one at a time, following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing each card verify that the fault is cleared. 3. Manual interrupt or Power Monitor interrupt on all other systems. ACTION: Replace the CPU or MISC or PS card(s) one at a time, following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing each card verify that the fault is cleared.
02	1. Peripheral Signal ROM checksum error on an NT, RT, XT, 51, 61, or 71. ACTION: Replace the IF cards, following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared. 2. Peripheral Signal ROM checksum error on an XN. ACTION: Replace the CIM card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared. 3. Peripheral Signal ROM checksum error on all other systems. ACTION: Replace the ROM card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
03	1. Real-time Control (RTC) interrupt fault on an NT, RT, XT, 51, 61, or 71. ACTION: Replace the IF card, following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared. 2. Real-time Control (RTC) interrupt fault on an XN. ACTION: Replace the CT card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

- 04 1. Input Output (I/O) interrupt fault on an NT, RT, XT, 51, 61, or 71.
ACTION: Replace the IF card, following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Input Output (I/O) interrupt fault on an XN.
ACTION: Replace the MISC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
3. Input Output (I/O) interrupt fault on all other systems.
ACTION: Replace the MISC, SDI, TDS or MFS card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 05 **ACTION:** Replace the PS card and follow the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- 06 **ACTION:** Replace the MISC, PS or MFS card(s) one at a time. Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 07 1. Real-time Control (RTC) interrupt fault on an NT, RT, XT, 51, 61, or 71.
ACTION: Replace the IF cards, following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Real-time Control (RTC) interrupt fault on an XN.
ACTION: Replace the CIM card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
3. Real-time Control (RTC) interrupt fault on all other systems.
ACTION: Replace the ROM card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- 08 Too many initializations on this CPU.
ACTION: Contact your technical support group.
- 09 CMA transmission error.
ACTION: Replace the primary CMA, secondary CMA or Memory card(s). Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 0A CMA transmission error secondary, Memory Trouble Register (MTR) primary is disabled.
ACTION: Replace the primary CMA, secondary CMA. Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 0B CMA transmission error secondary, Memory Trouble Register (MTR) secondary is disabled.
ACTION: Replace the secondary MEM, secondary CMA and primary CMA. Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 0C PS ROM response timeout.
ACTION: Replace the CIM, IF card(s) one at a time. Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 0D Parity error at non-memory address.
ACTION: Replace the IF and CMA. Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 0E Parity error in PS ROM.
ACTION: Replace the IF and FN. Follow the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 0F Trap with no known cause.
ACTION: Contact your technical support group.
- 10 to 1A Memory card fault.
ACTION: To clear memory faults refer to the Output code INI0004 section of the “*INI — System Initialization*” on page 557 of this guide.
- 20 1. Primary memory parity error on read or write on an NT, RT, XT, 51, 61, or 71.
ACTION: Replace the CMA and IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
 2. Primary memory parity error on read or write on all other systems.
ACTION: Replace the CMA or MISC card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 21 1. Memory parity error - primary or secondary on an XN.
ACTION: Replace the prime CMA, or secondary CMA card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
 2. Memory parity error - primary or secondary on all other systems.
ACTION: Replace the prime CMA, secondary CMA, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 22 1. Cannot clear CMA interrupt on an XN.
ACTION: Replace the prime CMA, secondary CMA, or MISC card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
 2. Cannot clear CMA interrupt on all other systems.
ACTION: Replace the prime CMA, secondary CMA, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 23 CMA fault.
ACTION: Replace the CMA0 and CMA1 cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 24 Data-store failed to respond when reading trap data block.
ACTION: Replace the Memory, CMA, IF, and FN cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 25 Checksum failed.
ACTION: Replace the Memory, CMA, IF and FN cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 40 to 49 Peripheral Signaler card fault.
ACTION: To clear PS faults refer to the Output code INI0003 section of the “*INI — System Initialization*” on page 557 in the guide.
- 50 to 63 Intergroup Switch card fault.
ACTION: To clear IGS faults refer to the Output code INI0007 section of the “*INI — System Initialization*” on page 557 in this guide.
- 70 to 71 Mass Storage Interface card fault.
ACTION: To clear MSI faults refer to the Output code INI0002 section of the “*INI — System Initialization*” on page 557 in this guide.
- 80 to 8F Serial Data Interface card fault.
ACTION: To clear SDI faults refer to the Output code INI0002 section of the “*INI — System Initialization*” on page 557 in this guide.
- 90 to 1DF Network loop fault.
ACTION: To clear loop faults refer to the Output code INI0003 section of the “*INI — System Initialization*” on page 557 in this guide.
- E0 to FF Extender card fault.
ACTION: To clear extender faults refer to the Output code INI0014 section of the “*INI — System Initialization*” on page 557 in this guide.
- 010 1. Sequence, status flag, conditional jump problems on an XN.
ACTION: Replace the CT, FN, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Sequence, status flag, conditional jump problems on all other systems.
ACTION: Replace the FN, and/or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 011 3. Call, return, micro return address stack problems on an XN.
ACTION: Replace the CT, FN, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
4. Call, return, micro return address stack problems on all other systems.
ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 012 1. JN1 to jump over to next page in ROM failed on an XN.
ACTION: Replace the CT, FN, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. JN1 to jump over to next page in ROM failed on all other systems.
ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 013 1. Micro-store parity on an XN.
ACTION: Replace the CT, FN, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Micro-store parity on all other systems.
ACTION: Replace the IF card, following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- 020 1. Slice register arithmetic, logic problem on an XN.
ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Slice register arithmetic, logic problem on all other systems.
ACTION: Replace the FN, or the IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 021 1. Sixteen-bit barrel shifter problems on an XN.
ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Sixteen-bit barrel shifter problems on all other systems.
ACTION: Replace the FN, IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 022 1. Sixteen-bit barrel shifter problems with micro-store data on an XN.
ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Sixteen-bit barrel shifter problems with micro-store data on all other systems.
ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 023 1. Write to background while at interrupt level on an XN.
ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Write to background while at interrupt level on all other systems.

ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

024

1. Interrupt level did not write its bases on an XN.

ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Interrupt level did not write its bases on all other systems.

ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

025

1. Bad data written to some interrupt level bases on an XN.

ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Bad data written to some interrupt level bases on all other systems.

ACTION: Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

026

1. Bad base fetch through BN at some interrupt level on an XN.

ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Bad base fetch through BN at some interrupt level on all other systems.

ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

027

1. Twenty four-bit ALU shifter problem on an XN.

ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Twenty four-bit ALU shifter problem on all other systems.

ACTION: Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

042

1. CPU write protect failed on an XN.

ACTION: Replace the FN, CT, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. CPU write protect failed on all other systems.

ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 080 1. Stuck bits in Y-registers on an XN.
- ACTION:** Replace the CT, FN, IF, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Stuck bits in Y-registers on all other systems.
- ACTION:** Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 081 1. Bad PSW register on an XN.
- ACTION:** Replace the IF, MISC, CT, FN, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Bad PSW register on all other systems.
- ACTION:** Replace the IF card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- 082 1. Bad FSI register on an XN.
- ACTION:** Replace the IF, MISC, CT, FN, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Bad FSI register on all other systems.
- ACTION:** Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 083 1. RAM addressing failure on an XN.
- ACTION:** Replace the FN, IF, CT, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. RAM addressing failure on all other systems.
- ACTION:** Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 084 1. Bad stack access at interrupt level on an XN.
- ACTION:** Replace the FN, MISC, CT, IF, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
2. Bad stack access at interrupt level on all other systems.
- ACTION:** Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- 085 1. Faulty FAR register on an XN.
- ACTION:** Replace the IF, CT, FN, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Faulty FAR register on all other systems.

ACTION: Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 086 Faulty FSR register.

ACTION: Replace the IF, CT, FN, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 087
1. Read/Write failure on Miscellaneous registers on an XN.

ACTION: Replace the MISC, IF, FN, CT, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Read/Write failure on Miscellaneous registers on all other systems.

ACTION: Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 088
1. Fault during read/write operation while doing CPU tests on an XN.

ACTION: Replace the IF, MISC, CT, FN, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Fault during read/write operation while doing CPU tests on all other systems.

ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 089
1. PC auto-increment failure on an XN.

ACTION: Replace the IF, MISC, CT, FN, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. PC auto-increment failure on all other systems.

ACTION: Replace the FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 08A
1. PS fetch using BIR, not blocked on an XN.

ACTION: Replace the MISC, IF, FN, CT, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. PS fetch using BIR, not blocked on all other systems.

ACTION: Replace the FN, IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

- 08B
1. RTC did not tick or clear on an XN.

ACTION: Replace the CIM, MISC, IF, FN, or CT card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. RTC did not tick or clear on all other systems.

ACTION: Replace the FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

08C

1. Bad response time-out in FSI on an XN.

ACTION: Replace the IF, CT, FN, MISC, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Bad response timeout in FSI on all other systems.

ACTION: Replace the prime FN or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

08D

1. Bad data in program store fetch on an XN.

ACTION: Replace the IF, MISC, CT, FN, or CIM card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

2. Bad data in program store fetch on all other systems.

ACTION: Replace the prime FN, or IF card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

0FF

Bad CIM.

ACTION: Replace the CIM, IF, MISC, FN, or CT card(s) one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

CPU commands		
Command	Description	Release

Status of both CPUs

STAT CPUx	Get status of both CPUs. Responses are: ENBL = CPU is running IDLE = CPU is in standby DSBL = CPU is disabled Not applicable to Meridian SL-1 MS or S.	basic-1

Clear display of a CPU

CDSP	Clear the maintenance display on the active CPU.	basic-1

Display active CPU

DSPL	Get contents of maintenance display on the active CPU. If the maintenance display is blank, 000 is output.	basic-1

Switch CPU

SCPU	Switch CPUs. In a dual CPU system, this command causes the inactive CPU to become the active CPU. If the changeover is successful, OK is output. This command cannot be used when the active CPU is in maintenance mode.	basic-1



CAUTION: Indiscriminate use of this command should be avoided as system reload may occur.

CPU commands (continued)		
Command	Description	Release

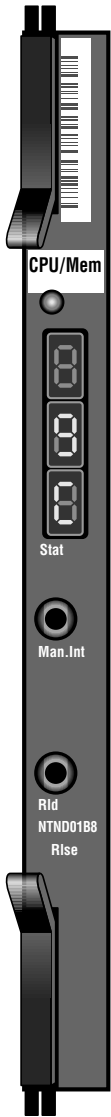
Test CPU system

SHLF x	Perform memory decode fault test on CPU x.	basic-1
	Performs a memory decode fault test on the disabled memories corresponding to the specified CPU (0 or 1). To use this test, disable the memory modules that are to be included in the test and issue the command to the appropriate shelf. If individual tests of memory modules using the MEM command pass but the SHLF test fails on the same modules, then the CMA or controller is probably faulty.	
TCPU	Test inactive CPU in a dual CPU system. This command tests the inactive CPU. If the CPU passes, OK is output. This command cannot be used when the active CPU is in maintenance mode.	basic-1



CAUTION: Indiscriminate use of this command should be avoided as system reload may occur.

MEM — Random Access Memory



553-0175T RAM(CED)

The Meridian 1 Option 21 Random Access Memory (RAM) is based on 64k word memory pages, located on memory modules or cards.

Options 61, 71, NT and XT RAM are based on contiguous memory rather than page memory, and use 24 bits rather than 16 bits.

Option 61 and SL-1NT — contain redundant RAM of one 768k memory module for each CPU, or 2Meg module for each CPU running Release 18

Option 71 and SL-1XT — contain redundant RAM of three 768k memory modules for each CPU, or maximum two 2Meg modules for each CPU running Release 18

Option 21 — houses a 768k memory module in the card labelled as MMPS

Option 21E and SL-1STE — houses 2Meg of memory in the CPU/Mem card

Purpose

The memory cards are loaded from a floppy disk with the SL-1 operating programs and provide the fuel to drive the CPU.

Function

The dynamic RAM or DRAM memory modules are refreshed by a memory controller circuit which generates signals every 15 microseconds while operating the RAM to ensure that the information is not lost.

All cards use 16 or 24 bit address words and one parity bit.

Features

The faceplate features a LED which, when lit indicates that the module is disabled.

Memory commands		
Command	Description	Release
Status		
BATT	Check status of memory battery backup. The response is OK or CED0503 . Only available on 21E and STE systems with X11 Release 18 and later.	21e -18
STAT MEM	Get status of all memory modules. This command outputs the number of enabled and disabled memory modules. Use STAT MEM x for status of a specific module.	basic -1
STAT MEM xx	Get status of memory module xx . Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second digit specifies the memory module number. Responses are: ENBL = module is enabled ENBL BUT FAULTY = module is enabled but faulty REPL = module is replaced DSBL module is disabled UNEQ = module is missing or not configured	basic -1
Disable		
DIS xx	Disable memory module xx . Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second digit specifies the memory module number.	basic -1

Memory commands (continued)		
Command	Description	Release
Enable		
ENL xx	Perform memory test on module xx. Performs a memory test on memory module xx. Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second digit specifies the memory module number. The module must not be in use by the system. Dual CPU systems only. System response of OK is output and the module is enabled if the test is passed.	basic -1
REPL xx	Enable new memory card xx. Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second digit specifies the memory module number.	basic -1
Test		
MEM xx	Test memory module xx. Where xx is a 2-digit number. The first digit specifies which CPU the module is associated with and the second digit specifies the memory module number. The module must be disabled first with the DIS x command. The module does not have to be defined in the Configuration Record (LD 17) to pass the test. System outputs OK if test is passed.	basic -1

Memory commands (continued)		
Command	Description	Release

Failure counts

FCNT Get soft failure counts of all memory modules. basic-1

Sample response:

For system options NT, RT, XT, 51, 61 and 71:

CD	MTR	FCNT
0	0	0
0	1	0
0	2	0

where:

CD = memory module number

MTR = Memory Trouble Register number on the 768K memory

FCNT = fault counts on that MTR

For all other system options:

CD	PAGE	LFC	HFC
0	0	3	1
0	1	0	2
0	2	3	2
1	5	2	0
1	6	0	1

where:

CD = memory card number

PAGE = page number

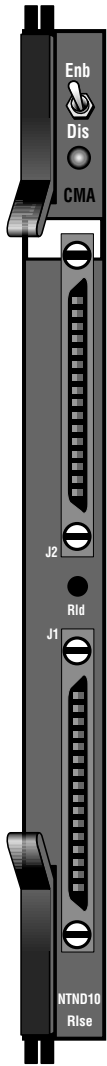
LFC = fault count of low card module

HFC = fault count of high card module

Not applicable to SL-1 MS, S, ST or system Option 21.

Memory commands (continued)		
Command	Description	Release
List		
LDIS	List disabled memories. Not applicable to SL-1 MS, S, ST or system Option 21.	basic-1
LENL	List enabled memories. Not applicable to SL-1 MS, S, ST or system Option 21.	basic-1
Print		
IDC ICM, MSPS	Print card ID for ICM or MSPS card. The Integrated CPU with 4Meg Memory (ICM) or Misc/SDI and PS (MSPS) card ID is output in the following format. pppppppppaa rrssss ccccccc@ddddd ppppppppp = PEC code aa = Attribute code rr = Release number ssss = Serial number cccccccc = Comments (optional) @ = HEX 01 ASCII SOH character (non printing) ddddd = Design code	21e-18

CMA — Changeover and Memory Arbitrator



553-0176T CMA(CED)

The Changeover and Memory Arbitrator (CMA) is used in redundant CPU configuration on SL-1 N, NT, XT, Option 61 and 71. Two CMA circuit cards are required, and operate in a master-slave relationship. The master CMA card is always associated with the active CPU.

Purpose

The master CMA updates both the active and standby memories.

The master CMA monitors the active CPU and in the event of a failure can changeover control to the standby CPU.

The master CMA can arbitrate the connection of either memory system to the active CPU through the CMA faceplate cables.

Function

Both CMA cards combine to keep one CPU active. The master CMA will cause the standby CPU to become active when the following occurs:

- ◆ the active CPU fails to reset a three second timer after a lapse of 24 seconds
- ◆ the software calls for a CPU changeover during the daily or midnight routines
- ◆ neither CPU is active, and the CMA causes the power monitor to activate an emergency transfer

The active CMA has a memory trouble register which will disable either memory card when the following occurs:

- ◆ a data or address parity error is detected
- ◆ response time-out from memory during a read or write attempt fails to set a 10 μ -sec timer on the CMA

Features

The faceplate includes the following features:

- ◆ ENB/DIS switch used to hardware enable or disable the card
- ◆ LED, when lit indicates a disabled CMA
- ◆ two 50 pin connectors (J3 and J4) used to interconnect the CMAs, extending CPU control to the opposite CE bus
- ◆ RLD button, which when pressed simultaneously on both CMA cards causes a system reload

The CMA cards are slot addressed.

CMA commands		
Command	Description	Release
Status		
STAT CMA	Get status of CMA x. Response is: CMA x ACTIVE y MEM = CMA is being used CMA x DSBL = CMA is disabled CMA x ENBL = CMA is enabled but in a standby state In some systems a value of "y MEM" is output. Ignore this value. Use STAT MEM to check memory status.	basic-1
Disable device		
DIS CMA x	Disable Changeover and Memory card x. This command disables the specified Changeover and Memory (CMA) card. It must be the CMA on the idle CPU and all the memories served by the CMA must be disabled before the CMA can be disabled.	basic-1
Enable		
ENL SBE	Enable the Segmented Bus Extender (SL-1 MS only)	basic-1
ENL CMA x	Enable Changeover and Memory card x. The CMA must be on the idle CPU.	basic-1

SBE/QPC496 — Bus extenders



553-0177T SBE(CE)

There are two types of bus extenders:

QPC215 Segmented Bus Extender (SBE) — an active device, used with Option 71, multi-group systems, half group SL-1N, and NT, and is optional on SL-1S and MS.

QPC496 Bus Extender — a passive device, used in full group SL-1NT.

Purpose

Bus extenders interconnect the CE bus and the control bus on network shelves, through 3 Port Extenders or network shelf backplane connectors.

Function

The Segmented Bus Extender performs the following functions:

- ◆ drives address, data and control signals from the CE bus onto the network shelf control bus
- ◆ drives data, interrupts and DUNIT signals from the network shelf control bus onto the CE bus
- ◆ provides fault isolation to protect the CPU from bus faults on multi-group systems

Features

QPC496 — faceplate has three 36 pin connectors A, C, and B, used to interconnect the CE and control buses.

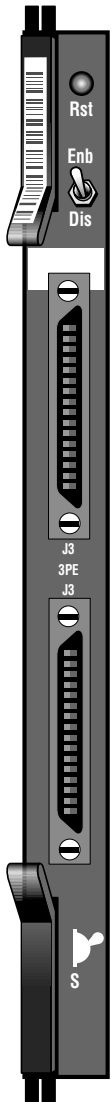
QPC215 — faceplate includes the following features:

- ◆ a LED, when lit indicates a disabled SBE card or in a multi-group system indicates that the other SBE mate has a driver power problem
- ◆ Enb/Dis switch used to hardware enable or disable the card
- ◆ two 50 pin connectors (J3 and J4) used to interconnect the CE and control buses

A switch on the component side of the card matches the SBE to the group.

The bus extenders are slot addressed.

3PE — Three port extender



553-0178T 3PE(CED)

The three ports associated with a full group are as follows:

- ◆ Port A is the 3PE card edge connector which connects the 3PE to the CPU shelf through the network shelf backplane connector and cables to the CPU
- ◆ Port B is the 3PE card edge connector which connects the 3PE to the network shelf backplane
- ◆ Port C is the two faceplate connections between both 3PEs

The three ports used on a half group are as follows:

- ◆ Port A and Port B are the same as for the full group
- ◆ Port C is the two faceplate connection between the 3PE and the SBE

Purpose

The master 3PE transmits signals between the active CPU and network shelves, and isolates network faults that could adversely affect the total system.

Function

The 3PE card contains the following circuitry:

Address Decode — circuitry which checks to ensure that only cards residing on its network shelf respond to addressing. For example, a network card responding to a memory address is denied access to the CPU bus.

Disable Register — allows software to enable or disable either slave 3PE port B or C from the master 3PE.

Features

The faceplate includes the following features:

- ◆ ENB/DIS switch to hardware enable or disable the card
- ◆ LED, when lit, indicates that the master is 3PE disabled, or the slave 3PE and the port from master 3PE are disabled

- ◆ two connectors (J3 and J4) used to interconnect port C between 3PE cards

Switches on the component side can be set for 3PE located in the following systems:

- ◆ half group LE, N, NT or full and multi-group
- ◆ page 3 address or page 7
- ◆ single group or multi-group systems

The 3PE cards are slot addressed.

CE extender commands		
Command	Description	Release
Status		
STAT EXT	Get the status of the extender pair designation. This command outputs the extender pair designation and if disabled indicates the number of devices on the network shelf connected to the extender that would become inaccessible if a CPU changeover occurs. If the extender has been disabled by using the DIS EXT command, then the number output will be equal to the number of devices on the shelf. The extender pair designations are as follows: 0G0 = SBE of CPU 0 and 3PE of Network Group 0 0G1 = SBE of CPU 0 and 3PE of Network Group 1 0G2 = SBE of CPU 0 and 3PE of Network Group 2 0G3 = SBE of CPU 0 and 3PE of Network Group 3 0G4 = SBE of CPU 0 and 3PE of Network Group 4 1G0 = SBE of CPU 1 and 3PE of Network Group 0 1G1 = SBE of CPU 1 and 3PE of Network Group 1 1G2 = SBE of CPU 1 and 3PE of Network Group 2 1G3 = SBE of CPU 1 and 3PE of Network Group 3 1G4 = SBE of CPU 1 and 3PE of Network Group 4	basic-1

CE extender commands		
Command	Description	Release
Status		
STAT EXT x	Get the status of specified extender. For extenders to network shelves, the response is: x <status> <y NET>, where x <status> = status of extender x, can be one of: ENBL = the extender is enabled. DSBL = the extender is disabled. LEFT DSBL = only shelf 0 of the group served by the extender is disabled RIGHT DSBL = only shelf 1 the group served by the extender is disabled y NET = the number of network and PS cards that do not respond when accessed using the specified extender. The extender pair designations are as follows 0G0 = SBE of CPU 0 and 3PE of Network Group 0 0G1 = SBE of CPU 0 and 3PE of Network Group 1 0G2 = SBE of CPU 0 and 3PE of Network Group 2 0G3 = SBE of CPU 0 and 3PE of Network Group 3 0G4 = SBE of CPU 0 and 3PE of Network Group 4 1G0 = SBE of CPU 1 and 3PE of Network Group 0 1G1 = SBE of CPU 1 and 3PE of Network Group 1 1G2 = SBE of CPU 1 and 3PE of Network Group 2 1G3 = SBE of CPU 1 and 3PE of Network Group 3 1G4 = SBE of CPU 1 and 3PE of Network Group 4	basic-1
STAT SBE	Get the status of the Segmented Bus Extender.	basic-1
Disable device		
DIS EXT x	Disable the specified extender pair. This command disables the extender pair specified by x. Only extenders on the nonactive CPU may be disabled. The extender is marked as unusable by the system and it will not attempt to use it, i.e., a CPU changeover will not be permitted. LEDs on the card faceplate do not reflect this command.	basic-1
DIS SBE	Disable the Segmented Bus Extender.	basic-1

CE extender commands (continued)

Command	Description	Release
Enable		
ENL EXT x	Enable specified extender pair. Only extenders on the nonactive CPU may be enabled. See introduction for extender designations. The state of the LED on the circuit card faceplate does not reflect this command.	basic-1
ENL SBE	Enable the Segmented Bus Extender (SL-1 MS only).	basic-1

CED messages

CED0000	No errors detected. ACTION: Information only, no action required.
CED0001	An invalid number of characters are entered in the command. ACTION: Check to make sure your data is correct and re-enter the command.
CED0002	An invalid character is entered in the command. ACTION: Check to make sure your data is correct and re-enter the command.
CED0003	An invalid command is entered. ACTION: Ensure that this is the command you wanted to use.
CED0004	Incorrect number of arguments. ACTION: Check to make sure your data is correct and re-enter the command.
CED0005	Invalid argument. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
CED0010	Memory number out-of-range. The allowable range depends on the system type. ACTION: Check to make sure your data is correct and re-enter the command. If you need help refer to the “<i>MEM — Random Access Memory</i>” on page 266 in this chapter.
CED0011	The specified card is active and may not be tested. ACTION: Indiscriminate use of the following command may cause a system reload to occur. Use SCPU to switch the CPUs, this will change the specified card to standby mode.
CED0012	The memory test on a specified card failed. The memory card can have a fault. Start at the first or most likely cause and go down the list until the fault is cleared. The following is a list of possible faulty cards:

1. Memory cards.

ACTION: Replace the memory card(s) following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to see if this message reappears. If it reappears try the next card on the list.

2. Changeover and Memory (CMA) card.

ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to see if this message reappears. If it reappears try the next card on the list.

3. Miscellaneous (MISC) card.

ACTION: Replace the MISC/IF card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to see if this message reappears. If it reappears contact your technical support group.

CED0013 CED0013 is a duplicate of CED0012.

ACTION: See the action of CED0012.

CED0014 The Watchdog timer failed to time out. There is a probable fault on the MISC card or the IF card in the active CPU. Start at the first or most likely cause and go down the list until the fault is cleared.

The following is a list of possible faulty cards:

1. MISC or Interface (IF) card.

ACTION: Replace the MISC or IF card(s) following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears try the next card on the list.

2. CPU card or Function (FN) card.

ACTION: Replace the CPU or IF card following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears contact your technical support group.

CED0015 The Memory card passed the test but is not in the configuration record. If the module is supposed to be in the system, check the configuration record.

ACTION: If the module is supposed to be in the system, refer to the *X11 Administration* (553-3001-311). Use LD 17 to program the card into the configuration record and follow steps required to have added a new memory card (system reload).

CED0016 The specified spare is not on the active CPU and may be tested.

ACTION: Information only, no action required.

CED0017 Spare number must be 0 or 1.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the CFN record, then re-enter the command.

CED0021 The spare R/W memory is not switched in for the card you wish to replace.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the CFN record, then re-enter the command.

CED0022 The spare R/W memory card is being used by the system.

ACTION: Information only, no action required.

- CED0023 The card number of the spare is not between 32 and 47 inclusive.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the CFN record, then re-enter the command.
- CED0024 Memory card could not be enabled because soft memory failure threshold was exceeded. Response to ENL N command.
ACTION: Replace the memory card following the steps in the *X11 Administration* (553-3001-311). After replacing the card verify that the fault is cleared.
- CED0030 The extender is already enabled.
ACTION: Ensure that this is the command you wanted to use.
- CED0031 The near-end extender did not respond and therefore cannot be enabled. Suspect a faulty near-end extender.
ACTION: Replace the SBE card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CED0032 The far end extender did not respond and therefore cannot be enabled. Start at the first or most likely cause and go down the list until the fault is cleared.
1. Suspect a faulty far end extender.
ACTION: Replace the 3PE card following the steps in the *Hardware Replacement* (553-3001-520). Run test again to see if this message reappears. If it reappears try the next card on the list.
2. The near end extender may be faulty as well.
ACTION: Replace the SBE card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CED0033 The extender to the Intergroup Switch (IGS) through and the Junctor is not a Segmented Bus Extender (SBE) and therefore cannot be enabled.
ACTION: Check and re-enter the command.
- CED0034 The extender to the IGS through the Junctor did not respond and therefore cannot be enabled. Suspect a faulty extender.
ACTION: Replace the SBE card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CED0035 The SBE is not configured.
ACTION: If the SBE card is supposed to be in the system, refer to the *X11 Administration* (553-3001-311). Use LD 17 to program the card into the configuration record.
- CED0036 The SBE is already disabled.
ACTION: Ensure that this is the command you wanted to use.
- CED0037 The SBE is unequipped or is equipped and disabled.
ACTION: If the SBE card is unequipped, insert an SBE card into the proper card slot. If equipped and disabled, replace the SBE card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CED0038 The SBE is enabled but not configured.
ACTION: If the SBE card is supposed to be in the system, refer to the *X11 Administration* (553-3001-311). Use LD 17 to program the card into the configuration record.

- CED0039 The SBE could not be enabled.
ACTION: Replace the SBE card following the steps in the *Hardware Replacement* (553-3001-520). Check to see if cable is installed properly. Verify that the fault is cleared.
- CED0050 Specified customer does not exist.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- CED0059 System does not have two CPUs.
ACTION: Check to make sure that you are working on a single CPU system. Check that your data is correct and then re-enter the command.
- CED0060 CMA card did not respond. Probable fault on CMA card associated with non-active CPU.
ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CED0061 A CE bus is disabled and the CPU cannot be changed. Suspect a probable bus fault.
ACTION: Use Maintenance Tape to clear. Replace the CE shelf backplane following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- CED0062 A spare has replaced a disabled card.
ACTION: Information only, no action required.
- CED0063 CPU changeover disallowed because the associated Peripheral Signaling (PS) card providing the real time clock is disabled.
ACTION: Use ENPS x in LD 32 to enable the PS card before using SCPU. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 or “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.
- CED0065 x Cannot use TCPU or SCPU commands when the active CPU is in maintenance mode. In this case, x indicates the inactive CPU, or: CPU x has failed.
ACTION: Place the faceplate MAINT/NORM switch to NORM on the active CPU and re-enter the command. If this message reappears, replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0066 CPU is in maintenance mode and an attempt is made to TCPU or SCPU in LD 35. Changeover card did not respond. Faulty CMA card on nonactive CPU.
ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0067 Changeover card did not respond. Requested function could not be performed. Faulty CMA card.
ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0068 Only extenders on the idle CPU may be enabled or disabled.
ACTION: Check to make sure you are working on the correct CPU and re-enter the command.

- CED0069 Extenders are not equipped.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the CFN record for extenders, then re-enter the command.
- CED0070 1. Cannot perform CPU changeover because some loops, PS cards or Intergroup Switch cards do not work on the other CPU. An extender fault on the second CPU is suspected.
ACTION: Use the STAT EXT command to determine which extender is faulty. Replace the SBE or 3PE card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
2. Receiving this message, and cannot perform a test or swap CPU command on an Option 71 system.
ACTION: Verify that all CPU related cards, such as, the CMA, SBE, 3PE and memory cards are enabled.
- CED0071 1. Cannot switch CPUs because a section of memory does not work on the other CPU. Suspect CMA card.
ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Receiving this message after upgrading to Release 19.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the configuration record for MTYP. It should be 2M or 4M and not 768. Use LD 17 to correct. Verify that the newly installed CMA (NTND10) is jumpered correctly, to allow for the new expanded memory card.
- CED0072 Cannot switch CPUs because spare memory is faulty. Suspect the CMA card.
ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0073 Cannot perform CPU changeover because the tape interface on the other CPU does not work. Minor alarm lamp lit on attendant console.
ACTION: Replace the tape interface card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0074 Cannot switch CPUs because the other CPU has a stuck interrupt or faulty real time clock. Minor alarm lamp lit on attendant console.
ACTION: Replace the MISC or IF card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0075 Cannot switch CPUs because the other CPU is faulty. Minor alarm lamp lit on attendant console.
ACTION: Replace the MISC, IF card, CPU or FN card(s) one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- CED0080 xx Spare memory card number **xx** has failed.
ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- CED0081 x The spare R/W memory on CPU x failed the daily memory test. The spare 16K memory failed the daily checksum verification test on the spare I/C row. Only relevant for SL-1M.
ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0082 No attempt was made to perform CPU changeover during midnight routines because of an uncleared fault. Minor alarm lamp lit on attendant console.
ACTION: Use TCPUR or STAT CMA command to determine if the CPU or extender is at fault. Replace the MISC or IF, CPU or FN and CMA cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- CED0083 The spare on the CPU that was active at the time of test, failed daily memory test.
ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0085 The shelf number is not zero or one.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- CED0086 The shelf memory decode test failed. Test each Memory card individually using the MEM command. If all cards work but consistently fail the SHLF test, suspect the CMA or Memory cards. Only relevant for SL-1LE and VLE and XL.
ACTION: Replace the CMA or Memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.
- CED0087 No test was performed as no cards are disabled on the specified shelf.
ACTION: Check the data and re-enter or disable the cards to be tested on the shelf.
- CED0088 The memory card may not be enabled because the associated CMA card is not enabled.
ACTION: Use the ENL CMA command to enable the CMA. Try the test again.
- CED0089 The CMA may not be disabled because the associated memory is not disabled.
ACTION: Use the DIS command to disable all the associated memory.
- CED0090 You are not allowed to enable modules between 32 and 47, except for spares.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22. To check the CFN record, then re-enter the command.
- CED0091 The module is already enabled.
ACTION: Ensure that this is the command you wanted to use.
- CED0092 The module is not equipped and therefore cannot be enabled.
ACTION: Check to make sure your data is correct. If the data is correct, you may have to install the module.
- CED0093 The card is a spare which has been used to replace a faulty card.
ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0094 The card has failed the memory test. Suspect a probable fault on the memory card. Start at the first or most likely cause and go down the list until the fault is cleared.
The following is a list of possible faulty cards:

1. Memory cards.

ACTION: Replace the memory card(s) following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to see if this message reappears. If it does reappear try the next card on the list.

2. Changeover and Memory (CMA) card.

ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to see if this message reappears. If it does reappear try the next card on the list.

3. Miscellaneous (MISC) card.

ACTION: Replace the MISC/IF card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to see if this message reappears. If it does reappear contact your technical support group.

CED0095 The spare QPC30 card is required by the system. This module contains programs and may only be enabled by the REP command or a system reload.

ACTION: Enabled by the REP command and do a system reload.

CED0096 Card may not be disabled because the corresponding card of the redundant configuration is disabled.

ACTION: Enable the corresponding card.

CED0097 The CMA number is not 0 or 1.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

CED0098 The CMA on the active CPU may not be enabled or disabled.

ACTION: Use the SCPU command to perform CPU changeover so that the CMA is no longer on the active CPU.

CED0099 The CMA failed to respond and therefore may not be enabled. Suspect a faulty CMA. The CMA on the active processor may also be faulty.

ACTION: Replace the CMA cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

CED0100 pg cpu xxxx

The read and write Memory Trouble Register (MTR) bits were different. The card will be disabled. Suspect CMA card.

pg = the page that had the problem. This problem could be in the card on shelf 0 or 1. "pg" is only printed for NT, RT, and XT systems. The "page" information can be ignored.

cpu = CPU that was active when the problem occurred.

xxxx = m1m2m3m4, where m1m2 is the old contents of Memory Trouble Registers (MTR) for the page; m3m4 is the new contents of MTR for the page.

ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0101 pg cpu xxxx

Memory unequipped but MTR is not set. The MTR will be written to disable the card. If the memory is not equipped, suspect CMA card. Refer to CED0100.

ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0102 mem cpu xxxx

The memory card should have been disabled but the MTR said it was enabled.

mem = memory card that had the fault.

cpu = CPU that was active when the problem occurred.

xxxx = m1m2m3m4, where m1m2 is the old contents of Memory Trouble Registers (MTR) for the page; m3m4 is the new contents of MTR for the page.

ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0103 mem mtr xxxx

The indicated memory card has failed and is disabled. The card indicated may be faulty.

mtr = Memory Trouble Register. One MTR is allocated for every 768K memory type, or every 1 meg for 1MWG/2MEG memory types.

If the CED0103 message continues with random memory failure, a faulty CMA card may be the cause. Replace faulty CMA card. Refer to CED0102.

ACTION: Test the card manually using ENL xx. The card is to be replaced only after failing this test. Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0104 cma cpu 0000

The specified CMA failed to respond. The CMA that failed to respond is probably faulty.

cma = the CMA that failed.

cpu = the active CPU when the fault occurred

0000 = always 0000

ACTION: Replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0105 cpu count

Invalid interrupts are occurring. Possible fault occurs on both CPUs, suspect a faulty card on a network shelf.

cpu = CPU that was active when the problem occurred.

count = number of invalid interrupts which have occurred in the last 30 seconds.

ACTION: Use the STAT loop in LD 32 to test the superloop. Use ENLL 1 in LD 32 to enable the loops and run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the Network card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

CED0106 p la ha

Soft memory failure has been recorded against memory card **p**. The number of failures now recorded against the low address range of the card **la** and the number of failures now recorded against the high address range **ha**).

ACTION: Replace the Memory or CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

CED0107 p la ha

Hard memory failure has been recorded against memory card **p** because the fault count has exceeded the hard-failure threshold. The current number of failures now recorded against the low address range of the memory card **la** and the high address range **ha**.

ACTION: Replace the Memory or CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

CED0108 p

Single bit fault on memory card **p**.

ACTION: Replace the Memory or CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

CED0109 p

Memory fault on card **p**.

ACTION: Replace the Memory or CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card verify that the fault is cleared.

CED0110

Upper write protect boundary is incorrect.

ACTION: Choose hardware value. Refer to the *Software Conversion Procedures* (553-2001-320) to perform a parallel reload. Contact your technical support group for guidance.

CED0111

Upper write protect boundary is incorrect. Choose hardware value.

ACTION: Choose hardware value. Refer to the *Software Conversion Procedures* (553-2001-320) to perform a parallel reload. Contact your technical support group for guidance.

CED0112

Both hardware and software upper write protect boundaries are incorrect.

ACTION: Contact your technical support group for guidance. To perform a parallel reload, refer to the *Software Conversion Procedures* (553-2001-320) and perform a parallel reload.

CED0113

Hardware lower write protect boundary is incorrect.

ACTION: Refer to the *Software Conversion Procedures* (553-2001-320) to perform a parallel reload. Contact your technical support group for guidance.

CED0114

Upper write protect boundary is incorrect.

ACTION: Choose hardware value. Refer to the *Software Conversion Procedures* (553-2001-320) to perform a parallel reload. Contact your technical support group for guidance.

CED0115

The masked software upper write protect boundary value falls below Z_SOFT_P_BND. Attempting to correct value by adding 4K.

ACTION: Contact your technical support group.

CED0116

Updated value exceeds the Z_SOFT_U_BND. Attempting to determine the high write protect boundary from the linked list.

ACTION: Contact your technical support group.

CED0117

FATAL: (The system has stopped processing calls). Invalid write protect boundaries. Attempts to correct boundaries failed.

ACTION: Refer to the *Software Conversion Procedures* (553-2001-320) to perform a parallel reload. Contact your technical support group for guidance.

CED0200 p1 p2 pn

The CED found those cards listed as disabled or partially disabled (some segments within the card disabled) during the midnight routines.

ACTION: Use DIS xx to disable the memory card(s) then use MEM xx or ENL xx to perform a memory test. If applicable, replace the memory card(s) following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0201 cpu pg addr pf sf

A memory failed while the primary and secondary were being compared. These fields contain the same data as the fault code field 1 in the INI0000 message (see INI error codes). This problem could be in the card on shelf 0 or 1. PG is only printed for NT, RT, and XT systems.

cpu = CPU that was active when the problem occurred

pg addr = failed memory location

pf = prime fault

sf = secondary fault

ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0202 cpu pg addr pd sd

The data in the primary (pd) and secondary (sd) differed at the specified address. This error can result when a double bit error occurs in a word in a memory. If the fault occurred in a data store, CED will cause a Fault Code 0012 (second field) initialize to clear up the data.

If the fault occurred in a protected data store or firmware store and the contents of the primary module are correct (i.e., checksum successful) the primary will be copied into the secondary.

cpu = CPU that was active when the problem occurred

pg addr = failed memory location

pf = prime fault

sf = secondary fault

1. If a CED0203 occurs for the same page, the primary is suspect.

ACTION: Use DIS xx to disable the memory card(s) associated with the active CPU, then use MEM xx or ENL xx to perform a memory test. If applicable, replace the memory card(s) following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If a CED0203 does not occur, suspect the secondary. If the fault occurred in a protected data store or firmware store and the contents of the primary module are correct (for instance the checksum is successful) the primary will be copied into the secondary.

ACTION: Use DIS xx to disable the memory card(s) associated with the nonactive CPU, then use MEM xx or ENL xx to perform a memory test. If applicable, replace the memory card(s) following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0203 cpu pg

The checksum failed on the specified page. This means that the program or data stored in the memory is incorrect. If the page is protected data store, data dump will be inhibited because the integrity of the data cannot be guaranteed. If the page is a protected data page, data dump may be prevented.

cpu = CPU that was active when the problem occurred.

pg = the page that had the problem.

ACTION: Investigate and clear any SYSxxxx messages which may appear concurrently with this message, then attempt to data dump onto a second copy of the storage medium. Use EDD CLR in LD 43, then reload from the new copy to check that the data is now valid. If this is done after a reload, the only further cause would be CED0203. On dual-memory machines, use ENL xx on the indicated memory card to test and re-enable (the data will be copied from the other memory). If this fails again (or for single memory machines), use EDD CLR in LD 43 to dump the data to a second copy of the storage medium, then reload and check any SYS or INI errors for possible data corruption. Refer to LD 43, message EDD016 for further information.

CED0204 cpu memory

The memory card was tested at midnight and failed. Refer to the CED0207 description.

cpu = CPU that was active when the problem occurred.

ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0205 cpu mem

The memory card was tested at midnight and passed. The card was enabled. If the secondary was disabled, an attempt will be made to enable it. The card may have an intermittent fault.

cpu = CPU that was active when the problem occurred.

ACTION: Use DIS xx to disable the memory card(s) associated with the nonactive CPU, then use MEM xx or ENL xx to perform a memory test. If applicable, replace the memory card(s) following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0206 cpu cma

The CMA failed when the midnight routine tried to enable it. No further memory testing will be done.

cpu = CPU that was active when the problem occurred

cma = Changeover and Memory Arbitrator card

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The CMA card could be faulty.

ACTION: Replace the CMA card associated with the CPU indicated in this message, following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. The CMA cable could be faulty.

ACTION: Replace the inter-CMA cable following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

3. The other CMA card could be faulty.

ACTION: Replace the CMA card associated with the opposite CPU as indicated in this message, following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0207 cpu cma

The CMA was successfully reenabled by the midnight routine. Interpretation of data accompanying CED0100 to 0207 is as follows:

pg = the page that had the problem. This problem could be in the card on shelf 0 or 1. PG is only printed for NT, RT, and XT systems. The pg information can be ignored.

addr = address of the fault.

cma = Changeover and Memory Arbitrator card.

cpu = CPU that was active when the problem occurred.

count = number of invalid interrupts which have occurred in the last 30s.

memory = memory card that had the fault

xxxx = m1m2m3m4

Where:

m1m2 = old contents of Memory Trouble Registers (MTR) for the page.

m3m4 = new contents of MTR for the page.

ACTION: If applicable, replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0300 A temporary module is not equipped or is faulty.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the CFN record. Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0301 Replaced module is not equipped or is faulty.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the CFN record. Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0302 Specified module has not been spared. One of the system memory modules is faulty.

ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0303 Spare is disabled. Module 0 should be replaced.

ACTION: Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0304 Spare is in use. Only relevant for SL-1LE, VLE, A, XL, and M.

ACTION: Information only, no action required.

CED0305 Spare failed memory test.

ACTION: Replace module 0. Replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CED0306 The specified module has not been replaced by the temporary module.

ACTION: Information only, no action required.

- CED0307 The temporary module is in use.
ACTION: Information only, no action required.
- CED0401 Cannot determine which CPU is active.
ACTION: Use STAT CMA to determine which CPU or CMA is active.
- CED0402 System Clock must be switched before proceeding.
ACTION: Use SCLK in LD 39 to switch the System Clock. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.
- CED0403 The specified System Clock Generator (SCG) is out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.
- CED0404 The specified System Clock Generator (SCG) is not responding.
ACTION: Use SCLK in LD 39 to switch the System Clock. If you need help with the commands or system responses go to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.
- CED0405 The specified System Clock Generator (SCG) is already enabled.
ACTION: Ensure that this is the command you wanted to use.
- CED0406 The idle CPU must be switched in as the active CPU before proceeding with the command.
ACTION: Use SCPU in the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 to switch the CPU.
- CED0407 Intergroup Switch is out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.
- CED0408 Intergroup Switch is not responding.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command. If the data is correct, replace the IGS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0409 The specified Intergroup Switch is already enabled.
ACTION: Ensure that this is the command you wanted to use.
- CED0410 Only one DISI IGS is allowed at a time.
ACTION: Be patient, you are inputting commands faster than the system can handle them.
- CED0411 DISI IGS command is completed.
ACTION: Information only, no action required.
- CED0412 c System Clock c cannot be switched to replace the presently active clock.
ACTION: If appropriate, replace the System Clock card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CED0450 Invalid command for single CPU systems.
ACTION: Ensure that this is the command you wanted to use.

- CED0502 That command is only valid for system Option 21 with X11 Release 18 and later.
ACTION: Ensure that this is the command you wanted to use.
- CED0503 1. The battery test failed.
ACTION: Replace the battery per steps in the *Hardware Replacement* (553-3001-520). Use BATT to retest. If the test does not pass, replace the MSPS card per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Receiving this message after installing or upgrading to an OPT21E or STE. The battery may have been installed incorrectly or is missing.
ACTION: Check the MSPS (NTND02) card for correct battery installation.
- CED0504 The battery is not configured.
ACTION: If a battery is present on the MSPS (NTND02BA) refer to the *X11 Administration* (553-3001-311). Use LD 17 prompt BATT to Yes before doing a BATT test.
- CED0505 That command is not valid for system Option 21.
ACTION: Ensure that this is the command you wanted to use. 

CIOD — LD 137 Core Input/Output Diagnostics

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Before changing circuit cards, be aware of the procedures outlined in *Do this when replacing circuit cards*, found in the *Hardware maintenance tools* chapter.

How the CIOD works

LD 137 provides IOP and CMDU related diagnostic and maintenance information for Options 51C/61C/81 machines. Some commands in LD 37 can also be used. Refer to that program.

LD 137 provides a means of performing the following functions:

- ◆ enabling and disabling the CMDU and IOP cards
- ◆ displaying status and card ID for CMDU and IOP cards
- ◆ testing the IOP and CMDU (the hard and floppy disk drives are tested)
- ◆ testing individual disk drives
- ◆ enabling and disabling disk redundancy
- ◆ testing SCSI cable connections between IOPs and CMDUs
- ◆ testing disk synchronization on file or sector levels
- ◆ during midnight routines performs DATA CMDU, DATA RDUN commands

Note: The DATA CMDU and DATA RDUN midnight routines are run every five days.

CIOD common commands

Status

STAT Get the status of both IOPs and CMDUs. 51C/61C/81-19

For the IOP, the Enabled or Disabled, and Active or Standby state is printed. Status is given for active and standby IOPs.
For the CMDU, Disk redundancy, enabled/disabled, and active/standby status are printed.

Note: The status given for the standby IOP is a software status as it was last seen when that IOP was active. No hardware status is given because the standby IOP cannot be accessed.

If the status of the IOP or CMDU is disabled, one of the following OOS messages may appear on the maintenance terminal as follows:

ASIC interrupt fault monitor threshold exceeded

Action: Contact your technical support group.

CMDU does not respond, the disk drive may be missing

Action: Be sure CMDU power is on and the IOP to IOP cable is in place.

CMDU has been disabled by the craftperson

Action: Information only, take appropriate action as required.

CMDU is disabled because the IOP is Out-of-Service

Action: Contact your technical support group.

CMDU is in split mode

Action: Information only, take appropriate action as required.

CIOD common commands (continued)

STAT
(continued)

CMDU is out of split mode

Action: Information only, take appropriate action as required.

CMDU Out-of-Service

Action: Contact your technical support group.

CMDU status is mismatched because of a software error

Action: Contact your technical support group.

CMDUs are not synchronized

Action: Information only, take appropriate action as required.

Fault interrupt fault monitor threshold exceeded

Action: Contact your technical support group.

General event interrupt fault monitor threshold exceeded

Action: Contact your technical support group.

Hard disk drive error

Action: Contact your technical support group.

Hard disk is inaccessible

Action: Be sure CMDU power is on and the IOP to IOP cable is in place.

Hard disk read error

Action: Contact your technical support group.

CIOD common commands (continued)

STAT

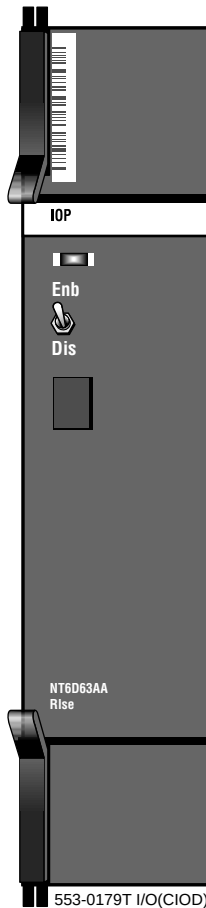
(continued)

Hard disk write error**Action:** Contact your technical support group.**IOP disabled by craftperson****Action:** Information only, take appropriate action as required.**IOP not responding****Action:** Check that the IOP enable/disable switch is in the enable position (up). If the IOP does not respond after enabling it, reseal the IOP card. If the card does not respond after resealing, replace the IOP card by following the steps in the Hardware replacement guide.**IOP Out-of-Service****Action:** Contact your technical support group.**IOP responding but cannot be enabled****Action:** Contact your technical support group.**No access to hard disk (HDK)****Action:** Be sure CMDU power is on and the IOP to IOP cable is in place.**Processor exception fault monitor threshold exceeded****Action:** Contact your technical support group.**Unexpected interrupt fault monitor threshold exceeded****Action:** Contact your technical support group.

CIOD common commands (continued)

STAT (continued)	Unrecognized error fault monitor threshold exceeded Action: Contact your technical support group.
Print	
IDC	Print the IDs of both CMDUs and the active IOP. 51C/61C/81-19 The printout appears in the following format: pppppppppp rrssss cccccccc pppppppppp = PEC code rr = Release number ssss = Serial number cccccccc = Comments (not always present)
Test	
TEST SCSI	Test the SCSI cables. 51C/61C/81-19 This test ensures the cable connections between the IOPs are present. Access to the CMDUs is tested as well. If the test is successful, OK is printed. If the test is unsuccessful, CIOD messages are printed to indicate the problem.
TTY x	Test TTY x 51C/61C/81-19 Response is: ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789"#\$%* !& () <> _ . : , . ? READY FOR INPUT Anything entered on the keyboard will be echoed until END is input.

IOP — Input/Output Processor



553-0179T I/O(CIOD)

Purpose

The IOP loads the programs and office data into the system memory.

Function

The IOP interfaces the Core Multi-drive Unit or CMDU, a serial device, to the CP, a parallel device.

The IOP provides the interface between the CP and the CMDU via a SCSI bus interface, and utilizes a Motorola 68020 microprocessor.

The IOP card provides address matching, disk drive control, data buffering, and interrupt control circuits.

The IOP and CMDU are combined into one card on the Option 81C.

Features

The IOP face plate includes the following features:

- ◆ a hex display for IOP status codes
- ◆ a LED which flashes three times to indicate a passed self-test, and when steadily lit, indicates a disabled IOP.

IOP faceplate hex codes

The NT6D63 I/O Processor (IOP) card provides hexadecimal displays to indicate various phases of operation and the state of the card during those phases.

Assembly level initialization and basic card self-tests are noted on the HEX display by decimal points appearing to the left of the HEX code.

High level code initialization and card self-tests have the decimal point to the right of the code to indicate they are taking place.

Card operation is indicated by the alternating decimal points.

Assembly level initialization and basic card self-test messages

.0.	LED on. Bootstrap code on power up. ACTION: Information only, no action required.
.1	LED on. ROM checksum for self-test 1. ACTION: Information only, no action required.
.1/.E.	LED on. ROM checksum self-test 1 failed (alternates 3 times). ACTION: Replace the IOP card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
.2	LED on. SRAM self-test. Card LED is on for self-test 2. ACTION: Information only, no action required.
.2/.E.	LED on. SRAM self-test 2 failed (alternates 3 times). ACTION: Replace the IOP card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
.3.	LED on. IOP debugger initialization. ACTION: Information only, no action required.
.3/.E.	LED on. IOP debugger initialization failed (alternates 3 times). ACTION: Replace the IOP card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
.3	LED on. Processor self-test 3. ACTION: Information only, no action required.
.3/.E.	LED on. Processor self-test 3 failed (alternates 3 times). ACTION: Replace the IOP card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

- .4 LED on. BIC Initial Condition Check, self-test 4
ACTION: Information only, no action required.
- .4/.E. LED on. BIC Initial Condition Check, self-test 4 failed (alternates 3 times).
ACTION: Replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- .8 LED on. Assembly level copying ROM to RAM, and miscellaneous initialization setup.
ACTION: Information only, no action required.
- .D. LED on. 3 second window to enter the debugger by typing ^B, or in debugger.
ACTION: Information only, no action required.
8. LED off. Initialization and set up in C.
ACTION: Information only, no action required.
1. LED off. IOP registers self-test a.
ACTION: Information only, no action required.
- 1./E LED on. IOP registers self-test a failed (alternates 3 times).
ACTION: Replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. LED off. BIC self-test b.
ACTION: Information only, no action required.
- 2./E LED on. BIC self-test b failed (alternates 3 times).
ACTION: Replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
3. LED off. SCSI self-test c.
ACTION: Information only, no action required.
- 3./E LED on. SCSI self-test c failed (alternates 3 times).
ACTION: Replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
5. LED off. Security cartridge self-test e.
ACTION: Information only, no action required.
- 5./E LED on. Security cartridge self-test e failed (alternates 3 times).
ACTION: Replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
6. LED off. DUART self-test f.
ACTION: Information only, no action required.
- 6./E LED on. DUART self-test failed (alternates 3 times).
ACTION: Replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

.9/9.	LED on. IOP hunt CP/IOP test in progress, Ping. ACTION: Information only, no action required.
.A/A.	LED on. Operational and disabled, or waiting to hunt. ACTION: Information only, no action required.
.A/A.	LED off. Operational and enabled. ACTION: Information only, no action required.
.B/B.	LED off. Maintenance message sent (persists for about 1 second). ACTION: Information only, no action required.
.F/F.	LED off. SCSI interrupt message sent (persists for about 1 second). ACTION: Information only, no action required.
.D/D.	LED off. Operational, debugger enabled and DUART polled for ^B to enter. ACTION: Information only, no action required.
.D/D.	LED on. Operational, debugger disabled and DUART polled for ^B to enter. ACTION: Information only, no action required.
D	LED on. Active in debugger. ACTION: Information only, no action required.
.E/E.	LED off. Soft reset occurred, error enabled. ACTION: Information only, no action required.
.E/E.	LED on. Soft reset occurred, error disabled. ACTION: Information only, no action required.
.E.	LED on. Hard reset initiated. ACTION: Information only, no action required.

IOP commands

Status

STAT IOP	Provide status of the active IOP. This command prints out the status whether the IOP is enabled or disabled. If it is disabled, the OOS reasons are printed. The following IOP OOS messages may appear on the maintenance terminal as follows: ASIC interrupt fault monitor threshold exceeded Action: Contact your technical support group.	51C/61C/81-19

IOP commands (continued)

STAT IOP
(continued)**Fault interrupt fault monitor threshold exceeded**

Action: Contact your technical support group.

General event interrupt fault monitor threshold exceeded

Action: Contact your technical support group.

IOP disabled by craftperson

Action: Information only, take appropriate action as required.

IOP not responding

Action: Check that the IOP enable/disable switch is in the enable position (up). If the IOP does not respond after enabling it, reseal the IOP card. If the card does not respond after resealing, replace the IOP card by following the steps in the Hardware replacement guide.

IOP Out of Service

Action: Contact your technical support group.

IOP responding but cannot be enabled

Action: Contact your technical support group.

Processor exception fault monitor threshold exceeded

Action: Contact your technical support group.

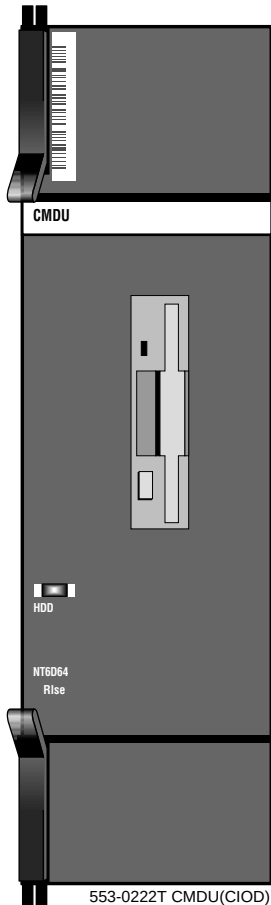
Unexpected interrupt fault monitor threshold exceeded

Action: Contact your technical support group.

IOP commands (continued)

STAT IOP (continued)	Unrecognized error fault monitor threshold exceeded Action: Contact your technical support group.	
Disable		
DIS IOP	Disable the active IOP. The LED is lit on the IOP faceplate, and both CMDUs are inaccessible.	51C/61C/81-19
Enable		
ENL IOP	Enable the IOP on the active Core. The LED is turned off on the IOP faceplate. The CMDUs are restored to the state they were in prior to the IOP being changed. However, if the cable between the IOPs is not connected, the CMDUs remain inaccessible until the cable is reattached. Note: If both CMDUs were enabled, a file level synchronization check is performed prior to restoring states. If the synchronization (disk redundancy) does not exist, only the previously active CMDU is enabled.	51C/61C/81-19
Test		
TEST IOP	Perform self test on the active IOP. The IOP must be disabled to perform this test.	51C/61C/81-19
Print		
IDC IOP	Print out the ID of the active IOP.	51C/61C/81-19

CMDU — Core Multi Drive Unit



553-0222T CMDU(CIOD)

Purpose

The CMDU is used to load programs and office data into the system memory.

Function

The CMDU occupies three adjacent card slots in each Core Module of the Option 81 and each Core/Network Module of Options 51C and 61C.

The CMDU requires 5V and 12V from the module backplane.

Each CMDU is controlled by an IOP card in the module. The IOP cards maintain redundancy of the CMDUs through a SCSI bus connection.

The IOP and CMDU are combined into one card on the Option 81C.

The CMDU cards can provide card-ID, which includes the card type, NT code, serial number and other relevant data about the CMDU.

Features

The CMDU contains the following:

- ◆ one 3.5-inch super high density floppy drive with a format capacity of 2.88 Mbytes
- ◆ a 3.5-inch hard drive with a minimum capacity of 120 Mbytes

CMDU commands

Status

STAT CMDU n Get status of the CMDU. 51C/61C/81-19

n = Core number (0 or 1) If n is not entered, the status for both CMDUs is printed.

If the CMDU is disabled, one of the following CMDU OOS reason may appear on the maintenance terminal.

CMDU does not respond, the disk drive may be missing

Action: Be sure CMDU power is on and the IOP to IOP cable is in place.

CMDU has been disabled by the craftperson

Action: Information only, take appropriate action as required.

CMDU is disabled because the IOP is out-of-service

Action: Be sure CMDU power is on and the IOP to IOP cable is in place.

CMDU is in split mode

Action: Information only, take appropriate action as required.

CMDU is out of split mode

Action: Information only, take appropriate action as required.

CMDU status is mismatched because of a software error

Action: Contact your technical support group.

CMDU commands (continued)

STAT CMDU n
(continued)

CMDUs are not synchronized
Action: Contact your technical support group.

Hard disk drive error
Action: Contact your technical support group.

Hard disk is inaccessible
Action: Be sure CMDU power is on and the IOP to IOP cable is in place.

Hard disk read error
Action: Contact your technical support group.

Hard disk write error
Action: Contact your technical support group.

No access to hard disk (HDK)
Action: Be sure CMDU power is on and the IOP to IOP cable is in place.

Disable device

DIS CMDU	Disable CMDU. 51C/61C/81-19 n = Core number (0 or 1) You must enter the Core number. If disk redundancy is currently enabled (both CMDUs are enabled and enabled); disabling the CMDU also disables disk redundancy. The confirmation is displayed, CURRENTLY CMDU N IS ACTIVE. DISK RDUN WILL BE DISABLED. ENTER Y(ES) TO CONFIRM, N(O) TO ABORT. If the specified CMDU is in standby, its state is changed to disabled. If it is the active CMDU, it is disabled, and the standby CMDU becomes active.

CMDU commands (continued)

Enable

ENL CMDU n Enable the CMDU. 51C/61C/81-19

n = Core number (0 or 1) You must enter the Core number.

When the first CMDU is enabled, that CMDU's state is ACTIVE. If a second ENL CMDU is attempted, a file level synchronization on both hard disks is performed first. If the synchronization (disk redundancy) does not exist, a CIOD error message is printed, and the second CMDU remains disabled. If the synchronization exists, the confirmation is "displayed, **DISK RDUN WILL BE ENABLED, ENTER Y(ES) to CONFIRM, N(O) TO ABORT.** When disk redundancy is successful, both CMDU states are Enabled. The CMDU enabled first is active, and the second is standby.

Print

ICD CMDUs Print the ID for the CMDU. 51C/61C/81-19

n = Core number (0 or 1) If n is not entered, card ID information is printed for both CMDUs.

CMDU commands (continued)

Test

TEST CMDU n Perform test for the CMDU. 51C/61C/81-19

This test includes a self-test, read/write capability test, and disk access test on both hard and floppy disks for this CMDU. While the test is in progress, the CMDU is inaccessible.

n = Core number (0 or 1) You must enter the Core number.

A disk must be in the floppy drive when this test is run. If the floppy disk is not present, the floppy disk test will fail. The hard disk test will not be affected.

DATA CMDU n Perform read tests on the specified CMDU. 51C/61C/81-19

This data validity check is performed on both hard and floppy disks. While the test is in progress, the CMDU is inaccessible. Progress messages are output.

n = core number (0 or 1). If n is not entered, this command checks both CMDUs.

Note: This is more extensive than the TEST command, and may take longer.

Swap

SWAP Swap the CMDUs. 51C/61C/81-19

After this command is issued, the active CMDU becomes standby, and the standby CMDU becomes active. This command is performed only when disk redundancy is enabled.

Synchronize

SYNC Synchronize the hard disks on both CMDUs. 51C/61C/81-19

This is a sector level synchronization. It is performed by copying the data from the active CMDU to the disabled CMDU, sector by sector. This can only be done when one CMDU is active and one is disabled. The confirmation prompt appears when the system is ready to do the copying, **CMDU n ACTIVE HDK WILL BE COPIED AND DISK RDUN WILL BE ENABLED. ENTER Y TO CONFIRM.**

Synchronization may take as long as 40 minutes. Progress reports appear on the TTY periodically.

Hard and Floppy Disk Commands

Test

TEST CMDU n HDK, FDK	Perform test on the Hard or Floppy Disk. This test includes a self-test, read/write capability test, and disk access test on either the hard or floppy disk drive for this CMDU. While the test is in progress, the CMDU is inaccessible. n = Core number (0 or 1) You must enter the Core number. A disk must be in the floppy drive to be tested. If a floppy disk is not present, the floppy disk test will fail. The hard disk test will not be affected.	51C/61C/81-19
TEST RDUN	Perform file level checking on both hard disks. This test ensures that disk synchronization exists. It can only be performed when disk redundancy is enabled. If the test fails, a CIOD message appears, and disk redundancy is disabled. While this test is in progress, the disk is inaccessible	51C/61C/81-19
DATA CMDU n HDK, FDK	Perform read test on either the Hard Disk or Floppy Disk. This is a data validity check. While the test is in progress, the Disk is inaccessible. n = Core number (0 or 1) You must enter the Core number. Note: This is more extensive than the TEST command, and may take longer.	51C/61C/81-19

Test

DATA RDUN	Perform sector level checking on both hard disks. This test ensures that disk synchronization (disk redundancy) exists. It can only be performed when disk redundancy is enabled. All data is checked on both disks, sector by sector. If the test fails, a CIOD message appears, and disk redundancy is disabled. Note: This is more extensive than the TEST command, and may take longer. While this test is in progress, the disks are inaccessible.	51C/61C/81-19

CIOD messages

The message output format is: CIOD x y z, where: x = side, y = card and z = port

CIOD0000	Overlay Program 137 has been loaded.
CIOD0001	Invalid command. ACTION: Ensure that this is the command you wanted to use.
CIOD0002	Invalid argument. ACTION: Check to make sure your data is correct and re-enter the command.
CIOD0003	The device number is out-of-range. ACTION: Check to make sure your data is correct and re-enter the command. Enter 0 or 1.
CIOD0004 x	HDK x test failed. The hard disk on CMDU x failed the test. ACTION: Try the test again. If it fails three times, replace the CMDU by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If you need help contact your technical support group.
CIOD0005	Softerr: cannot access the device. ACTION: Contact your technical support group.
CIOD0006	That device is already enabled. ACTION: Ensure that this is the command you wanted to use.
CIOD0007	That device is already disabled. ACTION: Ensure that this is the command you wanted to use.
CIOD0008 x	FDK x failed. The floppy disk on CMDU x failed the test. ACTION: Try the test again. If it fails three times, replace the floppy drive by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If you need help contact your technical support group.
CIOD0009	Failed to disable the device. ACTION: Re-attempt the command. If the problem persists contact your technical support group.
CIOD0010	Related data (CMDU status) is mismatched due to a software error. ACTION: Contact your technical support group.
CIOD0011	IOP test failed. See fault reporting for the reason for the failure. ACTION: Replace the IOP card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
CIOD0012	Cannot access CMDU x because the system is in split mode. System must be redundant before attempting this command. ACTION: Use SHDW in LD 135 to restore the system to redundancy. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219. Re-enter the command.

CIOD0013	The CMDU number is required. ACTION: Check to make sure your data is correct and re-enter the command. Enter 0 or 1 to indicate which device.
CIOD0014	Receiving this message while the midnight routine runs or RDUN test failed because the disk contents are not synchronized. ACTION: Use SYNC to synchronize the disks, then re-enter the command. Check for a possible bad CMDU. If the SCSI bus is busy, unseat the IOP in the opposite CORE. Use SYNC to synchronize the CMDUs. Reseat the IOP and re-enter the RDUN diagnostics in both COREs.
CIOD0015	ENL command failed, and device cannot be enabled, because it cannot be accessed. ACTION: Be sure device is enabled and cables are connected, then re-enter the command.
CIOD0016	RDUN command failed because the disk redundancy is in the disabled state. ACTION: Enable the disk redundancy before using the RDUN command. Use ENL CMDU n to enable the disk, then re-enter the command.
CIOD0017	SYNC command failed because the disk redundancy is in enabled state. ACTION: Use DIS CMDU n to disable the disk, then re-enter the command.
CIOD0018	SYNC command failed because of a software mismatch. ACTION: Contact your technical support group.
CIOD0019	SYNC command failed. 1. Refer to fault reporting for the reason for the failure. ACTION: Re-attempt the command. If the error continues contact your technical support group. 2. Receiving this message when attempting to resync the CMDUs after an upgrade or parallel reload. ACTION: Disable the active IOP and re-enable in LD 137. Confirm that the CMDU at the far end can be recognized by using the IDC command. Try the SYNC command again if it still fails. Unseat the IOP off the bus in the opposite CORE and resync the CMDUs. Reseat the IOP and verify access. If the error continues contact your technical support group.
CIOD0020	SYNC command failed because there is no system resource available at this time. ACTION: Try again later.
CIOD0021 xx	SYNC in progress. xx percent complete. This is a status message. Synchronization may take a long time. This message helps indicate how far along the synchronization is ACTION: Information only, no action required.

CIOD0022 xxxx yy

CABLE yy is loose, or CMDU yy is inaccessible. The SCSI test was performed successfully on both sides. The test failed because of a loose cable or inaccessible CMDU. Whichever is applicable is printed.

xxxx may be CABL or CMDU: CABL yy means that a cable is loose, or the status is unknown because both CMDUs are inaccessible.

CMDU indicates that the CMDU is inaccessible.

ACTION: Check the cable connection between the IOP and the CMDU. Reconnect the cable if it is loose. Perform a parallel reload if the CMDU does not respond.

CIOD0023

Unable to switch to inactive CP. The current CP remains active. The SCSI test was performed on the active side only, and the switchover attempt failed. Refer to CIOD0024 for active side information

ACTION: Check the cable connection between the IOP and the CMDU.

CIOD0024 xxxx yy

This message is associated with CIOD0023 message to display the cable status and CMDUs accessibility on the active side. The test had failed due to either cable is loose or inaccessible CMDU(s). If CMDU on the inactive side is inaccessible, it could be either CMDU is inaccessible or the cable between IOPs is loose.

XXXX may be CABL or CMDU. The text string is variable in length and is depending on the parameter list of the failure components. CABL yy indicates cable might be loose which requires further investigation. CMDU yy indicates which CMDU is inaccessible, if applicable.

ACTION: Check the cable connection between IOP and CMDU.

CIOD0025

Unable to switch back to active CP. The SCSI test was performed on both sides, but the system cannot return to the original active CP. The inactive CP is now active. Refer to CIOD0026 for status.

ACTION: Check the cable connection between the IOP and the CMDU. Perform a parallel reload if the CMDU does not respond

CIOD0026 xxxx yy

This message displays cable status and CMDU accessibility for both sides due to the inability to switch back to the original active CP.

xxxx can refer to CABL, or CMDU. Output may be one of the following.

CMDU yy indicates which CMDU is inaccessible.

CABL yy means the cable is loose, or the status is unknown.

ACTION: Check the cable connection between the IOP and the CMDU. Perform a parallel reload if the CMDU does not respond.

CIOD0027

SCSI test failed because an invalid address was detected for SCSI address 6 or 7.

ACTION: Use TEST CMDU to test the drive. If the error continues contact your technical support group.

CIOD0028

No resource is available for overlay input processing.

ACTION: Try again later.

- CIOD0029 Both CMDUs are disabled.
ACTION: Use ENL CMDU n to enable a CMDU.
- CIOD0030 Disk redundancy (RDUN) file level check failed. The CMDU and/or disk redundancy cannot be enabled.
ACTION: Contact your technical support group.
- CIOD0031 Abort delayed because a critical write is in progress. The abort will be delayed until the write is complete.
ACTION: Wait and try the command later.
- CIOD0032 To issue this command, the IOP must be enabled.
ACTION: Use ENL IOP to enable the IOP.
- CIOD0033 To test the IOP, it must be disabled.
ACTION: Use DIS IOP to disable the IOP.
- CIOD0034 To perform the Read/Write test, the CMDU must be enabled.
ACTION: Use ENL CMDU n to enable a CMDU.
- CIOD0035 That response is not allowed for this prompt.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- CIOD0036 xx Read test in progress (xx percent done).
This is a status message output during an exhaustive read test. This test may take a while, so this message helps keep track of the status.
ACTION: Information only, no action required.
- CIOD0037 xx Synchronization sector check in progress (xx percent done).
This is a status message output during the check. This check may take a while, so this message helps keep track of the status.
ACTION: Information only, no action required.
- CIOD0038 Card ID cannot be read
ACTION: Reseat or replace the card.
- CIOD0039 SYNC command failed because both CMDUs are disabled.
ACTION: Re-enable CMDU 0 then restore to CMDU 1.
- CIOD0040 x Cannot access CMDU x.
ACTION: Ensure it is enabled, and check cabling. Check the cable connection between the IOP and the CMDU. Use ENL CMDU n to enable the CMDU.
- CIOD0041 x Unexpected signal x raised, interfering with LD 137.
ACTION: Contact your technical support group.
- CIOD0042 Synchronization failed because the system is in split mode.
ACTION: Use SHDW in LD 135 to restore the system to the redundant mode. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219.

- CIOD0045 To issue the SWAP command, disk redundancy must be enabled.
ACTION: Use SHDW in LD 135 to restore the system to the redundant mode. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219.
- CIOD0046 Unable to lockout graceful switchover possibility. The switchover was performed while the maintenance command is in progress.
ACTION: Information only. No action required.
- CIOD0100 VALID cable loss or CMDU removal store current CMDU states.
ACTION: Store current CMDU states. Information only. No action required.
- CIOD0101 SCSI Cable reconnected or CMDUs re-inserted: but IOP still disabled.
ACTION: Use ENL IOP to re-enable the IOP.
- CIOD0102 CMDU states previously stored when IOP was disabled.
ACTION: Information only. No action required.
- CIOD0103 x CMDU x hard disk inaccessible: cannot restore to STANDBY.
ACTION: Be sure CMDU power is on and the IOP to IOP cable is in place.
- CIOD0104 x CMDU x hard disk inaccessible: cannot restore to ACTIVE.
ACTION: Be sure CMDU power is on and the IOP to IOP cable is in place.
- CIOD0105 x CMDU x cannot delete hard disk test file.
ACTION: Use DIS CMDU x to disable and ENL CMDU x to re-enable the CMDU, then re-enter the command.
- CIOD0106 x CMDU x cannot delete floppy disk test file.
ACTION: Disable CMDU x and then re-enable in LD 137.
- CIOD0107 No floppy disk in drive.
ACTION: Place the proper floppy disk into the drive.
- CIOD0108 Floppy disk not formatted.
ACTION: Insert formatted disk or contact your local technical support group to have the disk formatted in PDT.
- CIOD0109 Floppy disk is Write Protected.
ACTION: Check that the write protect tab on the floppy disk is closed (no hole).
- CIOD0110 x SCSI cable between IOPs is missing, both CMDUs are disabled.
ACTION: Check that both connectors on the IOP to IOP cable are in place.
- CIOD0111 x Valid cable reconnect. Attempt to restore CMDU states.
ACTION: Information only.
- CIOD0112 Invalid cable loss. Multiple loss msgs: states not stored.
ACTION: Contact your technical support group.
- CIOD0113 Invalid cable loss. CMDU accessible, states not stored.
ACTION: Contact your technical support group.

- CIOD0114 x CMDU x hard disk has insufficient memory for quick read/write test.
ACTION: Re-enter the command. If the error continues contact your technical support group.
- CIOD0115 x CMDU x floppy disk has insufficient memory for quick read/write test.
ACTION: Contact your technical support group.
- CIOD0116 x CMDU x hard disk: cannot open file for quick read/write test.
ACTION: Contact your technical support group.
- CIOD0117 x CMDU x floppy disk: cannot open file for quick read/write test.
ACTION: Contact your technical support group.
- CIOD0118 x CMDU x: cannot read card ID.
ACTION: Contact your technical support group.
- CIOD0119 x CMDU x floppy disk cannot create quick test file.
ACTION: Contact your technical support group.
- CIOD0120 x CMDU x hard disk cannot create quick test file.
ACTION: Contact your technical support group.
- CIOD0121 x CMDU x hard disk input buff malloc err: quick test.
ACTION: Contact your technical support group.
- CIOD0122 x CMDU x floppy disk input buff malloc err: quick test.
ACTION: Contact your technical support group.
- CIOD0123 x CMDU x is disabled due to fault monitoring.
ACTION: Use TEST CMDU n HDK to test the CMDU. If the test fails, replace the CMDU by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0124 x CMDU x is disabled due to IOP to IOP cable loss.
ACTION: Check that both connectors on the IOP to IOP cable are in place.
- CIOD0125 x CMDU x is disabled because the IOP is disabled.
ACTION: Re-enable the IOP from LD 137 (ENL IOP, ENLT).
- CIOD0126 x CMDU x is disabled. Active CP can not access the standby CMDU because the system is in split mode.
ACTION: Use SHDW in LD 135 to restore the system to the redundant mode. If you need help with the commands or system responses refer to the *CCED* chapter. Re-enter the command.
- CIOD0127 x CMDU x is disabled because the system is in split mode. The standby CMDU remains disabled.
ACTION: Use SHDW in LD 135 to restore the system to the redundant mode. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219. Use ENL CMDU to enable the CMDU.
- CIOD0128 CMDU x is disabled because of a software/hardware mismatch.
ACTION: Use ENL CMDU n from LD 137 to re-enable the CMDU.

- CIOD0129 x **1.** CMDU x is disabled because it could not access hard disk.
ACTION: Check that the CMDU power is on and that both connectors on the IOP to CMDU cable are in place.
- 2.** Receiving CIOD0129, CIOD0143 and CIOD0136 messages when swapping over from CORE 0 to CORE 1. The CMDUs are not running in sync. The error indicates that the active CMDU 0 cannot communicate to the newly active CORE 1 after the switch.
ACTION: Check for faulty cabling or bent pins on the IOP, slot positions 16A on both CORE backplanes.
- CIOD0130 x CMDU x is disabled due to a software mismatch on both active or standby CMDUs.
ACTION: Contact your technical support group.
- CIOD0131 x CMDU x is restored to STANDBY because the IOP was enabled.
ACTION: Information only, no action required.
- CIOD0132 x CMDU x is restored to ACTIVE because the IOP was enabled.
ACTION: Information only, no action required.
- CIOD0133 x CMDU x is restored to STANDBY.
ACTION: Information only, no action required.
- CIOD0134 x CMDU x is restored to ACTIVE.
ACTION: Information only, no action required.
- CIOD0135 x CMDU x is standby due to switchover.
ACTION: Information only, no action required.
- CIOD0136 x **1.** CMDU x is active due to switchover.
ACTION: Information only. No action required.
- 2.** Receiving CIOD0129, CIOD0143 and CIOD0136 messages when swapping over from CORE 0 to CORE 1. The CMDUs are not running in sync. The error indicates the active CMDU 0, cannot communicate to the newly active made CORE 1 after the switch.
ACTION: Check for faulty cabling or bent pins on the IOP, slot positions 16A on both CORE backplanes.
- CIOD0137 x CMDU x is standby due to a warm start.
ACTION: Information only, no action required.
- CIOD0138 x CMDU x is active due to a warm start.
ACTION: Information only, no action required.
- CIOD0139 x CMDU x is standby due to a cold start.
ACTION: Information only, no action required.
- CIOD0140 x CMDU x is active due to a cold start.
ACTION: Information only, no action required.
- CIOD0141 x CMDU x is disabled and cannot access hard disk from a cold start.
ACTION: Check that the CMDU power is on and that cable connectors are in place.

- CIOD0142 x CMDU x is disabled and cannot access hard disk from a warm start.
ACTION: Check that the CMDU power is on and that cable connectors are in place.
- CIOD0143 x 1. CMDU x is disabled cannot access hard disk (switchover).
ACTION: Check that the CMDU power is on and that cable connectors are in place.
2. Receiving CIOD0129, CIOD0143 and CIOD0136 messages when swapping over from CORE 0 to CORE 1. The CMDUs are not running in sync. The error indicates the active CMDU 0, cannot communicate to the newly active made CORE 1 after the switch.
ACTION: Check for faulty cabling or bent pins on the IOP, slot positions 16A on both CORE backplanes.
- CIOD0144 x CMDU x was in the standby mode and switched to the active mode due to a cold start.
ACTION: Information only, no action required.
- CIOD0145 x CMDU x was in the standby mode and switched to the active mode due to a warm start.
ACTION: Information only, no action required.
- CIOD0146 x CMDU x was in the standby mode and switched to the active mode due to a switchover.
ACTION: Information only, no action required.
- CIOD0147 x CMDU x was in the standby mode and switched to the active mode due to a fault monitoring.
ACTION: Contact your technical support group.
- CIOD0148 x CMDU x is disabled due to SPLIT mode from a cold start.
ACTION: Information only, no action required.
- CIOD0149 x CMDU x is disabled due to SPLIT mode from a warm start.
ACTION: Information only, no action required.
- CIOD0150 x CMDU x is disabled due to SPLIT mode from a switchover.
ACTION: Information only, no action required.
- CIOD0151 x Cannot restore CMDU x to standby due to SPLIT mode.
ACTION: Use SHDW in LD 135 to restore the system to the redundant mode. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219. Re-enter the command.
- CIOD0152 x Cannot restore CMDU x to active due to SPLIT mode.
ACTION: Use SHDW in LD 135 to restore the system to the redundant mode. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219. Re-enter the command.
- CIOD0153 x CMDU x was in the standby mode and switched to active due to IOP being enabled.
ACTION: Information only, no action required.
- CIOD0154 x CMDU x was in the standby mode and switched to active due to SCSI IOP to IOP cable.
ACTION: Information only, no action required.
- CIOD0155 Both CMDU hard disks are inaccessible.
ACTION: Check that the CMDU power is on and that cable connectors are in place.

- CIOD0156 CMDU x was in the standby mode and switched to active mode.
ACTION: Information only, no action required.
- CIOD0157 INFO: CMDU “a” is active, RDUN is “b”.
ACTION: Information only, no action required.
- CIOD0158 CMDU x is disabled and the system cannot access hard disk on a warm start.
ACTION: Check that the CMDU is plugged in and is powered on.
- CIOD0159 CMDU x is disabled and the system cannot access hard disk on a cold start.
ACTION: Check that the CMDU is plugged in and is powered on.
- CIOD0160 CMDU was removed and the system automatically disabled it.
ACTION: Information only. Assuming that you removed the CMDU no action is required.
- CIOD0161 CMDU still disabled since it is not plugged in.
ACTION: Plug the CMDU in and then re-enter your command.
- CIOD0162 CMDU x hard disk is inaccessible and the system cannot restore to the active mode.
ACTION: Check that the CMDU is plugged in and that the power is on.
- CIOD0163 CMDU was reinserted, but is disabled since IOP is disabled.
ACTION: Use ENL IOP to enable the IOP and then use ENL CMDU n to enable the CMDU.
- CIOD0164 Cluster number beyond normal range: <clustNum> <filename>
ACTION: Contact your technical support group.
- CIOD0165 Cluster incorrectly terminated: <clustNum> <filename>
ACTION: Contact your technical support group.
- CIOD0166 Cluster multiply assigned: <filename>
ACTION: Contact your technical support group.
- CIOD0167 File size longer than cluster chain: <filename>
ACTION: Contact your technical support group.
- CIOD0168 Clusters lost in the FAT = <no of lostClusters>
ACTION: Contact your technical support group.
- CIOD0169 Illegal file name <oldName> renamed as <newName>
ACTION: Contact your technical support group.
- CIOD0200 Security cartridge is missing or not responding.
ACTION: Be sure the ID number, software version and options match on both the cartridge on the IOP and the disks supplied with the system.
- CIOD0201 Incorrect response from security cartridge.
ACTION: Ensure the cartridge is properly installed on the IOP.
- CIOD0202 The wrong security cartridge has been installed.
ACTION: Locate and install the correct cartridge.

- CIOD0203 Customer ID number mismatch.
ACTION: Locate and install the correct cartridge.
 Receiving this message when attempting to install software. The CMDUs from manufacturing are loaded with a test database and will not match the serial number ID on the data cartridge you have installed.
ACTION: Contact your technical support group for help in verifying that the Options 51C, 61C, 81 *Installation Tool Reference* procedure was used.
- CIOD0204 Machine type mismatch.
ACTION: Locate and install the correct cartridge.
- CIOD0205 System type or version number mismatch.
ACTION: Locate and install the correct cartridge.
- CIOD0206 System issue number mismatch.
ACTION: Locate and install the correct cartridge.
- CIOD0207 Security cartridge data not valid.
ACTION: Locate and install the correct cartridge
- CIOD0208 Failed to read security Cartridge.
ACTION: Locate and install the correct cartridge
- CIOD0300 No IOP object can be created during HI OBJ creation phase.
ACTION: Information only, no action required.
- CIOD0301 x y IOP x in slot y is not responding.
ACTION: Check that the IOP enable/disable switch is in the enable position (up). If the IOP does not respond after enabling it, reseal the IOP card. If the card does not respond after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0302 x y IOP x in slot y detects both CMDUs becoming inaccessible.
ACTION: Check both connector ends of IOP to IOP SCSI cable. Check that both CMDUs are plugged in and powered on.
- CIOD0303 IOP x in slot y detects either or both CMDUs becoming accessible.
ACTION: Check both connector ends of IOP to IOP SCSI cable. Check that both CMDUs are plugged in and that the power is on.
- CIOD0304 Cannot find IOP database file.
ACTION: Use RES in LD 43 to restore the database to both hard drives from backup floppy disks. Verify the fault is cleared. If you need help with the commands or system responses refer to the “EDD — LD 43 Equipment Data Dump” on page 389 in this guide.
- CIOD0305 IOP x in slot y fails SCSI controller test.
ACTION: Reseat the IOP card. If the card does not respond after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).

- CIOD0306 IOP x in slot y fails to program/enable IOP BIC window.
ACTION: Reseat the IOP card. If the card does not respond after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0307 IOP x in slot y cannot send message to IOP card.
ACTION: Reinitialize the system by pressing the manual INIT button on top of the active CP card.
- CIOD0308 IOP x in slot y space manager cannot allocate CSR address.
ACTION: Reload the system by pressing the reload button on the bottom of the active CP card.
- CIOD0309 IOP cannot write to IOP database file.
ACTION: Check CMDU power.
- CIOD0310 IOP cannot create binary semaphore for IOP.
ACTION: Contact you technical support group.
- CIOD0311 IOP cannot create IOP class.
ACTION: Contact you technical support group.
- CIOD0312 IOP x in slot y cannot be created.
ACTION: Contact you technical support group.
- CIOD0313 IOP x in slot y cannot enable IOP.
ACTION: Contact you technical support group.
- CIOD0314 x IOP cannot open x database file.
ACTION: Contact you technical support group.
- CIOD0315 x IOP x database file is empty.
ACTION: Contact you technical support group.
- CIOD0316 x IOP release number is not found in x database file.
ACTION: Use RES in LD 43 to restore the database to both hard drives from backup floppy disks. Verify that the fault is cleared. If you need help with the commands or system responses refer to the “EDD — LD 43 Equipment Data Dump” on page 389 in this guide.
- CIOD0317 x y IOP x in slot y: security cartridge test failed.
ACTION: Reseat or replace the security cartridge on IOP.
- CIOD0318 x y IOP x in slot y: fails to take SCSI low level semaphore.
ACTION: Contact you technical support group.
- CIOD0319 x y IOP x in slot y: fails to give SCSI low level semaphore.
ACTION: Contact you technical support group.
- CIOD0320 x y IOP x in slot y: fails to take SCSI high level semaphore.
ACTION: Contact you technical support group.
- CIOD0321 x y IOP x in slot y: fails to give SCSI high level semaphore.
ACTION: Contact you technical support group.

- CIOD0322 x y IOP x in slot y: Timeout waiting for response from control register test.
ACTION: Reseat the IOP card. If the card does not respond after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0323 x y IOP x in slot y: BIC test failed.
ACTION: Reseat the IOP card. If the card does not pass the test after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0324 x y IOP x in slot y: Timeout waiting for response from BIC test.
ACTION: Reseat the IOP card. If the card does not pass the test after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0325 x y IOP: switchover graceful call failed with retCode a.
ACTION: Contact you technical support group.
- CIOD0339 x y IOP x in slot y: SCSI cable test failed.
ACTION: Use STAT IOP to check the IOP. Check both connector ends of the IOP to IOP SCSI cable. Check that both CMDUs are plugged in and the power is on.
- CIOD0341 x y IOP x in slot y: Fails to set IOP general register B.
ACTION: Reseat the IOP card. If the card does not pass the test after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0343 x y IOP x in slot y: fails to get general register A.
ACTION: Reseat the IOP card. If the card does not pass the test after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0344 x y IOP x in slot y: fails to set IPB/Local T/O timer, EI mapping, TOC, or Arb Id.
ACTION: Reseat the IOP card. If the card does not pass the test after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0346 x y IOP x in slot y: Fails to read BIC card ID.
ACTION: Reseat the IOP card. If the card does not pass the test after reseating, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0347 x y IOP x in slot y: Space manager cannot allocate IPB address.
ACTION: Reload the system by pressing the reload button on the bottom of the active CP card.
- CIOD0348 x y IOP x in slot y: fails to program SCSI controller.
ACTION: Check the software in LD 137.
- CIOD0349 x y IOP x in slot y: Installing Event Interrupt ISR failure on CP.
ACTION: Check CP in LD 135 and replace if necessary by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0350 x y IOP x in slot y: Control register test failed.
ACTION: Rerun the test. If the card continues to fail the test, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0351 x y IOP x in slot y timeout waiting for response from security cartridge test.
ACTION: Replace or reseat security cartridge/dongle on IOP/IDU.

- CIOD0352 x y IOP x in slot y: Time-out waiting for response from SCSI control test on top of the active CP card.
ACTION: Rerun the test. If the card continues to fail the test, replace the IOP card by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0353 x y IOP x in slot y: Timeout waiting for response from SCSI cable test.
ACTION: Re-enter the command.
- CIOD0354 Hunt: Illegal response from IOP to ping test message.
ACTION: If the error persists replace the IOP by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0355 Hunt: No response from IOP to ping test message.
ACTION: If the error persists replace the IOP by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0356 Hunt: The IOP did not complete the self-test.
ACTION: If the error persists replace the IOP by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0357 Hunt: The IOP failed the self-test.
ACTION: If the error persists replace the IOP by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0358 Hunt: IOP x y did not pass self-test.
ACTION: If the error persists replace the IOP by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0359 Hunt: IOP x y failed ping test.
ACTION: If the error persists replace the IOP by following the steps in the *Hardware Replacement* (553-3001-520).
- CIOD0360 Hunt: No IOPs recognized on side x.
ACTION: Check the cabling between the core modules.
- CIOD0361 IOP x in slot y: detects CMDU is accessible.
ACTION: Information only, no action required.
- CIOD0362 IOP x in slot y: detects CMDU is inaccessible.
ACTION: Check the CMDU for proper backplane seating.
- CIOD0363 Ethernet has been restored to ACTIVE because the IOP is enabled.
ACTION: Information only. This message appears repeatedly or is associated with a system problem. Contact your technical support group.
- CIOD0364 Ethernet has been disabled because the IOP is disabled
ACTION: Information only if the IOP is manually disabled. If a manual disabled has not been done, investigate why the IOP is disabling.
- CIOD0385 Command fails due to ELNK in DIS state.
ACTION: Enable the ethernet controller in LD 137.

- CIOD0386 Problems encountered. ENL command aborted.
ACTION: Retry. If the problem persists, contact your technical support group.
- CIOD0387 Problems encountered. DIS command aborted.
ACTION: Retry. If the problems persists, contact your technical support group.
- CIOD0388 TEST command cannot be executed as long as ERDN feature is in ENL state.
ACTION: Disable the ERDN feature (in LD 137) and try again.
- CIOD0389 Command fails. ERDN feature is not yet configured.
ACTION: Configure first the feature in LD 17. Try again.
- CIOD0390 {TEST result}: Ethernet link on active side is UP. 

CMF — LD 54 Multifrequency Signaling Diagnostic

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Before changing circuit cards, be aware of the procedures outlined in *Do this when replacing circuit cards*, found in the *Hardware maintenance tools* chapter in this guide.

How the CMF works

Multifrequency Compelled Signaling (MFC) or Multifrequency Signaling (MFE) provides a handshaking facility between the Meridian 1 and the Central Office or Public Exchange (CO/PE) or between other PBXs over network/Tie trunks.

The MFD overlay program is used to diagnose, display or change the status of the MFC or MFE send/receive (S/R) cards.

LD 54 resets all available MFC or MFE cards (both channels idle) and performs loop-back tests during the midnight routines. After every SYSLOAD or power-up, all available MFC or MFE cards are initialized.

The overlay can be loaded by the system after every power-up (or SYSLOAD), as part of the daily routines, or loaded manually to enter commands.

Hardware initialization after SYSLOAD

After the system power-up, every idle MFC or MFE card is initialized (self-tested). During this test the card is disabled, the LED on the faceplate is ON, and the S/R card microprocessor executes sequential loop-back tests on both channels.

These tests entail looping the sender output of each card to the Receiver input. The sender transmits all thirty tone pairs (1 to 15 digits for both DOD/DID modes) with a default signal level of zero. Each time the receiver detects a tone pair, the microprocessor verifies the digit received. At the end of the test a command to enable the card is issued and the microprocessor sends the test results to the CPU.

Loop-around test during daily routines

This loop-around test is conducted by the system during the daily routines. The loop-around test is identical to the one conducted after power-up except for the following points:

- ◆ the test is conducted on one channel at a time for all available MFC or MFE cards
- ◆ the MFC or MFE S/R card remains enabled the LED on the faceplate is OFF
- ◆ the self-test can also be loaded manually by issuing a command on the specified channel

Loop-around test by command

The loop-around tests are performed by maintenance personnel on a specified channel of the MFC or MFE S/R card. There are two types of tests:

- ◆ one is identical to the daily routine test which is conducted on the specific channel
- ◆ the second is conducted on a specific channel for a specified digit and signal level

LD 54 also performs the following functions:

- ◆ resets all idle MFC or MFE cards once a day during the midnight routines
- ◆ enables and disables the MFC or MFE card or channel
- ◆ determines the status of the MFC card or channel
- ◆ lists all disabled MFC or MFE channels
- ◆ handles other common overlay operations (such as clearing alarms)

Note 1: Use the DISL command to force-disable the MFC or MFE channel or card.

Note 2: Use the DISI command in LD 32 to disable the card when idle.

Note 3: No more than 50 percent of MFC channels can be disabled at one time as a result of system or manually initiated tests. However, this constraint does not apply using disable commands.

MFC/MFE Error handler and counter

The MFC/MFE error handlers are resident programs that monitor the number of MFC or MFE signaling errors. A one-word error field in the MFC or MFE block is initialized to zero. The Error Handler program allows a maximum of 10 errors. After every successful use of the MFC or MFE channel, the error field is decremental by one, if it is not already at zero. After every failure of the MFC or MFE channel the error field is incremental by one.

With X11 software, the Error Handler program generates only the **ERR700 l s c u** message. When an Error Handler code is output, the MFD overlay must be loaded manually and the MFC or MFE channels tested.

CMF common commands

Clear display/alarm

CDSP	Clear the maintenance display on the active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1

Status

STAT	List all disabled MFC channels in the system.	basic-1
STAT I s c (u)	Get status of specified MFC or MFE card or unit. Status is one of IDLE , BUSY , MBSY , DSBL or UNEQ for both channels.	basic-1

Disable device

DISC I s c	Disable specified MFC or MFE card. LED on card is ON when disabled.	basic-1
DISU I s c u	Disable specified MFC or MFE channel. When the other unit on the card is also in a disabled state in the software, a message is sent to disable the MFC or MFE card. LED on card is ON when disabled.	basic-1

Enable

ENLC I s c	Enable specified MFC or MFE card. Response is OK . A message is sent to the MFC or MFE card to turn off the LED.	basic-1
ENLU I s c u	Enable specified MFC or MFE channel. Response is OK . A message is sent to the MFC or MFE card to turn off the LED.	basic-1

CMF common commands (continued)

Reset/Initialize

MIDN 0	Reset all idle MFC or MFE cards. Resets all idle MFC or MFE cards and performs loop-around tests on all idle channels.	basic-1
MIDN 1	Initialize all idle MFC or MFE cards (recommended after installation).	basic-1

Test

ATST I s c u	Test automatic loop-around for specified unit. Performs automatic loop-around test on specified unit with default signal level of zero. All 30 tone pairs are tested and verified by the card microprocessor. Digits 1 to 15 signify Forward Signals 1 to 15 (DOD mode) and digits 16 to 30 signify Backward Signals 1 to 15 (DID mode). The response is OK when the unit passes the test and is enabled. If the receiver sends no message within a predefined time period, an error message indicating timeout is printed. If the receiver indicates it has received a different signal than that sent, the failed signal, an error message and the TN are printed.	basic-1

CMF common commands (continued)

End

END Stop further testing or cancel active command. basic-1

Manual loop-around

MTST I s c u d l Manual loop-around test on unit with specified digit level. basic-1

MFC-30 tone pairs are tested and verified by the CPU. Digits 1 to 15 indicate forward signals 1 to 15 (DOD mode) and digits 16 to 30 indicate backward signals 1 to 15 (DID mode).

MFE-15 tone pairs are tested and verified. Digits 1-15 represent Forward Signals 1-15 (DID mode). Digit 0 represents the control frequency.

The MFC signal levels require a +3 dBm gain at the trunk end. The following list shows the level codes, their value at the S/R card output, and their value at the trunk.

Digit level	Level Values (at S/R card)	Level Values (at trunk)
0	8 dBm	5 dBm
1	11 dBm	8 dBm
2	12 dBm	9 dBm
3	13 dBm	10 dBm
4	14 dBm	11 dBm
5	15 dBm	12 dBm
6	16 dBm	13 dBm
7	35 dBm	32 dBm

The MFE signal level 0= -10.5 dBm level with skew -7.0 dBm control frequency level. Signal levels 1-7 are used for internal test purposes.

The response is **OK** when the unit passes the test and is enabled. If the unit fails the test, the appropriate error message and the TN are printed.

CMF messages

CMF messages identify software/hardware errors during call processing. Output is in the following format:

CMFxxxx CMFTN TRKTN X0.... X8

Mnemonic description is as follows:

xxxx = the error code number

CMFTN = the CMF register TN in packed format

TRKTN = the Trunk TN associated with the CMFTN in packed format

X0 to X8 = the first nine words of the unprotected CMF block for the CMF unit used.

- CMF0001

Noisy Multifrequency Compelled (MFC) card. (hardware fault)
ACTION: Replace the MFC card following the stepsfollowing the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the faultverify that the fault is cleared.
- CMF0002

Large twist indicates a hardware fault.
ACTION: Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CMF0003

Three frequencies indicates a hardware fault.
ACTION: Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CMF0004

No inter-digit pause indicates a hardware fault.
ACTION: Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CMF0005

Invalid decision indicates a hardware fault.
ACTION: Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CMF0006

MFC card firmware fault.
ACTION: Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CMF0007

Undefined error indicates a hardware fault.
ACTION: Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

CMF0008	Software timeout indicates a software fault. ACTION: Contact your technical support group.
CMF0009	Not ready to send indicates a software fault. ACTION: Contact your technical support group.
CMF0010	Undefined function/signal indicates a software fault. ACTION: Contact your technical support group.
CMF0011	CMF table not defined indicating a software fault. ACTION: Contact your technical support group.
CMF0012	Invalid backward signal (BWD) received. Call cleared down indicating a software fault. ACTION: Contact your technical support group.
CMF0013	Invalid Forward signal (FWD) received. Call cleared down indicating a software fault. ACTION: Contact your technical support group.
CMF0014	Warning: L1 sequence terminated at Level 1 indicates a software fault. ACTION: Contact your technical support group.
CMF0015	Invalid trunk type is attempting MFC signaling indicating a software fault. ACTION: Contact your technical support group.
CMF0023	Warning: trying to send signal not defined in the CMF signal table. ACTION: CMIN ALL will clear all monitor alarms. Contact your technical support group. 

CMON — Core Monitor

CMON messages

Core Monitor is a resident program. CMON does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

The message output format is: CMON x y z, where x = side, y = card and z = port.

CMON0100 x y z

Card with PEC “x” inserted into side y slot z

ACTION: Information only, no action required.

CMON0101 x y z

Card with PEC “x” removed from side y slot z

ACTION: Information only, no action required.

CMON0102 x y Card with no PEC removed from side x slot y

ACTION: Information only, no action required.

CMON0103 x y Card with no PEC inserted into side x slot y

ACTION: Reseat or replace the corresponding card. Contact your technical support group.

CMON0104 x y Card with unknown PEC removed from side x slot y

ACTION: Information only, no action required.

CMON0105 x y Card with unknown PEC inserted into side x slot y.

ACTION: Reseat or replace the corresponding card.

CMON0400 x y z m

The mask value of the CNI port on core side X, slot Y, port Z, mask M does not match the software image. The hardware image is being restored

ACTION: Information only, no action required.

CMON0401 CNI intermittent interrupt occurring.

ACTION: Contact your technical support group.

CMON0402 x y z

Core side X, slot Y, port Z cable 1 is detected. The system is putting it into Normal mode

ACTION: Information only, no action required.

CMON0403 x y z

Core side X, slot Y, port Z cable 1 is lost. The system is putting it into Disabled mode

ACTION: Contact your technical support group.

CMON0404 x y z

Core side X, slot Y, port Z cable 2 is detected. The system is putting it into Normal mode

ACTION: Information only, no action required.

CMON0405 x y z

Core side X, slot Y, port Z cable 2 is lost. The system is putting it into Disabled mode

ACTION: Contact your technical support group.

CMON0406 x y z

Core side X, slot Y, port Z cable 2 is lost. The system is putting it into Disabled mode

ACTION: Contact your technical support group.

CMON0407 x y z

Core side X, slot Y, port Z remote power is lost. The system is putting it into Disabled mode

ACTION: Contact your technical support group.

CMON0408 x y z

Core side X, slot Y, port Z 3PE physical switch is enabled. The system is putting it into Normal mode

ACTION: Information only, no action required.

CMON0409 x y z

Core side X, slot Y, port Z 3PE physical switch is disabled. The system is putting it into Disabled mode

ACTION: Contact your technical support group.

CMON0410 x y z

An event interrupt has been lost on core side x, slot y, port z

ACTION: Contact your technical support group.

CMON0411 x y

Core side X, slot Y CN1 physical switch is enabled. The system is putting it into Normal mode

ACTION: Information only, no action required.

CMON0412 x y

Core side X, slot Y CN1 physical switch is disabled. The system is putting it into Disabled mode.

ACTION: DisabledContact your technical support group. 

CND — Caller's Name Display

How the CND works

Caller's Name Display is a resident program. CND does not have an overlay load (LD) associated with it. For more information refer to "Software maintenance tools" on page 49 in the *You should know this* chapter.

The Caller's Name Display allows storage of user names in an Auxiliary computer such as a Property Management System (PMS). Problems with the link to the PMS are indicated by CND messages.

CND messages

CND0001	CND link input/output block is missing. ACTION: Check the CPND database through the background terminal.
CND0002	CND link status block is missing. ACTION: Check the CPND database through the background terminal.
CND0003	Garbage character receive on the CND link. ACTION: Refer to the <i>X11 Maintenance</i> (553-3001-511) and disable and re-enable the PMS link. If the CND SDI is programmed as a TTY use LD 37. If the CND SDI is programmed as an AML, use LD 48. If the PMS link is used with the hospitality feature through Meridian Mail, logon and check the port.
CND0004	Lost partially assembled message. ACTION: Refer to the <i>X11 Maintenance</i> (553-3001-511) and disable and re-enable the PMS link. If the CND SDI is programmed as a TTY, use LD 37. If the CND SDI is programmed as an AML, use LD 48. If the PMS link is used with the hospitality feature through Meridian Mail, logon and check the port.
CND0005	CND SDI output buffer does not get emptied properly. ACTION: Refer to the <i>X11 Maintenance</i> (553-3001-511) and disable and re-enable the PMS link. If the CND SDI is programmed as a TTY use LD 37. If the CND SDI is programmed as an AML, use LD 48. If the PMS link is used with the hospitality feature through Meridian Mail, logon and check the port.

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- CND0006 Wrong parameter passed to procedure CND_LINK_MSG_CR.
ACTION: Check the PMS link and make sure the database is correct.
- CND0007 Noisy CND Link.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and disable and re-enable the PMS link. If the CND SDI is programmed as a TTY use LD 37. If the CND SDI is programmed as an AML, use LD 48. If the PMS link is used with the hospitality feature through Meridian Mail, logon and check the port.
- CND0008 Slow response on CND link.
ACTION: Contact your technical support group.
- CND0009 CND link is down.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and disable and re-enable the PMS link. If the CND SDI is programmed as a TTY use LD 37. If the CND SDI is programmed as an AML, use LD 48. If the PMS link is used with the hospitality feature through Meridian Mail, logon and check the port.
- CND0010 CND messages are lost.
ACTION: Contact your technical support group.
- CND0011 CND link queue is not empty.
ACTION: Information only, no action required.
- CND0012 Cannot synchronize the CND link.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and disable and re-enable the PMS link. If the CND SDI is programmed as a TTY use LD 37. If the CND SDI is programmed as an AML, use LD 48. If the PMS link is used with the hospitality feature through Meridian Mail, logon and check the port.
- CND0013 CND garbage collection pointers are corrupted.
ACTION: Contact your technical support group.
- CND0014 Attempt to acquire CND name block with length zero.
ACTION: Ensure that this is the command you wanted to use.
- CND0015 Not enough memory for CND name block.
ACTION: Check to make sure all unused names have been deleted. Disable the PMS link and re-enable it.
- CND0016 Out of boundaries for CND name block.
ACTION: Check to make sure you have up to 27 characters for the CPND name. Also verify that the XPLN does not exceed the MXLN.
- CND0017 Pointer corruption while trying to remove name block.
ACTION: Contact your technical support group.
- CND0018 Name block corruption.
ACTION: Re-enter the name by using the SEt CPnd command from the background terminal.

- CND0021 Wrong TN in the Call Register.
ACTION: No action required, but if the error continues contact your technical support group.
- CND0022 Special name table does not exist.
ACTION: Check the CPND database through the background terminal and re-enter the command.
- CND0023 Display's customer does not match unit's customer.
ACTION: Check and re-enter name through the background terminal.
- CND0024 Broken attendant queue.
ACTION: Information only, but if the error continues contact your technical support group.
- CND0025 Unable to initialize CND link because of calls waiting in attendant queue.
ACTION: Wait for the queue to become idle and re-attempt the initialization. 

CNF — LD 38 Conference Circuit Diagnostic

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Before changing circuit cards, be aware of the procedures outlined in *Do this when replacing circuit cards*, found in the *Hardware maintenance tools* chapter in this guide.

How the CNF works

LD 38 is used to detect and isolate circuit faults on the system conferencing equipment. The CNF messages are output in response to commands issued in LD 38.

LD 38 can detect the following problems on the conference circuit:

- ◆ channel faults on the network card which interfaces a conference card to the system
- ◆ channel faults on the conference card
- ◆ conference faults associated with conferee group numbers
- ◆ switching faults controlling the attenuation feature

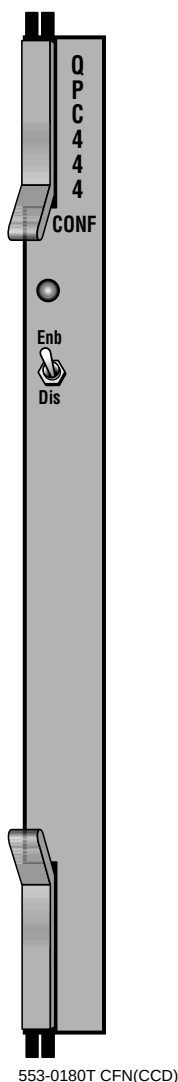
The overlay is used to do the following:

- ◆ enable a specific conference card
- ◆ disable a specific conference card
- ◆ check the status of channels and conferee groups
- ◆ clear alarms and displays

The overlay allows complete manual control in establishing a test conference, thus allowing the user to listen for noise and distortion. The following are included:

- ◆ selection of a specific conference card
- ◆ selection of a specific conferee group
- ◆ stepping through all free channels and groups with special test conference

CONF — Conference



The conference circuit uses two multiplex loops and is located in a network card position in the network shelf. The card contains both conference and network circuitry and uses one network card slot location.

Purpose

The conference circuit card can theoretically connect up to 30 people in a single conference. Practically, this number is limited by the trans-hybrid loss in the line circuits, so that a reasonable number of people in a single conference is somewhere between 6 and 12 parties. The card can originate a mix of multi-party conferences, for example, three in one conference, four in another and so on, provided the total number of conferees does not exceed 30.

Function

The conference card captures a full frame of PCM serial data from the network, that is, eight sample bits from each of the 30 time slots. The eight sample bits of a given time slot are re-configured to be available in a parallel and decoded to a 14-bit linear sample. All the linear samples from the time slots associated with a given conference are added. Each conferee has his linear sample subtracted from the total for the conference. This difference is then compressed into an 8-bit PCM sample, which is returned serially to the conferee's time slot via the network.

System software provides eight levels of attenuation for each conferee to reduce singing and background noise. Software can also select a specific conferee for listen only, as in Music On-Hold and Wake Up.

Features

The face plate includes:

- ◆ a LED, when lit indicating a disabled card
- ◆ an ENB, DIS switch to hardware enable or disable the card

Conference cards are available with a warning tone to inform conferees that a conference is progress. The tone can be enabled or disabled by a switch mounted on the face plate.

Conference cards are slot addressed.

CONF/TDS — Conference Tone and Digit Switch



553-0181T CT(CCD)

The CT card combines the functionality of the existing conference and tone and digit switch. It occupies one network slot and will use two network loops.

Purpose

The conference portion of the CT card remains the same, except that A or μ law is now provided. The T&DS portion of the card provides 256 tones, Music Trunk Interface (MTI) and Multifrequency Sender (MFS) tones.

Function

Conference — The selection of A law or μ law is set in the software according to a country code. The code information is downloaded from the CPU to an on board CT microprocessor unit, which sets the card in the proper companding mode.

T&DS — The 256 tones are generated from 1Mega-bit EPROM.

A Master Cadence Table (MCT) will store up to 256 ringing cadences. The MCT table is created by the user for their particular country and is down loaded from the CPU during CT card enabling or initialization. Default is the North American MCT. The CT microprocessor firmware is used to generate the cadences, freeing the CPU for other tasks.

Music Trunk Interface, for certain international markets, uses external cards providing eight channels of Music Announcements, record tones and cadences. These announcements can come from an analog Music Trunk or a Kapsch Digital announcer.

Multi Frequency Sender tones are provided for the signaling of ANI digits over CAMA trunks to toll switching CAMA, TOPS or TSPS offices.

Features

The face plate includes:

- ◆ a LED for Conf and a LED for TDS when lit indicates a disabled function
- ◆ a Enb, Dis switch to hardware enable or disable the card
- ◆ a J1 connector to attach a Music Trunk Interface

The component side of the card contains a switch to set attenuation levels and the warning tone to on or off, and a strap to set the warning tone level.

CNF common commands		
Command	Description	Release
Clear		
CDSP	Clears the maintenance display on the active CPU.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
Status		
STAT I s c u	List conference card and group used by specified TN. Lists which conference card and conferee group is being used by the specified terminal number.	basic-1
STAT loop	Provide status of conference card loop. Output format is: CNFC N DSBL N BUSY = number of conferee groups disabled and busy CHAN N DSBL N BUSY = number of channels disabled and busy UNEQ = card is not equipped in the system DSBL = card is disabled in software FAULTY HW: NO RESPONSE = loop identified as faulty by the LRIP function. Refer to the FHW chapter.	basic-1
Print		
IDC	Print the IDs of both CMDUs and the active IOP. The printout appears in the following format: pppppppppp rrssss cccccccc pppppppppp = PEC code rr = Release number ssss = Serial number cccccccc = Comments (not always be present)	51C/61C/81-19
ICD CMDUs	Print the ID for the CMDU. n = Core number (0 or 1) If n is not entered, card ID information is printed for both CMDUs.	51C/61C/81-19
IDC IOP	Print out the ID of the active IOP.	51C/61C/81-19

CNF common commands (continued)

Command	Description	Release
Disable device		
DISL loop	Disable conference loop.	basic-1
DISX loop	Disable NT8D17 Conference/TDS card on loop L and L - 1. Disables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are disabled. Loop = 1, 3, 5, 159 Note 1: The DISL and ENLL commands can be used on the odd number loop for the conference functions provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. Note 2: This command can be used in LD 34, LD 38 and LD 46.	basic-1
Enable		
ENLL loop	Enable conference loop. Note 1: Enabling more than 16 conference loops may cause system to lock-up.	basic-1
Enable		
ENLX loop	Enable NT8D17 Conference/Ts card on loop L and L-1. Enables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are enabled. Loop = 1, 3, 5... 159 If one of the loops is already enabled, it is disabled and then both loops are enabled. This command initiates card tests and downloads software. Note 1: The DISL and ENLL commands can be used on the odd number loop for the conference functions, provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. Note 2: This command can be used in LD 34, LD 38 and LD 46. Note 3: The Conf/TDS card is not enabled automatically when it is inserted. Note 4: Enabling more than 16 conference loops may cause the system to lock-up.	basic-1

CNF common commands (continued)		
Command	Description	Release
List		
LCNF loop	List busy and disabled conference	basic-1
Test and manual conference test		
CNFC loop	Test conference loop. Tests conference loop for channel, group and switching faults.	basic-1
CNFC MAN loop g	Set up for manual conference on conference group g, following the steps outlined in the <i>Circuit card installation and testing NTP— Acceptance tests — Conference cards</i> . The conference group range is 1-15. Only one manual conference is allowed at a time. After this command, any telephone dialing SPRE 93 enters the conference. SPRE is the special service prefix for the system. Going on-hook from that telephone takes it out of the conference. The END command removes all telephones in the manual conference. If CNFC MAN command is entered from a maintenance telephone, the telephone automatically becomes part of the manual conference.	basic-1
CNFC STEP	Ready system terminal for testing conference groups. This command puts the system TTY into a special command mode for testing various channels and conferee groups audibly. Two telephones are used: one to monitor and one to act as a signal source. The CNFC MAN command is first used to set up the 2-party conference. By entering Con the TTY, the conference will step on to the next available channel. Entering G will step to the next available conferee group. Entering an asterisk (*) will revert back to the normal command mode. Entering END or aborting LD 38 releases the manual conference.	

CNF common commands (continued)		
Command	Description	Release

CNFC STEP The Manual Conference Test is performed by stepping
continued through conference channels and groups. After each
step, listen for noise. Noise indicates a faulty card.

This test should be run when users complain of noisy conferences.

A time slot is assigned to a telephone in a conference and another is assigned to the conference card. In other words a pair of time slots are used. This pair is referred to as a conference channel. There are 16 channels for every conference group on a conference card. Because channel 0 is applied to idle time slots, only 15 channels are actually used. The first channel assigned is 15 followed by 14 and so on down to channel 1.

A conferee group is all the phones in a single conversation, with the conference card using a number to identify all parties in that conference. The maximum number of conference groups controlled by a conference card is 10, in other words, 10 three party conferences, utilizing 30 time slots, or 15 channels. The groups are assigned numbers from group 15 down to group 6. As four bits are required in the conferee group register to address a maximum of 10 groups, the register has the capability to count from 0 to 15. The test however will check for 15 conferee groups. Group 0 is not tested.

End		
END	Abort all current test activity.	basic-1

CNF messages

- CNF0000 Program identifier.
ACTION: The CFN program is loaded and ready for you to re-enter the commands.
- CNF0001 Invalid command.
ACTION: Ensure that this is the command you wanted to use.
- CNF0002 Invalid argument.
ACTION: Check to make sure your data is correct and re-enter the command.
- CNF0003 Customer nonexistent or out-of-range. Range is 0 to 31 inclusive.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- CNF0004 Loop or conferee group out-of-range. Loop ranges are 0 to 158 and conferee group range is 1 to 15.
ACTION: Check to make sure your data is correct and re-enter the command.
- CNF0005 Unequipped or out-of-range TN. Ranges are: Loop, 0 to 158; Shelf, 0 to 3; Card, 1 to 10; Unit, 1 to 15.
ACTION: Check to make sure your data is correct and re-enter the command.
- CNF0006 Requested loop is not defined in the system or is not a conference group.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- CNF0007 Requested loop has been disabled.
ACTION: Use ENLL 1 to enable the loop.
- CNF0008 Requested conference loop is in use.
ACTION: Wait until the loop is free.
- CNF0009 The CNFC STEP command requires a two-party conference. More or fewer sets are not allowed.
ACTION: Ensure that only two sets are in conference. If not, use END command to cancel the conference. Use the CNFC MAN L C command to set up two manual conferences by dialing SPRE 93 on any two sets, where SPRE is the customer's Special Service Prefix code.
- CNF0020 loop Conference card failed to respond.
ACTION: Check the enable switch on the card. If the card still does not respond, replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared. If the fault persists after the conference card is replaced, replace the Peripheral Signaling card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0021 loop Channel fault found on the Conference card.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.verify that the fault is cleared.

- CNF0022 loop Channel fault found on the Conference card.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0023 loop Conference fault found with one or more conferee groups on conference card. May also be a faulty network card.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared. If the problem persists, replace the faulty network card as per the *Hardware Replacement* (553-3001-520).
- CNF0024 loop Attenuation feature is not working on conference card. May also be a faulty network card.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared. If problem persist replace the faulty network card as per the *Hardware Replacement* (553-3001-520).
- CNF0025 loop Listen-only feature is not working on the Conference card.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0026 Attenuation level 12.2 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0027 Attenuation level 10.4 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0028 Attenuation level 8.2 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0029 Attenuation level 7.2 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0030 Attenuation level 5.4 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0031 Attenuation level 4.0 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0032 Attenuation level 1.2 dB is faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- CNF0033 TSM memory faulty.
ACTION: Replace the conference card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- CNF0100 Cannot use the ENLX (Enable) or DISX (Disable) commands on a non-XCT card.
ACTION: Use ENLL 1 to enable a conference card. Use DISL 1 to enable a conference card.
- CNF0101 The XCT card is already enabled/disabled.
ACTION: Information only, no action required.
- CNF0102 The Conference/TDS card did not receive the message verifying download completion within six seconds, after the ENLX command.
ACTION: Use DISX to disable the card and re-enter the ENLX command.
- CNF0103 The Conference card did not receive the self test result within ten seconds, after the CNFC 1 command.
ACTION: Wait a few minutes and then re-enter the command.
- CNF0104 Received an unexpected message from the Conference/TDS card.
ACTION: Use the DISX command to disable the card and re-enter the ENLX command.
- CNF0107 Superloop numbers must be a multiple of 4.
ACTION: Information only, no action required.
- CNF0108 Shelf parameter is out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.
- CNF0109 Card parameter is out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.
- CNF0110 Unit parameter is out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.



CNI — LD 135 Core to Network Interface

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How the CNI works

LD 135 provides diagnostic and maintenance information for Options 51/51C/61/61C/81 machines. It provides a means of performing the following functions.

- ◆ clearing minor and major alarms
- ◆ clearing and printing maintenance display contents for the primary Core
- ◆ testing the idle Core
- ◆ displaying CP card status and ID
- ◆ enabling and disabling CNI cards
- ◆ displaying CNI card ID and status
- ◆ testing SIMMs, inactive CNIs, and standby Core during daily routines
- ◆ switches Cores when in redundant mode
- ◆ checks primary CNIs, checks for Core redundancy, and attempts to switch Cores during midnight routines

CNI common commands		
Command	Description	Release
Clear		
CDSP	Clear maintenance displays. This command sets the maintenance display for the primary CP to blank.	51C/61C/81-19
CMAJ	Clear major alarm, and reset power fail transfer.	51C/61C/81-19
CMIN ALL	Clear minor alarm indication for all customers.	51C/61C/81-19
CMIN a	Clear minor alarm indication for customer a.	51C/61C/81-19

CNI — Core to Network Interface



553-0182T CNI(CNI)

Purpose

The CNI combines the functions of two Segmented Bus Extenders. Three CNI cards are used to connect the Core to five network groups.

Function

The CBT faceplate is blank; however, a LED on the component side may become visible at certain viewing angles. The LED for Core side 1 is on, and the LED for Core side 0 is off.

Features

The CNI faceplate includes the following features:

- ◆ two LEDs to indicate the status of each port, and a light to indicate the inactive Core
- ◆ all CNI card LEDs light to indicate the inactive Call Processor or Core side
- ◆ Core Bus Terminator

CNI commands		
Command	Description	Release
Status CNI		
STAT CNI c s p	Get the status of all configured CNIs. Also prints the Network Group number of both ports on each CNI. To get the status of a specific CNI port, enter the following information. Entering only STAT CNI gets the status for all CNI ports. - c = Core number (0 or 1) - s = Slot number (8-12) - p = Port number (0 or 1) If the P is not entered, the status of both ports is printed. If the status is DSBL (Disabled), one or more of the OOS reasons may appear. What actually appears are the numbers associated with the OOS text. as follows:. 0 = CP local bus parity threshold exceeded. Contact your technical support group. 1 = CP card HPM timeout threshold exceeded. Action: Contact your technical support group. 8 = Unconfigured CNI card. Action: Refer to the <i>administration input/output guide</i>. Use LD 17 CEQU to program CNI. 9 = Port has been disabled by craftsperson. Action: Information only. Take appropriate action as required. 10 = Device is not accessible. Action: Install a CNI card following the steps in the <i>Hardware replacement</i> guide. 16 = CNI to 3PE cable 1 on specified card and port lost. Action: Check both connector ends of the CNI-3PE cable.	51C/61C/81-19

CNI commands (continued)

Command	Description	Release
STAT CNI c s p (continued)	17 = CNI to 3PE cable 2 on specified card and port lost. Action: Check both connector ends of the CNI-3PE cable. 18 = 3PE power lost. Action: Check the power supply circuit breakers on the network shelf where the 3PE is located and reset if required. If the circuit breaker trips replace the power supply card following the steps in the <i>Hardware replacement</i> guide. If the circuit breaker trips after replacing the power supply card, remove all cards and reset the circuit breaker. If the circuit breaker trips after all cards removed, replace the shelf backplane following the steps in the <i>Hardware replacement</i> guide. If the circuit breaker does not trip after all the cards are removed, replace the network shelf cards one at a time until the card causing the circuit breaker to trip is found, then replace the card(s) following the steps in the <i>Hardware replacement</i> guide. 19 = 3PE has been manually disabled. Action: Information only. Take appropriate action as required. 20 = CNI card has been manually disabled. Action: Information only. Take appropriate action as required. 21 = Card test failed. Action: Replace the CNI card following the steps in the <i>Hardware replacement</i> guide. After replacing the card verify that the fault is cleared. 22 = Port test failed. Action: Replace the CNI card following the steps in the <i>Hardware replacement</i> guide. After replacing the card verify that the fault is cleared.	

CNI commands (continued)		
Command	Description	Release

23 = Extender disabled by Meridian 1 initialization.

Action: Use the ENL CNI command to enable the extender.

24 = Port interrupt line 0 disabled.

Action: Contact your technical support group.

25 = Port interrupt line 1 disabled.

Action: Contact your technical support group.

26 = Port interrupt line 2 disabled.

Action: Contact your technical support group.

27 = Port interrupt line 3 disabled.

Action: Contact your technical support group.

Test CNI port

TEST CNI c s p	Test the CNI port. c = Core number (0 or 1) s = Slot number (8-12) p = Port number (0 or 1) If the P is not entered, both ports are tested. This command can test Standby CNIs as well as active CNIs that are out-of-service. This may take a few minutes because of the time required to reestablish memory shadowing and contents. When the command is successful, OK is printed. If it is not successful, an error message is printed.	51C/61C/81-19

Disable CNI port

DIS CNI c s p	Disable the CNI port. c = Core number (0 or 1) This must be the standby side. Disable the active side if the CNI is not in service. s = Slot number (8-12) p = Port number (0 or 1)	51C/61C/81-19

CNI commands (continued)		
Command	Description	Release
Enable CNI port		
ENL CNI c s p	Enable CNI port. c = Core number (0 or 1) s = Slot number (8-12) p = Port number (0 or 1) If the P is not entered, both ports, and the card itself are enabled. A port cannot be enabled if the card is disabled. Enabling the CNI card will also enable the 3 Port Extender card.	51C/61C/81-19
Print CNI ID		
IDC CNI s	Print the card ID for the CNI on the active side. s = Slot number (8-12) The printout appears in the following format: x y ppppppppaa rrssss cccccc x = Core number (0 or 1) y = Slot number (8-12) pppppppp = PEC code aa = Attribute code rr = Release number ssss = Serial number ccccc = Comments (optional)	51C/61C/81-19

CNI messages

The message output format is: CNI x y z, where x = side, y = card, and z = port.

CNI0000 x y z CNIP x y z: Intermittent interrupt occurring.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

CNI0001 x y z CNIP x y z: CNI-3PE Cable 1 (top) detected.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

CNI0002 x y z CNIP x y z: CNI-3PE Cable 1 (top) lost.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

CNI0003 x y z CNIP x y z: CNI-3PE Cable 2 (bottom) detected.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

CNI0004 x y z CNIP x y z: CNI-3PE Cable 2 (bottom) lost.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

- CNI0005 x y z CNIP x y z: Remote Power (3PE) Detected.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0006 x y z CNIP x y z: Remote Power (3PE) Lost.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0007 x y z CNIP x y z: 3PE switch has been enabled.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use STAT CNI to verify the status of the CNIs.
- CNI0008 x y z CNIP x y z: 3PE switch has been disabled.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0009 x y z CNIP x y z: Event interrupt lost. Mask REG = n. Re-enabling all interrupts.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Information only, no action required.
- CNI0010 x y z CNIP x y z: Faceplate switch enabled.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Information only, no action required
- CNI0011 x y z CNIP x y z: Faceplate switch disabled.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Information only, no action required

CNI0012 x y z CNIP x y z: Putting Port into Disabled mode.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Information only, no action required.

CNI0013 x y z CNIP x y z: Putting port into Normal/Enabled mode.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Information only, no action required.

CNI0020 x y z CNIP x y z: Failure to change port mode.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

CNI0021 x y z CNIP x y z: Port has been placed into Normal mode.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Information only, no action required.

CNI0022 x y z CNIP x y z: Port has been placed into Disable mode.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Information only, no action required

CNI0023 x y z CNIP x y z: EI Y register. This message represents a CNI port test result.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

CNI0024 x y z CNIP x y z: ICC/Default values check. This message represents a CNI port test result.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

- CNI0025 x y z CNIP x y z: Loopback address. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0026 x y z CNIP x y z: Loopback address parity. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0027 x y z CNIP x y z: Loopback address parity invert. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0028 x y z CNIP x y z: Loopback data LSB. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0029 x y z CNIP x y z: Loopback data parity LSB. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

- CNI0030 x y z CNIP x y z: Loopback data MSB. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0031 x y z CNIP x y z: Loopback data parity MSB. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the cables on the core module backplane between the CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0032 x y z CNIP x y z: Event interrupts out of sequence. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0033 x y z CNIP x y z: Event interrupts lost. This message represents a CNI port test result.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0034 x y z CNIP x y z: Event interrupt time-out test.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

- CNI0035 x y z CNIP x y z: Read strobe test. This message represents a CNI port test result**
 **Warning: Attached group will NOT be accessible **
 x = CNI core side (0-1)
 y = CNI card slot (8-12)
 z = CNI port (0-1)
ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0036 x y z CNIP x y z: Write strobe test. This message represents a CNI port test result**
 **Warning: Attached group will NOT be accessible **
 x = CNI core side (0-1)
 y = CNI card slot (8-12)
 z = CNI port (0-1)
ACTION: Check that the cables on the core module backplane between CNI and 3PE for bent pins or improper connections. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0037 x y z CNIP x y z: Event generation circuitry test. This message represents a CNI port test result.
 x = CNI core side (0-1)
 y = CNI card slot (8-12)
 z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0050 CNIP x y z: Failure to access CNI Port hardware.
 x = CNI core side (0-1)
 y = CNI card slot (8-12)
 z = CNI port (0-1)
 Check the CNI enable/disable switch. Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0051 CNIP x y z: Failure to unmask event interrupt.
 x = CNI core side (0-1)
 y = CNI card slot (8-12)
 z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0052 x CNIP x y z: Mask a does not match. Interrupt being unmasked.
 x = CNI core side (0-1)
 y = CNI card slot (8-12)
 z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.

- CNI0053 x CNIP x y z: Mask a does not match, Interrupt being masked.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0054 CNIP x y z: Could not find the source of the interrupt.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0055 l s c CNIP x y z: Testing port l s c u.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Information only, no action required.
- CNI0056 CNIP x y z: Interrupt line x is STUCK, unmasking line.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use DIS CNI c s p and ENL CNI c s p to clear the interrupt. If the interrupt does not clear, use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0060 CNIP ROW: Incorrect release. Option 81 must run X11 Release 18 or later.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service for the correct software release.
- CNI0061 v w x y z
 CNIP x y z: LBA = v, LBD = w, BERZ = x, CR = y, SR = z
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Information only, no action required.

- CNI0062 CNIP x y z: The remote device is not accessible.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Use DIS CNI c s p and ENL CNI c s p. If the remote device is still not accessible, use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0064 cnipMon - Interrupt masked. Turn on “cnipMaskAutoRestore” to recover.
ACTION: Use DIS CNI c s p and ENL CNI c s p to clear the interrupt. If the interrupt does not clear, use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0065 cnipMon - EILOST reported, mask = n.
ACTION: Use DIS CNI c s p and ENL CNI c s p to clear the fault. If the fault does not clear, use STAT CNI and TEST CNI to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0066 cnipMon - Switchover requested; side x is deemed better.
ACTION: Use STAT CNI and TEST CNI on the suspected faulty side to test the CNI cards. Replace any components that fail following the steps in the *Hardware Replacement* (553-3001-520). After replacement, verify that the fault is cleared.
- CNI0070 CNIP x y z: EI x register does not match. sw=n, hw=m. Restoring.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Contact your technical support group.
- CNI0071 EI Unmasking line x failed. Mask Reg = n.
ACTION: Contact your technical support group.
- CNI0072 EI Masking line x failed. Mask Reg = n.
ACTION: Contact your technical support group.
- CNI0073 CNIP x y z: Maintenance Interrupt Threshold exceeded. Subsequent changes in 3PE/cable status will be ignored.
x = CNI core side (0-1)
y = CNI card slot (8-12)
z = CNI port (0-1)
ACTION: Check the 3PE and CNI-3PE cable (if applicable) and then use ENL CNI c s p to re-enable the CNI.
- CNI0074 CNIP x y z: EI3 address repaired. EI3 address was set to: x. EI3 address restored to: y.
ACTION: Contact your technical support group.

CNI0075 CNIP x y z: Cause for EI3 event unknown. Forcing the port into Normal mode.

x = CNI core side (0-1)

y = CNI card slot (8-12)

z = CNI port (0-1)

ACTION: Contact your technical support group.

CNI0200 x cnib card configured but not present in slot x. Database mismatch.

ACTION: Refer to the *X11 Administration* (553-3001-311) to put the CNI card in the right slot if applicable. Use LD 22 PRT to check for the correct CNI and configuration. Use LD 17 to make appropriate changes if required. 

CNV — LD 66 Conversion Program

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How the CNV works

When upgrading the software from a generic release to a higher release, software conversion is the process of transferring the customer data (programmable data) to the higher release.

Methods of software conversion

There are two ways to transfer customer data when upgrading the software:

- ◆ conversion programs that do it automatically, or
- ◆ load the new software and manually re-enter the customer data on a TTY.

The greater the difference between the old and new software and smaller line size, the more cost effective it is to manually re-enter the customer data.

Conversion program procedures

Prior to X11 Rls 2

Prior to X11 release 2, but including X08 and X37, conversion was done by data dump, LD 43, onto the target tape. After a successful data dump, the system was then reloaded. Conversion was automatically done as part of the sysload routine.

X11 Rls 2 to X11 Rls 12

After X11 release 2 and up to X11 release 12, software data structures changed, requiring new conversion procedures. The conversion program and a new conversion overlay, LD 66, were issued on a separate tape or disk. Each release required its own unique conversion program.

X11 Rls 12 to present

From X11 release 12 and onward, conversion is again part of the sysload function, and no longer requires a separate conversion media. The conversion program is contained in the target software, and is called Automatic Inline Conversion.

For information on how to prepare and operate each generic's conversion program, consult the applicable product bulletins and the *Software Conversion NTP*.

Conversion terms

Source — the software release currently running in the Meridian 1

Target — the software release you are converting to

Media — a tape or a disk(s) containing the software

Automatic Inline Conversion process

For a conversion without Auto Inline, the following steps are performed:

1. The EDD is loaded from the source media.
2. The source media is replaced with the target media
3. The Customer data is dumped to the target media
4. Sysload the target media software into memory
5. The Sysload sees that the customer data is not in the proper format for target release. It invokes the conversion program to convert the customer data to the right format.
6. Conversion is finished.

Conversion without Auto Inline process

For a conversion without Auto Inline, the following steps are performed:

1. Insert conversion media
2. Load conversion program LD66, when CDD 000 prompt is given
3. Insert target media
4. Type CDD
5. Customer data from memory is converted on target media
6. Sysload target media software into memory
7. Conversion done

CNV messages

Conversion programs are used to convert previous software generics to the most recent, that is the generic on which this conversion program resides.

For information on how to prepare for and operate each generic's conversion program, consult the applicable product bulletins and the *Software Conversions* NTP.

Some of the CNV may have additional information associated with them as follows: **t c b**

Where:

t = Data block type, if **t** = TNB, then it is followed by **l s c u**

c = Customer number

b = Block number or route number if **t** = RDB

- CNV000 Identification of program (not an error).
ACTION: The CNV program is loaded and ready for you to input commands.
- CNV100 Identification of program (not an error).
ACTION: Information only, no action required.
- CNV601 **t c b TNB l s c u**
 Not enough unprotected memory for data.
t = Data block type, if **t** = TNB, then it is followed by **l s c u**
c = Customer number
b = Block number or route number if **t** = RDB
ACTION: Re-allocate or add more memory.
- CNV602 **t c b TNB l s c u**
 Not enough protected memory for data.
t = Data block type, if **t** = TNB, then it is followed by **l s c u**
c = Customer number
b = Block number or route number if **t** = RDB
ACTION: Re-allocate or add more memory.
- CNV630 Wrong number of parameters.
ACTION: Re-enter the proper command.
- CNV631 Invalid command.
ACTION: Re-enter the proper command.

- CNV632 Invalid argument(s).
ACTION: Re-enter the proper command.
- CNV633 Wrong P_CUST_DATA length.
ACTION: Contact your technical support group.
- CNV634 Wrong P_ROUTE_DATA length.
ACTION: Contact your technical support group.
- CNV635 Warning: mismatched signaling and trunk type in PTRKBLOCK.
ACTION: Contact your technical support group.
- CNV636 Warning: some serious error in TNTRANSLATOR.
ACTION: Contact your technical support group.
- CNV637 Error: the conversion has already been run on this data.
ACTION: Contact your technical support group.
- CNV638 Insufficient protected memory to run conversion.
ACTION: Re-allocate or add more memory.
- CNV639 t c b TNB l s c u
Nil pointer to data block.
t = Data block type, if **t** = TNB, then it is followed by **l s c u**
c = Customer number
b = Block number or route number if **t** = RDB
ACTION: Contact your technical support group.
- CNV640 TNB l s c u
TN block has an invalid unit type.
t = Data block type, if **t** = TNB, then it is followed by **l s c u**
c = Customer number
b = Block number or route number if **t** = RDB
ACTION: Contact your technical support group.
- CNV641 t c b Pointer does not point to correct data block.
t = Data block type, if **t** = TNB, then it is followed by **l s c u**
c = Customer number
b = Block number or route number if **t** = RDB
ACTION: Contact your technical support group.
- CNV642 RMB c b
MR block number is greater than 99. See summary for output data.
ACTION: Contact your technical support group. 

CSC — Customer Service Change

How the CSC works

Customer Service Change is a resident program. CSC does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

The CSC messages indicate problems and progress within the Attendant Administration and Automatic Set Relocation features.

CSC messages

CSC0001	Access code or password entered from console was incorrect. ACTION: Check to make sure your data is correct and re-enter the command.
CSC0002	Cannot login because currently running overlay program refuses to leave. ACTION: Contact your technical support group.
CSC0003 x y	Start of attendant service change of a telephone. TN and Prime DN are given. Where: x = TN (l s c u) of set y = Prime DN of set ACTION: Information only, no action required.
CSC0004	The feature selected by the attendant is shown, together with the old and new contents. ACTION: Information only, no action required.
CSC0005	Change of telephone data has been completed. ACTION: Information only, no action required.
CSC0006	Someone else has logged in and replaced the Attendant Administration user. ACTION: Contact your technical support group.
CSC0007	An error was encountered trying to load an overlay program. ACTION: Try again. If this message appears repeatedly, contact your technical support group.

- CSC0010 x y The first message produced by a relocation at the point the set leaves the system. It gives the TN the set is relocating from, and the identification code entered. Where:
 x = old TN of set
 y = ID code entered
ACTION: Information only, no action required.
- CSC0011 x y The second message produced by a set relocation at the point the set re-enters the system. It gives the old and new TN of the set. Where:
 x = old TN l s c u of set
 y = new TN l s c u of set
ACTION: Information only, no action required.
- CSC0012 x A set cannot be relocated back in. It gives the old TN of the set. Where:
 x = old TN l s c u of set
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 21 PRT type SRDT to confirm the telephone TN. Use LD 10 or 11 to manually relocate the telephone back into the customer database if applicable.
- CSC0013 x y A set reassigned back in has been de-assigned as an Associate Set (AST) for a DN. Output data is:
 x = TN l s c u of set
 y = Prime DN of set
ACTION: Information only, no action required.
- CSC0100 x y Set Installation message indicating that a set or trunk **l s c u** has been installed using AINS, where x is the model number.
ACTION: Information only, no action required.
- CSC0101 x Set Installation message indicating that a set or trunk **l s c u** has been removed from the database using AINS.
ACTION: Information only, no action required.
- CSC0102 DN xxxx NEW
 The DN xxxx appearance for a MARP TN has been changed in Attendant Administration. The new MARP for DN xxxx has defaulted to TN l s c u.
ACTION: Information only, no action required.
- CSC0104 x y z Flexible Call Forward No Answer DN (FDN) updated through User Selectable Call Redirection (USCR) from telephone. Where:
 x = TN l s c u
 y = old FDN
 z = new FDN
ACTION: Information only, no action required.
- CSC0105 x y z Hunt DN updated through User Selectable Call Redirection (USCR) from telephone.
 x = TN l s c u
 y = old Hunt DN
 z = new Hunt DN
ACTION: Information only, no action required.

- CSC0106 x y z External Call Forward No Answer DN (EFD) updated through User Selectable Call Redirection (USCR) from telephone.
x = TN l s c u
y = old EFD
z = new EFD
ACTION: Information only, no action required.
- CSC0107 x y z External Hunt DN (EHT) updated through User Selectable Call Redirection (USCR) from telephone.
x = TN l s c u
y = old EHT
z = new EHT
ACTION: Information only, no action required.
- CSC0108 x y z Ringing Cycle Option (RCO) updated through User Selectable Call Redirection (USCR) from telephone.
x = TN l s c u
y = old Ringing Cycle Option (RCO)
z = new RCO
ACTION: Information only, no action required.
- CSC0109 x y Unacceptable Flexible Call Forward No Answer DN (FDN) dialed during User Selectable Call Redirection (USCR) programing from telephone. Invalid data was not stored.
x = TN l s c u
y = unacceptable FDN
ACTION: Check with the user to make sure that their data is correct and have them re-enter the command.
- CSC0110 x y Unacceptable Hunt DN dialed during User Selectable Call Redirection (USCR) programing from telephone. Invalid data was not stored.
x = TN l s c u
y = unacceptable Hunt DN
ACTION: Check with the user to make sure that their data is correct and have them re-enter the command.
- CSC0111 x y Unacceptable External Call Forward No Answer DN (EFD) dialed during User Selectable Call Redirection (USCR) programing from telephone. Invalid data was not stored.
x = TN l s c u
y = unacceptable EFD
ACTION: Check with the user to make sure that their data is correct and have them re-enter the command.
- CSC0112 x y Unacceptable External Hunt DN (EHT) dialed during User Selectable Call Redirection (USCR) programming from telephone. Invalid data was not stored.
x = TN l s c u
y = unacceptable EHT
ACTION: Check with the user to make sure that their data is correct and have them re-enter the command.

- CSC0113 x y Unacceptable Ringing Cycle Option (RCO) dialled during User Selectable Call Redirection (USCR) programming from telephone. Invalid data was not stored.
x = TN l s c u
y = unacceptable RCO
ACTION: Check with the user to make sure that their data is correct and have them re-enter the command.
- CSC0118 Multiple appearance of a DN that is associated with a DTM key is not permitted.
ACTION: Check to make sure your data is correct and re-enter the data.
- CSC0119 Virtual Office - login process of a VO worker onto a Host TN has ended successfully.
 Where:
x = TN of the Host Terminal (l s c u).
y = Virtual TN Primary DN.
- CSC0120 Virtual Office - logout process of a VO worker from a Host TN has ended successfully.
 Where:
x = TN of the Host Terminal (l s c u).
y = Virtual TN Primary DN.
- CSC0121 Virtual Office data corruption for the Logged-Off TN: Host TN must be on a Physical loop and Virtual TN must be on a Phantom loop.
 Where:
x = TN of the Host or Virtual Terminal (l s c u).
- CSC0122 Virtual Office data corruption for the Logged-In TN: Host TN must be on a Phantom loop and Virtual TN must be on a Physical loop. Where: **x** = TN of the Host or Virtual Terminal (l s c u).
- CSC0123 Virtual Office data corruption for the Logged-In TN: Invalid VO_SOURCE_TN was found in TN.
 Where:
x = TN of the Host or Virtual Terminal (l s c u).
y = VO_SOURCE_TN (Hex format).
- CSC0124 Virtual Office data corruption for the Logged-In TN: The VO_SOURCE_TN must be a BCS unit and The UNIT_SUBTYPES of both TNs must be the same M3903/M3904 type and VO_SOURCE_TN must be a Host or Virtual TN and TN and VO_SOURCE_TN must be a pair of Virtual and Host TNs.
 Where:
x = TN of the Logged-in Terminal (l s c u).
y = TN of VO_SOURCE_TN (l s c u).
- CSC0125 Virtual Office data corruption for the Logged-In VO_SOURCE_TN: Host TN must be on a Phantom loop and Virtual TN must be on a Physical loop.
 Where:
x = TN of the Logged-in Terminal (l s c u).
y = TN of VO_SOURCE_TN (l s c u).

- CSC0126 Virtual Office data corruption for the Logged-In TN: The VO_SOURCE_TN must be in Logged-In state and the VO_SOURCE_TN must contain the original TN.
Where:
x = TN of the Logged-in Terminal (l s c u).
y = Original TN of VO_SOURCE_TN (l s c u).
- CSC0127 Virtual Office swap process failure - Invalid Host TN (VO_SWAP_HOST_TN) was found. Swapping process is aborted.
Where:
x = VO_SWAP_HOST_TN (Hex format).
y = VO_SWAT_VIRT_TN (Hex format).
- CSC0128 Virtual Office swap process failure - Invalid Virtual TN (VO_SWAP_VIRT_TN) was found. Swapping process is aborted.
Where:
x = VO_SWAP_HOST_TN (Hex format).
y = VO_SWAT_VIRT_TN (Hex format).
- CSC0129 Virtual Office swap process failure - Invalid Virtual TN (VO_SWAP_VIRT_TN) or Host TN (VO_SWAP_HOST_TN) were found. Swapping process is aborted.
Where:
x = VO_SWAP_HOST_TN (Hex format).
y = VO_SWAT_VIRT_TN (Hex format).
- CSC0130 Virtual Office swap process warning - DNTRANS2 failure during swapping process. Swapping process continues.cc
Where:
x = TN of the swapped Terminal (l s c u).
y = Key number.
z = DN.
- CSC0131 x y z Virtual Office swap process warning - process aborted due to system initialize. Where x = First swapped TN (l s c u); y = Second swapped TN (l s c u); z = DN key of y.
- CSC1000 x y z Flexible Call Forward No Answer DN (FDN) updated with vacant DN through User Selectable Call Redirection (USCR) from telephone.
x = TN l s c u
y = old FDN
z = new vacant FDN of set
ACTION: Information only, no action required.
- CSC1001 x y z Hunt DN updated with vacant DN through User Selectable Call Redirection (USCR) from telephone.
x = TN l s c u
y = old Hunt DN
z = new vacant Hunt DN
ACTION: Information only, no action required.

CSC1002 x y z External Call Forward No Answer DN (EFD) updated with vacant DN through User Selectable Call Redirection (USCR) from telephone.

x = TN l s c u

y = old EFD

z = new vacant EFD

ACTION: Information only, no action required.

CSC1003 x y z External Hunt DN (EHT) updated with vacant DN through User Selectable Call Redirection (USCR) from telephone.

x = TN l s c u

y = old EHT

z = new vacant EHT

ACTION: Information only, no action required. 

DBMT — Database Media Transfer

DBMT messages

Database Media Transfer is a resident program. DBMT does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

DBMT0001	Unable to determine default floppy device name. ACTION: Contact your technical support group.
DBMT0002	Unable to determine floppy device name. ACTION: Contact your technical support group.
DBMT0003	Unable to determine file names for transfer. ACTION: Contact your technical support group.
DBMT0004	Unable to open floppy drive. ACTION: Be sure that the disk is properly inserted.
DBMT0005	Unable to create temporary Database file. ACTION: Contact your technical support group.
DBMT0006	Unable to create temporary Configuration file. ACTION: Contact your technical support group.
DBMT0007	Unable to transfer Database to hard disk. ACTION: Contact your technical support group.
DBMT0008	Unable to append Database and Configuration files into one file. ACTION: Contact your technical support group.
DBMT0009	Unable to rename Configuration file to Database file for s option. ACTION: Contact your technical support group.
DBMT0010	Unable to restore file to original state. ACTION: Contact your technical support group.
DBMT0011	Unable to rename all files correctly. ACTION: Contact your technical support group.

DBMT0012	Unable to read Private sector from floppy disk. ACTION: Contact your technical support group.
DBMT0013	Too many disks are being used. ACTION: Contact your technical support group.
DBMT0014	Incorrect disk in drive. ACTION: Contact your technical support group.
DBMT0015	Unable to identify record type. ACTION: Contact your technical support group.
DBMT0016	Unable to read sector(s) from disk. ACTION: Ensure disk is properly inserted. Check the power and the SCSI cable on the CMDU. Contact your technical support group.
DBMT0017	Unable to write Database file to hard disk. ACTION: Contact your technical support group.
DBMT0018	Unable to write Configuration file to hard disk. ACTION: Contact your technical support group.
DBMT0019 x y	Incorrect Database record count. Was x , should be y . ACTION: Contact your technical support group.
DBMT0020 x y	Incorrect Configuration record count. Was x , should be y . ACTION: Contact your technical support group.
DBMT0021	Incorrect floppy disk in drive. ACTION: Insert disk A1.
DBMT0022	Read Private Sector(s): Unable to read sector(s) from floppy disk. ACTION: Contact your technical support group.
DBMT0023	Read Private Sector: Invalid floppy disk. ACTION: Contact your technical support group.
DBMT0024	Read Private Sector: End of track 1 not found. ACTION: Contact your technical support group.
DBMT0025	Read Private Sector: End of track 3 not found. ACTION: Contact your technical support group.
DBMT0026	Get Record Type: Unable to identify record type. ACTION: Contact your technical support group.
DBMT0027	Unused message. ACTION: Contact your technical support group.
DBMT0028	Get Disk Buffer: Unable to seek on floppy disk. ACTION: Contact your technical support group.

- DBMT0029 Get Disk Buffer: Unable to read from floppy disk.
ACTION: Check hard disk power, and SCSI cable on CMDU. Contact your technical support group.
- DBMT0030 Append Database: Unable to seek Database on hard disk.
ACTION: Contact your technical support group.
- DBMT0031 Append Database: Unable to seek Configuration, on hard disk.
ACTION: Contact your technical support group.
- DBMT0032 Append Database: Unable to read from hard disk.
ACTION: Check hard disk power, and SCSI cable on CMDU. Contact your technical support group.
- DBMT0033 Append Database: Unable to write to hard disk.
ACTION: Contact your technical support group.
- DBMT0034 Write Database: Unable to write to hard disk.
ACTION: Contact your technical support group.
- DBMT0035 Write Database: Unable to write to hard disk.
ACTION: Contact your technical support group.
- DBMT0036 Write Database: Unknown Database format.
ACTION: Contact your technical support group.
- DBMT0037 Get Directory: Unable to read Private Sector from floppy disk.
ACTION: Contact your technical support group.
- DBMT0038 Get Directory: Unable to read sector(s) from floppy disk.
ACTION: Check that diskette is in the correct drive. Check that the diskette is properly inserted.
- DBMT0039 Close Files: Unable to close floppy device.
ACTION: Contact your technical support group.
- DBMT0040 Close Files: Unable to close Database file.
ACTION: Contact your technical support group.
- DBMT0041 Close Files: Unable to close Configuration file.
ACTION: Contact your technical support group.
- DBMT0042 Rename All Files: Unable to rename secondary Database file to holding file.
ACTION: Contact your technical support group.
- DBMT0043 Rename All Files: Unable to restore files to original state.
ACTION: Contact your technical support group.
- DBMT0044 Rename All Files: Unable to rename secondary Configuration file to holding file.
ACTION: Contact your technical support group.
- DBMT0045 Rename All Files: Unable to rename primary Database file to secondary file.
ACTION: Contact your technical support group.

- DBMT0046 Rename All Files: Unable to rename primary Configuration file to secondary file.
ACTION: Contact your technical support group.
- DBMT0047 Rename All Files: Unable to rename new Database file to primary file.
ACTION: Contact your technical support group.
- DBMT0048 Rename All Files: Unable to rename new Configuration file to primary file.
ACTION: Contact your technical support group.
- DBMT0049 Get File Names: Unable to determine primary Database file name.
ACTION: Contact your technical support group.
- DBMT0050 Get File Names: Unable to determine secondary Database file name.
ACTION: Contact your technical support group.
- DBMT0051 Get File Names: Unable to determine holding Database file name.
ACTION: Contact your technical support group.
- DBMT0052 Get File Names: Unable to determine temporary Database file name.
ACTION: Contact your technical support group.
- DBMT0053 Get File Names: Unable to determine primary Configuration file name.
ACTION: Contact your technical support group.
- DBMT0054 Get File Names: Unable to determine secondary Configuration file name.
ACTION: Contact your technical support group.
- DBMT0055 Get File Names: Unable to determine holding Configuration file name.
ACTION: Contact your technical support group.
- DBMT0056 Get File Names: Unable to determine temporary Configuration file name.
ACTION: Contact your technical support group.
- DBMT0057 Restore Files: Unable to restore temporary Database file.
ACTION: Contact your technical support group.
- DBMT0058 Restore Files: Unable to restore primary Database file.
ACTION: Contact your technical support group.
- DBMT0059 Restore Files: Unable to restore secondary Database file.
ACTION: Contact your technical support group.
- DBMT0060 Restore Files: Unable to restore temporary Configuration file.
ACTION: Contact your technical support group.
- DBMT0061 Restore Files: Unable to restore primary Configuration file.
ACTION: Contact your technical support group.
- DBMT0062 Restore Files: Unable to restore secondary Configuration file.
ACTION: Contact your technical support group.

- DBMT0063 Unable to initialize floppy driver to 2 Mb on side: **x**.
ACTION: Be sure CMDU power is on, and cables are in place. Contact your technical support group.
- DBMT0064 Unable to initialize floppy driver to 4 Mb on side: **x**.
ACTION: Be sure CMDU power is on, and cables are in place. Contact your technical support group.
- DBMT0205 Read Private Sector: End of track 3 not found. 

DLO — Disk Layout

Disk Layout is a resident program. DLO does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

DLO messages

DLO0001	Unable to find symbol. ACTION: Contact your technical-support group.
DLO0002	Unable to read from file, error x . ACTION: Contact your technical-support group.
DLO0003	Unknown error code <codename>. ACTION: Contact your technical-support group.
DLO0004	Unable to get active CMDU. Cannot look up symbol ACTION: Contact your technical-support group. 

DSET — Digital Set Download

How the DSET works

Digital Set Download is a resident program. DSET does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

Digital telephone set downloading takes place during a system reload.

DSET messages

DSET0000 DOWNLOAD 1 2 3 4 5 6 7 8

Digital-telephone set downloading has taken place. This information appears once during the system reload. Eight additional fields are associated with this output

Output format is:

1 = number of SSD messages sent

2 = number of M3000 telephone sets downloaded

3 = number of Digital telephone sets downloaded

4 = number of Digital attendant consoles downloaded

5 = number of M3000 telephone sets that failed the download

6 = number of Digital telephone sets that failed the download

7 = number of Digital attendant consoles that failed the download

8 = current real time clock 

EDD — LD 43 Equipment Data Dump

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How the EDD works

The LD 43 Equipment Data dump (EDD) is used to keep data on the system storage device up-to-date. When data dump is invoked, data in the read/write memory (including any that has been changed or added) is written to the storage device at the location reserved for it. This includes any data that has been changed or added.

The overlay can be invoked daily as part of the daily routine or loaded manually. An incremental data dump occurs during the daily routines if database changes have been made. Problems with the data dump operation are indicated by EDD messages.

The same commands apply to Options 51C/61C/81 and all other machines. Because Options 61C and 81 utilize two CMDUs and disk redundancy, the LD 43 commands apply to both sides of the system. Refer to the specific commands for the differences between Options 51C/61C/81 and other systems.

Following a successful EDD on Options 51C/61C/81, the Hardware Infrastructure message, **HWIxxxx**, is output.

When the data dump fails

In the event of an unsuccessful initial data dump, the programmable data on the tape or disk is suspect. Another data dump should be attempted on the same tape or disk. If the data dump is successful, a transient error is indicated and normal procedures can be resumed. If this second attempt also fails, *do not* attempt another data dump until the fault is isolated and corrected.

If the storage medium is not proved faulty and the storage device appears serviceable, data dumping to an OLD tape or disk may help to pinpoint the problem.

Except during the troubleshooting phase, any storage medium which has failed to data dump successfully must not be left in the storage device. Should a SYSLOAD occur with such a storage medium, the load may terminate abnormally with unpredictable results.

Low memory warning

Unprotected data-store equal in size to the length of the records being written (for example, 512 words) must be available to the data dump overlay.

A low memory warning message **SCH0603** is issued when spare unprotected data store falls below a given threshold. Once this warning message has been issued, it is not possible to perform a data dump, as the Meridian SL-1 requires spare unprotected data-store equivalent to the size of a record on the storage medium (for example, 512K words).

Users should ensure that these amounts of spare unprotected data-store are available before attempting to perform a data dump.

EDD commands		
Command	Description	Release
Copy		
BKO	Copy data from the primary to the backup device. Copy data base from the primary device (hard disk) to the back-up device (floppy disk). Applicable to systems with hard disk storage only. For the Options 51C/61C/81, this command creates backups to floppy disks for the active CMDU.	basic-19
Begin data dump		
EDD	Begin data dump. For the Options 51C/61C/81, this command creates backups to floppy disks for both CMDUs when redundancy is in effect and both CMDUs have floppy disks inserted.	basic-19
Clear data dump		
EDD CLR	Clear data dump inhibit flag. This flag is set because SYSLOAD or the conversion programs detect incomplete or inconsistent equipment data. Exercise caution since the use of this option may result in incorrect data being written to tape.	basic-19
Save		
EDD CN	Save CND names (use prior to data dump). Saves the names associated with DNs for Caller's Name Display. Note: Use EDD CN prior to data dump.	basic-1
EDD HM	Save AWU, RMS and MR data with the data dump. Saves Automatic Wake Up (AWU), Room Status (RMS) and Message Registration (MR) data. Note: This should be performed prior to a sysload or software conversion.	basic-1

EDD commands (continued)		
Command	Description	Release
Inhibit		
EDD IWC	Inhibits write check. Caution: For Emergency Use Only. Inhibits write check. This command is useful when the standard commands for data dump fail and end-of-file cannot be found. It writes an end-of-file on tape and allows other commands to be invoked.	basic-1
EDD NBK	Inhibit database backup. Indicates that a database backup should not be performed after a data dump. Applicable to hard disk storage with floppy disk backup.	basic-1
EDD NS	Inhibit tape far end spool. Tape will not spool to the far end and will not perform write test. Default option is SP. Overlay cannot be aborted until writing has either been completed or has failed. This command applies to systems equipped with tape units.	basic-1
Write		
EDD NX	Write tape data records. Writes tape data records consistent in size with predefined system values. Default option is NX.	basic-1
Data dump without XPEC/XNET audit		
EDD SA	This command is used to complete the data dump and bypass the software audit of Peripheral Controller and superloop data.	basic-20

EDD commands (continued)		
Command	Description	Release
Spool		
EDD SP	Spool tape to far end. Spools tape to the far end in order to even the tension on the tape. Also writes a test record after the end of existing data to check for any write problems. If errors occur during test, data should remain intact. This command applies to systems equipped with tape units.	basic-1
Print		
DAT	Print the creation date of the main, secondary, or backup database.	op81-18
Bit dump		
PBXC6 (ALLOWED)	Bit dumped with PBX data block.	basic-1
Copy		
RES	Copy entire contents of back-up to primary device. Copy entire contents of back-up device (floppy diskettes) to primary device (hard disk). Applicable to systems with hard disk storage. For Options 51C/61C/81, this command copies the contents of the floppy disks on the active CMDU to both hard disks providing redundancy is in effect. If redundancy is not in effect, this command copies the floppy disk contents to the active CMDU.	basic-19
Swap		
SWP	Exchange (swap) main and secondary database files.	51C/61C /81-18

EDD messages

- EDD0000 Ready for commands.
ACTION: The EDD program is loaded and ready for you to input the commands.
- EDD0001 Storage device unequipped.
ACTION: Check to make sure your data is correct.
- EDD0002 Storage device busy.
ACTION: Wait until the tape unit, the floppy disk unit, or the mass storage unit is idle.
- EDD0003 Storage device not ready.
ACTION: Check that the tape cartridge or diskettes are correctly seated.
- EDD0004 Storage medium is write protected.
ACTION: Use a coin to position the arrow on the tape cartridge away from the word SAFE.
- EDD0005 Tape unit has sensed an early warning mark while attempting to write a test record. The tape is probably full.
ACTION: Do not attempt to dump to remaining tapes. Contact your technical support group.
- EDD0006 Storage device read error.
ACTION: Attempt the data dump again.
- EDD0007 **1.** Storage device write error.
ACTION: Check the memory deallocation and attempt the data dump again. Contact your technical support group.
2. Received a TEMU0011 message while backing up the database.
ACTION: Use TEST CMDU n and DATA CMDU n in LD 137 to check for a faulty CMDU. Replace the faulty components following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CIOD — LD 137 Core Input/Output Diagnostics” on page 291 in this guide.
- EDD0008 Storage device disabled.
ACTION: For MSI - Use ENL MSI x in LD 37 to enable the storage device. If the MSI does not enable and the fault does not clear, replace the MSI card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IOD — LD 37 Input/Output Diagnostic” on page 605 in this guide.

For CMDU use DIS CMDU n and DIS IOP to disable both CMDUs and IOPs. Use ENL CMDU n and ENL IOP to re-enable the active CMDU and IOP. Try to data dump again. If you are successful, use the SYNC command to synchronize the CMDUs. If you need help with the commands or system responses refer to the “CIOD — LD 137 Core Input/Output Diagnostics” on page 291 in this guide. If you are not successful, contact your technical support group.

- EDD0009 1. A 90 minute time-out has occurred.
ACTION: An initialization is required to clear this fault condition. After the initialization, insert the patch.
2. Receiving time and date stamps on CORE x, and this message when using the SPCU command. All BUG/ERR/AUD messages buffered in CORE x are output.
ACTION: Check for a bad IOP card in CORE x. Check for any SCIO40, SCSI0043 time-out messages while in CORE x. Contact your technical support group.
- EDD0010 Invalid command or incorrect parameter.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- EDD0011 x y Successive records with identical record numbers track 1 (or 3). Refer to ERR0014.
ACTION: Try again. If this message reappears contact your technical support group.
- EDD0012 x y 1. Records out-of-order track 1 (or 3). See ERR0014.
ACTION: Try again. If this message reappears contact your technical support group.
2. Receiving this message after upgrading to Release 18.
ACTION: Verify the tape identification of the system. Use LD 97 to check for modified ISM parameters. Refer to *Keywords* in the *X11 Administration* (553-3001-311).
- EDD0013 x y Successive records with identical record numbers track 2 (or 4). Refer to ERR0014.
ACTION: Try again. If this message reappears contact your technical support group.
- EDD0014 x y Records out of order track 2 (or 4). Errors EDD0011 to 0014 have two parameters: the record number expected and the record number found. According to the pattern of errors, the storage medium may or may not be all right to load.
ACTION: Try again. If this message reappears contact your technical support group.
- EDD0015 Storage device has no existing data. Cannot dump.
ACTION: Check to make sure you have the proper disk in the storage device.
- EDD0016 Incorrect data. Dump is inhibited to prevent writing bad data to storage medium.
ACTION: Investigate and clear any SYSxxxx messages which may appear concurrently with this message, then attempt to data dump onto a second or new copy of the storage medium. If the EDD0016 is printed again, enter the EDD CLR command. Reload the system from the new copy to check that the data is now valid. If this is done after a reload, the only further cause would be CED0203. On dual-memory systems, the indicated memory card should be retested and re-enabled. The data will be copied from the other memory. If this fails again or is a single memory system, use EDD CLR to dump data to a second copy of the storage medium. Reload and check any SYS or INI errors for data corruption.
- EDD0017 Not enough unprotected data space available for the storage device buffer. The buffer requires the defined threshold number of words of unprotected data; for instance, the size of records to be written (the space is used only while the data dump is running).
ACTION: Use LD 29 to check the memory map. Contact your technical support group.

- EDD0018 Error occurred during an attempt to write a test record. It may indicate storage medium or storage device problems.
ACTION: Make a second attempt with the SP option. Refer to the *IOD* chapter and use the MSI diagnostics in LD 37 for more information. Use EDD SP to spool the tape and even the tension. The data on the tape should remain intact, as long as the SP option is used.
- EDD0019 A faulty Map. The memory allocation map to be dumped is invalid.
ACTION: Use LD 29 to correct the dump map. The CLR option overwrites the error condition, but if used, the data will likely be lost at the next SYSLOAD.
- EDD0020 c EOF tape write fault; record count c (normally 9). X08: Tape unit not idle.
ACTION: Attempt the data dump again using the EDD IWC command.
- EDD0021 Tape unit not idle.
ACTION: Attempt dump again. Use DIS TAPE in LD 37 to disable, and ENL TAPE in LD 37 to re-enable the tape interface and re-enter the command. If you need help with the commands or system responses refer to the *IOD* chapter in this guide.
- EDD0022 Data corrupted in tree block.
ACTION: Contact your technical support group.
- EDD0023 Double density loop has single density card in upper unit.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 10 or LD 11 to correct the database, and re-enter the command.
- EDD0024 Tape ID does not match system. An incorrect tape cartridge is being used.
ACTION: Contact your technical support group.
- EDD0025 a b t The tape unit has sensed the early-warning mark but is unable to write an end-of-file mark. Two possible causes are:
1. Record **a** does not match record **b**, and/or
 2. Record **b** is not a data record. For example, the record that was read was type **t** when a data record was expected.
- ACTION:** In either case, do not dump to the remaining tapes. Contact your technical support group.
- EDD0026 MSI is reading from the floppy backup instead of the hard disk primary device.
ACTION: Use MSI x in LD 37 to check for a faulty MSI. Replace the faulty MSI following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IOD — LD 37 Input/Output Diagnostic” on page 605 in this guide.
- EDD0027 End-of-data (EOD) sensed on the last disk in the set.
ACTION: Information only, no action required.
- EDD0028 Floppy disk insertion timeout.
ACTION: You did not insert the next disk required by the system in time. Start the procedure again and watch the maintenance DTE for the prompt to insert the next disk.
- EDD0029 Floppy disk is write protected.
ACTION: Remove write protect by positioning the disk slider to cover the square hole.

- EDD0030 Floppy disk backup or restore function timeout.
ACTION: X08: Faulty map. The memory allocation map to be dumped is invalid. Use LD 29 to correct the dump map. The CLR option overwrites the error condition but the data will likely be lost at the next SYSLOAD.
- EDD0031 Not all the floppy disks needed to complete the function are in the drives.
ACTION: Check to make sure you have all the floppy disks that are needed.
- EDD0032 “Restore function done” was sensed before all floppy disks were restored.
ACTION: Try again. If this message reappears contact your technical support group.
- EDD0033 Command not allowed for systems not equipped with a hard disk primary device.
ACTION: Ensure that this is the command you wanted to use.
- EDD0034 DIP switch 4 on the MSI (QPC584) card is set to the off position, and in the CFN data block, a hard disk has been redefined, causing this message when a data dump is performed. The floppies are being dumped to, and not the hard disk. Possible faulty MSI/EMSI/MDU if the switch settings are correct and a BKO receives the same response.
ACTION: Set 4 to on and enter BKO. If this message reappears, use MSI x to test for faults. Replace the faulty components following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “IOD — LD 37 Input/Output Diagnostic” on page 605 in this guide.
- EDD0035 Configured loops exceed system loop limit.
ACTION: Check for the correct machine type and refer to the *X11 Administration* (553-3001-311) for loop limitations.
- EDD0036 Hard disk not ready.
ACTION: Use DIS MSI in LD 37 to disable and ENL MSI in LD 37 to re-enable the tape interface and re-enter the command. If the problem persists, replace either the disk interface or the hard drive. If you need help with the commands or system responses refer to the “IOD — LD 37 Input/Output Diagnostic” on page 605 in this guide.
- EDD0037 Data error on the disk media.
ACTION: Replace the hard drive or the MDU card following the steps in the *Hardware Replacement* (553-3001-520). Verify that a data dump to the floppies can be performed. To do a data dump to the floppies, turn off switch 4 on the MSI card.
- EDD0038 The EDD HM command cannot be used because a Background Terminal is not equipped.
ACTION: Ensure that this is the command you wanted to use.
- EDD0039 An audit indicates Peripheral Controller and the superloop data do not agree. The datadump is aborted. During a data dump, Peripheral Controller and superloop data is audited to ensure that data matches and is otherwise correct. The data dump is aborted when a data discrepancy is found.
ACTION: To bypass the software audit and complete the data dump, enter the EDD SA command. To correct the data discrepancy, redefine the Peripheral Controller or superloop data using LD 97.

- EDD0040 c It does not allocate storage either for ovflw_ptr_block or ovflw_Index_block.
ACTION: Remove all the existing authcodes for customer c, and create new authcodes.
- EDD0041 Corrupted Group Hunt (GPHT) data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 57 FFC to correct the Group Hunt data and LD 18 to correct the Group Hunt list(s). Perform an EDD to correct the primary storage medium.
- EDD0047 Insufficient UDATA for EDD GP.
ACTION: Initialize the system and retry the EDD GP command.
- EDD0048 No patches found on tape (for use with EDD GP option).
ACTION: Information only, no action required.
- EDD0049 Cannot do a GP option with a GP option.
ACTION: Information only, no action required.
- EDD0050 Attempt to dump card with wrong density.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 17 to correct the loop density and re-enter the command.
- EDD0060 Not able to allocate enough unprotected data-store (UDS) for authcode conversion. Auth data block and sorted table are not converted. The required number of words in UDS is displayed.
ACTION: Check the memory and add more if necessary.
- EDD0074 Conversion: number of leading digits to insert for digit manipulation table is greater than 20. The table is lost.
ACTION: Perform a system reload, or a parallel reload. Contact your technical support group for assistance.
- EDD0075 The digit manipulation table being converted is lost. Either 256 tables already exist or unprotected data store cannot be allocated.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 86 PRT DGT to check the table. If there are tables missing, it is due to data corruption. You need to perform a system reload, or a parallel reload. Contact your technical support group for assistance.
- EDD0076 The Classcode of the authcode being converted does not match any in the auth table. The authcode is discarded.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 88 PRT AUB to check the table. If there are tables missing, it is due to data corruption. You will need to perform a system reload, or a parallel reload. Contact your technical support group for assistance.
- EDD0080 GP option requires Supplementary Package (131).
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service and order package 131.
- EDD0081 DP option requires Supplementary Package (131).
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service and order package 131.

EDD0082	Numbers expected after EDD DP. ACTION: Enter: EDD DP xx xx, where xx is the patch number. EDD DP only dumps data.
EDD0083	Patch number does not exist; is out-of-range; or is not tagged for saving. Occurs during an EDD DP operation. ACTION: Contact your technical support group.
EDD0100	Corruption in FFC tree. ACTION: Contact your technical support group.
EDD0101	This message is unique to Option 11. Your dynamic memory request has failed; there is not enough Unprotected data space available to buffer the Patch data. The Patch buffer requires 383 words; the Patches have not been saved. ACTION: Increase your Unprotected memory size through Service Change and perform data dump.
EDD0102	There was a database conversion between the Source database and the Target Release issue. No backward data dump is allowed. ACTION: Information only. Contact your technical support group if you need assistance.
EDD0103	Corruption has occurred in the FFC RPA tree. ACTION: Contact your technical support group.
EDD0104	Corruption has occurred in the DN-PSA tree. ACTION: Contact your technical support group.
EDD0105	Corruption has occurred in the System Parameter Blk. ACTION: Contact your technical support group.
EDD0106	The data of a set being moved by Automatic Set Relocation is not dumped because its originating TN is already occupied. ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use LD 21 SRDT to locate the set data not dumped. Use LD 10 or 11 to correct TN location.
EDD0107	Flash ROM interface not idle. Option 11 ACTION: Perform a manual initialization and re-enter the command.
EDD0108	Backup of data exceeded the time limit. ACTION: Re-enter the command.
EDD0109	Backup of data failed. ACTION: Re-enter the command. If this message appears, contact your technical support group.
EDD0110	Invalid flash ROM selection. Option 11 ACTION: Check for the correct hardware.
EDD0111	Time limit exceeded for erasure of flash ROM. Option 11 ACTION: Re-enter the command.
EDD0112	Security check failed. Invalid cartridge. ACTION: Check the tape identification of the system. Check that the ISM parameters were modified in LD 97.

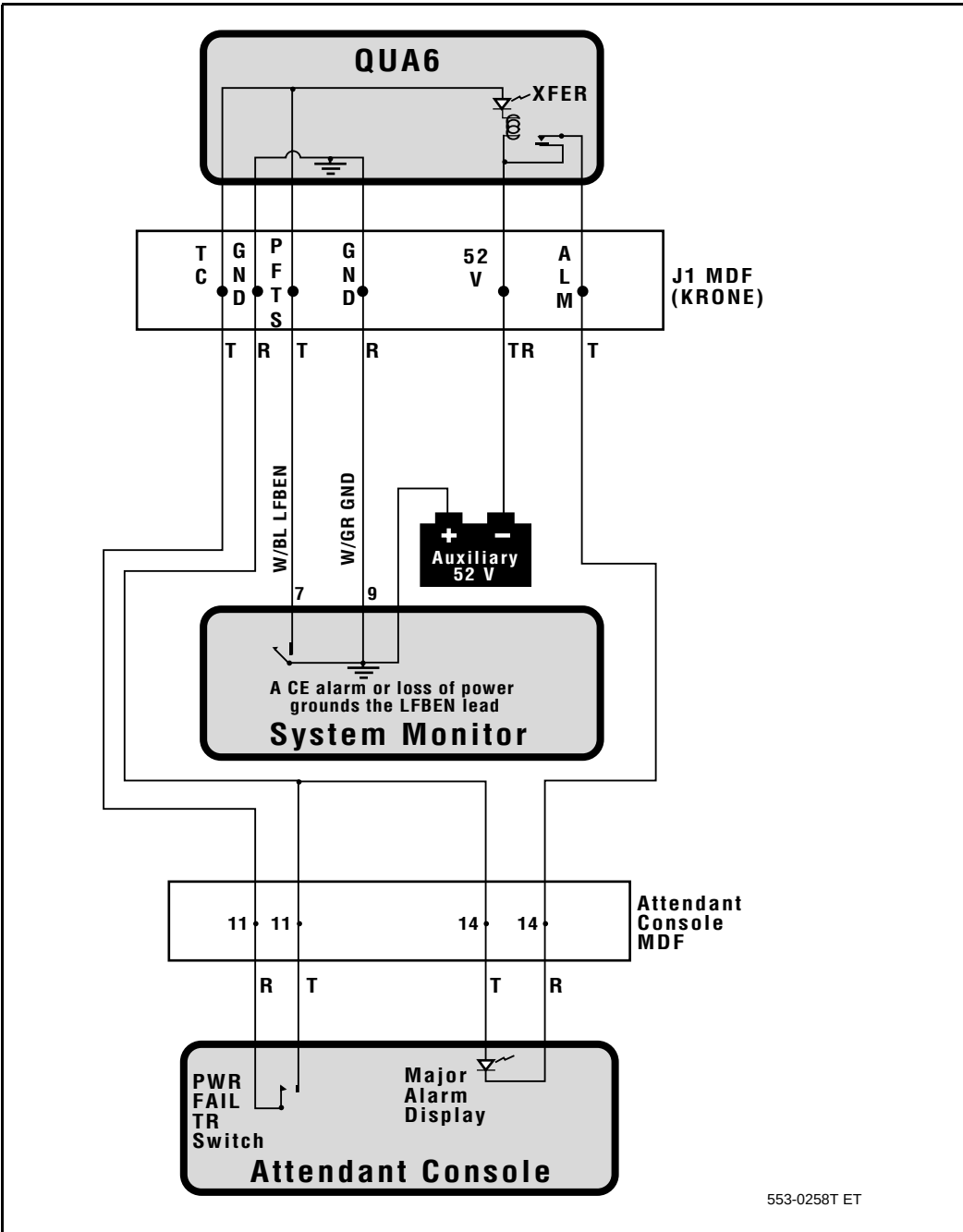
- EDD0113 Checksum of flash ROM failed. Option 11
ACTION: Contact your technical support group.
- EDD0114 Cannot find DSL data.
ACTION: Contact your technical support group.
- EDD0115 Cannot find USID map.
ACTION: Contact your technical support group.
- EDD0116 Cannot find protected Multipurpose ISDN Signaling Processor (MISP) loop block.
ACTION: Contact your technical support group.
- EDD0117 TN of Agent key on ACD supervisor does not link to an ACD agent.
ACTION: Correct the database and re-attempt the command.
- EDD0118 This message is unique to Option 11. The EDD DR1 command cannot be executed if a service change has been performed.
ACTION: Remove all the models and the ACD queues from the system, and re-enter the command. Contact your technical support group.
- EDD0119 Corruption is detected in the data structure for TTY x. Data for TTY x is not dumped.
ACTION: Contact your technical support group.
- EDD0120 Data dump is inhibited, since an IDC tree and its related SDID tree are found to be inconsistent. Load Overlay 49 to correct the problem. If need to perform the data dump regardless, use EDD CLR option.
Warning: The EDD CLR command will cause the inconsistent IDC and SDID tree to be dumped to the storage medium.
- EDD0121 Cannot create alarm management db directory.
- EDD0122 Cannot create/open alarm management db file.
- EDD0123 Cannot close alarm management db file.
- EDD0124 Cannot make a backup of the existing alarm management data base.
- EDD0125 Error occurred writing alarm management database.
- EDD0126 Not all patches are saved on the CPU backup flash drive.
- EDD0127 Insufficient protected data space to buffer an MWNS dump table. The MWNS data dump has not been completed.
ACTION: Contact your technical support group.
- EDD0128 Did not get data dump completion confirmation from OAM Task.
ACTION: Do a data dump one more time. If the problem still persists, contact your technical support group.
- EDD0129 Cannot send messages to the Mobility task (OAMSRV) for data dump.
ACTION: Do a data dump one more time. If the problems still persists, contact your technical support group.
- EDD0151 Invalid input format for DWL xx, SWP xx, RES xx, or RIB xx.
- EDD0152 Cabinet number out of range. 

Emergency Transfer (PFTU)

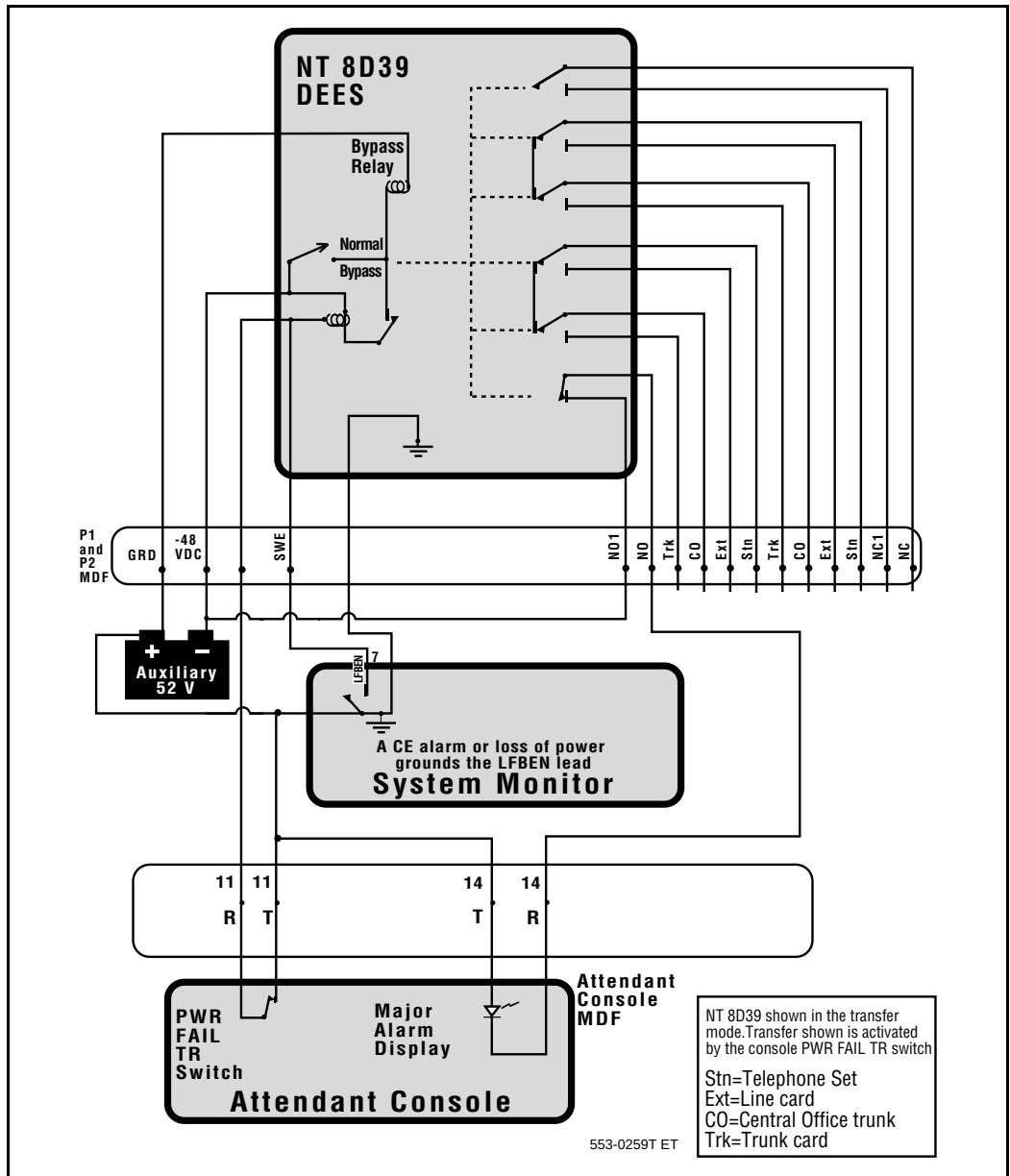
The following diagrams will assist you in finding faults with emergency transfer units.

The diagrams show the connections to the control circuits for the QUA6 and NT8D39 units. The trunk and line connections for these units are found in the Installation NTP.

Option 21 to 81C using a QUA6 unit



Option 21 to 81C using an NT8D39 unit



EMR — Emergency Key (ACD)

How the EMR works

In the event of an emergency situation, an ACD agent can press the Emergency (EMR) key to establish a No Hold Conference with a supervisor, and begin recording the call. When the key is pressed an EMR message appears on the TTY noting pertinent information.

EMR messages

EMR0100 This message is output to the TTY when an ACD Emergency key is pressed. The message appears in one or more of the following formats:

EMR100 RC L S C U RR MMM

EMR100 AG XXXX YYYY

EMR100 OR L S C U RR MM

Where:

RC = Recording trunk for the emergency recorder

L = Loop for the recording trunk

S = Shelf for the recording trunk

C = Card for the recording trunk

U = Unit for the recording trunk

RR = Recording trunk Route number

MMM= Recording trunk Member number

AG = Agent that pressed the EMR key

XXXX= ACD DN assigned to that agent

YYYY= Agent Position ID (POS ID)

OR = The Originator

Prior to X11 Release 14, ACD DN and Position ID digits are shown in reverse order. The character “A” indicates a “0,” and the character “0” indicates the end of the number. For example, output “01A4” identifies the ACD DN 401, while the Position ID 5412 would be output as 2145. X11 Release 14 and later output the ACD DN and Position ID as they really exist. ACD DN 301 appears as 301 on the printout. 

ERR — Error Monitor

How the ERR works

Error Monitor is a resident program. ERR does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49, in the *You should know this* chapter.

When the Error Monitor detects database programming errors or incorrectly formatted information, the system outputs ERR messages. Programming errors cause most ERR messages, however, certain hardware faults can also cause ERR messages.

ERR message makeup

The ERR messages fall into two categories:

- ◆ messages reporting the effect of the programmed database on call processing
- ◆ messages reporting the condition of Peripheral Equipment and Network equipment located in the network and Peripheral Equipment shelves

Using the ERR messages to clear faults

Depending on the fault, the actions in this chapter refer to different overlay loads located outside of this chapter. To solve database programming errors, the action refers you to overlay loads in the *X11 Administration* (553-3001-311). To solve hardware faults, the action refers you to diagnostic overlays found in this guide.

ERR messages

- ERR0001 No MWI NSI table corresponds to the NSI string received.
ACTION: Check the MWI NSI table in OVL 15.
- ERR0002 The NSI string received does not match the corresponding MWI NWI table.
ACTION: Compare the MWI NSI table in OVL 15 to the manufacturer's requirements.
- ERR0003 A Syntax error in the MWI NSI string received.
ACTION: Compare the MWI NSI table in OVL 15 to the manufacturer's requirements.
- ERR0010 loop Input message from unequipped **loop**.
 Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.
1. Check if the network card for the **loop** is inserted into the network shelf backplane.
ACTION: Unseat the network or superloop card from the backplane in the network shelf.
 2. The data for the unequipped **loop** is incorrect.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use CFN in LD 22 or PRT in LD 97, to check the loop data. Use LD 17 or LD 97 (CFN) to correct the loop data.
 3. If the **loop** identifier in the message is not present, the peripheral signaling (PS) card is suspect.
ACTION: Replace the PS card following the steps in the *Hardware Replacement* (553-3001-520).
- ERR0020 l s c Input message received from an unequipped peripheral equipment card **l s c**. This card has no TNs programmed. The card is disabled to prevent further input.
 Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.
1. If all the messages are from the same card or from the same PE shelf, suspect one of the following:
 - a) The PE card **l s c**, if the card is present.
ACTION: If the PE card is seated in the PE shelf backplane, unseat it.
 - b) The peripheral buffer on loop **l** shelf **s**.
ACTION: Replace the peripheral buffer following the steps in the *Hardware Replacement* (553-3001-520).
 - c) The network loop **s**.
ACTION: Replace the network card following the steps in the *Hardware Replacement* (553-3001-520).
 - d) The cables connecting the network and peripheral shelves.
ACTION: Replace the cables following the steps in the *Hardware Replacement* (553-3001-520).

- e) Other PE cards on loop I shelf s.

ACTION: Replace the cards following the steps in the *Hardware Replacement* (553-3001-520).

- f) The connectors.

ACTION: Check the PE shelf backplane connectors between the PE shelf and the crossconnect wiring.

- g) The PE shelf backplane.

ACTION: Replace the PE shelf backplane following the steps in the *Hardware Replacement* (553-3001-520).

2. If all the messages are from various PE shelves connecting to loop I, suspect:

- a) The network loop I.

ACTION: Replace the network card following the steps in the *Hardware Replacement* (553-3001-520).

- b) The network loop I associated cables.

ACTION: Check the cable connectors, and if they are unseated, seat them. If the fault does not clear, replace the cables following the steps in the *Hardware Replacement* (553-3001-520).

- c) Any peripheral buffer card on loop I.

ACTION: Replace each peripheral buffer following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, Refer to if this message reappears. If it does reappear replace another peripheral buffer card.

3. For SL-1 XN: Messages occur only when a specific System Clock Controller (SCC) is providing clock and loops in all groups are affected. Suspect:

- a) SCC providing clock when messages occur.

ACTION: Replace the clock controller following the steps in the *Hardware Replacement* (553-3001-520).

- b) Any QPC412 Intergroup Switch (IGS).

ACTION: Replace the IGS cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, Refer to if this message reappears. If it does reappear replace another IGS card.

4. Messages occur only when a specific SCC is providing clock and loops on both shelves of one group are affected. Suspect:

- a) QPC412 IGS associated with the affected group when messages occur.

ACTION: Replace the IGS cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, Refer to if this message reappears. If it does reappear replace another IGS card.

- b) Cable connecting the SCC and IGS cards through the Junctor.

ACTION: Replace the cables one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each cable, Refer to if this message reappears. If it does reappear replace another cable.

5. The messages are from loops on the same network shelf. Suspect:

a) Peripheral signaling card on the affected shelf.

ACTION: Replace the PS card following the steps in the *Hardware Replacement* (553-3001-520).

b) QPC412 IGS on affected shelf.

ACTION: Replace the IGS cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, Refer to if this message reappears. If it does reappear replace another IGS card.

c) Any network, conference or TDS card on this shelf.

ACTION: Replace the listed cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, Refer to if this message reappears. If it does reappear replace another card.

ERR0027 Too large, invalid > 3 auxpm out-of-range.

ACTION: Contact your technical support group.

ERR0030 x x tn rtclock

NE-500 output buffer overflow. **x x** represents reference numbers for the message. These numbers normally do not concern the technician.

Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.

1. The NE-500 buffer may not be large enough or is not being emptied.

ACTION: Refer to the *X11 Administration* (553-3001-311). Print out the CFN record using LD 22 CFN to check the 500 output buffer size. Run TFS004 using LD 2, to tell you if the buffer is overflowing or if the line card is faulty. Use LD 17 to resize the buffer. Contact your technical support group for more information.

2. If the error messages are from the same TN,

a) The telephone could be faulty.

ACTION: Replace the telephone. If this message reappears, re-install the original telephone.

b) The 500/2500 line card may be defective.

ACTION: Replace the card following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears, reinsert the original card.

3. The message continues to appear.

ACTION: Contact your technical support group.

ERR0031 x x Output buffer overflow (as ERR0030). An RPE message is lost. **x x** represents reference numbers for the message. These numbers do not concern the user.

ACTION: Take the same action as for ERR0030.

ERR0032 No response is received for an MCID request.

ACTION: Check if the local CO supports the treatment of such requests.

- ERR0033 A mCIDRequest return error component (See Appendix C), has been returned with the indication 'notSubscribed'.
- ACTION:** Check if you have subscribed to the service with the operator. If not, disallow MCID as a Remote Capability on the corresponding D-Channel.'
- ERR0034 An mCIDRequest return error component (see Appendix C) has been returned with the indication 'notAvailable'. This means that the network was not able to register any call information.
- ACTION:** Contact the network operator.
- ERR0040 x x tb rtclock
- SL-1 telephone output buffer overflow. x x represents reference numbers for the message. These numbers normally do not concern the technician.
- Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.
1. SL-1 telephone buffer may not be large enough or is not being emptied.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Print out the CFN record using LD 22 CFN to check the SL-1 output buffer size. Run TFS004 using LD 2. This will tell you if the buffer is overflowing or if the line card is faulty. Use LD 17 to resize the buffer. Contact your technical support group for more information.
2. If the error messages are from the same TN,
 - a) The telephone may be faulty.

ACTION: Replace the telephone. If this message reappears, re-install the original telephone.

 - b) The SL-1 or digital line card may be faulty.

ACTION: Replace the card following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears, reinsert the original card.
 3. The message continues to appear.
- ACTION:** Contact your technical support group.
- ERR0045 tn Invalid DN stored against buzz key.
- Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.
1. If the set is equipped with a buzz key, check that the DN stored against it is valid.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the buzz key TN. Use LD 11 to correct the data.
2. Otherwise, print all information for that Meridian 1 proprietary telephone.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the buzz key TN.
- ERR0050 x x tn Meridian 1 proprietary telephone DN has too many appearances. x x represents reference numbers for the message. These numbers normally do not concern the user.

1. For each DN on the specified Meridian 1 proprietary telephone, check that the DN has at most 16 appearances.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 or LD 22 DNB to check for DN appearances. Use LD 11 to correct the data.

2. The fault cannot be fixed.

ACTION: Contact your technical support group.

ERR0060 tn Invalid Digitone Receiver TN.

ACTION: Check that the Digitone Receiver with the given TN is defined in the data. Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check for invalid Digitone Receiver programming. Use LD 13 to correct the data.

ERR0070 tn Input from software-idled Digitone Receiver. Where:

x = rtclock

y = start time when ttr idled

z = allowed wait time before printing msg

x, y, z in half millisecond increments.

ACTION: Use the STAT command in LD 34 to list all disabled Digitone Receivers. Replace the Digitone receiver card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025, chapter in this guide.

ERR0071 Charge_son never a main_cr.

ACTION: Contact your technical support group.

ERR0076 Music trunk has a bad Call Register in active Call Register (CR).

ACTION: Contact your technical support group.

ERR0077 Music CR has a bad conference TN.

ACTION: Contact your technical support group.

ERR0078 Music CR has a bad auxpm.

ACTION: Contact your technical support group.

ERR0079 Music on hold has improper Call Register (CR).

ACTION: Contact your technical support group.

ERR0080 tn key Key input from software-unequipped add-on module.

Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.

1. Check Meridian 1 proprietary telephone data.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the Meridian 1 proprietary telephone data. Use LD 11 to correct the data.

2. Ensure that the add-on module is defined and that the last key number is less than the last key.

ACTION: Check that the last key on the printout is less than last key of the add-on module. Use LD 11 to correct the data.

ERR0081 The music source has an improper Call Register (CR).

ACTION: Contact your technical support group.

ERR0090 tn Answer supervision was received before all the digits were outpulsed by the far-end.

ACTION: Contact your technical support group for help in checking with the local public exchange office personnel for a bad trunk.

ERR0091 tn A call through the network trunk was camped on for 40 minutes. The call is disconnected.

ACTION: No action required. Someone may have forgotten that they activated Camp-On. You may want to let the telephone users know how to tell if they have a call Camped-On.

ERR0092 c r s A radio paging system has failed. All trunks on that route have been made maintenance busy. Output: **c** = customer, **r** = route, **s** = system.

ACTION: Follow the radio page vendor maintenance recommendations.

ERR0100 tn An invalid starting arrangement is specified for the trunk.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TIE to check the trunk data. Contact your technical support group for advice. Use LD 14 to modify the start arrangement as required.

ERR0110 tn Invalid protected trunk line data.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the trunk data. Contact your technical support group for advice. Use LD 14 to correct the data.

ERR0115 tn The route block data indicated by the trunk data, cannot be located.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the trunk data, and LD 21 to check customer number and route number. Contact your technical support group for advice.

ERR0120 tn The trunk has not been released by the far-end.

ACTION: Contact your technical support group and have the trunk at the central office checked for release failure.

ERR0130 tn Invalid DN hunting data.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 HNT to check that the hunt DN defined for the TN is correct. Use LD 10 or 11 to correct the data.

ERR0140 tn Invalid off-hook message.

ACTION: Contact your engineering or traffic group for more information. Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the size of the input buffer and correct it if necessary. Use LD 2 to check the traffic statistics. If necessary, replace the card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- ERR0150 r/c Automatically Identified Outward Dialing (AIOD) route **r** or customer number **c** is nonexistent.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 LTM to check the route and customer number. Use LD 16 to correct ACNO or ARNO in the trunk route data blocks. Use LD 15 to correct the customer number.
- ERR0160 An invalid AIOD station identification. The station ID must be 4 digits.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 to check the APRF and AATT in the customer data block and ATTK in the route data blocks of the incoming Tie trunks.
- ERR0170 An undefined AIOD output message. An AIOD station or trunk identification is missing.
ACTION: Use LD 36 and set AIOD MSG to display the data. Refer to the *X11 Administration* (553-3001-311). Check the ADID in LD 14 trunk data blocks and AATT in LD 15 customer data block.
- ERR0180 x x rtclock
A trunk output buffer overflow. The trunk output buffer may not be large enough. **x x** represents reference numbers for the message. These numbers normally do not concern the user.
ACTION: Contact your technical support group for more information. Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the size of the 500 output buffer and, correct it if necessary. Use LD 2 to check the traffic statistics. If necessary, replace the card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- ERR0182 The route type has been changed to ISA.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR0183 dnis tnThe DINS calls cannot terminate because the IDC Translation is invalid, or the terminating station is not an ACD-DN.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check that DNIS and IDC are set to YES. This error message outputs when a route has both IDC and DNIS set to YES and a call is made to a vacant number. Contact your technical support group.
- ERR0184 A Global CREF number is needed for any service message.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR0185 An invalid maintenance state in the service message.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR0186 Change the status; an octet 3 error.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR0187 Mini-CDR, used with the SL-1 M and MS, is not supported with DNXP or CDRE.
ACTION: Information only, no action required.

- ERR0190 An overload TN stack overflow.
ACTION: Contact your technical support group.
- ERR0200 c tn Invalid customer **c** in unit block.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the customer number and LD 14 to correct data for the specified TN.
- ERR0201 No customer ptr set.
ACTION: Contact your technical support group.
- ERR0203 Ulptr not set.
ACTION: Contact your technical support group.
- ERR0205 c tn Invalid customer **c** in unit block.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the customer number and LD 14 to correct the data for the specified TN.
- ERR0206 Let the group data audit get rid of all pointers.
ACTION: Information only, no action required.
- ERR0210 r/c The route **r** or customer **c** is invalid.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the customer number and LD 14 to correct the data for the specified TN.
- ERR0215 r/c The Recorded Announcement (RAN) route **r** or customer **c** is nonexistent.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the route and CDB to check the customer number. Correct the RAN route or customer number in LD 16 route data block or LD 15 customer data block.
- ERR0220 r c There is no response (control pulse) return from all the trunks on route **r** for customer **c**.
ACTION: Check the RAN equipment is operating according to the vendors instructions. Use RAN in LD 36 to check the trunk and the RAN machine. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721, chapter in this guide.
- ERR0221 r c Procedure NWK/DIGPR. The intercept treatment is assigned as RAN. RAN route **r** for customer **c** does not exist.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the route and CDB to check the customer number. Correct the RAN route or customer number in LD 16 route data block or LD 15 customer data block.
- ERR0225 p c The Call Detail Recording (CDR) port **p** for customer **c** is not a CDR device.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the data and LD 17 to correct the data so that the port is not a CDR device, or connect the correct CDR hardware.
- ERR0226 tn A bit was set for trunk idle. Missed operation of Call Transfer.
ACTION: Contact your technical support group.
- ERR0230 Protected ARS pointers are incorrect. Print out and correct the ARS data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.

- ERR0231 The location access code for a VNET route has not been found.
ACTION: Contact your technical support group.
- ERR0232 No ARS ADB data was found for network calls.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0235 An invalid ARS route number. This occurs if an ARS schedule block contains a valid route that has no members. Print out and correct the ARS data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0240 Inserted digits for a route do not begin with the access code for that route. Print out and correct the ARS data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0245 tn scl A nonexistent or invalid speed call list number SCL.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 SCL to check the Speed Call list number. Correct the speed call list number for the TN using LD 18, or provide the list number by service change using LD 10 or 11.
- ERR0250 c r x AIOD route number is not an AIOD route **x**. Route data block for outgoing central office route contains invalid AIOD route number.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the AIOD route. Correct the central office route data block using LD 16.
- ERR0260 Incomplete calling number information. Check ANI_LDN, ANI_TRK_NO and ANI_ATTN_NO to form a complete 7-digit number.
ACTION: Contact your technical support group for help in checking with the local public exchange office personnel for an ANI problem.
- ERR0265 g DND key used to determine status of nonexistent group **g**.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 26 to print out and correct the data.
- ERR0266 mg sg Secondary DND group **sg** was encountered during the processing of a main group **mg** that did not exist.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 26 to print out and correct the data.
- ERR0267 mg sg g A secondary group **sg** contains another group number **g**.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 26 to print out and correct the data.

- ERR0269 c tn Procedure FIND_ARSQPTR failed. **tn** has suddenly disappeared during the processing of a call involving it. The **tn** may have been removed from service while someone was making or receiving a call on it.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), and check to Refer to if someone was using LD 10 or 11 or 14 and removed this TN from the customer data base with the OUT command.
- ERR0270 Overflow of OVD_TRK_LIST. The trunk identified by the accompanying OVD003 message may not be automatically re-enabled.
- ACTION:** To correct the overload condition indicated by the OVD003 message, refer to the “OVD — LD 77 Locating Overloads” on page 801, chapter in this guide.
- ERR0275 x ARS schedule block **x** not in data but is invoked by certain codes. Print out and correct ARS data.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0280 tn1 tn2 Ring Again activated by **tn1** was unable to access trunk **tn2** due to trunk access restrictions.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 “TRK — LD 36, 41 Trunk Diagnostic” on page 1093 to check that all trunks in the route have the same class-of-service. Correct the class of service using LD 14.
- ERR0285 tn Voice call to invalid DN from set.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check that the voice call key VCC is not programmed to call a Mixed, Multiple Appearance or Invalid DN. Correct Voice Call using LD 14.
- ERR0290 Invalid incoming DP precedence digit.
- ACTION:** Contact your technical support group and have the trunk at the central office checked for release failure.
- ERR0291 Invalid incoming MF precedence digit.
- ACTION:** Contact your technical support group and have the trunk at the central office checked for release failure.
- ERR0300 tn Customer has no Dial Intercom Group (DIG) defined or DIG package does not exist.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 DIG to check for a Dial Intercom Group. If the problem cannot be resolved, notify your technical support group.
- ERR0301 tn DIG group does not exist for this **tn**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the group number on the DIG key for this TN. Use LD 10 or 11 to correct the data.
- ERR0302 tn DIG key group number problem.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the group number on the DIG key for this TN. Use LD 10 or 11 to correct the data.
- ERR0303 tn Originating DIG group is not the same as the terminating group for this key and DN.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the group number on the DIG key for this TN. Use LD 10 or 11 to correct the data.

- ERR0304 tn Telephone does not belong to the same customer as the DIG.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the group number on the DIG key for this TN. Use LD 10 or 11 to correct the data.
- ERR0305 Invalid tstl linkage.
ACTION: Contact your technical support group.
- ERR0306 Customer translation failed.
ACTION: Contact your technical support group.
- ERR0307 TNS actv.cr does not point to Call Register (CR).
ACTION: Perform an AUDIT in LD 44. If this message reappears, perform a parallel reload. If you need help contact your technical support group.
- ERR0319 Bad LLC blocking value found.
ACTION: Contact your technical support group.
- ERR0367 Son Call Register is an orphan, idle it.
ACTION: Perform an AUDIT in LD 44. If this message reappears, perform a parallel reload. If you need help contact your technical support group.
- ERR0400 Customer data block (CDB) missing.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 CDB to check the CDB and LD 15 to program the CDB.
- ERR0401 NFCR pointers table missing.
ACTION: Contact your technical support group.
- ERR0402 CRCS table missing.
ACTION: Contact your technical support group.
- ERR0403 Tree pointers table missing.
ACTION: Contact your technical support group.
- ERR0404 No default tree exists.
ACTION: Check the IDC data base and re-enter the command.
- ERR0405 Tree was service-changed.
ACTION: Information only, no action required.
- ERR0406 NCOS not defined in procedure CODE_RESTRICTION.
ACTION: Check the BARS/NARS database.
- ERR0418 MFC TN of active MFC S/R not.
ACTION: Contact your technical support group.
- ERR0500 dn tn Message Waiting lamps for the set listed have been found faulty by the system.
 Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, contact your technical support group.
1. One unit is faulty, suspect the lamp of the telephone indicated by the TN.
ACTION: Use LD 61 to test the lamps. If the lamps are faulty, replace the telephone.

2. User may have inadvertently unplugged telephone.

ACTION: Plug in the telephone.

3. All units on one card are faulty, suspect the line card.

ACTION: Replace the line card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

4. All units on one more shelves are faulty. Suspect the power supply.

ACTION: Refer to the PWR chapter.

ERR0547 c g dn Invalid **dn** or disallowed Tenant DN for group **g** call for customer.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 or 26 to check the data for group and LD 10 or 11 or 26 to correct through service change.

ERR0548 c g Group **g** for customer **c** does not exist or is invalid.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 or 26 to check the data for the group and LD 10 or 11 or 26 to correct through service change.

ERR0600 Invalid supervisor TN in Automatic Call Distribution (ACD). Check ACD data for the TN.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ACD overlays to correct the data.

ERR0605 Agent-ID table is full.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ACD overlays to correct the data.

ERR0606 High-speed link is not defined.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the link and LD 17 to define the link.

ERR0607 High-speed link Serial Data Interface (SDI) is disabled.

ACTION: Refer to the *X11 Maintenance* (553-3001-511). Use LD 48 to enable the SDI card.

ERR0608 High-speed link status is 'down'.

ACTION: Refer to the *X11 Maintenance* (553-3001-511). Use LD 48 to enable the link.

ERR0609 Low-speed link is not defined.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the link and LD 17 to define the link.

ERR0623 Customer pointer not valid or is missing. Between the time of origination and the time the error was generated, the pointer to the customer data block was corrupted. (SET CUST PTRS fails).

ACTION: Perform a parallel reload. If you need help contact your technical support group.

ERR0624 ESN data block or NTCL data block pointer invalid or missing. A NARS/BARS/CDP DN has been dialed but the ESN or NTCL block has not been set up.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.

- ERR0625 Pointer to NARS/BARS/CDP translation data is not valid, or missing. The pointer to the NARS/BARS/CDP translation data does not exist for the access code dialed (enter network data through service change).
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0626 NARS/BARS is not available due to feature packaging but a NARS/BARS access code is in the system and was dialed.
ACTION: Information only, no action required.
- ERR0627 Translation data is corrupted; invalid translation type. NARS/BARS/CDP translation data specifies a call type not recognized by call processing software (corrupted protected data).
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0628 Route List data cannot be accessed. Route list specified by NARS/BARS/CDP is not in the system (add route list data through service change.)
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0629 Trunk route data cannot be accessed. Trunk route is specified by NARS/BARS/CDP data but the route data block is not available.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0630 Location route data is invalid. When attempting to perform conversion from an On-Net to an Off-Net number, it was determined that the location route data block has invalid data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0631 Route list entry data is at fault. Occurs when route list data has been changed between the time a route list entry has been selected and when the route has been seized (pointer to route list entry cannot be found).
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0638 Invalid NXX code.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0639 Free Calling Area Screening (FCAS) data cannot be accessed.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR0700 tn MFC signaling error threshold exceeded.
ACTION: Refer to the *X11 Maintenance* (553-3001-511). Use LD 54 to test MFC channels.

ERR1001	An invalid primitive was received from the DCHI card. Check the DCHI card vintage to make sure it matches the X11 software release. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR2139	DN assignment is not allowed for this key. ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use LD 20 to check the DN, and LD 10 or 11 to correct the data.
ERR3000 x	APL message about I/O devices. ACTION: Refer to the <i>Related System Messages</i> section in the “IOD — LD 37 Input/Output Diagnostic” on page 605, chapter of this guide.
ERR3001 x	APL link x is down due to transmission problems. The problem can be TTY hardware problem, transmission line problem or AUX processor problem. ACTION: Refer to the <i>Related System Messages</i> section in the “IOD — LD 37 Input/Output Diagnostic” on page 605, chapter of this guide.
ERR3002 x	The number of NAK messages within last 30 minutes exceeded the system-defined limit of 10. APL link x may have transmission problem. This APL link has an occasional hit on the line. ACTION: Contact your technical support group. Check the transmission facility for foreign noise introduced to this link.
ERR3003	Remove_Apl_OQ. Message CR is not in QU_APL_OP queue. ACTION: Perform a parallel sysload, and contact your technical support.
ERR3004 x	The number of times the link has no acknowledge signal sent from the other side exceeds the system limit of 10. APL link x may have a transmission problem. This APL link has occasional hit on the line. ACTION: Contact your technical support group. Check the transmission facility for foreign noise introduced to this link.
ERR3007	Special Common Carrier (SCC) data table is required and is not found. ACTION: Contact your technical support group.
ERR3010 dn	The dn sent from the AUX, in Message 7 is invalid for Message Waiting Indication. The AUX DN may be invalid. ACTION: Contact your technical support.
ERR3011 ltn	An invalid ltn was found. The LTN table may be wrong. ACTION: Check the LTN database.
ERR3012	Bad APL range (0-15). ACTION: Check the APL link in LD 17 and LD 48.
ERR3013	APL shared by another user. ACTION: Information only, no action required.
ERR3014	APL not defined in customer data block ACTION: Check and program the APL data in LD 15.

- ERR3015 Warning: some UST user may have some problem.
ACTION: Contact your technical support group.
- ERR3016 Bad telmsg timer range (2-15).
ACTION: Contact your technical support group.
- ERR3017 No to mwc not allowed, IMS defined.
ACTION: Information only, no action required.
- ERR3018 Change CMS from yes to no, or vice versa.
ACTION: Information only, no action required.
- ERR3030 Member in DND group does not exist.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 26 to check and correct the DND data.
- ERR3032 Transfer blocked due to unavailable matching timeslots.
ACTION: Information only, no action required.
- ERR3033 c p A Q-record is discarded because the target CTY port **p** for customer **c** is under maintenance testing.
ACTION: If you are not testing, contact your technical support group.
- ERR3035 Test line type/index out-of-range.
ACTION: Contact your technical support group.
- ERR3036 r s j ts Continuity failure has occurred on assigning timeslots for speech paths. First attempt failed; tries to get new path. Parameters are:
r = receive loop **s** = send loop **j** = junctor used to transmit to the RRR loop ID
ts = timeslot used on transmit loop to send PCM data to the receive loop
ERR3036 and ERR3037 messages refer to one-way connections so that if both one-way connections fail, either message may print out twice.
Note: ERR3036 also occurs if a loop on the QPC414 Network card is not configured. This is not an error condition. To prevent ERR3036 occurring in this case, define the loop in LD 17.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 22 CFN to check the unused loop on the network card, and LD 17 to program it if applicable.
- ERR3037 r s j ts Same as EDD3036 but failed on second attempt; path is assigned anyway.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 22 CFN to check the unused loop on the network card, and LD 17 to program it if applicable.
- ERR3038 dn Invalid or non-existing intra-flow **dn**.
ACTION: Contact your technical support group.
- ERR3039 Process IDs do not match in AUX_KEYS. This could be due to the AUX equipment not having a Directory Number assigned at the time of an incoming call to that equipment.
ACTION: Contact your technical support group.
- ERR3040 Process IDs do not match in operator revert.
ACTION: Contact your technical support group.

- ERR3041 The output buffer to the DTI hardware has overflowed.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR3042 No IETI.
ACTION: Contact your technical support group.
- ERR3043 LOC NO SDI.
ACTION: Contact your technical support group.
- ERR3044 Bad ITGE data.
ACTION: Contact your technical support group.
- ERR3045 Incorrect key function defined for data TN.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check the key function and LD 11 to program it.
- ERR3046 Data TN is not defined.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check the Data TN and LD 11 to program it.
- ERR3047 c loop tn
Failure for 500/2500 telephone set Six-Party Conference c.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check the conference programming, and LD 10 CLS to check for XFA and C6A.
- ERR3050 MWD not allowed if MWK key is equipped.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check the MWA and LD 11 CLS to program the MWA if applicable.
- ERR3056 tn tn was force disconnected due to a LD 10, 11 or 14 service change.
ACTION: Check to Refer to if someone was using LD 10 or 11 or 14 on this TN. Tactfully inform the person programming that STAT l s c u in LD 32 or LD 10 or LD 11 can tell them if the unit is in use.
- ERR3067 The output buffer to the tone detector has overflowed.
ACTION: Contact your technical support group.
- ERR3068 x Call Park ID x returned which is now invalid, usually the result of a service change or set relocation. The invalid ID is unavailable for use as a Park ID.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 11 to correct the ID.
- ERR3069 Call is to HOT set/key but not to package.
ACTION: Information only, no action required.
- ERR3070 Set/key is EHOT but data is defined.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check EHOT and LD 10 or 11 to program it.
- ERR3071 Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.

1. The list number for Hot key termination is invalid.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 HTL to check the list and LD 18 to correct it.

2. The entry number for Hot key termination is invalid.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check the key termination and LD 11 to correct it.

ERR3072 Failure to establish SLP conference.

ACTION: Contact your technical support group.

ERR3073 Failure to add tone to SLP conference.

ACTION: Contact your technical support group.

ERR4010 tn key f

Predefined secondary DN key with function **f** on a data service ACD agent set is not MNC, MCR, SNC, or SCR.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ACD overlays to correct the data.

ERR4011 tn ici Wrong **ici** key removed.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 ATT to check ICI key and LD 15 to correct the data.

ERR4012 in cr tn msg key

Message Reference ID (MRID) mismatch between the MRID contained in the input CSL message and the MRID stored in the Call Register. This message indicates the CSL message is delayed. When this message repeats, the most likely problem is CPU overload. Where:
in = MRID contained in the incoming CSL message (in hex).
cr = MRID stored in the Call Register associated with the TN of the incoming CSL message (in hex).

tn = The TN of the incoming CSL message, in packed format.
msg = The message type of the incoming CSL message.

key = The function of the key message, in packed format.

key = The function of the key message. This appears when the message type is KEY

message.

ACTION: Contact your technical support group.

ERR4013 n t There have been **n** mismatches in Message Reference ID (MRID) between the active CR and AML message CR within **t** * 2 seconds.

ACTION: The CPU may be very busy. Contact your technical support group for help in checking the total number of Call Registers, provision of Meridian Mail ports, Meridian Mail use, and system I/O.

ERR4016 CSL indirect connect failed.

ACTION: Contact your technical support group.

ERR4017 CSL indirect disconnect failed.

ACTION: Contact your technical support group.

- ERR4018 dn c The ACD-DN for customer **c** is not defined for data services.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ACD overlays to correct the data.
- ERR4019 dn
 1. Invalid **dn** was sent from VAS when requesting MWI update. Digits output following the code show the DN affected.
 2. Receiving this message and cannot light the message waiting lamp.
ACTION: Refer to the *Meridian Mail guide* in the *X11 Administration* (553-3001-311) section to check that the customer number is correct.
- ERR4020 dn c xxx
 Data Service **dn** leaf block does not contain a valid ACD DN. **c** = customer; **xxx** = block contents.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ACD overlays to correct the data.
- ERR4021 Meridian Mail MP alarm.
ACTION: Contact your technical support group.
- ERR4022 mt mst vas c dn acc
 An incoming CSL DATA add data service DN message has been received, but not enough protected memory exists to allocate a DSDN_LIST for the customer.
mt = message type
mst = message subtype
vas = VAS ID
c = customer number
dn = data service DN
acc = access code.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247, chapter in this guide.
- ERR4023 An incoming CSL DATA add or validate data service DN message has been received, but the data services customer option is not set. No data services DNs will be accepted. Refer to ERR4022 for output data.
ACTION: Contact your technical support group.
- ERR4024 CSL Co-administration error.
ACTION: Contact your technical support group.
- ERR4025 An incoming CSL DATA add or delete data service DN message has been received, but the DN could not be added or removed because not enough unprotected memory exists to allocate a WORKAREA. Refer to ERR4022 for output data.
ACTION: Check and reallocate memory or add more memory.

- ERR4026 An incoming CSL DATA delete data service DN message has been received, but the DN does not exist for this customer. Refer to ERR4022 for output data.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247, chapter in this guide.
- ERR4027 An incoming CSL DATA add data service DN message has been received, but the DN could not be added because the maximum had been reached. Refer to ERR4022 for output data.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247, chapter in this guide.
- ERR4028 An incoming CSL DATA delete data service DN message has been received, but the DN was not removed because it was not a data DN. Refer to ERR4022 for output data.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247, chapter in this guide.
- ERR4029 An incoming CSL DATA add or delete data service DN message has been received, but the DN was rejected because the access code was invalid (the DN does not exist). Refer to ERR4022 for output data.
- ACTION:** Check the database and then re-enter the commands.
- ERR4030 An incoming CSL DATA add or delete data service DN message has been received, but the DN was rejected because the access code was invalid (the DN was not an ACD DN). Refer to ERR4022 for output data.
- ACTION:** Information only, no action required.
- ERR4031 An incoming CSL DATA add or delete data service DN message has been received, but the DN was rejected because the access code was invalid (the ACD DN is not defined as a primary data service access code). Refer to ERR4022 for output data.
- ACTION:** Check the ACD DN in OVL 23.
- ERR4032 An incoming CSL DATA add or delete data service DN message has been received, but the DN was rejected because the access code was invalid (the DN is defined for a different VAS Server). Refer to ERR4022 for output data.
- ACTION:** Check the database for VAS in LD 17.
- ERR4033 An incoming CSL DATA add or delete data service DN message has been received, but the DN was rejected because the access code was invalid (the DN conflicts with an existing longer or shorter DN). Refer to ERR4022 for output data.
- ACTION:** Contact your technical support group.

- ERR4034 An incoming CSL DATA add or delete data service DN message has been received, but the DN was rejected because the access code was invalid (the DN already exists). Refer to ERR4022 for output data.
ACTION: Contact your technical support group.
- ERR4035 Wrong IE for Notify Message.
ACTION: Contact your technical support group.
- ERR4036 Wrong extension bit for notification indicator IE.
ACTION: Contact your technical support group.
- ERR4037 Wrong extension bit for original called number IE.
ACTION: Contact your technical support group.
- ERR4038 Wrong IE length for original called number IE.
ACTION: Contact your technical support group.
- ERR4040 NTP states no default tree exists.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 49 NFCR to check for valid data. Use LD 15 to check if NFCR is allowed. If NFCR is to be denied, NFCR should be NO.
- ERR4048 c r idc Conflict in data base for DRC key on SL-1 set. Check the specified customer, route, for IDC setting.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the DRC key, LD 15 and LD 11 to correct the data.
- ERR4049 Mandatory Notification description invalid.
ACTION: Information only, no action required.
- ERR4050 data Intercept treatment DN not found. Define intercept treatment DN in the FGD data block (LD 19). The data output is:
TRK tn MFR tn ID j ddd ADR j ddd
Where,
TRK tn = TN of the FGDT trunk (l s c u, loop ch)
MFR tn = TN of the MF receiver (l s c u, or loop ch)
ID j ddd = ID field, **j** = number of digits, **ddd** = digits
ADR j ddd = Address field, **j** = number of digits, **ddd** = digits
Note: If the address was not received or was empty, it is not printed.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 19 to check and correct the intercept treatment DN.
- ERR4051 data Invalid NPA in ID field. If the error repeats with the same MFR, test the MFR card; otherwise suspect a fault on far-end outpulsing mechanism. Refer to ERR4050 for a description of output data.
ACTION: If the MFR card is faulty replace it following the *Hardware Replacement* (553-3001-520). If the MFR card is not faulty, contact your technical support group for assistance from the far-end.

- ERR4052 data Incorrect address; cannot determine the category. If the error repeats with the same MFR, test the MFR card; otherwise suspect a fault on far-end outputting mechanism. Refer to ERR4050 for a description of output data.
- ACTION:** If the MFR card is faulty replace it following the *Hardware Replacement* (553-3001-520). If the MFR card is not faulty, contact your technical support group for assistance from the far-end.
- ERR4053 c h a More than 20 Attendant console Graphic Modules being updated in one time slice.
c = customer number
h = hundreds group involved
a = attendant not updated
- ACTION:** Information only, no action required.
- ERR4054 Access to the trunk was disconnected due to Timed Forced Disconnect (TFD) time-out.
- ACTION:** Information only, no action required.
- ERR4055 data This message may indicate that a caller dialed an invalid authorization code. It can also refer to MF inter-digital or inter-field time-out. Refer to ERR4050 for a description of output data.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD xx to check the ID and ADR fields to Refer to if the digits are for a phone number or an authorization code. If it is an incomplete phone number, increase the DGTO or IFTO parameters in the FGD block in LD 19.
- ERR4056 data FGD or M911 trunk received TTR input before end of start-dial wink. Output: trktn mfrtn trunkpm input_message
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD xx to test the FGDT trunk and MFR card.
- ERR4057 CFNA cannot terminate on the Forward DN (FDN) because;
1. The FDN is an ACD-DN which is not a Message Center,
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the FDN and use LD 10 or LD 11 to correct.
2. The set on which the FDN is defined does not have Message Waiting Allowed (MWA) Class of Service (COS).
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the FDN and use LD 10 or LD 11 to correct it.
- ERR4058 Undefined or invalid Attendant Alternative Answering (AAA) DN type was found at AAA time-out. Valid types are Set DN and ACD-DN.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 ATT to check the AADN and LD 12 to correct it.
- ERR4059 dn Tenant to Tenant Access denied between the caller and the specified Attendant Alternative Answering (AAA) **dn** at AAA time-out.
- ACTION:** Information only, no action required.

ERR4060 SUPL loop HW c

Parameter downloading failed. Unable to send messages through Network card message interface. Where: **c** = NT8D01 Controller card

ACTION: Try using ENXP in LD 32 to download the appropriate enable command to the card. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 chapter in this guide.

ERR4061 CPG_DATA_PTR or CPG_BLK_PTR pointer is nil (DUMP module).

ACTION: Perform a parallel reload. Contact your technical support group for assistance.

ERR4062 Digitone Receiver (NT8D16) failed self test.

ACTION: Use DTR l s c in LD 34 to perform Digitone receiver diagnostics. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025, chapter in this guide.

ERR4064 x y z Feature is not allowed for this interface.

x = DCH Interface ID

y = D-channel number

z = Mnemonic for the feature

ACTION: Information only, no action required.

ERR4067 c x No unprotected CPG data block for CPG x of customer c.

ACTION: Perform a parallel reload. Contact your technical support group for assistance.

ERR4068 c No unprotected CPG data block for CPG 0 of customer c.

ACTION: Perform a parallel reload. Contact your technical support group for assistance.

ERR4069 c No protected CPG data block for CPG 0 of customer c.

ACTION: Perform a parallel reload. Contact your technical support group for assistance.

ERR4070 c x Customer c data block exists, but there is no CPG_PTR_BLK for CPG number x.

ACTION: Perform a parallel reload. Contact your technical support group for assistance.

ERR4071 tn The type of trunk (COT, DID, Tie, etc.) specified during the audit did not match the trunk type stored within IPE trunk card. The trunk type stored within the card has been set to the trunk type specified in the audit message. (The audit process obtains trunk type from the TN block contained within the database.)

Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.

1. If this message persists, do a parameter download.

ACTION: Use DISC l s c and ENLC l s c in LD 32 to disable and enable the unit causing a download.

2. If the problem persists, suspect a faulty card.

ACTION: Replace the IPE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- ERR4072 tn Impedance setting conflict found on an IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the impedance setting and LD 14 to correct the data.
- ERR4073 tn Dialing speed setting conflict found on an IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the dialing speed setting and LD 14 to correct the data.
- ERR4074 tn Carrier pad setting conflict found on an IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the Carrier pad setting and LD 14 to correct the data.
- ERR4075 tn A-Law or Mu-Law companding setting conflict found on an IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the A-Law or Mu-Law companding setting and LD 14 to correct the data.
- ERR4076 tn 10pps1 conflict found on IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK Class of Service to check the 10pps1 setting and LD 14 to correct the data.
- ERR4077 tn 10pps2 conflict found on the IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK Class of Service to check the 10pps2 setting and LD 14 to correct the data.
- ERR4078 tn 20pps conflict found on the IPE trunk during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TRK to check the 20pps setting and LD 14 to correct the data.
- ERR4079 tn The hardware ID for type of unit (COT, DID, etc.) and signaling (LOP,GRD, EAM, etc.) is not supported by the XUT, XEM, or any other IPE trunk card. The software configuration no longer matches the hardware configuration for the unit. Unit is disabled.
ACTION: Check that the correct card for the desired trunks is in the configured slot. Check the configuration of the unit. Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the impedance setting and LD 14 to correct the data.
- ERR4080 D-channel was not found for sending a facility Message. Output appears as follows (with X11 Release 16 and later software):
NTFERR a b c
DIGPR a b c
INVDN p a b c
Where:
a = originating digits
b = destination digits
c = customer number
p = TCAP package type
X11 Release 15 messages appear as follows: FAIL ORIG: xxx DEST: xxx CUST: xx
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501) *NTP*. Set up messaging in LD 96.

- ERR4081 A Facility Reject message was received. Destination digits cannot be translated. Output with message: **PKG: xxx NOXLAN ORIG: xxx DEST: xxx CUST: xx**
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlay LD 86 to verify that the NCDP prompt is set to the same length in all systems within the network.
- ERR4082 TCAP Package type is not recognized by Network Message Center (NMC) feature. Output with message: **PKG: xxx ORIG: xxx DEST: xxx CUST: xx**
ACTION: Check the networking data database.
- ERR4082 ICP does not support more than 4 digit DNs. Procedure ICP_ESTABLISH and ICP_FIND_DN
ACTION: Information only, no action required.
- ERR4083 TCAP Component is not recognized by Network Message Center (NMC) feature. Output with message: **PKG: xxx COMP: xxx ORIG: xxx DEST: xxx CUST: xx**
ACTION: Check the networking data database.
- ERR4084 TCAP Operation is not recognized by Network Message Center (NMC) feature. Output with message: **PKG: xxx COMP: xxx OPER: xxx ORIG: xxx DEST: xxx CUST: xx**
ACTION: Check the networking data database.
- ERR4085 TCAP parameter is not recognized by Network Message Center (NMC) feature. Output with message:
PKG: xxx COMP: xxx OPER: xxx PARM: xxx ORIG: xxx DEST: xxx CUST: xx
ACTION: Check the networking data database.
- ERR4100 Tenant TDATAPTR or route ACCESS_ARRAY block does not exist.
ACTION: Contact your technical support group.
- ERR4101 PBX output buffer overflow for Digital set.
ACTION: Refer to the *X11 Administration* (553-3001-311). Print out the CFN record using LD 22 CFN to check the 500 output buffer size. Run TFS004 using LD 2. This will tell you if the buffer is overflowing or if the line card is faulty. Use LD 17 to resize the buffer. Contact your technical support group for more information.
- ERR4102 Set requested to disable the unit. LAMPAUDIT disables it.
ACTION: Contact your technical support group.
- ERR4103 Meridian 3000 Touch Telephone watchdog overflow.
ACTION: In LD 32 use DISU l s c u to disable and ENLU l s c u to enable the telephone. If the message reappears, replace the Meridian 3000 Touch Telephone or the line card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 chapter in this guide.
- ERR4104 TSET data TN not equipped.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 DNB to check if the data TN is equipped and LD 11 to correct it.

- ERR4105 An appearance of Multiple Appearance DN cannot answer a call. It resides on a telephone with CLS that cannot receive external calls, or, it resides on a telephone with a tenant that differs from the tenant of other telephones that can answer the call. All the appearances of the DN should reside on sets that belong to the same tenant.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the Multiple Appearance DN and LD 11 or 10 to correct the data.
- ERR4106 TSET downloading buffer overflow.
- ACTION:** Contact your technical support group.
- ERR4108 tn Possible tip and ring reversal at central office or CO trunk card problem.
- ACTION:** Check the polarity at the cross connect with meter for reversal. Contact your technical support group for help in checking with the local public exchange office personnel for reverse polarity.
- ERR4109 VASID out-of-range.
- ACTION:** Check the database in LD 17. Contact your technical support group.
- ERR4111 Incorrect key function defined for data TN.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the data and LD 11 or 10 to correct the data.
- ERR4112 Data TN not defined. An M2317 telephone cannot have Single Call Ringing (SCR) on key 10.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the data and LD 11 or 10 to correct the data.
- ERR4113 Digital set has sent handsfree activated message, but does not have Handsfree Class of Service (HFA).
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check data and LD 11 or 10 to correct data.
- ERR4114 Data DN of M2317 or M3000 Touch telephone does not have two appearances.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check data and LD 11 or 10 to correct the data.
- ERR4115 The M2317 or M3000 telephone has requested a restart.
1. If telephone has not been manually reversed down and up and these messages consistently appear then, start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.
 - a) The telephone may be faulty.

ACTION: Replace the telephone following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

 - b) The line card channel may be faulty.

ACTION: Replace the line card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- c) The telephone power supply may be faulty.

ACTION: Replace the power supply card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared. Replace the power supply.

2. ORIG & TER TN will show if active in a call.

ACTION: To check if a call on this telephone is active, use TRAC l s c u in LD 80. If you need help with the commands or system responses refer to the “TRA — LD 80 Tracing Calls” on page 1071, chapter in this guide.

ERR4116 The M2317 set has received a message when the headset was unplugged, but no message was sent when the headset was plugged in. Ignore this message during sysload as all headsets should be unplugged.

ACTION: Replace the telephone following the steps in the *Hardware Replacement* (553-3001-520).

ERR4117 Incorrect tree class.

ACTION: Contact your technical support group.

ERR4118 Tree is corrupted.

ACTION: Contact your technical support group.

ERR4119 IDC pointer is corrupted.

ACTION: Contact your technical support group.

ERR4120 Invalid digit received by IDC.

ACTION: Contact your technical support group.

ERR4124 Add the NSF IE to the SETUP message

ACTION: Contact your technical support group.

ERR4125 Message CRI is not in idle queue.

ACTION: Perform a system initialization, and if the problem continues contact your technical support group.

ERR4126 Output queue is not allocated.

ACTION: Contact your technical support group.

ERR4127 Message CR is not in QU_CSL_OP.

ACTION: Perform a system initialization, and if the problem continues contact your technical support group.

ERR4128 Output message has length zero.

ACTION: Contact your technical support group.

ERR4129 dn c t1 t2

The duration time set for the call in the Abandoned Call Waiting in the Source queue is invalid. Output: **dn** = ACD-DN, **c** = customer, **t1** = time of day, **t2** = time call arrived.

ACTION: Refer to the *Automatic Call Distribution guide*.

- ERR4130 Wrong call reference flag. Incompatible Protocol between the interface. If the error continues, file a problem report.
ACTION: Contact your technical support group.
- ERR4131 The message received has global CREF. Incompatible protocol between the interface. If the error continues, file a problem report.
ACTION: Contact your technical support group.
- ERR4132 Received a SERVICE, SERVICE ACK, RESTART, RESTART ACK with a non-global CREF. Incompatible protocol between the interface.
ACTION: Contact your technical support group.
- ERR4133 For ISDN ESS #4 received a SERVICE, SERVICE ACK, RESTART, RESTART ACK with the wrong call reference flag. Incompatible protocol between the interface. If the error continues, file a problem report.
ACTION: Contact your technical support group.
- ERR4134 data First digit is not KP. If the error repeats with the same MFR, test the MFR card; otherwise suspect a fault on far-end outpulsing mechanism, or noisy trunk. The data output is:
TRK tn MFR tn ID j dddr ADDR j dddr
Where:
TRK tn = TN of the FGDT trunk (l s c u, loop ch)
MFR tn = TN of the MF receiver (l s c u, or loop ch)
ID j dddr = ID field, **j** = number of digits, **dddr** = digits
ADDR j dddr = Address field, **j** = number of digits, **dddr** = digits
Note: If the address was not received or was empty, it is not printed.
ACTION: Replace the MFR card, following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears, contact your technical support group for assistance from the far-end.
- ERR4135 data Illegal size of a field. If the error repeats with the same MFR, test the MFR card. Refer to ERR4134 for a description of output data.
ACTION: Replace the MFR card, following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears, contact your technical support group for assistance from the far-end.
- ERR4136 data Illegal MF combination. If the error repeats with the same MFR, test the MFR card; otherwise suspect a fault on far-end outpulsing mechanism, or noisy trunk. Refer to ERR4050 for a description of output data.
ACTION: Replace the MFR card, following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears, contact your technical support group for assistance from the far-end.
- ERR4137 data Unexpected digit (ST', ST'', ST'''), or KP in the middle of a field. If the error repeats with the same MFR, test the MFR card; otherwise suspect a fault on far-end outpulsing mechanism, or noisy trunk. Refer to ERR4050 for a description of output data.
ACTION: Replace the MFR card, following the steps in the *Hardware Replacement* (553-3001-520). If this message reappears, contact your technical support group for assistance from the far-end.

- ERR4138 data Call category denied. Refer to ERR4134 for a description of output data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 CRB to check if the CCAN definitions are consistent with the far-end LEC arrangement. Contact your technical support group for assistance from the far-end. Use LD 19 to correct the fault.
- ERR4139 data ANI field empty when should be present. Refer to ERR4134 for a description of output data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 CRB to check if the CCAN definitions are consistent with the far-end LEC arrangement. Contact your technical support group for assistance from far-end. Use LD 19 to correct the fault.
- ERR4140 data ANI field present when should be empty. Refer to ERR4134 for a description of output data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 CRB to check if the CCAN definitions are consistent with the far-end LEC arrangement. Contact your technical support group for assistance from far-end. Use LD 19 to correct the fault.
- ERR4141 data Undefined information digit (I I) number received. This is an attempt by an unauthorized user. The output data is: **CUST c Trm hh:mm:ss dd/mm/yyyy II-NPANXXXXX zzzzz**
 Where:
 c = customer number
 Trm = FGD route and member number
 II-NPANXXXX = FGD ID field information
 zzzzz = FGD field address digits
ACTION: Contact your technical support group for help in checking with the local public exchange office personnel.
- ERR4142 data Undefined ANI number received. This is an attempt by an unauthorized user. Refer to ERR4141 for description of the output data.
ACTION: Contact your technical support group for help in checking with the local public exchange office personnel.
- ERR4143 data Cannot access NARS database. Refer to ERR4134 for a description of output data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ESN overlays to correct the data.
- ERR4144 data Cannot access FGD block. Refer to ERR4134 for a description of output data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB and check the value of the FGDB in the route and the definition of the related FGD block.
- ERR4145 data 100 line test DN not defined. Refer to ERR4134 for a description of output data.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 CDB to check and define the 100 test line in LD 15.
- ERR4147 data An invalid message while waiting for MF digits. Output data is mfrtn input_message.
ACTION: Test the MFR card.
- ERR4148 An invalid message while waiting for DTR digits. Output data is mfrtn input_message.
ACTION: Test the MFR card.
- ERR4149 The output buffer to PRI2 card overflowed.
ACTION: Test or replace the PRI card.

ERR4161	Call Reference length is greater than 2. ACTION: Contact your technical support group for assistance from the far-end.
ERR4162 x	The length x of the call reference of an incoming ISDN message was incorrect. The length allowed in North America is 1 or 2. For some other interfaces, only a length of 2 is allowed. There may be a compatibility problem with the far-end. ACTION: Contact your technical support group for assistance from the far-end.
ERR4200	Speed Call list check failed. ACTION: Perform a system reload, and if the problem continues contact your technical support group.
ERR4201	Speed Call list CR setup failed. ACTION: Perform a system reload, and if the problem continues contact your technical support group.
ERR4202	Speed Call indexing failed. ACTION: Perform a system reload, and if the problem continues contact your technical support group.
ERR4203	Speed Call entry pointer nil. ACTION: Perform a system reload, and if the problem continues contact your technical support group.
ERR4204	Speed Call digits to CR failed. ACTION: Perform a system reload, and if the problem continues contact your technical support group.
ERR4205	Pretranslation table being removed. ACTION: Information only, no action required.
ERR4220	1. Secondary Control register on MSI card (QPC584) failed R/W test. 2. Receiving this message during upgrade to new software. ACTION: Check the MSI card to verify that the correct target data cartridge is used to receive the datadump. Check the associated cabling.
ERR4221	MSI Refer to the <i>X11 Administration</i> (553-3001-311). Use the reading from backup device when it should be reading from primary device. ACTION: Check for proper switch settings on the MSI card.
ERR4222	Auto-terminating DN defined in the trunk block for this ACD DNIS call is not an ACD DN. ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use the ACD overlays to correct the data.
ERR4225	500/2500 Set DN cannot be defined until CPND feature is configured for that set. DATA: 500/2500 set DN and packed TN ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use the LD 95 PRT CPND command to check and to configure any name first. Use LD 10 to configure the CPND feature.

- ERR4226 xx Insufficient storage for CPND Name.
ACTION: Add memory or relocate CPND Logic page. **xx** = DN or DIG group and member numbers. Refer to the *X11 Administration* (553-3001-311). Use the LD 95 PRT CPND command to check and to configure any name first. Use LD 10 to configure the CPND feature.
- ERR4227 xx Insufficient storage for DIG name table.
ACTION: Add memory or relocate CPND Logic page. **xx** = DN or DIG group and member numbers. Refer to the *X11 Administration* (553-3001-311). Use LD 95 PRT CPND to check and to configure any name first. Use LD 10 to configure CPND feature.
- ERR4228 Wrong I.E. for message type.
ACTION: Contact your technical support group.
- ERR4229 Wrong I.E. for STATUS message.
ACTION: Contact your technical support group.
- ERR4230 Wrong I.E. for RELease message.
ACTION: Contact your technical support group.
- ERR4231 Wrong I.E. for REStart message.
ACTION: Contact your technical support group.
- ERR4232 Wrong I.E. for CONNect message.
ACTION: Contact your technical support group.
- ERR4233 Wrong I.E. for SETUP message.
ACTION: Contact your technical support group.
- ERR4234 Wrong I.E. for PROGress message.
ACTION: Contact your technical support group.
- ERR4235 Wrong I.E. for CALL PROCeeding message.
ACTION: Contact your technical support group.
- ERR4236 Wrong I.E. for ALERTing message.
ACTION: Contact your technical support group.
- ERR4237 Wrong message type.
ACTION: Contact your technical support group.
- ERR4238 Wrong coding standard.
ACTION: Contact your technical support group.
- ERR4239 BC - extension bit not right.
ACTION: Contact your technical support group.
- ERR4240 BC - information transfer not supported.
ACTION: Information only, no action required.
- ERR4241 BC - information transfer rate/mode not supported.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.

ERR4242	BC - layer1 protocol id not correct. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4243	BC - rate is not correct. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4244	General location not supported. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4245	Cause value not supported. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4246	Channel id octet3 error. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4247	Channel id octet5 error. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4248	Channel number not exist. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4249	Extension bit wrong in cause. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4250	Extension bit wrong in connected number. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4251	Extension bit wrong in redirecting number. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4252	Extension bit wrong in redirection number. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4253	Extension bit wrong in channel number. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4254	Extension bit wrong in progress indicator. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.

ERR4255	Extension bit wrong in NSF. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4256	Extension bit wrong in calling party number. ACTION: Contact your technical support group.
ERR4257	Extension bit wrong in called party number. ACTION: Contact your technical support group.
ERR4258	Extension bit wrong in restart. ACTION: Contact your technical support group.
ERR4259	Reference length error. ACTION: Contact your technical support group.
ERR4260	CREF flag in SETUP is incorrect. ACTION: Contact your technical support group.
ERR4261	State message error, protocol violation. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4262	NTWK ID not correct in TNS. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4263	No REStart ACK message received. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4264	Message received in NULL state. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4265	Mandatory Channel ID missing in ALERTing. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4266	Mandatory Channel ID missing in CONNect. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4267	Service in NSF doesn't match service route. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.
ERR4268	PROGRESS INDICATOR not supported. ACTION: Refer to the <i>ISDN PRI: Maintenance</i> (553-2901-501). Contact your technical support group.

- ERR4269 ZERO length for mandatory IE.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4270 ZERO length for option IE.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4271 TNS, BAD NTWK ID, TYPE/PLAN.
ACTION: Contact your technical support group.
- ERR4272 BC - layer id not correct.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4273 Incorrect TNS Network ID.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4274 Message Length exceeds buffer size (261).
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4275 Protocol discriminator is not compatible with a Message length of > 2.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4276 The maintenance message is only allowed in specific DCH interface.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4277 c dn ifdn
Invalid Interflow destination. Where: **c** = customer, **dn** = ACD-DN, **ifdn** = Interflow DN.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.
- ERR4278 c dn ifdn
Invalid Night Call Forward destination specified. Where:
c = customer, **dn** = ACD-DN, **ifdn** = Interflow DN.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.
- ERR4279 No Service Ack message received.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4280 Use LD 92 to diagnose the ADM TN.
ACTION: Refer to the action for ERR4279.
- ERR4281 Message input received from a 64 k data module has no Call Register available.
ACTION: Information only, no action required.

- ERR4282 d b No response from far-end to this PRA call. Where: **d** = DCHI number, **b** = B-channel number.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501), and check the D-channel link on the near and far-end switches. Contact your technical support group.
- ERR4283 Both DCHs have been released. Establish the DCH.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4285 ACNT key defined but no ADS block defined.
ACTION: Take out the ACNT key or the defined ADS block.
- ERR4286 Message count on the loop exceeds the threshold value.
ACTION: Refer to any “OVD — LD 77 Locating Overloads” on page 801, messages previously printed, and check the hardware for defects that generate an overload condition. Rearrange the TNs to another location or they may be disabled. If you need help with the commands or system responses refer to the “OVD — LD 77 Locating Overloads” on page 801, chapter in this guide.
- ERR4287 Customer number greater than 31 while CDRE is not packaged.
ACTION: Information only, no action required.
- ERR4288 Route number is greater than 127 while CDRE is not packaged.
ACTION: Information only, no action required.
- ERR4289 Route number for Music Route is not a Music Route.
ACTION: Refer to the *X11 Administration* (553-3001-311). Check all routes in LD 15, LD 23 and LD 50 for MUS.
- ERR4291 Music Route is undefined.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 to check the Music Route and LD 16 to correct it.
- ERR4293 Both DCHs are out-of-service.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Release and establish both DCHs.
- ERR4300 c dn n i
Invalid DN in the Speed Call List. Prints an error message and skips to the next DN. Where: **c** = customer, **dn** = Pilot DN, **n** = LSNO, **i** = INDEX value.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.
- ERR4301 c dn n i
Pilot DN not allowed as Trunk/Tenant Night DN. Call is diverted to customer night DN during Night Service. Where:
c = customer, **dn** = Pilot DN, **n** = LSNO, **i** = INDEX value.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.

ERR4302 c dn n i

Pilot DN is not allowed Speed Call list. Where:

c = customer, **dn** = Pilot DN, **n** = LSNO, **i** = INDEX value.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.

ERR4302 c dn tn

Pilot DN not allowed as Hunt/CFW/MNDN when used to access a Speed Call. Where:

c = customer, **dn** = Pilot DN, **tn** = TN.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.

ERR4304 Display DN too large to be output in CDR record.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the database.

ERR4500 GPT Integrated Digital Access ERR: <x x x x x>

The format of the message is **ERR4500 xxxx**, where **xxxx** is as follows:

300 d = A message has been received from DTSL/DDSL **d** that is either unequipped or disabled.

311 d = Message length of zero read from DTSL **d** — suspect faulty card.

312 d = Message length exceeding 63 bytes read from DTSL **d**.

313 d = DTSL **d** is not responding.

314 d = Status register of DTSL **d** is not accessible.

315 d = Data register of DTSL **d** is not accessible.

330 d = Message output to DTSL/DDSL **d** has failed.

333 d = Invalid interrupt.

401 d = Message length of less than 3 bytes has been received from DTSL/DDSL **d**.

402 d l c = Message received on unconfigured channel **c**, loop **l**, and DTSL/DDSL **d**.

403 d tn = Flow control encountered on DTSL/DDSL **d**. **tn** gives packed TN of the channel.

ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501) *guide*.

ERR4501 Received a PRA message with an unsupported service identifier.

ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501) *guide*. Contact your technical support group.

ERR4502 Service discriminator is not supported by ISDN.

ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.

ERR4503 Message is bouncing back and forth between two nodes.

ACTION: Call your technical support group for a software patch.

- ERR4506 Facility reject received. Data: Orig PNI, Orig #, Dest PNI, Dest #, Reason. The values for “Reason” are:
0 = no transmission address of such nature
1 = no transmission address for this specific address
2 = application congestion
3 = application failure
4 = unequipped application
5 = network failure
6 = network congestion
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4507 c s Missing PNI number in the customer data block. Where: **c** = customer, **s** = service ID.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4508 Received bad facility I.E.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4509 s
1. PNI missing in RDB, **s** = Service ID.
2. Receiving this message and the PNI is missing type error when calling across an ISDN network with NMS service. All sites involved with NMS type service in a network, must have package 148.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR4510 ROSE component sent is being rejected.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5000 Target ID is not an ACD-DN or NARS DN. Procedure: Successful
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5001 Target ID did not access the ISL/PRA Trunk. Procedure: SEND_CALLSETUP
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5002 The QPC720C PRI is required for 1.5 Mb/s GPRI, otherwise the MU/A law conversion and loss level adjustments will not function properly.
ACTION: Use QPC720C, or newer, hardware.
- ERR5003 x An incoming message, shorter than 5 octets, is ignored. The message should have a minimum of 5 octets if <n> is equal to 2. Where, **x** = the length of call reference in hex.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.

- ERR5010 ISDN: Receive a Status messages with CAUSE = 30. This was in response to Status Enquiry but SL-1 did not send out a Status Enquiry message. Output format:
DCH = x IFC = y
x = D-channel number
y = Interface Type
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5011 x Received IE is in the wrong codeset; **x** = IE index.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5012 x Received IE is wrong in the High Layer Compatibility; **x** = wrong IE information.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5015 x y z D-channel is interfacing with a software issue not supported by the application. Output:
x = D-channel number;
y = the last digit of the release ID (for example: if LD 17 prompt RLS = 16, then y = 6);
z = application ID.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group. Be sure the software release at the far-end is correctly defined by prompt RLS in LD 17.
- ERR5016 Wrong extension bit for information request IE.
ACTION: Contact your technical support group.
- ERR5017 c Customer **c** should have a common printer defined. Procedure ICP_GET_PRINTER.
ACTION: Contact your technical support group.
- ERR5018 t Tenant **t** should have a common printer defined. Procedure ICP_GET_PRINTER.
ACTION: Information only, no action required.
- ERR5019 This TN should have a printer configured. Procedure ICP_ESTABLISH and ICP_GET_ATTN_PTR.
ACTION: Information only, no action required.
- ERR5020 That information request type is not supported. ICP_STORECFW and ICP_ACT_ALLOWED.
ACTION: Information only, no action required.
- ERR5021 Wrong length for information request IE.
ACTION: Contact your technical support group.
- ERR5022 The specific information requested is not supported.
ACTION: Information only, no action required.
- ERR5024 The Auto-Terminating number for this In-Band ANI route is not an ACD-DN.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use the ACD overlays to correct the data.

- ERR5025 x A call originating or being tandem switched though on this switch is trying to insert more than 8 digits in the calling party number for an AXE-10 interface. Only eight (8) digits can be included in the calling party number, or the digits are truncated to the right. **x** = DCH Interface number for the SETUP message.
- ACTION:** Use PFX1 and PFX2 in LD 15 to modify the calling party number so that PFX1+PFX2+DN is less than 8 digits.
- ERR5026 Multi-Tenant alone or with CPG level services is enabled. The caller is denied access to the CPG Night DN. This is an illegal configuration. Tenants sharing the same CPG should be allowed access to each other.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 93 to check the Multi-Tenant data and correct it.
- ERR5027 Stepping action is aborted. Stepping to an ISA route is not allowed.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the stepping route number and LD 16 to correct it.
- ERR5028 Stepping action is aborted. Stepping to an ISA SERVICE route is not allowed.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the stepping route number and LD 16 to correct it.
- ERR5029 Reverse call charging is not allowed.
- ACTION:** Information only. Disregard the call charging information received from the network.
- ERR5030 Information in the TYPE field of the Information Element is invalid.
- ACTION:** Information only, no action required.
- ERR5031 The network will disregard the ISDN call charging information received, because the call was never properly established.
- ACTION:** Information only, no action required.
- ERR5032 The HM_STRUCT for a set is missing in the procedure WUK_LAMP_FLASH, or the HM_STRUCT for a set is missing or the set does not have CCSA Class of Service procedure WUK_DARK_OR_LIT. Data corruption.
- ACTION:** Perform a system reload, and contact your technical support.
- ERR5033 An invalid lamp state has occurred in the procedure WUK_DARK_OR_LIT. Either there is a request and the Wake Up key (WUK) lamp is not lit or there is no request and the WUK lamp is lit.
- ACTION:** Information only, no action required.
- ERR5034 aux_custptr [] = NIL in procedure store_awu. Data corruption.
- ACTION:** Perform a system reload, and contact your technical support.
- ERR5035 Unable to find a primary appearance DN to store the Wake Up call. Procedure wuk_get_tn or ffc_find_awu_tn. Cannot proceed.
- ACTION:** Perform a system reload, and contact your technical support.

- ERR5037 A restart message has been sent twice, but the far-end has not responded with the proper RESTART ACK message. The PRA B-channels are left in a maintenance busy state. The ISL trunks are not marked as maintenance busy if they revert back to a conventional trunk (option enabled).
ACTION: Check the D-channel status for both ends in LD 96. Try to disable and re-enable the D-channels.
- ERR5039 d The Virtual Network Service (VNS) message received is discarded because the VNS package is not equipped. **d** = D-channel number.
ACTION: Contact your technical support group.
- ERR5040 No idle channel is available for a VNS customer.
ACTION: Contact your technical support group.
- ERR5041 VNS mismatch due to timing. Depending on frequency, this may or may not be a problem.
ACTION: Information only. If the error continues contact your technical support group.
- ERR5043 Invalid date information element for PRA messaging.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5044 No posttransl blk defined in pd. Pretranslation.
ACTION: Contact your technical support group.
- ERR5045 No RPA FFC PARM blk defined for the RPS.
ACTION: Contact your technical support group.
- ERR5046 DN does not exist in the RPA-DN tree (table).
ACTION: Information only, no action required.
- ERR5047 RPA does not support diversion to manual RPS.
ACTION: Information only, no action required.
- ERR5048 RPA traffic block pointer in RPA SYS PARM blk is nil.
ACTION: Information only, no action required.
- ERR5049 Rising edge of Call Accepted signal is either too short or too long from trailing All Digits Revd signal.
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5050 Rising edge of Start Talk signal is either too short or too long from trailing Call Accepted signal. Speech path will not be provided; call can be answered in normal manner.
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5051 NO RPCD data defined.
ACTION: Contact your technical support group.
- ERR5054 The ISDN call charging information exceeds the limit of 9 digits. Please disregard the charging information message from the network.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.

- ERR5055 Unable to generate End-to-End Signaling tone due to one or more of the following:
- ◆ no available conference slots
 - ◆ no available TDS slots
 - ◆ no available junctor slots
 - ◆ no available time slots to establish speech paths among all involved conference parties
 - ◆ this can be a traffic problem
- ACTION:** Contact your technical support or engineering group to help you check that the system is properly balanced. Ensure that the system has enough DTRs to support the load. Verify that Music On-Hold is used on the DTI trunks. Check your traffic reports for the specific hour to help isolate the problem. If necessary, add applicable cards following the *Installation NTP*.
- ERR5056 l s c u An invalid EES lamp state exists on the Attendant console. The TN l s c u is output.
- ACTION:** Disable and re-enable the Attendant console in LD 32.
- ERR5057 a d o t The D-channel interface for routing Network Message Service (NMS) facility messages is not an SL-1 interface.
- a = operation code for TCAP protocol
d = the D-channel sending FACILITY message
o = Originating digits
t = Terminating digits
- ACTION:** Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5058 a o t Please check the system registers resources. Cannot obtain Call Register to simulate the configuration request for sender feature originated at remote switch.
- a = operation code for TCAP protocol
o = Originating digits
t = Terminating digits
- ACTION:** Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5059 No DNP message is sent to the Meridian Mail server. The DNP message for ISDN/AP is not retrieved for a Conference call to the Meridian Mail server when activated from a remote switch.
- ACTION:** Refer to the *ISDN PRI: Maintenance* (553-2901-501). Contact your technical support group.
- ERR5060 tn This unit has and LSPK key, but the DN defined does not match with any loudspeaker.
- ACTION:** Contact your technical support group.
- ERR5061 You cannot synchronize a local clock, it must be set manually.
- ACTION:** Information only, no action required.
- ERR5062 That TCAP package type is not recognized by the TSYNC feature.
- ACTION:** Contact your technical support group.
- ERR5063 That TCAP parameter is not recognized by the TSYNC feature.
- ACTION:** Contact your technical support group.

- ERR5064 The local clock can not be synchronized, the local clock must be set.
ACTION: Information only, no action required.
- ERR5065 The TCAP package type is not recognized by the TSYNC feature.
ACTION: Contact your technical support group.
- ERR5066 That TCAP parameter is not recognized by the TSYNC feature.
ACTION: Contact your technical support group.
- ERR5067 Previous Hospitality block is found to be missing. The new entry is used to recreate the lost block.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 49 PRT to check and correct the Hospitality block.
- ERR5068 Corrupted NFCR structures. TREE_EXIST of Hospitality.
ACTION: Contact your technical support group.
- ERR5069 Corrupted Hospitality tree. Hospitality procedure.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use “EDD — LD 43 Equipment Data Dump” on page 389, correct the Hospitality tree.
- ERR5070 Prime DN key must be SCR or SCN for a Hospitality set. HSP_FORCEDISC of Hospitality.
ACTION: Check the database in LD 11 or LD 10.
- ERR5071 Hospitality tree does not exist. TREE_EXIST of Hospitality.
ACTION: Contact your technical support group.
- ERR5072 Accessed tree is not a Hospitality tree. HSP_GETLEAF_PTR of Hospitality.
ACTION: Contact your technical support group.
- ERR5073 Corrupted value of TREE_DIGIT_CODE in Hospitality tree. HSP_GETLEAF_PTR of Hospitality.
ACTION: Contact your technical support group.
- ERR5075 x The NT8D19 Memory/Peripheral Signaling card had x memory parity errors in the last 30 minutes. Ignore occasional occurrences as these errors are self-correcting.
ACTION: If this error persists or is accompanied by unexplained system reloads, replace the Memory/Peripheral Signaling card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- ERR5087 x Invalid value for the interface identifier field of channel id information element from an incoming message. Where, x = the message type in hex.
ACTION: Contact your technical support group.
- ERR5088 Invalid value for the class field of restart indicator information element from an incoming message. Where, x = the message type in hex.
ACTION: Contact your technical support group.
- ERR5090 data Could not send an activation/deactivation message to an MFR.
ACTION: Contact your technical support group.

- ERR5091 Speaker dn, unit dn - loudspeaker cannot enter CONF; number of loudspeakers in conference is at maximum value.
ACTION: Contact your technical support group.
- ERR5092 **Warning:** LDNO must be defined for the customer for ISDN DID calls in order to determine the number of digits expected for successful call termination.
ACTION: Contact your technical support group.
- ERR5094 Not the same dial tone frequency range defined on the route and on the dial tone detector.
ACTION: Contact your technical support group.
- ERR5095 Timer value conflict found on Universal Trunk or E & M Dictation card (NT8D14/NT8D15) during audit parameter download.
ACTION: Contact your technical support group.
- ERR5096 A TNTRANS was successful when the AWU call was linked to the attendant queue, but is now unsuccessful when the actual VIP call was attempted.
ACTION: Contact your technical support group.
- ERR5097 Received an invalid call reference from the far-end switch.
ACTION: Contact your technical support group.
- ERR5098 Invalid Cardlan Message. Received a data message before receiving an address type message.
ACTION: Contact your technical support group.
- ERR5099 Invalid Cardlan Message. Received a retransmit message without sending a message.
ACTION: Contact your technical support group.
- ERR5100 Invalid Cardlan message. Received an unrecognizable message.
ACTION: Contact your technical support group.
- ERR5101 Cardlan received a message out of sequence.
ACTION: Contact your technical support group.
- ERR5102 A write to 64180 Interrupt control register failed
ACTION: Contact your technical support group.
- ERR5103 A write to 64180 Data control register failed.
ACTION: Contact your technical support group.
- ERR5104 Invalid Cardlan Message.
ACTION: Contact your technical support group.
- ERR5105 Received a retransmit message from an XPE pack.
ACTION: Information only, no action required.
- ERR5106 Cardlan audit has detected a stuck cardlan state.Problem has been reset.
ACTION: Information only, no action required.
- ERR5107 An invalid 64180 message has been received.
ACTION: Contact your technical support group.

- ERR5108 Hardware type error message received from cardlan.
ACTION: Contact your technical support group.
- ERR5109 Input IVD message has been discarded.
ACTION: Information only, no action required.
- ERR5110 Output SSD message is discarded.
ACTION: Contact your technical support group.
- ERR5111 Invalid sequence type has been detected in a transmit XI type message.
ACTION: Contact your technical support group.
- ERR5112 Overload condition has been detected on an XPE line card. Signaling to the card has been disabled.
ACTION: Refer to the “OVD — LD 77 Locating Overloads” on page 801, chapter in this guide. Follow steps 1 through 15 in the section called *How to use manual print LD 77*.
- ERR5113 Three consecutive overload conditions have occurred for this card. The card will be disabled and will not be re-enabled. You must replace the card.
ACTION: Replace the card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared. If you need help refer to the “OVD — LD 77 Locating Overloads” on page 801, chapter.
- ERR5114 A signaling channel has been disabled. The channel will be enabled automatically.
ACTION: Information only, no action required.
- ERR5115 An overload card has been enabled again. Card must be operational.
ACTION: Contact your technical support group.
- ERR5120 The 1.5 Mb/s International ISDN Gateway feature does not support the QPC472 DTI hardware for the MU/A law conversion and loss level adjustments.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). Use the QPC720C PRI hardware for 1.5 Mbps DTI trunk connectivities.
- ERR5132 data For a tandem CDP DSC call, the incoming route and outgoing route belong to the same Route List Index (RLI). The output data is: customer number, incoming route, outgoing route, outgoing route list index, outputpulsed digits.
ACTION: To avoid potential looping problems, the CDP DSC database may need to be modified. Contact your technical support group.
- ERR5133 Invalid content of optional information element.
ACTION: Contact your technical support group.
- ERR5134 Invalid information element for the message type.
ACTION: Contact your technical support group.
- ERR5135 Mandatory Cause Information Element missing in Release or Release Complete message. Procedure I_RELEASE.
ACTION: Contact your technical support group.

- ERR5136 Invalid octet 3A in Calling Party Number Information Element. Procedure CALLING_PTY_#.
ACTION: Contact your technical support group.
- ERR5137 Protocol error. Procedure DEC_STATUS.
ACTION: Contact your technical support group.
- ERR5138 Global Call Reference not supported. Procedure GLOBAL_CREF.
ACTION: Contact your technical support group.
- ERR5139 a b c d e f
A data corruption in the ISA_ACTIVE_CALL variable for the ISA service route has been detected and fixed. The data output is:
a = customer number
b = ISA master route number
c = ISA service route number
d = number of trunks configured for the master route
e = audited active call count
f = active call count in data-store
ACTION: Contact your technical support group.
- ERR5140 a b c d e
A data corruption in the ISA_B_RESERVED variable for the ISA service route has been detected and fixed. The data output is:
a = customer number
b = ISA master route number
c = ISA service route number
d = number of B-channels reserved in data-store
e = audited number of B-channels reserved
ACTION: Contact your technical support group.
- ERR5141 a b c d e f g h
A data corruption in the ISA_BCH_AVAIL variable for the ISA service route has been detected and fixed. The data output is:
a = customer number
b = ISA master route number
c = ISA service route number
d = audited number of channels available
e = number of trunks configured for the master route
f = audited number of busy channels
g = number of channels available in data-store
h = number of channels reserved in data-store
ACTION: Contact your technical support group.
- ERR5144 Invalid length of information element.
ACTION: Contact your technical support group.
- ERR5145 Extension bit or IE length error in Party Category IE.
ACTION: Contact your technical support group.

ERR5146	Extension bit or IE length error in Transit Counter IE. ACTION: Contact your technical support group.
ERR5147	Invalid numbering type, numbering plan combination. ACTION: Contact your technical support group.
ERR5148	Invalid restart class. ACTION: Contact your technical support group.
ERR5149	Receipt of a Status reporting a Cause different than response to STATUS ENQ. ACTION: Contact your technical support group.
ERR5150	T308 timed out twice in U19 channel. Put in maint-busy state followed by INT (MSG_CR), D-channel number, UTN, State, Call Reference. ACTION: Contact your technical support group.
ERR5151	Undesirable Interface Indicator present in Channel ID IE. ACTION: Contact your technical support group.
ERR5155	OHAS treatment not given because it is not a legal OHAS DN. ACTION: Information only, no action required.
ERR5156	The input buffer for the CDR TTY is still loaded. There is not enough space for the number of characters to be output. The last character of the field may be lost. ACTION: Information only, no action required.
ERR5157	BRI call in wrong state, call is cleared. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.
ERR5158	Invalid BRI call reference. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.
ERR5159	BRI B-channel status out of sync between Meridian 1 and the MISP; call attempt is aborted. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.
ERR5160	BRI calls exceeded the limit for the DSL. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.
ERR5161	BRI call cannot be connected because of incompatibility of the call type with the B-channel. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.
ERR5162	BRI call cannot be connected because a call register cannot be allocated. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.
ERR5163	BRI call processing message has timed out. ACTION: Refer to the <i>ISDN Basic Rate Interface: Maintenance</i> (553-3901-500). Contact your technical support group.

- ERR5164 The BRI B-channel is in a maintenance busy state.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Contact your technical support group.
- ERR5165 Message received from invalid loop.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Contact your technical support group.
- ERR5166 Message received from wrong line card type.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Contact your technical support group.
- ERR5167 Invalid message received from BRI line card.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Contact your technical support group.
- ERR5168 No output buffer available to send SSD message.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Contact your technical support group.
- ERR5169 Message problem report from BRI line card.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Contact your technical support group.
- ERR5231 No outgoing ESDI packet allowed when the ESDI card is disabled. Output: **AML: <aml number in decimal>**.
ACTION: Contact your technical support group.
- ERR5232 No incoming ESDI packet allowed when the ESDI card is disabled. Output: **AML: <aml number in decimal>**.
ACTION: Information only, no action required.
- ERR5233 The MSDL AML port is disabled. Therefore the incoming AML message is disregarded. Output: **AML: <aml number in decimal>**.
ACTION: Re-enable the MSDL AML port in LD 48.
- ERR5234 The given AML (i.e., CLS) priority is disregarded. Output:
AML: <aml number in decimal> CODE: <msg_priority in decimal>
Receiving this message and Meridian Mail is not answering calls properly.
ACTION: Check for an I/O conflict with the ESDI/AML card setting and an existing I/O device. Check for a paddleboard sitting on the rear of the module, causing a hardware conflict. Contact your technical support group.
- ERR5235 The MSDLMISP_HDLR handler failed the outgoing XDU MSDL AML request. Output: **AML: <aml number in decimal> CODE: <msdlmisp_hdlr failure code in decimal>**
ACTION: Contact your technical support group.
- ERR5236 The MSDLMISP_HDLR handler failed the outgoing DU MSDL AML request. Output: **AML: <aml number in decimal> CODE: <msdlmisp_hdlr failure code in decimal>**
ACTION: Contact your technical support group.

- ERR5237 The GET_O_BUF procedure failed to find a free outgoing buffer to send an outgoing AML MSDL packet. Output: AML: <aml number in decimal>.
ACTION: Contact your technical support group.
- ERR5241 NIL pointer passed in as a parameter. Unable to update the TN block with the wake up information. Cannot proceed. Procedure WRT_AWU_TN.
ACTION: Contact your technical support group.
- ERR5242 NIL pointer to the HM_STRUCT which contains the wake up information. Cannot update and cannot proceed. Procedure WRT_AWU_TN.
ACTION: Contact your technical support group.
- ERR5243 tn Digit collect message received from RAN trunk unit.
ACTION: Check that the RAN equipment is operating according to the vendor's instructions. Use RAN in LD 36 to check the trunk and the RAN machine. If you need help with the commands or system responses refer to the "NPR — LD 32 Checking loops, shelves, controllers, cards and units" on page 721, chapter in this guide.
- ERR5244 type tn An invalid problem type has been received in a problem report message.
ACTION: Contact your technical support group.
- ERR5245 type tn
1. An invalid message type has been received from a card or unit.
ACTION: Check or replace the card following the steps in the *Hardware Replacement* (553-3001-520).
 2. Receiving this message, without type tn, and INI000 8000 message on an Option 21E system running release 19.32 software.
ACTION: Verify that there is no I/O address mismatch with this card and other I/O cards. Check the fault page and address in the "INI — System Initialization" on page 557, message and if they are hardware related, check for and replace a faulty MSPS (NTDD02) card following the steps in the *Hardware Replacement* (553-3001-520).
- ERR5252 The SDI I/F Handler could not retrieve a free buffer to send an outgoing message.
ACTION: Contact your technical support group.
- ERR5254 The SDI I/F Handler encountered a problem transmitting an expedited message.
ACTION: Contact your technical support group.
- ERR5255 The SDI I/F Handler encountered a problem transmitting a standard ring message.
ACTION: Contact your technical support group.
- ERR5256 The SDI I/F Handler received a data.indication primitive with a length of zero.
ACTION: Contact your technical support group.
- ERR5257 The SDI I/F Handler received a data indication primitive but could not store incoming characters because the TTY input buffer is full. Incoming characters were discarded.
ACTION: Contact your technical support group.

- ERR5258 The SDI I/F Handler received a data indication primitive but could not store all incoming characters because the TTY input buffer became full. Some incoming characters were discarded.
ACTION: Contact your technical support group.
- ERR5259 The SDI I/F Handler received an incoming message that had an unsupported primitive ID.
ACTION: Contact your technical support group.
- ERR5260 The SDI I/F Handler received an incoming message that was not in the correct MSDL ring or expedited buffer.
ACTION: Contact your technical support group.
- ERR5261 The SDI Port was disabled because the number of response timeouts on a output primitive has been exceeded.
ACTION: Contact your technical support group.
- ERR5262 The SDI I/F Handler received a message from a port that is not enabled.
ACTION: Contact your technical support group.
- ERR5263 The SDI I/F Handler received an incoming message that could not be processed in the current SDI state.
ACTION: Contact your technical support group.
- ERR5264 The SDI I/F Handler received a data.indication message that had more characters than the maximum size of the TTY input buffer. The message is discarded.
ACTION: Information only, no action required.
- ERR5266 The SDI I/F Handler received a maintenance primitive message with an invalid data length. The primitive message is discarded.
ACTION: Information only, no action required.
- ERR5267 The SDI I/F Handler encountered a problem when trying to resynchronize flow-control variables with the MSDL I/F Handler.
ACTION: Contact your technical support group.
- ERR5272 tn An invalid maintenance message has been received from a card.
ACTION: Information only, no action required.
- ERR5275 The DCH timed out while waiting for a test mode state change.
ACTION: Information only, no action required.
- ERR5276 An SSD message to process the MSDL DCH output request queue is found to be lost.
ACTION: Information only, no action required.
- ERR5277 An invalid DCH link state was found and corrected.
ACTION: Information only, no action required.
- ERR5278 The DCH state was found to be disabled, while the DCH port was disabled.
ACTION: Re-enable the DCH card.
- ERR5279 DCH application state was disabled, while the port on the MSDL card was enabled.
ACTION: Information only, no action required.

- ERR5279 Wrong mandatory Information Element length.
ACTION: Information only, no action required.
- ERR5280 Wrong Optional Information Element Length.
ACTION: Information only, no action required.
- ERR5281 Pointer BG_TFC_TODAY_PTR or BG_TFC_YESDY_PTR is NIL because of the low memory problem or the memory corruption.
ACTION: Manually INIT the system to rebuild memory blocks. If the manual INIT command does not work, you must add more memory cards or remove data from the system.
- ERR5282 c dn r **Warning:** Undefined RAN route for night RAN. Where: c = customer number, dn = ACD DN, r = route number.
ACTION: Manually INIT the system to rebuild memory blocks. If the manual INIT command does not work, you must add more memory cards or remove data from the system.
- ERR5283 No message sent to the ICP computer. Update the computer database manually.
ACTION: Manually INIT the system to rebuild memory blocks. If the manual INIT command does not work, you must add more memory cards or remove data from the system.
- ERR5285 c dn r **Warning:** Undefined RAN route for first RAN. Where, c = customer number, dn = ACD DN, r = route number.
ACTION: Define the RAN route and trunk in LD 16 and LD 14. Enter the route number at the FRRT prompt and the connection timer at the FRT prompt in LD 23 for the ACD DN.
- ERR5286 c dn r **Warning:** Undefined RAN route for second RAN. Where: c = customer number, dn = ACD DN, r = route number.
ACTION: Define the RAN route and trunk in LD 16 and LD 14. Enter the route number at the SRRT prompt and the connection timer at the SRT prompt in LD 23 for the ACD DN.
- ERR5287 Invalid routing data encountered for Network Call Pickup/TAFAS. Digits do not indicate a valid DSC/TSC/AC1/AC2 route access code to route the Call Pickup request.
ACTION: Information only, no action required.
- ERR5300 DPNSS Route Optimization, invalid message received in Route Optimization supplementary service state. The message is ignored.
ACTION: Information only, no action required.
- ERR5301 The ATDN is not a CDN, but the call was routed to the ATDN anyway. Output data: TRK trktn ANI ani_count ani_digits
ACTION: Information only, no action required.
- ERR5302 M911 does not support test calls for the pilot release. (This does not apply to Release 19.) Output data: TRK trktn ANI ani_count ani_digits.
ACTION: Information only, no action required.
- ERR5303 ANI must be either one or eight digits in length. Call routed to default ACD DN as ANI failure. Output data: TRK trktn ANI ani_count ani_digits
ACTION: Contact your technical support group for assistance from the far-end.

- ERR5304 ANI digit is must be 1-10, where 10 is the digit 0. Call routed to default ACD DN as ANI failure. Output data: TRK trktn ANI ani_count ani_digits
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5305 ANI was not received within 4 seconds. Call routed to default ACD DN as ANI failure. Output data: TRK trktn ANI ani_count ani_digits
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5306 Digit dialed exceed maximum allowed. More than 10 digits received.
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5307 MFR holding timeout. Call routed to default ACD DN as ANI failure. Output data: TRK trktn ANI ani_count ani_digits
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5308 Could not allocate the M911 auxiliary call register. Call routed to default ACD DN as ANI failure. Output data: TRK trk tn ANI ani_count ani_digits
ACTION: Contact your technical support group.
- ERR5309 x y No music route for telephones defined for customer x using the FTC table y with XTT = YES.
ACTION: Information only, no action required.
- ERR5310 l s c u x No music route defined for the trunk at TN l s c u using the FTC table x with XTT = YES.
ACTION: Information only, no action required.
- ERR5313 CP to CP Cable Loss. The CP to CP cable is either disconnected or faulty.
ACTION: Check the cables on the core module backplane at 14A and 14C for bent pins or improper connections. Replace the cables if necessary following the steps in the *Hardware Replacement* (553-3001-520).
- ERR5314 The remote CMB has lost power.
ACTION: Contact your technical support group.
- ERR5315 Cannot turn on memory protection. Input address is invalid.
ACTION: Contact your technical support group.
- ERR5316 Cannot turn off memory protection. Input address is invalid.
ACTION: Contact your technical support group.
- ERR5317 IPB parity threshold exceeded.
ACTION: Contact your technical support group.
- ERR5318 IPB IRQ threshold exceeded. Interrupt has been disabled.
ACTION: Contact your technical support group.
- ERR5319 IPB IRQ interrupt has been re-enabled.
ACTION: Contact your technical support group.
- ERR5320 Error occurred initializing CP.
ACTION: Contact your technical support group.

- ERR5321 Failure occurred opening IPB database.
ACTION: Contact your technical support group.
- ERR5322 CP database I/O error.
ACTION: Contact your technical support group.
- ERR5323 IPB database I/O error.
ACTION: Contact your technical support group.
- ERR5324 l s c u The message received (Barring, Busy Tone, Line Break, Polarity Change, Seize Acknowledge) is not supported by the class of service defined on the trunk unit. Trunk disabled. Mismatch between hardware and software data base. (Feature is XFCOT/XDID.)
ACTION: Use ENLU l s c u in LD 32 to re-enable the trunk, forcing a software download.
- ERR5325 l s c Undefined PPM ID on card l s c; PPM ID unchanged on card: hardware and software configurations no longer match. If PPM ID was invalid or undefined before, PPM has been disabled by card for all units on card.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 14 to reconfigure the PPM ID for the card.
- ERR5326 l s c Undefined Busy Tone Id on Card l s c; Busy Tone ID unchanged on card: hardware and software configurations no longer match. If Busy Tone ID was invalid or undefined before, Tone supervision is not guaranteed to work for any unit on the card.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD xx to reconfigure the Busy Tone ID for the card.
- ERR5327 l s c u xxx xxx...xxx
Configuration Not Supported on trunk l s c u. Trunk is disabled. Configurations not supported are **xxx (xxx ... xxx)** where **xxx** is one of: **BUF PPM BTD BAR BAT DGC ATG**.
ATG = Autoguard (defined on unit: SEIZ)
BAR = Barring/Line Break Alarm (defined on unit Class of Service)
BAT = Battery Supervision (ARF BAT LBS) (defined on unit Class of Service).
BTS = Busy Tone Supervised: (defined on unit Class of Service)
BUF = PPM Buffered/Unbuffered: (defined on route)
DGC = DID Digit Collection Type (DIP/DTN/MFC) (defined on unit Class of Service and route)
PPM = PPM Enabled/Disabled: (defined on route)
ACTION: Examine the Route and Trunk Unit configuration and change the offending configuration.
- ERR5328 l s c u Dialing Speed downloaded is not supported on the unit. Dialing speed for the unit is not changed on the card. Hardware and software databases no longer match.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD xx to change the dialing speed of the unit.
- ERR5329 l s c Companding law downloaded is not supported on the card. Companding law on the card is not changed. Hardware and software databases no longer match. Do either of the following:

1. Change the companding law of the system.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD xx to change the companding law of the system.

2. Change the card.

ACTION: Replace the card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

ERR5330 l s c u Configuration conflict was detected on trunk unit during an audit. The configuration as specified for the unit has been stored on the card.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 to check the trunk TN, or LD or 17 to check the trunk loop density.

ERR5331 Seize failure on trunk to Conventional Main. CBQCM or RVQCM process was canceled.

ACTION: Contact your technical support group for assistance from the far-end.

ERR5332 msgtype tn

Unknown content in message type received from superloop unit.

ACTION: Check the superloop card, and if the error continues replace the superloop card following the steps in the *Hardware Replacement* (553-3001-520).

ERR5333 content msgtype tn

Unknown content in message type received from superloop unit.

ACTION: Check the superloop card, and if the error continues replace the superloop card following the steps in the *Hardware Replacement* (553-3001-520).

ERR5334 The SACP package is not equipped. Idle Extension Notification (IEN) or Attendant Blocking of DN (ABDN) request received from another location.

ACTION: Equip the SACP packages in all nodes. Contact your technical support group.

ERR5335 x y Route x has a non-existent XTDT table defined y and therefore no XTD could be found.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 97 to print out the tables on the system. Use LD 20 to print out the information on the XTD cards. Use LD xx to reconfigure the route with the existing XTDT table.

ERR5336 GPT DTSL or NT5K75AA card configured in GPT mode. Status register not accessible. Writeio failed. Pd. DTS_CLEAR_LINT

ACTION: Replace the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.

ERR5337 GPT DTSL or NT5K75AA card configured in GPT mode. Status register not accessible. Writeio failed. Pd. DTS_READY

ACTION: Replace the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.

ERR5338 GPT DTSL, NT5K75AA card. Data register not accessible. Write I/O failed. Pd. DTS_SEND

ACTION: Replace the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.

- ERR5339 GPT DTSL or NT5K75AA card configured in GPT mode. Status register not accessible. Write I/O failed. Pd. DTS_END_OF_WRITE
ACTION: Replace the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.
- ERR5340 GPT DTSL or NT5K75AA card configured in GPT mode. The timer has expired and the I bit is still raised in the status register. Pd. DTS_END_OF_WRITE
ACTION: Replace the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.
- ERR5341 GPT DTSL, NT5K35AA card or NT5K75AA card. The software wanted to send a message to the card. The transmit FIFO on the card was busy and there was no more output buffer available. The value entered to DTOB in the ovl17 may be too small. This may also be a hardware fault. Pd. DTOB_Q_MSG
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the DTOB prompt and LD 17 to increase the value. If this message reappears, replace the NT5K35AA card or the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.
- ERR5342 NT5K35AA card or NT5K75AA in NT mode. DTS_SEND failed in pd. SEND_DPNSS_MSG.
ACTION: Replace the NT5K35AA card or the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.
- ERR5343 GPT DTSL or NT5K75AA card in GPT mode. DTS_SEND failed in pd. DASS_INPUT.
ACTION: Replace the NT5K75AA card, following the steps in the *Hardware Replacement* (553-3001-520). If the fault persists, contact your technical support group.
- ERR5344 WRITE I/O failed. Pd. LED_OFF.
ACTION: Contact your technical support group.
- ERR5345 WRITE I/O failed. Pd. LED_ON.
ACTION: Contact your technical support group.
- ERR5346 Msg received from L2 but DTIB is full. The value entered to DTIB in the Ov117 may be too small. This may also be a hardware fault. Pd. DTS_LONG_MSG.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 to check the DTIB prompt and LD 17 to increase the value. If this message reappears, contact your technical support group.
- ERR5347 DTS_SEND failed in pd. WRITE_SIG_LINK.
ACTION: Contact your technical support group.
- ERR5348 Some msg were still waiting in the DTOB when the DISABLE msg is sent to the card. DTOB has been cleared. Pd. DDSL_DIS_MSG
ACTION: Information only, no action required.
- ERR5349 Some msg were still waiting in the DTOB when the ENABLE msg is sent to the card. DTOB has been cleared. Pd. REQ_ENABLE.
ACTION: Information only, no action required.

- ERR5350 The required FR is missing in the display IE received from SwissNet CO. The charging information is ignored.
ACTION: Information only, no action required.
- ERR5351 A FACILITY message other than the expected campon activation message was received at the MCDN/DPNSS call offer Gateway.
ACTION: Information only, no action required.
- ERR5352 Could not allocate memory for Call ID table. No Call ID can be allocated. More memory may be required.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247, chapter in this guide.
- ERR5355 Request to get an expedited buffer by the MSDL DCH application failed.
ACTION: Contact your technical support group.
- ERR5356 Request to send a message through the MSDL expedited interface failed.
ACTION: Contact your technical support group.
- ERR5357 A flow control timer was found to be active for MSDL D channel. It has been reset.
ACTION: Information only, no action required.
- ERR5358 There must be an active flow control timer for the MSDL D channel. The flow control state has been reset.
ACTION: Information only, no action required.
- ERR5359 Under/Overflow condition in converting ICCL Tandem Count to/from IDA Loop Avoidance Count.
ACTION: Contact your technical support group.
- ERR5360 tn Loss Plan conflict found on an IPE trunk during audit parameter download. The Loss Plan stored in the IPE trunk firmware for the unit has been reset to the Loss Plan specified in the audit message.
ACTION: Contact your technical support group.
- ERR5361 Unable to allocate NPID table block in memory.
ACTION: Contact your technical support group.
- ERR5362 Invalid format of the dialed (ADR) digits received over 911E trunk.
ACTION: Contact your technical support group.
- ERR5363 Dialed (ADR) digits not received within specified time. 911 call treated as ANI failure.
ACTION: Information only, no action required.
- ERR5364 NPID table does not exist for the 911 route.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 21 RDB to check the table and use LD 16 RDB to check for the 911 route.

ERR5365	M911_NPID_MHPTR is Nil. ACTION: Information only, no action required.
ERR5367	Wrong configuration for NAS Routing when the attendant is in Night Service. The following may indicate the problem: 1. NAS table is empty. ACTION: Contact your technical support group. 2. Night DN cannot be defined as DSC. ACTION: Contact your technical support group. 3. Night DN is not allowed to have any forward of any type (CFWAC, FBA, HTA, EHTA, HBTA) ACTION: Contact your technical support group.
ERR5368 n	Italian CO special services: route associated to the ITXX FFC code is not configured anymore. n = is the route originally configured for ITXX. ACTION: Contact your technical support group.
ERR5369 l s c u i	Invalid database configuration. Assigned authcode entered is not a valid authcode in OVL88. l = loop s = shelf c = card u = unit i = index of the assigned authcode ACTION: Check the database in LD 10 or LD 11.
ERR5370 tn	USCR being accessed, but customer SCPL is not defined. ACTION: Information only, no action required.
ERR5371 tn	Set has CLS USRA but FFC package is not equipped. ACTION: Information only, no action required.
ERR5384	The total number of messages in queue exceeds the predefined number defined in LD 17. The oldest message will be discarded in order to make room for more. The deleted messages will be displayed following this error message. ACTION: Information only, no action required.
ERR5385	The message has been retransmitted for the specified number of times. This message will be discarded. This deleted message will be displayed following the error message. ACTION: Contact your technical support group
ERR5386	Failed to allocate a CR for PMSI outgoing message. ACTION: Contact your technical support group

ERR5387 a b c d

The PMSI outgoing message is exceed the maximum length. The character will be ignored, where:

a = address of the CR contains the message

b = AUXPM, MAINPM

c = NAK counter, Timeout counter, retransmission flag

d = message length

ACTION: Contact your technical support group.

ERR5388 A digit other than 1 or 0 was entered for message monitoring option from a maintenance telephone.

ACTION: Information only, no action required.

ERR5389 A non-polling Call Register was found when auditing the PMSI Call Registers.

ACTION: Contact your technical support group.

ERR5390 Failed to allocate polling Call Register during initialization.

ACTION: Contact your technical support group.

ERR5391 The primary port is not configured. Therefor, the message monitoring commands cannot be executed from LD 37, or from a maintenance telephone.

ACTION: Contact your technical support group.

ERR5396 Call is dropped due to TSP database change.

ACTION: Contact your technical support group.

ERR5397 Service operation violated.

ACTION: Contact your technical support group.

ERR5398 One of the following has occurred.

- ◆ The specified RAN route is not configured.
- ◆ The specified route is not configured as a RAN route.
- ◆ The RAN route is configured but no RAN member exists.

ACTION: Information only, no action required.

ERR5399 Attendant Blocking of DN (ABDN) feature is not enabled.

ACTION: Information only, no action required.

ERR5400 x y x The PNI in the Route Data Block (LD 16), as noted by the dialed digits, is the same PNI number as currently programmed in the CDB (LD 15), where:

x = customer number

y = customer PNI number

z = digits dialed (first 8 digits)

ACTION: Information only, no action required.

ERR5408 NACD logical call request received that contained more than the supported number of DNIS digits. The DNIS information has been truncated to the supported length.

ACTION: Information only, no action required.

- ERR5409 tn The OHOL unit assigned to the conference loop is not valid. The spare dealer conference loop was used.
ACTION: Information only, no action required.
- ERR5410 tn The OHOL unit assigned to the conference loop is not available. The spare dealer conference loop was either non existing or not available.
ACTION: Information only, no action required.
- ERR5411 tn The M2616 telephone with CLS DELA, but is not an OHOL unit has initiated a conference.
ACTION: Information only, no action required.
- ERR5412 Invalid Status Register state in Low Speed Link to Option 11 Mail.
ACTION: Contact your technical support group.
- ERR5413 tn No charging information available from CO for an outgoing call.
ACTION: Information only, no action required.
- ERR5414 NIL AOC pointers found in protected trunk block.
ACTION: A possible solution is to switch the MR prompt in LD 16 to NO and then to switch it back to the current value (the TN of the trunk to follow).
- ERR5415 c For customer c, either the Authcode-last Retry RAN is defined with an invalid RAN route, or the route has no trunk member.
ACTION: Use LD 21 RDB to check the route information. Use LD 16 to correct the route information.
- ERR5416 c dn For customer c, DISA DN **dn**, an incoming call has been waiting too long (>RTMR) for DISA RAN. As a result, the caller is removed from the RAN queue and the call proceeds to the next processing step.
ACTION: Check the RAN hardware to see if the RAN trunks are capable of handling the traffic. An alternative to decreasing the frequency of message appearance is increasing the time defined for the RAN timer.
- ERR5417 Message received from analog line card contains invalid message type. The message is ignored. Format:
ERR5417 tttt mmmm
Where:
tttt = the TN the message was sent to in internat format.
mmmm = the message contents
ACTION: This message can be ignored if test messages are being sent to the line card firmware. Otherwise contact your technical support group.
- ERR5418 Reverse Charging billing ID received in an AOC-D or AOC-E message from CO for an outgoing call. This charging information is not taken into account. (TN of the trunk to follow).
ACTION: Information only, no action required.
- ERR5419 The currency information received from CO in AOC-D or AOC-E message overflows the storing area limit (4 294 967 295). This charging information will no be taken into account. (TN of the trunk to follow)
ACTION: Information only, no action required.

- ERR5420 Overflow during computing of AOC information received from CO. This charging information is not to be taken into account. (TN of the trunk to follow).
ACTION: Information only, no action required.
- ERR5421 Null time stamp found in AOC-S structure. Processing of the charging information not possible. (TN of the trunk to follow).
ACTION: Information only, no action required.
- ERR5422 The AOC-D or AOC-E charging information received from CO is smaller than the previous one. This information is discarded. (TN of the trunk to follow).
ACTION: Information only, no action required.
- ERR5423 No 500 set TN found to send Message Waiting Indication from.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 10 to define a pseudo-TN block with SMSA Class of Service, where y is the customer number.
- ERR5424 Procedure DO_XALC_SETS/DO_ANALOG_SETS module LIN5 Input received from Standalone Mail Message server. These sets should not exist outside of the configuration.
ACTION: Contact your technical support group.
- ERR5425 Buffer to the PRI (QPC720) hardware has overflowed.
ACTION: If necessary, replace the PRI card following the steps in the *Hardware Replacement* (553-3001-520).
- ERR5427 Failure on a D-ch used by VNS.
ACTION: Contact your technical support group.
- ERR5428 Failure on a bearer trunk used by VNS.
ACTION: Contact your technical support group.
- ERR5429 Unexpected event for the VNS state handler.
<WHATS_HAPPENED><VNS_STATEPN:UVNS_DNPTR> and if VNS state not 0:<CUST><INDEX>.
ACTION: Contact your technical support group.
- ERR5430 Unexpected message received on a D-ch used by VNS <message type>.
ACTION: Contact your technical support group.
- ERR5431 Invalid message to send an a D-ch used by VNS <message type>
ACTION: Contact your technical support group.
- ERR5433 FLH timer conflict found on the EXUT, XCOT cards during audit parameter download. The FLH timer stored on the card is different form that which is stored in the route for the unit. TN of the unit is given.
Force disconnect timer conflict found on the CIS incoming XDID card during audit parameter download. Unproductive timer conflict found on the CIS outgoing XDID card during audit parameter download.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 16 FLH to change the timer. Use DISC l s c and ENLC l s c to disable and then re-enable the card.

- ERR5434 tn A recall message is reported by the XFEM card to the software for an AC15 tie trunk but it is ignored because either the ACRL package is restricted or the TRRL feature is not configured properly. **tn** is the TN of the faulty trunk. If the ACRL package is restricted
ACTION: Contact your technical support group to enable the ACRL package. Reload the system if necessary.
If the TRRL feature is supposed to be configured, make sure the data configuration is correct.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD xx to check the TRRL feature Use LD xx to correct.
If the TRRL feature is not to be configured, check why the system at the far-end sends a recall signal.
ACTION: Contact your technical support group for assistance from the far-end.
- ERR5435 tn A recall message is reported by the XFEM card to the software for an AC15 tie trunk but it is ignored because the trunk is not in the "answered" state. **tn** is the TN of the faulty trunk.
ACTION: Contact your technical support group and with their help, check to find out why the system at the far-end is sending a recall signal when the trunk is in this state.
- ERR5436 Number of Call Registers is too low to process DASS/DPNSS calls. This can be changed in the configuration record (Overlay 17, prompt NCR).
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the Call Registers. Use LD 17 NCR to increase the NCR.
- ERR5437 Set is configured with DIG Member Number matching the SPRE first digit and one single DIG digit is expected. This should never happen unless wrong configuration manipulation. For instance, going from a two-digit table to a single-digit table without removing the single DIG Member Number matching the first SPRE code digit.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 20 TNB to check the DIG and LD 21 CDB to check the SPRE. Use LD 10, and LD 11 to correct the DIG, or LD 15 to correct the SPRE.
- ERR5439 CPND/CLID message not sent to card from output buffer. Output buffer overflow on MCMO card. MCMO set buffer may not be large enough or is not being emptied. Impact: User will not Refer to all or part of CPND/CLID information.
ACTION: If the error messages are from the same TN, check the station or the MCMO card for defects.
Output Data: **ERRyy xx tn**, where:
yy = the error number.
xx = reference numbers for the message.
tn = terminal number (tn is in all decimals (l s c u)).
- ERR5440 mm nn Auto Set Inst. default Model No. in LD 97 mismatches with model set defined in the data base, where:
mm = the default model type
nn = the default number.
ACTION: Information only, no action required.

- ERR5441 Facility message error. Incorrect Facility message is sent to the user.
ACTION: Contact your technical support group.
- ERR5442 The Set Based Administration initialization routine could not allocate enough memory for the restriction control blocks. Login limits are set to zero.
ACTION: Contact your technical support group.
- ERR5443 y BTDT table associated with this trunk y has been removed using Overlay 97. Table 0 is used.
ACTION: Either recreate BTDT table number as configured in trunk block or remove all trunks associated with this card and reconfigure them with BTDT to match an existing table.
- ERR5444 l s c A mismatch between previously downloaded Busy Tone Phase 1 cadence value and audit message has occurred.
ACTION: Values on card are changed to reflect audit message. If problem continues, contact your technical support group.
- ERR5445 l s c A mismatch between previously downloaded Busy Tone Phase 2 cadence value and audit message has occurred.
ACTION: Values on card are changed to reflect audit message. If problem continues, contact your technical support group.
- ERR5446 l s c A mismatch between previously downloaded BTDT call direction support value and audit message has occurred.
ACTION: Values on card are changed to reflect audit message. If problem continues, contact your technical support group.
- ERR5447 l s c A mismatch between previously downloaded Busy Tone Detect Level value and audit message has occurred.
ACTION: Contact your technical support group.
- ERR5448 The EI Originating party has received a CCM for the connection of the EI conference, but this CCM does not contain any EI-I.
ACTION: Still accept the message.
- ERR5449 The Wanted party has become free while involved in an EI process (waiting for the Unwanted's IPL or involved in an established EI conference), but it could not be re-rung for lack of resources or bad configuration.
ACTION: Send CRM (Congestion) on the Originating channel.
- ERR5468 NFCR tree being used for Outgoing Call Barring does not exist. No calls are barred.
ACTION: Turn off OCB on the set indicated, or configure the required tree.
- ERR5469 The number of digits used for LEC and ANI DN is more or less than 7 when trying to transmit ANI information to a CIS analogue/DTI trunk. The least significant digits of the ANI DN will be omitted or missing digits will be completed with ADDG.
ACTION: Check LEC prompt in LD 16 and ANI DN used.
- ERR5491 Bad CPNW configuration. The Speed Call list specified in the CPNW data block of Overlay 18 is invalid.
ACTION: Contact your technical support group.

- ERR5492 The PINX DN cannot be reached. Start at the first cause and follow that action. If this message reappears, go down the list one item at a time until the fault is cleared. If the fault does not clear, call your technical support group.
1. Either the configuration is invalid, or
ACTION: Program a valid configuration.
 2. the D-channel is disabled, or
ACTION: Enable the D-channel.
 3. The local PINX DN is not defined.
Define the local PINX DN.
- ERR5493 TCAP or ROSE protocol error for CPNW feature.
ACTION: Contact your technical support group.
- ERR5511 BTD Table 0 is not defined.
ACTION: Use Overlay 97 to create Busy Tone Detection Table 0.
- ERR5512 n ERR0020 blocking on
More than 10 ERR0020 messages received from loop **n** within 20 seconds. ERR0020 messages for loop **n** has been automatically turned OFF. ERR0020 will be automatically turned back ON in 20 seconds.
ACTION: Information only, no action required.
- ERR5513 n ERR0020 blocking off
ERR0020 messages for loop **n** has been automatically turned ON.
ACTION: If accompanied by an FWH0003 message, refer to the FHW chapter.
- ERR5514 Multiple appearances of a DN that is associated with a DTM key or with key 00 of a TN which has a DTM key is not permitted.
Output data: TN location DN for which an illegal multiple appearance has been found.
ACTION: Craftsperson must either deleted the multiple appearance, use another DN, or delete the DTM key.
- ERR5515 Applicable when MULT = YES
Configuration error. Regarding the value of the multiplier received from the CO, the value of RURC is not correct. the RURC value should not be great than the multiplier.
ACTION: Change RURC exponent value.
- ERR5516 The IDs configured on the NAS routing table must lead to a full DPNNS route, or full MCDN routes to routes including a single MCDN to DPNSS gateway.
ACTION: Reconfigure the NAS routing table.
- ERR5517 The IDs configured in the NAS routing tables must be UDP or CDP DNs.
ACTION: Reconfigure the NAS routing table.
- ERR5523 Parsing of name informations received from QSIG failed.
ACTION: Inconsistent name information has been received. Contact your technical support group.

- ERR5524 A network call park operation is tried from one node to another for which the Call Park Networkwide feature is not defined.
- ACTION:** Contact your system administrator if the Call Park Networkwide operation is not defined.
- ERR5526 Illegal multiple appearance of a DN assigned to a designated data mode key.
- ACTION:** Contact your technical support group.
- ERR5532 DNIS has more than 30 digits in the PCI message which is not supported by the MMail.
- ACTION:** Contact your technical support group.
- ERR5533 SETUP message has been received on an Australian UIPE interface with the request for a permanent connection to be established. The ISPC Reference Number included in the message does not allow the link to be established for the following reason:
- The format of the message is: ERR5533 -x -y where:
- y - D-channel number
x - Detail of the problem
1. Unknown ISPC Reference Number. there is no TN on any Phantom DT12 loops configured with this ISPC Reference Number.
 2. The ISPC Call Reference number is not delimited by a star '*' character in Calling number field of the received SETUP message.
 3. The ISPC Call Reference number is empty.
 4. The ISPC Call Reference numbner is made of information other than the digits in the IA5 format.
 5. The ISPC Call Reference number is longer than seven digits.
 6. The TN for which the ISPC Reference number is configured is on a Phantom DT12 loop not on the same group as the PRI2 trunk on which the request was received.
- ACTION:** Check the system configuration. If the configuration is correct, contact the Administrative Entity of the Public Network.
- ERR5534 The ISPC Call Reference number is empty in the Calling number field of the received SETUP message. This message is displayed when a SETUP message has been received on request for a permanent connection to be established.
- ACTION:** Contact the Administrative Entity of the Public Network.
- ERR5535 TN <cause>
- An improper configuration has been detected when an ISPC link is used to convey D-channel signaling.
- The format of the message is ERR5535 TN <cause> where:
- TN - ISPC D-channel slave trunk <cause> - represents the error cause:
- 0: SET_DTI22_PTRS failed with DT12 phantom trunk.
 - 2: The trunk must be a TIE trunk.
 - 3: The trunk must be configured with the DTN class of service.
 - 4: Data corruption with the route pointer.
 - 5: The route is not an ISL trunk.
 - 6: The trunk is not a DID trunk.
 - 7: The route is not configured with DSEL = DTA.
 - 8: The route must not be an ISL route.

- 9: The route is not configured with DLTN = YES.
- 10: The route is not configured.
- 11: The route is not configured with PRDL = BSY.
- 12: The route is not configured with DTD = YES.
- 13: The route is not configured as outgoing.
- 14: The route is not configured with NEDC = ETH.
- 15: The route is not configured with FEDC = ETH.
- 16: The route is not configured with CPDC = NO.
- 17: DDD_PACKAGE is restricted.

ACTION: Check the system configuration and use overlay 96 to restart the process if required.

ERR5536 The ISPC Call Reference number length is longer than 7 digits. This message is displayed when a SETUP message has been received on an Australian UIPE interface with the request for a permanent connection to be established.

ACTION: Contact the Administrative Entity of the Public Network.

ERR5537 TN DN

The maximum number of calls to be performed on a data interface for D-channel signalling to use an ISPD link has been reached. This manual process has been stopped. The format of the message is:

ERR5537 TN DN, where:

TN - ISPC D-channel slave trunk

DN - represents the digits received by the Meridian 1. If no digits have been received, nothing is printed. If some digits have been received, but the DN is incomplete or invalid, the digits will be printed.

ACTION: Check the system configuration and use overlay 96 to restart the process if required. Also, check the system configuration of the far end Meridian 1.

ERR5538 A SETUP message has been received on an Australian UIPE interface with the request for a permanent connection to be established. As the ISPC package (#313) is not enabled, the request has been requested.

ACTION: Enable Package ISPD (#313) and reload the PBX if an ISPC link is required.

ERR5539 <type> of error> <event/state> <parm1> <parm2><parm3>

Call Completion (CC) Supplementary Service. Protocol error detected by CC QSIG protocol handler.

ACTION: Contact your technical support group.

ERR8985 Invalid Group Hunt number encountered, Group Hunting terminated.

ACTION: Contact your technical support group.

ERR8986 This TN should have CFW AC configured. Procedure icp_storecfw and icp_act_allowed.

ACTION: Contact your technical support group.

ERR8987 FFC cannot be used without SPRE defined.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 15 to define SPRE.

ERR8988 Flexible Dial Tone Detection (FDTD) table not configured.

ACTION: Contact your technical support group.

- ERR8999 x Attempt to use a nonexistent ART x. Default for route type is used.
ACTION: Contact your technical support group
- ERR9000 C T A
 NAS routing is incorrectly configured. The routing tables should contain DN's to reach remote attendants on the network. The configuration error was noticed by the software while processing.
 CUST c customer number
 TEN t tenant number
 ALT a alternative
 The previous alternative route is probably badly defined, for example as a local DN.
ACTION: Redefine the previous alternative route.
- ERR9006 Invalid ESRT configuration. ACCD intercept treatment has been given to the set.
ACTION: Correct the database.
- ERR9007 Invalid OSDN configuration, caller information is not linked.
ACTION: Correct the database
- ERR9008 Station set specified by OSDN is not configured with an OSN key. Caller information is not linked.
ACTION: Correct the database.
- ERR9009 Undefined CLID entry is configured for the originating DN of an ESA call. Calling number is set to customer's DFCL.
ACTION: Correct the database.
- ERR9012 ESA CLID configuration error detected. Calling number for ESA call is set to customer's DFCL.
ACTION: Correct the database.
- ERR9013 TN N data
 Parsing of QSIG Diversion Informations received failed, or QSIG Diversion informations sent have been answered unexpectedly. Incorrect QSIG Diversion informations are dropped. Output parameters:
 TN = TN from which information is received.
 N = error number
 data = dependant on error number (N)
ACTION: Report the problem along with the output parameters.
- ERR9016 x NON PROVISION SERVICE y An incoming SETUP with NSF IE message is received from the NI-2 CBC master route and the service specified in the facility coding field cannot be found in service route associating with the master route. The call was terminated as public call. Where:
 x = Master route number
 y = NSF IE in Hex format
ACTION: Configure a service route.
- ERR9021 Type 5A PAD messages were specified for an unknown trunk card type. The TN is printed.
ACTION: Contact your technical support group.

- ERR9022 Type 5B PAD messages were specified for an unknown trunk card type. The TN is printed.
ACTION: Contact your technical support group.
- ERR9023 Incorrect database configuration encountered. CNUS class of service conflicts with CNAAClass of service.
ACTION: Correct the database configuration in LD10.
- ERR9027xxx DCH TN STATEPM
 WARNING: Cannot use the B-channel or the ISL trunk because the STATEPM of the trunk is not idle. The B-channel or ISL trunk is put in a maintenance busy state.
ACTION: Manually restart the given B-channel or the ISL trunk.
- ERR9034 x y z Cannot send an ISRM containing a Message Waiting NSI string. There is no NORTEL message waiting NSI string configured in Overlay 15 (for Notification (NOTI) or Cancellation (CNC)).
ACTION: FORMAT_MWI_NSI. Module DIO.
- ERR9036 DO NOT PRINT
 The TMDI output buffer is not allocated.
ACTION: Ensure that some unprotected memory is available, then use LD 17 and CHG CEQU (no real changes required, to rebuild the output buffer.)
- ERR9044 The ANI data should be retrieved from an ANI Entry but the specified Entry does not exist in the Customer Data Block.
ACTION: Action: Configure the ANI Entry that is needed (Overlay 15).
- ERR9048 AUDIT turned on Analog CLI.
ACTION: Contact your technical support group.
- ERR9049 AUDIT turned off on Analog CLI.
ACTION: Contact your technical support group.
- ERR9050 RAN/MIRAN channel is not available.
ACTION: Contact your technical support group.
- ERR9051 The CAC conversion data must be retrieved from a CAC conversion entry but the specified entry does not exist in the Customer Data Block. The default table is used instead.
ACTION: Configure the CAC conversion entry that is needed (Overlay 15).
- ERR9052 VNS does not support Backup D-channel signalling.
ACTION: VNS call made using BDCH.
- ERR9056 The XCT card is the only card supported by TWR1. The MFS card is not supported. The call cannot be completed
ACTION: Contact your technical support group.
- ERR9057 The length of FLEN in LD 86 and LD 90 is not configured. The call cannot be completed.
ACTION: Contact your technical support group. The FLEN must be configured.
- ERR9058 The supervision is not of the expected type.
ACTION: Contact your technical support group.

- ERR9059 The data received for INS-J is more than 128 bytes.
ACTION: Contact your technical support group.
- ERR9060 An invalid parameter type has been received.
ACTION: Contact your technical support group.
- ERR9061 INS-J data was not expected.
ACTION: Contact your technical support group.
- ERR9062 No DID digits were received in the INS-J data.
ACTION: Contact your technical support group.
- ERR9063 An ACLI SSD message was unexpectedly received.
ACTION: Contact your technical support group.
- ERR9064 The father CR is nil for the ACLI son call register.
ACTION: Contact your technical support group.
- ERR9065 Parsing of QSIG Transfer information received failed.
ACTION: Report the problem. 

FHW — Faulty Hardware

Faulty Hardware is a resident program. FHW does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

The M1 Initialization Prevention and Recovery feature prevents initializations from network loop, SDI device or Expanded SDI device faults. An FHW000x message on all maintenance TTYs indicates a loop or device fault. The faulty network loop, SDI or Expanded SDI remain enabled until one of the following occur:

- ◆ the faulty hardware is disabled by your maintenance commands
- ◆ the faulty hardware is disabled by background routines
- ◆ the faulty hardware is disabled by the FHWR function
- ◆ an initialization
- ◆ a sysload

FHW messages

FHW0000 n Loop **n** is faulty as detected by the LRIP function. An INI0000 8000 is prevented.

ACTION: Do the following immediately:

1. Load the appropriate maintenance overlay according to the database configuration of loop **n**. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to check the loop type of **n**:
 - ◆ Use LD 32 when the loop type is a Terminal loop, a Super Loop, a Remote Loop [without RPE2 package 165 equipped], or a Multipurpose ISDN Signal Processor Loop. Refer to the *Administration Guide*. Use LD 22 PRT, PKG to check for RPE2 package 165.
 - ◆ Use LD 34 when the loop type is a Tone/Digit Sender Loop.
 - ◆ Use LD 38 when the loop type is a Conference Loop.
 - ◆ Use LD 46 when the loop type is a Multifrequency Sender Loop.
 - ◆ Use LD 53 when the loop type is a Remote Loop with RPE2 package 165 equipped. Refer to the *Administration Guide*. Use LD 22 PRT, PKG to check for RPE2 package 165.
 - ◆ Use LD 60 when the loop type is a Digital Loop.
 - ◆ Use LD 75 when the loop type is either an Integrated Digital Access Loop or a Primary Rate Interface Loop.
2. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to print the status of loop **n** to ensure that it is marked faulty. Skip the remaining steps if loop **n** is not marked “faulty”.
3. Enter the disable command for loop **n**.
4. Enter the disable command for all other loops that are on the same hardware card as the faulty loop.
5. Replace the hardware card, by following the steps in the *Hardware Replacement* (553-3001-520).
6. Enter the enable command for all the loops that are on the newly installed hardware card.
7. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to print the status of loop **n** to ensure that it is no longer marked faulty.

If you are unable to perform steps 1 to 3, the FHWR function will disable the faulty loop as a low priority task.

FHW0001 n SDI device **n**, which is not defined as an Expanded D-channel, is faulty as detected by the SRIP function. An INI8000 is prevented.

ACTION: Do the following immediately:

1. Load the appropriate maintenance overlay according to the data base configuration of SDI device **n**:
 - ◆ Use LD 37 when the SDI device is either a Terminal Port or a Printer Port on a non-MSDL card.
 - ◆ Use LD 48 when the SDI device is an Application Module Link on a non-MSDL card.
 - ◆ Use LD 96 when the SDI device is on an MSDL card, or when either a Backup D-channel or a D-channel is on a non-MSDL card.

2. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to print the status of the SDI device **n** to ensure that it is marked faulty. Skip the remaining steps if the SDI device **n** is not marked faulty.
3. Enter the disable command for the faulty SDI device.
4. Enter the disable command for all other SDI devices that are on the same hardware card as the faulty SDI device.
5. Replace the hardware card, by following the steps in the *Hardware Replacement* (553-3001-520).
6. Enter the enable command for all the SDI devices that are on the newly installed hardware card.
7. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to print the status of the SDI device **n** to ensure that it is no longer marked as faulty.

If you are unable to perform steps 1 to 3, the FHWR function will disable the faulty SDI device as a low priority task.

FHW0002 n SDI device **n**, which is defined as an Expanded D-channel, is faulty as detected by the SRIP function. an INI8000 is prevented.

ACTION: Do the following immediately:

1. Load LD 75.
2. Print the status of the SDI device **n** to ensure that it is marked faulty and has been disabled. Skip the remaining steps if the SDI device **n** is not marked faulty.
3. Enter the disable command for the faulty SDI device.
4. Enter the disable command for all other SDI devices that are on the same hardware card as the faulty SDI device.
5. Replace the hardware card, by following the steps in the *Hardware Replacement* (553-3001-520).
6. Enter the enable command for all the SDI devices that are on the newly installed hardware card.
7. Print the status of the SDI device **n** to ensure that it is no longer marked as faulty.

If you are unable to perform steps 1 to 3, the FHWR function will disable the faulty Expanded SDI device as a low priority task.

FHW0003 n Loop **n** has been detected as faulty by LOIP function. INI0000 0006 has been averted.

ACTION: Do the following immediately:

1. Load the appropriate maintenance Overlay according to the data base configuration of loop **n**. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to check the loop type of **n**:
2. Use LD 32 when the loop type is a Terminal loop, Super Loop, or a Remote Loop [without RPE2 package 165 equipped]. Refer to the *Administration Guide*. Use LD 22 PRT, PKG to check for RPE2 package 165.
3. Use LD 53 when the loop type is Remote Loop [with RPE2 package 165 equipped]. Refer to the *Administration Guide*. Use LD 22 PRT, PKG to check for RPE2 package 165.

4. Use LD 60 when the loop type is Digital Loop.
5. Use LD 75 when the loop type is either an Integrated Digital Access Loop or a Primary Rate Interface Loop
6. Print the status of loop **n** to ensure that it is marked “faulty”. Skip remaining steps if loop **n** is not marked “faulty”.
7. Enter the disable command for loop **n**.
8. Enter the disable command for all other loops that are on the same hardware card as the faulty loop
9. Replace the hardware card, following the steps in the *Hardware Replacement* (553-3001-520).
10. Enter the enable command for all the loops that are on the newly installed hardware card.
11. Print the status of loop **n** to ensure that it is no longer marked as faulty.

If you are unable to perform steps 1 to 3, the FHWR function will disable the faulty loop as a low priority task.

FHW0004 n Loop **n** has been automatically disabled by the FHWR function.

ACTION: Do the following immediately:

1. Load the appropriate maintenance Overlay according to the data base configuration of loop **n**. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to check the loop type of **n**:
 - ◆ Use LD 32 when the loop type is a Terminal loop, Super Loop, Remote Loop [*without* RPE2 package 165 equipped], or a Multipurpose ISDN Signal Processor Loop. Refer to the *Administration Guide*. Use LD 22 PRT, PKG to check for RPE2 package 165.
 - ◆ Use LD 34 when the loop type is a Tone/Digit Sender Loop
 - ◆ Use LD 38 when the loop type is a Conference Loop
 - ◆ Use LD 46 when the loop type is a Multifrequency Sender Loop
 - ◆ Use LD 53 when the loop type is a Remote Loop [*with* RPE2 package 165 equipped]. Refer to the *Administration Guide*. Use LD 22 PRT, PKG to check for RPE2 package 165.
 - ◆ Use LD 60 when the loop type is a Digital Loop.
 - ◆ Use LD 75 when the loop type is either an Integrated Digital Access Loop or a Primary Rate Interface Loop.
2. Enter the status command for loop **n** to ensure that it is marked “faulty” and has been disabled. Skip the remaining steps if loop **n** is not marked “faulty”.
3. Enter the disable command for all other loops that are on the same hardware card as the faulty loop.
4. Replace the hardware card, by following the steps in the *Hardware Replacement* (553-3001-520).
5. Enter the enable command for all the loops that are on the newly installed hardware card.
6. Print the status of loop **n** to ensure that it is no longer marked as faulty.

FHW0005 n SDI device **n**, which is not an Expanded D-channel, has been automatically disabled by the FHWR function.

ACTION: Do the following immediately:

1. Load the appropriate maintenance Overlay according to the data base configuration of SDI device **n**:
 - ◆ Use LD 37 when the SDI device is either a Terminal Port or a Printer Port, on a non-MSDL card.
 - ◆ Use LD 96 when the SDI device is on an MSDL card, or when either a Backup D-channel or a D-channel is on a non-MSDL card.
2. Enter the Status command for SDI device **n** to ensure that it is marked “faulty” and has been disabled. Skip the remaining steps if SDI device **n** is not marked “faulty”.
3. Enter the disable command for all other SDI devices that are on the same hardware card as the faulty SDI device.
4. Replace the hardware card, by following the steps in the *Hardware Replacement* (553-3001-520).
5. Enter the enable command for all the SDI devices that are on the newly installed hardware card.
6. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to print the status of SDI device **n** to ensure that it is no longer marked as faulty.

FHW0006 n SDI device **n**, which is an expanded D-channel, has been automatically disabled by the FHWR function.

ACTION: Do the following immediately:

1. Load LD 75.
2. Enter the status command for SDI device **n** to ensure that it is marked “faulty” and has been disabled. Skip the remaining steps if the SDI device **n** is not marked “faulty”.
3. Enter the disable command for all other SDI devices that are on the same hardware card as the faulty SDI device.
4. Replace the hardware card, by following the steps in the *Hardware Replacement* (553-3001-520).
5. Enter the enable command for all SDI devices that are on the newly installed hardware card.
6. Refer to the *Administration Guide*. Use LD 22 PRT, CFN to print the status of SDI device **n** to ensure that it is no longer marked as faulty. 

HEX — Hexadecimal Display Codes

Hexadecimal displays on card faceplates indicate normal operation or faults.

A description and an action for the hexadecimal display codes follow the description of each card.

How to find the hex codes

If you see a hexadecimal display code you want to investigate, do the following:

- 1 Note the card name.
- 2 Locate the card name in this guide's *Index of cards*.
- 3 Go to the page where the card is listed.
- 4 Locate the hex code in the *XXX faceplate hex codes* list that follows the Purpose, Function and Feature description of the card.
- 5 Read the hex code description and follow the action.

Convert hexadecimal to binary and decimal

It is sometimes necessary to convert hexadecimal numbers (HEX) output in a message into decimal. In Release 15, the LD 32 CONV command can be used to convert TNs between hex and decimal.

Example: a single density terminal number is output as 081A hexadecimal. To find the decimal equivalent:

- 1 Convert each HEX digit into binary. See Table 1.

hex: 081A binary: 0000 1000 0001 1010

- 2 Decode the binary number using the formats shown in Figure 1. In this example, the TN is single density.
- Group: 000 = 0 decimal

Loop: 01000 = 8 decimal

Shelf: 00 = 0 decimal

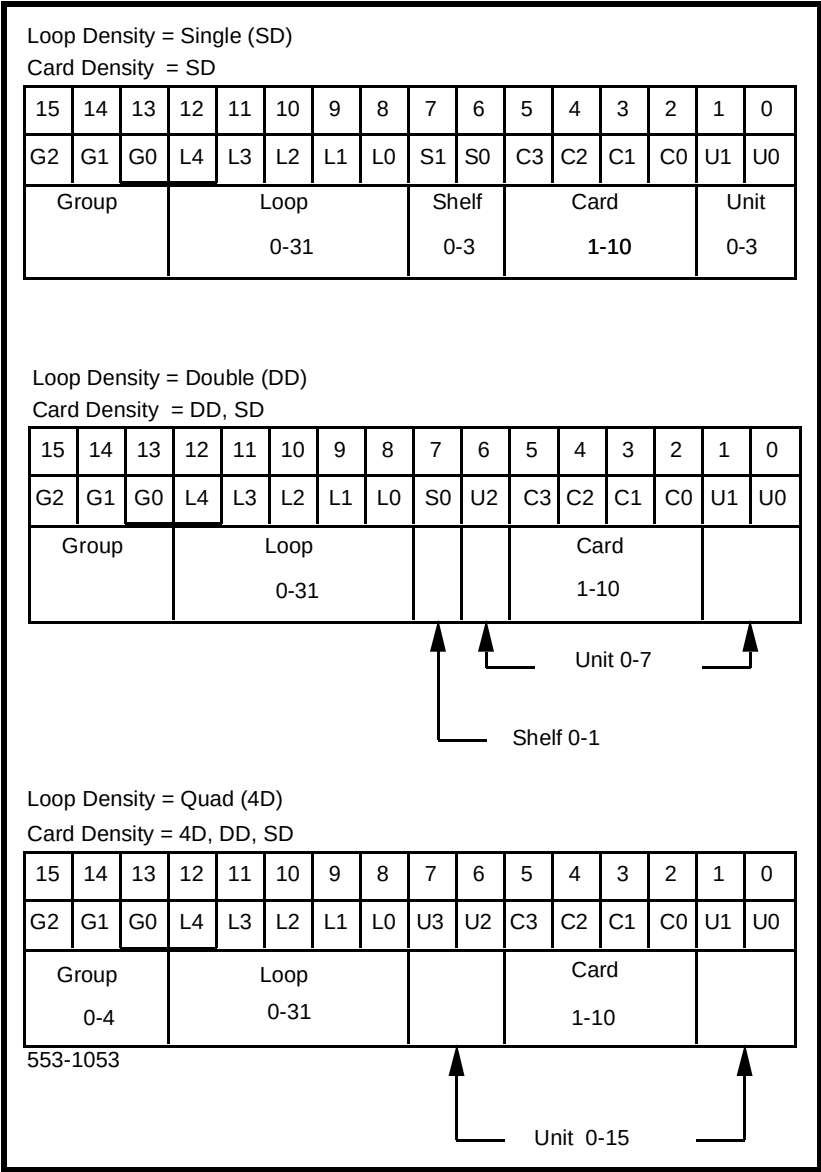
Card: 0110 = 6 decimal

Unit: 10 = 2 decimal TN in decimal = 8 0 6 2.

Table 1: Convert hex to binary and decimal

HEX	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Binary	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
Decimal	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Figure 1
Terminal number formats



NT8D01 Controller faceplate codes

The NT8D01 Controller faceplate has a two digit hexadecimal display. The display has two modes of operation: normal operation and power on reset self-test.

Normal operation

During normal operation the display alternately shows

- 1 The Controller number (1-95) in hexadecimal.
- 2 The port on which the Controller clock is tracking. The tracking is indicated by the decimal points before and after the digit. The possible tracking modes are:

C0 - Controller tracking to the network connected to port 0.
 C1 - Controller tracking to the network connected to port 1.
 C2 - Controller tracking to the network connected to port 2.
 C3 - Controller tracking to the network connected to port 3.
 CF - Controller not tracking any network.

See also **LD 30** for the following commands:

CPED : clear Peripheral Controller maintenance displays
 RPED : read Peripheral Controller maintenance displays

Self-tests

During the self-tests, the display quickly shows the self-tests listed below. If a test fails, the display shows the number of the failed test for 0.5 seconds before continuing the remaining tests. The self-test sequence is repeated until all tests pass.

Table 2: Controller self-test codes

Code	Definition
02	A31 #1 external buffer test.
03	A31 #1 internal context memory test, phase A.
04	A31 #1 internal context memory test, phase B.
05	A31 #1 internal TXVM memory test.
06	A31 #1 configuration memory test.
07	A31 #1 external FIFO test.
08	A31 #2 external buffer test.
09	A31 #2 internal context memory test, phase A.
0A	A31 #2 internal context memory test, phase B.
0B	A31 #2 internal TXVM memory test.
0C	A31 #2 configuration memory test.
0D	A31 #2 external FIFO test.
0E	peripheral side W72 loopback test using A31 #1.
0F	peripheral side W72 loopback test using A31 #2.
10	R72 #1 N-P switching control memory test.
11	R72 #1 320 x 8 NIVD buffer test.
12	R72 #1 N-P quiet-code register test.
13	R72 #1 P-N switching control memory test.
14	R72 #1 640 x 8 XIVD buffer test.
15	R72 #1 640 x 8 XIVD loopback buffer test.
16	R72 #1 P-N quiet-code register test.
17	R71 #1 register test.
18	R71 #1 continuity test, peripheral side.
19	R71 #1 continuity test, network side.
1A	R71 #1 simulation packet transmission test.
1B	DUART port A self-test.
1C	DUART port B self-test.
1D	R72 #2 N-P switching control memory test.
1E	R72 #2 320 x 8 NIVD buffer test.
1F	R72 #2 N-P quiet-code register test.
20	R72 #2 P-N switching control memory test.
21	R72 #2 640 x 8 XIVD buffer test.
22	R72 #2 640 x 8 XIVD loopback buffer test.
23	R72 #2 P-N quiet-code register test.
24	R71 #2 register test.
25	R71 #2 continuity test, peripheral side.
26	R71 #2 continuity test, network side.
27	R71 #2 simulation packet transmission test.
EE	Bus error, exception errors, etc.

Mass Storage Interface (MSI) faceplate codes

The Mass Storage Interface (MSI) card is located on the CPU shelf of systems equipped with disk drives. Table 3 applies to QPC584E and earlier versions. If the faceplate cable is disconnected, the MSI displays AF for about 7 seconds then flashes 55 followed by 10, the idle state. IOD0050 and OVL0005 messages are output.

Table 3: Mass Storage Interface (MSI) faceplate codes

The meaning of the code depends on whether the display is alternating, counting, flashing or steady.

Mass Storage Interface Faceplate Codes		
Display Status	Code	Meaning
Alternating	Ax	The MSI is reading disk records.
Counting	00-50	During the restore command in LD 43, the MSI display counts from 0 to 32 hex as the floppies are being copied to hard disk. Each count corresponds to a block of data being transferred. It also counts down when a second copy of the floppy is made on the hard disk.
	55-00	During the running of LD 37 I/O Diagnostic commands: During execution of the MSI 0 command, the display shows a pattern counting down from 55 to 00 on two separate occasions. Each count occurs in approximately 1 second intervals. This simulates the fast forward and reverse tape motion which takes about 85 seconds each. During execution of the MSI RW 0 command, after the A1-AF pattern indicating records are being read, there is an occasional '8B' indicating records are being written. When writing to a floppy with the write protect tab on, the display flashes 97 and IOD075 is output.
Flashing	00	Hard disk or floppy disk is not formatted (QPC584A to D). For QPC584E or later, 00 indicates missing information from disk.
	01	No Index/Sector signal (hardware/disk error).
Flashing	02	No seek complete on the floppy disk (hardware/disk error).
	03	Write fault.

Mass Storage Interface Faceplate Codes		
Display Status	Code	Meaning
	04	Addressed disk drive is not ready. Check that the floppy disks are in place and that they are properly seated. Be sure that the floppy disks are not upside down or backwards in their drives.
	05	Addressed disk drive is not selected. Check that the drive is present, and the cables to the controller are correct. If the MSU has just been powered on, the MSI must be initialized. This is done by turning the MSI switch from ENL to DIS and back to ENL.
	06	No Track Zero found (hardware error).
	07	Multiple Drives selected (hardware error).
	0D	A command is still executing and a new command is issued.
	10	Check Sum Error (hardware/medium error).
	11	Read Error (medium error).
	12	No address mark found in ID field on disk (medium error).
	13	No address mark found in data field on disk (medium error).
	14	No record found (disks) (medium error).
	15	Seek error (hardware error).
	1A	Too many parameters (illegal request).
	20	Invalid Command (illegal request).
	21	Illegal parameters were sent to the controller. For QPC584E; 21 indicates invalid address on disk.
	22	Switching from hard disk to floppy disk for normal operation.
	23	Disk capacity overflow (illegal request).
	24	Illegal field in command (illegal request).
	25	Invalid drive selection (illegal request).
	26	Invalid field in parameter list (illegal request).
	27	Write protected (also see 97).
	28	Disk changed.
Flashing	29	Power on reset occurred.
	2A	Drive parameters changed.
	2B	Floppy disk controller error.
	31	Drive format is corrupted (medium error).
	33	Switching from floppy disk to hard disk for normal operation.
	40	RAM failure (hardware error).

Mass Storage Interface Faceplate Codes		
Display Status	Code	Meaning
	41	ECC diagnostic failure (hardware error).
	91	Uncorrectable error in data field of diskette. Replace the floppy disk that was being accessed when the error occurred.
	92	Controller did not detect the address mark in the Identification (ID) field.
	94	Controller could not find the requested record.
	95	Seek error. The Controller could not find the specified track.
	97	Attempting to write on a write-protected disk. Floppy disk B has a write-protect tab.
	BA	Write error.
	BC	A diskette write error occurred during the write of a record.
	BD	Logical Record Count (LRC) mismatch during disk write. The LRC calculated by the MSI does not agree with the LRC sent by the system.
	BE	Record Number (RN) mismatch during disk write. The current RN in the MSI does not agree with the RN sent by the system.
	BF	Illegal Record Type (RT) during disk write. The record requested by SL-1 to be written onto diskette is neither a configuration record (RT8) nor data record (RT7).
	CA	Beginning to copy data from floppy disk A to hard disk.
	CA	Beginning to copy data from floppy disk B to hard disk.
	CC	Copy (restore) from floppy disk to hard disk is complete.
	CD	Hard disk has been positioned to shipping zone.

Flashing	D0	Attempting to do a data base back up when there are no data records on the hard disk. Do a data dump to the hard disk before doing the backup to the floppy disks.
	D1	Attempting to do a data base back up when MSI switch settings have not been set for operation from a hard disk.
	D6	Read error of hard disk private sector.
	DD	Data dump (back-up) to floppy disk B is beginning.
	DC	Data dump (back-up) to floppy disk is complete.
	E1	Cartridge time-out because MSI data cartridge is not present. Install a data cartridge.

Mass Storage Interface Faceplate Codes		
Display Status	Code	Meaning
	E2	Illegal MSI data cartridge. Check that the data cartridge is properly installed (proper orientation with all pins inserted), or replace data cartridge.
	E3	Disk ID on floppy does not match ID in data cartridge. Replace floppy or cartridge.
	E4	Mismatch in System Version Number (SVN). SVN on disk does not match SVN in MSI data cartridge. Replace floppy disks or cartridge. SVN indicates the SL-1 machine type. For example the SVN for SL-1 XN it is 911.
	E5	Mismatch in System Issue Number (SIN). SIN release number on disk does not match SIN release number in MSI data cartridge. Replace floppy disks or data cartridge. SIN consists of two parts: a release number and an issue number. The release number is the most significant (decimal) digit of the SIN and the issue number is the lease two significant digits. For example, a SIN of 855 means a release number of 8 and an issue number of 55. The MSI only compares the release portion of the SIN.
	E6	Diskette read error encountered during attempted read of the private sector. Check that the floppy disk is present.
	E7	Diskette write error encountered during attempted write to the private sector. Check that the write-protect tab has been removed from the floppy disk in drive B.
	E8	Illegal attempt to write onto floppy disk A. This is not allowed.
Flashing	E9	Illegal attempt to write to track 1 or track 2 space on the hard disk. This is not allowed.
	EA	Illegal value was written into track register. The value written was not 1, 2, 4 or 8.
	EC	Conversion error in computing logical sector number for hard disk.
	EE	Maximum record number was exceeded during a database write to disk.
	FA	Fault in floppy drive A. Self-test failed. Check cabling to drive A, check drive DIP switches or replace drive.
	FB	Fault in floppy drive B. Self-test failed. If code 97 was displayed before FB, the write-protect tab is in place and the write test could not be completed. Remove the write-protect tab on floppy disk B. Otherwise, check cabling to drive B, check drive DIP switches or replace drive.
	FC	Fault in hard disk drive C. Self-test failed. Check cabling to drive C, check drive DIP switches or replace drive.

Mass Storage Interface Faceplate Codes		
Display Status	Code	Meaning
Steady	FD	Wrong floppy disks in drives.
	FE	Read error.
	FF	Floppy disk is in the wrong drive. Floppy disk A is in drive B and floppy disk B is in drive A. Drive A must contain a Track 1 floppy, Drive B a Track 3 floppy.
	00	Mass Storage Interface (MSI) power-up completed.
	10	Mass Storage Interface (MSI) in idle state.
	2F	Unknown command from CPU.
	81-8F	Codes 81 to 8F indicate the MSI is simulating tape functions. 81 = Slow forward with Inter-record Gap (IRG) 82 = Slow reverse with Inter-record Gap (IRG) 83 = Fast forward with Inter-record Gap (IRG) 84 = Fast reverse with Inter-record Gap (IRG) 85 = Rewind

Steady		89 = Set timer (to a maximum of 64 ms)
		8A = Read disk
		8B = Write disk
		8C = Diagnostic write
		8D = Diagnostic fast forward
		8E = Diagnostic fast reverse
		8F = Unrecognized command
	A1	MSI has completed reading a record from disk and is transferring the data to the CPU.
	A2	MSI has completed writing a record from its write buffer onto a diskette.
	AD	during restore and backup for hard disk, the Mass Storage Interface (MSI) is waiting for the disk controller to indicate that it has completed execution of the command.
	AE	MSI has sent a status request to the Disk Controller.
	AF	MSI has issued a command to the Disk Controller.
	C2	Copying track 1 to track 2 on hard disk.
	C4	Copying track 3 to track 4 on hard disk.
	FE	Read error.

Mass Storage Interface Faceplate Codes		
Display Status	Code	Meaning
	FF	Floppy disk is in the wrong drive. Floppy disk A is in drive B and floppy disk B is in drive A. Drive A must contain a Track 1 floppy, Drive B a Track 3 floppy.

Floppy Drive Interface pack (FDI) faceplate codes

The codes listed in this table appear on the Floppy Disk Interface (FDI) circuit pack located on the CPU shelf of systems equipped with disk drives.

Table 4: Floppy Drive Interface pack (FDI) faceplate codes
The meaning of the code depends on whether the display is alternating, counting, flashing or steady.

Floppy Drive Interface Faceplate Codes		
Display Status	Code	Meaning
Alternating	A1-70	FDI is reading disk records.
Counting	55-00	Display counts down in hexadecimal from 55 to 00 in approximately 1 second intervals. This display will run through two cycles. This is to simulate fast-forward and fast-reverse tape motion during diagnostics.
Flashing	44	Sanity timer has timed-out. Extraordinary situation.
	55	Floppy Disk Unit (FDU) or CPU not responding. The FDU may have no power. Check FDI to FDU cable. This message is also displayed if the CPU does not respond to the FDI after giving it a command.
	60	Missing address mark. The Floppy Disk Controller (FDC) cannot detect the ID address mark after encountering the index hole twice. Check the cable or replace the diskette (disk error).
	61	Not able to write. The Floppy Disk Controller (FDC) has detected a write protect signal from the addressed drive. Remove the write protect tab on floppy disk B and try again.
	62	No data. Floppy Disk Controller (FDC) cannot find the sector specified (disk error).

Floppy Drive Interface Faceplate Codes		
Display Status	Code	Meaning
Flashing	63	Overrun. Floppy Disk Controller (FDC) is not being serviced fast enough by the CPU (FDC/hardware error).
	64	Data error. A checksum error in the ID field or the data field was detected (disk error).
	65	End of cylinder. An attempt has been made to access beyond the final sector of a cylinder (FDC/hardware error).
	66	Missing address mark in data field. In conjunction with (60), this specifies the missing address mark to have occurred in a data field (disk error).
	67	Bad cylinder. The cylinder address as read from the disk does not match the cylinder address loaded into the Floppy Disk Controller (FDC), and the disk cylinder address equals FFH (FDC/hardware error).
	68	Wrong cylinder. The cylinder address as read from the disk does not match the cylinder address loaded into the Floppy Disk (FDC) (FDC/hardware error).
	69	Data error in data field. A checksum error was detected in the data field (disk error).
	6A	Control mark. A sector with a deleted data address mark was encountered (disk error).
	72	Abnormal termination. Command execution started but not be successfully completed.
	74	Interrupt module error. An error was detected during execution of interrupt module.
	75	Read2s module error.
	76	Write2s module error.
	77	Initctrl module error.
	78	Command interface error. Incorrect hand shaking between Floppy Disk Controller (FDC) and CPU during attempt to load command block.
	79	Result interface error. Incorrect handshaking between Floppy Disk Controller (FDC) and CPU during attempt to read result bytes.
	7A	RXRSLT module error.
	7C	Addressed drive not ready.
	7D	Invalid hard disk operation attempted.
	7E	Logical sector number out-of-range.
Steady	BA	Write error.
	BC	A disk write error occurred during the write of a tape record.

Floppy Drive Interface Faceplate Codes		
Display Status	Code	Meaning
Flashing	BD	Checksum mismatch during disk write. The checksum calculated by the MSI does not agree with the checksum sent by the system.
	BE	Record Number (RN) mismatch during disk write. The current RN in the MSI does not agree with the RN sent by the system.
	BF	System has requested that a record be written to a disk. The record is neither a configuration record nor a data record.
	E1	Cartridge timeout because MSI data cartridge is not present. Install a data cartridge.
	E2	Illegal MSI data cartridge. Check that the data cartridge is properly installed (proper orientation with all pins inserted), or replace data cartridge.
	E3	Disk ID on floppy disk does not match disk ID in data cartridge. Replace floppy disks or data cartridge.
	E4	Mismatch in System Version Number (SVN). SVN on disk does not match SVN in MSI data cartridge. Replace floppy disks or cartridge.
	E5	Mismatch in System Issue Number (SIN). SIN release number on disk does not match SIN release number in MSI data cartridge. Replace floppy disks or data cartridge.
	E6	Diskette read error encountered during attempted read of the private sector. Check that the floppy disk is present.
	E7	Diskette write error encountered during attempted write to the private sector. Check that the write-protect tab has been removed from the floppy disk in drive B.
	E8	Illegal attempt to write onto floppy disk A. This process is not allowed.
	EA	Illegal value was written into track register. The value written was not 1, 2, 4 or 8.
	EE	Maximum record number was exceeded during database write to disk.
	FA	Fault in floppy drive A. Self-test failed. Check cabling to drive A or replace drive.

Floppy Drive Interface Faceplate Codes		
Display Status	Code	Meaning
Flashing	FB	Fault in floppy drive B. Self-test failed. If code 61 was displayed before FB, the write-protect tab is in place and the write test could not be completed. Remove the write-protect tab on floppy disk B. Otherwise, check cabling to drive B or replace drive.
	FD	Wrong floppy disks in drives.
	FE	Read error.
	FF	Floppy disk is in the wrong drive. Floppy disk A is in drive B and floppy disk B is in drive A. Insert disks in the proper drives.
Steady	00	Floppy Disk Interface (FDI) power-up completed.
	10	Floppy Disk Interface (FDI) in idle state.
	2F	Unknown command from CPU.
	70	Invalid command. Floppy Disk Controller (FDC) has received an unrecognizable command. This code also signals the successful completion of all asynchronous processing.
	71	Asynchronous command complete.
	73	Ready status change.
	7B	Synchronous command complete.
	81-8F	Codes 81 to 8F indicate the FDI is simulating tape functions. 81 = Slow forward with Inter-record Gap (IRG) 82 = Slow reverse with Inter-record Gap (IRG) 83 = Fast forward with Inter-record Gap (IRG) 84 = Fast reverse with Inter-record Gap (IRG) 85 = Rewind 89 = Set timer (to a maximum of 64 ms) 8A = Read disk 8B = Write disk 8C = Diagnostic write 8D = Diagnostic fast forward 8E = Diagnostic fast reverse 8F = Unrecognized command
	A1	Floppy Disk Interface (FDI) has completed reading a record from a disk into its read buffer and is transferring the data to the CPU.
	A2	Floppy Disk Interface (FDI) has completed writing a record from its write buffer onto a disk.
	CC	Data transfer from cartridge is complete.

Maintenance Display Codes

The maintenance display indicates status and error conditions. The display is located on the Interface or Miscellaneous card in the CPU.

Note: Option 11 does not have a maintenance display, the HEX codes are displayed on the maintenance terminal during Initialization or Sysload. In Option 81, the maintenance display on the NT6D66 Call Processor (CP) Card shows two lines of information, with up to 16 characters per each line. The hexadecimal code and its definition are shown on the display.

Each new code shown on a maintenance display overwrites the one before it. However:

- ◆ All codes received on common equipment displays are recorded. You can review them by printing the History File (if equipped).
- ◆ The most recent 16 codes displayed on a controller card stay in memory. You can review them and reset the counter through the Network and Signaling Diagnostic (LD 30).
- ◆ In Option 51C, 61C, 81, and 81C, the most recent 64 displays on a CP card stay in memory. You can review the displays on the active CP card through the Core Common Equipment Diagnostic (LD 135).

Table 5 on page 498 lists the cards with maintenance displays and the type of information indicated by the codes on each card.

Table 5: Circuit cards with maintenance displays

System options	Circuit card	Display indication (for all related cards)
21A, 21	NT8D19 Memory/Peripheral Signaling Card	Sysload (system reload) status
21E	NTND01 ICM Card	Interrupt faults
51, 61, 71	QPC580 CPU Interface Card	Memory faults
51C, 61C, 81, 81C	NT6D66, NT9D19, NT5D10, NT5D03 Call Processor Card	Common equipment hardware faults
21A, 21, 21E, 51, 61	QPC742 Floppy Disk Interface Card	Faults on the disk drive unit
51, 61, 71	QPC584 Mass Storage Interface Card	Faults on the disk drive interface card
61C (NT9D11), 81	NT6D63 I/O Processor Card (release 19 and 20)	
51C, 61C, 81, 81C	NT5D61 IODU/C Card (release 23 and later) NT5D20 IOP/CMDU Card (release 21 and later)	
21, 21E, 51, 51C, 61, 61C, 71, 81, 81C	NT8D01 Controller Card NT1P62 Fibre Controller	During normal operation, display shows self-test codes and port number on which Controller Clock is tracking
21E, 51, 51C, 61, 61C, 71, 81, 81C, STE, RT, NT, XT	NT7R52 Remote Carrier Interface Card	During normal operation, display shows self-test codes and port number on which Controller Clock is tracking

System Element Abbreviations

Some error conditions indicate hardware faults. In these cases, try to isolate the fault by replacing the cards in the order listed. The following abbreviations are used:

- CIM Control Interface and Memory
- CMA Changeover and Memory Arbitrator
- CPU Central Processing Unit
- CT Control and Timing
- FN Function
- IF Interface

MEM	Memory
MFS	Multifrequency Sender
MISC	Miscellaneous
PS	Peripheral Signaling
ROM	Read Only Memory
SDI	Serial Data Interface
TDS	Tone and Digit Switch
TT	Tone Transmitter
TD	Tone Detector
PRI	Primary Rate Interface
MISP	Meridian ISDN Signalling Processor

Note: The following 3 digit Hex codes do not apply to Option 11.

Maintenance display codes

Code Description

- 01 Manual interrupt or Power Monitor interrupt.
For system Options NT, RT, XT, 51 and 61, replace: IF, FN.
For system Options XN and 71, replace: FN, CT, MISC.
For all other system Options, replace: CPU, MISC, PS.
- 02 Peripheral Signal ROM checksum error.
For system Options NT, RT, XT, 51 and 61, replace IF.
For system Options XN and 71, replace: CIM.
For system Option 11, replace: CPU.
For all other system Options, replace: ROM.
- 03 Real-time Control (RTC) interrupt fault.
For system Options NT, RT, XT, 51 and 61, replace: IF.
For system Option 11, replace: CPU.
For system Options XN and 71, replace: CT.
- 04 Input Output (I/O) interrupt fault.
For system Options NT, RT, XT, 51 and 61, replace: FN.
For system Options XN and 71, replace: MISC.
For system Option 11, replace: CPU, TT/TD/SDI, SDI, card option mail, PRI, MISP.
For all other system Options, replace: MISC, SDI, TDS, MFS.
- 05 For system Option 11, replace: CPU. For all other system Options, replace:PS.
- 06 For system Option 11, replace: CPU. For all other system Options, replace:MISC, PS, MFS.
- 07 Real-time Control (RTC) interrupt fault.
For system Options NT, RT, XT, 51 and 61, replace: IF.
For system Options XN and 71, replace: CIM.
For system Option 11, replace: CPU. For all other system Options, replace: ROM.

- 08 Too many initializes on this CPU.
- 09 CMA transmission error. Replace: primary CMA, secondary CMA, Memory.
- 0A CMA transmission error secondary, Memory Trouble Register (MTR) primary is disabled. Replace: primary CMA, secondary CMA.
- 0B CMA transmission error secondary, Memory Trouble Register (MTR) secondary is disabled. Replace: secondary MEM, secondary CMA, primary CMA.
- 0C PS ROM response timeout. Replace: CIM, IF.
- 0D Parity error at non-memory address. Replace: IF, CMA.
- 0E Parity error in PS ROM. Replace: IF, FN.
- 0F Trap with no known cause.
- 10 Replace Memory 00.
- 11 Replace Memory 01.
- 12 Replace Memory 02.
- 18 Replace Memory 10.
- 19 Replace Memory 11.
- 1A Replace Memory 12.
- 20 Primary memory parity error on read or write.
For system Options NT, RT, XT, 51 and 61, replace: CMA, IF. For system Option 11, replace: CPU. For all other system Options, replace: CMA, MISC.
- 21 Memory parity error - primary and/or secondary.
For system Options XN and 71, replace: prime CMA, secondary CMA, MISC. For all other system Options, replace: prime CMA, secondary CMA, IF.
- 22 Cannot clear CMA interrupt.
For system Options XN and 71, replace: prime CMA, secondary CMA, MISC. For all other system Options, replace: primary CMA, secondary CMA.
- 23 CMA fault. Replace: CMA0, CMA1.
- 24 Data store failed to respond when reading trap data block. Replace: Memory, CMA, IF, FN.
- 25 Checksum failed. For system Option 11, replace: CPU. Replace: Memory, CMA, IF, FN.
- 4x Peripheral Signaling card failure, where x is the PS number.
- 5x Replace Intergroup Switch, where x is the IGS number in hex. (0-F = 0-15).
During SYSLOAD the following codes appear:
 - 5B = loading firmware
 - 5C = loading program
 - 5D = loading data
 - 5E = initializing data store (protected and unprotected)
 - 5F = loading process successful
- 60 Replace Intergroup Switch 16.
- 61 Replace Intergroup Switch 17.

- 62 Replace Intergroup Switch 18.
- 63 Replace Intergroup Switch 19.
- 6E Replace Clock Controller 0.
- 6F Replace Clock Controller 1.
- 7x Replace TAPE or MSI x.
- 8x Replace Serial Data Interface x, where x is the port number in hex. (0-F = 0-15). For Option 11, x is card number in Hex.

- 9x Replace network, conference or TDS loop for group 0, where x is the loop number in hex (0-F = 0-15).

Group 0	Loop Number
90	loop 0
91	loop 1
92	loop 2
93	loop 3
94	loop 4
95	loop 5
96	loop 6
97	loop 7
98	loop 8
99	loop 9
9A	loop 10
9B	loop 11
9C	loop 12
9D	loop 13
9E	loop 14
9F	loop 15

- Ax Replace network, conference or TDS loop for group 0, where x is the loop number in hex (0-F = 16-31).

Group 0	Loop Number
A0	loop 16
A1	loop 17
A2	loop 18
A3	loop 19
A4	loop 20
A5	loop 21
A6	loop 22
A7	loop 23
A8	loop 24
A9	loop 25
AA	loop 26
AB	loop 27
AC	loop 28
AD	loop 29
AE	loop 30
AF	loop 31

Bx Replace network, conference or TDS loop for group 1, where x is the loop number in hex (0-F = 32-47).

Group 1	Loop Number
B0	loop 32
B1	loop 33
B2	loop 34
B3	loop 35
B4	loop 36
B5	loop 37
B6	loop 38
B7	loop 39
B8	loop 40
B9	loop 41
BA	loop 42
BB	loop 43
BC	loop 44
BD	loop 45
BE	loop 46
BF	loop 47

Cx Replace network, conference or TDS loop for group 1, where x is the loop number in hex (0-F = 48-63).

Group 1 Loop Number

C0	loop 48
C1	loop 49
C2	loop 50
C3	loop 51
C4	loop 52
C5	loop 53
C6	loop 54
C7	loop 55
C8	loop 56
C9	loop 57
CA	loop 58
CB	loop 59
CC	loop 60
CD	loop 61
CE	loop 62
CF	loop 63

Dx Replace network, conference or TDS loop for group 2, where x is the loop number in hex (0-F = 64-79).

Group 2 Loop Number

D0	loop 64
D1	loop 65
D2	loop 66
D3	loop 67
D4	loop 68
D5	loop 69
D6	loop 70
D7	loop 71
D8	loop 72
D9	loop 73
DA	loop 74
DB	loop 75
DC	loop 76
DD	loop 77
DE	loop 78
DF	loop 79

Ex Replace extender.

Note: Ex codes are also used to define network, conference, or TDS loops. Check the INI message to determine whether the HEX code is associated with an extender or loop.

Where x is:

- E0 : Local Extender CPU 0 to Group 0
- E1 : Local Extender CPU 0 to Group 1
- E2 : Local Extender CPU 0 to Group 2
- E3 : Local Extender CPU 0 to Group 3
- E4 : Local Extender CPU 0 to Group 4
- E8 : Remote Extender Group 0 to CPU 0
- E9 : Remote Extender Group 1 to CPU 0
- EA : Remote Extender Group 2 to CPU 0
- EB : Remote Extender Group 3 to CPU 0
- EC : Remote Extender Group 4 to CPU 0

Fx Replace extender, where x is:

F0 : Local Extender CPU 1 to Group 0
 F1 : Local Extender CPU 1 to Group 1
 F2 : Local Extender CPU 1 to Group 2
 F3 : Local Extender CPU 1 to Group 3
 F4 : Local Extender CPU 1 to Group 4
 F8 : Remote Extender Group 0 to CPU 1
 F9 : Remote Extender Group 1 to CPU 1
 FA : Remote Extender Group 2 to CPU 1
 FB : Remote Extender Group 3 to CPU 1
 FC : Remote Extender Group 4 to CPU 1
 FF : All extenders disabled

010 Sequence, status flag, conditional jump problems.

For system Options XN and 71, replace: CT, FN, IF, MISC, CIM. For all other system Options, replace: FN, IF.

011 Call, return, micro return address stack problems.

For system Options XN and 71, replace: CT, FN, IF, MISC, CIM. For all other system Options, replace: FN, IF.

012 JNI to jump over to next page in ROM failed. Replace: CT, FN, IF, MISC, CIM.

013 Micro-store parity.

For system Options XN and 71, replace: CT, FN, IF, MISC, CIM. For all other system Options, replace IF.

020 Slice register arithmetic, logic problem.

For system Options XN and 71, replace: FN, CT, IF, MISC, CIM. For all other system Options, replace: FN, IF.

021 16-bit barrel shifter problems.

For system Options XN and 71, replace: FN, CT, IF, MISC, CIM. For all other system Options, replace: FN, IF.

022 16-bit barrel shifter problems with micro-store data.

For system Options XN and 71, replace: FN, CT, IF, MISC, CIM. For all other system Options, replace: FN, IF.

023 Write to background while at interrupt level.

For system Options XN and 71, replace: FN, MISC, CT, IF, CIM. For all other system Options, replace: FN, IF.

024 Interrupt level did not write its bases.

For system Options XN and 71, replace: FN, MISC, CT, IF, CIM. For all other system Options, replace: FN, IF.

025 Bad data written to some interrupt level bases.

For system Options XN and 71, replace: FN, MISC, CT, IF, CIM. For all other system Options, replace: FN, IF.

- 026 Bad base fetch via BN at some interrupt level.
For system Options XN and 71, replace: FN, MISC, CT, IF, CIM. For all other system Options, replace: FN, IF.
- 027 24-bit ALU shifter problem. Replace: FN, IF.
- 042 CPU write protect failed Replace: MISC, IF, FN, CIM.
- 080 Stuck bits in Y-registers.
For system Options XN and 71, replace: CT, FN, IF, MISC, CIM. For all other system Options, replace: FN, IF.
- 081 Bad PSW register.
For system options XN and 71, replace: IF, MISC, CT, FN, CIM. For all other system options, replace: IF.
- 082 Bad FSI register.
For system Options XN and 71, replace: IF, MISC, CT, FN, CIM. For all other system Options, replace: FN, IF.
- 083 RAM addressing failure.
For system Options XN and 71, replace: FN, IF, CT, MISC, CIM. For all other system Options, replace: FN, IF.
- 084 Bad stack access at interrupt level.
For system Options XN and 71, replace: FN, MISC, CT, IF, CIM. For all other system Options, replace: FN, IF.
- 085 Faulty FAR register.
For system Options XN and 71, replace: IF, CT, FN, MISC, CIM. For all other system Options, replace: FN, IF.
- 086 Faulty FSR register Replace: IF, CT, FN, MISC, CIM.
- 087 Read/Write failure on Miscellaneous registers.
For system Options XN and 71, replace: MISC, IF, FN, CT, CIM. For all other system Options, replace: FN, IF.
- 088 Fault during read/write operation while doing CPU tests.
For system Options XN and 71, replace: IF, MISC, CT, FN, CIM. For all other system Options, replace: FN, IF.
- 089 PC auto-increment failure.
For system Options XN and 71, replace: IF, MISC, CT, FN, CIM. For all other system Options, replace: FN, IF.
- 08A PS fetch using BIR, not blocked.
For system Options XN and 71, replace: MISC, IF, FN, CT, CIM. For all other system Options, replace: FN, IF.
- 08B RTC did not tick or clear.
For system Options XN and 71, replace: CIM, MISC, IF, FN, CT. For all other system options, replace: FN, IF.

08C Bad response timeout in FSI.

For system Options XN and 71, replace: IF, CT, FN, MISC, CIM. For all other system Options, replace: FN, IF.

08D Bad data in program store fetch.

For system Options XN and 71, replace: IF, MISC, CT, FN, CIM. For all other system Options, replace: FN, IF.

0FF Bad CIM. Replace: CIM, IF, MISC, FN, CT.

19x Replace network, conference or TDS loop for group 2

Note: Ex codes are also used to replace extenders. Check the INI message to determine whether the HEX code is associated with an extender or loop.

Where x is the loop number in hex (0-F = 80-95):

<u>Group 2</u>	<u>Loop Number</u>
190	80
191	81
192	82
193	83
194	84
195	85
196	86
197	87
198	88
199	89
19A	90
19B	91
19C	92
19D	93
19E	94
19F	95

1Ax Replace network, conference or TDS loop for group 3, where x is the loop number in hex (0-F = 96-111).

<u>Group 3</u>	<u>Loop Number</u>
1A0	96
1A1	97
1A2	98
1A3	99
1A4	100
1A5	101
1A6	102
1A7	103
1A8	104
1A9	105
1AA	106
1AB	107
1AC	108
1AD	109
1AE	110
1AF	111

1Bx Replace network, conference or TDS loop for group 3, where x is the loop number in hex (0-F = 112-127).

<u>Group 3</u>	<u>Loop Number</u>
1B0	112
1B1	113
1B2	114
1B3	115
1B4	116
1B5	117
1B6	118
1B7	119
1B8	120
1B9	121
1BA	122
1BB	123
1BC	124
1BD	125
1BE	126
1BF	127

1Cx Replace network, conference or TDS loop for group 4, where x is the loop number in hex (0-F = 128-143).

<u>Group 4</u>	<u>Loop Number</u>
1C0	128
1C1	129
1C2	130
1C3	131
1C4	132
1C5	133
1C6	134
1C7	135
1C8	136
1C9	137
1CA	138
1CB	139
1CC	140
1CD	141
1CE	142
1CF	143

1Dx Replace network, conference or TDS loop for group 4, where x is the loop number in hex (0-F = 144-159).

<u>Group 4</u>	<u>Loop Number</u>
1D0	144
1D1	145
1D2	146
1D3	147
1D4	148
1D5	149
1D6	150
1D7	151
1D8	152
1D9	153
1DA	154
1DB	155
1DC	156
1DD	157
1DE	158
1DF	159

13x Replace network, conference or TDS loop for group 5, where x is the loop number in hex (0-F = 160-175).

<u>Group 5</u>	<u>Loop Number</u>
130	160
131	161
132	162
133	163
134	164
135	165
136	166
137	167
138	168
139	169
13A	170
13B	171
13C	172
13D	173
13E	174
13F	175

14x Replace network, conference or TDS loop for group 5, where x is the loop number in hex (0-F = 176-191).

<u>Group 5</u>	<u>Loop Number</u>
140	176
141	177
142	178
143	179
144	180
145	181
146	182
147	183
148	184
149	185
14A	186
14B	187
14C	188
14D	189
14E	190
14F	191

15x Replace network, conference or TDS loop for group 6, where x is the loop number in hex (0-F = 192-207).

<u>Group 6</u>	<u>Loop Number</u>
150	192
151	193
152	194
153	195
154	196
155	197
156	198
157	199
158	200
159	201
15A	202
15B	203
15C	204
15D	205
15E	206
15F	207

- 16x Replace network, conference or TDS loop for group 6, where x is the loop number in hex (0-F = 208-223).

<u>Group 6</u>	<u>Loop Number</u>
160	208
161	209
162	210
163	211
164	212
165	213
166	214
167	215
168	216
169	217
16A	218
16B	219
16C	220
16D	221
16E	222
16F	223

- 17x Replace network, conference or TDS loop for group 7, where x is the loop number in hex (0-F = 224-239).

<u>Group 7</u>	<u>Loop Number</u>
170	224
171	225
172	226
173	227
174	228
175	229
176	230
177	231
178	232
179	233
17A	234
17B	235
17C	236
17D	237
17E	238
17F	239

18x Replace network, conference or TDS loop for group 7, where x is the loop number in hex (0-F = 240-255).

<u>Group 7</u>	<u>Loop Number</u>
180	240
181	241
182	242
183	243
184	244
185	245
186	246
187	247
188	248
189	249
18A	250
18B	251
18C	252
18D	253
18E	254
18F	255

CDR Maintenance Display codes (CDR systems)

The codes provided below appear on the QPC41 MISC card maintenance display of the CDR CPU. Codes with ** after them apply only to Multi-port CDR machines. Refer to *CDR Maintenance* (553-2631-510).

- 00 Trap caused by system power reset. This code is provided for information only.
- 01 The CDR CPU failed the CPU test. If CDR is not running, suspect one or more of the following packs:

Arithmetic Logic Unit (ALU) - QPC40
Miscellaneous (MISC) - QPC41
Sequencer (SEQ) - QPC42
Read-only-memories (ROMs)

If CDR is running then an intermittent fault is present. Use LD 42 to clear the CDR maintenance display or press the MAN INT button on multi-port CDR machines. If the problem recurs, suspect the packs listed above.

- 02, 03 The ROM failed to checksum correctly. Suspect ROM packs. If CDR is not running, suspect the following packs:
- 02 = CDR ROM 1 QPC131 (single port), QPC234 (multi-port)
03 = CDR ROM 2 QPC132 (single port), QPC235 (multi-port)
- If neither of these packs clear the fault, suspect a processor fault. Respond as if 01 were in the display. If CDR is running, an intermittent fault is present. Use LD 42 to clear the CDR maintenance display. If the problem reappears, suspect the packs listed above. If the problem reappears and persists, treat it as a code 01.
- 05 Trap caused by response time-out. A device suddenly failed to respond. This could happen if an SDI card was removed without first using CDM to disable the card. If this problem is intermittent, a card may not be securely enough plugged into the CDR machine or may be faulty. If the problem still occurs, respond as for code 01.
- 06 Trap caused by write protection violation.
- 07 Trap caused by watchdog time-out. These codes probably indicate a CPU problem. Suspect cards in the same order as for code 01.
- 08 Trap caused by memory parity error. If this recurs after clearing the maintenance display, respond as for code 10.
- 09 Trap for indeterminable causes. This code probably indicates a CPU problem. Suspect packs in the same order as for code 01.
- 10 The read/write memory failed the memory test. If CDR is not running, suspect the memory pack.
- If CDR is running then an intermittent fault exists. Use LD 42 to clear the CDR maintenance display. If the fault recurs, suspect the packs listed above followed by the packs listed for code 01.
- 20, 21 CDR timing problem:
- 20 = CDR timing did not respond.
21 = CDR timing had a stuck interrupt.
- For both 20 or 21 case suspect CDR Timing pack.
- If CDR is not running, see 553-2631-510. If CDR is running, the an intermittent fault exists. Use LD 42 to clear the CDR maintenance display. If the problem recurs, suspect the packs listed above followed by all the packs listed for code 01.
- 30 The requested sequence is already being performed. Wait for it to complete.
- 31 The requested function can not be performed because another request is still pending. Wait for the pending function to complete or press the UNLOAD button to terminate it.
- 32 The requested function (RESTORE or LOAD) cannot be performed because CDM has been loaded and has put the CDR machine in maintenance mode.
- See the discussion of maintenance mode in LD 42. If it is required to terminate the maintenance mode, UNLOAD may be pressed to unload the tape. Note that this may disturb the tests being performed by CDM.
- 33 RESTORE cannot be performed because a LOAD or UNLOAD sequence is in progress; wait for the sequence to complete.

- 34 LOAD can not be performed because the drive is not disabled or another function is in progress. If another function is being performed, wait for it to complete, then try again. If the drive is not disabled, you must UNLOAD the tape before you can LOAD it.
- CAUTION: LOAD will destroy any data already written on the tape.
- 35 LOAD can not be performed because the tape is not at load point. UNLOAD and remount the tape.
- CAUTION: LOAD will destroy any data already on the tape.
- 40 Cabinet over-temperature has been detected. Take appropriate temperature lowering measures.
- 41 Fan failure has been detected in CDR cooling unit. Clean filters and/or replace fan assembly.
- 50 LOAD cannot be performed because the tape is write protected. CDR will unload the reel of tape. Install a write enable ring in the supply reel and remount the tape.
- 51 LOAD cannot be performed because the tape unit is not ready. This may be because it is rewinding. Wait for rewind to complete and make unit ready. Retry request.
- 52 LOAD failed after 10 tries. CDR will unload the tape. Retry the request with a different tape. If the problem persists then:
- Clean the tape head path.
- The tape unit may require calibration or be faulty.
- Suspect QPC130 (Tape Control), QPC39 (Timing) or cables.
- 53 UNLOAD failed after 10 tries. CDR gives up.
- 54 The RESTORE function failed after 4 tries. CDR will wait 8 h and then try again. This code indicates that the error recovery attempt has failed.
- Attempt to RESTORE the tape. If restore is successful, use LD 42 to clear the maintenance display or press MAN INT on a multi-port CDR machine. If the RESTORE fails, try cleaning the tape heads and path. Try RESTORE again. If it fails, try Loading a new tape. If this is successful, send the old tape for processing.
- If the LOAD fails, suspect one or more of the following items:
- tape drive - may require calibration or repair
 - QPC130 Tape Interface
 - QPC39 Timing
 - cables
- If the problem is intermittent suspect the items listed above.
- Since CDR will try the RESTORE again after an 8 h wait, the CDR machine may be recording data if more than 8 h has elapsed since the code was originally put in the display. This would indicate that the fault is intermittent.
- 55 End-of-tape encountered while doing a RESTORE. CDR will UNLOAD the tape.
- The tape cannot be RESTORED since the tape mark at the end of the data cannot be found. If the tape has data on it, it should be sent for processing and a new tape mounted and LOADED to collect new data. If the problem persists, a faulty tape unit is suspected. This problem can also be caused by trying to RESTORE a blank tape.

56	Write protect was encountered while doing a RESTORE. Ensure that the write enable ring is installed. If the problem persists, suspect a tape reel or tape drive.
57	End-of-tape encountered while writing. CDR will UNLOAD the tape. Mount a new tape and LOAD it. Send the tape that was removed for processing. Depending on the period of time since the end of tape occurred, data may or may not have been lost.
70	CDR tape control pack did not respond.
71	CDR tape control has a stuck interrupt. In either case suspect CDR Tape Control. If the CDR is not running see 553-2631-510. If the CDR is running, an intermittent fault exists. Use LD 42 to clear the CDR maintenance display or press MAN INT on a multi-port CDR machine. If the problem recurs, suspect the packs listed above followed by all packs listed for code 01.
8x	SDI problem, where: 80 = SDI response time-out. 81 = SDI has permanent interrupt. 82 = SDI line is not ready. 83 = SDI lost an output interrupt. For 80 to 83 suspect the SDI pack. Ensure that the speed select, address select and programming plugs are properly set. If the CDR is not running, see 553-2631-510. If CDR is running, an intermittent fault exists. Use LD 42 to clear the CDR maintenance display or press MAN INT on a multi-port CDR machine. If the problem recurs, suspect the packs listed above followed by all packs listed for code 01. Code 82 can also be caused by a faulty modem or cable.

Regarding Codes Ax through Dx:

The following display codes (Ax through Dx) identify a problem in port x (0 to 15), where x is indicated as a hexadecimal device number in the range 0 to F. See hexadecimal conversion table in the first part of this practice.

Ax	TTY x does not exist. This code will be displayed if the parameter on an ENL SL1 command refers to an SDI port which does not exist. Either the parameter was mis-specified or the address switches on the SDI card were set incorrectly. This error can also occur with a faulty SDI card.
Bx	TTY x is not getting output interrupts. The SDI pack should be replaced. If this does not cure the problem, act as for code 01.
Cx	“EIA Device Not Ready” status on TTY x. Unless the SDI card is faulty, this error indicates: 1. There is no connector attached to the faceplate of the SDI, or 2. A plug on the SDI pack is in the wrong position, or 3. A plug on the SDI pack is missing.
Dx	Stuck interrupt on TTY x. Replace the SDI card. If this proves to be of no avail, treat the problem the same as for code 01.

I/O Processor (IOP) card displays

System Options 51C, 61C, 81, and 81C machines, the NT6D63 I/O Processor (IOP) card provides hexadecimal displays to indicate various phases of operation and the states the card is in during those phases.

Assembly level initialization and basic card self-tests are noted on the HEX display by decimal points appearing to the left of the HEX code.

High level code initialization and card self-tests have the decimal point to the right of the code to indicate they are taking place.

Card operation is indicated by the alternating decimal points.

Table 6: Assembly level initialization and basic card self-tests

Event	Hex code	LED state	Note
Power up	.0.	ON	Bootstrap code
Self-test 1	.1	ON	ROM checksum self-test
Self-test 1 fails	.1/.E.	ON	ROM checksum self-test failed (alternates 3 times)
Self-test 2	.2	ON	SRAM self-test
Self-test 2 fails	.2/.E.	ON	SRAM self-test failed (alternates 3 times)
Debug initialization	.3.	ON	IOP debugger initialization
Debug initialization failed	.3./E.	ON	IOP debugger initialization failed (alternates 3 times)
Self-test 3	.3	ON	Processor self-test
Self-test 3 fails	.3/.E.	ON	Processor self-test failed (alternates 3 times)
Self-test 4	.4	ON	BIC Initial Condition Check
Self-test 4 fails	.4/.E.	ON	BIC Initial Condition Check failed (alternates 3 times)
Set up	.8	ON	Assembly level copying ROM to RAM, and miscellaneous initialization

Table 7: High level initialization and card self-tests

Event	Hex code	LED state	Note
Debug	.D.	ON	3 second window to enter the debugger by typing ^B, or in debugger
Set up	8.	OFF	Initialization and set up in C
Self-test a	1.	OFF	IOP registers self-test
Self-test a fails	1./ E	ON	IOP registers self-test failed (alternates 3 times)
Self-test b	2.	OFF	BIC self-test
Self-test b fails	2./ E	ON	BIC self-test failed (alternates 3 times)
Self-test c	3.	OFF	SCSI self-test
Self-test c failed	3./ E	ON	SCSI self-test failed (alternates 3 times)
Self-test e	5.	OFF	Security cartridge self-test
Self-test 3 fails	5./ E	ON	Security cartridge self-test failed (alternates 3 times)
Self-test f	6.	OFF	Duart self-test
Self-test f fails	6./ E	ON	Duart self-test failed (alternates 3 times)

Table 8: Operational states

Event	Hex code	LED state	Note
Ping	.9 / 9.	ON	IOP hunt cp/IOP test in progress
Disabled	.A / A.	ON	Operational and disabled, or waiting to hunt
Enabled	.A / A.	OFF	Operational and enabled
Maintenance message	.B / B.	OFF	Maintenance message sent (persists for about 1 second)
SCSI interrupt message	.F / F.	OFF	SCSI interrupt message sent (persists for about 1 second)
Debugger enabled	.D / D.	OFF	Operational, enabled and duart polled for ^B to enter
Debugger disabled	.D / D.	ON	Operational, disabled and duart polled for ^B to enter.
Debugger active	D	ON	In debugger
Error enabled	.E / E.	OFF	Soft reset occurred, enabled
Error disabled	.E / E.	ON	Soft reset occurred, disabled
Reset	.E.	ON	Hard reset initiated

Call processor (CP) card displays

The NT6D66 Call Processor (CP) card in the Options 51C, 61C, 81, and 81C utilizes plain text messages as well as Hex for system maintenance, status, and errors. Table 9 lists the different LCD messages that appear on the CP card faceplate. The standard Hex messages also appear on this LCD display. 

Table 9: NT6D66 CP card displays

Display output	Meaning
pack is AP: IDLE	Checking to determine if the system can be Split.
Type CTRL-B to run CP-BUG debugger	Option 81 start-up. Output to CP port prior to loading the operating system.
In CP-BUG	The debug program was entered.
Exit CP-BUG	The debug program is being exited.
BOOT ERROR: RPT. Init	System failed to initialize correctly
SIOx No Drv	No device driver associated with CP serial port x.
SIOx Created	CP serial port x already exists
SIOx Init Fail	CP serial port x failed to initialize the device specific database.

HWI — Hardware Infrastructure Maintenance

How the HWI works

Hardware Infrastructure Maintenance is a resident program. HWI does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

These messages indicate errors within the Hardware Infrastructure. These maintenance messages relate to:

- ◆ Changeover and Memory Block (CMB). CMB provides DRAM control and separate updating of memory or shadowing
- ◆ Switchover (SWO)
- ◆ Network Control Bus (NCB)
- ◆ Connectors (CON)

The message output format is: Fields x, y, z

Where: x = side, y = card and z = port

HWI messages

HWI0001 x	HI Init: Cold Start to begin on side x. ACTION: Information only. If this message appears repeatedly or is associated with a system problem, contact your technical support group.
HWI0002 x	HI Init: Warm Start to begin on side x. ACTION: Information only. If this message appears repeatedly or is associated with a system problem, contact your technical support group.
HWI0003 x	HI: Graceful Switchover to start on side x. ACTION: Information only, no action required.

HWI0004 x y	HI Init: Phase x (y) to start. ACTION: Information only, no action required.
HWI0005 x y	HI Init: Cold Start to complete on side x, section y. ACTION: Information only, no action required.
HWI0006 x y	HI Init: Warm Start to complete at side x in y seconds. ACTION: Information only, no action required.
HWI0007 x y	HI Init: Switchover Start to complete at side x in y seconds. ACTION: Information only, no action required.
HWI0008 x	HI Init: created a data directory x. ACTION: Information only, no action required.
HWI0009 x	HI FS: saving data to directory x. ACTION: Information only, no action required.
HWI0010 x	HI Init: Forced Switchover to start on side x. ACTION: Information only, no action required. Core was forced into the maintenance mode.
HWI0013 x	NCB x y: Unmasking x interrupt.
HWI0101 x	CON x y: Connected to x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0102 x y	CON x y: Disconnected from x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0103	CON x y: Connector device is unknown. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0104	CON x y: Disconnected device is unknown. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0105	CON x y: Connect event. Identification starts. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0106 x	CON x y: Connect event. Creating a. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0107 x y	CON x y: State transition from: a (input=b) to: c. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.

HWI0108 x	CON x y: Created x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0109 x	CON x y: Simulating Disconnect-Connect for x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0110 x	CON x y: Deleted. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0111 x	CON x y: Connect event. Notifying x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0112 x	CON x y: Disconnect event. Notifying x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0113 x	CON x y: Specification of new device x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0114 x y z	CON x y: x destroyed. Affected objects: y, z. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0115 x	CON x y: x destroyed. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0116 x	CON x y: Successful probe of x. ACTION: Information only, no action required.
HWI0117 x	CON x y: Failed to probe x. ACTION: Check cables in the core module backplane for bent pins or improper connections. If this problem persists, contact your technical support group.
HWI0118 x y	CON x y: Unconfigured x connected to y. ACTION: Verify that the above hardware is in the database.
HWI0119 x	CON x y: Unknown device connected to x. ACTION: Check the ID for the device on the core shelf and check the 3PE switch settings.
HWI0201 x	NCB x y: Enabling 3PE to support: x. ACTION: Information only, no action required.
HWI0202 x	NCB x y: Failed to enable 3PE on group x. ACTION: Check that 3PE has correct DIP switch setting. Check both connector ends of CNI-3PE cable (if applicable). Check that 3PE enable/disable switch is enable (up).

- HWI0203 y NCBNCB x y: Disabling 3PE on Group y.
ACTION: Information only, no action required.
- HWI0204 x NCB x y: Failed to disable 3PE on group a.
ACTION: Check that the 3PE has the correct DIP switch setting. Check both connector ends of the CNI-3PE cable (if applicable). Check that the 3PE enable/disable switch is in the enable (up) position.
- HWI0205 NCB x y: OOS testing 3PE.
ACTION: Check both connector ends of the CNI-3PE cable for bent pins or improper connections. Use TEST CNI c s p in LD 135 to test the CNI. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0206 x NCB x y: No response from 3PE on Group x.
ACTION: Check that the CP Norm/Maint SW is in Maint (Down) for Single Mode. Check the CNI-3PE cable (if applicable). Check 3PE ENB/DIS switch is ENB (up) or check the 3PE DIP switch setting.
- HWI0207 NCB x y: Unable to control 3PE state.
ACTION: Check both connector ends of CNI-3PE cable for bent pins or improper connections. Use TEST CNI c s p in LD 135 to test the CNI. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0208 NCB x y: Failed OOS test.
ACTION: Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to locate the faulty components. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide. Replace the faulty components by following the steps in the Hardware replacement guide. After replacing the component verify that the fault is cleared.
- HWI0209 NCB x y: Cannot read 3PE state.
ACTION: Check the cable connection between the 3PE and the CNI. Check that the 3PE faceplate switch is in the Enb position. Use DIS EXT x to disable the 3PE card, unseat and reseat the 3PE card, use ENL EXT x to re-enable the 3PE. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide. Use DSPS x to disable the PS card, unseat and reseat the PS card, use ENPS x to re-enable the PS card. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

- HWI0210 x y NCB x y: Failed to service interrupt x. Number of ISR serviced: n.
ACTION: Check the cable connection between the 3PE and the CNI. Check that the 3PE faceplate switch is in the Enb position. Use DIS EXT x to disable the 3PE card. Unseat and reseal the 3PE card. Use ENL EXT x to re-enable the 3PE. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247. Use DSPS x to disable the PS card. Unseat and reseal the PS card. Use ENPS x to re-enable the PS card. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- HWI0211 x y NCB x y: Resuming service of interrupt x. Number of ISR Service Failures: n.
ACTION: Check the cable connection between the 3PE and the CNI. Check that the 3PE faceplate switch is in the Enb position. Use DIS EXT x to disable the 3PE card, unseat and reseal the 3PE card, use ENL EXT x to re-enable the 3PE. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247. Use DSPS x to disable the PS card, unseat and reseal the PS card, use ENPS x to re-enable the PS card. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 or “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- HWI0212 x y NCB x y: Masking interrupt x. Failed to detect source of this interrupt y times.
ACTION: Use STAT CNI c s p in LD 135 to get an OOS to determine why the CNI is disabled. Refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide to interpret the OOS messages and follow the OOS action to clear the fault. When you are finished, verify that the fault is cleared.
- HWI0213 NCB x y: Unmasking interrupt a.
ACTION: Information only, no action required.
- HWI0214 NCB x y: Unmasking all interrupts.
ACTION: Information only, no action required.
- HWI0215 x y NCB x y: Failed to unmask interrupt x, (line d).
ACTION: Contact your technical support group.
- HWI0216 x NCB x y: I/O interrupts from group x disabled.
ACTION: Remove all unconfigured I/O cards from the above group. Reseat or replace the I/O cards, by following the steps in the Hardware replacement guide. Reseat or replace the corresponding CNI card, by following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

HWI0217 x y NCB x y: x interrupts from group y disabled.

ACTION: Reseat or replace the card(s) for the above group, by following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 or “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide. Verify that the fault is cleared. If the fault is not cleared, reseat or replace the corresponding CNI card, following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

HWI0218 x y z, a b c

NCB x y: CNI to 3PE connection mismatch.

Expected: a to 3PE b c.

Detected: d to 3PE e f .

ACTION: Check that the 3PE has the correct DIP switch setting. Check both connector ends of the CNI-3PE cable (if applicable). Check that the 3PE enable/disable switch is in the enable (up) position.

HWI0219 y z NCB x y: Masking interrupt a failed to detect source of this interrupt b times.

ACTION: Contact your technical support group.

HWI0301 CP: CP to CP Cable (top cable) Faulty or Removed.

ACTION: Check both connector ends of the CP cable, A14 and C14.

HWI0302 CP: CP remote power failed.

ACTION: Check the CEPS on the other core shelf. Check both connector ends of the CP cable, A14 and C14.

HWI0303 CP: CP remote power restored.

ACTION: Information only, no action required.

HWI0304 CP: CP Cable (top cable) installed.

ACTION: Information only, no action required.

HWI0305 SIMM x y: Actual SIMM(s) found is less than configured in database.

ACTION: Reseat the SIMMs on the CP card.

HWI0306 x y SIMM x y: Memory fault will impact real time capacity. (MTR : a)

ACTION: Replace the CP card, by following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

HWI0320 x SIMM x y: From side a this SIMM appears without Base Address.

ACTION: Suspect a faulty SIMM. Replace the CP card, by following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

- HWI0321 x SIMM x y: From side a this SIMM appears without size attribute.
ACTION: Suspect a faulty SIMM. Replace the CP card, by following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0322 n SIMM x y: From side a this SIMM appears with unknown size: n.
ACTION: Suspect a faulty SIMM. Replace the CP card, by following the steps in the Hardware replacement guide. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0323 y z SIMM x: Total DRAM on side 0: y megabytes, side 1: z megabytes. Memory mismatch may affect switchover decision.
ACTION: Check the SIMMs on side c of the CP card.
- HWI0324 x y z SIMM x: Total equipped DRAM on CP x: y megabytes. Specified amount of DRAM: z megabytes
ACTION: Check the SIMMs on side x. of the CP card.
- HWI0325 n x SIMM x: SIMMs on CP side n: - x - x - x - x - x - x. x = SIMM size.
ACTION: Information only, no action required.
- HWI0326 x SIMM x: SIMMs on CP side x: not accessible.
ACTION: Check both connector ends of the CP cable, A14 and C14. Check that both CP Norm/Maint switches are in the Norm Mode (Up).
- HWI0401 SWO %x: Switchover denied, system is in maintenance mode.
ACTION: Check that both CP Norm/Maint switches are in the Norm Mode (Up).
- HWI0402 SWO x: Switchover denied, redundancy not available.
ACTION: Check both connector ends of the CP cable, A14 and C14.
- HWI0403 SWO x: Switchover attempt unsuccessful.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0404 SWO x: Switchover denied. Other side deemed not better.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0405 SWO x: Switchover denied, critical resource is locked.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

- HWI0406 SWO x: Failure occurred attempting to suspend SL-1 task.
ACTION: Contact your technical support group.
- HWI0407 SWO x: Failure occurred attempting to resume SL-1 task.
ACTION: Contact your technical support group.
- HWI0408 SWO x: Attempted to switchover when memory not synchronized.
ACTION: Perform MEM synchronization in LD 137 (SYNC).
- HWI0409 x y SWO: Switch back to side x fail: Will un-suspend SL-1 on side y.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0412 SWO %s: Switchover requested, other side deemed better. (%d will be replaced with Core Shelf number).
ACTION: No action to be taken by craftsperson.
- HWI0500 CP: Remote ready deasserted.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0501 CP: Remote ready asserted.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0502 CP: Remote power bit de-asserted.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0503 CP: Secondary CMB not accessible.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0504 CP: Cable time out.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

- HWI0505 CP: Primary parameter error: AD=a DA=b PSC=c LMTR=d RMTR=e.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0506 CP: Secondary parameter error: AD=a DA=b PSC=c LMTR=d RMTR=e.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0507 CP: Write without unlock.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0525 CP: Spurious interrupt.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0526 CP: RSC = 0 x%08x (TASK LEVEL).
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. If errors continue and the cabling is not at fault, replace the CP card, by following the steps in the *Hardware Replacement* (553-3001-520).
- HWI0527 CP: RSC = 0 x%08x (INTERRUPT LEVEL).
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. If errors continue and the cabling is not at fault, replace the CP card, by following the steps in the *Hardware Replacement* (553-3001-520).
- HWI0528 CP: Standby CP asserts READY. Begin shadowing.
ACTION: Information only, no action required.
- HWI0529 CP: Primary CP cannot access secondary CP.
ACTION: Check both 14 A and 14C connector ends of the CP cables for bent pins or improper connections. Use TEST CNI c s p, TEST CPU and STAT MEM c in LD 135 to check the CNI and CP. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
- HWI0530 CP: System split via maint/norm switches.
ACTION: Information only. Manual intervention.
- HWI0531 CP: MAINT/MAINT to MAINT/NORM does not shadow.
ACTION: Use TEST CPU in LD 135 to check the CP. Replace the CP card, if applicable, by following the steps in the *Hardware replacement* guide. After replacing the card verify that the fault is cleared. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.

HWI0532	CP: Synchronization of memories failed. ACTION: Use TEST CPU in LD 135 to check the CP. Replace the CP card, if applicable, by following the steps in the Hardware replacement guide. After replacing the card verify that the fault is cleared. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
HWI0533	CP: Synchronization of memories completed. ACTION: Information only, no action required.
HWI0534 x	CP: Synchronization of memories begun: CP x master. ACTION: Information only. Be sure HWI0533 is seen after this message before further system diagnostics is done.
HWI0535 x y	CP: Fatal error occurred on CP x. Processing will continue on CP y. ACTION: Use TEST CPU in LD 135 to check the CP. Replace the CP card, if applicable, by following the steps in the Hardware replacement guide. After replacing the card verify that the fault is cleared. If you need help with the commands or system responses refer to the “CCED — LD 135 Core Common Equipment Diagnostic” on page 219 in this guide.
HWI0536	CMB 0: Flash ROM mismatch -- staying in Single mode. Both sides must have the same released installed.
HWI0601	SUTL: Main Card just went *In Service*, no OOS reasons exist; interrupts should be UNMASKED
HWI0602	SUTL: All OOS rsns cleared due to Craftsperson ENL. SUTL interrupts are also UNMASKED
HWI0603	SUTL: EXCESS FP_SWITCH_CHGS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0604	SUTL: EXCESS FP_SWITCH_SPUR_INTS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0605	SUTL: EXCESS ADDR_ERR_INT OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0606	SUTL: EXCESS NULL_ISR_PTR OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0607	SUTL: EXCESS UNKNOWN_INT OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0608	SUTL: NOT_SW_CONFIGURED OOS reason cleared. SUTL Main card is now configured for that slot.
HWI0609	SUTL: NO_HW_ACCESS OOS reason cleared. SUTL H/W should now be accessible
HWI0610	SUTL: IN_TEST_MODE OOS reason cleared
HWI0611	SUTL: FP_SWITCH_DOWN OOS reason cleared. SUTL Faceplate Switch has been flipped UP
HWI0612	SUTL: CANT_READ_CARDID OOS reason cleared. SUTL Card ID PROM has been read successfully
HWI0613	SUTL: BAD_HW_REGISTER OOS reason cleared
HWI0614	SUTL: NO_PCI_INT_REGISTERED OOS reason cleared

HWI0615	SUTL: Can't clear OOS reasons; NO_PCI_INT_REGISTERED ACTION: If condition persists, remove the SUTL Main card, wait for the HWI102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible and the PCI interrupt should be registered.
HWI0616	SUTL: Couldn't start sutlFpBackGrnd task
HWI0617	SUTL: Main Card just went *Out-Of-Service*
HWI0618	SUTL: Craftsperson DIS OOS reason set. SUTL interrupts are MASKED out
HWI0619	SUTL: EXCESS FP_SWITCH_CHGS OOS reason set. SUTL went OOS since there were too many switch changes in a given period. If the switch is not faulty, the OOS reason will be cleared automatically by HI Fault Monitoring.
HWI0620	SUTL: EXCESS FP_SWITCH_SPUR_INTS OOS reason set. SUTL went OOS since there were too many switch changes in a given period. If the switch is not faulty, the OOS reason will be cleared automatically by HI Fault Monitoring.
HWI0621	SUTL: EXCESS NULL_ISR_PTR OOS reason set. OOS reason set automatically by HI Fault Monitoring
HWI0622	SUTL: EXCESS ADDR_ERR_INT OOS reason set. OOS reason set automatically by HI Fault Monitoring
HWI0623	SUTL: EXCESS UNKNOWN_INT OOS reason set. OOS reason set automatically by HI Fault Monitoring
HWI0624	SUTL: NOT_SW_CONFIGURED OOS reason set. SUTL Main card is now configured for that slot.
HWI0625	SUTL: NO_HW_ACCESS OOS reason set ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0626	SUTL: IN_TEST_MODE OOS reason set
HWI0627	SUTL: FP_SWITCH_DOWN OOS reason set
HWI0628	SUTL: CANT_READ_CARDID OOS reason set
HWI0629	SUTL: BAD_HW_REGISTER OOS reason set
HWI0630	SUTL: NO_PCI_INT_REGISTERED OOS reason set. SUTL H/W is not accessible. ACTION: Remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0631	SUTL: Can't decode interrupt; PLX chip not configured ACTION: Remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0632	SUTL: Can't get protDataPtr; can't call ISR: objId=x
HWI0633	SUTL: Can't determine if int x is active: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0634	SUTL: Can't get mask status of int x: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING

HWI0635	SUTL: Can't process int x: funcPtr = NULL
HWI0636	SUTL: Can't get unprotDataPtr (FpSwitchIsr): objId=x
HWI0637	SUTL: Can't get fpSwitchPos: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0638	SUTL: Can't clear FP_SWITCH Int: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0639	SUTL: Can't create sutlFpBackGrnd task
HWI0640	SUTL: Can't stop sutlFpBackGrnd task: JobId = x
HWI0641	SUTL: Can't clear ADDERR_INT Int: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0642	SUTL: Can't UNMASK int x: PLX chip not configured ACTION: Remove the SUTL Main card, wait for the HWI102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0643	SUTL: Can't UNMASK EpldToPlxInt: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING SUTL will not generate any interrupts. ACTION: Attempt to to dis/enl the SUTL in ovl135. If that doesn't work, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, the problem should have been corrected.
HWI0644	SUTL: Can't UNMASK int x: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0645	SUTL: Can't MASK int x: PLX chip not configured ACTION: Remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0646	SUTL: Can't MASK EpldToPlxInt: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0647	SUTL: Can't MASK int x: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0648	SUTL: Can't get sutlBaseAddr: objName = %s, objId = x ACTION: Try warm starting system. May need to cold start
HWI0649	SUTL: Can't get plxBASEAddr: objName = %s, objId = x ACTION: Try warm starting system. May need to cold start
HWI0650	SUTL: Can't open windows: plxBASE = x, cardBase = x ACTION: Try warm starting system. May need to cold start
HWI0651	SUTL: Can't reg SUTL ISR; no upstrmId. sutlId = x ACTION: Try warm starting system. May need to cold start
HWI0652	SUTL: Can't reg SUTL ISR; Slot x not configd AND noAccess ACTION: Remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card into slot 15. After the reinsertion is detected, SUTL H/W should be accessible.

- HWI0653 SUTL: Can't reg SUTL ISR; Slot x configd BUT noAccess
ACTION: Remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0654 SUTL: Can't reg SUTL ISR; Slot x Access OK BUT notConfigd. SUTL is probably in the wrong slot. Make sure it is in slot 15.
- HWI0655 SUTL: sutlBackGrndTest invoked
- HWI0656 SUTL: Can't determine if SUTL is in the slot: slotName, x
- HWI0657 SUTL: Can't chg faceplate LED to green: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0658 SUTL: Can't chg faceplate LED to red: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0659 SUTL: Can't store cardID in unprot struct
- HWI0660 SUTL: Can't mask/clear FP_SWITCH int: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0661 SUTL: Can't mask/clear ADDR_ERR int: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0662 SUTL: Can't mask/clear PLX int: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0663 SUTL: Can't clear PLX Int: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0664 SUTL: Can't unmask Main card ints: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0665 SUTL: Can't unmask FP_SWITCH int: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0666 SUTL: Can't unmask ADDR_ERR int: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.

- HWI0667 SUTL: Can't unmask PLX int: can't access H/W. SUTL will not be able to generate any Interrupts.
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0668 SUTL: Can't mask Main card ints: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0669 SUTL: Can't chg faceplate LED to green: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0670 SUTL: WRONG slot (x): SUTL can only be in slot 15
ACTION: Be sure to insert the SUTL Main card in slot 15. Also, ensure the SUTL Transition card is connected on the rear of the backplane directly behind the SUTL Main card (slot 15).
- HWI0671 SUTL: Can't perform FpBackGrnd task: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0672 SUTL: PLX chip not configured; SideID default = 0 SUTL H/W is not accessible.
ACTION: Remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0673 SUTL: BOTH side IDs set to: x. Check DIP Switch setting. Unprotected memory of the real HI objects on the ACTIVE side have been overwritten with data from the STANDBY side. This can occur when both sides appear to have the same side ID.
ACTION: First, check to see if the SUTL H/W on both sides is accessible. Do this by performing the "test sutl" & "stat sutl" commands in OVL 135. If a SUTL card is not accessible, try removing the card, wait for the system to detect the removal, then reinsert the card. If both SUTL are accessible, the DIP switches on the SUTL Transition cards are probably both the same. One needs to be set to "0", the other to "1". After taking the action described above, the switch will most likely need to be initialized to clear up unprotected memory.
- HWI0676 STRN: Transition Card just went *In Service*. No OOS reasons exist; interrupts should be UNMASKED
- HWI0677 STRN: All OOS rsns cleared due to Craftsperson ENL. STRN interrupts are also UNMASKED
- HWI0678 STRN: EXCESS CONNECTOR_CHGS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
- HWI0679 STRN: EXCESS SPUR CONNECTOR INTS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
- HWI0680 STRN: NOT_SW_CONFIGURED OOS reason cleared

HWI0681	STRN: NO_HW_ACCESS OOS reason cleared. STRN H/W should now be accessible
HWI0682	STRN: IN_TEST_MODE OOS reason cleared
HWI0683	STRN: PACK_REMOVED OOS reason cleared. Transition Card has been reinserted into the backplane
HWI0684	STRN: CANT_READ_CARDID OOS reason cleared. STRN Card ID PROM has been read successfully
HWI0685	STRN: Can't clr children's OOS rsn: can't get protDataPtr
HWI0686	STRN: Transition Card just went *Out-Of-Service*
HWI0687	STRN: Can't set children's OOS rsn: can't get protDataPtr
HWI0688	STRN: Craftsperson DIS OOS reason set. STRN interrupts are MASKED out
HWI0689	STRN: EXCESS CONNECTOR_CHGS OOS reason set. OOS reason set automatically by HI Fault Monitoring ACTION: Check if SUTL Transition Card is connected solidly to the rear of the backplane. If condition persists, may be bad card or connector
HWI0690	STRN: EXCESS SPUR CONNECTOR INTS OOS reason set. OOS reason set automatically by HI Fault Monitoring ACTION: Check if SUTL Transition Card is connected solidly to the rear of the backplane. If condition persists, may be bad card or connector.
HWI0691	STRN: NOT_SW_CONFIGURED OOS reason set
HWI0692	STRN: NO_HW_ACCESS OOS reason set ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0693	STRN: IN_TEST_MODE OOS reason set
HWI0694	STRN: PACK_REMOVED OOS reason set. Transition card was removed from the backplane
HWI0695	STRN: CANT_READ_CARDID OOS reason set
HWI0696	STRN: Can't get unprotDataPtr (connectorIsr): objId=x
HWI0697	STRN: Can't MASK int x: can't get upstreamId
HWI0698	STRN: Can't start strnConnBkGrnd task: JobId = x
HWI0699	STRN: Can't clear TRAN_INT: drvRet = x Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0700	STRN: Can't get unprotDataPtr (strnConnBkGrnd): objId=x
HWI0701	STRN: Can't stop strnConnBkGrnd task; JobId = x
HWI0702	STRN: Can't get currentCardPos: drvRet = x Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0703	STRN: Can't UNMASK int x: can't get upstreamId
HWI0704	STRN: Can't register TRAN_INT with SUTL
HWI0705	STRN: Can't create strnConnBkGrnd task

HWI0706	STRN: Can't get TRAN_INT MASK status: drvRet = x Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0707	STRN: Can't store cardID in unprot struct
HWI0708	STRN: Can't mask Trans card ints: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0709	STRN: Can't mask/clear TRAN_INT: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0710	STRN: Can't unmask Trans card ints: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0711	STRN: Can't unmask TRAN_INT: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0712	STRN: Can't perform ConnBkGrnd task: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0721	DISP: Display Panel just went *In Service* no OOS reasons exist; interrupts should be UNMASKED.
HWI0722	DISP: All OOS rsns cleared due to Craftsperson ENL. DISP interrupts are also UNMASKED
HWI0723	DISP: EXCESS CBL_CHGS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0724	DISP: EXCESS SPUR CABLE INTS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0725	DISP: NOT_SW_CONFIGURED OOS reason cleared
HWI0726	DISP: NO_HW_ACCESS OOS reason cleared. DISP H/W should now be accessible
HWI0727	DISP: IN_TEST_MODE OOS reason cleared
HWI0728	DISP: CABLE_MISSING OOS reason cleared
HWI0729	DISP: BAD_LCD OOS reason cleared
HWI0730	DISP: CANT_READ_CARDID OOS reason cleared. DISP Card ID PROM has been read successfully
HWI0731	DISP: Can't start dispLedBkGrnd task: Can't get unprotDataPtr: objId = x
HWI0732	DISP: Can't start dispLedBkGrnd task: JobId = x

- HWI0733 DISP: Can't chg Panel STATUS LED to green: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0734 DISP: Can't chg Panel STATUS LED to red: drvRet = x Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0735 DISP: Display Panel just went *Out-Of-Service*
- HWI0736 DISP: Craftsperson DIS OOS reason set. DISP interrupts are MASKED out
- HWI0737 DISP: EXCESS CBL_CHGS OOS reason set. OOS reason set automatically by HI Fault Monitoring
ACTION: Check if DISP cable(s) are connected solidly from the Display Panel to the back of the SUTL Transition card. If condition persists, may be bad cable or connector.
- HWI0738 DISP: EXCESS SPUR CABLE INTS OOS reason set. OOS reason set automatically by HI Fault Monitoring
ACTION: Check if DISP cable(s) are connected solidly from the Display Panel to the back of the SUTL Transition card. If condition persists, may be bad cable or connector.
- HWI0739 DISP: NOT_SW_CONFIGURED OOS reason set
- HWI0740 DISP: NO_HW_ACCESS OOS reason set
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0741 DISP: IN_TEST_MODE OOS reason set
- HWI0742 DISP: CABLE_MISSING OOS reason set
- HWI0743 DISP: BAD_LCD OOS reason set
- HWI0744 DISP: CANT_READ_CARDID OOS reason set
- HWI0745 DISP: Can't clear DSPL_CBL_INT: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0746 DISP: Can't MASK int x: can't get upstreamId
- HWI0747 DISP: Can't UNMASK int x: can't get upstreamId
- HWI0748 DISP: Can't get currentCablePos: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0749 DISP: Can't stop dispLedBkGrnd task; JobId = x
- HWI0750 DISP: Can't create dispLedBkGrnd task
- HWI0751 DISP: Can't register DSPL_CBL_INT with STRN
- HWI0752 DISP: Can't get DSPL_CBL_INT MASK status: drvRet = x Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
- HWI0753 DISP: Can't store cardID in unprot struct
- HWI0754 DISP: Can't mask Disp Pnl ints: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.

HWI0755	DISP: Can't chg Pnl STATUS LED to green: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0756	DISP: ChgDisplay called with CP slot num (x):illegal
HWI0757	DISP: Can't unmask DISP ints: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0758	DISP: Can't unmask DSPL_CBL_INT: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0759	DISP: Can't mask/clear DSPL_CBL_INT: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible
HWI0760	DISP: Can't perform LedBkGrnd task: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0761	DISP: Can't chg LED stat for slot x: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0762	DISP: Can't get classID; can't chg LEDs for slot x
HWI0763	DISP: Can't chg CP LED stat: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0764	DISP: Can't reinitialize objID for LED control
HWI0766	XSMP: XSM Port just went *In Service*. No OOS reasons exist; interrupts should be UNMASKED.
HWI0767	XSMP: All OOS rsns cleared due to Craftsperson ENL. XSMP interrupts are also UNMASKED
HWI0768	XSMP: EXCESS CABLE_CHGS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0769	XSMP: EXCESS SPUR CABLE INTS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0770	XSMP: EXCESS MAJOR SIGNAL CHGS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring

HWI0771	XSMP: EXCESS SPUR MAJOR SIGNAL CHGS OOS reason cleared. OOS reason cleared automatically by HI Fault Monitoring
HWI0772	XSMP: NOT_SW_CONFIGURED OOS reason cleared
HWI0773	XSMP: NO_HW_ACCESS OOS reason cleared. H/W should now be accessible
HWI0774	XSMP: IN_TEST_MODE OOS reason cleared
HWI0775	XSMP: CABLE_MISSING OOS reason cleared
HWI0776	XSMP: XSM Port just went *Out-Of-Service*
HWI0777	XSMP: Craftsperson DIS OOS reason set. XSMP interrupts are MASKED out
HWI0778	XSMP: EXCESS CABLE_CHGS OOS reason set. OOS reason set automatically by HI Fault Monitoring ACTION: Check if XSM cable is connected solidly from the XSM to the back of the SUTL Transition card. If condition persists, may be bad cable or connector.
HWI0779	XSMP: EXCESS SPUR CABLE_CHGS OOS reason set. OOS reason set automatically by HI Fault Monitoring ACTION: Check if XSM cable is connected solidly from the XSM to the back of the SUTL Transition card. If condition persists, may be bad cable or connector.
HWI0780	XSMP: EXCESS MAJOR SIGNAL CHGS OOS reason set. OOS reason set automatically by HI Fault Monitoring ACTION: Check if XSM cable is connected solidly from the XSM to the back of the SUTL Transition card. If condition persists, may be bad cable or connector.
HWI0781	XSMP: EXCESS SPUR MAJOR SIGNAL CHGS OOS reason set. OOS reason set automatically by HI Fault Monitoring ACTION: Check if XSM cable is connected solidly from the XSM to the back of the SUTL Transition card. If condition persists, may be bad cable or connector.
HWI0782	XSMP: NOT_SW_CONFIGURED OOS reason set
HWI0783	XSMP: NO_HW_ACCESS OOS reason set ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0784	XSMP: IN_TEST_MODE OOS reason set
HWI0785	XSMP: CABLE_MISSING OOS reason set
HWI0786	XSMP: Can't clear XSM_CBL_INT: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0787	XSMP: Can't clear MAJOR_INT: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0788	XSMP: Can't MASK int x: can't get upstreamId
HWI0789	XSMP: Can't UNMASK int x: can't get upstreamId
HWI0790	XSMP: Can't register XSM_CBL_INT with STRN
HWI0791	XSMP: Can't register MAJOR_INT with STRN
HWI0792	XSMP: Can't start xsmpCblBkGrnd task: JobId = x

HWI0793	XSMP: Can't start xsmpMajorBkGrnd task: JobId = x
HWI0794	XSMP: Can't stop xsmpCblBkGrnd task: JobId = x
HWI0795	XSMP: Can't stop xsmpMajorBkGrnd task: JobId = x
HWI0796	XSMP: Can't create xsmpCblBkGrnd task
HWI0797	XSMP: Can't create xsmpMajorBkGrnd task
HWI0798	XSMP: Can't get unprotDataPtr (xsmpCableIsr): objId=x
HWI0799	XSMP: Can't get unprotDataPtr (xsmpMajorLineIsr): objId=x
HWI0800	XSMP: Can't get MajorStat: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0801	XSMP: Can't enable SUTL-to-XSM outputs: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0802	XSMP: Can't disable SUTL-to-XSM outputs: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0803	XSMP: Can't set CTA signal to LOW: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0804	XSMP: Can't set CTR signal to HIGH: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0805	XSMP: Can't set FAIL signal to HIGH: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0806	XSMP: Can't get MAJOR_INT MASK status: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0807	XSMP: Can't get XSM_CBL_INT MASK status: drvRet = x. Driver level code experienced a problem: 0 = OK, 1 = PARM_BAD, 2 = REGISTER_BAD, 3 = BOARD_MISSING
HWI0808	XSMP: Can't mask XSM Port ints: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0809	XSMP: Can't perform MajorBkGrnd task: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0810	XSMP: Can't perform CblBkGrnd task: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
HWI0811	XSMP: Can't mask/clear XSM_CBL_INT: can't access H/W ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.

- HWI0812 XSMP: Can't mask/clear MAJOR_INT: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0813 XSMP: Can't unmask XSMP its: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0814 XSMP: Can't unmask XSM_CBL_INT: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0815 XSMP: Can't unmask MAJOR_INT: can't access H/W
ACTION: If condition persists, remove the SUTL Main card, wait for the HWI0102 "disconnect" msg, then reinsert the card. After the reinsertion is detected, SUTL H/W should be accessible.
- HWI0827 SUIO: NOT_SW_CONFIGURED OOS reason cleared.
- HWI0850 IPB: objid = 0x%x. The given object failed to register its ISR with PCI vector table.
- HWI0851 IPB failed to attach ISRs in CP's vector table for the given IRQ.
- HWI0852 IPB could not service interrupts for the given IRQ number.
- HWI0853 IPB found invalid IRQ number in given slot.
- HWI0854 IPB: Could not service ISRs due to invalid IRQ number.
- HWI0855 IPB module failed to remove ISR of given object from its table.
- HWI0925 BIC: bicCardAsciiGet - Failed to get CardId for the given slot.
- HWI0926 BIC: bicGeoSideGet returns invalid side info. Side is defaulted to 1. 

HWR — Hardware Reset

The following messages indicate command errors that are related to system reloads on Option 11 systems.

HWR messages

HWR0000	Hardware reset (LED flashes).
HWR0001	Programming failed. Card is defective, or software cartridge is not seated properly.
HWR0002	64180 RAM failed.
HWR0003	Page 2 download error.
HWR0004	Invalid interrupt occurred.
HWR0005	Self-test failed.
HWR0006	VLSI initialization failure
HWR0007	Indicates that the software and the System Core for pre-Option 11C, or Small System Controller for Option 11C, have been reset.
HWR0008	DSP memory test failure.
HWR0010	Test channel request failure (already in use).
HWR0011	SDI port message out of sequence.
HWR0012	SDI Port output overflow.
HWR0013	SDI Port in invalid state.
HWR0014	SDI Port message from invalid port number.
HWR0015	SDI Port output timeout.
HWR0016	SDI Port message queue write failure.
HWR0017	SDI Port output message queue write failure.
HWR0018	SDI Port output buffer write failure.
HWR0019	SDI Port output message queue read failure.
HWR0020	Flash conversion to 2 Meg. (requested).
HWR0021	Flash conversion to 2 Meg. (automatic).
HWR0030	Interrupt to task communication error.
HWR0040	Pack reset due to tack errors.
HWR0041	Operating system reset due to task errors.

HWR0042	Suspended task restarted.
HWR0043	Suspended task resumed.
HWR0044	Task time-out.
HWR0100	Real time clock failure. ACTION: Replace the SSC card by following the steps in the <i>Hardware Replacement</i> (553-3001-520).
HWR0101	DRAM failure ACTION: Use STAT MEM in LD 135 to check the memory. Replace SSC card by following the steps in the <i>Hardware Replacement</i> (553-3001-520).
HWR0102	SRAM failure. ACTION: Replace the SSC card by following the steps in the <i>Hardware Replacement</i> (553-3001-520).
HWR0103	Auxiliary CPU (68020) failure. ACTION: Replace the SSC card by following the steps in the <i>Hardware Replacement</i> (553-3001-520).
HWR0104	Conference Circuit failure. ACTION: Replace the SSC card by following the steps in the <i>Hardware Replacement</i> (553-3001-520).
HWR0105	Speechpath network failure. ACTION: Replace the SSC card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). 

ICU — LD 51 Intercept Computer Update

How the ICU works

The following messages indicate command errors related to the ICU feature in LD 51.

LD 51 commands		
Command	Description	Release
Update		
CUST ALL	Update all customers.	icp-5
CUST c...c	Update 1 to 5 customers (0-99). Repeat the command if more than 5 customers are to be updated.	icp-5
END	Terminate the program.	icp-5
UPD	Update the transfer information.	icp-5

ICU Messages

- ICU0001

Invalid command.
ACTION: Check to make sure your data is correct and re-enter the command.
- ICU0002

Too many characters.
ACTION: Check to make sure your data is correct and re-enter the command.
- ICU0003

Invalid number of parameters.
ACTION: Check to make sure your data is correct and re-enter the command.
- ICU0004

Customer number does not exist.
ACTION: Check to make sure your data is correct and re-enter the command.
- ICU0005

ICP, APL, ACD_BAS, MW, SUPP, FTC, or FFC package missing.
ACTION: Contact your technical support group.
- ICU0006

Invalid input.
ACTION: Check to make sure your data is correct and re-enter the command.
- ICU0007

ICP does not exist for this customer.
ACTION: Check to make sure your data is correct and re-enter the command.
- ICU0008

No customer to update.
ACTION: Information only, no action required. 

IGS — LD 39 Intergroup Switch and System Clock

In this chapter

- How the IGS works 546
 - Common commands 546
- IGS — Intergroup Switch. 547
 - How to locate Intergroup Switch cards. 548
 - IGS commands. 549
- PS/Periph Snlg — Peripheral Signaling 550
 - Group, Loop and Periph Snlg card relationship 551
 - PS card commands 552
- CC/SCG — System Clock. 553
 - SCG commands 554
 - IGS clock synchronization messages. 555

Before changing circuit cards, be aware of the procedures to follow as outlined in the section “Do this when you replace circuit cards” on page 44, in the *You should know this* chapter of this guide.

How the IGS works

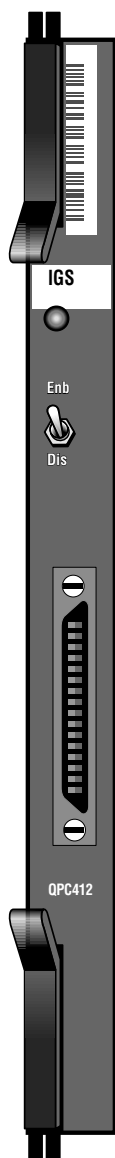
The Intergroup Switch (IGS) and System Clock Generator (SCG) or Clock Controller (CC) diagnostic is used to perform the following:

- ◆ determine the status of any Peripheral Signaling (PS), IGS, SCG, CC card
- ◆ disable and enable any PS, IGS, SCG or CC card
- ◆ switch the system clock from one SCG or CC to another
- ◆ clear minor alarm indications and the maintenance display on the active CPU

All SCG commands can be used for Clock Controllers, although LD 60 is normally used when DTI, CPI or PRI features are installed.

Common commands		
Command	Description	Release
Clear alarms and display		
CDSP	Clear the maintenance display on the active CPU.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1

IGS — Intergroup Switch



553-0183T IGS(ISSC)

Intergroup Switch cards are used in multigroup systems such as Meridian SL-1 XT, Options 71, 81 and 81C.

Purpose

There are four IGS cards associated with each group, composed of two cards, on each network shelf. Therefore the loss of one IGS card would only reduce intergroup traffic to that group by 25 percent.

All IGS cards are interconnected with one another through a Junctor Board.

Function

The Intergroup Switch acts as a space switch, passing PCM from one group to another.

The master System Clock Generator distributes timing signals through the IGS to its network shelf peripheral signalling card.

Features

The faceplate of the IGS card includes the following features:

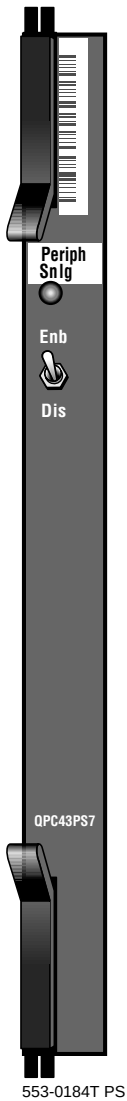
- ◆ an LED, when lit indicates a disabled card
- ◆ an ENB, DIS switch to hardware enable or disable the card
- ◆ a connector used to interconnect the IGS and Junctor Board

How to locate Intergroup Switch cards

Group	Shelf or module	Card slot	IGS card
0	0	12	0
0	0	13	2
0	1	2	3
0	1	3	1
1	0	12	4
1	0	13	6
1	1	2	7
1	1	3	5
2	0	12	8
2	0	13	10
2	1	2	11
2	1	3	9
3	0	12	12
3	0	13	14
3	1	2	15
3	1	3	13
4	0	12	16
4	0	13	18
4	1	2	19
4	1	3	17

IGS commands		
Command	Description	Release
Check status of IGS		
STAT IGS x	Get status of IGS card x (0 to 19). The response x DSBL x BUSY indicates the number of junctor timeslots disabled or busy associated with the specified IGS card.	basic-1
Disable an IGS		
DIS IGS x	Disables IGS card x (0 to 19).	basic-1
DISI IGS x	Disables IGS card x (0 to 19) when all timeslots are idle. Use of this command is recommended instead of DIS IGS, which interrupts calls in progress. The command's progress completion is indicated by an output of ISR043 on the maintenance terminal.	basic-1
Enable an IGS		
ENL IGS x	Enables IGS card x (0 to 19).	basic-1
Stop test		
END	Stop current operation or test.	basic-1

PS/Periph Snlg — Peripheral Signaling



The CPU communicates with the terminal equipment through the Peripheral Signaling card. One Peripheral Signaling card is required per network shelf, each controlling up to 16 loops in a 32 loop group. The peripheral signaling circuitry is combined with other circuitry on some single group systems.

Purpose

The Peripheral Signaling card has two functions:

- ◆ to provide a signaling interface between the parallel CPU bus and the serial bit stream required by the PE equipment
- ◆ to generate and distribute timing signals for synchronous PCM transmission throughout the system

Function

Signaling — A change of state, for example Off-Hook or Dialing, on a PE card generates a 16 bit MESSIN, setting a flag. During Time Slot (TS) Ø the network loop scans each of its terminals for flags and enables the flagged terminal during subsequent TS Øs. The PS enables each network loop in turn during TS Ø and when it detects a MESSIN, locks on and receives the 16 bits. It takes 29 successive TS Øs to gather the MESSIN and generate an interrupt. The CPU recovers the 16 bits by reading the MESSIN Register, of the PS card and this action allows the PS and network card to resume scanning.

When the CPU writes into the PS MESSOUT Register, the PS card serially shifts the 16 bit MESSOUT out through the network loop to the PE card.

Timing — A 16.384 MHz oscillator on the PS card is divided down to obtain the 2.048 MHz clock and 4 kHz for CODEC sync. In a single group enhanced SL-1, the PS card associated with the active CPU is the master clock source. In multigroup systems, each PS card obtains its master clock from the System Clock Generator through the Intergroup Switch card.

Features

The faceplate includes the following features:

- ◆ a LED, when lit indicating a disabled card
- ◆ an ENB, DIS switch to hardware enable or disable the card

Group, Loop and Periph Sngl card relationship

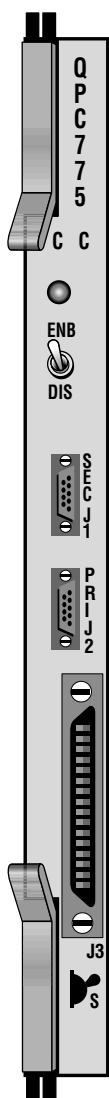
Group	Shelf	PS	Loops
0	0	0	0-15
0	1	1	16-31
1	0	2	32-47
1	1	3	48-63
2	0	4	64-79
2	1	5	80-95
3	0	6	96-111
3	1	7	112-127
4	0	8	128-143
4	1	9	144-159

PS card commands		
Command	Description	Release

Check status of PS

STAT PER x	Get status of PS card x (0 to 9). Possible responses: DSBL : NOT RESPONDING = Peripheral Signaling card is disabled and not responding. The PS is either missing, disabled via its faceplate switch or faulty. Note: If there is a fault in the extender pair for the network shelf, the status of the PS card will also be DSBL: NOT RESPONDING. DSBL : RESPONDING = The PS card is disabled and responding to the CPU. The PS may have been disabled by manual request (DSPS) or the associated extender pair may have been manually disabled. If neither of these conditions exist, the card may have been disabled because of an overload condition on the associated loop. Check for OVD messages appearing in previous TTY output. An attempt to enable a PS card which was disabled because of an overload may result in a recurrence of the overload condition: the system's service may be impaired for approximately 2 minutes.	basic-1

CC/SCG — System Clock



553-0185T CC(ISSC)

The System Clock Generator (SCG) and Clock Controller (CC) cards are used in multigroup systems which can contain up to five groups. There are two redundant clock cards and either one can be made active regardless of which CPU is active. In addition, Clock Controller cards synchronize the Meridian 1 network to an external source clock for PRI and DTI functions. These PRI and DTI functions are further described in the *ISDN Basic Rate Interface: Maintenance* (553-3901-500) NTP.

Purpose

There can be up to five separate network buses in a multigroup system. The SCG and CC is required to synchronize the flow of the PCM from one group to another by doing the following:

- ◆ generating master timing for all multiplex network loops
- ◆ providing synchronization for all CODECs
- ◆ monitoring the other SCG and CC cards for failure and switching over when necessary or when requested by the CPU

Function

The active SCG CC provides the following through junctors:

- ◆ eight mHz clock, through the IGS, to each Peripheral Signaling card for timing
- ◆ four kHz synchronization for each CODEC
- ◆ both SCGs CCs send status to one another, thereby keeping only one SCG CC active
- ◆ each SCG CC sense clock on its twin to detect failure

SCG commands		
Command	Description	Release
Check status of SCG		
STAT SCG x	Get status of SCG x (0 or 1).	basic-1
Disable a SCG		
DIS SCG x	Disable SCG card x (0 or 1).	basic-1
Enable SCG		
ENL SCG	Enable SCG x (0 or 1).	basic-1
Switch SCGs		
SCLK	Switch clock to other SCG.	basic-1
Stop test		
END	Stop current operation or test.	basic-1

IGS clock synchronization messages

The following messages indicate command errors related to the clock synchronization hardware.

- IGS0501 c Requested clock **c** card failed to respond.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- IGS0502 c Requested clock **c** card failed self-test.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- IGS0503 c s loop
Phase locked on primary source **loop**, DTI shelf **s**, and the Clock Controller **c** is active.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- IGS0504 c s loop
Phase locked on secondary source **loop**, DTI shelf **s**, and the Clock Controller **c** is active.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- IGS0505 c s loop
Unable to track on primary source **loop**, DTI shelf **s** and the Clock Controller **c** is active.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- IGS0506 c s loop
Unable to track on secondary source **loop**, DTI shelf **s**, and the Clock Controller **c** is active.
Free running.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500). 

INI — System Initialization

In this chapter

- How the INI works 558
 - Causes of initialization 558
 - Example of a Clean INI Message 558
 - Example of an INI Message indicating typical I/O
 - Device faults.. . . . 559
- When to suspect a hardware fault. 560
- How to decode INI messages 560
 - The Fault Address Codes section is used in rare cases
 - when there are no output codes. 560
 - Fault codes 577
 - Decoding the Fault Address Code 588
 - Fault Address Codes for page 3. 589

How the INI works

The Initialization program (INI) is a resident program used to build the unprotected data blocks in Meridian 1 software. An occurrence of an initialization is indicated by INI messages.

Causes of initialization

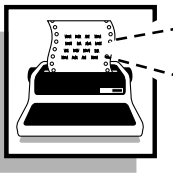
The Initialization program is run when the following conditions occur:

- ◆ after a SYSLOAD is complete
- ◆ when the manual initialize button is pressed on the Miscellaneous (MISC), Interface (IF) or Call Processor (CP) card of the active CPU
- ◆ when a software or firmware fault is detected
- ◆ when a hardware fault in CE equipment is detected

For more information refer to: *You should know this* chapter, “Software maintenance tools” on page 49, “What the system does when things go wrong” on page 52.

Example of a Clean INI Message

When an INI is invoked on a system without faults, a clean INI message is output. The following is an example of a clean INI message:



```
INI0000 000002 10 09 38 000000 07A188  
00000A 007C99 0 1 000000
```

- ◆ **INI0000** = Output Code. The output code INI0000 always appears as shown in the above example
- ◆ **000002** = Fault Code. Identifying the cause of the initialization*
- ◆ **10** = Hour of initialization
- ◆ **09** = Minute of initialization
- ◆ **38** = Second of initialization

- ◆ **000000** = Program page. At the time of trap, in hexadecimal.*
- ◆ **07A188** = Program counter. In hexadecimal.*
- ◆ **00000A** = Fault page. In hexadecimal. Hardware faults are indicated when this field displays 000003 (page 3).*
- ◆ **007C99** = Fault address. Valid for a hardware fault if the fault page is 3 and only one fault is detected.*
- ◆ **0** = Active CPU or FN. If it is not known, a question mark (?) is output. This field only occurs for dual CPU systems and is not included in INI message from single CPU systems.
- ◆ **1** = Active clock controller. For multi-group systems only and is not included in INI message from single group systems.
- ◆ **000000** = Hex contents of the maintenance display prior to the initialization.*

* The number of digits in these fields may vary from the above example. However the position of the field within the message and the meaning does not change.

Example of an INI Message indicating typical I/O Device faults.



```
INI0000 002000 10 09 38 000000 07A188
00000A 000DC0 0 1 000000
INI0002 12/08/96 10:35:52129013
OPRDATA: 000000080 00000001
```

- ◆ **INI0002** = the output code indicating an I/O fault.
- ◆ **OPRDATA**=a 30-character field to help determine how to clear fault
- ◆ **000080** = the hex code field indicating that SDI port 0 is faulty.
- ◆ **00008A**= the hex code field indicating that SDI port 10 is faulty.

In this example, the maintenance hexadecimal faceplate display of the MISC or IF or CP card will show **8A** or **08A**. The maintenance hexadecimal faceplate display can only indicate one code, that is the last hex code.

When to suspect a hardware fault

Automatic initializations can be caused by either hardware or software failures. A hardware fault can be suspected when:

- ◆ the initialization outputs a message in the ranges INI0002 to INI0005 and/or INI0007 to INI0012
- ◆ initializations occur frequently on one CPU but not on the other. An INI0013 message may appear specifying which CPU experiences frequent initializations. An intermittent fault can exist on the affected CPU, even though the CPU may pass a manually requested CPU test. Other possible causes of apparent CPU problems are listed with the appropriate fault codes in the following tables.
- ◆ the maintenance display indicates a fault.

How to decode INI messages

To help you decode INI messages the following three sections are provided.

- ◆ output codes
- ◆ fault codes
- ◆ fault address codes



Most important to the technician is that the Output Codes section identifies faulty cards and, in most cases, where they are located in the various shelves of the equipment.

The Fault Codes section identifies the cause of the INI and supplies supporting information to the Output Codes section.

The Fault Address Codes section is used in rare cases when there are no output codes.

Output codes

INI0000 fc hh mm ss pg pc fp fa (a cpu) (a c c) hex

An initialization has taken place. Up to 12 additional fields are associated with this message output. For an explanation of these fields see “Example of an INI Message indicating typical I/O Device faults.” on page 559 in this chapter.

fc = fault code identifying the cause of the initialization. See “Fault codes” on page 577.

hh = the hour of initialization

mm = the minute of initialization

ss = the second of initialization

pg = the program page at the time of trap (in hexadecimal)

pc = the program counter (in hexadecimal)

fp = the fault page (in hexadecimal)

fa = the fault address (when the fault page is on page 3). See “Fault Address Codes for page 3” on page 589.

x = the active CPU, if it is known. If it is not known, a question mark (?) is output. This field only occurs for dual CPU systems.

y = the active Clock Controller (SL-1 XT only)

hex = the contents of the maintenance display (see HEX for interpretation)

The INI0000 message is followed by DSET0000 message.

ACTION: Examine the associated fields and any subsequent INI output codes for fault indicators.

INI0001

Insufficient memory for this system. If maintenance display shows a defective memory module, refer to the HEX chapter in *X11 System Messages Guide* (553-3001-411).

ACTION: If maintenance display does not show a memory fault, memory size must be increased.

INI0002 xx

An I/O device fault is indicated. The faceplate **hex** display or this message **hex** code identifies the faulty device requiring replacement.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the I/O card indicated by the hex code. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “IOD — LD 37 Input/Output Diagnostic” on page 605. The following table of INI0002 hex codes identify the I/O cards:

INI0002 Hex code	For card type	Addressed as
70	MSI	device 0
71	MSI	device 1
80	SDI, ESDI or MSDL	port 0
81	SDI, ESDI or MSDL	port 1
82	SDI, ESDI or MSDL	port 2
83	SDI, ESDI or MSDL	port 3

— continued —		
INI0002 Hex code	For card type	Addressed as
84	SDI, ESDI or MSDL	port 4
85	SDI, ESDI or MSDL	port 5
86	SDI, ESDI or MSDL	port 6
87	SDI, ESDI or MSDL	port 7
88	SDI, ESDI or MSDL	port 8
89	SDI, ESDI or MSDL	port 9
8A	SDI, ESDI or MSDL	port 10
8B	SDI, ESDI or MSDL	port 11
8C	SDI, ESDI or MSDL	port 12
8D	SDI, ESDI or MSDL	port 13
8E	SDI, ESDI or MSDL	port 14
8F	SDI, ESDI or MSDL	port 15

INI0003 xx Network or Peripheral Signaling card fault.

1. The faceplate **hex** display or this message **hex** code shows one or more of the following for Peripheral Signaling card faults.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the Peripheral Signaling card indicated by the hex code. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 or “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545. The following table of INI0003 hex codes identify the Peripheral Signaling cards.

INI0003 Hex code	For card type	Addressed as
40	Peripheral Signaling	card 0
41	Peripheral Signaling	card 1
42	Peripheral Signaling	card 2
43	Peripheral Signaling	card 3
44	Peripheral Signaling	card 4
45	Peripheral Signaling	card 5
46	Peripheral Signaling	card 6
47	Peripheral Signaling	card 7
48	Peripheral Signaling	card 8
49	Peripheral Signaling	card 9

2. The faceplate **hex** display or this message **hex** code shows one or more of the following for network or TDS or Conference loop faults.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the network, tone and digit switch, or conference card as indicated by the hex code. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721, “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 or “CNF — LD 38 Conference Circuit Diagnostic” on page 339. The following table of INI0003 hex codes identify the loops.

INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop is in network shelf	Shelf is in Group
90	0	0	0
91	1	0	0
92	2	0	0
93	3	0	0
94	4	0	0
95	5	0	0
96	6	0	0
97	7	0	0
98	8	0	0
99	9	0	0
9A	10	0	0
9B	11	0	0
9C	12	0	0
9D	13	0	0
9E	14	0	0
9F	15	0	0
A0	16	1	0
A1	17	1	0
A2	18	1	0
A3	19	1	0
A4	20	1	0
A5	21	1	0
A6	22	1	0
A7	23	1	0
A8	24	1	0
A9	25	1	0
AA	26	1	0
AB	27	1	0

— continued —			
INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop is in network shelf	Shelf is in Group
AC	28	1	0
AD	29	1	0
AE	30	1	0
AF	31	1	0
B0	32	0	1
B1	33	0	1
B2	34	0	1
B3	35	0	1
B4	36	0	1
B5	37	0	1
B6	38	0	1
B7	39	0	1
B8	40	0	1
B9	41	0	1
BA	42	0	1
BB	43	0	1
BC	44	0	1
BD	45	0	1
BE	46	0	1
BF	47	0	1
C0	48	1	1
C1	49	1	1
C2	50	1	1
C3	51	1	1
C4	52	1	1
C5	53	1	1
C6	54	1	1
C7	55	1	1
C8	56	1	1
C9	57	1	1
CA	58	1	1
CB	59	1	1
CC	60	1	1
CD	61	1	1
CE	62	1	1

— continued —			
INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop is in network shelf	Shelf is in Group
CF	63	1	1
D0	64	0	2
D1	65	0	2
D2	66	0	2
D3	67	0	2
D4	68	0	2
D5	69	0	2
D6	70	0	2
D7	71	0	2
D8	72	0	2
D9	73	0	2
DA	74	0	2
DB	75	0	2
DC	76	0	2
DD	77	0	2
DE	78	0	2
DF	79	0	2

3. Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the network, tone and digit switch, or conference card as indicated by the hex code. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721, “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 or “CNF — LD 38 Conference Circuit Diagnostic” on page 339. The following table of INI0003 hex codes, which only apply to the SL-1 XT, Option 71 and Option 81, identify the loops.

INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop located in network shelf	Shelf located in Group
190	80	1	2
191	81	1	2
192	82	1	2
193	83	1	2
194	84	1	2
195	85	1	2
196	86	1	2
197	87	1	2

— continued —			
INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop located in network shelf	Shelf located in Group
198	88	1	2
199	89	1	2
19A	90	1	2
19B	91	1	2
19C	92	1	2
19D	93	1	2
19E	94	1	2
19F	95	1	2
1A0	96	0	3
1A1	97	0	3
1A2	98	0	3
1A3	99	0	3
1A4	100	0	3
1A5	101	0	3
1A6	102	0	3
1A7	103	0	3
1A8	104	0	3
1A9	105	0	3
1AA	106	0	3
1AB	107	0	3
1AC	108	0	3
1AD	109	0	3
1AE	110	0	3
1AF	111	0	3
1B0	112	1	3
1B1	113	1	3
1B2	114	1	3
1B3	115	1	3
1B4	116	1	3
1B5	117	1	3
1B6	118	1	3
1B7	119	1	3
1B8	120	1	3
1B9	121	1	3
1BA	122	1	3

— continued —			
INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop located in network shelf	Shelf located in Group
1BB	123	1	3
1BC	124	1	3
1BD	125	1	3
1BE	126	1	3
1BF	127	1	3
1C0	128	0	4
1C1	129	0	4
1C2	130	0	4
1C3	131	0	4
1C4	132	0	4
1C5	133	0	4
1C6	134	0	4
1C7	135	0	4
1C8	136	0	4
1C9	137	0	4
1CA	138	0	4
1CB	139	0	4
1CC	140	0	4
1CD	141	0	4
1CE	142	0	4
1CF	143	0	4
1D0	144	1	4
1D1	145	1	4
1D2	146	1	4
1D3	147	1	4
1D4	148	1	4
1D5	149	1	4
1D6	150	1	4
1D7	151	1	4
1D8	152	1	4
1D9	153	1	4
1DA	154	1	4
1DB	155	1	4
— continued —			

INI0003 Hex code	For NET or T&DS or Conf or CT loop	Loop located in network shelf	Shelf located in Group
1DC	156	1	4
1DD	157	1	4
1DE	158	1	4
1DF	159	1	4

INI0004 xx A memory fault. The faceplate **hex** display or this message **hex** code shows one or more of the following, indicating a defective memory module or CMA card.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the memory modules (card) indicated by the hex code. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247. The following table of INI0004 hex codes identify the memory cards.

INI0004 Hex code	For memory card	In CE shelf with CPU
10	00	0
11	01	0
12	02	0
18	10	1
19	11	1
1A	12	1

INI0005 000 x A CPU or FN fault, where **x** equals 0 for a CPU 0 fault and **x** equals 1 for a CPU 1 fault.

ACTION: Start at the first or most likely cause and go down the list until the fault is cleared. Follow the steps in the *Hardware Replacement* (553-3001-520) to replace the cards indicated. If the fault does not clear, call your technical support group. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

1. The Interface card may be faulty.

ACTION: Use STAT CPU x in LD 35 to get the status of the both IF cards. Use TCPU in LD 35 to test the inactive IF card. If necessary, replace the IF card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2. The Function card

ACTION: Use STAT CPU x in LD 35 to get the status of the both FN cards. Use TCPU in LD 35 to test the inactive FN card. If necessary, replace the FN card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

3. A ROM daughter board on FN, especially if display shows 02, may be faulty.

ACTION: If necessary, replace the ROM daughter board following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

4. Configuration and Memory Arbitrator cards may be faulty.

ACTION: Use STAT CMA x in LD 35 to get the status of the CMA cards. Use ENL CMA x in LD 35 to enable CMA and run TEST in LD 45 to verify that the fault is cleared. If the CMA card does not enable and the fault does not clear, replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

INI0006 xx

A device or card has been detected which is not defined in the configuration record. The device must be removed or programmed in the configuration record. An accompanying INI message, with a **hex** code, should identify the device or card.

ACTION: Remove the card indicated, if appropriate for your situation, and follow the steps in the *Hardware Replacement* (553-3001-520). To program the card, if appropriate for your situation, use LD 17 in the *X11 Administration* (553-3001-311). The following table of INI0006 hex codes identify the card, port or device.

INI0006 Range of Hex code	card, port or device	see Output codes for specific card
10 to 1A	memory	INI0004
40 to 49	peripheral signaling	INI0003
50 to 63	IGS	INI0007
70 to 71	MSI	INI0002
80 to 8F	SDI	INI0002
90 to 1DF	loops	INI0003
E0 to FF	extenders	INI0014

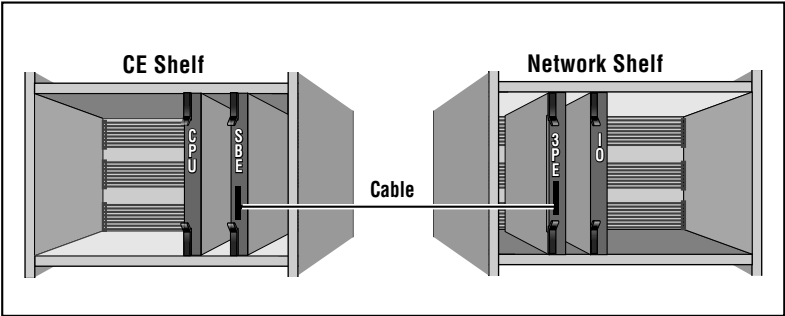
INI0007 xx

Intergroup Switch fault. The faceplate **hex** display or this message **hex** code indicates one or more defective IGS card.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) to replace the cards indicated. If the fault does not clear, call your technical support group. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545. The following table of INI0007 hex codes that identify the IGS cards in this guide.

INI0007 Hex code	For IGS card	Card is in network shelf	Shelf is in Group
50	0	0	0
51	1	1	0
52	2	0	0
53	3	1	0
54	4	0	1
55	5	1	1
56	6	0	1
57	7	1	1
58	8	0	2
59	9	1	2
5A	10	0	2
5B	11	1	2
5C	12	0	3
5D	13	1	3
5E	14	0	3
5F	15	1	3
60	16	0	4
61	17	1	4
62	18	0	4
63	19	1	4

INI0008 xx The CPU or FN tried to access an I/O device port but could not because of a faulty extender (SBE, 3PE, cable). The CPU is unable to indicate which extender is at fault. It can only indicate that the I/O device it tried to access did not respond. The I/O device is indicated in the faceplate **hex** display or this message **hex** code .



553-0186T SI

1. If there is no hex indicator, the standby CPU has full access through the extenders to the network shelves but the active CPU does not.

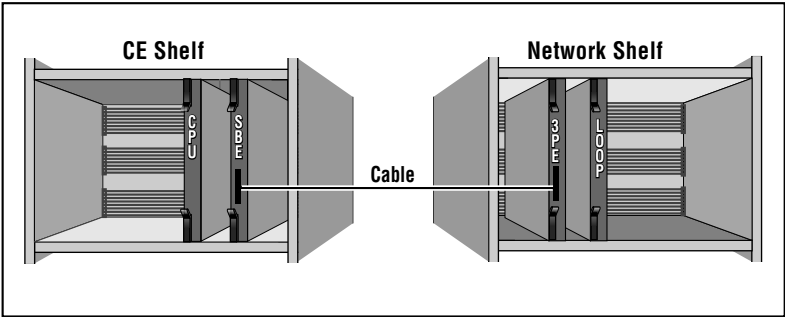
ACTION: Check all the Segmented Bus Extender cards or the 3 Port Extender cards; or the cables between the extenders associated with the active CPU, and all network shelves. Replace faulty components following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2. If the output code includes one or more hex indicators, the standby CPU has limited access through the extenders to the network shelves.

ACTION: Use the INI0008 Hex code table below to locate the network shelf where the I/O device is situated. Check the Segmented Bus Extender card, or the 3 Port Extender card, or the cable between the standby CPU and the located network shelf. Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

INI0008 Hex code	I/O device	Port on I/O device
70	MSI	device 0
80	SDI, ESDI or MSDL	port 0
81	SDI, ESDI or MSDL	port 1
82	SDI, ESDI or MSDL	port 2
83	SDI, ESDI or MSDL	port 3
84	SDI, ESDI or MSDL	port 4
85	SDI, ESDI or MSDL	port 5
86	SDI, ESDI or MSDL	port 6
87	SDI, ESDI or MSDL	port 7
88	SDI, ESDI or MSDL	port 8
89	SDI, ESDI or MSDL	port 9
8A	SDI, ESDI or MSDL	port 10
8B	SDI, ESDI or MSDL	port 11
8C	SDI, ESDI or MSDL	port 12
8D	SDI, ESDI or MSDL	port 13
8E	SDI, ESDI or MSDL	port 14
8F	SDI, ESDI or MSDL	port 15

INI0009 xx The CPU or FN tried to access a Network, Tone and Digit switch, or conference loop, but could not because of a faulty extender (SBE, 3PE, cable). The CPU is unable to indicate which extender is at fault. It only indicates that the loop it tried to access did not respond. The loop is shown in the faceplate **hex** display or this message **hex** code .



553-0187T SI

- 1. If there is no hex indicator, the standby CPU has full access through the extenders, to the network shelves, but the active CPU does not.

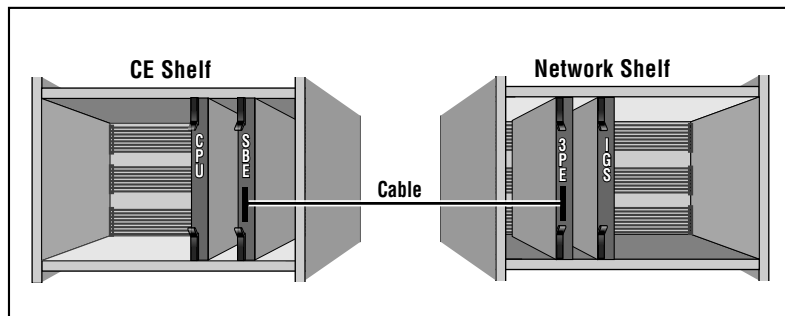
ACTION: Check all the Segmented Bus Extender cards or the 3 Port Extender cards, or the cables between the extenders associated with the active CPU, and all network shelves. Replace faulty components following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- 2. If the output code includes one or more hex indicators, the standby CPU has limited access through the extenders to the network shelves.

ACTION: Use the INI0009 Hex code table to locate the network shelf. Check the Segmented Bus Extender card, or the 3 Port Extender card, or the cable between the standby CPU and the located network shelf. Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

INI0009 Hex code range	Network shelf	Group
90 to 9F	0	0
A0 to AF	1	0
B0 to BF	0	1
C0 to CF	1	1
D0 to DF	0	2
190 to 19F	1	2
1A0 to 1AF	0	3
1B0 to 1BF	1	3
1C0 to 1CF	0	4
1D0 to 1DF	1	4

- INI0010 xx The CPU or FN tried to access an Intergroup Switch card but could not because of a faulty extender (SBE, 3PE, cable). The CPU is unable to indicate which extender is at fault. It can only indicate that the IGS card it tried to access did not respond. The IGS card is indicated in the faceplate **hex** display or this message **hex** code .



553-0188T SI

1. If there is no hex indicator, the standby CPU has full access, through the extenders, to the network shelves but the active CPU does not.

ACTION: Check all the Segmented Bus Extender cards or the 3 Port Extender cards, or the cables between the extenders associated with the active CPU and all network shelves. Replace faulty components following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2. If the output code includes one or more hex indicators, the standby CPU has limited access, through the extenders, to the network shelves.

ACTION: Use the INI0010 Hex code table to locate the network shelf. Check the Segmented Bus Extender card, or the 3 Port Extender card, or the cable between the standby CPU and the located network shelf. Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

INI0010 Hex code	Network shelf	Group
50	0	0
51	1	0
52	0	0
53	1	0
54	0	1
55	1	1
56	0	1
57	1	1
58	0	2
59	1	2

5A	0	2
5B	1	2
5C	0	3
— continued —		
INI0010 Hex code	Network shelf	Group
5D	1	3
5E	0	3
5F	1	3
60	0	4
61	1	4
62	0	4
63	1	4

- INI0011 xx

The faceplate **hex** display or this message **hex** code indicates Network shelves that do not respond to Clock Controller 0 or the SCG card 0.

 1. A hex code of 6E indicates a probable fault on CC/SCG, IGS or interconnecting cables through the Junctor.
 2. For SL-1 VL, VLE and XL systems, display 5E = MG CTRL 0

ACTION: Check and replace the clock card or the interconnecting cables, the clock and Junctor, following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.
- INI0012 xx

The faceplate **hex** display or this message **hex** code indicates Network shelves that do not respond to Clock Controller 1 or the SCG card 1.

 1. A hex display or hex code of 6F. The probable fault is on CC/SCG, IGS or interconnecting cables through the Junctor.
 2. For SL-1 VL, VLE and XL systems, display 5F = MG CTRL 1.

ACTION: Check and replace the clock card or the interconnecting cables, the clock and Junctor, following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide.
- INI0013 x

x = 0 for CPU 0 or 1 for CPU 1. There is a possible CPU or FN fault, because the CPU has initialized more than five times, since the previous running of the midnight or daily routines.

ACTION: Check and replace the CPU/ MISC. or FN/IF card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “*CED — LD 35 Common Equipment Diagnostic*” on page 247 in this guide.
- INI0014

The faceplate **hex** display or this message **hex** code indicates an Extender fault or stuck I/O interrupt on the network shelf associated with the extender card.

1. If a stuck interrupt, the interrupt was identified which could not be disabled directly. Disabling the extender allows the Meridian 1 to process interrupts from devices not located on the network shelf with the stuck interrupt.

ACTION: In LD 35, use DIS EXT x to disable the extender and ENL EXT x to enable the extender. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

Extender fault

ACTION: If the problem reoccurs, replace the extender following the steps in the *Hardware Replacement* (553-3001-520). The following table of INI0014 hex codes identify the extender card. After replacing the card verify that the fault is cleared.

INI0014 Hex code	For extender	linking	to
E0	SBE	CPU 0	group 0
E1	SBE	CPU 0	group 1
E2	SBE	CPU 0	group 2
E3	SBE	CPU 0	group 3
E4	SBE	CPU 0	group 4
E8	3PE	group 0	CPU 0
E9	3PE	group 1	CPU 0
EA	3PE	group 2	CPU 0
EB	3PE	group 3	CPU 0
EC	3PE	group 4	CPU 0
F0	SBE	CPU 1	group 0
F1	SBE	CPU 1	group 1
F2	SBE	CPU 1	group 2
F3	SBE	CPU 1	group 3
F4	SBE	CPU 1	group 4
F8	3PE	group 0	CPU 1
F9	3PE	group 1	CPU 1
FA	3PE	group 2	CPU 1
FB	3PE	group 3	CPU 1
FC	3PE	group 4	CPU 1
FF	All extenders are disabled		

INI0016 hex The faceplate **hex** display or this message **hex** code indicates the following:

1. If this messages appears without a hex code, the standby CPU or FN has full access to all devices of the appropriate type, but the active CPU or FN does not.

ACTION: Check and replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). The following table of INI0016 hex codes identify the memory and CMA cards.

2. Memory access faults from the standby CPU or FN. If the maintenance hex display or hex code shows one or more of the following, indicating a defective memory module or CMA card.

ACTION: Check and replace the CMA card or the memory cards following the steps in the *Hardware Replacement* (553-3001-520). The following table of INI0016 hex codes identify the memory and CMA cards. After replacing a card, verify that the fault is cleared.

INI0016 Hex code	memory card	CMA card	Memory and CMA are on CE shelf
10	00	0	0
11	01	0	0
12	02	0	0
18	10	1	1
19	11	1	1
1A	12	1	1

INI0017 More than five Network or Network/DTR cards need a software download recovery during the auto-recovery or midnight audit.

ACTION: Examine the fault code field for cause of the initialization.

INI0018 More than five Peripheral Controllers need a software download recovery during the auto-recovery or midnight audit.

ACTION: Examine the fault code field for cause of the initialization.

INI0020 aaaa Page 0 has been frozen at address **aaaa** for software analysis, (XN CPU/Memory).

ACTION: Your technical support group is probably already aware of this.

INI0021 Idle Output queue was not set up.

ACTION: If this fault is causing problems, contact your technical support group.

INI0022 X08 omega diagnostic return address stack information is output.

ACTION: If this is causing problems, contact your technical support group.

INI0100 0200-29F

DDSL card failed read/write response test. Fault codes 200 - 29F indicate the DDSL number 0 - 159 respectively.

ACTION: Contact your technical support group.

INI0102 The mass storage interface is not responding. Peripheral software downloading was not attempted.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the MSI card. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “IOD — LD 37 Input/Output Diagnostic” on page 605 in this guide.

INI0106 n	The number of Call Registers has been reduced by n. This warning indicates that the number of Call Registers has been reduced since the amount of the available unprotected data-store is not large enough for the configured number of Call Registers. ACTION: Contact your provisioning group to re-evaluate the number of Call Registers required. Examine the use of unprotected data-store.
INI0107 G S	Superfluous clock(s) is found. The information on Group and Side of the superfluous clock(s) is provided.
INI0108 G S	Only one clock has been found in the system in the Group G and Side S. This indicates that either there is no clock in the other side or the second installed clock has its shelf-side switch set wrong.
INI0109	No clock has been found in the system.
INI0110 Z G S	No clock has been found in side Z and superfluous clock(s) has been found in the other side. The information on Group and Side of the superfluous clock(s) is provided.
INI0111	16K of unprotected memory space cannot be allocated for INIT ACD Queue Call Restore (ACDR). ACTION: Contact your technical support group.
INI0112	INIT ACD Queue Call Restore (ACDR) aborted due to multiple system initializations. ACTION: Contact your technical support group.
INI7272	Failure to reprogram R72 counter register during initialization.
INI7273	No response or the response was too slow (software timed out to avoid INIT within INIT) from the carrier hardware during Carrier Remote Interface initialization update. If the message is output again with the same loop number, then it is an indication that there is a hardware fault in either the LCI or RCI card.

Fault codes

The following fault codes are output as the second field in the INI0000 message. Note that the fault codes from some systems may show more backfilled zeros than indicated in the following list.

0000	Normal initialize after SYSLOAD. ACTION: Information only, no action required. This code may also appear if a fault occurs in memory 0. In this case, an INI0004 10 message will follow the INI0000 line. ACTION: Refer to the output code INI0004.
0001	Manual initialize by attendant. If this code appears but no attendant has operated the manual initialize key, check whether any attendant console is equipped with an initialize key. If not, probable software or data error: check data for each console. If some consoles have an initialize key, possible fault in: 1. Attendant console. Use LD 31 to check each console having an INI key. 2. Signaling path to an attendant console. Use TEST command of LD 45 to check signaling.

- 0002 Manual initialize from the Miscellaneous (MISC) or Interface (IF) card.
ACTION: For information only, to advise you that the MAN INT button was pressed.
The code appears but the button on the MISC or IF card was not pressed.
ACTION: Check and replace the MISC or IF card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- 0003 A PE signaling fault. The INI0003 message will follow to identify the Peripheral Signaling card at fault.
ACTION: Refer to output code INI0003.
- 0004 The Real-Time Clock (RTC) has failed, in a system having two CPUs. Start at the first or most likely cause and go down the list until the fault is cleared.
1. A probable fault in the Peripheral Signaling card providing the clock.
ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) to replace the cards indicated. If the fault does not clear, call your technical support group. If you need help with the commands or system responses when verifying that the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
2. Miscellaneous or Interface associated with an active CPU.
ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) to replace the MISC. or IF cards. If the fault does not clear, call your technical support group. If you need help with the commands or system responses when verifying that the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- 0005 A CPU changeover has taken place due to a failure of the then-active CPU. The faulty CPU or FN should be identified by a subsequent INI0005 message. A fault may exist on:
1. Miscellaneous pack
2. QPC424 CPU pack or daughter board ROM (especially if maintenance display shows 02)
3. Function (FN), Interface (IF) or Control and Timing pack
4. CIM pack (especially for maintenance display codes 088 and 08D)
5. CMA pack
ACTION: Refer to output code INI0005.
- 0006 An Overload is detected from a particular loop. The loop will be disabled. An OVD diagnostic message should follow. If an OVD message identifying a faulty PE card appeared before the initialization, remove that card before the loop.
ACTION: Note the OVD message and refer to the “OVD — LD 77 Locating Overloads” on page 801 in this guide. Test and replace the card(s) if necessary.
- 0007 An Overload is detected from a Peripheral Signaling card. The offending Peripheral Signaling card will be disabled. An OVD diagnostic message should follow.
ACTION: Note the OVD message and refer to the “OVD — LD 77 Locating Overloads” on page 801 in this guide. Test and replace the card(s) if necessary.

- 0008 1. Invalid operation code (opcode). Inform the operating company.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
2. A problem encountered when attempting to load Overlay N 1 and N 2.
ACTION: Try to load the overlay from the floppy if a hard disk is present or try to load overlay from another set of diskettes, as a floppy diskette may be faulty. If the above actions do not clear the fault, replace the MDU following the steps in the *Hardware Replacement* (553-3001-520).
- 0009 Invalid interrupt. Inform operating company.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 000A Attempt to write store using a nil pointer. Software error.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 000B Main stack underflow. Software error.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 000C Broken queue. Software error.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 000D Response timeout in data-store 0. The System should reload. Replace data-store 0.
ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) to replace the memory card 00, if necessary. If the fault does not clear, call your technical support group. If you need help with the commands or system responses when verifying the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- 000E Trying to idle Call Register with active auxiliary Call Registers still linked to it. Inform operating company.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 000F A Service change. The data-store has been exceeded and should be preceded by a warning message, “Equip more data store”. Insufficient memory for SL-1 L, VL, LE, VLE and XL systems.
ACTION: Refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 and the *X11 Administration* (553-3001-311) LD 17 to install more memory.
- 0010 Congratulations on a job well done; conversions are complete.
ACTION: Information only, no action required.
- 0011 Triggered by a software verification program which is used only by the operating company. If an investigation by the operating company is not currently active, then inform the operating company.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.

- 0012 Caused by Common Equipment Diagnostic (CED) trying to rebuild an unprotected data-store.
ACTION: Be careful when using memory commands during peak telephone traffic times.
- 0013 All extenders are disabled. This may be followed by an INI0014 FF.
ACTION: Refer to output code INI0014.
- 0014 A Firmware fault. CPU clock unmasked. This is the same as 011.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 0015 A Firmware fault. The RTC interrupt on level 7 is unmasked. This is the same as 0011.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- 0017 More than five NT8D04 Network or Network/DTR cards need software download recovery during the auto-recovery or midnight audit. xxxx = cause of the initialization.
ACTION: Examine previous INI messages for the cause of software download recoveries.
- 0018 More than five NT8D01 Peripheral Controllers need software download recovery during the auto-recovery or midnight audit.
ACTION: Examine the previous INI messages for cause of software download recoveries.
- 0019 From Firmware. The system has initialized after recovery from battery backup. The system clock time may have slipped during the time the system was under battery power.
ACTION: To reset the time, use LD 2 and refer to “TFC — LD 2 Set Time and Date” on page 1057 in this guide.
- 001C There have been more than ten occurrences of auto-recoveries to avert INI0000 000C problems since the last system initialization. INI0000 000C was triggered to perform systae cleanup following midnight routines.
ACTION: Contact your technical support group.
- 001D An invalid pointer is found during queue processing.
ACTION: Contact your technical support group.
- 00000021 Hardware Sanity Timeout on Options 51C/61C/81/81C.
ACTION: Contact your technical support group.
- 00000022 SWO. Failure on switchover on Options 51C/61C/81/81C.
ACTION: To check hardware on the affected core, use LD 135.
- 00000023 SWO. Too many switchovers on Options 51C/61C/81/81C.
ACTION: Information only. If the error continues contact your technical support group.
- 00000024 WARM. Disk OS warmstart failure on Options 51C/61C/81/81C.
ACTION: Contact your technical support group.
- 00000025 WARM. Too many Disk OS Warmstarts on Options 51C/61C/81/81C.
ACTION: Contact your technical support group.
- 00000026 WARM. Disk OS not loaded on Options 51C/61C/81/81C.
ACTION: Contact your technical support group.

00000027	RESET: Forced SWO in progress on Options 51C/61C/81/81C. ACTION: Information only, no action required.
00000028	RESET: Soft Reset in progress on Options 51C/61C/81/81C. ACTION: Information only, no action required.
00000029	TASK: Unable to create msg queue on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000002A	Protected Memory checksum failure on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000002B	INFO: Disk OS Warm start begins on Options 51C/61C/81/81C. ACTION: Information only, no action required.
0000002C	INFO: DRAM is not initialized on Options 51C/61C/81/81C. ACTION: Information only, no action required.
0000002D	Restart: Cannot delete safe task on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000002E	RESET: Task threshold exceeded on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000002F	WARM: Exc vector thresh exceeded on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000030	WARM: Exc total thresh exceeded on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000031	WARM: Non-bus exc in interrupt on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000032	WARM: Exc handling already busy
00000033	WARM: Exc Restart Task () failed
00000034	RESET: Manual INIT requested
00000035	SEG: Checksum failure detected
00000036	SEG: Disk OS Text segment corrupt on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000037	SEG: Disk OS partitions corrupt on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000038	DISKOS: Unable to load SL-1 on Options 51C/61C/81/81C. ACTION: Make sure the correct TOOLS window selection was made.
00000039	DISKOS: Unable to start SL-1
0000003A	INSTALL: boot after installation
0000003B	IOP Bus Error on active IOP
0000003C	Parity Err on both sides

0000003D	Parity Err in Split mode
0000003E	Parity Err - remote SIMM: missing on Options 51C/61C/81/81C. ACTION: Check the SIMM status in LD 135.
0000003F	Parity Err - remote SIMM: disabled on Options 51C/61C/81/81C. ACTION: LD 135 and re-enable SIMM.
00000040	HI BER recommended action on Options 51C/61C/81/81C. ACTION: Information only. No action required
00000041	HI BER TASK RESTART for safe task on Options 51C/61C/81/81C. ACTION: Information only, no action required.
00000042	HI Warm Start not possible on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000049	OS: manual (PDT) request on Options 51C/61C/81/81C. ACTION: Information only, no action required.
0000004A	OS: request to reboot (sysToMon) on Options 51C/61C/81/81C. ACTION: Information only, no action required.
0000004B	OS: RST initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000004C	OS: SKD initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000004D	OS: SWD initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000004E	OS: PMEM initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000004F	OS: Security Cart check failed on Options 51C/61C/81/81C. ACTION: Check to make sure correct cartridge is being used.
00000050	OS: Normal recovery from BER on Options 51C/61C/81/81C. ACTION: Information only, no action required.
00000051	OS: Unable to recover from BER on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000052	OS: Unable to run “diskos” on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000053	OS: Unable to load “diskos” on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000054	OS: VOL initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.

00000055	OS: SCSI initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000056	OS: DOS initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000057	OS: IOP initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000058	OS: EXC initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
00000059	OS: IOS initialization failed on Option 51C/61C/81/81C. ACTION: Contact your technical support group.
0000005A	OS: Clock initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000005B	OS: Failed during Loader run on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000005C	OS: Failed to spawn Loader task on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000005D	OS: kernel initialization failed on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000005E	OS: diskos P seg overlaps U seg on Options 51C/61C/81/81C. ACTION: Contact your technical support group.
0000005F	Operating System level command to coldstart on Options 51C/61C/81. ACTION: Contact your technical support group.
0100	Trap data blocks are not valid. ACTION: No action required. If this message appears repeatedly, contact your technical support group.
0200	The SYSLOAD was caused by response timeout of data-store. ACTION: Follow the steps in the <i>Hardware Replacement</i> (553-3001-520) to replace the memory card(s) if necessary. If you need help with the commands or system responses when verifying that the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
0400	Power-on reset. Power-up, manual reload. ACTION: Check to see if the commercial power failed.
0800	Software trap. ACTION: No action required. If this message appears repeatedly, contact your technical support group.

1000 A Memory parity error.

ACTION: Refer to “Example of an INI Message indicating typical I/O Device faults.” on page 559 in this chapter. Examine the fault page field, seventh from INI0000, and the fault address field, eighth from INI0000, for this message. If the fault page is 3 and the fault address field codes are listed below, these address codes indicate the following cards may be faulty:

1. The CMA card may be faulty.

ACTION: Use STAT CMA x in LD 35 to get the status of the CMA cards. Use ENL CMA x in LD 35 to enable CMA and run TEST in LD 45 to verify that the fault is cleared. If the CMA card does not enable and the fault does not clear, replace the CMA card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2. MISC card may be faulty.

ACTION: Indiscriminate use of the following test command, especially during heavy telephone traffic periods, may cause the system to reload. Use TCPU in LD 35 to test the idle MISC circuitry or IF card. If MISC circuitry or the IF card does not pass the test, or the fault does not clear, replace it following the steps in the *Hardware Replacement* (553-3001-520). Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

3. The Memory card may be faulty.

ACTION: Follow the steps in the *Hardware Replacement* (553-3001-520) and replace the memory modules (card). If you need help with the commands or system responses when verifying that the fault is cleared, refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2000 Watchdog timer run out. This fault code without an additional INI000x hex output code, sometimes denotes a software fault.

ACTION: Contact your technical support group.

If accompanied by an additional INI000x hex output code, this could indicate hardware faults as follows.

1. This fault code with an INI0002 message indicates an I/O fault.

ACTION: Refer to output code INI0002.

2. This fault code with an INI0003 message indicates a network fault.

ACTION: Refer to output code INI0003.

3. If the maintenance display on the faceplate of the IF card is 04, suspect the inactive IF card.

- a) CE extender packs
- b) Miscellaneous
- c) Serial Data Interface (SDI)
- d) Tape Interface

e) Tone and Digit Switch (TDS).

ACTION: Use STAT CPU x in LD 35 to get the status of both IF cards. Use TCPU in LD 35 to test the inactive IF card. If necessary, replace the IF card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

4. If the maintenance display on the faceplate of the IF card is 05, suspect the following cards.

a) The Peripheral Signaling card may be faulty.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of all PS cards. Replace the PS cards following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 or “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

b) The CE Extender card may be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and fault does not clear, replace the extender card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

5. The affected CPU or FN may be faulty.

ACTION: Use STAT CPU x in LD 35 to get the status of both FN cards. Use TCPU in LD 35 to test the inactive FN card. If necessary, replace the FN card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

6. CIM may be faulty (if equipped).
7. Also occurs if a TDS card is in slot 5 of an SL-1 ST and configured as loop 0. This is not a valid configuration.

3000 Same as code 1000.

ACTION: Refer to the action for fault code 1000.

4000 A write protection violation. An attempt was made to overwrite a protected memory location.

1. This code may appear if the affected CPU is faulty, especially the IF card.

ACTION: Use STAT CPU x in LD 35 to get the status of the both IF cards. Use TCPU in LD 35 to test the inactive IF card. If necessary, replace the IF card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

2. The software may be faulty.

ACTION: Contact your technical support group.

5000 Same as code 1000.

ACTION: Refer to the action for fault code 1000.

6000 Same as code 2000.

ACTION: Refer to the action for fault code 2000.

7000 Same as code 1000.

ACTION: Refer to the action for fault code 1000.

8000 Response time-out. A memory or other device failed to respond to a read-write request.

1. This fault code with an INI0002 message indicates an I/O fault.

ACTION: Refer to the output code INI0002.

2. This fault code with an INI0003 message indicates a network fault.

ACTION: Refer to the output code INI0003.

3. This fault code with an INI0004 message indicates a CPU fault.

ACTION: Refer to the output code INI0004.

4. If several devices on the same shelf are indicated, the CE extender connecting the shelf to the CPU may be faulty.

ACTION: Use STAT EXT in LD 35 to get the status of the Segmented Bus Extender card and 3 Port Extender card. Use ENL EXT x in LD 35 to enable extender pair and run TEST in LD 45 to verify that the fault is cleared. If the extenders do not enable and fault does not clear, replace the extender card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

5. If none of the above messages appear, this code probably indicates the following:

- a) The software may be faulty.

ACTION: Contact your technical support group.

- b) There is a CPU fault, especially the Interface card of the affected CPU.

ACTION: Use STAT CPU x in LD 35 to get the status of the both IF cards. Use TCPU in LD 35 to test the inactive IF card. If necessary, replace the IF card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- c) Peripheral Signaling card faulty on same bus as affected CPU.

ACTION: Use STAT PER x in LD 32 or LD 39 to get the status of all PS cards. Replace the PS cards following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 or “IGS — LD 39 Intergroup Switch and System Clock” on page 545 chapter in this guide.

d) Faulty ROM on CPU or FN card faulty.

ACTION: If necessary, replace the ROM daughter board following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 chapter in this guide.

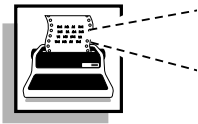
6. On an Option 21E system running 19.32 software, if you are receiving ERR5245 and INI0000 8000 messages and the fault page in the initialization message is 3.

ACTION: Replace the MSPS (NTDN02) card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

9000	Same as code 1000. ACTION: Refer to the action for fault code 1000.
A000	Same as code 8000. ACTION: Refer to the action for fault code 8000.
B000	Same as code 1000. ACTION: Refer to the action for fault code 1000.
C000	Same as code 8000. ACTION: Refer to the action for fault code 8000.
D000	Same as code 1000. ACTION: Refer to the action for fault code 1000.
E000	Same as code 8000. ACTION: Refer to the action for fault code 8000.
F000	Same as code 1000. ACTION: Refer to the action for fault code 1000.

Decoding the Fault Address Code

The following is used to interpret a single fault address for page 3 hardware faults. To obtain the address of the fault, the 4-digit hexadecimal codes must be converted to a 16 bit binary word.



INI0000 000002 10 09 38 000000 07A188
000003 000DC0 0 1 000000

1. From the above example, if eighth field is 3, write the last four digits of the ninth field on a paper (hexadecimal).

Note that as the ninth field **000DC0** indicates, the range of the hexadecimal code is between 8000 to A7FF, a network loop is faulty.

2. Write the binary values on the paper. It takes four binary values to equal one hexadecimal character.

3. Write a 1 under the column value that will add up to the hexadecimal number above it. In hexadecimal the numbers 0 to 9 are the same as decimal 0 to 9. Hexadecimal A=10, B=11, C=12, D=13, E=14, F=15.

Hexadecimal	0	D	C	0
Binary values	8 4 2 1	8 4 2 1	8 4 2 1	8 4 2 1
16 bit word	0 0 0 0	1 1 0 1	1 1 0 0	0 0 0 0

4. Write the bit identifiers under the 16 bit word.

5. In the fault address codes for page 3, bits 6 to 13 are relevant as the example system uses enhanced network loops.

16 bit word	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0
bit identity	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

6. Assume that bits 6 to 13 are a single entity. Assign column values, starting with 1 on the right and double the previous value as you refer to the left.

				1											
				2	6	3	1								
Column value				8	4	2	6	8	4	2	1				
Bits 6 to 13				0	0	1	1	0	1	1	1				

7. Add up the column values where a 1 in bits 6 to 13 are present.
32+16+4+2+1 = 55.

Network loop 55 is faulty.

Fault Address Codes for page 3

The following Fault Address Codes are output as the ninth field in INI0000 messages. The fault address codes from some systems may show more backfilled zeros than indicated in the Fault Address Code column of the following code list.

Outputs not covered in this list cannot be decoded to an address, however they may indicate a Bus Fault.

0800 to 0807 CPU or FN card fault address, or an extender fault.

ACTION: Follow the INI0005 output code action.

1806 CMA card fault address.

ACTION: Follow the INI0005, item 4 output code action.

0x3000 to 0x 30F0 and 0xC000 to 0xC3C0

SDI device fault address.

Bits 4 to 7 provide card addressing.

ACTION: Refer to the following table to locate the faulty card and follow the INI0002 output code action.

SL-1 NT, XT and Option 51, 61, 71	
3000 = SDI 0	3010 = SDI 1
3020 = SDI 2	3030 = SDI 3
3140 = SDI 4	3050 = SDI 5
3160 = SDI 6	3070 = SDI 7
3080 = SDI 8	3090 = SDI 9
30A0 = SDI 10	30B0 = SDI 11
30C0 = SDI 12	30D0 = SDI 13
30E0 = SDI 14	30F0 = SDI 15

Option 51C, 61C, 81 and 81C	
C000 = SDI 0	C040 = SDI 1
C080 = SDI 2	C0C0 = SDI 3
C100 = SDI 4	C140 = SDI 5
C180 = SDI 6	C1C0 = SDI 7
C200 = SDI 8	C240 = SDI 9
C280 = SDI 10	C2C0 = SDI 11
C300 = SDI 12	C340 = SDI 12
C380 = SDI 13	C3C0 = SDI 15

0x3800 to 0x 3CF8 and 0xE000 to 0xF3E0

Expanded Serial Data Intreface (XSDI) device fault address.

ACTION: Refer to the following table to locate the faulty card and follow the steps in the *Hardware replacement* guide to replace the Expanded Digital Signalling Link card (NT5K75AA).

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
3800 = XSDI 0	3808 = XSDI 1	E000 = XSDI 0	E020 = XSDI 1
3810 = XSDI 2	3818 = XSDI 3	E040 = XSDI 2	E060 = XSDI 3
3820 = XSDI 4	3828 = XSDI 5	E080 = XSDI 4	E0A0 = XSDI 5
3830 = XSDI 6	3838 = XSDI 7	E0C0 = XSDI 6	E0E0 = XSDI 7
3840 = XSDI 8	3848 = XSDI 9	E100 = XSDI 8	E120 = XSDI 9
3850 = XSDI 10	3858 = XSDI 11	E140 = XSDI 10	E160 = XSDI 11
3860 = XSDI 12	3868 = XSDI 13	E180 = XSDI 12	E1A0 = XSDI 13
3870 = XSDI 14	3878 = XSDI 15	E1C0 = XSDI 14	E1E0 = XSDI 15
3880 = XSDI 16	3888 = XSDI 17	E200 = XSDI 16	E220 = XSDI 17
3890 = XSDI 18	3898 = XSDI 19	E240 = XSDI 18	E260 = XSDI 19
38A0 = XSDI 20	38A8 = XSDI 21	E280 = XSDI 20	E2A0 = XSDI 21
38B0 = XSDI 22	38B8 = XSDI 23	E2C0 = XSDI 22	E2E0 = XSDI 23
38C0 = XSDI 24	38C8 = XSDI 25	E300 = XSDI 24	E320 = XSDI 25
38D0 = XSDI 26	38D8 = XSDI 27	E340 = XSDI 26	E360 = XSDI 27
38E0 = XSDI 28	38D8 = XSDI 29	E380 = XSDI 28	E3A0 = XSDI 29
38F0 = XSDI 30	38F8 = XSDI 31	E3C0 = XSDI 30	E3E0 = XSDI 31
3900 = XSDI 32	3908 = XSDI 33	E400 = XSDI 32	E420 = XSDI 33
3910 = XSDI 34	3918 = XSDI 35	E440 = XSDI 34	E460 = XSDI 35
3920 = XSDI 36	3928 = XSDI 37	E480 = XSDI 36	E4A0 = XSDI 37
3930 = XSDI 38	3938 = XSDI 39	E4C0 = XSDI 38	E4E0 = XSDI 39
3940 = XSDI 40	3948 = XSDI 41	E500 = XSDI 40	E520 = XSDI 41
3950 = XSDI 42	3958 = XSDI 43	E540 = XSDI 42	E560 = XSDI 43
3960 = XSDI 44	3968 = XSDI 45	E580 = XSDI 44	E5A0 = XSDI 45
— continued —			

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
3970 = XSDI 46	3978 = XSDI 47	E5C0 = XSDI 46	E5E0 = XSDI 47
3980 = XSDI 48	3988 = XSDI 49	E600 = XSDI 48	E620 = XSDI 49
3990 = XSDI 50	3998 = XSDI 51	E640 = XSDI 50	E660 = XSDI 51
39A0 = XSDI 52	39A8 = XSDI 53	E680 = XSDI 52	E6A0 = XSDI 53
39B0 = XSDI 54	39B8 = XSDI 55	E6C0 = XSDI 54	E6E0 = XSDI 55
39C0 = XSDI 56	39C8 = XSDI 57	E700 = XSDI 56	E720 = XSDI 57
39D0 = XSDI 58	39D8 = XSDI 59	E740 = XSDI 58	E760 = XSDI 59
39E0 = XSDI 60	39D8 = XSDI 61	E780 = XSDI 60	E7A0 = XSDI 61
39F0 = XSDI 62	39F8 = XSDI 63	E7C0 = XSDI 62	E7E0 = XSDI 63
3A00 = XSDI 64	3A08 = XSDI 65	E800 = XSDI 64	E820 = XSDI 65
3A10 = XSDI 66	3A18 = XSDI 67	E840 = XSDI 66	E860 = XSDI 67
3A20 = XSDI 68	3A28 = XSDI 69	E880 = XSDI 68	E8A0 = XSDI 69
3A30 = XSDI 70	3A38 = XSDI 71	E8C0 = XSDI 70	E8E0 = XSDI 71
3A40 = XSDI 72	3A48 = XSDI 73	E900 = XSDI 72	E920 = XSDI 73
3A50 = XSDI 74	3A58 = XSDI 75	E940 = XSDI 74	E960 = XSDI 75
3A60 = XSDI 76	3A68 = XSDI 77	E980 = XSDI 76	E9A0 = XSDI 77
3A70 = XSDI 78	3A78 = XSDI 79	E9C0 = XSDI 78	E9E0 = XSDI 79
3A80 = XSDI 80	3A88 = XSDI 81	EA00 = XSDI 80	EA20 = XSDI 81
3A90 = XSDI 82	3A98 = XSDI 83	EA40 = XSDI 82	EA60 = XSDI 83
3AA0 = XSDI 84	3AA8 = XSDI 85	EA80 = XSDI 84	EAA0 = XSDI 85
3AB0 = XSDI 86	3AB8 = XSDI 87	EAC0 = XSDI 86	EAE0 = XSDI 87
3AC0 = XSDI 88	3AC8 = XSDI 89	EB00 = XSDI 88	EB20 = XSDI 89
3AD0 = XSDI 90	3AD8 = XSDI 91	EB40 = XSDI 90	EB60 = XSDI 91
3AE0 = XSDI 92	3AD8 = XSDI 93	EB80 = XSDI 92	EBA0 = XSDI 93
3AF0 = XSDI 94	3AF8 = XSDI 95	EBC0 = XSDI 94	EBE0 = XSDI 95
3B00 = XSDI 96	3B08 = XSDI 97	EC00 = XSDI 96	EC20 = XSDI 97
3B10 = XSDI 98	3B18 = XSDI 99	EC40 = XSDI 98	EC60 = XSDI 99
3B20 = XSDI 100	3B28 = XSDI 101	EC80 = XSDI 100	ECA0 = XSDI 101
— continued —			

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
3B30 = XSDI 102	3B38 = XSDI 103	ECC0 = XSDI 102	ECE0 = XSDI 103
3B40 = XSDI 104	3B48 = XSDI 105	ED00 = XSDI 104	ED20 = XSDI 105
3B50 = XSDI 106	3B58 = XSDI 107	ED40 = XSDI 106	ED60 = XSDI 107
3B60 = XSDI 108	3B68 = XSDI 109	ED80 = XSDI 108	EDA0 = XSDI 109
3B70 = XSDI 110	3B78 = XSDI 111	EDC0 = XSDI 110	EDE0 = XSDI 111
3B80 = XSDI 112	3B88 = XSDI 113	EE00 = XSDI 112	EE20 = XSDI 113
3B90 = XSDI 114	3B98 = XSDI 115	EE40 = XSDI 114	EE60 = XSDI 115
3BA0 = XSDI 116	3BA8 = XSDI 117	EE80 = XSDI 116	EEA0 = XSDI 117
3BB0 = XSDI 118	3BB8 = XSDI 119	EEC0 = XSDI 118	EEE0 = XSDI 119
3BC0 = XSDI 120	3BC8 = XSDI 121	EF00 = XSDI 120	EF20 = XSDI 121
3BD0 = XSDI 122	3BD8 = XSDI 123	EF40 = XSDI 122	EF60 = XSDI 123
3BE0 = XSDI 124	3BD8 = XSDI 125	EF80 = XSDI 124	EFA0 = XSDI 125
3BF0 = XSDI 126	3BF8 = XSDI 127	EFC0 = XSDI 126	EFE0 = XSDI 127
3C00 = XSDI 128	3C08 = XSDI 129	F000 = XSDI 128	F020 = XSDI 129
3C10 = XSDI 130	3C18 = XSDI 131	F040 = XSDI 130	F060 = XSDI 131
3C20 = XSDI 132	3C28 = XSDI 133	F080 = XSDI 132	F0A0 = XSDI 133
3C30 = XSDI 134	3C38 = XSDI 135	F0C0 = XSDI 134	F0E0 = XSDI 135
3C40 = XSDI 136	3C48 = XSDI 137	F100 = XSDI 136	F120 = XSDI 137
3C50 = XSDI 138	3C58 = XSDI 139	F140 = XSDI 138	F160 = XSDI 139
3C60 = XSDI 140	3C68 = XSDI 141	F180 = XSDI 140	F1A0 = XSDI 141
3C70 = XSDI 142	3C78 = XSDI 143	F1C0 = XSDI 142	F1E0 = XSDI 143
3C80 = XSDI 144	3C88 = XSDI 145	F200 = XSDI 144	F220 = XSDI 145
3C90 = XSDI 146	3C98 = XSDI 147	F240 = XSDI 146	F260 = XSDI 147
3CA0 = XSDI 148	3CA8 = XSDI 149	F280 = XSDI 148	F2A0 = XSDI 149
3CB0 = XSDI 150	3CB8 = XSDI 151	F2C0 = XSDI 150	F2E0 = XSDI 151
3CC0 = XSDI 152	3CC8 = XSDI 153	F300 = XSDI 152	F320 = XSDI 153
3CD0 = XSDI 154	3CD8 = XSDI 155	F340 = XSDI 154	F360 = XSDI 155
3CE0 = XSDI 156	3CD8 = XSDI 157	F380 = XSDI 156	F3A0 = XSDI 157
3CF0 = XSDI 158	3CF8 = XSDI 159	F3C0 = XSDI 158	F3E0 = XSDI 159

0x3000 to 0x37FF

MSDL card fault address.

ACTION: Follow the INI0002 output code action.

3FC8

Tape or MSI card fault address.

ACTION: Follow the INI0002 output code action.

0x6008 to 0x63FD

3PE card fault address.

ACTION: Refer to the INI0002 output code.

0x8000 to 0xA7C0

NET, ENET, CONF, TDS, and XCT loop fault address.

For single network loops (QPC50 cards), dual or non-enhanced (QPC376 cards), bits 7 through 13 determine loop address.

For enhanced network loops, (QPC414 cards), bits 6 through 13 determine loop address.

ACTION: Refer to the following table to locate the faulty loop and follow the INI0003 output code action.

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
8000 = loop 0	8040 = loop 1	20000 = loop 0	20100 = loop 1
8080 = loop 2	80C0 = loop 3	20200 = loop 2	20300 = loop 3
8100 = loop 4	8140 = loop 5	20400 = loop 4	20500 = loop 5
8180 = loop 6	81C0 = loop 7	20600 = loop 6	20700 = loop 7
8200 = loop 8	8240 = loop 9	20800 = loop 8	20900 = loop 9
8280 = loop 10	82C0 = loop 11	20A00 = loop 10	20B00 = loop 11
8300 = loop 12	8340 = loop 13	20C00 = loop 12	20D00 = loop 12
8380 = loop 14	83C0 = loop 15	20E00 = loop 13	20F00 = loop 15
8400 = loop 16	8440 = loop 17	21000 = loop 16	21100 = loop 17
8480 = loop 18	84C0 = loop 19	21200 = loop 18	21300 = loop 19
8500 = loop 20	8540 = loop 21	21400 = loop 20	21500 = loop 21
8580 = loop 22	85C0 = loop 23	21600 = loop 22	21700 = loop 23
8580 = loop 22	85C0 = loop 23	21600 = loop 22	21700 = loop 23
8600 = loop 24	8640 = loop 25	21800 = loop 24	21900 = loop 25
8680 = loop 26	86C0 = loop 27	21A00 = loop 26	21B00 = loop 27
8700 = loop 28	8740 = loop 29	21C00 = loop 28	21B00 = loop 29
— continued —			

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
8780 = loop 30	87C0 = loop 31	21E00 = loop 30	21F00 = loop 31
8800 = loop 32	8840 = loop 33	22000 = loop 32	22100 = loop 33
8880 = loop 34	88C0 = loop 35	22200 = loop 34	22300 = loop 35
8900 = loop 36	8940 = loop 37	22400 = loop 36	22500 = loop 37
8980 = loop 38	89C0 = loop 39	22600 = loop 38	22700 = loop 39
8A00 = loop 40	8A40 = loop 41	22800 = loop 40	22900 = loop 41
8A80 = loop 42	8AC0 = loop 43	22A00 = loop 42	22B00 = loop 43
8B00 = loop 44	8B40 = loop 45	22C00 = loop 44	22D00 = loop 45
8B80 = loop 46	8BC0 = loop 47	22E00 = loop 46	22F00 = loop 47
8C00 = loop 48	8C40 = loop 49	23000 = loop 48	23100 = loop 49
8C80 = loop 50	8CC0 = loop 51	23200 = loop 50	233300 = loop 51
8D00 = loop 52	8D40 = loop 53	23400 = loop 52	23500 = loop 53
8E00 = loop 56	8E40 = loop 57	23800 = loop 56	23900 = loop 57
8E80 = loop 58	8EC0 = loop 59	23A00 = loop 58	23B00 = loop 59
8F00 = loop 60	8F40 = loop 61	23C00 = loop 60	23D00 = loop 61
8F80 = loop 62	8FC0 = loop 63	23E00 = loop 62	23F00 = loop 63
9000 = loop 64	9040 = loop 65	24000 = loop 64	24100 = loop 65
9080 = loop 66	90C0 = loop 67	24200 = loop 66	24300 = loop 67
9100 = loop 68	9140 = loop 69	24400 = loop 68	24500 = loop 69
9180 = loop 70	91C0 = loop 71	24600 = loop 70	24700 = loop 71
9200 = loop 72	9240 = loop 73	24800 = loop 72	24900 = loop 73
9280 = loop 74	92C0 = loop 75	24A00 = loop 74	24B00 = loop 75
9300 = loop 76	9340 = loop 77	24C00 = loop 76	24D00 = loop 77
9380 = loop 78	93C0 = loop 79	24E00 = loop 78	24F00 = loop 79
9400 = loop 80	9440 = loop 81	25000 = loop 80	25100 = loop 81
9480 = loop 82	94C0 = loop 83	25200 = loop 82	25300 = loop 83
9550 = loop 84	9450 = loop 85	25400 = loop 84	25500 = loop 85
9580 = loop 86	95C0 = loop 87	25600 = loop 86	25700 = loop 87

— continued —

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
9600 = loop 88	9640 = loop 89	25800 = loop 88	2590 = loop 89
9680 = loop 90	96C0 = loop 91	25A00 = loop 90	25B00 = loop 91
9700 = loop 92	9740 = loop 93	25C00 = loop 92	25D00 = loop 93
9780 = loop 94	97C0 = loop 95	25E00 = loop 94	25F00 = loop 95
9800 = loop 96	9840 = loop 97	26000 = loop 96	26100 = loop 97
9880 = loop 98	98C0 = loop 99	26200 = loop 98	26300 = loop 99
9900 = loop 100	9940 = loop 101	26400 = loop 100	26500 = loop 101
9980 = loop 102	99C0 = loop 103	26600 = loop 102	26700 = loop 103
9A00 = loop 104	9A40 = loop 105	26800 = loop 104	26900 = loop 105
9A80 = loop 106	9AC0 = loop 107	26A00 = loop 106	26B00 = loop 107
9B00 = loop 108	9B40 = loop 109	26C00 = loop 108	26D00 = loop 109
9B80 = loop 110	9BC0 = loop 111	26E00 = loop 110	26F00 = loop 111
9C00 = loop 112	9C40 = loop 113	27000 = loop 112	27100 = loop 113
9C80 = loop 114	9CC0 = loop 115	27200 = loop 114	27300 = loop 115
9D00 = loop 116	9D40 = loop 117	27400 = loop 116	27500 = loop 117
9D80 = loop 118	9DC0 = loop 119	27600 = loop 118	27700 = loop 119
9E00 = loop 120	9E40 = loop 121	27800 = loop 120	27900 = loop 121
9E80 = loop 122	9EC0 = loop 123	27A00 = loop 122	27B00 = loop 123
9F00 = loop 124	9F40 = loop 125	27C00 = loop 124	27D00 = loop 125
9F80 = loop 126	9FC0 = loop 127	27E00 = loop 126	27F00 = loop 127
A000 = loop 128	A040 = loop 129	28000 = loop 128	28100 = loop 129
A080 = loop 130	A0C0 = loop 131	28200 = loop 130	28300 = loop 131
A100 = loop 132	A140 = loop 133	28400 = loop 132	28500 = loop 133
A180 = loop 134	A1C0 = loop 135	28600 = loop 134	28700 = loop 135
A200 = loop 136	A2C0 = loop 137	28800 = loop 136	28900 = loop 137
A280 = loop 138	A2C0 = loop 139	28A00 = loop 138	28B00 = loop 139
A300 = loop 140	A340 = loop 141	28C00 = loop 140	28D00 = loop 141
A380 = loop 142	A3C0 = loop 143	28E00 = loop 142	28F00 = loop 143
— continued —			

SL-1 NT, XT and Option 51, 61, 71		Option 51C, 61C, 81 and 81C	
A400 = loop 144	A440 = loop 145	29000 = loop 144	29100 = loop 145
A480 = loop 146	A4C0 = loop 147	29200 = loop 146	29300 = loop 147
A500 = loop 148	A540 = loop 149	29400 = loop 148	29500 = loop 149
A580 = loop 150	A5C0 = loop 151	29600 = loop 150	29700 = loop 151
A600 = loop 152	A640 = loop 153	29800 = loop 152	29900 = loop 153
A680 = loop 154	A6C0 = loop 155	29A00 = loop 154	29B00 = loop 155
A700 = loop 156	A740 = loop 157	29C00 = loop 156	29D00 = loop 157
A780 = loop 158	A7C0 = loop 159	29E00 = loop 158	29F00 = loop 159

C000 to E2FF PS and Clock Controller card fault address.

ACTION: Refer to the following table to locate the faulty card and follow the INI0003 output code action.

SL-1 L, LE, VL,VLE, XL, M, MS, S, ST, N, XN and Option 21	SL-1NT, XT and Option 51, 61, 71
Fault Address	Fault Address
C0xx = Peripheral Signaling card 0	C0C0xx = Peripheral Signaling card 0
C2xx = Peripheral Signaling card 1	C0C2xx = Peripheral Signaling card 1
C4xx = Peripheral Signaling card 2	C0C4xx = Peripheral Signaling card 2
C6xx = Peripheral Signaling card 3	C0C6xx = Peripheral Signaling card 3
C8xx = Peripheral Signaling card 4	C0C8xx = Peripheral Signaling card 4
CAxx = Peripheral Signaling card 5	C0CAxx = Peripheral Signaling card 5
CCxx = Peripheral Signaling card 6	C0CCxx = Peripheral Signaling card 6
— continued —	

SL-1 L, LE, VL, VLE, XL, M, MS, S, ST, N, XN and Option 21		SL-1NT, XT and Option 61, 71	
Fault Address		Fault Address	
CExx = Peripheral Signaling card 7		C0CExx = Peripheral Signaling card 7	
D0xx = Peripheral Signaling card 8		C0D0xx = Peripheral Signaling card 8	
D2xx = Peripheral Signaling card 9		C0D2xx = Peripheral Signaling card 9	
D4xx = Peripheral Signaling card 10		C0D4xx = Peripheral Signaling card 10	
D6xx = Peripheral Signaling card 11		C0D6xx = Peripheral Signaling card 11	
D8xx = Peripheral Signaling card 12		C0D8xx = Peripheral Signaling card 12	
DAxx = Peripheral Signaling card 13		C0DAxx = Peripheral Signaling card 13	
DCxx = Peripheral Signaling card 14		C0ACxx = Peripheral Signaling card 14	
DExx = Peripheral Signaling card 15		C0DExx = Peripheral Signaling card 15	
E0xx = Clock Controller card 0		C0E0xx = Clock Controller card 0	
E2xx = Clock Controller card 1		C0E2xx = Clock Controller card 1	



INST — Installation

INST messages

INST0000	FATAL Install cannot continue.
INST0001	The Flash Rom Caching could not be disabled. Installation will fail. ACTION: Retry the installation again. If the Flash Rom Caching could not be disabled check that the flash daughter board is on properly. Cold start the system and try again. If the problem persists, contact your technical support group.
INST0002	Unable to allocate memory. There is not enough free memory to allocate. ACTION: Cold start the system and try the installation again. If the problem persists contact your technical support group.
INST0003	Unable to create a directory. The directory could not be created. ACTION: Check that the drive is not full. If there is space check that the directory tree exists and is not corrupted. If the directory is corrupted, remove the corrupted directory and try the installation again. If the problem persists contact your technical support group.
INST0004	All the undo Installation files were not saved to the Software Delivery Card. Undo Installations will not be possible. ACTION: Contact your technical support group.
INST0005	Either the Upgrade Information Block pointer or the Module Information Block pointer is corrupted. ACTION: Quite the Install and start the install again. If the problem occurs again cold start the system and start the installation again. If the problem persists contact your technical support group.
INST0006	Unable to find any database file under dir \"%s\".
INST0007	Fail to seek to the end of split file \"%s\".
INST0008	Fail to append to a non-existing file \"%s\".
INST0009	Error installing Database.
INST0010	Unable to validate Hard disk partition \"%s\".
INST0011	Unable to process the Install control file.
INST0012	Unable to open file \"%s\".
INST0013	Unable to access database directory \"%s\".

INST0014	Error parsing the Install control file.
INST0015	Disk does not belong to this set of Installation diskettes.
INST0016	Can't install database DB files cannot be obtained.
INST0017	Unable to open the file \ %s\ for pre-allocation
INST0018	Unable to pre-allocate file \ %s\
INST0019	Unable to make directory \"%s\".
INST0020	New directory conflicts with existing file \"%s\"
INST0021	Unable to open file \"%s\" for checksum.
INST0022	Error reading file \"%s\" during checksum.
INST0023	Error reading floppy disk file \"%s\".
INST0024	Unable to open hard disk file \"%s\" for writing.
INST0025	Unable to write to hard disk file \"%s\".
INST0026	Software Error - Assume Quit selection.
INST0027	Error copying file \"%s\" to hard disk.
INST0028	Missing last segment of split file \"%s\".
INST0029	Checksum of \"%s\" does not match the actual.
INST0030	Missing card-id file on IODU %d.
INST0031	New software is large than the maximum size.
INST0032	Software Error - Return Error.
INST0033	Unable to find the active \"%s\" slot.
INST0034	Unable to access the active \"%s\" card.
INST0035	Unable to get file name using DLO: \"%s\".
INST0036	Unable to access file \"%s\".
INST0037	Unable to open file \"%s\" for reading.
INST0038	Unable to write to hard disk, disk is full.
INST0039	Unable to copy file \"%s\".
INST0040	Unable to close file \"%s\".
INST0041	Unable to open directory \"%s\" for reading.
INST0042	Unable to read directory \"%s\".
INST0043	Unable to close directory \"%s\".
INST0044	Unable to rename file \"%s\" to \"%s\".
INST0045	Unable to copy file from \"%s\" to \"%s\".
INST0046	Fail to copy directory from \"%s\" to \"%s\".
INST0047	Unable to initialize partition \"%s\".
INST0048	Unable to find database file \"%s\".
INST0049	Unable to access directory \"%s\".

INST0050	No partition found, Install control file is corrupted.
INST0051	Cannot continue, System has Disk Redundancy on.
INST0052	Error in Database install, file's size unmatched.
INST0053	Unable to find symbol for %s-ROM file.
INST0054	None of the installation disk has %s-ROM file
INST0055	Current floppy disk does not have %s-ROM file.
INST0056	Cannot contact device on SCSI bus ID %d.
INST0057	Unable to read input from keyboard, please try again.
INST0058	Invalid input string, length can not be greater than %d
INST0059	Invalid option selected, please enter another option
INST0060	Incorrect disk in drive, please insert the correct one.
INST0061	Unable to reset IOP card, slot number %d.
INST0062	Invalid date for leap year, day cannot exceed 29.
INST0063	Invalid date entered, please enter again.
INST0064	Invalid time entered, please enter again.
INST0065	Fatal, fail to partition hard disk.
INST0066	Invalid year, please enter from %d to %d.
INST0067	Unable to create a PhysDev for Hard Disk.
INST0068	Unable to create BlockDev for /u partition.
INST0069	Unable to create BlockDev for /p partition.
INST0070	Unable to create BlockDev for /id partition.
INST0071	Unable to open /u partition.
INST0072	Unable to initialize /u partition.
INST0073	Unable to open /p partition.
INST0074	Unable to initialize /np partition.
INST0075	Unable to open /id partition.
INST0076	Unable to initialize /id partition.
INST0077	System Date is not correct, please set it to the current date.
INST0078	Fail to erase file \"%s\".
INST0079	Fail to allocate memory for internal patch structure.
INST0080	Unable to mark patches for retention.
INST0081	Same release and issue, new patches are ignored.
INST0082	MDP package is not equipped, new patches are ignored.
INST0083	Unable to obtain the Database's release and issue \"%s\".
INST0084	Unable to find symbol for flash file %s.
INST0085	File context unmatched. \"%s\": %s vs. \"%s\": %s.

INST0086	Unable to access the card at slot %d
INST0087	Target slot not in %d...%d range.
INST0088	Manual keycode insertion failed.
INST0089	Copy /p partition from other core failed.
INST0090	Unable to install software from CD-ROM to hard disk.
INST0091	Error reading CDROM file %s/%s.
INST0092	ERROR while trying to update direct.rec file.
INST0093	Security Device ERROR detected.
INST0094	Keycode format ERROR.
INST0095	Keycode validation ERROR.
INST0096	Cannot extract parameters from keycode.
INST0097	Invalid input to function instDiskPrompt.
INST0098	Error copying %s to %s.
INST0099	Could not locate \'"%s"\' firmware on (hard-disk/CDROM)
INST0100	Invalid parameter passed to DBMT
INST0101	Unable to determine default floppy device name
INST0102	Unable to determine floppy device name
INST0103	Unable to determine file names for transfer
INST0104	Unable to open Floppy drive
INST0105	Unable to create temporary Database file
INST0106	Unable to create temporary Config file
INST0107	Unable to transfer Database to hard disk
INST0108	Unable to append Database and Config files into one file
INST0109	Unable to rename Config file to Database file for -s option
INST0110	Unable to restore files to original state
INST0111	Unable to rename all files correctly
INST0112	Unable to read Private Sector from floppy disk
INST0113	Too many disks being used,
INST0114	Incorrect floppy disk placed in drive
INST0115	Unable to identify record type
INST0116	Unable to read sector(s) from floppy disk
INST0117	Unable to write Database file to hard disk
INST0118	Unable to write Config file to hard disk
INST0119	Incorrect Database record count. Was %d should be %d
INST0120	Incorrect Configuration record count. Was %d should be %d
INST0121	Incorrect Floppy disk placed in drive. Need A(1) disk

INST0122	Unable to write %d sector (start sector %d), to device on scsi bus ID %d
INST0123	Invalid floppy disk
INST0124	End of track 1 not found
INST0125	End of track 3 not found
INST0126	Unable to identify record type
INST0127	Keycode file is corrupted. Check Keycode file.
INST0128	Unable to seek on floppy disk
INST0129	Unable to read from floppy disk
INST0130	Unable to seek DB on hard disk
INST0131	Unable to seek Config on hard disk
INST0132	Unable to read from hard disk
INST0133	Unable to write to hard disk
INST0134	Unable to write to hard disk
INST0135	Unable to write to hard disk
INST0136	Unknown Database format
INST0137	Unable to read Private Sector from floppy disk
INST0138	Unable to read %d sector (start sector %d), from device on scsi bus ID %d
INST0139	Unable to close floppy device
INST0140	Unable to close Database file
INST0141	Unable to close Config file
INST0142	Unable to rename secondary Database file to holding file
INST0143	Unable to restore files to original state
INST0144	Unable to rename secondary Config file to holding file
INST0145	Unable to rename primary Database file to secondary file
INST0146	Unable to rename primary Config file to secondary file
INST0147	Unable to rename new Database file to primary file
INST0148	Unable to rename new Config file to primary file
INST0149	Unable to determine primary Database file name
INST0150	Unable to determine secondary Database file name
INST0151	Unable to determine holding Database file name
INST0152	Unable to determine temporary Database file name
INST0153	Unable to determine primary Config file name
INST0154	Unable to determine secondary Config file name
INST0155	Unable to determine holding Config file name
INST0156	Unable to determine temporary Config file name
INST0157	Unable to restore temporary Database file

- INST0158 Unable to restore primary Database file
- INST0159 Unable to restore secondary Database file
- INST0160 Unable to restore temporary Config file
- INST0161 Unable to restore primary Config file
- INST0162 Unable to restore secondary Config file
- INST0163 Unable to initialize floppy driver to 2 Mb on Core: %d
- INST0164 Unable to initialize floppy driver to 4 Mb on Core: %d
- INST0165 Unable to determine floppy size.
- INST0166 Block device number %d on bus ID %d does not exist.
- INST0167 Memory allocation problems.
- INST0168 Failed to copy the new keycode on hard disk.
- INST0169 Failed to replace the keycode with the new one.
- INST0170 CP type, specified by keycode, mismatches the actual CP type. 

IOD — LD 37 Input/Output Diagnostic

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter of this guide.

How the IOD works

LD 37 is used to diagnose faults with disk units, tape units, Teletypewriter (TTY) or Serial Data Interface (SDI) cards. It provides enable, disable, status and test functions on these devices. Problems are indicated by IOD messages.

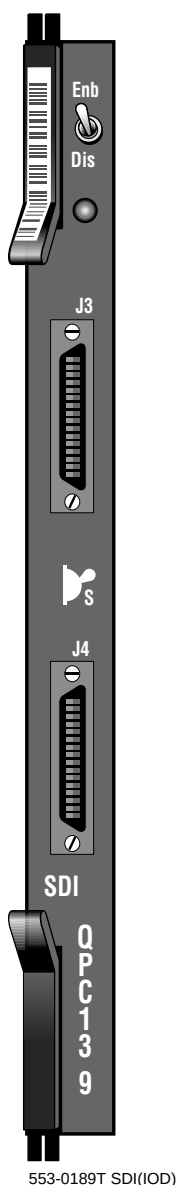
When LD 37 is defined as a daily routine, the overlay runs only once every five days. And the primary storage device (disk or tape) is thoroughly tested (equivalent to command MSI 0 or TAPE 0).

Only some of the commands in this overlay are supported by Options 51C/61C/81. For these systems, use the MSI commands in LD 137.

Refer to Link Diagnostic (LD 48) for I/O ports used with the following applications:

- ◆ Command and Status Links (CSL)
- ◆ Meridian Link
- ◆ Automatic Call Distribution (ACD)
- ◆ Integrated System Messaging Link
- ◆ Enhanced Serial Data Interface (ESDI) ports

SDI — Serial Data Interface



All Meridian SL-1 systems can support up to 16 serial data interface devices that utilize the American Standard Code for Information Interchange (ASCII) characters.

Up to three dual port SDI paddleboards can be installed on the rear backplane of each Option 21 CE/PE module, and up to two SDI paddleboards can be installed on the rear backplane of each Option 61 CPU/NET module.

Purpose

The SDI provides EIA Data Interchange Standard RS-232-C interface between the CPU and Data Terminal Equipment (DTE), Data Communication Equipment (DCE), and an Applications Processor Link (APL). Older SDI cards, up to and including the QPC139 card can also support teletypes or printers requiring 20 mA loop current.

Function

Serial data from the external equipment is converted to parallel data and driven onto the CE or control bus for the CPU, or vice versa.

Features

The faceplate includes the following:

- ◆ an ENB, DIS switch to hardware enable or disable the card
- ◆ a LED, when lit indicating a disabled card
- ◆ two DB 25 sub-miniature connectors; port 1 is labeled as J3 and port 2 is labeled as J4

The component side of the card contains the following switches and plugs:

Address Selection Switches — selects which pair of devices, 0 and 1 to 14 and 15, are to be addressed as ports 1 and 2

Speed Switches — matches the port baud speed to that of the connected device

Socket Plugs — matches the card function to three types of connecting devices as follows:

- ◆ Modem or DCE — used as an interface between a digital terminal and the analog transmission facilities of the public exchange network.
- ◆ EIA RS 232 Data Terminal or DTE — a device that requires an exchange of predetermined signals to provide control, called handshaking. This exchange between the SL-1 and the device must take place before information can be passed.
- ◆ Teletype terminal or TTY — a non-handshaking 20 mA current loop device. The SDI card provides the current.

TTY/PRT commands		
Command	Description	Release
Stat all		
STAT	Provide status of all input/output devices in system.	basic-1
Status of TTY/PTR		
STAT TTY x	Provide status of TTY x. With X11 Release 19 and later, this command also provides the status of the primary PMSI port. FAULTY HW: NO RESPONSE = SDI device identified as faulty by the SRIP function. Refer to the FHW chapter.	basic-1
STAT TTY	Provide status of all TTY devices in system. With X11 Release 19 and later, this command enables you to get the status of the primary PMSI I/O port, and the Single Terminal Access (STA) administration terminal.	basic-1
STAT PRT	Provide status of all printers in system.	basic-1
STAT PRT x	Provide status of printer x.	basic-1

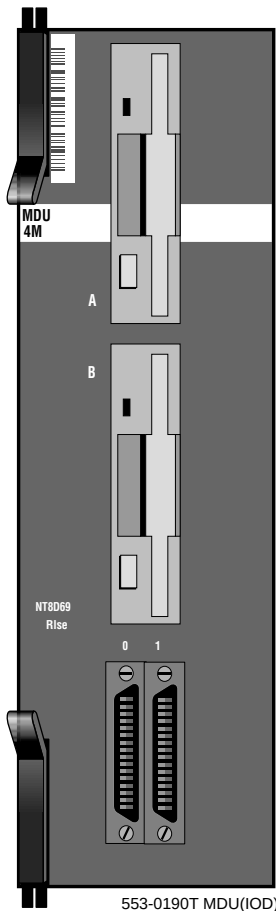
TTY/PRT commands (continued)		
Command	Description	Release
Disable TTY/PRT		
DIS TTY x	Disable TTY x.	basic-1
DIS PRT X	Disable printer x.	basic-1
Enable TTY/PRT		
ENL TTY x	Enable TTY x.	basic-1
ENL PRT X	Enable printer x.	basic-1
Test TTY/PRT		
TTY x	Test TTY x . Response is: ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789"#\$%*!&(<>-.:,.? READY FOR INPUT Anything entered on the keyboard will be echoed until END is input.	basic-1

Test TTY/PRT		
PRT x	Test printer x. Same as TTY test except that no keyboard input is expected and END command is not required. The following symbol is printed * denoting that the printer is not yet available.	

Mass storage system

The mass storage system is used as the nonvolatile storage medium and consists of two 3.5 inch floppy disk drives, a mass storage interface card, and a hard disk drive (optional).

MDU — Multi Disk Unit



Purpose

The Multi Disk Unit (MDU) is used to load the programs and programmable data into the system memory.

Function

Provides a nonvolatile store of resident programs and data for automatic loading in case the system memory is erased due to a power or control failure. The MDU or FDU can be used on Option 61 and 71. The MDU is mandatory when Option 71 or SL-1 XT is equipped with Release 16 and later software.

Features

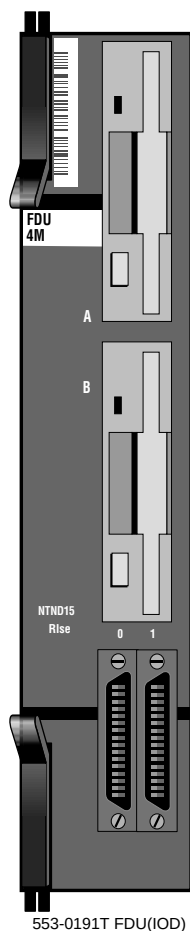
The MDU has the following features:

- ◆ two 3.5-inch floppy drive units, labeled “A” and “B”, each with a LED, which when lit indicate that the diskette is rotating. Each disk has a formatted capacity of 1.44 mega-bytes
- ◆ a 3.5-inch hard drive unit, labeled “C”, with a capacity of 20 mega-bytes
- ◆ a QPC584 Mass Storage Interface card, which controls the MDU
- ◆ occupies three adjacent card slots in the CPU, CPU/NET, or Network module and requires 5V and 12V from this module backplane

The MDU can be connected to one or two MSI cards as required.

Do not turn off the power when the drives are active, as this could corrupt data.

FDU — Floppy Disk Unit



Purpose

The Floppy Disk Unit (FDU) is used to load the programs and programmable data into the system memory.

Function

Provides a nonvolatile store of resident programs and data for automatic loading in case the system memory is erased due to a power or control failure. The FDU is used with Options 21, 61, 71, and can be retrofitted to the Meridian SL-1XT, NT, ST.

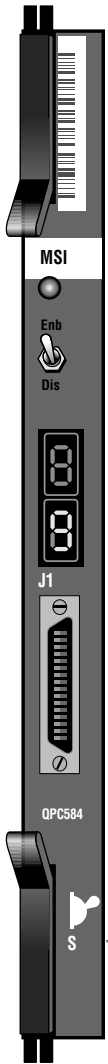
Features

The FDU has the following features:

- ◆ two 3.5-inch floppy drive units, with same features as the MDU floppy
- ◆ is controlled by the QPC742 Floppy Disk Interface card
- ◆ is powered through the cable connecting it to the FDI card
- ◆ occupies two adjacent card slots in the CUP, Network, or PE module
- ◆ can be connected to one or two FDI cards as required

Do not turn off the power when the drives are active, as this could corrupt data

MSI — Mass Storage Interface



553-0192T MSI(IOD)

Purpose

Used to interface the Mass Storage Unit, a Serial Device, to the CPU, a Parallel Device.

Function

The MSI card provides address matching, disk drive control, data buffering, and interrupt control circuits.

Features

The faceplate includes the following features:

- ◆ a LED when lit indicating a disabled MSI card
- ◆ an ENB, DIS switch to hardware enable or disable the card
- ◆ two display modules, to indicate MSU faults or operation
- ◆ a 50 pin connector used to interconnect the MSI card to the mass storage unit

A switch on the component side of the card is used to address the hard disk when optioned.

A Security Data cartridge is inserted into jack J2 on the component side of the MSI card. Only one cartridge is issued for each MSI card installed in a Meridian 1.

Data Cartridge - The cartridge allows the system to load only those optional programs purchased by the user or owner of the system. Each cartridge carries an identification number and is unique to a particular Meridian 1. If the identification number on the cartridge does not match that of the floppy disks, the system will not load. - If the cartridge fails during operation, the system will still process calls, however the system will not load programs stored on disks into memory.

MSI faceplate hex codes

The Mass Storage Interface (MSI) card is located on the CPU shelf of systems equipped with disk drives. *Display definition* applies to QPC584E and earlier versions. If the faceplate cable is disconnected, the MSI displays AF for about seven seconds then flashes 55 followed by 10, the idle state. IOD0050 and OVL0005 messages are output.

The meaning of the code depends on whether the display is alternating, counting, flashing or steady.

Display is alternating

- Ax The MSI is reading disk records.
ACTION: For information only, no action required.

Display is counting

- 00-50 During the restore command in LD 43, the MSI display counts from 0 to 32 hex as the floppies are being copied to hard disk. Each count corresponds to a block of data being transferred. It also counts down when a second copy of the floppy is made on the hard disk.
ACTION: For information only, no action required.
- 55-00 During the running of LD 37 I/O diagnostic commands:
 On **MSI 0** command, the display shows a pattern counting down from 55 to 00 on two separate occasions. Each count occurs in approximately 1 second intervals. This simulates the fast forward and reverse tape motion which takes about 85 seconds each.
ACTION: For information only, no action required.
 On **MSI RW 0** command, after the A1-AF pattern indicating records are being read, there is an occasional '8B' indicating that records are being written. When writing to a floppy with the write/protect tab on, the display flashes 97 and IOD0075 is output.
ACTION: If appropriate remove write/prot Display is flashing.
- 00 Hard disk or floppy disk is not formatted (QPC584A to D). For QPC584E or later, 00 indicates that information is missing from the disk.
ACTION: Try another set of disks. If the problem still occurs, replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 01 No Index/Sector signal (hardware/disk error).
ACTION: Try another set of disks. If the problem still occurs, replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 02 No seek complete on the floppy disk (hardware data/disk error).
ACTION: Try another set of disks. If the problem still occurs replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 03 Write fault.
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).

- 04 Addressed disk drive is not ready.
ACTION: Check that the floppy disks are in place and that they are properly seated. Be sure that the floppy disks are not upside down or backwards in their drives.
- 05 Addressed disk drive is not selected.
ACTION: Check that the drive is present and the cables to the controller are correct. If the MSU has just been powered on, the MSI must be initialized. This is done by turning the MSI switch from ENL to DIS and back to ENL.
- 06 No Track Zero found (hardware error).
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 07 Multiple Drives selected (hardware error).
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 0D A command is still executing and a new command is issued.
ACTION: Be patient. You are entering commands faster than the system can handle them.
- 10 Check Sum Error (hardware/medium error).
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 11 Read Error (medium error).
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 12 No address mark found in ID field on disk (medium error).
ACTION: Try another set of disks, if the problem still occurs, replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 13 No address mark found in data field on disk (medium error).
ACTION: Try another set of disks, if the problem still occurs, replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 14 No record found (disks) (medium error).
ACTION: Try another set of disks, if the problem still occurs, replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 15 Seek error (hardware error).
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 17 Attempting to write to a write-protected disk.
ACTION: Close the sliding write/protect tab on the disk, to un-write protect.
- 1A Too many parameters (illegal request).
ACTION: Contact your technical support group.
- 20 Invalid Command (illegal request).
ACTION: Contact your technical support group.

- 21 Illegal parameters were sent to the controller. For QPC584E; 21 indicates invalid address on disk.
ACTION: Contact your technical support group.
- 22 Switching from hard disk to floppy disk for n
ACTION: For information only, no action required.
- 23 Disk capacity overflow (illegal request).
ACTION: Contact your technical support group.
- 24 Illegal field in command (illegal request).
ACTION: Contact your technical support group.
- 25 Invalid drive selection (illegal request).
ACTION: Contact your technical support group.
- 26 Invalid field in parameter list (illegal request).
ACTION: Contact your technical support group.
- 27 Write protected (also see 97).
ACTION: Switch the notch from the write protect to unwrite protect on the disk.
- 28 Disk changed.
ACTION: Information only, no action required.
- 29 Power on reset occurred.
ACTION: Information only, no action required.
- 2A Drive parameters changed.
ACTION: Information only, no action required.
- 2B Floppy disk controller error.
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 31 Drive format is corrupted (medium error).
ACTION: Try another set of disks, if the problem still occurs replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 33 Switching from floppy disk to hard disk for normal operation.
ACTION: Information only, no action required.
- 40 RAM failure (hardware error).
ACTION: Contact your technical support group.
- 41 ECC diagnostic failure (hardware error).
ACTION: Contact your technical support group.
- 42 Power on failure (hardware error).
ACTION: Contact your technical support group.
- 43 Message rejected.
ACTION: Contact your technical support group.

-
- 44 Sanity timer is active; extraordinary situation.
ACTION: Contact your technical support group.
- 45 Drive select failed (hardware error).
ACTION: Replace the hard drive following the steps in the *Hardware Replacement* (553-3001-520).
- 47 Parity error.
ACTION: Contact your technical support group.
- 48 Initiator detected error.
ACTION: Contact your technical support group.
- 49 Illegal message.
ACTION: Contact your technical support group.
- 55 The MSU or CPU not responding. The MSU may have no power. 55 also occurs if the CPU does not respond to the MSI after giving it a command.
ACTION: Check the MSI to MSU cable.
- 90 Configuration error.
ACTION: Contact your technical support group.
- 91 Uncorrectable error in data field of diskette.
ACTION: Replace the floppy disk that was being accessed when the error occurred with a backup floppy disk.
- 92 Controller did not detect the address mark in the Identification (ID) field.
ACTION: Contact your technical support group.
- 94 Controller could not find the requested record.
ACTION: Contact your technical support group.
- 95 Seek error. The Controller could not find the specified track.
ACTION: Contact your technical support group.
- 97 Attempting to write on a write-protected disk. Floppy disk B has a write-protect tab.
ACTION: Switch the notch from the write protect to unwrite protect on the disk.
- BA Write error.
ACTION: Replace the floppy disk that was being accessed when the error occurred with a backup floppy disk.
- BC A diskette write error occurred during the write of a record.
ACTION: Replace the floppy disk that was being accessed when the error occurred with a backup floppy disk.
- BD Logical Record Count (LRC) mismatch during disk write. The LRC calculated by the MSI does not agree with the LRC sent by the system.
ACTION: Contact your technical support group.

- BE Record Number (RN) mismatch during disk write. The current RN in the MSI does not agree with the RN sent by the system.
ACTION: Contact your technical support group.
- BF Illegal Record Type (RT) during disk write. The record requested by SL-1 to be written onto diskette is neither a configuration record (RT8) nor data record (RT7).
ACTION: Contact your technical support group.
- CA Beginning to copy data from floppy disk B to hard disk.
ACTION: For information only, no action required.
- CC Copy (restore) from floppy disk to hard disk is complete.
ACTION: For information only, no action required.
- CD Hard disk has been positioned to shipping zone.
ACTION: Contact your technical support group.
- D0 Attempting to do a backup when there are no data records on the hard disk. Do a datadump to the hard disk before doing the backup to the floppy disks.
ACTION: Perform a (RES) command to restore LD 43 to the hard drive.
- D1 Attempting to do a data base backup when MSI switch settings have not been set for operation from a hard disk.
ACTION: Put position 4 of S3 ON
- D6 Read error of hard disk private sector.
ACTION: Contact your technical support group.
- DD Datadump (backup) to floppy disk B is beginning.
ACTION: Information only, no action required.
- DC Datadump (backup) to floppy disk is complete.
ACTION: Information only, no action required.
- E1 Cartridge time-out because MSI data cartridge is not present.
ACTION: Install a data cartridge.
- E2 Illegal MSI data cartridge.
ACTION: Check that the data cartridge is properly installed (proper orientation with all pins inserted), or replace the data cartridge.
- E3 Disk ID on floppy does not match ID in data cartridge.
ACTION: Replace the floppy disk or cartridge.
- E4 Mismatch in System Version Number (SVN). SVN on disk does not match SVN in MSI data cartridge.
ACTION: Replace the floppy disks or cartridge. SVN indicates the SL-1 machine type, for example the SVN for SL-1 XN is 911.

- E5 Mismatch in System Issue Number (SIN). SIN release number on disk does not match SIN release number in MSI data cartridge. SIN consists of two parts: a release number and an issue number. The release number is the most significant (decimal) digit of the SIN and the issue number is the lease two significant digits. For example, a SIN of 855 means a release number of 8 and an issue number of 55. The MSI only compares the release portion of the SIN.
ACTION: Replace the floppy disks or data cartridge.
- E6 Diskette read error encountered during attempted read of the private sector.
ACTION: Check that the floppy disk is present.
- E7 Diskette write error encountered during attempted write to the private sector.
ACTION: Check that the write-protect tab has been removed from the floppy disk in drive B.
- E8 Illegal attempt to write onto floppy disk A.
ACTION: This is not allowed.
- E9 Illegal attempt to write to track 1 or track 2 space on the hard disk. This is not allowed.
ACTION: Contact your technical support group.
- EA Illegal value was written into track register. The value written was not 1, 2, 4 or 8.
ACTION: Contact your technical support group.
- EC Conversion error in computing logical sector number for hard disk.
ACTION: Contact your technical support group.
- EE Maximum record number was exceeded during a database write to disk.
ACTION: Contact your technical support group.
- FA Fault in floppy drive A. Self-test failed.
ACTION: Check the cabling to drive A, and check the drive DIP switches or replace the drive.
- FB Fault in floppy drive B. Self-test failed. If code 97 was displayed before FB, the write-protect tab is in place and the write test could not be completed.
ACTION: Remove the tab on floppy disk B. Check the cabling to drive B, check the drive DIP switches or replace the drive.
- FC Fault in hard disk drive C. Self-test failed.
ACTION: Check the cabling to drive C, also check the drive DIP switches or replace the drive.
- FD Wrong floppy disks in drives.
ACTION: Insert Floppy disk A in drive A and floppy disk B in drive B.
- FE Read error.
ACTION: Contact your technical support group.
- FF Floppy disk is in the wrong drive. Floppy disk A is in drive B and floppy disk B is in drive A. Drive A must contain a Track 1 floppy, Drive B a Track 3 floppy.
ACTION: Insert Floppy disk A in drive A and floppy disk B in drive B.

Display is steady

- 00 Mass Storage Interface (MSI) power-up completed.
ACTION: For information only, no action required.
- 10 Mass Storage Interface (MSI) in idle state.
ACTION: For information only, no action required.
- 2F Unknown command from CPU.
ACTION: Contact your technical support group.
- 81-8F Codes **81** to **8F** indicate the MSI is simulating tape functions.
- 81** Slow forward with Inter-record Gap (IRG)
 - 82** Slow reverse with Inter-record Gap (IRG)
 - 83** Fast forward with Inter-record Gap (IRG)
 - 84** Fast reverse with Inter-record Gap (IRG)
 - 85** Rewind
 - 89** Set timer (to a maximum of 64 ms)
 - 8A** Read disk
 - 8B** Write disk
 - 8C** Diagnostic write
 - 8D** Diagnostic fast forward
 - 8E** Diagnostic fast reverse
 - 8F** Unrecognized command
- ACTION:** For information only, no action required.
- A1 MSI has completed reading a record from disk and is transferring the data to the CPU.
ACTION: For information only, no action required.
- A2 MSI has completed writing a record from its write buffer onto a diskette.
ACTION: For information only, no action required.
- AD During restore and backup for hard disk, the MSI is waiting for the disk controller to indicate that it has completed execution of the command.
ACTION: For information only, no action required.
- AE MSI has sent a status request to the Disk Controller.
ACTION: For information only, no action required.
- AF MSI has issued a command to the Disk Controller.
ACTION: For information only, no action required.
- C2 Copying track 1 to track 2 on hard disk.
ACTION: For information only, no action required.
- C4 Copying track 3 to track 4 on hard disk.
ACTION: For information only, no action required.

Disk commands versus tape commands

The various MSI (Mass Storage Interface) commands are not supported on Generic X37 and Generic X08 (prior to Release 12) software and if they are equipped with disk drives, the corresponding TAPE command should be used when testing the MSI as follows:

Disk command = Tape command

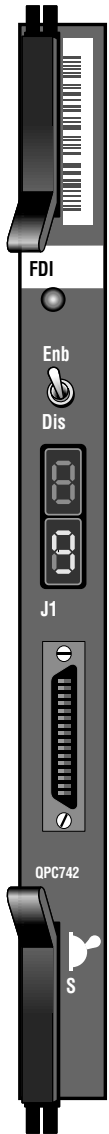
DIS MSI x=DIS TAPE x
ENL MSI x=ENL TAPE x
MSI DATA=TAPE DATA
MSI x=TAPE x
MSI RW x=TAPE RW x
MSI SELF x=TAPE CTRL x
STAT MSI=STAT TAPE
STAT MSI x=STAT TAPE x

Use of the TAPE x or TAPE MOTN x commands on a system equipped with disk drives will result in an IOD0075 message. This message should be disregarded.

If LD 37 is run as part of the daily routines, an IOD0075 message will be output on systems equipped with disk drives. This message should be disregarded.

MSI status		
Command	Description	Release
STAT	Provide status of all input/output devices in system.	basic-1
STAT MSI	Provide status of all MSI cards.	basic-1
STAT MSI x	Provide status of MSI card associated with the active CPU.	basic-1
STAT TAPE	Provide status of all magnetic tape devices.	basic-1
Disable MSI		
DIS MSI x	Disable Mass Storage Interface card x.	basic-1
DIS TAPE x	Disable tape unit x.	basic-1
Enable MSI		
ENL MSI x	Enable Mass Storage Interface card x.	basic-1
ENL TAPE X	Enable tape unit x.	basic-1
Test MSI		
TAPE CTRL x	Test control electronics on tape device x.	basic-1
TAPE DATA	Test data on all 4 tracks.	basic-1
TAPE MOTN x	Test motion and timing on tape device x.	basic-1
TAPE RW x	Test READ/WRITE ability of tape device x.	basic-1
TAPE x	Test magnetic tape device x.	basic-1
MSI DATA	Test data validity in primary and backup device.	basic-1
MSI RW x	Test READ/WRITE ability of Mass Storage unit x.	basic-1
MSI SELF x	Perform self-test on MSI card and report result.	basic-1
MSI x	Test Mass Storage unit x. This commands runs the MSI DATA, RW and SELF tests.	basic-1
Status of CDR Links		
STAT LINK	Provide status of all CDR links.	basic-1
STAT LINK x	Provide status of CDR data link x.	basic-1

FDI — Floppy Disk Interface



553-0193T FDI(10D)

Purpose

The Floppy Disk Interface (FDI) card is used to interface the floppy disk unit, a serial device, to the CPU, a parallel device.

Function

The FDI card provides address matching, disk drive control, data buffering, and interrupt control circuits.

Features

The FDI card faceplate includes the following:

- ◆ a LED, when lit indicating a disabled FDI card
- ◆ an ENB/DIS switch to hardware enable or disable the card
- ◆ two display modules, to indicate FDU faults or operation
- ◆ a 50 pin connector used to interconnect the FDI card to the mass storage unit

A switch on the component side of the card is used to address the hard disk when optioned.

A Security Data cartridge is inserted into jack J2 on the component side of the FDI card. Only one cartridge is issued for each FDI card installed in a Meridian 1.

Data cartridge The cartridge allows the system to load only those optional programs purchased by the user or owner of the system. Each cartridge carries an identification number and is unique to a particular Meridian 1. If the identification number on the cartridge does not match that of the floppy disks, the system will not load. - If the cartridge fails during operation, the system will still process calls, however the system will not load programs stored on disks into memory.

FDI faceplate hex codes

The codes listed in the following section appear on the Floppy Disk Interface (FDI) circuit card located on the CPU shelf of systems equipped with disk drives.

The meaning of the code depends on whether the display is alternating, counting, flashing or steady.

Display is alternating

- A1-70 FDI is reading disk records.
ACTION: For information only, no action required.

Display is counting

- 55-00 Display counts down in hexadecimal from 55 to 00 in approximately 1 second intervals. This display will run through two cycles. This is to simulate fast-forward and fast-reverse tape motion during diagnostics.
ACTION: For information only, no action required.

Display is flashing

- 44 Sanity timer has timed out. Extraordinary situation.
ACTION: Contact your technical support group.
- 55 Floppy Disk Unit (FDU) or CPU not responding. The FDU may have no power. This message is also displayed if the CPU does not respond to the FDI after giving it a command.
ACTION: Check the FDI to FDU cable.
- 60 Missing address mark. The Floppy Disk Controller (FDC) cannot detect the ID address mark after encountering the index hole twice.
ACTION: Check the cable or replace the diskette (disk error).
- 61 Not writable. The Floppy Disk Controller (FDC) has detected a write protect signal from the addressed drive.
ACTION: Remove the write protect tab on floppy disk B and try again.
- 62 No data. Floppy Disk Controller (FDC) cannot find the sector specified (disk error).
ACTION: Contact your technical support group.
- 63 Overrun. Floppy Disk Controller (FDC) is not being serviced fast enough by the CPU (FDC/hardware error).
ACTION: Contact your technical support group.
- 64 Data error. A checksum error in the ID field or the data field was detected (disk error).
ACTION: Contact your technical support group.
- 65 End of cylinder. An attempt has been made to access beyond the final sector of a cylinder (FDC/hardware error).
ACTION: Contact your technical support group.

- 66 Missing address mark in data field. In conjunction with (60), this specifies the missing address mark to have occurred in a data field (disk error).
ACTION: Contact your technical support group.
- 67 Bad cylinder. The cylinder address as read from the disk does not match the cylinder address loaded into the Floppy Disk Controller (FDC), and the disk cylinder address equals FFH (FDC/hardware error).
ACTION: Contact your technical support group.
- 68 Wrong cylinder. The cylinder address as read from the disk does not match the cylinder address loaded into the Floppy Disk (FDC) (FDC/hardware error).
ACTION: Contact your technical support group.
- 69 Data error in data field. A checksum error was detected in the data field (disk error).
ACTION: Contact your technical support group.
- 6A Control mark. A sector with a deleted data address mark was encountered (disk error).
ACTION: Contact your technical support group.
- 72 Abnormal termination. Command execution started but not be successfully completed.
ACTION: Contact your technical support group.
- 74 Interrupt module error. An error was detected during execution of interrupt module.
ACTION: Contact your technical support group.
- 75 Read2s module error.
ACTION: Contact your technical support group.
- 76 Write2s module error.
ACTION: Contact your technical support group.
- 77 Initctrl module error.
ACTION: Contact your technical support group.
- 78 Command interface error. Incorrect hand shaking between Floppy Disk Controller (FDC) and CPU during attempt to load command block.
ACTION: Contact your technical support group.
- 79 Result interface error. Incorrect handshaking between Floppy Disk Controller (FDC) and CPU during attempt to read result bytes.
ACTION: Contact your technical support group.
- 7A RXRSLT module error.
ACTION: Contact your technical support group.
- 7C Addressed drive not ready.
ACTION: Contact your technical support group.
- 7D Invalid hard disk operation attempted.
ACTION: Contact your technical support group.
- 7E Logical sector number out-of-range.
ACTION: Contact your technical support group.

BA	Write error. ACTION: Contact your technical support group.
BC	A disk write error occurred during the write of a tape record. ACTION: Contact your technical support group.
BD	Checksum mismatch during disk write. The checksum calculated by the MSI does not agree with the checksum sent by the system. ACTION: Contact your technical support group.
BE	Record Number (RN) mismatch during disk write. The current RN in the MSI does not agree with the RN sent by the system. ACTION: Contact your technical support group.
BF	System has requested that a record be written to a disk. The record is neither a configuration record nor a data record. ACTION: Contact your technical support group.
E1	Cartridge timeout because MSI data cartridge is not present. ACTION: Install a data cartridge.
E2	Illegal MSI data cartridge. ACTION: Check that the data cartridge is properly installed (proper orientation with all pins inserted), or replace data cartridge.
E3	Disk ID on floppy disk does not match disk ID in data cartridge ACTION: Replace the floppy disks or data cartridge.
E4	Mismatch in System Version Number (SVN). SVN on disk does not match SVN in MSI data cartridge. ACTION: Replace the floppy disks or data cartridge.
E5	Mismatch in System Issue Number (SIN). SIN release number on disk does not match SIN release number in MSI data cartridge. ACTION: Replace the floppy disks or data cartridge.
E6	Diskette read error encountered during attempted read of the private sector. ACTION: Check that the floppy disk is present.
E7	Diskette write error encountered during attempted write to the private sector. ACTION: Check that the write-protect tab has been removed from the floppy disk in drive B.
E8	Illegal attempt to write onto floppy disk A. This process is not allowed. ACTION: Check that the proper floppy disk is present.
EA	Illegal value was written into track register. The value written was not 1, 2, 4 or 8. ACTION: Contact your technical support group.
EE	Maximum record number was exceeded during database write to disk ACTION: Contact your technical support group.
FA	Fault in floppy drive A. Self-test failed. ACTION: Check the cabling to drive A or replace the drive.

- FB** Fault in floppy drive B. Self-test failed. If code 61 was displayed before FB, the write-protect tab is in place and the write test could not be completed.
ACTION: Remove the write/protect tab on floppy disk B. Check cabling to drive B or replace the drive.
- FD** Wrong floppy disks in drives.
ACTION: Insert disks in the proper drives.
- FE** Read error.
ACTION: Contact your technical support group.
- FF** Floppy disk is in the wrong drive. Floppy disk A is in drive B and floppy disk B is in drive A.
ACTION: Insert disks in the proper drives.

Display is steady

- 00** Floppy Disk Interface (FDI) power-up completed.
ACTION: For information only, no action required.
- 10** Floppy Disk Interface (FDI) in idle state.
ACTION: For information only, no action required.
- 2F** Unknown command from CPU.
ACTION: Contact your technical support group.
- 70**
 1. Invalid command. Floppy Disk Controller (FDC) has received an unrecognizable command.
ACTION: Ensure that this is the command you wanted to use.
 2. This code also signals the successful completion of all asynchronous processing.
ACTION: For information only, no action required.
- 71** Asynchronous command complete.
ACTION: For information only, no action required.
- 73** Ready status change.
ACTION: For information only, no action required.
- 7B** Synchronous command complete.
ACTION: For information only, no action required.
- 81-8F** Codes **81** to **8F** indicate the FDI is simulating tape functions.
81 Slow forward with Inter-record Gap (IRG)
82 Slow reverse with Inter-record Gap (IRG)
83 Fast forward with Inter-record Gap (IRG)
84 Fast reverse with Inter-record Gap (IRG)
85 Rewind
89 Set timer (to a maximum of 64 ms)
8A Read disk

- 8B Write disk
- 8C Diagnostic write
- 8D Diagnostic fast forward
- 8E Diagnostic fast reverse
- 8F Unrecognized command

ACTION: For information only. No action required.

A1 Floppy Disk Interface (FDI) has completed reading a record from a disk into its read buffer and is transferring the data to the CPU.

ACTION: For information only, no action required.

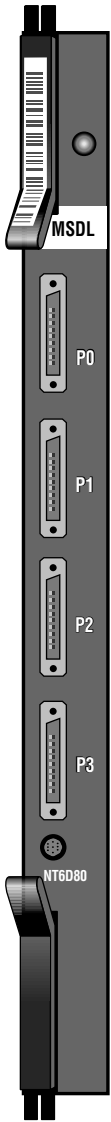
A2 Floppy Disk Interface (FDI) has completed writing a record from its write buffer onto a disk.

ACTION: For information only, no action required.

CC Data transfer from cartridge is complete.

ACTION: For information only, no action required.

MSDL — Multipurpose Serial Data Link



553-0194T MSDL(OD)

A Meridian 1 can support up to 16 Multipurpose Serial Data Link (MSDL) cards to a maximum of 64 ports.

Purpose

The MSDL card provides a serial interface for D-channel (DCH), ISDN Signaling Link (ISL), Application Module Link (AML), and SDI terminals (DTE or DCE).

TTY and printer asynchronous terminals can only be configured on port 0. All ports can be configured for synchronous applications, as DTE or DCE and RS232 or RS422.

Function

The MSDL MPU provides the following:

- ◆ self-tests
- ◆ communicates with the Meridian 1 CPU
- ◆ downloads peripheral software from the Meridian 1 CPU to control MSDL parameters
- ◆ coordinates data flow in conjunction with the Meridian 1 CPU
- ◆ manages data link layer and network layer signaling to control connection and disconnection
- ◆ controls its own operation initialization and addressing

Features

The MSDL card faceplate includes the following:

- ◆ a LED, when lit indicating a disabled MSDL card
- ◆ four I/O ports using 26 pin female SCSI II connectors
- ◆ a proprietary port for monitoring MSDL functions

On the component side of the card, switches S9 and S10 set the device number to match DNUM in LD 17. Switches S1 to S8 set ports to DTE or DCE and RS232 or RS422.

Multipurpose Serial Data Link commands

The MSDL provides 4 ports for ISDN Primary Rate D-channel (DCH) and Application Module Link (AML).

The MSDL commands are listed below, where x is the MSDL device number (defined by prompt DNUM in LD 17):

- DIS MSDL x (ALL) = Disable MSDL card
- ENL MSDL x (FDL, ALL) = Enable MSDL card
- RST MSDL x = Reset MSDL card
- STAT MSDL (x (FULL)) = Get MSDL status
- SLFT MSDL x = Execute a selftest on MSDL card x

These commands are provided in Link Diagnostic (LD 48) and D-channel Maintenance (LD 96), and I/O Diagnostic (LD 37). Refer to the “Alphabetical list of commands” in LD 48 for a complete description of these commands.

MSDL commands		
Command	Description	Release
Status of MSDL		
STAT MSDL (x) (FULL)	Get status of MSDL card (x) (additional information).	
Disable		
DIS MSDL x (ALL)	Disable MSDL device x (card).	
Enable		
ENL MSDL x (ALL, FDL)	Enable MSDL device x (card, Forced Download).	
Reset MSDL		
RST MSDL x	Reset MSDL device x.	
Test MSDL		
SLFT MSDL x	Invoke self-test for MSDL device x.	

Property Management System Interface

The Property Management System Interface (PMSI) is a full-duplex RS-232 asynchronous data link that allows a Meridian 1 customer with a Property Management System (PMS) computer to exchange a higher level of protocol for the Background Terminal (BGD) features in a hospitality environment.

The system connects to the PMS computer through a SDI port. Each character received from the PMSI data link is treated as if it were entered from a TTY, and each character transmitted to the PMS computer is handled the same way as characters that are output to a TTY.

PMSI commands		
Command	Description	Release

Status of PMSI

STAT	Provide status of all input/output devices in system.	basic-1
STAT TTY	Provide status of all TTY devices in system. With X11 Release 19 and later, this command enables you to get the status of the primary PMSI I/O port, and the Single Terminal Access (STA) administration terminal.	basic-1
STAT TTY x	Provide status of TTY x. With X11 Release 19 and later, this command also provides the appropriate PMSI port.	basic-1
STAT MON	Get the monitoring status for the primary PMSI port. This command displays the status of the message monitoring for the primary port. For example, if MSGI, MSGO, and SET MON 0 are enabled the display would be as follows.	pms-19

MSGI:ON MSGO: ON ALPH

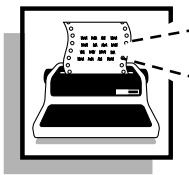
Disable PMSI

DIS MSGI	Disable incoming message monitoring for the primary PMSI port.	pms-19
DIS MSGO	Disable outgoing message monitoring for the primary PMSI port.	pms-19

PMSI commands (continued)		
Command	Description	Release
Enable PMSI		
ENL MSG	Enable incoming message monitoring for the primary PMSI port.	pms-19
ENL MSGO	Enable outgoing message monitoring for the primary PMSI port.	pms-19
Set PMSI monitoring display		
SET MON 0	Set the monitoring display to be in alphanumeric format. This applies to the primary PMSI port.	pms-19
SET MON 1	Set the monitoring display to be in hexadecimal format. This applies to the primary PMSI port.	pms-19
CDSP	Set the monitoring display to be in alphanumeric format This applies to the primary PMSI port.	pms-19

Intelligent Links (APL, HSL, LSL, and CMAC)

A warning message is generated each time an intelligent link is accessed (enable, disable, test). The message is generated for the following types of links:



APL
ACD-D (HSL/LSL)
CMAC (Communication Management Center)

The message allows the access to be aborted prior to performing the enable, test, etc. The warning appears in the following format:

DIS TTY N (link type) LINK (status) (y/n)

A response of y disables the hardware of the TTY regardless of the software status of the link. The status field provides the software status of the link. Valid status entries are:

BAD = software status is invalid
DOWN = link is down
MAINT = link is up and in maintenance mode

FULL = link is full
EMPTY = link is empty
NOT EMPTY= link still contains data

IOD messages

- IOD0000 Program 37 identifier.
ACTION: The IOD program is loaded and ready for you to enter commands.
- IOD0001 An invalid command.
ACTION: Ensure that this is the command you wanted to use.
- IOD0002 An invalid argument(s).
ACTION: Check to make sure your data is correct and re-enter the command.
- IOD0003 The customer is nonexistent or out-of-range. Range is 0 to 31.
ACTION: Check to make sure your data is correct and re-enter the command.
- IOD0004 The device number is out-of-range. Range is 0 to 7 or 0 to 15.
ACTION: Check to make sure your data is correct and re-enter the command.
- IOD0005 The requested device is not defined in the system.
ACTION: Ensure that this is the command you wanted to use. If this is the correct command, refer to the *X11 Administration* (553-3001-311) to program the device.
- IOD0006 The interface card failed to respond and a card fault is indicated. The device cannot be enabled until the fault is cleared. This information is also displayed on the maintenance display. Refer to the Maintenance Display Codes Table.
ACTION: Check the enable switch on the SDI or MSDL card. Use ENL MSDL to enable MSDL card. If the card still does not respond, replace the SDI or MSDL cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0007 The interface card has a permanent interrupt. The device cannot be enabled until fault is cleared.
ACTION: Replace the SDI or MSDL card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0009 The disabling of an active input device is not allowed.
ACTION: Refer to a different TTY or use an SL-1 maintenance set.
- IOD0010 The device cannot be enabled because the extender to the network shelf is disabled.
ACTION: Use STAT EXT in LD 35 to determine which extender is disabled. Use ENL EXT xxx in LD 35 to re-enable the extender before proceeding. If the extender does not enable, replace the extender card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- IOD0011 The CDR tape is not positioned after the last record.
ACTION: Perform a backup so that the data on the tape is not lost, and then install new tape.
- IOD0012 The RW test is not allowed on the Mini-CDR tape. It is only used on SL-1 M and MS.
ACTION: Information only, no action required.
- IOD0021 An illegal character was entered while the tape data was running. Only END is permitted while TEST is in progress.
ACTION: Check to make sure your data is correct and re-enter the command.
- IOD0030 The command is not allowed for an ESDI port.
ACTION: Ensure that this is the command you wanted to use.
- IOD0040 n A TTY or printer **n** is not emptying the output buffer. The device is disabled. This information is also displayed on the maintenance display.
 Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
1. The output circuitry on SDI card **n** is faulty.
ACTION: Replace the SDI card following the steps in the *Hardware Replacement* (553-3001-520).
 2. A miscellaneous or IF card on active CPU
ACTION: Use SCPU in LD 35 to switch CPUs. If the TTY operates now, replace the IF card following the steps in the *Hardware Replacement* (553-3001-520). If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
 3. Other Serial Data Interface Type cards.
ACTION: Replace the other SDI card one at a time following the steps in the *Hardware Replacement* (553-3001-520).
- IOD0041 n A TTY **n** is producing incoherent or too much (over a defined threshold) input. The card has been disabled. Either the device is faulty or it is connected to a very noisy data line. This information is also displayed on the maintenance display. With X11 Release 19 and later, I/O Port auto Lockout Recovery is operating. This message indicates the TTY was left disabled because it had been locked out and re-enabled three times in the last 30 minutes.
ACTION: Use ENL TTY **x** to manually re-enable the port, and bring it back to service.
- IOD0050 n
1. The MSI/Tape unit **n** is not ready.
ACTION: Check disk/tape cartridge for proper seating. With disk systems, try operation again while watching the Mass Storage Interface display. Note display and follow the actions in the “*MSI faceplate hex codes*” on page 613 in this chapter.
 2. Receiving this message on a STE system running release 19 or 20 software.
ACTION: Load an overlay from another set of diskettes. Check for faulty FDI (QPC742). Check for a faulty cable or FDU (NTND15) card.
 3. Receiving this message when data dumping to the target diskettes while upgrading.
ACTION: Check that the MSI or FDI switch S3 position 4 is off. Check that the proper target data cartridge is mounted on the MSI or FDI card.

- IOD0051 e n 1. Time-out or early warning on tape unit while reading. Error codes for **e** are as follows:
- A=read directory timeout
 - B=check directory time-out
 - C=check track 3 time-out
 - D=check track 4 time-out
 - E=find last overlay record time-out
 - F=read EOF (End-Of-File) time-out
 - G=erase fault
 - W=tape initialization time-out
 - X=position check (tape read) time-out
 - Y=early warning point reached
 - Z=find record time-out
- The field **n** represents MSI/tape unit 1 or 2.
- ACTION:** Replace the MSI card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Receiving this message when data dumping to the target diskettes while upgrading.
- ACTION:** Check that the MSI or FDI switch S3 position 4 is off. Check that the proper target data cartridge is mounted on the MSI or FDI card.
- IOD0052 An early warning point has been reached.
- ACTION:** Replace the disk or tape. Verify that the fault is cleared.
- IOD0060 n An MSI or Tape Interface card fault for MSI or tape unit **n**.
- ACTION:** Replace the MSI card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0061 n A faulty track select on MSI or tape unit **n**.
- ACTION:** Replace the MSI card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0062 n A tape cartridge is missing or there is a defective bulb on tape unit **n**.
- ACTION:** Check the cartridge and bulb. Use MSI x to check Drive A and drive B. If the tests do not pass, replace drive A or B following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0063 n The tape wound off the end of the reel on unit **n**, or tape unit **n** is defective.
- ACTION:** Check the cartridge or disk on MSI unit **n**.
- IOD0064 n Interrupt fault on tape interface (TI) card for unit **n**.
- ACTION:** Disregard this message if the system is equipped with disk drives.
- IOD0065 n Unable to position disk or tape correctly on MSI drive A or drive B or tape unit **n** due to faulty tape or interrupt fault.
- ACTION:** Replace the MSI card or drive A or drive B one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each device verify that the fault is cleared.

- IOD0066 n The MSI or tape motion error detector on MSI or tape unit **n** malfunctioning.
ACTION: Replace the MSI card or drive A or drive B one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each device verify that the fault is cleared.
- IOD0067 n Tape control electronics is allowing improper tape motion on tape unit **n**. The MSI control unit is not working.
ACTION: Replace the MSI card or Drive A or drive B one at a time as per steps in the *Hardware Replacement* (553-3001-520). After replacing each device verify that the fault is cleared.
- IOD0068 n There is a defective interval timer on interface card for tape unit **n**. The MSI timer is not working.
ACTION: Replace the MSI card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0069 n The tape speed is incorrect, or there has been a failure to detect tape position changes on tape unit **n**. Possible defect in positioning of front cover. MSI timer not working.
ACTION: Remove the cover and test the cartridge. Replace the MSI card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0070 n The hardware on tape unit **n** failed to automatically stop motion at cartridge limits, or MSI timer not working.
ACTION: Replace the MSI card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0071 n Bad data on disk or tape, or defective cartridge in MSI, or tape unit **n**.
ACTION: Replace the MSI cartridge following the steps *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0072 n There is a faulty track select or defective cartridge in MSI, or tape unit **n**.
ACTION: Replace the MSI cartridge following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- IOD0073 n A faulty write protect mechanism exists which allows writing on protected data track of MSI or tape.
ACTION: Replace the drive unit following the steps in the *Hardware Replacement* (553-3001-520). After replacing the drive unit verify that the fault is cleared.
- IOD0074 n The tape cartridge on tape unit **n** is set to SAFE; the test cannot continue. Test will automatically continue when cartridge is replaced. This message can also indicate the MSI floppy disk B is write protected.
ACTION: Remove the write protection on the 5 1/4 inch floppy disk B by exposing the notch in the disk, or on the 3.5 inch floppy disk B by covering the hole on the disk.
- IOD0075 e c n Erase or write fault on tape unit **n**. **c** is the EOF record count (normally 9) and is given only when **e** = J. **e** appears as one of the following codes:
J=write unsuccessful after four attempts
K=skip back timeout
L=not EOF when EOF expected or timeout
M=read buffer full

N=read buffer full
O=time-out checking read buffer
P=EOF record not found before starting check pattern
Q=write check pattern timeout
R=read check pattern timeout
S=read check pattern timeout
T=check pattern record count error
U=read EOF (to start erase) timeout
V=no EOF when expected or timeout
n=MSI/tape unit 1 or 2 has erase or write fault. Possible faults include dirty tape heads, faulty cartridge or faulty drive interface

ACTION: Replace the tape unit following the steps in the *Hardware Replacement* (553-3001-520).

- IOD0076 n The MSI or tape unit **n** has problems reading data from disk or tape.
ACTION: Replace the drive unit following the steps in the *Hardware Replacement* (553-3001-520). After replacing the drive unit verify that the fault is cleared.
- IOD0077 n The MSI or tape unit **n** has problems writing data on tape
ACTION: Replace the drive unit following the steps in the *Hardware Replacement* (553-3001-520). After replacing the drive unit verify that the fault is cleared.
- IOD0078 n There is a hardware fault on the MSI or tape unit **n** which causes a momentary 'Not Ready' indication.
ACTION: Replace the MSI or tape unit. If the problem continues contact your technical support group.
- IOD0079 n The tape cartridge on tape unit **n** has bad a directory, or there is a bad directory in the MSI system.
ACTION: Try using the backup disks.
- IOD0080 n Disk or tape cartridge on MSI or tape unit **n** has missing 'end of disk/file'.
ACTION: Try using the backup disks.
- IOD0100 x y Meaning depends on the output data:
1. If **IOD0100 = 1 t**, Head fault or bad record on track **t**.
ACTION: Try using the backup disks, or replace the drive unit following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
 2. If **IOD0100 = e n**, Timeout or early warning during checking MSI/tape unit **n**. See IOD0051 for error **e**. Suspect tape cartridge, interface, cable(s) or tape shelf.
ACTION: Replace the following components one at a time following the steps in the *Hardware replacement guide*. Replace tape cartridge, interface, cable(s) or tape drive unit following the steps in the *Hardware Replacement* (553-3001-520). Swapping the active and secondary tape interfaces and cables may help to isolate the problem. Verify that the fault is cleared after replacing each component.
 3. If **IOD0100 = n t**, Track **t** disabled due to timeout or early warning initializing MSI/tape unit **n**.
ACTION: Try the backup disks/tape.
- IOD0101 x y Meaning depends on the output:

1. If **IOD0101 = 1 t**, Requested data record not found on track **t**.

ACTION: Try the backup disks/tape.

2. If **IOD0101 = n t**, Data record not found on track **t** on MSI/tape unit **n**. The data was loaded because it was duplicated.

ACTION: See IOD0100 for possible faults.

3. If **IOD0101 = t n r**, Data record rewritten by TAPE module on MSI/tape **n**, record **r**.

ACTION: Try the backup disks/tape.

4. 4. If **IOD0101 = e n t**, Data record not found on tape **n** track **r**, **e** appears as one of the following codes:

A=tape initialization

B=read directory

C=read data record (after read directory)

D=read test record

E=read EOF record

F=read data record (after test)

G=read last overlay record

H=read checking track 1 or 3

I=read checking track 2 or 4

ACTION: Try the backup disks/tape.

IOD0110 Meaning depends on the output data:

1. If **IOD0110 = n**, Data record not found on both tracks of tape unit **n**. The data from the tape could not be loaded. Refer to IOD0100 for possible faults.

2. If **IOD0110 = 1 t**, Requested data record not found on track **t**.

ACTION: Backup the disk or tape. If the problem continues replace the drive.

IOD0111 n Tape unit **n** is disabled.

ACTION: Use ENL MSI x to enable MSI unit.

IOD0112 Cannot perform TTY tests on PMS link.

ACTION: Information only, no action required.

IOD0200 1 Tape disabled detected during write effort. Write effort suspended.

ACTION: Replace the drive following the steps in the *Hardware Replacement* (553-3001-520).

IOD0201 1 Tape not equipped detected during write effort. Write effort suspended.

ACTION: Remove the tape from the drive and reset the drive.

IOD0203 1 Tape not ready detected during write effort. Write effort suspended.

ACTION: Disable and re-enable the drive and enter the command again.

IOD0204 1 Tape write protected detected during write effort. Write effort suspended.

ACTION: Remove the tape from write protect.

IOD0205 1 Early warning detected during write effort. Write effort suspended if track 3.

ACTION: Replace the drive following the steps in the *Hardware Replacement* (553-3001-520).

- IOD0206 1 Read error detected during write effort. Hardware fault suspected. Write effort suspended.
ACTION: Replace the drive following the steps in the *Hardware Replacement* (553-3001-520).
- IOD0207 1 Write error detected during write effort. Write effort suspended after retries fail.
ACTION: Run diagnostics, and replace the tape or drive.
- IOD0208 1 Record not found error detected during write effort. Hardware fault suspected. Write effort suspended.
ACTION: Replace the drive following the steps in the *Hardware Replacement* (553-3001-520).
- IOD0209 1 Time-out detected during write effort. Write effort suspended.
ACTION: Run diagnostics, and replace the tape.
- IOD0210 1 Tape is put in tape full state. Write effort suspended.
ACTION: Perform a backup and install new tape.
- IOD0211 1 CDR tape has been locked too long. Write effort suspended.
ACTION: Run diagnostics, and replace the tape.
- IOD0212 1 CDR tape is now at least 75% full.
ACTION: Information only, no action required.
- IOD0250 1 Tape response idle while erasing. Hardware fault suspected.
ACTION: Replace the drive following the steps in the *Hardware Replacement* (553-3001-520).
- IOD0251 1 Mini-CDR tape disabled. Only used on SL-1 M and MS.
ACTION: Re-enable the drive and run a test.
- IOD0252 1 Mini-CDR tape unequipped. Only used on SL-1 M and MS.
ACTION: Remove the tape and insert a backup tape.
- IOD0254 1 Mini-CDR tape not ready. Only used on SL-1 M and MS.
ACTION: Disable the drive and then re-enable it.
- IOD0255 1 Mini-CDR tape write protected. Only used on SL-1 M and MS.
ACTION: Remove the write protect from the tape.
- IOD0256 1 Early warning hit.
ACTION: Retry the command. Try the backup software.
- IOD0257 1 Read error detected.
ACTION: Try the backup software.
- IOD0258 1 Write error detected.
ACTION: Try the backup software.
- IOD0259 1 Record not found.
ACTION: Try the backup software.

IOD0260	1	Time-out occurred. ACTION: Try the backup software.
IOD0261		(No description) ACTION: Use LD 48 to enable or disable CND TTY.
IOD0280		(No description) ACTION: Use the tape command.
IOD0281		(No description) ACTION: Use the MSI command.
IOD0282		(No description) ACTION: This command not allowed for an MSI equipped system.
IOD0283		The primary MSU is not responding. ACTION: Check that the MSU cable connectors are fully inserted in their sockets. If the fault does not clear, replace the MSU card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the MSU verify that the fault is cleared.
IOD0284		The secondary MSU is not responding. ACTION: Check that the MSU cable connectors are fully inserted in their sockets. If the fault does not clear, replace the MSU card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the MSU verify that the fault is cleared.
IOD0290		MSI self-test time-out. MSI is not responding. ACTION: Replace the MSI card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0291		MSI memory is faulty. ACTION: Replace the MSI card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0292		MSI control is faulty. ACTION: Replace the MSI card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0293		MSI drive A failed self-test. ACTION: Replace the MSI drive A following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0294		MSI drive B failed self-test. ACTION: Replace the MSI drive B following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0295		MSI drive C failed self-test. ACTION: Replace the MSI drive C following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0296		MSI drive not configured. ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use LD 17 ADAN to program the MSI.

IOD0297	Mass Storage Interface (MSI) floppy drive failed self-test. ACTION: Replace the MSI drive following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
IOD0298	The Mass Storage Interface (MSI) software configuration does not match the hardware. Update the configuration record (LD 17). ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use LD 17 ADAN to update the configuration record.
IOD0300	No response is received from the System Monitor (NT8D22) after sending a status request message. ACTION: Check that the ribbon cable, from the master system monitor connector is fully inserted into the proper socket of the SDI paddleboard. Check that the SDI paddleboard switch settings correspond to the configuration record. Refer to the administration put/output guide. Use LD 22 PRT CFN to check the configuration record and go to the <i>Circuit Pack and Testing NTP</i> to check for switch settings. If the fault does not clear, replace the System Monitor or SDI paddleboard, one at a time, following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing each device verify that the fault is cleared.
IOD0301	There is no master System Monitor (NT8D22) port defined. ACTION: Refer to the <i>X11 Administration</i> (553-3001-311). Use LD 17 ADAN to define the master System Monitor port.
IOD0302	Invalid command. ACTION: Ensure that this is the command you wanted to use.
IOD0306 x	Could not test TTY due to one of the following reasons. The x field indicates the port number. 1. A self-test is not supported on that type of TTY ACTION: Information only, no action required. 2. The TTY is not in the correct state to run self-test. ACTION: Check to make sure the TTY is connected properly, optioned correctly, plugged in, turned on, has paper, and is serviceable. 3. Put the TTY in the enable and operational state and run the test again. ACTION: Use ENL TTY x to enable the TTY port.
IOD0307 x	The Meridian 1 timed out waiting for a response to the enable SDI application message sent to the MSDL card. The x field indicates the port number. ACTION: Use ENL MSDL x to enable the MSDL card. If this error message is received twice in a row when attempting to enable the TTY, check to ensure the card is enabled and remains that way for the next few minutes. If the problem still persists, use DIS MSDL x to disable and then re-enable the MSDL card.
IOD0308 x	The MSDL cannot enable the SDI application. The x field indicates the port number. ACTION: Use ENL MSDL x to enable the MSDL card. If this error message is received more than twice in a row when attempting to enable the TTY, use ENL MSDL x FDL to re-download the card.

IOD0309 x	The SDI application in transient state. x = port number ACTION: Try again.
IOD0314	That command does not apply to the Pseudo TTY (PTY). ACTION: Ensure that this is the command you wanted to use.
IOD0315 x	Failure to download the device setup. The device will still be enabled with the current setup. The x field indicates the failure reason: 1. If x = 0, Fail to download due to device data corruption. ACTION: Remove the data and rebuild the device. 2. If x = 1, Fail to change baud rate. ACTION: Remove the data and rebuild the device. 3. If x = 2, Fail to change device setup such as data bit, stop bit, or parity type. ACTION: Remove the data and rebuild the device. 4. If x = 3, Fail to change control option. ACTION: Remove the data and rebuild the device.
IOD0316	It is not possible to enable the TTY or PRT without first enabling the MSDL card. ACTION: Use ENL MSDL x to enable the MSDL card.
IOD0317	The MSI and Tape related commands are not applicable to this machine. ACTION: Use LD 137 to issue any maintenance and diagnostics for IOPs and CMDUs.
IOD0318 x	TTY x was disabled due to invalid characters and will be automatically enabled in 4 minutes. ACTION: Information only, no action required. Be patient.
IOD0319 x	TTY x was automatically enabled. ACTION: Information only, no action required.
IOD0320 x	TTY x has been disabled 3 times, the maximum allowed, during the last 30 minutes. It will not be automatically enabled. ACTION: Information only, no action required.
IOD0321	Cannot disable the TTY used to access non Meridian 1 task (PDT/VxWorks Shell, for example). ACTION: Information only, no action required.
IOD0322	Int detected: unconfigured I/O device. The I/O device located in group x at address y has been H/W disabled. Address y is interpreted in the “Fault Address Codes for page 3” on page 589 section in the “INI — System Initialization” chapter. ACTION: Refer to the administration guide. Use LD 17 to program the MSDL card. Check that the card faceplate switch is in the ENB position. Use the ENL MSDL x command to enable the card.

- IOD0323 Int detected: S/W disabled I/O device. The I/O device located in group **x** at address **y** has been H/W disabled. Address **y** is interpreted in the “Fault Address Codes for page 3” on page 589 section in the “INI — System Initialization” chapter.
- ACTION:** Check that the card faceplate switch is in the ENB position. Use the ENL MSDL **x** command to enable the card.
- IOD0327 **x** Overlay command cannot be executed due to one of the following conditions. The **x** field indicates the port number.
1. The port is not in the correct state for the command to be executed.
- ACTION:** Disable the MSDL card and re-enter the command.
2. The port is already in the right state.
- ACTION:** Check to ensure your data is correct and if applicable, re-enter the command.
3. Check port state and try again.
- ACTION:** Use the stat MSDL to check the status of the card.
- IOD0328 **x y z** MSDL SDI target state has been changed. The **x** field gives the port number. The **y** field gives the original target. The **z** field gives the new target.
- ACTION:** Information only, no action required.
- IOD0329 **x y** Event: An application download failed. The **x** field indicates the port number. The **y** field indicates the failure reason.
1. If **y** = 3, Maintenance in progress is the failure reason.
- ACTION:** Be patient, and wait.
2. If **y** = 4, Transmit **x** buffer busy is the failure reason.
- ACTION:** Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it. When the card is enabled, try again.
3. If **y** = 6, No maintenance socket ID is the failure reason.
- ACTION:** Refer to the *X11 Administration* (553-3001-311). Use LD 17 ADAN to reconfigure port, then use ENL MSDL **x** to enable port again.
4. If **y** = 10, Download failed or other failure reasons.
- ACTION:** Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and then try again.
5. If **y** = 11, Force download not allowed is the failure reason.
- ACTION:** Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and then try again.
- IOD0331 **x y z** The port is disabled by the system. The **x** field indicates the port number. The **y** field indicates why the port is disabled. The **z** field indicates the port state or port substate if the state is test.
1. If **y** = 1, Enable application failed
- ACTION:** Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

2. If **y** = 2, Status errno

ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

3. If **y** = 3, Primitive timeout

ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

4. If **y** = 4, MSDL Handler failure

ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

5. If **y** = 5, Disable indication received

ACTION: Refer to the *Circuit Pack Installation & Testing NTP* and check the MSDL card switch setting.

6. If **y** = 6, PSDL threshold exceeded

ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

7. If **y** = 7, MSDL card is system disabled

ACTION: Use ENL MSDL **x** to enable the card and re-enter the command.

8. If **z** = 15, Bad RS232/422 switch setting

ACTION: Refer to the *Circuit Pack Installation & Testing NTP* and check the MSDL card switch setting.

9. If **z** = 16, Bad DTE/DCE switch setting

ACTION: Refer to the *Circuit Pack Installation & Testing NTP* and check the MSDL card switch setting.

10. If **z** = 17, Not enough memory

ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

IOD0332 **x y** The port is enabled but not ready. The **x** field gives the port number and the **y** field indicates the not ready reason.

1. If **y** = 0 Autobauding

ACTION: Press the return key repeatedly to trigger the port to autobaud.

2. If **y** = 1, Wait for the modem to be connected

ACTION: Check the modem connection.

3. If **y** = 2, The DTR is down

ACTION: Check the cable connection.

4. If **y** = 3, Await terminal (vt220) verification

ACTION: Information only, no action required. Be patient.

IOD0333 **x** The port is now operational; previously it was enabled but not ready. **x** = port number.

ACTION: Information only, no action required.

- IOD0334 x The port is put into midnight recovery. **x** = port number
ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable the card, or wait for a midnight recovery to occur.
- IOD0335 x Auto-recovery is complete. **x** = port number
ACTION: Information only, no action required.
- IOD0336 x y z Auto-recovery is in progress. Wait for auto-recovery to complete.
x = port number
y = recv attempt no - 1, 2, or 3
z = cause for recovery - <disable reason>
ACTION: Information only, no action required. Be patient.
- IOD0337 HSPR command attempted, but the HOSP package is unequipped.
ACTION: Ensure that this is the command you wanted to use. If it is the proper command, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk. Check to make sure that there are no extra packages on the disk. Have your technical-support group contact Nortel Networks Customer Service for replacement software.
- IOD0338 HSPR command attempted, but no PMS ports configured.
ACTION: Ensure that this is the command you wanted to use. If it is the proper command, you may have to configure the PMS ports.
- IOD0339 x STA disable process failed because application says so. **x** = STA logical number.
ACTION: Contact your technical support group.
- IOD0340 x The overlay command cannot be executed. One of the following may have taken place. The **x** gives the STA logical number
1. STA application is not in the correct state for the command to be executed
ACTION: Check the database and if applicable, re-enter the command.
 2. STA application is already in the right state.
ACTION: Ensure that this is the command you wanted to use.
- IOD0341 x y z STA application encounters operational errors and the auto-recovery process is activated to recover. The **x** field indicates the STA logical number, The **y** field indicates the type of operational errors and the **z** field is the reason for STA loadware suicide. The **z** only appears in the message if **y** is 5.
1. If **y** = 1, Fail to enable STA application due to operational errors.
ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.
 2. If **y** = 2, Status error due to operational errors.
ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.
 3. If **y** = 3, Primitive timeout due to operational errors.
ACTION: Use DIS MSDL **x** to disable the MSDL card, then use ENL MSDL **x** to enable it and re-enter the command.

4. If $y = 4$, MSDL Handler failure due to operational errors.

ACTION: Use DIS MSDL x to disable the MSDL card, then use ENL MSDL x to enable it and re-enter the command.

5. If $y = 5$, STA loadware suicide as indicated by z , as follows:

$z = 15$ Wrong RS232/RS422 switch setting caused suicide.

ACTION: Refer to the *Circuit Pack Installation & Testing NTP* and check the MSDL card switch setting.

$z = 16$ Wrong DTE/DCE setting caused suicide.

ACTION: Go to the *Circuit Pack Installation & Testing NTP* and check the MSDL card switch setting.

$z = 17$ Not enough memory caused suicide.

ACTION: Use DIS MSDL x to disable the MSDL card, then use ENL MSDL x to enable it and re-enter the command.

$z = 18$ Fail to detect VT220 caused suicide.

ACTION: Contact your technical support group.

$z = 19$ STA loadware layer 2 bug caused suicide.

ACTION: Contact your technical support group.

$y = 6$ PSDL threshold failure due to operational errors.

ACTION: Use DIS MSDL x to disable the MSDL card, then use ENL MSDL x to enable it and re-enter the command.

IOD0342 x STA application is put in midnight recovery. No more auto-recovery will be attempted until midnight. x = STA logical number.

ACTION: Information only, no action required.

IOD0343 “DIS TTY #” Cannot be used to disable the STA administration terminal.

ACTION: Ensure that this is the command you wanted to use.

IOD0344 “ENL TTY #” cannot be used to enable the STA administration terminal.

ACTION: Ensure that this is the command you wanted to use.

IOD0345 A TTY self test is not allowed on the STA administration terminal.

ACTION: Ensure that this is the command you wanted to use.

IOD0346 x y z An STA auto-recovery is in progress. The x field indicates the STA logical number. The y field gives the number of STAs attempts to recover: after three attempts the STA is put into midnight recovery. The z field gives the Operational Errors types which cause auto-recovery.

1. If $z = 1$, Fail to enable STA application

ACTION: Contact your technical support group.

2. If $z = 2$, Status error

ACTION: Contact your technical support group.

3. If $z = 3$, Primitive timeout

ACTION: Contact your technical support group.

	4. If z = 4, MSDL Handler failure ACTION: Contact your technical support group. 5. If z = 5, STA loadware suicide ACTION: Contact your technical support group. 6. If z = 6, PSDL threshold failure ACTION: Contact your technical support group. 7. If z = 7, MSDL system enabled ACTION: Contact your technical support group.
IOD0347 x	A STA auto-recovery has been completed. The x field indicates the STA logical number. ACTION: Information only, no action required.
IOD0349	SDI port is not configured for MTC and SCH. ACTION: Either add MTC and SCH to SDI port or use another valid SDI port.
IOD0350	Point-to-Point Protocol interface is disabled. ACTION: Issue the command “ENL PPP” in LD 117.
IOD0351	Active Point-to-Point Protocol session has been found. ACTION: Wait until the current PPP session is terminated.
IOD0352	Point-to-Point Protocol task has failed to start. ACTION: Check the system port for additional information regarding possible causes of the failure.
IOD0353	Invalid PTY port. PTY port is not supported. ACTION: Check to make sure your data is correct.
IOD0357	Resume interrupt service for cabinet.
IOD0358	Stuck interrupt in cabinet. It may be caused by a damaged pack in the cabinet. ACTION: Check for offending packs in the cabinet.
IOD0359	Failed to service interrupt for Cabinet. Cannot identify the device that is raising the interrupt.
IOD0360	Failed to service interrupt for Cabinet. Interrupt is masked. ACTION: Check for offending packs in that cabinet
IOD0361	Unable to set event ISR for the cabinet. ACTION: Contact your technical support group.
IOD0362	Unable to install the CardLAN interface. ACTION: Contact your technical support group.
IOD0363	The overloaded SDI MSDL port needs to be disabled before it can be enabled. ACTION: Place the TTY in the manually disabled mode with the command DIS TTY x. Enable the TTY with the command ENL TTY x.
IOD0364	Package 296 (MAT) and/or 351 (DBA) is not enabled.
IOD0365	Network connection lost. Buffering data to memory and storage device.

IOD0366	Unable to write to storage device. Data might be lost.
IOD0367	DBA buffer is 80% full.
IOD0368	DBA buffer is 90% full.
IOD0369	DBA buffer is 100% full. Data might be lost.
IOD0370	Network connection re-established.
IOD0371	Device locked by the Russian Call Monitoring feature. The TTY could not be disabled or enabled. ACTION: Contact your technical support group.
IOD0372	LSECDR: File xx is available on expansion yy. 

MEM — LD 29 Memory Management

How the MEM works

Memory Manager is a resident program. MEM does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

MEM is used to check the amount of unused memory available to accommodate substantial amounts of new data to be added, and to respond to error messages SCH0601 and SCH0603.

MEM messages

MEM0000	Program Identifier. ACTION: The MEM program is loaded and ready for you to enter commands.
MEM0001	Invalid key word, or incorrect password entered. ACTION: Check to make sure your data is correct and re-enter the proper key word or password.
MEM0002	Incorrect number of parameters. ACTION: Check to make sure your data is correct and re-enter the command.
MEM0003	Invalid parameter. ACTION: Check to make sure your data is correct and re-enter the command.
MEM0005	Request valid for XL systems only. ACTION: Ensure that this is the command you wanted to use.
MEM0010	Dump map has been made identical to active map. ACTION: Contact your technical support group.
MEM0011	No change from present assignment. ACTION: Information only, no action required.

- MEM0012 Map was not changed before CHK command.
ACTION: To check the map refer to the *X11 Administration* (553-3001-311) and use LD 29.
- MEM0101 Maximum logical page size exceeded by response to MSG.
ACTION: To check the map refer to the *X11 Administration* (553-3001-311) and use LD 29.
- MEM0102 Maximum logical page size exceeded (prompts TYNM/PGBY).
ACTION: Contact your technical support group.
- MEM0103 Parameter out of range.
ACTION: Check to make sure your data is correct and re-enter the command.
- MEM0104 Unequipped package.
ACTION: Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the storage medium.
- MEM0110 Attempt to assign page to wrong memory type.
ACTION: Check to make sure your data is correct and re-enter the command.
- MEM0111 Attempt to assign page to an unequipped memory.
ACTION: Check to make sure your data is correct and re-enter the command.
- MEM0112 Invalid logical page number.
ACTION: Check to make sure your data is correct and re-enter the command.
- MEM0113 Specified page is assigned to an unequipped memory.
ACTION: Check to make sure your data is correct and re-enter the command.
- MEM0120 WARNING: Free space will likely be below the safety limit.
ACTION: Contact your technical support group.
- MEM0121 Map check failed. Some page(s) will not likely fit.
ACTION: Contact your technical support group.
- MEM0150 Automatic map generator routine failed.
ACTION: Contact your technical support group. 

MFC — LD 54 Multifrequency Compelled Signaling

In this chapter

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How the MFC works

Multifrequency Compelled Signaling (MFC) or Multifrequency Signaling (MFE) provides a handshaking facility between the Meridian 1 and the Central Office (CO) or Public Exchange (PE) or between other PBXs over network and Tie trunks.

The MFD overlay program is used to diagnose, display or change the status of the MFC or MFE send/receive (S/R) cards.

LD 54 resets all available MFC or MFE cards (both channels idle) and performs loop-back tests during the midnight routines. After every SYSLOAD or power-up, all available MFC or MFE cards are initialized.

The overlay can be loaded by the system after every power-up (or SYSLOAD), as part of the daily routines, or loaded manually to enter commands.

Hardware initialization after SYSLOAD

After system power-up, every idle MFC or MFE card is initialized (self-tested). During this test the card is disabled (the LED on faceplate is ON) and the S/R card microprocessor executes sequential loop-back tests on both channels.

These tests entail looping the sender output of each card to the receiver input. The sender transmits all thirty tone pairs (1 to 15 digits for both DOD/DID modes) with a default signal level of zero. Each time the receiver detects a tone pair, the microprocessor verifies the digit received. At the end of the test a command to enable the card is issued and the microprocessor sends the test results to the CPU.

Loop-around test during daily routines

This loop-around test is conducted by the system during the daily routines. The loop-around test is identical to the one conducted after power-up except for the following points:

- ◆ the test is conducted on one channel at a time for all available MFC or MFE cards
- ◆ the MFC or MFE S/R card remains enabled (the LED on faceplate is OFF)
- ◆ the self-test can also be loaded manually by issuing a command on the specified channel

Loop-around test by command

The loop-around tests are performed by maintenance personnel on a specified channel of the MFC or MFE S/R card. There are two types of tests:

- ◆ the first is identical to the daily routine test which is conducted on the specific channel
- ◆ the second is conducted on a specific channel for a specified digit and signal level

LD 54 also performs the following functions:

- ◆ resets all idle MFC or MFE cards once a day during the midnight routines
- ◆ enables and disables the MFC or MFE card or channel
- ◆ determines the status of the MFC card or channel
- ◆ lists all disabled MFC or MFE channels
- ◆ handles other common overlay operations, such as clearing alarms

Note 1: Use the DISL command to force-disable the MFC or MFE channel or card.

Note 2: Use the DISI command in LD 32 to disable the card when idle.

Note 3: No more than 50 percent of MFC channels can be disabled at one time as a result of system or manually initiated tests. However, this constraint does not apply when using disable commands.

MFC/MFE Error Handler and counter

The MFC/MFE Error Handlers are resident programs that monitor the number of MFC or MFE signaling errors. A one-word error field in the MFC or MFE block is initialized to zero. The Error Handler program allows a maximum of 10 errors. After every successful use of the MFC or MFE channel, the error field is decremental by one, if it is not already at zero. After every failure of the MFC or MFE channel the error field is incremental by one.

With X11 software, the Error Handler program generates only the **ERR700 L S C U** message. When an Error Handler code is output, the MFD overlay must be loaded manually and the MFC or MFE channels tested.

LD 54 Common commands

Command	Description	Release
Clear Disable alarm		
CDSP	Clear the maintenance display on active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all Attendant Consoles.	basic-1
CMIN c	Clear minor alarm indication on Attendant Consoles for customer c.	basic-1
Status		
STAT	List all disabled MFC channels in the system.	basic-1
STAT I s c (u)	Get status of specified MFC or MFE card or unit. Status is one of IDLE, BUSY, MBSY, DSBL or UNEQ for both channels.	basic-1
Disable device		
DISC I s c	Disable specified MFC or MFE card. LED on card is ON when disabled.	basic-1
DISU I s c u	Disable specified MFC or MFE channel. When the other unit on the card is also in a disabled state in the software, a message is sent to disable the MFC or MFE card. LED on card is ON when disabled.	basic-1

LD 54 Common commands (continued)		
Command	Description	Release
Enable		
ENLC I s c	Enable specified MFC or MFE card. Response is OK. A message is sent to the MFC or MFE card to turn off the LED.	basic-1
ENLU I s c u	Enable specified MFC or MFE channel. Response is OK. A message is sent to the MFC or MFE card to turn off the LED.	basic-1
Reset/Initialize		
MIDN 0	Reset all idle MFC or MFE cards. Resets all idle MFC or MFE cards and performs loop-around tests on all idle channels.	basic-1
MIDN 1	Initialize all idle MFC or MFE cards (recommended after installation).	basic-1
Test		
ATST I s c u	Test automatic loop-around for specified unit. Performs automatic loop-around test on specified unit with default signal level of zero. All 30 tone pairs are tested and verified by the card microprocessor. Digits 1 to 15 signify Forward Signals 1 to 15 (DOD mode) and digits 16 to 30 signify Backward Signals 1 to 15 (DID mode). The response is OK when the unit passes the test and is enabled. If the receiver sends no message within a predefined time period, an error message indicating timeout is printed. If the receiver indicates it has received a different signal than that sent, the failed signal, an error message and the TN are printed.	basic-1
End		
END	Stop further testing or cancel active command.	basic-1

LD 54 Common commands (continued)

Command	Description	Release

Manual loop-around

MTST I s c u dl	Manual loop-around test on unit with specified digit level.	basic-1

MFC-30 tone pairs are tested and verified by the CPU. Digits 1 to 15 indicate forward signals 1 to 15 (DOD mode) and digits 16 to 30 indicate backward signals 1 to 15 (DID mode).

MFE-15 tone pairs are tested and verified. Digits 1-15 represent Forward Signals 1-15 (DID mode). Digit 0 represents the control frequency.

The MFC signal levels require a +3 dBm gain at the trunk end. The following list shows the level codes, their value at the S/R card output, and their value at the trunk.

Digit level	Level Values (at S/R card)	Level Values (at trunk)
0	8 dBm	5 dBm
1	11 dBm	8 dBm
2	12 dBm	9 dBm
3	13 dBm	10 dBm
4	14 dBm	11 dBm
5	15 dBm	12 dBm
6	16 dBm	13 dBm
7	35 dBm	32 dBm

The MFE signal level 0=-10.5 dBm level with skew -7.0 dBm control frequency level. Signal levels 1-7 are used for internal test purposes.

The response is **OK** when the unit passes the test and is enabled. If the unit fails the test, the appropriate error

Multifrequency Compelled Signaling

Multifrequency Compelled Signaling (MFC) or Multifrequency Signaling (MFE) provides a handshaking facility between the Meridian 1 and the Central Office (CO) or Public Exchange (PE) or between other PBXs over network/Tie trunks.

MFC applies to X08, X11, and X11 with Supplementary features software. The format of MFC messages is as follows:

MFCxxx MFCTN TRKTN X1-X5

The mnemonic description is as follows:

MFCxxxx=MFC message

MFCTN=MFC register TN (packed format)

TRKTN=Trunk TN of the CMFTN (packed format)

X1-X5=the first 6 words of the unprotected MFC block for the unit used

MFC Messages

MFC0000	Program 54 identifier. ACTION: The MFD program is loaded and ready for you to enter commands.
MFC0001	Invalid input, number of characters in one field are greater than four (X08). Noisy card H/W (X11). ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Replace the MFC or MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFC0002	Invalid input (datatype) (X08). Large twist (hardware) (X11). ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Replace the MFC or MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFC0003	Invalid input, command field unknown (X08). Three frequencies (hardware) (X11). ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Replace the MFC or MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFC0004	Invalid input, too many parameters (X08). No interdigit pause (hardware) (X11). ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Replace the MFC or MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared

- MFC0005 Last command is still in progress (X08). Invalid decision (hardware) (X11).
ACTION: X08 Be patient. X11 Replace the MFC or MFE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared
- MFC0006 Invalid TN (X08). MFC card firmware fault (hardware) (X11).
ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFC0007 Invalid DOD trunk (X08). Undefined error (hardware) (X11).
ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Replace the MFC or MFE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared
- MFC0008 Trunk is busy or disabled (X08). Software timeout (software) (X11).
ACTION: X08 Try later or use ENLC l s c to re-enable the trunk card. X11 Contact your technical support group.
- MFC0009 Invalid TN. Shelf out-of-range. Shelf range is 0 to 3. (X08). Software not ready to send (X11).
ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Contact your technical support group.
- MFC0010 Invalid TN. Card out of range. Card range is 1 to 10 (X08). Undefined function/signal (software) (X11).
ACTION: X08 Check to make sure your data is correct and re-enter the command. X11.
- MFC0011 Invalid Set TN (X08). MFC table not defined (software) (X11).
ACTION: X08 Check to make sure your data is correct and re-enter the command. X11 Contact your technical support group.
- MFC0012 Defined set is busy or disabled (X08). Invalid backward (BWD) signal received. Call cleared down (software) (X11).
ACTION: X08 Try later or use ENLU l s c u to re-enable the set. X11 Contact your technical support group.
- MFC0013 Invalid signalling type (X08). Invalid FWD signal received; call cleared down (software) (X11).
ACTION: X11 Contact your technical support group.
- MFC0014 Signaling type not defined (X08).
ACTION: Check to make sure your data is correct and re-enter the command.
- MFC0015 Signalling type already defined (X08). Invalid TRKTYPE attempting MFC signaling (software) (X11).
ACTION: X08 Ensure that this is the command you wanted to use. X11 Contact your technical support group.
- MFC0016 Command not valid for MFE signaling (X08).
ACTION: Ensure that this is the command you wanted to use.

- MFC0017

Trunk busy, DSI timing (X08).

ACTION: Contact your technical support group.
- MFC0018

Use loop and channel for digital loop TN (X08).

ACTION: Check to make sure your data is correct and re-enter the command
- MFC0019

Invalid digital loop TN (X08).

ACTION: Check to make sure your data is correct and re-enter the command
- MFC0020

No MFC incoming table defined for route (software) (X11).

ACTION: Check to make sure your data is correct and re-enter the command
- MFC0021

No MFC outgoing table defined for route (software) (X11).

ACTION: Check to make sure your data is correct and re-enter the command. 

MFD — LD 54 Multifrequency Signaling Diagnostic

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How the MFD works

Multifrequency Compelled Signaling (MFC) or Multifrequency Signaling (MFE) provides a handshaking facility between the Meridian 1 and the Central Office (CO) or Public Exchange (PE) or between other PBXs over network and Tie trunks.

The MFD overlay program is used to diagnose, display or change the status of the MFC or MFE send/receive (S/R) cards.

LD 54 resets all available MFC or MFE cards (both channels idle) and performs loop-back tests during the midnight routines. After every SYSLOAD or power-up, all available MFC or MFE cards are initialized.

The overlay can be loaded by the system after every power-up (or SYSLOAD), as part of the daily routines, or loaded manually to enter commands.

Hardware initialization after SYSLOAD

After system power-up, every idle MFC or MFE card is initialized (self-tested). During this test the card is disabled (the LED on the faceplate is ON) and the S/R card microprocessor executes sequential loop-back tests on both channels.

These tests entail looping the sender output of each card to the receiver input. The sender transmits all thirty tone pairs (1 to 15 digits for both DOD/DID modes) with a default signal level of zero. Each time the receiver detects a tone pair, the microprocessor verifies the digit received. At the end of the test a command to enable the card is issued and the microprocessor sends the test results to the CPU.

Loop-around test during daily routines

This loop-around test is conducted by the system during the daily routines. The loop-around test is identical to the test conducted after power-up except for the following points:

- ◆ the test is conducted on one channel at a time for all available MFC or MFE cards
- ◆ the MFC or MFE S/R card remains enabled (the LED on the faceplate is OFF)
- ◆ the self-test can also be loaded manually by issuing a command on the specified channel

Loop-around test by command

The loop-around tests are performed by maintenance personnel on a specified channel of the MFC or MFE S/R card. There are two types of tests:

- ◆ the first is identical to the daily routine test which is conducted on the specific channel
- ◆ the second is conducted on a specific channel for a specified digit and signal level

LD 54 also performs the following functions:

- ◆ resets all idle MFC or MFE cards once a day during the midnight routines
- ◆ enables and disables the MFC or MFE card or channel
- ◆ determines the status of the MFC card or channel
- ◆ lists all disabled MFC or MFE channels
- ◆ handles other common overlay operations (such as clearing alarms)

Note 1: Use the DISL command to force-disable the MFC or MFE channel or card.

Note 2: Use the DISI command in LD 32 to disable the card when idle.

Note 3: No more than 50 percent of the MFC channels can be disabled at one time as a result of system or manually initiated tests. However, this constraint does not apply when using disable commands.

MFC/MFE Error Handler and counter

The MFC/MFE Error Handlers are resident programs that monitor the number of MFC or MFE signaling errors. A one-word error field in the MFC or MFE block is initialized to zero. The Error Handler program allows a maximum of 10 errors. After every successful use of the MFC or MFE channel, the error field is decremental by one, if it is not already at zero. After every failure of the MFC or MFE channel the error field is incremental by one.

With X11 software, the Error Handler program generates only the **ERR0700 L S C U** message. When an Error Handler code is output, the MFD overlay must be loaded manually and the MFC or MFE channels must be tested.

MFD common commands		
Command	Description	Release
Clear display/alarm		
CDSP	Clear the maintenance display on active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all Attendant Consoles.	basic-1
CMIN c	Clear minor alarm indication on Attendant Consoles for customer c.	basic-1
Status		
STAT	List all disabled MFC channels in the system.	basic-1
STAT l s c (u)	Get status of specified MFC or MFE card or unit. Status is one of IDLE, BUSY, MBSY, DSBL or UNEQ for both channels.	basic-1
Disable device		
DISC l s c	Disable specified MFC or MFE card. LED on card is ON when disabled.	basic-1
DISU l s c u	Disable specified MFC or MFE channel. When the other unit on the card is also in a disabled state in the software, a message is sent to disable the MFC or MFE card. LED on card is ON when disabled.	basic-1

MFD common commands (continued)		
Command	Description	Release
Enable		
ENLC I s c	Enable specified MFC or MFE card. Response is OK . A message is sent to the MFC or MFE card to turn off the LED.	basic-1
ENLU I s c u	Enable specified MFC or MFE channel. Response is OK . A message is sent to the MFC or MFE card to turn off the LED.	basic-1
Reset/Initialize		
MIDN 0	Reset all idle MFC or MFE cards. Resets all idle MFC or MFE cards and performs loop-around tests on all idle channels.	basic-1
MIDN 1	Initialize all idle MFC or MFE cards (recommended after installation).	basic-1
Test		
ATST I s c u	Test automatic loop-around for specified unit. Performs automatic loop-around test on specified unit with default signal level of zero. All 30 tone pairs are tested and verified by the card microprocessor. Digits 1 to 15 signify Forward Signals 1 to 15 (DOD mode) and digits 16 to 30 signify Backward Signals 1 to 15 (DID mode). The response is OK when the unit passes the test and is enabled. If the receiver sends no message within a predefined time period, an error message indicating timeout is printed. If the receiver indicates it has received a different signal than that sent, the failed signal, an error message and the TN are printed.	basic-1
End		
END	Stop further testing or cancel active command.	basic-1

MFD common commands (continued)

Command	Description	Release

Manual loop-around

MTST I s c u dl	Manual loop-around test on unit with specified digit level.	basic-1

MFC-30 tone pairs are tested and verified by the CPU. Digits 1 to 15 indicate forward signals 1 to 15 (DOD mode) and digits 16 to 30 indicate backward signals 1 to 15 (DID mode).

MFE-15 tone pairs are tested and verified. Digits 1-15 represent Forward Signals 1-15 (DID mode). Digit 0 represents the control frequency.

The MFC signal levels require a +3 dBm gain at the trunk end. The following list shows the level codes, their value at the S/R card output, and their value at the trunk.

Digit level	Level Values (at S/R card)	Level Values (at trunk)
0	8 dBm	5 dBm
1	11 dBm	8 dBm
2	12 dBm	9 dBm
3	13 dBm	10 dBm
4	14 dBm	11 dBm
5	15 dBm	12 dBm
6	16 dBm	13 dBm
7	35 dBm	32 dBm

The MFE signal level 0=-10.5 dBm level with skew -7.0 dBm control frequency level. Signal levels 1-7 are used for internal test purposes.

The response is **OK** when the unit passes the test and is enabled. If the unit fails the test, the appropriate error message and the TN are printed.

MFD messages

MFD0000	Program 54 identifier. ACTION: The MFD program is loaded and ready for you to enter commands.
MFD0001	Invalid input. Number of characters in one field is greater than four. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0002	Invalid input. Wrong data type. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0003	Invalid input. Command field unknown. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0004	Invalid input. Too many parameters. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0005	Previous command still in progress. ACTION: Be patient. You are entering commands faster than the system can handle them.
MFD0006	Wrong/unequipped customer. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
MFD0007	Wrong argument/invalid parameter. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0008	Invalid TN. Loop out-of-range. Loop range is 0 to 159. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0009	Invalid TN. Shelf out-of-range. Shelf range is 0 to 3. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0010	Invalid TN. Card out-of-range. Card range is 1 to 10. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0011	Invalid TN. Unit out-of-range. Unit range is 0 to 1. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0012	Wrong Argument. Digit out-of-range. Digit range is 1 to 30. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0013	Wrong Argument. Level out-of-range. Level range is 0 to 7. ACTION: Check to make sure your data is correct and re-enter the command.
MFD0014	Specified TN is not equipped to be MFC or MFE channel. ACTION: Ensure that this is the command you wanted to use.
MFD0015	MFC/MFE/MFK channel is busy. ACTION: Try later.

- MFD0016 MFC/MFE/MFK channel found faulty but has not been disabled. Given after ATST command or in response to test initiated by system. TN and failed digit are both output.
ACTION: Replace the MFE or MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0017 MFC/MFE/MFK channel found faulty and has been disabled. Given after ATST command or in response to test initiated by system. TN and failed digit are both output.
ACTION: Replace the MFE or MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0018 MFC/MFE/MFK channel found faulty but has not been disabled. Given after MTST command. TN, failed digit, and signal level received are all output.
ACTION: Replace the MFE or MFC card following the steps following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0019 MFC/MFE/MFK channel found faulty and has been disabled. Given after MTST command. TN, failed digit, and signal level received are all output.
ACTION: Replace the MFE or MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0020 Time-out, no response. Channel not disabled. Given after ATST, MTST commands and midnight test.
ACTION: For repeated failures, replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0021 Time-out, no response. Channel is disabled. Given after ATST, MDST commands and midnight test.
ACTION: For repeated failures, replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0022 Time-out, no response. Card level, channel or channels are not disabled. Given after initialization.
ACTION: For repeated failures, replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0023 Time-out, no response. Both channels are disabled. Given after initialization.
ACTION: For repeated failures, replace the MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFD0024 MFC/MFE/KD3 packages not equipped. Overlay not loaded.
ACTION: Contact your technical support group and ask if you can do this test.
- MFD0030 Corrupted data, loop density out-of-range. Loop density range is 0 to 2.
ACTION: Check to make sure your data is correct and re-enter the command.
- MFD0031 Corrupted data, unit information out-of-range. Unit information range is 0 to 15.
ACTION: Check to make sure your data is correct and re-enter the command.
- MFD0032 Self-test failed. Channel was not disabled.
ACTION: Use DISU l s c u in LD 54 to disable the channel.

MFD0033 Self-test failed. Channel was disabled.

ACTION: Use ENLU l s c u in LD 54 to enable the channel.

MFD0034 tn yy Self-test Failed, and XMFC/XMFE card disabled (all units)

Where: tn= loop, shelf and card, yy = result.

Where yy =

00- Self-test O.K.

01- DS-30X Toggle Fail

02- DSP EPROM Low Fail

03- DSP EPROM High Fail

04- DSP RAM 0 Low Fail

05- DSP RAM 0 High Fail

06- DSP RAM 1 Low Fail

07- DSP RAM 1 High Fail

08- DSP RAM 2 Low Fail

09- DSP RAM 2 High Fail

0A- DSP DS-30X RAM 0 Fail

0B- DSP DS-30X RAM 1 Fail

0C- DSP Latch Timeout

0D- DSP Invalid Configuration

0F- DSP General Fail

10- 80C31 AROM Fail

11- 80C31 RAM Fail

12- 80C31 MPU Fail

13- DSP Timeout Fail

14- A07 Register Fail

15- Card-Lan Fail

16- EEPROM Fail

17- Invalid Message from Meridian SL-1

2x- DID Loopback Fail (x = digit)

3x- DOD loopback Fail (x = digit)

ACTION: Replace the MFE or MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

MFD0035 l s c Time-out due to no response. The XMFC/XMFE card missing or disabled (all units).

l s c = TN information (loop, shelf, card)

ACTION: Replace the MFE or MFC card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared

MFD0037 New MFC/MFE/MFK5/MFK6 units on Card 0 can only be enabled using ENLX in LD 34.

ACTION: To enable these units, go into LD 34 and perform ENLX0.

MFD0038 Invalid TN. Unit out-of-range (0-31).

MFD0039 Wrong argument. Level out-of-range(0-15).

MFD0040 Corrupted data. Loop density out-of-range.

MFD0041 Invalid TN. Card out-of-range (0-15).

MFD0042 This command is supported in Overlay 32. 

MFE — LD 54 Multifrequency Signaling

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How the MFE works

Multifrequency Compelled Signaling (MFC) or Multifrequency Signaling (MFE) provides a handshaking facility between the Meridian 1 and the Central Office (CO) or Public Exchange (PE) or between other PBXs over network and Tie trunks.

The MFD overlay program is used to diagnose, display or change the status of the MFC or MFE send/receive (S/R) cards.

LD 54 resets all available MFC or MFE cards (both channels idle) and performs loop-back tests during the midnight routines. After every SYSLOAD or power-up, all available MFC or MFE cards are initialized.

The overlay can be loaded by the system after every power-up (or SYSLOAD), as part of the daily routines, or loaded manually to enter commands.

Hardware initialization after SYSLOAD

After system power-up, every idle MFC or MFE card is initialized (self-tested). During this test the card is disabled (the LED on the faceplate is ON) and the S/R card microprocessor executes sequential loop-back tests on both channels.

These tests entail looping the sender output of each card to the receiver input. The sender transmits all thirty tone pairs (1 to 15 digits for both DOD/DID modes) with a default signal level of zero. Each time the receiver detects a tone pair, the microprocessor verifies the digit received. At the end of the test a command to enable the card is issued and the microprocessor sends the test results to the CPU.

Loop-around test during daily routines

This loop-around test is conducted by the system during the daily routines. The loop-around test is identical to the one conducted after power-up except for the following points:

- ◆ the test is conducted on one channel at a time for all available MFC or MFE cards
- ◆ the MFC or MFE S/R card remains enabled (the LED on the faceplate is OFF)
- ◆ the self-test can also be loaded manually by issuing a command on the specified channel

Loop-around test by command

The loop-around tests are performed by maintenance personnel on a specified channel of the MFC or MFE S/R card. There are two types of tests:

- ◆ the first is identical to the daily routine test which is conducted on the specific channel
- ◆ the second is conducted on a specific channel for a specified digit and signal level

LD 54 also performs the following functions:

- ◆ resets all idle MFC or MFE cards once a day during the midnight routines
- ◆ enables and disables the MFC or MFE card or channel
- ◆ determines the status of the MFC card or the channel
- ◆ lists all disabled MFC or MFE channels
- ◆ handles other common overlay operations (such as clearing alarms)

Note 1: Use the DISL command to force-disable the MFC or MFE channel or card.

Note 2: Use the DISI command in LD 32 to disable the card when idle.

Note 3: No more than 50% of MFC channels can be disabled at one time as a result of system or manually initiated tests. However, this constraint does not apply when using disable commands.

MFC/MFE Error Handler and counter

The MFC/MFE Error Handlers are resident programs that monitor the number of MFC or MFE signaling errors. A one-word error field in the MFC or MFE block is initialized to zero. The Error Handler program allows a maximum of 10 errors. After every successful use of the MFC or MFE channel, the error field is decremental by one, if it is not already at zero. After every failure of the MFC or MFE channel the error field is incremental by one.

With X11 software, the Error Handler program generates only the **ERR0700 L S C U** message. When an Error Handler code is output, the MFD overlay must be loaded manually and the MFC or MFE channels tested.

MFE common commands		
Command	Description	Release
Clear display/alarm		
CDSP	Clear the maintenance display on active CPU.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
Status		
STAT	List all disabled MFC channels in the system.	basic-1
STAT I s c (u)	Get status of specified MFC or MFE card or unit. Status is one of IDLE, BUSY, MBSY, DSBL or UNEQ for both channels.	basic-1
Disable device		
DISC I s c	Disable specified MFC or MFE card. LED on card is ON when disabled.	basic-1
DISU I s c u	Disable specified MFC or MFE channel. When the other unit on the card is also in a disabled state in the software, a message is sent to disable the MFC or MFE card. LED on card is ON when disabled.	basic-1
Enable		
ENLC I s c	Enable specified MFC or MFE card. Response is OK . A message is sent to the MFC or MFE card to turn off the LED.	basic-1
ENLU I s c u	Enable specified MFC or MFE channel. Response is OK . A message is sent to the MFC or MFE card to turn off the LED.	basic-1

MFE common commands (continued)		
Command	Description	Release
Reset/Initialize		
MIDN 0	Reset all idle MFC or MFE cards. Resets all idle MFC or MFE cards and performs loop-around tests on all idle channels.	basic-1
MIDN 1	Initialize all idle MFC or MFE cards (recommended after installation).	basic-1
Test		
ATST I s c u	Test automatic loop-around for specified unit. Performs automatic loop-around test on specified unit with default signal level of zero. All 30 tone pairs are tested and verified by the card microprocessor. Digits 1 to 15 signify Forward Signals 1 to 15 (DOD mode) and digits 16 to 30 signify Backward Signals 1 to 15 (DID mode). The response is OK when the unit passes the test and is enabled. If the receiver sends no message within a predefined time period, an error message indicating timeout is printed. If the receiver indicates it has received a different signal than that sent, the failed signal, an error message and the TN are printed.	basic-1
End		
END	Stop further testing or cancel active command.	basic-1

MFE common commands (continued)		
Command	Description	Release

Manual loop-around

MTST I s c u dl	Manual loop-around test on unit with specified digit level.	basic-1

MFC-30 tone pairs are tested and verified by the CPU. Digits 1 to 15 indicate forward signals 1 to 15 (DOD Mode) and digits 16 to 30 indicate backward signals 1 to 15 (DID mode).

MFE-15 tone pairs are tested and verified. Digits 1-15 represent Forward Signals 1-15 (DID mode). Digit 0 represents the control frequency.

The MFC signal levels require a +3 dBm gain at the trunk end. The following list shows the level codes, their value at the S/R card output, and their value at the trunk.

Digit level	Level Values (at S/R card)	Level Values (at trunk)
0	8 dBm	5 dBm
1	11 dBm	8 dBm
2	12 dBm	9 dBm
3	13 dBm	10 dBm
4	14 dBm	11 dBm
5	15 dBm	12 dBm
6	16 dBm	13 dBm
7	35 dBm	32 dBm

The MFE signal level 0=-10.5 dBm level with skew -7.0 dBm control frequency level. Signal levels 1-7 are used for internal test purposes.

The response is OK when the unit passes the test and is enabled. If the unit fails the test, the appropriate error message and the TN are printed.

MFE message format

The MFE messages identify software and hardware errors during call processing. Output is in the following format:

MFExxxx MFETN TRKTN

The mnemonics description is as follows:

xxxx = the Error code number

MFETN = the MFE register TN (packed format)

TRKTN = the Trunk TN associated with the MFETN (packed format)

MFE messages

MFE0001	Noisy Multifrequency Signaling (MFE) card hardware. ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFE0002	Large twist (hardware). ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFE0003	Three frequencies (hardware). ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFE0004	No inter-digit pause (hardware). ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFE0005	Invalid decision (hardware). ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFE0006	MFE card firmware fault (hardware). ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFE0007	Illegal signal 11 to 15 not supported (hardware). ACTION: Replace the MFE card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

- MFE0008 Signal sent is invalid at this time (hardware).
ACTION: Replace the MFE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- MFE0009 Software time-out (software).
ACTION: Contact your technical support group.
- MFE0010 Undefined/invalid signal received (software).
ACTION: Contact your technical support group.
- MFE0011 Signal not expected (software).
ACTION: Contact your technical support group.
- MFE0012 Undefined function (software).
ACTION: Contact your technical support group.
- MFE0013 Outgoing calls not allowed (software).
ACTION: Contact your technical support group.
- MFE0014 MFE table not defined (software).
ACTION: Contact your technical support group.
- MFE0015 Not ready to send (software).
ACTION: Contact your technical support group. 

MFK — Multifrequency Signaling for KD3

MFK messages

Multifrequency Signaling for KD3 is a resident program. MFK does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

MFK0001	Noisy MFK card. ACTION: Replace the MFK card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFK0002	Large twist. ACTION: Contact your technical-support group.
MFK0003	Three frequencies. ACTION: Contact your technical-support group.
MFK0004	No interdigit pause. ACTION: Contact your technical-support group.
MFK0005	Invalid decision. ACTION: Check to make sure your data is correct and re-enter the command.
MFK0006	MFK card firmware fault. ACTION: Replace the MFK card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFK0007	Illegal signal. ACTION: Check to make sure your data is correct and re-enter the command.
MFK0008	Signal sent is invalid at this time. ACTION: Contact your technical-support group.
MFK0009	Software timeout. ACTION: Contact your technical-support group.
MFK010	Undefined signal received. ACTION: Contact your technical-support group.

MFK0011	Signal not expected. ACTION: Contact your technical-support group.
MFK0012	Undefined function. ACTION: Contact your technical-support group.
MFK0014	MFK table not defined. ACTION: Contact your technical-support group.
MFK0015	Not ready to send. ACTION: Contact your technical-support group. 

MFR — LD 34 Multifrequency Receiver Card

The Multifrequency Receiver card receives multifrequency signals for the Feature Group D package.

MFR commands		
Command	Description	Release
Test all MFR Units		
MFR	Test all Automatic Number Identification (ANI) Multifrequency receiver units.	fgd-17
Test MFR Units on this loop		
MFR loop	Test all Automatic Number Identification (ANI) Multifrequency receivers on this loop.	fgd-17
Test MFR Card or unit		
MFR I s c u	Test Automatic Number Identification (ANI) Multifrequency receiver card or unit.	fgd-17

MFR Messages

MFR0001 l s c u

MFR unit did not respond. The specified MFR unit has been disabled.

ACTION: Replace the indicated MFR card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

MFR0002 l s c u

MFR card self-test failed. N is the failure. The specified MFR card has been disabled.

1 = EPROM failed

2 = Processor failed

3 = Invalid result

ACTION: Replace the indicated MFR card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

MFR0003 tn n1 n2 nn

MFR unit failed MF tones test, where **n1**, **n2**, etc. is the list of input messages received by the MFR. In a successful test, 30 input messages are received, corresponding to KP, 0-9, ST, ST', ST" and ST"". Each tone input messages is followed by an interdigit silence input message. The specified card has been disabled. Suspect faulty MFS if fault persists or if MFR units on more than one card are shown faulty.

ACTION: Replace the indicated MFR card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared. 

MFS — LD 46 Multifrequency Sender Diagnostic for ANI

In this chapter

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter of this guide.

How the MFS works

LD 46 is used to maintain the Multifrequency Sender (MFS) card. The MFS card provides multifrequency signals of Automatic Number Identification (ANI) digits over Centralized Automatic Message Accounting (CAMA) trunks to a toll switching CAMA, Traffic Operator Position System (TOPS) or Traffic Service Position System (TSPS).

The MFS diagnostic overlay can be run manually to enter commands, or it can be run in the background, during the daily routines. It performs the following tests:

- ◆ checks that the MFS card responds to system I/O functions
- ◆ tests the 30-channel memory locations, the 480 (30 x 16) digit buffer memory locations and the 64 First-in, First-out locations
- ◆ exercises all 15-digit codes with digit strings from 2 to 16 digits long and verifies both the 68 ms pulse width and whether each string outputpulses to completion

MFS common commands		
Command	Description	Release
Clear display		
CDSP	Clear the maintenance display on the active CPU.	basic-1
CMAJ	Clear major alarm and resets power fail transfer.	basic-1
CMIN ALL	Clear minor alarm indication on all Attendant Consoles.	basic-1
CMIN c	Clear minor alarm indication on Attendant Consoles for customer c.	basic-1
MFS Status		
STAT loop	Get status of MFS loop. Response is: UNEQ — loop is unequipped DSBL — loop is disabled CHAN xx — number of channels busy xx DSBL xx BUSY — number of channels disabled and busy NOT MFS — loop is not an MFS loop FAULTY HW: NO RESPONSE = loop identified as faulty by the LRIP function. Refer to the FHW chapter.	basic-1
Disable MFS		
DISL loop	Disable MSF loop. For NT8D17 Conference/TDS cards see note with ENLL command.	basic-1
DISX loop	Disable NT8D17 Conference/TDS card on loop L and L + 1. Disables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are disabled. Loop = 0, 2, 4...158 Note 1: The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. Note 2: This command can be used in LD 34, LD 38 and LD 46.	xct-15

MFS common commands (continued)		
Command	Description	Release
Enable MFS		
ENLL loop	Enable loop. Note: For Conference/TDS cards the DISX and ENLX commands must be used whenever the faceplate switch of the card has been toggled. ENLL will software enable the card but the card will not reset properly.	basic-1
ENLX loop	Enable NT8D17 Conference/TDS card on loop L and L + 1. Enables all functions on the NT8D17 Conference/TDS card. Both the even numbered TDS/MFS loop and adjacent conference loop are enabled. Loop = 0, 2, 4...158 If one of the loops is already enabled, it is disabled and then both loops are enabled. This command initiates card tests and downloads software. Note 1: The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions, provided the card has not been hardware disabled by the faceplate switch. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. Note 2: This command can be used in LD 34, LD 38 and LD 46. Note 3: The Conf/TDS card is not enabled automatically when it is inserted. Note 4: Enabling more than 16 conference loops may cause system to lock-up.	xct-15
MF Tone		
TONE loop	Enter input mode to provide MF tone bursts.	basic-1
TONE loop ALL	Provide MF tone bursts for all digits on specified loop. Provides MF tone bursts for all digits 1 to 9, 0, 11 to 15, in that order.	basic-1
Test MFS		
MFS loop	Test and enable MFS loop.	basic-1
End		
END	Stop all current testing.	basic-1

MF Sender diagnostic for ANI

The Multifrequency Sender card provides multifrequency signals of Automatic Number Identification (ANI) digits over Centralized Automatic Message Accounting (CAMA) trunks to a toll switching CAMA, Traffic Operator Position System (TOPS) or Traffic Service Position System (TSPS).

MFS messages

MFS0000	Program identifier. ACTION: The MFS program is loaded and ready for you to input commands.
MFS0001	Invalid command. Only the commands listed are allowed. ACTION: Ensure that this is the command you wanted to use.
MFS0002	Incorrect use of command. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
MFS0003	The customer specified does not exist or is out-of-range. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
MFS0004	Loop specified is out of range. ACTION: Check to make sure your data is correct and re-enter the command.
MFS0005	This command is only allowed to be used from an SL-1 maintenance set. ACTION: Use END to abort the program. Reload the program from a maintenance telephone. If you need help with maintenance telephone functions, refer to the <i>You should know this</i> chapter in this guide.
MFS0006	Could not establish a channel connection between the maintenance telephone and the MF sender. ACTION: Use LOOP x in LD 30 to run a signaling test. Replace the component or card causing the faulty condition following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFS0020 loop	MF sender failed to respond. ACTION: Ensure that the faceplate switch is set to ENB and that the card is inserted properly. If the MFS card still fails to respond, replace the MFS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
MFS0021 loop	MF sender has a channel memory fault. ACTION: Replace the MFS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

MFS0022 loop MF sender has a digit buffer memory fault.

ACTION: Replace the MFS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

MFS0023 loop dMF sender does not outpulse for the digits **d** listed.

Applications with NT or XT machine types only can disregard this message. Operation of the MFS card is unaffected.

ACTION: Replace the MFS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

MFS0024 loop MF sender has a fault in the FIFO stack memory. This fault is not service affecting.

ACTION: Replace the MFS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

MFS0100 On ENLX (enable Conference/TDS/MFS card) did not receive the message verifying download completion within six seconds.

ACTION: Use DISX to disable the card and use the ENLX command to enable the MFS card.

MFS0101 Time out on Digit Interrupt for Conference/TDS/MFS card.

ACTION: Use DISX to disable the card and then use ENLX to re-enable the card. If the problem persists, replace the card following the *Hardware Replacement* (553-3001-520).

MFS0102 Cannot use the ENLX (Enable) or DISX (Disable) commands on a non-Conference/TDS/MFS card.

ACTION: Ensure that this is the command you wanted to use.

MFS0103 The Conference/TDS/MFS card is already enabled/disabled.

ACTION: Ensure that this is the command you wanted to use.

MFS0104 Received an unexpected message from a Conference/TDS/MFS card.

ACTION: Replace the card following the steps in the *Hardware Replacement* (553-3001-520). 

MRB — Message Registration Block

How the MRB works

Message Registration Block is a resident program. MRB does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

Message Registration Block messages are output in response to commands or prompts/responses related to the Message Registration feature.

MRB messages

MRB0028	The unit to be tested is not message waiting PBX type. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
MRB0029	The unit to be tested is not idle. ACTION: Wait for the unit to become idle and re-enter the command.
MRB0030	The unit to be tested is not lamp equipped. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
MRB0900	Wrong number of input fields to prompt 'FUNT'. ACTION: Check the database and re-enter the command
MRB0901	Unable to match input with stored mnemonics for prompt. ACTION: Check to make sure your data is correct and re-enter the command.
MRB0910	Wrong number of input fields for prompt 'REQ' when function 'MRBK', 'CRST', or 'DISP' has been invoked. ACTION: Check to make sure your data is correct and re-enter the command.
MRB0911	Unable to match input with stored mnemonics. ACTION: Check to make sure your data is correct and re-enter the command.
MRB0912	Warning: Unprotected data store below safety limit. ACTION: Reallocate or add memory.

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- MRB0913 Warning: Protected data store below safety limit.
ACTION: Reallocate or add memory.
- MRB0920 Wrong input type for prompt DBGN, BFNO.
ACTION: Check the database and re-enter the command.
- MRB0921 MR data block number out-of-range (0-99)
Check the database and re-enter the command.
- MRB0922 Block already exists.
ACTION: Ensure that this is the command you wanted to use.
- MRB0923 Block does not exist.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- MRB0930 Wrong input type for prompt DLST, LSRM.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0931 Entry for prompt DN out-of-range (0-99).
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0932 Last room number illegal (0-99).
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0940 Wrong input type for prompt DN, RMNO.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- MRB0941 DN or room number out of assigned range.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0950 Input parameter must be between 0 and 24, inclusive.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0951 Input parameter must be between 0 and 7, inclusive.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0952 CRT/TTY has not been allocated for MR in the configuration record.
ACTION: Check the database in LD 17, correct and if applicable, re-enter the command.
- MRB0961 Enter parameter between 0 and 31, inclusive.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0962 Customer does not have any MR blocks allocated.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- MRB0963 Password does not have access to this customer data.
ACTION: Contact your technical support group and obtain the proper password to continue.
- MRB0971 Enter parameter between 0 and 31 inclusive.
ACTION: Check to make sure your data is correct and re-enter the command.

- MRB0980 Wrong number of input fields to prompt **all**.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0981 Unable to match input with stored mnemonics for prompt **all**.
ACTION: Check to make sure your data is correct and re-enter the command.
- MRB0990 Wrong input data type.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- MRB0991 Number of input characters greater than four.
ACTION: Check to make sure your data is correct and re-enter the command. 

MSDL — LD 48 Multi-purpose Serial Data Link

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter of this guide.

How the MSDL works

The commands used to provide enable, disable, status, and test functions on the Multi-purpose Serial Data Link cards are provided in LD 48 - Link Diagnostic, LD 96 - D-channel Maintenance, and LD 37 I/O Diagnostic.

Problems on the Multi-purpose Serial Data Link cards are indicated by MSDL and IOD messages.

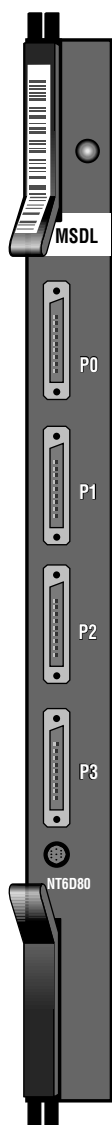
For additional information, refer to the *ISDN PRI description and administration* or the *Multi-purpose Serial Data Link description* or the *Fault Clearing Guide Book 3 of 3, Managenent Applications*.

The MSDL provides 4 ports for applications such as

- ◆ ISDN Primary Rate D-channel (DCH)
- ◆ Application Module Link (AML)
- ◆ Input/output devices (TTY)

The MSDL messages report problems with the MSDL card and its applications. MSDL commands are provided in LD 37, LD 48, and LD 96.

MSDL — Multipurpose Serial Data Link



553-0194T MSE

A Meridian 1 system can support up to 16 Multipurpose Serial Data Link (MSDL) cards to a maximum of 64 ports.

Purpose

One MSDL card provides a serial interface for four D-channels (DCH), one Application Module Link (AML), and one SDI terminal (DTE or DCE).

TTY and printer asynchronous applications can only be configured on port 0. All ports can be configured for synchronous applications, such as DTE or DCE, and RS232 or RS422.

Function

The MSDL MPU provides the following:

- ◆ self-tests
- ◆ communicates with the Meridian 1 CPU
- ◆ downloads peripheral software from the Meridian 1 CPU to control MSDL parameters
- ◆ coordinates data flow in conjunction with the Meridian 1 CPU
- ◆ management of the data link layer and network layer signaling to control connection and disconnection
- ◆ control of its own operation, initialization, and addressing

Features

The MSDL card faceplate includes the following:

- ◆ an LED, when lit indicating a disabled MSDL card
- ◆ four I/O ports using 26 pin female SCSI II connectors
- ◆ a proprietary port for monitoring MSDL functions

On the component side of the card, switches S9 and S10 set the device number to match DNUM in LD 17. Switches S1 to S8 set ports to DTE or DCE, and RS232 or RS422.

MSDL commands		
Command	Description	Release

Status of MSDL

STAT MSDL (x) (FULL)	Get the status of MSDL card (x) (additional information). msdl-18 This command outputs the status of MSDL cards. Without any optional parameters (no card number, etc.), the status of all MSDL cards in the system is output. When a card number alone is provided with the command, the status of the card is output along with additional information regarding the applications configured on the card. Specifically, for each D-channel or AML configured on the card, the application name, logical number and port status is output. For example: MSDL x: ENL AML 11 DIS PORT 1 DCH 25 OPER PORT 2 AML 03 OPER PORT 3 If the FULL option is entered along with the MSDL number, the Meridian 1 outputs all the information for the STAT MSDL x command along with the following additional information: — card ID — bootloader firmware version — basecode version — basecode state — when the basecode was activated (if it is active) — each application version — each application state — when each application was activated (if it is active)

MSDL commands (continued)		
Command	Description	Release

Status of MSDL

The card status is output on the first line and can be any one of the following:

MSDL x: ENBL - card is enabled

MSDL x: MAN DSBL - card disabled by the DIS MSDL command

MSDL x: SYS DSBL reason - card has been disabled by the system

The system disabled state may be due to any of the following:

1. SYS DSBL - NOT RESPONDING

If the MSDL is in this state, the implication is that the Meridian 1 has attempted to communicate with the MSDL and was not successful. It is possible that the card is not present in the shelf. If it is present, then it is possible that the software on the card is unable to respond to messages from the Meridian 1.

Action: Check to see if the card is properly inserted in its slot. If it is (and has been for more than a few minutes), then check the maintenance terminal for MSDL or ERR messages and take the appropriate action for the error message.

It may be that the rotary switch setting on the MSDL card is not set properly. To keep the Meridian 1 from continuously attempting recovery of the MSDL, use the DIS MSDL x command to put the card in the Manually Disabled (MAN DSBL) state.

2. SYS DSBL - SELF-TESTING

If the MSDL is in this state, self-tests are in progress.

Action: Wait for the self-tests to complete and for the Meridian 1 to examine the results. Under normal circumstances, the self-tests take less than one minute to complete. However, when an erasable EPROM on the card has been cleared, the self-tests may take between five and six minutes to complete. Do not to take any action at this time.

MSDL commands (continued)		
Command	Description	Release

Status of MSDL

3. SYS DSBL - SELF-TESTS PASSED

This is a transient state. A card in a transient state has successfully completed the self-tests and the Meridian 1 is either beginning to download the MSDL base software, or has just completed downloading the MSDL base software and is about to attempt to enable the card.

Action: Wait for the Meridian 1 to begin the next step of recovery. If a more immediate recovery is desired, use the DIS MSDL x command followed by the ENL MSDL x command. This causes essentially the same recovery action to be taken. However, it may be faster (since it is being done as a result of input from the craftsperson).

4. SYS DSBL - SELF-TESTS FAILED

If the MSDL is in this state, the self-tests have executed and failed on this card.

Action: Use the STAT MSDL x command to determine reason for self-test failure. Disable the MSDL card using the DIS MSDL x command, then use the SLFT MSDL x command to execute the self-tests again.

If the self-tests pass, attempt to enable the card using the ENL MSDL x command. If the card fails the self-tests again, record the results and replace the card.

5. SYS DSBL - SRAM TESTS FAILED

If the MSDL is in this state, the self-tests have been run and passed. However when the Meridian 1 attempted to perform read/write tests to the shared RAM on the MSDL, it detected a failure.

Action: This is the same as for a self-test failure. If the attempt to enable the card fails, record the results and replace the card.

MSDL commands (continued)

Command	Description	Release

Status of MSDL**6. SYS DSBL - OVERLOAD**

The Meridian 1 has received too many messages from the MSDL. This is unacceptable as excessive demand can interfere with other system functions.

Action: If the MSDL is left in this state, the Meridian 1 will attempt to bring the card back into service within a few minutes. If this is not required, disable the card using the DIS MSDL x command.

It is also advisable to identify a specific port or application that may be responsible for the overload. The identification can be made by disabling individual links/ports on the MSDL and letting the remaining links/ports operate normally.

7. SYS DSBL - RESET THRESHOLD

If the MSDL is in this state, the Meridian 1 has detected more than four resets within ten minutes. A normal, operating card should not reset so often.

It is possible that the card may be in this state due to a Fatal Error or Self-test failure from which no recovery was successful. (As the recovery from Fatal Errors and Self-test failures begins with resetting the card, repeated attempts at recovery may cause the reset threshold to be reached.)

Action: Disable the card using the DIS MSDL x command and execute the SLFT MSDL x command. If the self-tests pass, attempt to enable the card using the ENL MSDL x command. If the problem recurs, try a forced downloading of the software to the MSDL using the ENL MSDL x FDL command.

If the problem continues to recur and resets continue because of a repeated fatal error, attempt to isolate the problem by disabling all links/ports controlled by one application (e.g., all D-channels or all AMLs). If no manual intervention is taken by the craftsperson, the Meridian 1 will attempt to bring the card back into service beginning at midnight.

MSDL commands (continued)		
Command	Description	Release

Status of MSDL

8. SYS DSBL - FATAL ERROR

If the MSDL is in this state, the card encountered a fatal condition from which it could not recover. In response to the STAT command, the cause of the fatal error will be displayed.

If the STAT command is not entered while the card is in this state, the MSDL302 message printed at the time of the state transition will indicate the cause of the fatal error.

Action: The Meridian 1 will attempt to bring the card back into service automatically. While the card is in this state, no action is required. If the Meridian 1 is unable to recover the card, the system disabled substate will be changed to indicate the reason recovery was not possible. The craftsperson should then take the recommended action for that new substate.

9. SYS DSBL - NO RECOVERY ATTEMPTED UNTIL MIDNIGHT

When this is output after the SYS DSBL message, the Meridian 1 has attempted to recover the card but has repeatedly failed. One example of this condition is when the background recovery mechanism has failed to download the MSDL Base Code five times in a row.

Action: Disable the card using the DIS MSDL x command. Test the card using the SLFT MSDL x command, and if the self-tests pass, enable the card using the ENL MSDL x command.

If the downloading of the MSDL Base Code is necessary, it will be attempted in response to the enable command. If no manual intervention is taken, the Meridian 1 will attempt recovery again beginning at midnight.

MSDL commands (continued)		
Command	Description	Release
Disable		
DIS MSDL x (ALL)	Disable MSDL device x (card). When entered without the optional parameter, the disable MSDL command attempts to disable the MSDL card. Disabling the card via this command is permitted from either the Enabled (ENBL) state or the System Disabled (SYS DSBL) state. When attempted on an MSDL that does not have any ports enabled, this command will succeed. The only exception to this is when the disable card message needs to be sent to the card, and there is no buffer currently available for building the message (MSDL015 is output to the TTY). In this unusual situation, attempting the command again will most likely result in success. Application Overlays are not erased when the MSDL is disabled. If there are any ports that are still running in the MSDL card, the ALL option must be used to force disable the active ports. As an alternative to this command, the craftsperson can use the commands provided by the applications to disable the ports (D-channels or AML) individually, and then use the DIS MSDL x command. The command DIS MSDL x ALL is not allowed if the active TTY (the terminal from which the command was entered) is supported on the MSDL card in question. Software disable the logical channel prior to disabling the physical DNUM port.	msdl-18

MSDL commands (continued)		
Command	Description	Release
Enable		
ENL MSDL x (ALL, FDL)	Enable MSDL device x (card, Forced Download). When entered without any of the optional parameters, the enable MSDL command attempts to enable the MSDL card. Enabling the card via this command is only permitted if the card is currently in the Manually Disabled (MAN DSBL) state. The enable card succeeds if: 1. the card is resident in the shelf 2. it has passed all the self-tests 3. the MSDL base software has been downloaded and is responding If the MSDL base software and any configured application software has not been downloaded, or if the version of the software on the card is different from the version on the system disk, software download occurs. While download is in progress, a series of dots (. . .) are output. If the FDL (forced download) option is entered, the MSDL base software and all the configured applications will be downloaded regardless if the application already exists on the card. Following the download, the card will be enabled. If the ALL option is entered, the card will be enabled (provided the three conditions mentioned above are met), all the applications will be downloaded if necessary and then an attempt will be made to enable all the links/ports configured on the card. Additionally, the enable command with the ALL option can be entered when the card is already in the enabled state. This allows you to enable any disabled links/ports through one command. It is not possible to use both the ALL and the FDL options in the same command.	msdl-18

Reset MSDL		
RST MSDL x	Reset MSDL device x. This command causes a power-on reset on the MSDL, followed by a series of short self-tests. Resetting the card via this command is only permitted if the card is in the Manually Disabled (MAN DSBL) state.	msdl-18

MSDL commands (continued)		
Command	Description	Release

Test MSDL

SLFT MSDL x	Execute a self-test for MSDL device x. This command causes a power-on reset on the MSDL, which ill be followed by a complete set of self-tests. This command only executes the self-tests if the card is in the Manually Disabled (MAN DSBL) state. If the self-tests pass, a message indicating this and card id is output. If the self-tests fail, a message is output describing which self-test failed. It is useful to note that the first test that fails will abort the self-test sequence, so this command only indicates one test failure, even if multiple tests might fail.

MSDL messages

MSDL0001	The number of parameters for the MSDL command is incorrect. ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.
MSDL0002	The card number in the command is out-of-range or invalid. ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.
MSDL0003	Since this command is only valid for use on the MSDL card in this Overlay, the first parameter must be MSDL. ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.
MSDL0004	Cannot reset the card or execute self-tests right now because the card is not in Manually Disabled state (MAN DSBL). ACTION: Use DIS MSDL x to disable the card.
MSDL0005	Failed to reset; could not write command to card, due to the following: 1. Card is probably not present. ACTION: Check to make sure the card is seated in the backplane. 2. The address switch settings on the card do not agree with the database. ACTION: Check that the switch settings of S9 and S10 match the DNUM in the configuration record. To get the DNUM, refer to the <i>X11 Administration</i> (553-3001-311) and use LD 22 PRT CFN.

- MSDL0006 Cannot enable the card unless it is in Manually Disabled (MAN DSBL) state.
ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation. If your data is correct, use DIS MSDL x to disable the card.
- MSDL0007 Cannot disable card unless it is in the Enabled (ENBL) state.
ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation. If your data is correct, use ENL MSDL x to enable the card.
- MSDL0008 Cannot reset the card (or execute self-tests) on the card right now since the device enabled bit is set, meaning a message response is currently pending.
ACTION: Attempt the self test command again. Assuming the card is Manually Disabled and when the response pending condition clears, the reset and self tests should run.
- MSDL0011 No response received to the enable card command.
ACTION: To find out why the card did not respond to ENL MSDL x, use RST MSDL x, or use the SLFT MSDL x to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0012 The response message from the card to the Overlay indicates failure to enable/disable.
ACTION: To find out why the card did not respond, use RST MSDL x, or use the SLFT MSDL x to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0014 No response received to the disable card command. The card is set to the Manually Disabled (MAN DSBL) state anyway.
ACTION: Information only, no action required. However to find out why the card did not respond to DIS MSDL x, you may want to use RST MSDL x, or use the SLFT MSDL x to start a self test.
- MSDL0015 The command entered requires that a message be sent to the MSDL. The Meridian 1 was unable to build the message since the buffer was not free.
ACTION: Try again later. If this message continues to be generated and if the card is enabled, wait for a few minutes, as the card may have encountered a problem that warrants recovery. If the card is manually disabled, reset the card using the RST MSDL x, or execute self tests using the SLFT MSDL x. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0016 Failed enable attempt. If this message is not accompanied by any other error message, the card may be in the process of performing self-tests or the self-tests may have already failed.
ACTION: Wait a few minutes, then execute the self-tests with the SLFT MSDL x command. If the self-tests pass, use ENL MSDL x to enable the card again. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0017 At least one of the ports on the MSDL is currently enabled. Disabling the card is disallowed when ports are enabled unless the DIS MSDL x ALL command is used.
ACTION: To disable the card, use DIS MSDL x ALL.

- MSDL0018 The fourth parameter of the command is unrecognized or not implemented.
ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.
- MSDL0019 The command entered required that information be read from the MSDL. The specified MSDL is not present in the system, and the information could not be read.
ACTION: Check to make sure the card is seated in the backplane. Check that the switch settings of S9 and S10 match the DNUM in the configuration record. To get the DNUM, refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT CFN.
- MSDL0020 The command entered required that the application information block on the MSDL be read by the Meridian 1. The block is currently being updated by the MSDL, and the system could not read the block.
ACTION: Try again.
- MSDL0021 Began to download the MSDL basecode but stopped before finishing. There should be an accompanying SDL error message, so refer to the information on that message for the failure reason.
ACTION: See the accompanying SDL error message.
- MSDL0022 The rest of the information output in response to this command is resident on the card. The card is not enabled, and the information cannot be read.
ACTION: To enable the card, use ENL MSDL x.
- MSDL0024 The Meridian 1 began to download an MSDL application but stopped before finishing.
ACTION: There should be an accompanying SDL error message, so refer to the information on that message for the failure reason.
- MSDL0025 There is currently maintenance activity on the application in question.
ACTION: Wait a few minutes and try again.
- MSDL0026 Disabling the MSDL when the active TTY is supported by it, is not allowed.
ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.
- MSDL0027 Time out waiting for the self tests to complete.
ACTION: Wait at least five minutes, then try again.

Under certain unusual circumstances, the self-tests can take approximately five minutes, but this should only occur when the flash EPROM on the card is new or has been completely erased.
- MSDL0028 Cannot enable the card because it is not present in the system.
ACTION: If the card in question is believed to be present, check if the switch settings on the card agree with the device number entered in this command.
- MSDL0029 Incorrect password entered in response to the ENL MSDL x DBG command.
ACTION: Check to make sure that your data is correct and re-enter the command.
- MSDL0030 The debug option for this card has already been turned on.
ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.

- MSDL0031 The ENL MSDL x ALL command is only valid when the MSDL is in the ENBL or MAN DSBL state.
ACTION: Check to make sure that your data is correct and that you have entered the right command for this situation.
- MSDL0032 The MSDL card was removed from its slot, or the card reset itself during the self-tests.
ACTION: If the card was removed, execute the self-tests again and do not remove the card from its slot until the tests are complete. If the card was not removed, execute the self-tests again. If this message appears more than twice, replace the MSDL card.
- MSDL0033 Device locked by the Russian Call Monitoring feature. The MSDL card cannot be enabled or disabled.
ACTION: Contact your technical support group.
- MSDL0034 Group number in command is out of range or invalid.
- MSDL0035 Unequipped physical I/O address in the specified network group.
- MSDL0036 The network group number must be specified.
- MSDL0100 x The CSTAT and CSUBSTAT fields on MSDL x indicate the card is Manually Disabled. The Meridian 1 believes the card is Enabled. The card is placed in the System Disabled - Self- tests Passed state, and within the next few minutes, the Meridian 1 will attempt to enable the card.
ACTION: Information only, no action required.
- MSDL0101 x The CSTAT field on MSDL x indicates the card is no longer Enabled. The Meridian 1 will attempt to return the card to an Enabled state within a few minutes. Under certain conditions, this message is output at the same time as MSDL0302.
ACTION: Information only, no action required.
- MSDL0102 x No response was received from MSDL x to a background polling message sent periodically to each MSDL card. The purpose of this message is to ensure that the card is capable of receiving and sending messages.
ACTION: To find out why the card did not respond, use RST MSDL x, or use the SLFT MSDL x to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0103 x An Overlay was waiting for a message from MSDL x. Most likely, the Overlay is no longer loaded. The message the Overlay was waiting for was never received.
ACTION: Re-enter the command. If the card still does not respond, use RST MSDL x, or use the SLFT MSDL x to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0104 x The MSDL background audit sent a message to MSDL x, and did not receive a response.
ACTION: To find out why the card did not respond, use RST MSDL x, or use the SLFT MSDL x to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- MSDL0105 The CSTAT value read from the MSDL is invalid. This indicated one of two error conditions:
1. The card has encountered a severe hardware fault so that it is unable to report the error to the Meridian 1.

2. There may be multiple cards in the system with the same device number (switch settings) as the MSDL. When the CSTAT is read from the MSDL, it may not be the MSDL card that is responding.

ACTION: Be sure no other cards in the system share the device number. If so, change the device numbers. If not, replace the card.

MSDL0106 x appl

The MSDL audit detected that there was no response to a maintenance message originated by an application **appl** on MSDL **x**.

ACTION: To find out why the card did not respond, use RST MSDL **x**, or use the SLFT MSDL **x** to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.

MSDL0107 x appl y

The Meridian 1 was unable to determine if downloading was necessary. An SDL error message should accompany this message and describe the reason for the failure. Three fields accompany this message: **x** = device number (LD 17 DNUM), **appl** = the application name, and **y** is for design use only.

ACTION: See the accompanying SDL error message.

MSDL0108 x appl

An application on MSDL **x** needs to be downloaded to the card. Downloading begins as soon as there is no Overlay loaded. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name.

ACTION: Use END or * * * * to end the overlay.

MSDL0112 x MSDL **x** has been reset in order to begin automatic recovery. Immediately following this message, the card is executing self tests. When they are finished, provided they pass, the Meridian 1 will attempt to enable the card. Where: **x** = device number (LD 17 DNUM).

ACTION: If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.

MSDL0201 x appl

MSDL **x** sent a message to the Meridian 1 indicating an application data space has been corrupted. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name.

ACTION: Contact your technical support group.

MSDL0202 x appl

MSDL **x** sent a message to the Meridian 1 indicating that an application on the card unexpectedly disabled itself (performed a “close”). Where: **x** = device number (LD 17 DNUM) and **appl** = the application name.

ACTION: Contact your technical support group.

MSDL0204 x appl

The Meridian 1 searched the system disk to find a version of an application for MSDL **x** and found none. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name.

ACTION: Contact your technical support group.

MSDL0205 x appl y z

An error was encountered when searching the system disk to find a version of an application for MSDL **x**. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name. (**y** and **z** are for design use only)

ACTION: Refer to an accompanying SDL error message for the exact error reason. This message indicates that the Meridian 1 will attempt to enable the application in question if a version exists on the card.

MSDL0206 x appl y z

An error was encountered when comparing a version of an application on the system disk with the version on MSDL **x**. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name. (**y** and **z** are for design use only)

ACTION: Refer to the accompanying SDL error message for the exact error reason. This message indicates that the Meridian 1 will attempt to enable the application if a version exists on the card.

MSDL0207 x appl y z

An error was encountered when downloading an application to MSDL **x**. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name. (**y** and **z** are for design use only)

ACTION: Refer to the accompanying SDL error message for the exact error reason. The entire enable sequence has been aborted.

MSDL0208 x When preparing to download the base software to MSDL **x**, the card indicated that some kind of fatal error was encountered. Where: **x** = device number (LD 17 DNUM).

ACTION: To find out why the card did not respond, use RST MSDL **x**, or use the SLFT MSDL **x** to start a self test. If the test fails, replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.

MSDL0209 x y z

Some memory was reclaimed within the MSDL for future use. An application on MSDL **x** requested that a buffer pool be freed. When this occurred, there was at least one outstanding buffer. The basecode waited for the buffer(s) to be returned to the pool before freeing the buffers, but it never returned. The buffer pool was forcibly freed by the basecode. Where: **x** = device number (LD 17 DNUM) (**y** and **z** are for design use only).

MSDL0210 Failed to enable the MSDL for one of the following reasons: The card in question is not an MSDL card. For example, there may be a card in the system with switch settings that correspond to the MSDL, but is in fact not an MSDL card. There is at least one other card in the system with switch setting identical to the MSDLS.

ACTION: Remove the card with the same device number as the MSDL.

MSDL0211 An attempt to enable the T1E1 application during ENLL, timed out.

ACTION: RST TMDI in overlay 96 and then try again.

MSDL0212 The TMDI card could not enable the T1E1 application.

ACTION: RST TMDI in overaly 96 and then try again.

MSDL0213 The T1E1 application is in a transient state and could not be enabled.

ACTION: Wait and then try ENLL again.

- MSDL0214 A request to enable the DTI port has failed.
ACTION: RST TMDI in overlay 96 and then try again.
- MSDL0215 A request to disable the DTI port on the TMDI failed.
ACTION: RST TMDI in overlay 96 and then try again.
- MSDL0300 data The MSDL background audit has changed the card state. In the cases where the card was previously enabled and now is no longer enabled, another MSDL message will indicate the reason for the state change. When making a state transition due to a fatal error on the card, the reason for the fatal error is displayed in this message. This is an informational message and requires no action by the craftsperson.
 Output data: **MSDL0300 x FROM: aaaa TO: bbbb TIME time REASON cccc**
 Where:
x = MSDL card number (in decimal)
aaaa = the status of the MSDL prior to the state change
bbbb = the state of the card after the state change
time = the time of the state change
cccc = reason for the error (only when **TO: SYS DSBL - FATAL ERROR**)
ACTION: Information only, no action required.
- MSDL0301 x y z
 An expedited data unit was received. The Meridian 1 is not expecting MSDL **x** to generate any messages in its current state. However, immediately following a state transition to a disabled state, a pending message may cause this message to be displayed. This informational message indicates that the incoming message from the card was not processed due to the state change. No action is required. Where: **x** = device number (LD 17 DNUM) and **appl** = the application name. (**y** and **z** are for design use only)
ACTION: Information only, no action required.
- MSDL0302 x y Access to the memory space shared by the Meridian 1 and the MSDL (Shared RAM) has been momentarily suspended by MSDL **x**. There is no specific action to be taken as a result of this message; however, it indicates that message transfer between the Meridian 1 and the card ceased momentarily. Where: **x** = device number (LD 17 DNUM) and **y** = the reason for the suspension. Currently the only reason supported is the value "1," which indicates that some kind of buffer corruption was detected.
ACTION: Information only, no action required.
- MSDL0303 x y The Meridian 1 detected corruption in either the receive ring or the transmit ring or both, causing access to the memory space shared by the Meridian 1 CPU and MSDL **x** (Shared RAM) to be momentarily suspended. Take no action because of this message; however, it indicates that message transfer between the Meridian 1 and the card ceased momentarily. Where: **x** = device number (LD 17 DNUM) and **y** = a decimal number indicating where the corruption was detected. 1 means receive ring, 2 means transmit ring, and 3 means both receive and transmit rings.
ACTION: Information only, no action required.

MSDL0304 x y The Meridian 1 received 100 or more messages from MSDL x within two seconds. At this level of message transfer, there may be some impact to the overall system performance. The level of service does not warrant removing the card from service. Where:

x = device number (LD 17 DNUM)

y = the rate of message transfer from the card to the Meridian 1 in terms of messages per second.

MSDL0305 x y The Meridian 1 received 100 or more messages from MSDL x within two seconds. At this level of message transfer, there may be some impact to the overall system performance. The level of message transfer does not warrant removing the card from service. Where: **x** = device number (LD 17 DNUM) and **y** = the rate of message transfer from the card to the Meridian 1 (in terms of messages per second)

ACTION: Information only, no action required.

MSDL0306 x y The Meridian 1 has received 100 or more messages from MSDL x within one second. At this level of message transfer, there may be some impact to the overall system performance. The level of message transfer warrants removing the card from service. Where: **x** = device number (LD 17 DNUM) and **y** = the rate of message transfer from the card to the Meridian 1 (in terms of messages per second)

ACTION: Information only, no action required.

MSDL0307 x data

MSDL x encountered a fatal error. Where: **x** = device number (LD 17 DNUM). The data following x is information read from the card regarding the error and is intended for design use only.

ACTION: Replace the card as per steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.

MSDL0308 x y appl data

MSDL x reported that it received a message with an invalid (bad) socket ID. Where:

x = device number (LD 17 DNUM)

y = the socket ID

appl = the application name

data = up to eight words of hex data representing the message sent

MSDL0309 The TMDI output buffer is still in queue.

ACTION: Try the operation again, or RST TMDI in overlay 96.

MSDL0310 The TMDI output has not been sent to the card.

ACTION: Try the operation again or RST TMDI in overlay 96.

MSDL0450 When an SDI port is configured on an MSDL and the Meridian 1 initializes, it may be discovered, during initialization, that the MSDL basecode or SDI application needs to be downloaded. If so, there will be a period of time following the INIT (1 to 5 minutes) where the SDI port will not function. The port automatically enables itself once downloading has completed.

ACTION: Information only, no action required.

MSDL0451 <cardAddress> <(cardIndex)> <invalidCardstate>

An invalid card state change request from the SL1 task has been detected by the MMIH driver.

ACTION: If the problem does not clear automatically, disable and then enable the card.

MSDL0452 <cardAddress> <cardIndex>

The MMIH driver failed to send an SSD message to the SL1 task.

ACTION: Check the traffic reports for excessive traffic on the core CPU or check for a system problem. If the condition persists contact your technical support group.

MSDL0453 <cardAddress> <cardIndex>

The MMIH driver failed to send an RFC message to the SL1 task.

ACTION: Check the traffic reports for excessive traffic on the core CPU or check for a system problem. If the condition persists contact your technical support group.

MSDL0454 <cardAddress> <cardIndex>

The MMIH driver failed to place a transmit expedited message in the expedited interface.

ACTION: Disable and then enable the MSDL/MISP card. If the problem persists contact your technical support group.

MSDL0455 <cardAddress> <cardIndex>

The MMIH driver failed to send the Start UIPE Call Rebuild message through RFC to the SL1 task.

ACTION: The call rebuild operation for that MSDL will fail. If necessary, disable and then enable the FIJI/MSDL/MISP card. If the problem persists contact your technical support group.

MSDL0456 <blockSize>

The MMIH driver failed when it allocated memory of the size blockSize for the buffer pool. The system is probably out of memory and cannot communicate with the FIJI/MSDL/MISP cards.

ACTION: Contact your technical support group.

MSDL0457 <first 16 words of msg>

The MMIH has found a buffer in the Rx Ring message queue with an expired timestamp. The SL1 application has not processed the buffer's content promptly or the SSD message to the SL1 task was lost. The buffer's timestamp is reset and the buffer is returned as a free buffer. The first 16 words (32 bytes) of the discarded message are printed, 8 words to a line.

ACTION: Check the traffic reports. Excessive traffic can cause a delay in the core CPU.

MSDL0458 <first 16 words of msg>

The MMIH has found a buffer in the Tx Exp message queue with an expired timestamp. The message timed out while being sent to the card. The buffer is overwritten with the new message data. The first 16 words (32 bytes) of the discarded message are printed, 8 words to a line.

ACTION: Disable and then enable the card. If the problem persists replace the card.

MSDL0459 The MMIH has found a null physical I/O block pointer. The I/O pointer is corrupted and will prevent the system from communicating with the FIJI/MSDL/MISP cards.

ACTION: Contact your technical support group.

MSDL0460 <cardIndex>

The MMIH driver has found that the card index is out of range. The card index is corrupted and will prevent the system from communicating with the FIJI/MSDL/MISP cards.

ACTION: Contact your technical support group.

MSDL0461<cardAddress rtclock maintenancePegs>

A query base code message was sent by the MMIH after finding the SRAM suspended. maintenancePegs is a list of peg counts kept by the card's maintenance task.

MSDL0462 <cardAddress rtclock Msl1Pegs>

This message is printed in series with MSDL0461. msl1Pegs is a list of peg counts kept by the card's SL1 messaging interface task.

ACTION: Information only. If the problem persists disable and then enable the card.

MSDL0463 <cardAddress rtclock debugPegs>

This message is printed in series with MSDL0462. debugPegs is a list of peg counts kept by the card's debug task.

ACTION: Information only. If the problem persists disable and then enable the card.

MSDL0464 <cardAddress rtclock utilityPegs>

This message is printed in series with MSDL0463. utilityPegs is a list of pegs kept by the card's utility task

ACTION: Information only. If the problem persists disable and then enable the card.

MSDL0465 <cardAddress rtclock layer1Pegs>

This message is printed in series with MSDL0464. layer1Pegs is a list of pegs kept by the card's Layer 1 task.

ACTION: Information only. If the problem persists disable and then enable the card.

MSDL0466 <cardAddress rtclock returnCode>

The Interface Audit's polling message cannot be sent to the card's ring interface. The returnCode is the reason why the message has not been sent. The following returnCode values can appear:

0-request failed (null message pointer, empty data socket)

1-request succeeded

2-no operation (invalid card state)

4-flow control

5-no buffer

6-socket ID is suspended

7-ring is not operational

8-invalid socket ID

ACTION: Information only. If the problem persists, disable and then enable the card.

MSDL0467 <cardAddress> <cardIndex> <rtclock>

The SRAM Suspend message cannot be sent to the card through the expedited interface in response to two or more no buffer conditions being detected in a timespan greater than 100 msec.

ACTION: Information only. If the problem persists disable and then enable the card, or replace the card.

MSDL0468 <cardAddress> <cardIndex> <rtclock> <returnCode> <socketId application> <'First 8 words of the msg'>

The application's message cannot be sent to the ring and the reason code is other than no buffer. SocketID is the socket for the message to be sent. applicationID identifies the transmitting application. The first 8 words of the message are displayed in hex. Returncode contains the actual value returned by the procedure and contains one of the following values:

- 0-request failed (null message pointer, empty data socket)
- 1-request succeeded
- 4-flow control
- 5-no buffer
- 6-socket ID is suspended
- 7-ring is not operational
- 8-invalid socket ID

ACTION: Information only. If the problem persists disable and then enable the card.

MSDL0469 <cardAddress> <cardIndex> <rtclock>

A no buffer condition occurred because the transmitting ring is in the interface full state.

ACTION: Check whether the traffic flow is excessive. If the problem persists disable and then enable the card.

MSDL0470 <cardAddress> <cardIndex> <rtclock>

A no buffer condition occurred because the card has not yet sent an initialization acknowledgement response.

ACTION: Check whether the traffic flow is excessive. If the problem persists, disable and then enable the card.

MSDL0471 <cardAddress> <cardIndex> <rtclock messageSize>

A no buffer condition occurred because a single buffer message is larger than the size of a single buffer.

ACTION: Contact your technical support group. The buffer's data could be corrupted.

MSDL0472 <cardAddress> <cardIndex> <rtclock messageSize>

Insufficient buffers available in the transmit ring for the message.

ACTION: Check whether the traffic flow is excessive. If the problem persists disable and then enable the card.

MSDL0474 <cardAddress> <cardIndex> <rtclock> <socketId application> <'First 8 words of the msg'>

A no buffer condition has been encountered while attempting to send a message to the transmit ring. The first 8 words of the message are displayed in hex. The socketID is the socket for the message to be transmitted. The applicationID is the application ID of the application sending the message.

ACTION: Check whether the traffic flow is excessive. If the problem persists, disable and then enable the card.

MSDL0475 <cardAddress><cardIndex><rtclock> <tempNoBufferCount> <rtclockOfFirstNoBuffer>

This message is printed when the first line of corrective action (suspending the transmit ring) is taken. It displays the contents of the error detection variables and the descriptor words of all buffers in the transmit ring. It is printed in series with MSDL0476 and MSDL0477. The variables are:

tempNoBufferCount - number of consecutive no buffer occurrences since the last successful write to the transmit ring.

totalNoBufferCount - total number of no buffer occurrences for the card.

rtclockOfFirstNoBuffer - rtclock value at the time of the first no buffer occurrence following the last successful write to the transmit ring.

descriptor words - all 60 descriptor words are printed (in hex), six to a line.

ACTION: Information for debugging only. If the problem does not clear automatically, disable and then enable the card.

MSDL0476 <cardAddress> <cardIndex><rtcloc>k currentIndex> <descriptorBlockAddress>
<bufferSize> <numberOfBuffers> <transmitRing Address> <transmitRingState>

This message displays pertinent variables kept by the MMIH driver for the transmit ring. It is printed in series with MSDL0475 and MSDL0477. The variables printed are:

currentIndex - the MMIH's current index into the transmit ring's buffers (head pointer)

descriptorBlock Address - offset of the descriptor block in the SRAM

bufferSize - size of the buffers in the transmit ring

numberOfBuffers - number of buffers in the transmit ring

transmitRingAddress - address of the transmit ring in the card's SRAM

transmitRingState - current state of the transmit ring

ACTION: Information for debugging only. If the problem does not clear automatically, disable and then enable the card.

MSDL0477 <cardAddress> <cardIndex> rtclock '44SRAM configuration Block words'

This message displays the contents of the SRAM configuration block. It is printed in series with MSDL0475 and MSDL0476.

- configuration words - all 44 descriptor words are printed (in hex), four to a line.

ACTION: Information for debugging only. If the problem does not clear automatically, disable and then enable the card.

MSDL0485 The Meridian1 recieved 200 or more messages from the MSDL port. Port put into Lockout for overload protection.

ACTION: Identify the cause of the problem. Manually disable the AML, SDI or DCH configured on the MSDL port with one of the following commands: DIS AML x; for an AML Link, DIS TTY x; for an SDI or DIS DCH x; for a D channel. Enable the port with one of the following commands: ENL AML x; for an AML Link, ENL TTY x; for an SDI or ENL DCH x; for a D-channel. 

MWL — LD 61 Message Waiting Lamps Reset

How the MWL works

The program can be invoked automatically by the system as part of the daily routine or manually from an input device. It deactivates all active message waiting lamps on user telephones and resets the associated status in the system. MWL messages identify problems.

Reset lamp status

Only when message centers close and attendant consoles enter Night Service, does the program reset lamp status.

How applied to digital sets

This program does not work on digital sets.

Input when manually loaded

After manually loading LD 61, type **G** to initiate the program.

MWL messages

- MWL0000

Program has been loaded.

ACTION: The MWL program is loaded and ready for you to enter commands.
- MWL0001

Invalid command.

ACTION: Check to make sure your data is correct and re-enter the command.
- MWL0002

Cannot deactivate MW lamps until all MC agents out-of-service.

ACTION: Operate each Night Key on all MC attendant consoles to take them out-of-service.
- MWL0003

Cannot deactivate MW lamps until all attendants in Night Service.

ACTION: Operate each Night Key on all MC attendant consoles to take them out-of-service.
- MWL0500 dn tn

The TN specified has been flagged as having a faulty lamp. The unit status has been set to normal.

ACTION: Use PBXT in LD 32 to check the lamp(s) or check them visually. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide. 

NPR — LD 32 Checking loops, shelves, controllers, cards and units

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter in this guide.

How the NPR works

The Network Peripheral Replacement (NPR) Overlay (LD 32), performs checks and maintenance functions on Network and Peripheral Signaling Equipment.

You can use LD 32 commands on XTD cards. The STAT command will append XTD, LDC or LGD where required.

LD 32 has the following uses:

- ◆ printing the status of Peripheral Signaling (PS), Controller and Network cards
- ◆ printing the status of Peripheral Equipment (PE) shelves cards and units
- ◆ disabling and enabling PS, Controller and Network cards
- ◆ disabling and enabling PE shelves, cards and units
- ◆ testing Message Waiting Lamps on 500 and 2500 sets
- ◆ listing TNs of 500 and 2500 sets with faulty Message Waiting Lamps on a specified shelf (not applicable from X11 Release 5.24 and later)
- ◆ testing Message Waiting Lamps on 2500 sets during midnight routines from Release 8 and later
- ◆ printing set and card IDs on superloops
- ◆ converting TNs in hex format to the loop, shelf, card, unit format

Overlay link enhancement

With Release 19 and later software, Overlay programs 10, 11, 20 and 32 are linked, making it possible to add, print and get the status of a set without having to exit one overlay and load another.

The input processing has also been enhanced for prompts ending with a colon (:) allowing the user to enter either of the following:

- ◆ A question mark (?) followed by a carriage return (<cr>) to get a list of valid responses to that prompt.
- ◆ An abbreviated response, where the system then responds with the nearest match. For example, **N** for NEW. If there is more than one possible match, the system responds with **SCH0099** and the input, followed by a question mark and a list of possible responses. The user can then enter the valid response.

ENET — Network



553-0195T ENET(CL)

Purpose

Dual Loop Network cards for matching timeslots are used on the Meridian SL-1S, SN and MS systems. Enhanced Network cards for random timeslots are used for Meridian SL-1N, NT, ST, XT, and can also be used in Options 21, 51, 51C, 61, 61C, 71 and 81.

Function

Each network shelf or module can contain up to six network cards, or 12 multiplex loops. Each loop has 30 timeslots available for speech.

When specified as single density, these loops can drive up to four Peripheral Equipment (PE) modules or shelves equipped with single-density line cards. Double-density loops can drive up to two PE modules or shelves equipped with double-density line cards. Quad-density loops can drive one PE module or shelf equipped with quad-density line cards.

The network card establishes connections to its Peripheral Equipment, to provide the time and space switching of voice and data PCM between telephones, analog trunks, digitone receivers.

Features

The faceplate includes:

- ◆ two 36-pin faceplate connectors: J1 for even numbered loops, J2 for odd numbered loops. J1 and J2 are used for interconnection with 18-pair cables to carry PCM, data, clock signals and line circuit enables to the peripheral buffer on the PE shelf
- ◆ two LEDs. When lit, the LEDs indicate that even or odd loops are disabled
- ◆ an ENB/DIS switch to hardware enable or disable both loops on the card

The network cards are slot addressed.

Reflected fault tip

As some PE faults can reflect back to the network equipment and disable the network loop, it may be wise to check the status of the loop involved as a first step in troubleshooting a PE fault.

Network loop commands		
Command	Description	Release
Check status of network loop		
STAT (loop)	Give status of one or all loops. Response is one of the following: x BUSY, y DSBL = loop enabled with x channels busy and y channels disabled. UNEQ = loop unequipped; not programed in LD 17. CTYF: I1 I2 = loop specified in STAT command is unable to receive data from loops I1, I2, etc. (i.e., continuity test failed in most recent LD 45 loop test). Probable fault in network card. DSBL: NOT RESPONDING = loop disabled. Network card not responding. Card missing, disabled by switch or faulty. DSBL: RESPONDING = loop disabled but the network card responds. Loop may have been disabled due to: — manual request (DISL) — associated Peripheral Signaling card being disabled — overload condition on associated loop See OVD chapter for conditions indicated by OVD messages. An attempt to enable a loop which was disabled due to overload may result in a recurrence of the overload condition: the system's service may be impaired for about 2 minutes. FAULTY HW: NO RESPONSE = loop identified as faulty by the LRIP function. Refer to the FHW chapter. FAULTY HW: OVERLOAD = loop identified as faulty by the LOIP function. Refer to the FHW chapter.	basic-1

Network loop commands (continued)		
Command	Description	Release
Disable a network loop		
DISL loop	Disable network loop. When operation is complete system responds with a line feed and a dot. All units on a loop go into maintenance busy mode when disabled using the DISL command. The shelves on a loop must be individually re-enabled through the ENLS command. Any telephones that were in lockout mode show as idle, then go into lockout mode again 30 seconds after any unit on the shelf requests dial tone.	basic-1
DISN loop	Disables a network card, where loop is the number of the even or odd loop. Not applicable to superloops. When operation is complete system responds with a line feed and a dot.	basic-1
Enable a network loop		
ENLL loop	Enable network loop. When operation is complete system responds with OK line feed and a dot. Past releases respond with line feed and a dot. The shelves on a loop must be individually re-enabled through the ENLS command. Any telephones that were in lockout mode show as idle, then go into lockout mode again 30 seconds after any unit on the shelf requests dial tone. When enabling a network loop serving ISDL cards, the ISDL cards must be individually disabled then re-enabled to ensure that service is restored to digital telephones. Service may also be restored to digital telephones by disconnecting, and then connecting the telephone line cord.	basic-1

PB — Peripheral Buffer

Purpose

The Peripheral Buffer (PB) provides interface between the network card and the PE circuits. The PB also supplies power for the PE cards, much the same as the 5/12V converter does for the CE cards.

Function

The PB provides the PE cards with the following:

- ◆ $\pm 6V$, $+5V$, and $+2.5V$ derived from $-48V$ and $\pm 10V$ supply
- ◆ card enable signals used to enable 10 PE cards
- ◆ unit enable signals used to enable 16 units

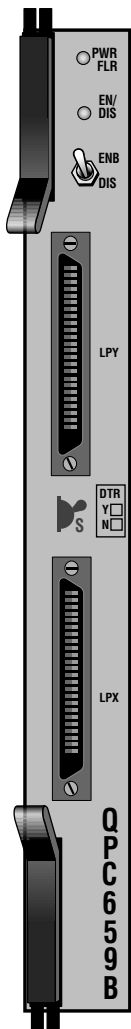
Features

The PB faceplate includes:

- ◆ a LED, labeled SIG FLR. When lit the LED indicates that timing or sync signals have failed
- ◆ a LED, labeled PWR. When lit, the LED indicates that there is no output from the PB power supplies
- ◆ an ENB/DIS switch to hardware enable or disable the card. Signal and Voltage Monitor circuitry check for $\pm 6V$ power transients, ensures power is applied in the proper sequence, and that clock and sync signals are present; if not LEDs are lit. Toggling the switch will manually restore the circuitry
- ◆ a bottom connector (J3) which interconnects the shelf 0 PB card to the network loop
- ◆ a top connector (J4) which interconnects the shelf 0 PB card to the shelf 1 PB card (J3)

A switch on the component side of the card allows you to change the frequency and level of the ringing voltage, and the line-card density supported by the PB card.

DL LP BFR — Dual Loop Peripheral Buffer



553-0196T DLPB(CL)

Purpose

The Dual Loop Peripheral Buffer (DLPB) provides interface and supplies power to the PE cards.

The card can be optioned in two modes:

- ◆ Single-loop mode, where one loop can drive all the cards on a PE shelf. It can be daisy-chained to the buffer card in a second PE shelf, provided the shelves are configured for single or double-density PE cards.
- ◆ Dual-loop mode, where one loop can drive the left half of the PE shelf cards and another loop can drive the right half. The dual-loop mode is used when quad-density PE cards are configured.

The card can hold a dual or quad Digitone Receiver Daughterboard, used on a 10-card PE shelf optioned for dual-loop mode, or on an eight-card PE shelf optioned for either the dual or single-loop mode.

Function

Except for the Digitone Receiver, the DLPB functions as the aforementioned Peripheral Buffer.

Features

The DLPB faceplate includes:

- ◆ a LED, labeled PWR FLR. When lit the LED indicates that timing or sync signals or power have failed
- ◆ a LED, labeled EN, DIS. When lit the LED indicates an enabled or disabled card
- ◆ an ENB, DIS switch to hardware enable or disable the card
- ◆ a connector labeled LPY in the single loop mode, is used to daisy-chain loop control to a second PE shelf. In the dual loop mode, it allows a loop to drive the last five cards, labeled Y, on a shelf. For a SL-1ST QCA66 PE shelf, the connector labeled LPY is used to drive the last four cards

- ◆ a connector labeled LPX, used in the single-loop mode to allow a loop to drive PE shelf 0. Used in the dual-loop mode to allow a loop to drive the first five cards labeled X on a PE shelf, or the first four cards on a SL-1ST QCA66 PE shelf

A connector, P2, on the component side of the card allows a dual or quad Digitone Receiver daughterboard to be mounted.

About Peripheral Equipment shelf commands

When you enable or disable the PE shelf, the Peripheral Buffer is responding to the commands.

PE shelf commands		
Command	Description	Release
Check status of PE shelf		
STAT I s	Get idle, busy or disabled status of units on specified shelf. Where I = loop and s = shelf Displays number of units idle, busy, disabled and maintenance busy for the specified shelf.	basic-1
Disable a PE shelf		
DISS I s	Disable specified shelf. Where I = loop and s = shelf. When operation is complete system responds with a line feed and a dot.	basic-1
Enable a PE shelf		
ENLS I s	Enable specified shelf. Where I = loop and s = shelf. When operation is complete system responds with a line feed and a dot. If the shelf is disabled by overload, the overload status entry is cleared.	basic-1

PE shelf commands (continued)		
Command	Description	Release
List TNs of units on PE shelf		
LBSY I s	List TNs of all busy units on specified shelf. Where I = loop and s = shelf	basic-1
LDIS I s	List TNs of all disabled units on specified shelf. Where I = loop and s = shelf	basic-1
LIDL I s	List TNs of all idle units on specified shelf. Where I = loop and s = shelf	basic-1
LLBD I s	List TNs of 500/2500 sets with defective MWLs. Where I = loop and s = shelf	basic-1
	Lists TNs of all 500/2500-type units for specified loop and shelf with message waiting lamps seen by the system as defective. Not available after Release 5. 24.	
LMNT I s	List TNs of all maintenance busy units on specified shelf. Where I = loop and s = shelf	basic-1

About Peripheral Equipment card commands

Included are telephone set line cards and analog trunk cards. Although Digitone Receivers are housed in PE shelves, and they are not included with this chapter as they function in a different manner from line and trunk cards. For Digitone Receivers refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 (LD 34) in this guide.

PE card commands		
Command	Description	Release
Check status of PE card		
STAT I s c	Get status of specified card. Where I = loop, s = shelf and c = card When getting the status of a card relating to a trunk error (STAT), the term RVSD may appear with the trunk information. RVSD indicates that the software detected a reversed wired trunk for that unit. Response example as follows: 00 = UNIT 00 is IDLE - no active call 01 = UNIT 01 is BUSY - active with a call 02 = UNIT 02 is MBSY - maintenance busy 03 = UNIT 03 is DSBL - disabled 04 = UNIT 04 is UNEQ - unequipped 05 = UNIT 05 is UNEQ - unequipped 06 = UNIT 06 is UNEQ - unequipped 07 = UNIT 07 is UNEQ - unequipped	basic-1
Disable a PE card		
DISC I s c	Disable specified card. When operation is complete system responds with a line feed and a dot.	basic-1

PE card commands (continued)		
Command	Description	Release
Disable a PE card		
DISI I s c	Disable specified card when it is idle. When operation is complete system responds with a line feed and a dot. Disabled DID trunks are placed in the answer state while disabled. If Recorded Telephone Dictation (RTDT) cards are to be software enabled or disabled, the Out-of-Service (OS) lead should be connected to ground. On completion of the task, ground can be removed.	basic-1
Enable a PE card		
ENLC I s c	Enable specified card. When operation is complete system responds with a line feed and a dot. If the card resides on a disabled shelf, the status is output and enable is not performed. If card has been disabled by overload, the overload status entry is cleared. After making any changes to the route data block, IPE TRUNK CARDS MUST BE DOWNLOADED by issuing the ENLC I s c command. When the Trunk Failure Monitor (TFM) cardage is enabled, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit (it stays in the BUSY state).	basic-1

About Peripheral Equipment unit commands

The number of units on a PE card is known as density. There is a different number of units on the same density of line and trunk cards. Refer to *Equipment Ordering Information* for a description of the cards including number of units.

PE unit commands		
Command	Description	Release
Check status of a unit		
STAT I s c u	Get status of specified unit. Response is one of the following: IDLE = idle MBSY = Maintenance Busy DSBL = Disabled BUSY = In use by Call Processing UNEQ = terminal not defined in software L500 = line is 500/2500 type MBCS = Maintenance Set BCS = Business Communication Set or Meridian 1 proprietary telephone set TRK = Trunk ATTN = Attendant Console DTR = Digitone Receiver	basic-1

PE unit commands (continued)		
Command	Description	Release

Check status of a unit

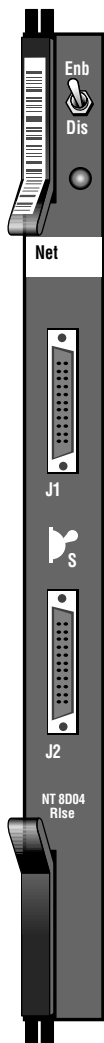
STAT I s c u	PWR = Console Power unit SIG FAULT = Outgoing signal circuitry fault detected on PS card under examination. Abnormal responses: CARD x DSBL (OVD) = Card x disabled due to overload. DND xxx xxx = Do-Not-Disturb feature is active. SHELF DSBL (OVD) = Shelf Disabled due to overload. WARNING: CRPTR NOT IN RANGE = TN's data is corrupted. Check BUG messages relating to the TN. BUG messages indicate software faults. See Convert a carded TN, after the next list. Responses caused by invalid equipment choice: EXT DSBL = extender disabled LOOP NOT TERM = loop is not a terminal loop LOOP UNEQ = loop is unequipped SHELF UNEQ = shelf is unequipped SHELF UNEQ W/PBX CARDS = no 500 cards on shelf CARD UNEQ = card is unequipped CARD NOT PBX = card is not a PBX card UNIT UNEQ FOR MW = unequipped for Message Waiting PER UNEQ = PS card is unequipped UNIT UNEQ = unit is unequipped	basic-1

Convert a carded TN

CONV tn,	Convert carded TN to I s c u.	xpe-15
CONV I s c u	Convert I s c u to carded TN	xpe-15
	TN formats are associated with BUG messages. BUG messages indicate software errors, and are generally beyond the scope of on-site technicians. The second line of some BUG messages has a TN after the colon (:). These TNs appear in many formats, uncarded or normal TN, e.g., 10 0 1 0, carded TN, e.g., 0A04, and carded and uncarded hexadecimal formats. The carded TN is not necessarily a hexadecimal number, as its makeup is dependent upon the density of the PE cards assigned to the loop.	xpe-15

PE unit commands (continued)		
Command	Description	Release
Disable a unit		
DISU I s c u	Disable specified unit. When operation is complete system responds with a line feed and a dot. Disabled DID trunks are placed in the answer state while disabled. If Recorded Telephone Dictation (RTDT) cards are to be software enabled or disabled, the Out-of-Service (OS) lead should be connected to ground. On completion of the task, ground can be removed.	basic-1
Enable a unit		
ENLU I s c u	Enable specified unit. If the unit resides on a disabled shelf or card, the status is output and enable is not performed. If the unit to be enabled is a 500/2500 message waiting telephone, test the unit prior to enabling. When the Trunk Failure Monitor (TFM) cardage is enabled, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit (it stays in the BUSY state).	basic-1

NET — Superloop network



553-0197T NET(CL)

A Superloop card can be installed in a NE UEM or an existing enhanced network shelf of a Meridian SL-1ST, NT, or XT, and requires a minimum of Release 15 software. Release 15 software is not supported on SL-1 N, XN systems.

The Superloop occupies one card slot on the shelf, and will provide four consecutive network loops, starting at loop 0. This means that some card slots used by superloops are not physically occupied by a Superloop card. These unoccupied card slots can be utilized for non-loop network cards, such as SDI or DTI cards.

Superloop cards can be placed to physically cover off the first pair of consecutive loops (left-hand side) or the second pair of the consecutive loops (right-hand side). Software identifies the location of the Superloop card.

If an ENET card is inadvertently placed into an empty consecutive slot of a Superloop, the ENET card does not respond to PS polling. To address the four loops of a superloop, the PS polls the even loop of the slot into which the Superloop card is plugged.

Purpose

The Superloop provides the time and space switching between any two PE terminals, and loop-to-CPU interface through the PS card. It interfaces the network through a 2.048 M bps bit interleaved PCM bus and Signaling (SSD) bus to byte-interleaved DS-30Y protocol used by the IPE.

Features

The Superloop card faceplate includes:

- ◆ Two 24-pin faceplate connectors (J1 and J2), with J2 used to connect the Superloop to an Intelligent Peripheral Equipment (IPE) module, and J1 used to connect a second IPE module to the same Superloop card.

- ◆ One red LED, which when lit steadily indicates that the card switch is in the Dis position. When the switch is set to Enb the MPU does a self test. A passed self test causes the LED to blink three times, remaining on until the software turns it off. A failed test causes the CPU to run a maintenance diagnostic and blink the LED at a one Hz. rate.
- ◆ An Enb/ Dis switch to enable or disable the card.

The Superloop cards are slot addressed in groups of four, starting at loop 0.

About Superloop commands

The following commands are available for Meridian 1 STE, NT, XT, Options 21, 21E, 51, 61, and 71 equipped with Superloop Network cards and Intelligent Peripheral Equipment (IPE).

Superloop commands		
Command	Description	Release
Check status of a Superloop		
STAT (loop)	Give status of one or all Superloops. Response is one of the following: x BUSY, y DSBL = loop enabled with x channels busy and y channels disabled. UNEQ = loop unequipped; not programed in LD 17. CTYF: l1 l2 = loop specified in STAT command is unable to receive data from loops l1, l2, etc. (i.e., continuity test failed in most recent LD 45 loop test). Probable fault in network card. DSBL: NOT RESPONDING = loop disabled. Network card not responding. Card missing, disabled by switch or faulty. DSBL: RESPONDING = loop disabled but the network card responds. Loop may have been disabled due to: — manual request (DISL) — associated Peripheral Signaling card being disabled — overload condition on associated loop For overload conditions are indicated by OVD messages. An attempt to enable a loop which was disabled due to overload may result in a recurrence of the overload condition: the system's service may be impaired for about 2 minutes.	basic-1

Superloop commands (continued)		
Command	Description	Release
Test a Superloop		
XNTT loop	Do self-test of Network card for specified superloop. The Network card must be disabled before the self-test. Response as follows: TEST PASSED XPE0 CONNECTED XPE1 NOT CONNECTED	xpe-15
Print Superloop data		
SUPL (loop)	Print data for all or specified superloop(s). Response as follows: TYPE = XNET XPE_x = c ss es x is module 0 or 1, c is the PEC, ss is the starting IPE segment and es is the ending IPE segment. SLOT = RIGHT or LEFT	xpe-15
Print MISP or Superloop card ID		
IDC loop	Print MISP or superloop card ID.	bri-18
IDC I s c	Print MISP or XPE card ID.	bri-18

Superloop commands (continued)		
Command	Description	Release

Print MISP or Superloop card ID

The Superloop card ID output format is:

```
XNET VERS => xxx
RUNNING FROM yyy
FW IS SANE
  CCCCCCCC-RRSSSS

XPEC0 VERS => xxx
RUNNING FROM yyy
FW IS SANE
  XPECz CCCCCCCC-RRSSSS

XPEC1 VERS => xxx
RUNNING FROM yyy
FW IS SANE
  XPECz CCCCCCCC-RRSSSS
```

where:
xxx = loadware version
yyy = RAM or ROM
z = 2 or 4
CCCCCCCC = order code
RR = release number
SSSS = is the serial number

The MISP card ID output format is:

```
CARDID: xxx. . . x
BASECODE VERSION: xxx. . . x
BRI LINE/TRUNK VERSION: xxx. . . x
BOOTCODE VERSION: xxx. . . x
```

Disable a Superloop

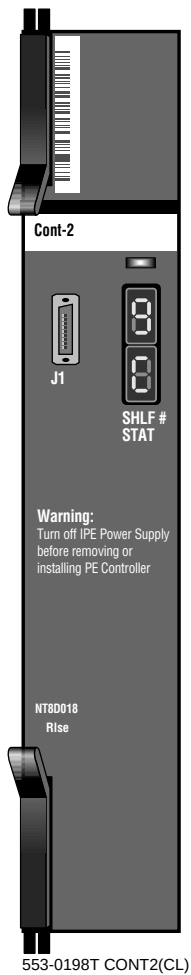
DISL loop	Disable Superloop. System responds by listing XPE modules connected to the superloop and the IPE cards programed for that XPE module. When operation is complete system responds with a line feed and a dot.	basic-1

Superloop commands (continued)		
Command	Description	Release

Enable a Superloop

ENLL loop	Enable network loop. When operation is complete system responds with OK, line feed and a dot. Past releases respond with line feed and a dot. When enabling a network loop serving ISDL cards, the ISDL cards must be individually disabled then re-enabled to ensure that service is restored to digital-telephones. Service may also be restored to digital-telephones by disconnecting, and then reconnecting the telephone line cord. Response as follows: TEST PASSED XPE0 CONNECTED XPEC1 NOT CONNECTED XNET HAS RECEIVED ENABLE MSG PROCESSING TN. . . . XPE0 CARD00 CARD01 OK	basic-1

Cont 2/4 — Peripheral Equipment Controller



553-0198T CONT2(CL)

The Peripheral Equipment Controller (PEC) is available in two versions: the PEC2, which will control up to two Superloop cards and the PEC4 which will handle up to four Superloop cards. Both versions use the same printed circuit board, with the PEC2 having a partially populated board and the PEC4 using a fully assembled board.

The PEC and IPE cards sit on a DS-30X bus, consisting of 16 TX buses for line cards to the PEC, and 16 RX buses for PEC to line cards. Each IPE card position has a unique hard wired slot address so the PEC can determine the card position. Also on this backplane are clock buses and a serial bus used by the CARD LAN.

Purpose

A PEC is used to interface the DS-30Y loop protocol used by the Superloop cards and the DS-30X PE bus protocol used by the IPE cards.

The PEC will recognize and support the signaling format as well as perform the format conversion for signaling messages between the PEC and the following:

- ◆ Digital Line card, [VVVVVVVVSSDDDDDDDDSS] X11 format. V = a voice bit. S = a signaling bit. D = a data bit.
- ◆ Message Waiting Analog Line card, Universal card and E&M Trunk card, [VVVVVVVVSSxxxxxxxxxx] A10 format. x = a blank bit

The PEC also provides up to 64 gain or loss pads, and maintenance functions.

Features

The PEC faceplate includes:

- ◆ a LED, when lit indicating a disabled card
- ◆ a DB9 connector, J1, as a proprietary maintenance port for use with a data scope
- ◆ a two digit alphanumeric display which has two modes
- ◆ normal operation will display alternately the controller number and the port on which the controller clock is tracking
- ◆ self testing, where if a test fails the code is displayed for 0.5 seconds and the test sequence is repeated until all tests pass.

Peripheral Controller faceplate code information

The NT8D01 Controller faceplate has a two-digit hexadecimal display. The display has two modes of operation: normal operation and power on reset self-test.

Normal operation

During normal operation the display alternately shows:

- ◆ The Controller number (1-95) in hexadecimal.
- ◆ The port on which the Controller clock is tracking. The tracking is indicated by the decimal points before and after the digit. The possible tracking modes are:

C0 = Controller tracking to the network connected to port 0.

C1 = Controller tracking to the network connected to port 1.

C2 = Controller tracking to the network connected to port 2.

C3 = Controller tracking to the network connected to port 3.

CF = Controller not tracking any network.

Refer to LD 30 in this guide for the following commands:

CPED — clear Peripheral Controller maintenance displays

RPED — read Peripheral Controller maintenance displays

Self-tests

During the self-tests, the display quickly shows the following:

02 to 09

0A to 0F

10 to 19

1A to 1F

20 to 28

and **EE**

Self-test failures

The Controller card indicates faults by displaying any of the following codes at 0.5 second intervals.

PEC faceplate hex codes

02 to 0F	Integrated circuit A31 failed a test. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
10 to 16	Integrated circuit R72 failed a test. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
17 to 1A	Integrated circuit R71 failed a test. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
1B to 1C	DUART integrated circuit failed a test. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
1D to 23	Integrated circuit R72 failed a test. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
24 to 27	Integrated circuit R71 failed a test. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
28	Checksum error. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
EE	Bus error, exception errors and various other errors. ACTION: Replace the Peripheral Controller following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

About Peripheral Equipment Controller commands

The Peripheral Equipment Controller (PEC) controls the IPE shelf and the superloop. Both the PEC and IPE shelf have separate commands.

PEC commands		
Command	Description	Release
Check status of PEC		
XPEC (x)	Print data for all or specified Controller(s). Displays the IPE segments controlled by the PEC, physical location of the PEC in the column and tier, and the enable/disable status of the PEC.	xpe-15
Test a PEC		
XPCT x	Do self test on Controller x. Response is TEST PASSED Note: The NT8D01 Controller must be disabled before the self-test.	xpe-15
Disable a PEC		
DSXP x	Disable specified PEC. System responds by listing the IPE cards programed for that PEC. When operation is complete system responds with a line feed and a dot.	basic-1
Enable a PEC		
ENXP x (v)	Enable Controller x and associated PE cards, download software version v. Enable all PE cards connected to Controller x and the Controller itself. If version v is not specified, the software downloaded to the Controller is current (c) or latest (l) version as defined in LD 97. Response as follows: TEST PASSED XPEC HAS RECEIVED ENABLE MSG PROCESSING TN. . . CARD00 CARD01 OK	xpe-15

PEC commands (continued)		
Command	Description	Release
Enable a PEC		
ENXP XPC x (v)	Enable Controller x, do not enable the associated PE cards, download software version v. The cards connected to the Controller are not enabled by this command. If version v is not specified, the software downloaded to the Controller is current (c) or latest (l) version as defined in LD 97. Response same as ENXP x (v).	xpe-15
ENXP x (v)	Enable Controller x and associated PE cards, download software version v. Enable all PE cards connected to Controller x and the Controller itself. If version v is not specified, the software downloaded to the Controller is current (c) or latest (l) version as defined in LD 97. Response same as ENXP x (v).	xpe-15

About Intelligent Peripheral Equipment shelf commands

The IPE shelf is controlled by the Peripheral Equipment Controller (PEC).

IPE shelf commands		
Command	Description	Release
Check status of IPE shelf		
STAT I s	Get idle, busy or disabled status of units on specified shelf. Where I = loop and s = shelf. Displays number of units idle, busy, disabled and maintenance busy for the specified shelf.	basic-1
Disable an IPE shelf		
DISS I s	Disable specified shelf. Where I = loop and s = shelf. When operation is complete system responds with a line feed and a dot.	basic-1
Enable an IPE shelf		
ENLS I s	Enable specified shelf. Where I = loop and s = shelf. When operation is complete system responds with a line feed and a dot. If the shelf is disabled by overload, the overload status entry is cleared.	basic-1

Intelligent Peripheral Equipment cards

IPE card segments

An IPE module will house up to 16 analog or digital or trunk cards. Cards are located in the shelf slots 0 to 15.

The IPE is arranged into segments of four cards each, starting with card slot 0, for a total of four segments per IPE UEM. The segments are numbered from 0 to 3.

TNs per IPE Line card

The NT8D02AA Digital Line Card supports 16 voice and 16 data TNs, making a total of 32.

The NT8D09AA Analog Message Waiting Line Card supports 16 voice TNs.

TNs per IPE Trunk card

The NT8D14AA Universal Trunk Card supports 8 TNs.

The NT8D15AA E&M Trunk Card supports 4 TNs.

Maximum TN Density

The maximum TN Density per segment is 128 TNs.

The maximum TN Density per IPE module is 512 TNs.

The maximum TN density assumes all slots are equipped with digital line cards with 16 voice and 16 data TNs provisioned. A typical mix of line and trunk cards yields a nominal density of 64 TNs per segment, and 256 TNs per IPE module.

About Intelligent Peripheral Equipment card commands

Included are telephone set line cards and analog trunk cards. Although Digitone Receivers are housed in PE shelves, they are not included with this section as they function in a different manner than line and trunk cards.

IPE card commands		
Command	Description	Release

Check status of IPE card

STAT I s c	Get status of specified card. Where I = loop, s = shelf and c = card Response example as follows: 00 = UNIT 00 is IDLE - no active call 01 = UNIT 01 is BUSY - active with a call 02 = UNIT 02 is MBSY - maintenance busy 03 = UNIT 03 is DSBL - disabled 04 = UNIT 04 is UNEQ - unequipped 05 = UNIT 05 is UNEQ - unequipped 06 = UNIT 06 is UNEQ - unequipped 07 = UNIT 07 is UNEQ - unequipped	basic-1

Print card ID

IDC I s c	Print MISP or XPE card ID. The MISP card ID output format is: CARDID: xxx. . . x BASECODE VERSION: xxx. . . x BRI LINE/TRUNK VERSION: xxx. . . x BOOTCODE VERSION: xxx. . . x The XPE card ID output format is: XXXX CCCCCCCC-RRSSSS where: XXXX = card type (, XDTR, XUT, etc.) CCCCCCCC = order code RR = release number SSSS = is the serial number	bri-18

IPE card commands (continued)		
Command	Description	Release
Print card ID		
IDCS x	Print card ID for all cards on shelf controlled by Controller x. The card ID for all cards in shelf controlled by Controller x is output. The XPE card ID output format is: XXXX CCCCCCCC-RRSSSS where: XXXX = card type (i.e., XDTR, XUT, etc.) CCCCCCCC = order code RR = release number SSSS = is the serial number	xpe-15
Disable an IPE card		
DISC I s c	Disable specified card. When operation is complete system responds with a line feed and a dot.	basic-1
DISI I s c	Disable specified card when it is idle. When operation is complete system responds with a line feed and a dot.	basic-1
Enable an IPE card		
ENLC I s c	Enable specified card. When operation is complete system responds with a line feed and a dot. If the card resides on a disabled shelf, the status is output and enable is not performed. If card has been disabled by overload, the overload status entry is cleared. When the Trunk Failure Monitor (TFM) cardage is enabled, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit (it stays in the BUSY state).	basic-1

About Intelligent Peripheral Equipment unit commands

IPE unit commands		
Command	Description	Release
Check status of an IPE unit		
STAT I s c u	Get status of specified unit. Response is one of the following: IDLE = Idle MBSY = Maintenance Busy DSBL = Disabled BUSY = in use by Call Processing UNEQ = terminal not defined in software L500 = line is 500/2500 type MBCS = maintenance set BCS = Business Communication Set or Meridian 1 proprietary telephone set TRK = Trunk ATTN = Attendant Console DTR = Digitone Receiver PWR = console power unit Abnormal responses: CARD x DSBL (OVD) = Card x disabled due to overload DND xxx xxx = Do not disturb feature is active SHELF DSBL (OVD) = Shelf disabled due to overload SIG FAULT = Outgoing signal circuitry fault detected on PS card under examination WARNING: CRPTR NOT IN RANGE = TN's data is corrupted. Check BUG messages relating to the TN. BUG messages indicate software faults. See Convert a carded TN, after the next list. Responses caused by invalid equipment choice: EXT DSBL = Extender Disabled LOOP NOT TERM = loop is not a terminal loop LOOP UNEQ = loop is unequipped SHELF UNEQ = shelf is unequipped SHELF UNEQ W/PBX CARDS = no 500 cards on shelf CARD UNEQ = card is unequipped CARD NOT PBX = card is not a PBX card UNIT UNEQ FOR MW = unequipped for Message Waiting PER UNEQ = PS card is unequipped UNIT UNEQ = unit is unequipped	basic-1

IPE unit commands (continued)		
Command	Description	Release
Print set ID		
IDU I s c u	Print set ID. Non-Option 11 format Print ID applies to the following set types: M2006, M2008, M2016, M2216 and M2616. The output format of the set ID (M2008 for example) is: ARIES TN: I s c u TN ID CODE: M2008 NT CODE: NT2K08WC COLOR CODE: xx RLS CODE: xx The color codes are: 03 = black 35 = chameleon ash 93 = dolphin	xpe-15
Convert a carded TN		
CONV tn,	Convert carded TN to I s c u.	xpe-15
CONV I s c u	Convert I s c u to carded TN	xpe-15
TN formats are associated with BUG messages. BUG messages indicate software errors, and are generally beyond the scope of on-site technicians. The second line of some BUG messages has a TN after the colon (:). These TNs appear in many formats, uncarded or normal TN, e.g., 10 0 1 0, carded TN, e.g., 0A04, and carded and uncarded hexadecimal formats. The carded TN is not necessarily a hexadecimal number, as its makeup is dependent upon the density of the PE cards assigned to the loop.		
Disable an IPE unit		
DISS I s	Disable specified shelf. Where I = loop and s = shelf. When operation is complete system responds with a line feed and a dot.	basic-1

IPE unit commands (continued)		
Command	Description	Release
Enable an IPE unit		
ENLS I s	Enable specified shelf. Where I = loop and s = shelf. When operation is complete system responds with a line feed and a dot. If the shelf is disabled by overload, the overload status entry is cleared.	basic-1
List TNs of units on an IPE shelf		
LBSY I s	List TNs of all busy units on specified shelf. Where I = loop and s = shelf	basic-1
LDIS I s	List TNs of all disabled units on specified shelf. Where I = loop and s = shelf	basic-1
LIDL I s	List TNs of all idle units on specified shelf. Where I = loop and s = shelf	basic-1

PS/Periph Sgnl — Peripheral Signaling



The CPU communicates with the terminal equipment through the Peripheral Signaling card. One Peripheral Signaling card is required per network shelf, each controlling up to 16 loops in a 32 loop group. The Peripheral Signaling circuitry is combined with other circuitry on some single group systems.

Purpose

The Peripheral Signaling card has two functions:

- ◆ to provide a signaling interface between the parallel CPU bus and the serial bit stream required by the PE equipment
- ◆ to generate and distribute timing signals for synchronous PCM transmission throughout the system

Function

Signaling a change of state such as Off-Hook or dialing, on a PE card generates a 16 bit MESSIN, setting a flag. During TS 0 the network loop scans each of its terminals for flags and enables the flagged terminal during subsequent TS 0s. The PS enables each network loop in turn during TS 0 and when it detects a MESSIN, locks on and receives the 16 bits. It takes 29 successive TS 0s to gather the MESSIN and generate an interrupt. The CPU recovers the 16 bits by reading the MESSIN Register of the PS card, and this action allows the PS card and the network card to resume scanning.

When the CPU writes into the PS MESSOUT Register, the PS card serially shifts out the 16 bit MESSOUT through the network loop to the PE card.

Timing a 16.384 m Hz oscillator on the PS card is divided down to obtain the 2.048 m Hz clock and 4 k Hz for CODEC synchronization. In a single-group enhanced SL-1, the PS card associated with the active CPU is the master clock source. In multi-group systems, each PS card obtains its master clock from the System Clock Generator through the Inter group Switch card.

Features

The Peripheral Signaling card faceplate includes the following features:

- ◆ a LED, when lit indicating a disabled card
- ◆ an ENB/ DIS switch to hardware enable or disable the card

Group, Loop and Periph Sgnl card relationship

Group	Shelf	PS	Loops
0	0	0	0 to 15
0	1	1	16 to 31
1	0	2	32 to 47
1	1	3	48 to 63
2	0	4	64 to 79
2	1	5	80 to 95
3	0	6	96 to 111
3	1	7	112 to 127
4	0	8	128 to 143
4	1	9	144 to 159

Peripheral Signaling commands

Peripheral Signaling commands		
Command	Description	Release
Check status of PS		
STAT PER x	Get status of PS card x (0 to 9). Possible responses: DSBL: NOT RESPONDING = Peripheral Signaling card is disabled and not responding. The PS is either missing, disabled through its faceplate switch or faulty. Note: If there is a fault in the extender pair for the network shelf, the status of the PS card will also be DSBL: NOT RESPONDING. DSBL: RESPONDING = The PS card is disabled and responding to the CPU. The PS may have been disabled by manual request (DSPS) or the associated extender pair may have been manually disabled. If neither of these conditions exist, the card may have been disabled because of an overload condition on the associated loop. Check for OVD messages appearing in previous TTY output. An attempt to enable a PS card which was disabled because of an overload may result in a recurrence of the	basic-1
Disable PS		
DSPS x	Disable PS card x (0 to 9).	basic-1
Enable PS		
ENPS x	Enable PS card x (0 or 1).	basic-1
Stop test		
END	Stop current operation or test.	basic-1

NPR Message makeup

The NPR Messages fall into the three following categories:

- ◆ Interactive messages that report non-admissible user input.
- ◆ Peripheral Equipment messages that report on the condition of the PE.
- ◆ Network messages that report on the condition of the equipment located in the network shelves.

Using the NPR message table to clear faults

To clear most network and peripheral faults, the NPR action suggests that you use the LD 32 overlays found in this chapter. A few NPR actions refer you to overlay loads located outside this chapter.

NPR Messages

NPR0000	LD 32 program identifier. ACTION: The NPR program is loaded and ready for you to enter commands.
NPR0001	An illegal character is in the command. ACTION: Check to make sure your data is correct and re-enter the command.
NPR0002	Wrong number of input parameters for command. ACTION: Check to make sure your data is correct and re-enter the command.
NPR0003	An illegal command. The command cannot be used in this situation. ACTION: Ensure that this is the command you wanted to use.
NPR0004	A loop or group parameter is out-of-range. Loops on multi-group systems range from 0 to 159. Loops on single group systems range from 0 to 31. ACTION: Check to make sure your data is correct and re-enter the command.
NPR0005	A shelf parameter is out-of-range. Units 0 to 3 only are allowed. ACTION: Check to make sure your data is correct and re-enter the command. Refer to the <i>Network card</i> in this guide.
NPR0006	A card parameter is out-of-range. Cards are numbered from 1 to 10 on PE shelves. IPE shelf cards are numbered from 0 to 15. ACTION: Check to make sure your data is correct and re-enter the command.
NPR0007	A unit parameter is out-of-range. Single density line units are 0 to 3. Double density line units are 0 to 7. Quad density line units are 0 to 15. ACTION: Check to make sure your data is correct and re-enter the command.

- NPR0008 A command is valid from a Meridian 1 proprietary telephone set (BCS) only and cannot outpulse from a TTY.
ACTION: Use a Meridian 1 proprietary telephone set (BCS). Refer to the *You should know this* chapter in this guide.
- NPR0009 The unit requested is not a trunk.
ACTION: Ensure that this is the command you wanted to use. Enter the STAT l s c command.
- NPR0010 A command is ignored as an active input device would be disabled.
ACTION: Abort the program and enter the command again from the TTY.
- NPR0011 A requested card is no longer busy and has been disabled. This is an indication that the DISI L S C command has been completed.
ACTION: Information only, no action required.
- NPR0012 A requested trunk is busy.
ACTION: Try the command later.
- NPR0013 A serious data error has been detected.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- NPR0014 The seizure of a RAN or AIOD trunk is not allowed by this program.
ACTION: Refer to the “TRK — LD 36, 41 Trunk Diagnostic” on page 1093 in this guide and use LD 36 TRK command.
- NPR0015
1. Specified loop not responding.
ACTION: Ensure that the card faceplate switch is in the Enb position.
If the fault persists, start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
 2. A network, or conference or tone and digit switch card(s) may be faulty.
ACTION: Use STAT l to get the status of the network loops, STAT L of LD 34 for TDS loops and STAT L of LD 38 for conference loops. Use ENLL l to enable network loops, ENLL L of LD 34 for TDS loops and ENLL L of LD 38 for conference loops. Run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 for tone and digit switch help or the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 in this guide for conference help.
 3. The CE EXT may be faulty.
ACTION: Check and replace the Segmented Bus Extender card or the 3 Port Extender card following the steps in the *Hardware Replacement* (553-3001-520), or the cable between the two extenders associated with the standby CPU and the network shelf, where the IGS card indicated in the message is located. Run TEST in LD 45 to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

4. Other network, or conference or Tone and Digit switch (TDS) cards on the same shelf, may be faulty.

ACTION: Use STAT l to get the status of the network loops, STAT L of LD 34 for TDS loops and STAT L of LD 38 for conference loops. Use ENLL l 32 to enable network loops, ENLL L of LD 34 for TDS loops and ENLL L of LD 38 for conference loops. Run TEST in LD 45 to verify that the fault is cleared. If the loop does not enable and the fault does not clear, replace the card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 for Tone and Digit switch help or the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 in this guide for conference help.

NPR0016 Loop already enabled.

ACTION: Information only, no action required.

NPR0017 Specified loop is a tone and digit switch.

ACTION: Refer to the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 in this guide and use the LD 34 commands.

NPR0018 A DISI command is still pending. Only one request is allowed at a time.

ACTION: Enter END to cancel the last DISI and enter a new DISI command.

NPR0019 Carrier Remote superloop (LCI) did not respond to the request to disable/enable the RTE superloop.

ACTION: Ensure that the LCI is installed and that the faceplate switch is in the enabled position.

NPR0020 A specified Peripheral Signaling card is out-of-range. Cards 1 to 10 only, are allowed.

ACTION: Check to make sure your data is correct and re-enter the command.

NPR0021 The specified Peripheral Signaling card did not respond.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. Check the enable switch on the faceplate of the Peripheral Signaling card.

ACTION: The switch should be in the ENB position.

2. If the fault still exists then suspect the Peripheral Signaling card.

ACTION: Use STAT PER x to get the status of the PS cards. Use ENPS x to enable the PS card and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.

3. Suspect a CPU, or CMA, card which connect the two CPUs.

ACTION: Use STAT CPU in LD 35 to check the status of the CPU or FN card. Use TCPU in LD 35 to test the idle CPU or FN card. Use STAT CMA x in LD 35 to check the CMA card. If a CPU or FN shows faulty or if the CMAs do not enable, replace the appropriate card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- NPR0022 The Peripheral Signaling card is already enabled. No action is required.
ACTION: Ensure that this is the command you wanted to use.
- NPR0023 The clock on a specified Peripheral Signaling card is not responding.
ACTION: Refer to the action for code NPR0021 in this chapter.
- NPR0024 The specified Peripheral Signaling card is being used by the active CPU for a clock.
ACTION: Caution: *Use of the following command during heavy traffic periods can cause the system to reload.* Use SCPU in LD 35 to switch the CPU, then return to LD 32 and try the command again.
- NPR0025
1. It cannot be determined which CPU is active.
ACTION: Use STAT CPU in LD 35 to check the status of the CPU or FN card. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
 2. Indicates either a fault on bus 0.
ACTION: If the CPU and CMA cards are not faulty, replace the backplane following the steps in the *Hardware Replacement* (553-3001-520).
 3. A faulty CMA which must be repaired before continuing.
ACTION: Use STAT CMA x in LD 35 to check the CMA card. If the CMA card does not enable, replace it following the steps in the *Hardware Replacement* (553-3001-520) that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- NPR0026 n An interrupt fault is present on Peripheral Signaling card n. If there is no card identified, the system cannot determine the fault source. No PS cards may be enabled while this fault persists. Probable fault causes are as follows:
- Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
1. Peripheral Signaling card(s) (card n, if specified) may be faulty.
 2. Use STAT PER x to get the status of the PS cards. Use ENPS x to enable the PS card and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
 3. An active MISC card may be faulty.
ACTION: Use STAT CPU in LD 35 to check status of MISC or IF card when this card is not active. *The use of the SCPU command during heavy traffic periods can cause the system to reload.* Use SCPU in LD 35 to switch CPU. Use TCPU in LD 35 to verify that the fault is cleared. If the MISC or IF card does not enable and the fault does not clear, replace the MISC or IF card following the steps in the *Hardware Replacement* (553-3001-520).

4. The CE extender may be faulty.

ACTION: Use STAT SBE in LD 35 to check the Segmented Bus Extender cards and 3 Port Extender cards. Enable any disabled cards and run TEST in LD 45 to verify that the fault is cleared. If the SBE or 3PE cards do not enable and the fault does not clear, replace the card(s) following the steps in the *Hardware Replacement* (553-3001-520). If the cards are good and the fault does not clear, replace the cable between the two extenders. If you need help with commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

NPR0027 A fault in the outgoing signaling on the Peripheral Signaling card is being examined.

ACTION: Use STAT PER x to get the status of the PS cards. Use ENPS x to enable the PS card and run TEST in LD 45 to verify that the fault is cleared. If the PS card does not enable and the fault does not clear, replace the PS card(s) following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.

NPR0028 The unit to be tested must be a PBX set with a Message Waiting Lamp.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

NPR0029 The unit specified is either maintenance busy or busy.

ACTION: Try the command later.

NPR0030 The unit to be tested is unequipped. You are trying to test a unit that does not exist in the database.

ACTION: Ensure that this is the command you wanted to use. If this is the correct command, refer to the *X11 Administration* (553-3001-311) to program the unit.

NPR0031 loop 1. The requested PS card cannot be disabled until all associated loops have been disabled.

ACTION: Use DISL to disable all loops on the same shelf as the PS card and then re-enter the command. If you need help with the commands or system responses refer to the “*TDS — LD 34 Checking TDS, DTR and Tone Detectors*” on page 1025 for tone and digit switch help or the “CNF — LD 38 Conference Circuit Diagnostic” on page 339 in this guide for conference help.

2. Loop is a remote loop. ENLL and DISL not allowed.

ACTION: Use LD 53 (2.0 Mb/s RPE) to bring loop L up and down.

NPR0032 The card does not respond.

ACTION: Try again. If the card still does not respond, use the STAT l s c command to obtain the status.

NPR0036 Peripheral Signaling card is already disabled.

ACTION: Information only, no action required.

NPR0037 TNTRANS FAILED for M3900 TN and UNIT POINTER IS NIL

NPR0038 Unit specified is not M3900 downloadable.

NPR0039 There is a response timeout from the M3900 set.

NPR0040 The set unit type does not match the version type in the set.

NPR0041 Unit has already the latest software.

NPR0042 Unit is not idle or system application is active.

NPR0043 Invalid parameters for FDLS command.

NPR0044	No XPEC in the system.
NPR0045	M3900 invalid state.
NPR0046	Midnight download initiated already. Cannot initiate another one.
NPR0050	That command is only valid for superloops. ACTION: Ensure that this is the command you wanted to use.
NPR0051	That command is not valid for superloops. ACTION: Ensure that this is the command you wanted to use.
NPR0070	Specified equipment could not be enabled due to the extender being disabled. ACTION: Use STAT SBE in LD 35 to check the Segmented Bus Extender cards and the 3 Port Extender cards. Enable any disabled cards and run TEST in LD 45 to verify that the fault is cleared. If the SBE or 3PE cards do not enable and the fault does not clear, replace the card(s) following the steps in the <i>Hardware Replacement</i> (553-3001-520). If the cards are good and the fault does not clear, replace the cable between the two extenders. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
NPR0080	The Peripheral Controller number is out-of-range. Peripheral Controllers range from 1 to 95. ACTION: Check to make sure your data is correct and re-enter the command.
NPR0081	The Peripheral Controller requested is not defined. You are trying to test a unit that does not exist in the data base. ACTION: Ensure that this is the command you wanted to use.
NPR0082	The Peripheral Controller is already enabled. ACTION: Ensure that this is the command you wanted to use.
NPR0083	An enabled Network Card that is connected to the Controller cannot be found. ACTION: Use ENLL to enable one or both of the Network Cards and try again.
NPR0084	A message cannot be sent to a Network Card. Wait and retry the command later. ACTION: Try the command later. If this error occurs again check the Network Card and the associated cabling.
NPR0085	This command is not valid for Network/DTR Card (NT8D18). ACTION: Use the DISL or ENLL commands instead.
NPR0086	Superloop numbers must be a multiple of 4, starting at loop 0. ACTION: Check to make sure your data is correct and re-enter the command.
NPR0087	The NT8D PE shelf is either unoccupied by superloops or contains incorrect superloop numbers. There is a possible data corruption in the Controller block. ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
NPR0209	1. A nonexistent customer. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

2. The Command, CMIN ALL, will clear all minor alarms.

ACTION: This action is optional. If attendant minor alarms are an annoyance, refer to the *X11 Administration* (553-3001-311). Use LD 17 prompt ALRM and input NO.

NPR0210 A TTR unit request is out-of-range (SD=0, DD=0,2, QD=0,2,4,6).

ACTION: Check to make sure your data is correct and re-enter the command.

NPR0300 l s c (u)

The specified loop, shelf, card and/or unit cannot be tested because it is disabled.

ACTION: Use ENLL, ENLS, ENLC and/or ENLU to enable the card(s) and try again.

NPR0301 loop Loop is a Digital Trunk Interface or Primary Rate Interface; use LD 60.

ACTION: Information only, no action required.

NPR0302 Conference loop. Use LD 38.

ACTION: Information only, no action required.

NPR0303 An unrecognizable status code has been sent. Undefined Link/DCHI state.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 60 and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NPR0310 Receive micro of ISDL memory fault.

ACTION: Try the test again. If the results are the same, use DISC and ENLC to replace the card.

NPR0311 Receive micro of ISDL lost a message.

ACTION: Try the test again.

NPR0314 Transmit micro of ISDL memory fault.

ACTION: Try the test again. If the results are the same, use DISC and ENLC to replace the card.

NPR0315 Transmit micro of ISDL output queue problem lost messages.

ACTION: Try the test again.

NPR0317 ISDL card reset.

ACTION: Information only, no action required.

NPR0318 No response from ISDL card.

ACTION: Try the test again. If the results are the same, use DISC and ENLC to replace the card.

NPR0319 All units on the card are enabled. A self test of the ISDL card is not performed as one or more units on the ISDL card are busy.

ACTION: If a self-test is mandatory, disable the card first.

NPR0320 This command is only allowed for the ISDL card.

ACTION: Ensure that this is the command you wanted to use.

NPR0321 This command is only allowed for M3000 sets.

ACTION: Ensure that this is the command you wanted to use.

- NPR0325 A card self test cannot be performed, because one or more units are busy.
ACTION: Try again later.
- NPR0326 There is no response from the card.
ACTION: Try the test again. If the results are the same, use DISC and ENLC to replace the card. Release 19.25 software sends an NPR0318 and fully enables all ports on the card.
- NPR0327 There is no response from the Network Card.
ACTION: Retry the command several times. If the problem persists, use STAT NWK l to get the status of the Network card. If the card does not respond and the fault does not clear, replace the Network card or the associated cabling following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared.
- NPR0328 The superloop must be disabled before using that command.
ACTION: Use DISL l to disable the superloop and re-enter the command.
- NPR0329 The card self test failed. The card was not enabled.
ACTION: Try to enable the card again, using ENLC. If the problem persists, use DISC and ENLC to replace the card.
- NPR0330 No acknowledgment returned for a message sent to the Network. Card/Controller (NT8D04/NT8D01). The command has been terminated.
ACTION: Retry the command later. If the problem persists, contact your technical support group.
- NPR0331 Time-out waiting for Peripheral Software Download (PSDL) to complete the download function.
ACTION: Check the maintenance terminal for SDL messages. If messages are present refer to the “SDL — Peripheral Software Download” on page 915 in this guide.
- NPR0332 Specified Peripheral Software (PSW) version number is out-of-range (1-99).
ACTION: Check to make sure your data is correct and re-enter the command.
- NPR0333 Specified Peripheral Software (PSW) version (1-99) was not found on the mass storage device.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 command PRT PSWV to determine the available software versions.
- NPR0334 There is a Peripheral Software Download (PSDL) failure.
ACTION: Try again. If the problem persists, contact your technical support group.
- NPR0500 dn l s c u
- The unit has failed the PBXT test.
- Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
1. There are several set states that would prevent successful completion of the test. For example, ringing or set is Off-Hook.
- ACTION:** Try again. If the problem persists, contact your technical support group.
2. Check for ERR0500 messages that indicate the same unit.
- ACTION:** Refer to the “ERR — Error Monitor” on page 409 in this guide.

3. ERR0500 messages do not indicate this unit to be in trouble.

ACTION: Try the test again.

4. If the fault indicates only one unit, suspect a faulty lamp in the telephone.

ACTION: Replace the telephone.

5. If all units are on one card, suspect a faulty line card.

ACTION: Use DISC and ENLC to replace card.

NPR0501 The telephone ID cannot be printed because the TN is not equipped, or the TN is not a voice TN on a Meridian Modular set.

ACTION: Ensure that this is the command you wanted to use.

NPR0502 No call registers available for IDU.

ACTION: Try again later.

NPR0503 The response timeout from IDU is 2 seconds.

ACTION: Try again. If the problem persists, contact your technical support group.

NPR0504 This Command is not allowed for Conference/TDS/MFS cards.

ACTION: Determine if the hardware you are testing is a Conference/TDS/MFS card and refer to those chapters in this guide for commands.

NPR0505 The Superloop Network or the Controller card may be faulty.

ACTION: Use XNTT 1 to self-test the Superloop card. Use XPCT x to self-test the Controller card. If the tests do not pass, replace the Superloop or Controller card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If the problem persists, check the associated cable and repeat the command.

NPR0506 The Extended shelf is not equipped.

ACTION: Ensure that this is the command you wanted to use.

NPR0508 The APNSS virtual loops cannot be disabled.

ACTION: Refer to the *DPNSS1: Maintenance Guide* (553-3921-500).

NPR0509 The DSL configuration download failed.

ACTION: Refer to the *PRA/DCHI Maintenance Guide*.

NPR0510 The DSL is already enabled.

ACTION: Ensure that this is the command you wanted to use.

NPR0511 This shelf contains at least one BRI line card.

ACTION: You must wait 45 seconds before enabling the shelf or loop.

NPR0512 A command is in progress. No input is allowed except aborting.

ACTION: Wait until the command action is finished or abort the command.

NPR0514 The software failed to enable the unit.

ACTION: Try again. If the problem persists, try replacing the card and if this fails, contact your technical support group.

NPR0515 The BRI line card did not send an activation acknowledgment for the DSL(s).

ACTION: Try again. If the problem persists, contact your technical support group.

- NPR0516 The BRI line card self test failed to be invoked.
ACTION: Try again. If the problem persists, contact your technical support group.
- NPR0517 The line card self test failed. The line card enabling sequence is aborted.
ACTION: Try to enable the card again, using ENLC. If the problem persists, use DISC and ENLC to replace card.
- NPR0519 There is no response from the ISDN BRI line card.
ACTION: Try the test again. If the results are the same use DISC and ENLC to replace card.
- NPR0522 The MISP is not responding. Aborting command.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0533 The MISP application did not acknowledge the requested “Line Card State Change”.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0534 The MISP application did not acknowledge the requested “DSL State Change”.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0551 Invalid message or invalid environment in which to send the message to the MISP.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0555 The expedited output queue is full.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0556 The MISP output buffer is not available, possibly because the MISP has not read off the previous output message yet.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0561 Only valid for MISP and superloops.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0562 Cannot send a message to the line card.
ACTION: Try again. If the problem persists, try replacing the card and if that fails, contact your technical support group.
- NPR0570 Cannot read the applications' information blocks from the MISP card.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0600 The Peripheral Signaling card cannot be disabled if DTCS is enabled.
ACTION: Refer to the *DPNSS1: Maintenance Guide* (553-3921-500).

- NPR0601 A non-terminal loop TN, cannot be converted.
ACTION: This command is intended for terminal loops only.
- NPR0605 That application is not configured on this MISP.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0606 The DSL needs to be in RELEASED state.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0607 The DSL needs to be in ESTABLISHED state.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0608 The DSL needs to be in TEST mode.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0609 The DSL needs to be in REMOTE LOOPBACK mode.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0610 The DSL needs to be ENABLED.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0611 The DSL configuration is not a TIE trunk type, nor a Meridian 1 interface type.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0612 The Application on MISP is disabled.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0620 This is not a BRI Line Card.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0621 This not a valid Trunk DSL.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0622 The MISP loop is disabled.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0623 The Trunk DSL is enabled but released (is in code already).
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0624 A command in LD 32 is pending completion.
ACTION: Wait for the command to finish, or enter two asterisks (**) to abort the overlay completely.
- NPR0626 An invalid case value for example, INTPM, PARPM.
ACTION: Contact your technical support group.
- NPR0627 Failed to get the Interface Type.
ACTION: Contact your technical support group.

- NPR0628 Failed to get the Interface TN.
ACTION: Contact your technical support group.
- NPR0629 MPH OVL PTR is NIL.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0630 The protected loop PTR is NIL.
ACTION: Contact your technical support group.
- NPR0631 MPH NET IFC PTR is NIL.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0632 The USID number is out-of-range (enter 0-15).
ACTION: Check to make sure your data is correct and re-enter the command.
- NPR0633 The B-channel number is out-of-range (enter 1 or 2).
ACTION: Check to make sure your data is correct and re-enter the command.
- NPR0634 The protected card PTR is NIL.
ACTION: Contact your technical support group.
- NPR0635 This must be a BRI line card.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0636 The protected line PTR is NIL.
ACTION: Contact your technical support group.
- NPR0637 That must be a digital telephone.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NPR0638 FUNC DATA PTR returned NIL PTR.
ACTION: Contact your technical support group.
- NPR0639 BRI USID MAPPTR is NIL.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0640 That must be an MISP loop.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0641 An invalid MISP TN.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0642 BRI USID TSPTTR is NIL.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0643 Invalid MPH terminal type.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

- NPR0644 That must be a superloop.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NPR0645 An invalid channel type.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NPR0646 TOD2SEC Time-out waiting for message.
ACTION: Re-enter the command.
- NPR0663 Cannot enable or disable this ISDN BRI line card or DSL because the line card is not associated with a BRSC or MISP.
ACTION: Refer to the *PRA/DCHI Maintenance Guide*.
- NPR0664 BRSC Cards do not have units associated with them.
ACTION: Refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0665 This command is not valid on phantom loops, since phantom loops do not physically exist. When phantom TNs are used the loop cards are not installed. Therefore you cannot test hardware that is not in the system.
ACTION: For further information, refer to the *Software feature guide, Phantom TNs*.
- NPR0666 The loop must be configured as a MISP.
ACTION: Re-enter the command with a valid MISP loop number.
- NPR0667 A MISP basecode must be enabled.
ACTION: Enable the MISP card using the ENLL 111 command. If you need help with commands or system responses refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0668 The BRIE Application is not configured on the MISP.
ACTION: Re-enter the command with a MISP loop that has the BRIE application configured. If you need help with commands or system responses refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0669 There was no downloadable Interface defined on the MISP.
ACTION: Configure an UIPE Trunk DSL in Overlay 27 and then try the command again. If you need help with commands or system responses refer to the *X11 Maintenance* (553-3001-511) and the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NPR0670 All Interfaces are “active”; there are enabled DSLs of each Interface type. An Interface must be “inactive” before the data can be downloaded.
ACTION: Disable the corresponding DSLs, or the BRIE application by using the DISL BRIE 111 command. Enter the command again.
- NPR0671 An invalid selection.
ACTION: Check to make sure your data is correct and if applicable, re-enter one of the choices offered.

- NPR0672 Interface is “active”; there are enabled DSLs of this Interface type. An Interface must be “inactive” before the data can be downloaded.
ACTION: Disable the corresponding DSLs, or the BRIE application by the DISL BRIE 111 command. Enter the command again.
- NPR0673 A UIPE BRI Trunk DSL/Line Card is expected for this command.
ACTION: Re-enter the command with UIPE BRI Trunk DSL/Line Card TN.
- NPR0674 The specified unit is out-of-service, or may be a console power unit. It cannot be enabled or disabled.
ACTION: To change a console power unit, you must remove it with an OUT command and re-enter it with a NEW command.
- NPR0675 DSL is not of the correct application type or the line card does not have a DSL of the correct application type for this command.
ACTION: Check the configuration in LD 27 and re-enter the command with a DSL/Linecard of the correct application
- NPR0678 DSL does not have GF capability
ACTION: Contact your technical support group.
- NPR0679 Invalid call reference number.
ACTION: Contact your technical support group.
- NPR0680 New MFC/MFE/MFK5/MFK6 units on Card 0 can only be enabled by ENLX in LD 34.
ACTION: To enable these units, go into LD 34 and perform ENLX 0.
- NPR0681 EIMC/MXC related maintenance commands are not allowed from overlay 32.
ACTION: Use the Mobility Mat platform.
- NPR0686 XCMC hardware pack self-test failed.
ACTION: Replace the XCMC hardware pack.
- NPR0687 Cannot enable a DMSX superloop if FWA package is restricted.
- NPR0688 Device locked by the Russian Call Monitoring feature. The command was not executed.
ACTION: Contact your technical support group.
- NPR0705 IDC/IDU is busy with another request.
ACTION: Contact your technical support group. 🏃

NWS — LD 30 Network Signaling Diagnostic

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter.

How the NWS works

LD 30 is used to test network loops. It may be run automatically in the background and daily routines, or loaded manually to enter commands. NWS messages report network signaling problems.

NWS Runs as background or daily routine

When invoked automatically by the system, the program performs the following tests:

- ◆ tests the network memory of each enabled network card
- ◆ tests the continuity of the speech path to each PE shelf (for enabled loops only)
- ◆ tests the signaling channel to each line or trunk card (on enabled loops only)
- ◆ tests the signaling channel through each Integrated Services Digital Line Card (ISDLC) to each digital-telephone or data TN
- ◆ switches the system clocks

Digital telephones that pass the signaling test have their date and time updated to match the system clock.

Any Meridian 1 proprietary set or line card that fails the signaling test may be disabled by this program. Use LD 32 to re-enable them.

If two or more PE cards are disabled on a loop, an NWS0101 message is printed without the associated NWS0301 messages to indicate card failures. However, the shelves that failed are identified by a NWS0201 message. Therefore, the state of the individual cards can be determined by manually re-testing using the SHLF command.

If NWS0301 indicates a failure of the Peripheral buffer or Controller card, the message may not be correct. Therefore the card should be re-tested using the SHLF command.

This program does not test attendant consoles or Automatically Identified Outward Dialing (AIOD) trunks. Equipment which has been disabled due to overload or manual request is not tested.

NWS Run manually

When manually invoked the program may be used for the following:

- ◆ to conduct a complete test, as when the program is invoked automatically, except for switching the clocks
- ◆ to conduct a test on a specific PE shelf
- ◆ to get the enable/disable status of network loops
- ◆ to enable or disable network loops
- ◆ to clear alarm indications and the maintenance display
- ◆ to download peripheral software on superloops
- ◆ to clear contents of the Controller maintenance display
- ◆ to read contents of the Controller maintenance display

Note: For systems running Release 15 and later, signaling tests are performed in LD 30. Including LD 30 is recommended if LD 45 is running as a background or midnight routine. By including LD 30, fault isolation improves as LD 30 detects network memory faults before LD 45 runs continuity tests.

About the NWS commands

The following commands apply to both regular networks and superloops.

NWS common commands		
Command	Description	Release
Clear display - alarms		
CDSP	Clear the maintenance display on active CPU to 00 or blank.	basic-1
CMAJ	Clear major alarm, reset power fail transfer and clear power fault alarm.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
Check status of loop		
STAT	Gives status of network circuits indicating how many are enabled and how many are disabled. Response is: x ENBL, y DSBL	basic-1

NWS common commands (continued)

Command	Description	Release
Clear display - alarms		
STAT loop	Get status of a network loop. Response is one of the following: 1. UNEQ = loop is unequipped. 2. DSBL: RESPONDING = loop is disabled and the Network card is responding. The loop may have been disabled because of: a. DISL command b. associated Peripheral Signaling card is disabled c. overload condition on associated loop. In this case an OVD message is output. An attempt to enable the loop may result in a recurrence of the overload. 3. DSBL: NOT RESPONDING = loop is disabled and the Network card is not responding. The card is missing, disabled by the faceplate switch or is faulty. 4. x BUSY, y DSBL = loop is enabled with x channels busy, y channels disabled. 5. CTYF l1, l2... = loop specified in the STAT command cannot receive speech from one or more loops (l1, l2). This usually indicates the LD 30 continuity test failed. Probable fault is the network card. 6. FAULTY HW: OVERLOAD = loop is identified as faulty by the LOIP function. Refer to the FHW chapter. 7. FAULTY HW: NO RESPONSE = loop is identified as faulty by the LRIP function. Refer to the FHW chapter.	basic-1
Disable a loop		
DISL loop	Disable network loop. When operation is complete system responds with a line feed and a dot. All calls in progress on this loop are disconnected. Peripheral cards remain software enabled and no LEDs are lit.	basic-1

NWS common commands (continued)		
Command	Description	Release
Enable a loop		
ENLL loop	Enable network loop. Enables the network, performs a network memory test and tests continuity and signaling to all shelves on the loop. If it passes the test, OK is output. This does not re-enable any disabled cards on the loop. Use LD32 ENLS or ENXP commands or enable each card individually. When enabling a network loop serving ISDL cards, the ISDL cards must be individually disabled, then re-enabled to ensure that service is restored to digital telephones. Service may also be restored to digital telephones by disconnecting and then reconnecting the telephone's line cord.	basic-1
List disabled/enabled loop		
LDIS	List disabled loops. Response is: l1, l2, ln — l is a disabled loop, or NONE — if no cards are disabled.	basic-1
LENL	List enabled loops. Response is: l1, l2, ln — l is an enabled loop, or NONE — if no cards are enabled.	basic-1
Test loop and memory		
LOOP loop, ALL	Test network memory on one or all loops. Performs a network memory test, continuity test and signaling test on the specified loop, which can be either a value from 0 to 159 or ALL. If ALL is specified, every loop currently enabled is tested. All shelves on each loop are tested (except for attendant consoles). If no errors are detected, OK is output.	basic-1
SHLF l s	Test loop l, shelf s.	basic-1
END	Abort current test. If no test is in progress, message NWS0002 is output.	basic-1

About regular network commands

The following commands apply to non superloop networks:

Regular network commands		
Command	Description	Release
Test time switch memory		
TTSM loop x y z	Test Time Switch Memory (TSM) of a loop. Tests the Time Switch Memory (TSM) of the network card, where: loop = the network loop that may have a faulty TSM. x = the network loop of the transmitting party. y = the junctor used on the transmitting side of the call. Its value has a range of 0 to 7, unless the two loops are in the same group, in which case the junctor value to be entered is 15. z = the timeslot used on the transmitting side of the call. Its value has a range of 2 to 31. Note: The values normally used in this command are the same values that appeared in the ERR3036 or ERR3037 message during call processing.	basic-1
Test time switch memory		
TTWI loop x y z	Test TSM when the timeslot junctor is idle. The command is usually used if error message NWS0800 is output in response to TTSM. loop = the network loop that may have a faulty TSM. x = the loop ID (range 0 to 159) of the transmitting party. y = the junctor used on the transmitting side of the call. Its value has a range of 0 to 7, unless the two loops are in the same group, in which case the junctor value to be entered is 15. z = the timeslot (2-31) used on the transmitting side of the call. Note: This command waits for timeslot z and junctor y to become available and will then execute the command.	basic-1

About superloop commands

The following commands are used with Controllers (NT8D01) and Network Cards (NT8D04 or NT8D18):

Superloop commands		
Command	Description	Release
Enable superloop		
ENLL loop (v)	Enable superloop, download peripheral software version v. If version v is not specified, the software downloaded is current (c) or latest (l) version as defined in LD 97.	xpe-15
Clear controller display		
CPED l s	Clear contents of Controller Maintenance Display on loop l shelf s. This also clears the buffer printed with the command RPED.	xpe-15
Read controller display		
RPED l s	Read contents of the Controller Maintenance Display. This command lists the current and last 15 clock tracking states of the NT8D01 Controller. The tracking is indicated on the Controller maintenance display by decimal points before and after the digit. The possible tracking modes are: C0 = Controller is tracking to the network connected to port 0. C1 = Controller is tracking to the network connected to port 1. C2 = Controller is tracking to the network connected to port 2. C3 = Controller is tracking to the network connected to port 3. CF = Controller is not tracking any network.	xpe-15
Test card or unit		
UNTT l s c (u)	Do a signaling test on specified card or unit controlled or connected to this superloops.	xpe-15

NWS messages

- NWS0000 Program 30 has been loaded.
ACTION: The NWS program is loaded and ready for you to enter commands.
- NWS0002 An invalid command was entered.
ACTION: Ensure that this is the command you wanted to use.
- NWS0003 The command contained an invalid parameter.
Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
 1. The loop, shelf or customer number is out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.
 2. The loop or shelf specified is disabled.
ACTION: Check to ensure that the faceplate switch is in the re-enter position on network loop and peripheral buffer cards. Use ENLL 1 and ENLS 1 s in LD 32 to enable loops and shelves or controllers.
 3. The loop or shelf specified is unequipped.
ACTION: If this is the correct command, refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check the configuration record for loop programming. Check to make sure your data is correct and re-enter the command.
 4. The customer number specified does not exist.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NWS0004 Yellow alarm is set or a loop is being audited.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500) and use LD 60.
- NWS0005 There is no free channel for a signaling test.
ACTION: Try the command later.
- NWS0006 A loop is being audited or there is no channel equipped.
ACTION: Try the command later.
- NWS0007 Attempted to enter a command other than END, while the previous command was still being executed.
ACTION: Enter END to abort the current command.
- NWS0008 A serious data error has been detected.
ACTION: Contact your technical support group.
- NWS0009 Start at the first or most likely cause and refer down the list until the fault is cleared. If the fault does not clear, call your technical support group. An ENLL has been issued to:
 1. An already enabled network loop.
ACTION: Ensure that this is the command you wanted to use.

2. A network loop associated with a disabled PS card. The command is ignored by the system.

ACTION: If the Peripheral Signaling card is disabled, use ENLPS in LD 32 to re-enable the PS card. If the PS card does not enable, replace the PS card following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

NWS0010 No response from Network card or no acknowledgment returned for previous message sent to the Network or Controller card (NT8D04/NT8D01).

ACTION: Try the command several times. If you get the same results, replace the listed cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, see if this message reappears. If it does reappear replace another card.

NWS0013 A serious data error has been detected by NWS.

ACTION: Contact your technical support group.

NWS0019 Carrier Remote superloop (LCI) did not respond to the request to disable/enable the RTE superloop.

ACTION: Ensure that the LCI is installed and that the faceplate switch is in the enabled position.

NWS0020 During execution of the signaling test, an input buffer overflow was detected and some input messages were lost.

ACTION: Check for OVD messages, and if present, go to the “OVD — LD 77 Locating Overloads” on page 801 in this guide and follow the action for that OVD message. If there is no OVD message, the signaling test was terminated with no fault implied by this message and you may want to retry this test later.

NWS0023 loop During the execution of the signaling test, a large number of line faults were detected, but storing the fault information required too much memory space. Testing of the PS card associated with this **loop** was terminated.

ACTION: Beginning with the specified loop, use LOOP x to separately test each of the remaining loops located on the same shelf as the PS card. Replace the cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card. This message does not necessarily imply a fault on the specified loop.

NWS0024 The Network Card fault list is full.

ACTION: Use DISL 1 in LD 32 to disable and ENLL 1 to enable the network card.

NWS0025 A serious data error has been detected by Network Card fault list management routines. The test is terminated.

ACTION: Contact your technical support group.

NWS0030 The clock switching function was not performed as it could not be determined which clock was active. If you do not have DTI hardware, ignore this message.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The QPC0411 SCG may be faulty.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500), and use LD 60.

2. The CE EXT connecting the active CPU to the network shelf may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

3. The cables connecting the above cards via the Junctor may be faulty.

ACTION: Replace the cables, one at a time, between the IGS cards and the junctor board following the steps in the *Hardware Replacement* (553-3001-520). After replacing each cable run the test again to verify that the fault is cleared.

NWS0031

1. The clock switching function was not performed. One or both of the QPC0411 SCG cards are disabled. No fault is implied.

ACTION: Re-enable the SCG using ENL SCG x in LD 39. If you need help with the commands or system responses refer to the “IGS — LD 39 Intergroup Switch and System Clock” on page 545 in this guide.

2. Receiving NWS0031 error messages during midnight routines.

ACTION: Check to see if the package 75 (DTI) software is equipped, but no hardware is installed.

NWS0042

The Network Card interface test failed and the PE continuity test was not performed

ACTION: Try the command several times. If you get the same results, use DISL x and ENLL x to test the cards one at a time. If the test fails, replace that card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0043

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

The requested PE cannot be tested because:

1. The Peripheral Controller is disabled.

ACTION: Use ENXP in LD 32 to enable the controller. If you need help with the commands or system responses refer to the *NPR* chapter in this guide.

The PE is not defined for the superloop.

ACTION: If applicable, refer to the *X11 Administration* (553-3001-311), and use LD 10 or 11 to program the PE.

2. The PE shelf connected to the superloop is empty.

ACTION: Check the PE shelf for cards.

NWS0061 c p1 p2

The clock switching function was not performed. One or both QPC0411 SCGs are disabled. No fault is implied. Check for message ISR0061.

ACTION: Refer to the “*IGS — LD 39 Intergroup Switch and System Clock*” on page 545 in this guide and follow the action for message ISR0061.

NWS0101 ps loop1 loop2 loopn

The **loop1**, **loop2**, etc. associated with Peripheral Signaling card **ps** failed the signaling test. Error code NWS0201 is implied for these loops.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The MISC card on the active CPU may be faulty.

ACTION: Replace the MISC or IF card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. Try the tests again. If this message reappears, replace the loops listed in the message one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

2. The CE EXT between the active CPU and affected network shelf may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

3. The network, conference and TDS cards in the same group may be faulty.

ACTION: Replace the listed cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

4. The CPU cards may be faulty. Loops may be tested separately using the LOOP L command.

ACTION: Replace the CPU or FN card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0102

The Real-time clock on the peripheral signaling card has failed.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The peripheral signaling card is may be faulty.

ACTION: Replace the peripheral signaling card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card run the test again to verify that the fault is cleared.

2. The MISC or IF card on the active CPU may be faulty.

ACTION: Replace the MISC or IF card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card run the test again to verify that the fault is cleared.

NWS0103 ps A fault has been detected in outgoing signaling on the Peripheral Signaling card **ps**. The system is still able to signal using the bad card but the outgoing signaling rate may be reduced. Repeat the LOOP ALL test, or test any terminal loop associated with the **ps** card several times.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

If this message reappears, the probable fault is on:

1. the PS card

ACTION: Replace the Peripheral Signaling card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. the CPU card

a) If the fault indication appears when one CPU is active but not when the other is active and the fault affects all groups, on either CE EXT connecting the affected network shelf to the active CPU, or in the cable between the extenders, execute the following actions:

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses go to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- b)** other PS cards

ACTION: Replace the peripheral signaling card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card run the test again to verify that the fault is cleared.

- c)** the MISC of the CPU which is active when the fault indication appears

ACTION: Replace the MISC or IF card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card run the test again to verify that the fault is cleared.

NWS0141 c The IGS card **c** failed to respond.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The IGS card **c** may be faulty.

ACTION: Replace the IGS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card run the test again to verify that the fault is cleared.

2. The CE EXT connecting active CPU to network shelf may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

3. Other IGS cards may be faulty.

ACTION: Replace the IGS cards one at a time following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

4. Associated cables may be faulty.

ACTION: Replace the cables, one at a time, between the IGS cards and the junctor board following the steps in the *Hardware Replacement* (553-3001-520). After replacing each cable run the test again to verify that the fault is cleared.

NWS0142 c

The clocks could not be switched when the System Clock Generator (SCG) was the providing clock.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The SCG may be faulty.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500), use LD 60.

2. The cables connecting the SCG cards via the Junctor, may be faulty.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500), use LD 60.

3. CE EXT connecting active CPU to network shelf

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

NWS0143 n

You cannot switch the clock controllers because the standby clock controller **n** is software disabled.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500). Use LD 60 to enable it, provided it is operational.

NWS0201 loop s1 s2 sn

Two or more shelves **s1**, **s2**, on the **loop** failed the signaling test. All cards failed the test on each shelf. Refer to the action provided for code NWS0301 in this chapter. If the loop is an RPE loop, refer to the *X11 Maintenance* (553-3001-511). Use LD 33.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The network card for the **loop** may be faulty.

ACTION: Replace the Network card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

2. The **loop** cable to the PE shelves may be faulty.

ACTION: Replace the cables, one at a time, between the Network cards and the Peripheral Buffer cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing each cable run the test again to verify that the fault is cleared.

3. There may be faults on shelves **s1** to **s4**, depending on card density.

ACTION: Replace the peripheral buffer cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card run the test again to verify that the fault is cleared.

4. The network extenders may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses go to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

5. The CPU cards may be faulty.

ACTION: Replace the CPU or FN card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0202 loop s1 s2

Continuity test failed on this loop, shelves **s1**, **s2**. Signaling test was completed in spite of the fault.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The peripheral buffer or the controller on the shelves listed, may be faulty.

ACTION: Replace the peripheral buffer or controller cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card run the test again to verify that the fault is cleared.

2. The interconnecting cable to the PE shelves may be faulty.

ACTION: Replace the cables, one at a time, between the network cards and the peripheral buffer cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing each cable run the test again to verify that the fault is cleared.

3. The network card may be faulty.

ACTION: Replace the network card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

4. The peripheral signaling cards may be faulty.

ACTION: Replace the peripheral signaling cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card run the test again to verify that the fault is cleared.

5. The network, conference and TDS cards in the same group may be faulty

ACTION: Replace the listed cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

6. The network extenders may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

7. The CPU cards may be faulty.

ACTION: Replace the CPU or the FN card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

Note: ERR3036 also occurs if a loop on the QPC414 Network card is not configured. This is not an error condition. To prevent ERR3036 occurring in this case, define the loop in LD 17. The unused loop should be disabled.

NWS0202 Receiving NWS0202 10:0 codes every night after converting loop 16 from a TERD to a TERQ.

ACTION: Check the switch setting on the peripheral buffer card to match Quad Density format. Refer to the *Circuit Pack Installation and Testing* chapter in the *Installation Guide*.

NWS0203 loop The memory test on this **loop** has failed and timeslots associated with faulty memory locations are disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The network card is probably faulty.

ACTION: Replace the network card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

2. If a LOOP L command produces this response only in one of the CPUs, the fault may be in the CE EXT connecting the network group (in which loop is located) to the CPU which is active when this message appears, or in the cable connecting these extenders

ACTION: Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0204 loop The network circuit for this **loop** failed to respond to an ENLL, DISL, LOOP or SHLF command.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. Check whether the network card is missing.

ACTION: If it is missing, install a network card by following the steps in the *Hardware Replacement* (553-3001-520).

2. Check whether the network card has been disabled from the faceplate switch.

ACTION: Set the Enb/Dis switch to Enb.

3. The network card may be faulty.

ACTION: Replace the network card by following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

4. The peripheral signaling card may be faulty.

ACTION: Replace the peripheral signaling card, following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card, test again to verify that the fault is cleared.

5. The network, conference and TDS cards in the same group may be faulty.

ACTION: Replace the listed cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

6. The network extenders may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

7. The CPU card may be faulty.

ACTION: Replace the CPU or FN card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0211 loop s1 s2 sn

One or more shelves **s1**, **s2**, failed the signaling test. At least one unit passed the signaling test. Refer to the action provided for code NWS0301 in this chapter. If **loop** is an RPE loop, refer to LD 33.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The Network card may be faulty.

ACTION: Replace the network card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

2. The loop cable to the PE shelves may be faulty.

ACTION: Replace the cables, one at a time, between the network cards and the peripheral buffer cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing each cable run the test again to verify that the fault is cleared.

3. There may be a fault on shelves **s1** to **s4**, depending on card density.

ACTION: Replace the peripheral buffer cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card run the test again to verify that the fault is cleared.

4. The Network, Conference and TDS cards in the same group may be faulty.

ACTION: Replace the listed cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

5. The Network Extenders may be faulty.

ACTION: Use STAT EXT in LD 35 to determine which extender is faulty. Replace the SBE or 3PE card(s) or cables following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared. If you need help with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

6. The CPU cards may be faulty.

ACTION: Replace the CPU or FN card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0301 l s, c1, c2, cn

Two or more PE cards **c1**, **c2**, on loop **l** shelf **s** failed the signaling test, or the results of the shelf test varied. LD 30 automatically tests each shelf two ways. If a card number is preceded by a minus sign, one or more units on that card were disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. There may be a fault in cards **c1** or **c2**, or other cards.

ACTION: Replace the listed cards one at a time for this group following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card, run the test again to see if this message reappears. If it does reappear replace another card.

2. The Peripheral buffer or controller for shelf 2 may be faulty.

ACTION: Replace the peripheral buffer or controller cards, one at a time, following the steps in the *Hardware Replacement* (553-3001-520). After replacing each card run the test again to verify that the fault is cleared.

3. The loop cable to PE shelf 3 may be faulty.

ACTION: Replace the cable, between the network card and the peripheral buffer card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the cable run the test again to verify that the fault is cleared.

4. The network card may be faulty.

ACTION: Replace the network card following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

5. If only one card is listed, an intermittent PE card fault is possible.

ACTION: Replace the PE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

NWS0302 l s

Less than half the cards on the specified shelf could not be tested because they were either busy or disabled, or there were no Meridian 1 proprietary sets on the shelf. This is not a fault condition.

ACTION: Repeat the test if desired.

NWS0303 l s For single density loops, more than half the cards on specified shelf s could not be tested because they were busy or disabled. For double or quad density loops, “some” of the cards in the shelf could not be tested because they were busy or disabled.

ACTION: Use ENLC x in LD 32 to enable the cards and run the test again. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

NWS0401 l s c: u1 u2 un

A fault has been detected on PE card l s c, (u1 and u2, do not appear in the message), or PE unit l s c u1, u2. If a card or unit number is preceded by a minus sign, the card or unit was disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The PE card l s c may be faulty.

ACTION: Replace the PE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. The peripheral buffer on the shelf 2 may be faulty.

ACTION: Replace the peripheral buffer or controller card, following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

3. Meridian 1 proprietary sets associated with units u1 or u2 or other units may be faulty.

ACTION: Replace the Meridian 1 proprietary sets, following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0501 l s c u

The telephone at l s c u failed the signaling test. If the unit number is preceded by a minus sign, the set was disabled.

Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.

1. The Peripheral Equipment card may be faulty.

ACTION: Replace the PE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. The Meridian 1 proprietary set may be faulty.

ACTION: Replace the Meridian 1 proprietary set, following the steps in the *Hardware Replacement* (553-3001-520). Run the test again to verify that the fault is cleared.

NWS0502 The network loop is not configured.

ACTION: Check to make sure your data is correct and then re-enter the command.

NWS0601 loop The loop requested is a Digital Trunk Interface (DTI) or Digital Link Interface (DLI).

ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500), use LD 60.

NWS0602 The DTI/DLI loop failed the signaling test.

ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

- NWS0603 A previously faulty DTI/DLI loop passed the signaling test.
ACTION: Information only, no action is required. Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0604 The DTI loop is in a waiting state. A reset red alarm message has been sent.
ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500), use LD 60.
- NWS0608 There has been a Peripheral Software Download (PSDL) failure.
ACTION: Check the SDL messages.
- NWS0609 The XNET or XPND network card has a problem.
ACTION: Check the card and its associated cable and repeat the command. If the problem persists, pull the card out and plug it back in. If the problem persists with the same command again, replace the XNET or XPND network card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- NWS0610 A time-out occurred while waiting for the PSDL to complete the download function.
ACTION: Repeat the command.
- NWS0611 You cannot use this command when the card is in an overload condition.
ACTION: Look for an OVD message and follow the action for that message in the “OVD — LD 77 Locating Overloads” on page 801 in this guide.
- NWS0612 Command parameter error; for NT8D02 Digital Line Card use, UNTT l s c u, for all others use, UNTT l s c.
ACTION: Re-enter the command.
- NWS0613 The proper card is not equipped.
ACTION: Check the card slot for the proper hardware.
- NWS0614 That command cannot be completed.
 Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
1. For the NT8D02 Digital Line card:
 - a) The unit is busy.
ACTION: Be patient.
 - b) The unit is manually disabled.
ACTION: Use ENLC x in LD 32 to enable the card. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
 - c) The unit is not defined.
ACTION: Ensure that this is the command you wanted to use. If this is the correct command, refer to the *X11 Administration* (553-3001-311) to program the unit.

2. For all others,

a) The card is manually disabled.

ACTION: Use ENLC x in LD 32 to enable the card. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

b) No unit is defined on the card.

ACTION: Ensure that this is the command you wanted to use. If this is the correct command, refer to the *X11 Administration* (553-3001-311) to program the unit.

NWS0615 Loop must be a superloop.

ACTION: Ensure that this is the command you wanted to use.

NWS0617 The expanded shelf is not equipped.

ACTION: Information only, no action required.

NWS0620 The express output queue is full and the CPU cannot send the message to the MISP.

ACTION: Wait and re-enter the command.

NWS0621 The MISP output buffer is not available, possibly because the MISP has not read off the previous output message yet.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0622 Invalid message or invalid environment in which to send the message to the MISP.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0623 The message cannot be sent to the line card.card.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0624 Since this shelf contains at least one BRI line card, you must wait 45 seconds before enabling the shelf/loop.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0625 A database error. Protected pointers are missing.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0626 The self test command only applies to the MISP network cards and BRI line cards. Make sure you specify the correct card.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0627 The MISP card must be in the MANUAL DISABLED state to perform the self-test.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0628 Line card must be disabled to invoke the self-test.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0630 The loop is unequipped.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

NWS0631 The loop is not responding.

ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

- NWS0632 The self-test failed. With X11 Release 19 and later, the following text will be appended to the message depending on the failure cause.
 68020 CPU = The microprocessor is faulty.
 DRAM = The DRAM is faulty.
 DRAM PARITY ERROR = Parity was detected on the DRAM.
 AO7 CHIP = The AO7 is faulty.
 MFP = The MFP is faulty.
 INTERNAL LPBK = The internal loopback has failed.
 R75 1 = The first R75 chip failed.
 R75 2 = The second R75 chip failed
 R75 3 = The third R75 chip failed.
 R75 4 = The fourth R75 chip failed.
 S01 1 = The first S01 chip failed.
 S01 2 = The second S01 chip failed.
 S01 3 = The third S01 chip failed.
 S01 4 = The fourth S01 chip failed.
 NOT RESPONDING = The Meridian 1 software cannot communicate with the BRSC card, or the BRSC card cannot send the self-test results to the Meridian 1 software.
ACTION: For all failures, replace the BRSC card. Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0633 The MISP status is undefined (MISP SLSTAT bit combination).
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0635 There is no response from the line card.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0636 A MISP self-test cannot be invoked.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0637 The self-test passed.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0638 A unit is not equipped.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0639 The TEI test could not be performed.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0640 There is no response from the MISP.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0641 Cannot execute command on MISP.
ACTION: Refer to *ISDN Basic Rate Interface: Maintenance* (553-3901-500).
- NWS0650 This command is not allowed for XCT loops.
ACTION: Ensure that this is the command you wanted to use.

- NWS0652 This command is not valid on phantom loops, since phantom loops do not physically exist. When phantom TN's are used the loop cards are not installed; therefore, you cannot test hardware that is not in the system.
ACTION: For further information, refer to the *Phantom TNs* section in the *Software Feature Guide*.
- NWS0653 The command cannot be executed the on BCS Phantom loop. When phantom TN's are used the loop cards are not installed. Therefore you cannot test hardware that is not in the system.
ACTION: For further information, refer to the *Phantom TNs* section in the *Software Feature Guide*.
- NWS0654 No Memory Test on BCS Phantom Loop. When phantom TN's are used the loop cards are not installed. Therefore you cannot test hardware that is not in the system.
ACTION: For further information, refer to the *Phantom TNs* section in the *Software Feature Guide*.
- NWS0800 The timeslot or junctor is busy and the test was not completed.
ACTION: Try again later.
- NWS0801 The continuity test failed.
ACTION: Re-enter the command, and if the problem continues replace the card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- NWS0802 The Network Card (NT8D04) failed to respond.
ACTION: Replace the Network card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- NWS0803 Superloop number must be a multiple of 4.
ACTION: Check to make sure your data is correct and re-enter the command.
- NWS0804 The shelf number is not equipped.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NWS0805 The message cannot be sent to Network Card (NT8D04).
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NWS0888 Invalid input. The loop or junctor number is out-of-range or the command is not allowed on superloops, or the terminating or transmitting party is disabled.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- NWS0927 Network Card (NT8D04) failed to respond within 10 seconds after sending a request to read or clear a Peripheral Controller (NT8D01) maintenance display.
ACTION: If the command fails a second time, use STAT 1 in LD 32 to get the status of the superloop.
- NWS0928 The superloop number must be a multiple of 4.
ACTION: Check to make sure your data is correct and re-enter the command.
- NWS0929 The shelf number is not equipped.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

- NWS0930 Cannot send CPED or RPED message to Network Card (NT8D04).
ACTION: Make sure the network card is installed and use STAT I in LD 32 to enable the network card.
- NWS0931 Cannot determine if the XTRUNK value is a Universal Trunk or E&M/Dictation Trunk (NT8D14/NT8D15).
ACTION: Use DISC I s c in LD 32 to disable and then re-enable the trunk card. Next perform an IDC to determine the trunk value. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- NWS0940 Wrong number of parameters.
ACTION: Check to make sure your data is correct and re-enter the command.
- NWS0941 The loop number is out of range.
ACTION: Check to make sure your data is correct and re-enter the command.
- NWS0942 The active input device will be disabled. The command is ignored.
ACTION: Enter END to abort the program and re-enter the command from the maintenance telephone.
- NWS0943 A serious data error has been detected by NWS.
ACTION: Contact your technical support group.
- NWS0944 The loop is already enabled.
ACTION: Ensure that this is the command you wanted to use.
- NWS0945 There is no response from the maintenance interface
ACTION: Verify that the proper hardware is installed in the shelf. Re-enter the command.
- NWS0946 No acknowledgment returned for a previous message sent to the Network or Controller. The current command has been terminated.
ACTION: Retry the command later. If the problem persists, contact the supplier.
- NWS0947 Time out from Peripheral Software Download (PSDL).
ACTION: Try the command again. If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- NWS0948 Specified Peripheral Software (PSW) version number is out-of-range (1-99)
ACTION: Try again.
- NWS0949 Specified Peripheral Software (PSW) version (1-99) not found on the mass storage device.
ACTION: Use LD 22 PRT and PSWV to determine the available PSW versions and try again.
- NWS0950 Unrecoverable error from Peripheral Software Download (PSDL). The command is aborted.
ACTION: Try again. If the problem persists, replace the card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- NWS0955 Peripheral Software (PSW) number in hardware and protected memory do not match.
ACTION: Use DISL 1 in LD 32 to disable the superloop and then enable it with the software download option (ENLL <pswid>). Use LD 22 to determine the correct software version.
- NWS0956 The card type is not found.
ACTION: Use LD 22 to find the card type for the Peripheral Software (PSW) version and try again.
- NWS0957 There is a disk access error.
ACTION: Check the disk for the fault and try again.
- NWS0958 Cannot enable a DMSX superloop if FWA package is restricted. 

OHAS — Off-Hook Alarm Security

Off-Hook Alarm Security is a resident program. OHAS does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

These messages indicate the occurrence of an Off-Hook Alarm.

OHAS messages

OHAS0000 dn l s c u hh:mm:ss

Off-Hook Alarm has occurred due to dial tone or interdigit or half disconnect timeout.

ACTION: Contact your technical support group.

OHAS0001 dn l s c u hh:mm:ss

Off-Hook Alarm has occurred due to forced out-of-service call treatment.

ACTION: Contact your technical support group. 

OSM — Operating System Messaging

Operating System Messaging is a resident program. OSM does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

OSM messages

OSM0000	Example message for <string>. ACTION: Information only, no action is required.
OSM0001	Cannot create pipe, errno x. ACTION: Contact your technical-support group.
OSM0002	Cannot open pipe for read/write, errno x. ACTION: Contact your technical-support group.
OSM0003	Cannot create OSM File semaphore, errno x. ACTION: Contact your technical-support group.
OSM0004	Cannot open OSM file for appending, errno x. ACTION: Contact your technical-support group.
OSM0005	Cannot open save file for writing, errno x. ACTION: Contact your technical-support group.
OSM0006	Cannot get OSM Save file semaphore errno x. ACTION: Contact your technical-support group.
OSM0007	Cannot save OSM file (copy failed), errno x. ACTION: Contact your technical-support group.
OSM0008	Cannot get OSM write file semaphore, errno x. ACTION: Contact your technical-support group.
OSM0009	Cannot fprintf to osm File, errno x. ACTION: Contact your technical-support group.
OSM0010	Cannot read from pipe, errno x. ACTION: Contact your technical-support group.
OSM0011	OsmTask has died. ACTION: Contact your technical-support group.

- OSM0012

Cannot spawn osm Task, errno x.
ACTION: Contact your technical-support group.
- OSM0013

Cannot spawn period task, errno x.
ACTION: Contact your technical-support group.
- OSM0014

Daily log file save failed. Check CMDU power on/off switch.
ACTION: Be sure the IOP enable/disable switch is enabled (up).
- OSM0015

Disk getting full. Only x bytes remain.
ACTION: Contact your technical-support group.
- OSM0016

x byte log file size limit exceeded. Disk getting full, only y bytes remain.
ACTION: Contact your technical-support group.
- OSM0017

Cannot flush to log file errno <x>.
ACTION: Contact your technical-support group. 

OVD — LD 77 Locating Overloads

In this chapter

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in *You should know this* chapter.

What you should know before you use LD 77

LD 77 Manual Print program is used to print the contents of the CPU high and low priority input buffers.

How a set or analog trunk uses input buffers

When a set or analog trunk signals a change of state, for example Off-Hook, On-Hook or Dialing, its PE card generates a flag bit and a message or messin which is sent serially to its network loop. The Peripheral Signaller scans each loop and locks on to the loops flag, then gathers the messin and a Terminal Number or TN from the loop. It takes 29 successive time slots for the peripheral signaller to gather the TN/messin and pass it to the CPU. The CPU places this TN/messin into an input buffer. The TN/messin consists of four words, a loop identification, shelf-card-unit identification, messin and time stamp. You would recognize the first two words as a TN. The messin tells the CPU the set/trunk is Off-Hook, On-Hook or dialing. The CPU then returns dial tone to the set, or whatever action is required.

How the OVD works

The overload monitor detects and disables peripheral equipment which is generating excessive input messages, causing the system input buffers to overflow.

The following is a brief description of how a telephone signals to the CPU that it wants service and what happens if this process becomes faulty and the signaling does not stop.

Normal operation of telephone sending message to CPU

When a telephone goes Off-Hook or On-Hook or a key is pressed or released, an input message is generated and sent to the system input buffers notifying the CPU this set wants service or dial tone returned. This process takes 29 successive time slot 0 (zeros) to notify the CPU.

Fault causes message stream not to stop

The hardware on the peripheral signaling card keeps track of how long the Peripheral Signaler scans a loop for input messages. If a stream of input messages has no break for approximately 128 consecutive time slot 0, causing an input buffer overflow, then a **PS STUCK** interrupt is sent to the CPU. The CPU will order the **PS FREE**. If the Peripheral Signaler becomes stuck again the CPU will free it and keep track of how long this stuck/ free takes place.

CPU executes the overload monitor program

If the stuck/ free condition lasts longer than 1.5 to 2 minutes, the CPU executes the overload monitor program, which detects three types of overload as follows:

Card overload — Monitors excessive messages from PE cards. If a card is faulty and one unit is the cause, then the unit is disabled, otherwise the card is disabled. If the disabled card is a trunk card it will be re-enabled after 10 minutes. If it overloads again it will be disabled until the midnight or daily maintenance routines are run.

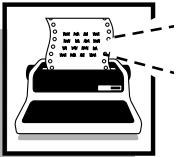
System overload — If excessive messages come from a nonspecific PE card, this indicates a faulty Peripheral Signaler, network loop or extender card. If one loop is causing the problem, it is disabled. If more than one loop on a shelf overloads, then the peripheral signaler will be disabled. Disabling is done by an initialization **INI0006** or **INI0007**.

Unequipped card overload — Results in an **ERR0020** printout, due to a Peripheral Equipment card that is:

- ◆ responding to more than one address
- ◆ responding to an illegal address
- ◆ software unequipped and is overloading

LD 77 message output format

All numerical output is in hexadecimal format. An example of someone pressing the prime DN key on a set of TN 10 0 1 4, is as follows:



- ◆ **0A 0 1 4 91C0 5AC0**
- ◆ **0A** = loop ten
- ◆ **0** = shelf zero
- ◆ **1** = card one
- ◆ **4** = unit four
- ◆ **91C0** = telephone set key 0 activated
- ◆ **5AC0** = time in milliseconds that CPU received message

LD 77 input format

All input is in decimal form. Space and carriage return are automatically done by the overlay when the expected number of digits are input. Early releases require two digits for loop, and later releases require three digits. An easy way to tell, is when the required number of digits are entered, the cursor will automatically space for you. If the input is incorrect the system responds with **?SYNTAX**.

For example:

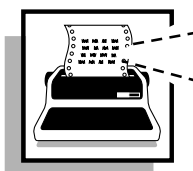
- ◆ for TN 1 0 2 0, enter: 001 0 02 00
- ◆ for TN 156 1 15 30, enter: 156 1 15 30

Note: Some software releases required a hexadecimal input for the loop.

This program has capabilities which are used by the software designers during development activities. The user is protected from accidental access to these commands, and resulting potential service

degradation, as a password is required. This password is not available to technicians. Users enter a “return” when the system asks for a password then enter the “P” commands.

When LD 77 is loaded into the overlay area the system responds with:



MAN000

.

PASS

.

When to use LD 77

When an overload condition occurs, usually the OVD message has a TN included. With a TN it is a simple matter of changing out the offending card. In the example on the previous page it would be card 1 of PE shelf 0 of loop 10. In some cases there is no TN indicated. When this happens LD 77 can be very helpful as it will allow you to print out the TN causing the overload, from the input buffer.

Some overloads on PE cards can reflect back into the network loop causing the CPU to disable the loop or even the complete network shelf. These overloads usually do not have TNs indicated. This condition calls for the use of LD 77.

How to use Manual Print LD 77

STEP	ACTION								
	A typical scenario.								
1	System outputs OVD022 10								
	Note the system output.								
2	Look up OVD022 10 in the OVD message section of this chapter.								
	A large number of invalid input messages were received from more than one PE shelf on loop 10. Loop 10 is disabled. Probable fault on: a) Network card for loop 10 b) Peripheral Buffer or Controller for loop 10 c) PE cabling to loop 10 d) any PE card associated with loop 10								
3	Isolate loop 10 from the PE.								
	Remove PE cable connector from network card loop 10.								
4	Enable loop 10.								
	Use LD 32, ENLL 10. Then STAT 10, to make sure it is enabled.								
5	Check loop 10 for overload.								
	<table><tr><th>If</th><th>Do</th></tr><tr><td>.....</td><td>.....</td></tr><tr><td>loop disables</td><td>Replace card.</td></tr><tr><td>loop remains enabled</td><td>step 6</td></tr></table>	If	Do			loop disables	Replace card.	loop remains enabled	step 6
If	Do								
.....									
loop disables	Replace card.								
loop remains enabled	step 6								
6	Isolate loop 10 cable from the PE								
	Remove PE cable connector from peripheral buffer or controller card associated with loop 10.								
7	Connect network card and cable.								
	Reconnect PE cable to network card of loop 10.								
8	Check loop 10 for overload								
	<table><tr><th>If</th><th>Do</th></tr><tr><td>.....</td><td>.....</td></tr><tr><td>loop disables</td><td>Replace cable.</td></tr><tr><td>loop remains enabled</td><td>step 9</td></tr></table>	If	Do			loop disables	Replace cable.	loop remains enabled	step 9
If	Do								
.....									
loop disables	Replace cable.								
loop remains enabled	step 9								
— continued —									

STEP	ACTION								
9	Isolate loop 10, cable and buffer/controller from the PE.								
	Unseat all PE cards from the first PE shelf or module backplane. If there is another PE shelf or module connected to loop 10, remove the cable that connects the first PE shelf or module to the next PE shelf or module.								
10	Connect loop 10, cable and first PE shelf.								
	Reconnect PE cable to first PE buffer or controller								
11	Check loop 10 for overload.								
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>loop disables</td><td>Replace buffer or controller.</td></tr> <tr> <td>loop remains enabled</td><td>step 12</td></tr> </table>	If	Do	loop disables	Replace buffer or controller.	loop remains enabled	step 12		
If	Do								
loop disables	Replace buffer or controller.								
loop remains enabled	step 12								
12	Load overlay 77 (see <i>A tip for using LD 77</i> , following this table).								
	System responds with MAN000 . PASS . Press return Type P 010 and press return (System will automatically enter a space for you after you type P.) <i>Note:</i> Steps 13, 14 and 15 can be done without LD 77; however, you would have to wait five minutes to be sure each PE card is good. If checking four PE shelves this could take at least 200 minutes to complete.								
13	Replace PE card.								
	Reseat one PE card into the PE shelf backplane.								
14	Check each PE card for overload.								
	<table> <tr> <th>If</th><th>Do</th></tr> <tr> <td>System responds with a rapid succession of PS STUCK and PS FREE messages.</td><td>Replace PE card and repeat this step for all remaining PE cards.</td></tr> <tr> <td>A few messages appear but not a rapid succession.</td><td>Repeat this step for all remaining PE cards.</td></tr> <tr> <td>last card</td><td>step 15</td></tr> </table>	If	Do	System responds with a rapid succession of PS STUCK and PS FREE messages.	Replace PE card and repeat this step for all remaining PE cards.	A few messages appear but not a rapid succession.	Repeat this step for all remaining PE cards.	last card	step 15
If	Do								
System responds with a rapid succession of PS STUCK and PS FREE messages.	Replace PE card and repeat this step for all remaining PE cards.								
A few messages appear but not a rapid succession.	Repeat this step for all remaining PE cards.								
last card	step 15								
— continued —									

STEP	ACTION	
15	Check other PE shelves for overload	
	If	Do
	more PE shelves on loop 10	step 9
	one PE shelf on loop 10	end
		

A tip for using LD 77

When a Meridian 1 is handling a lot of telephone calls, there will be a large number of valid messages generated from the peripheral equipment. Thus, the program will be most effective for troubleshooting when there is little system traffic and when the message address range is restricted to only at one loop, shelf or card.

LD 77 input commands

Command	Description	Release
Print all messages		
P	Print all messages. There may be a large number of valid messages generated by using the P command. The program will be more effective for troubleshooting when the message address range is restricted to only at one loop, shelf or card.	basic 1
Print all messages from specified loop		
P III	Print all messages from specified loop. Enter the exact number of loop digits. For example: for loop 4, enter 004.	basic-1
Print all messages from specified shelf		
P III s	Print all messages from specified shelf. Enter the exact number of loop digits. For example: for loop 4, enter 004.	basic-1
Print all messages from specified card		
P III s cc	Print all messages from specified card. Enter the exact number of loop and card digits. For example: for loop 4, enter 004; card 6 enter 06.	basic-1
Stop printing		
N	Stop print.	basic-1

OVD — Overload monitor

This resident program detects and disables peripheral equipment that is generating excessive input messages, causing the system input buffers to overflow and output an OVD message.

How the overload monitor works

The following is a brief description of how a telephone signals to the CPU that it wants service and what happens if this process becomes faulty and the signaling does not stop.

Normal operation of telephone sending message to CPU

When a telephone goes Off-Hook or On-Hook or a key is pressed or released, an input message is generated and sent to the system input buffers notifying the CPU this set wants service or dial tone returned. This process takes 29 successive time slot 0 (zeros) to notify the CPU.

Message stream faulty, does not stop

The hardware on the Peripheral Signaling card keeps track of how long the peripheral signaler scans a loop for input messages. If a stream of input messages has no break for approximately 128 consecutive time slot 0, causing an input buffer overflow, then a “PS STUCK” interrupt is sent to the CPU. The CPU will order the “PS FREE”. If the peripheral signaler becomes stuck again the CPU will free it and keep track of how long this takes place.

CPU executes the overload monitor program

If the condition as described in the above paragraph lasts longer than 1.5 to 2 minutes, the CPU executes the overload monitor program, which detects three types of overload as follows:

Card overload — Monitors excessive messages from PE cards. If a card is faulty and one unit is the cause, then the unit is disabled, otherwise the card is disabled. If the disabled card is a trunk card it will be re-enabled after 10 minutes. If it overloads again it will be disabled until the midnight or daily maintenance routines are run.

System overload — If excessive messages come from a nonspecific PE card, this indicates a faulty PS, network loop or extender card. If one loop is causing the problem, it is disabled. If more than one loop on a shelf overloads, then the peripheral signaler will be disabled. Disabling is done by an initialization INI006 or INI007.

Unequipped card overload — Results in an ERR020 printout, due to a peripheral equipment card that is:

- ◆ responding to more than one address
- ◆ responding to an illegal address
- ◆ software unequipped and is overloading

Procedure for OVD message without a TN

The CPU may be unable to identify a unit, card, or PE shelf. If this happens there may be no TN or an incomplete TN. For this condition see the Manual print LD 77 section of this book.

Using the OVD Message table to clear faults

To clear most overload faults, the OVD action column suggests you use LD 32 overlays found in the *NPR* chapter. A few OVD actions require you to use overlay loads located in another guide.

OVD messages

OVD0001 l s c (u)

A 500/2500 card or unit has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the line card by following the steps in the *Hardware Replacement* (553-3001-520). Verify the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0002 l s c (u)

A BSC line card or unit has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the line card by following the steps in the *Hardware Replacement* (553-3001-520). Verify the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0003 l s c (u)

A trunk card or unit has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the trunk card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0004 l s c (u)

1. A Digital set line card or unit has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the line card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

2. Unterminated or unequipped units on QPC578 or NT8D02AA line cards may produce erroneous OVD004 messages.

ACTION: To avoid erroneous OVD004 messages, go to the *X11 Administration* (553-3001-311), use LD 11 to program these units. Use DISU l s c u in LD 32 to disable the units you just programmed. If you need help with the LD 32 commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0005 l s c (u)

A Digitone Receiver card or unit has been disabled.

ACTION: Use ENLR l s c (u) in LD 34 to enable the card or unit. If the card or unit does not enable, replace the DTR card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “TDS — LD 34 Checking TDS, DTR and Tone Detectors” on page 1025 in this guide.

OVD0008 loop Overload detected from Local Carrier Buffer (LCB) card on specified loop. The carrier status monitoring function on the LCB has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the LCB card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0009 l s c (u)

An AIOD trunk card or unit has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the AIOD card by following the steps in the *Hardware Replacement* (553-3001-520). Verify that the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0010 l s c (u)

A RAN trunk card or unit has been disabled.

ACTION: Use ENLC l s c in LD 32 to enable the card. Use ENLU l s c u in LD 32 to enable the unit. If the card or unit does not enable, replace the RAN card by following the steps in the *Hardware Replacement* (553-3001-520). Verify the fault is cleared. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.

OVD0013 l s c (u)

A MFC Sender/Receiver card or unit (QPC327 or NT5K21AA) has been disabled.

OVD0021 loop Excessive input has been detected from specified loop. The loop was disabled. A minor alarm indication is given to all customers served by the loop. This message indicates a probable fault in:

1. Network card for the loop.
2. Peripheral Buffer or Controller for the loop.

3. Interconnecting cables.

4. Any PE card.

ACTION: See “How to use Manual Print LD 77” on page 806 in this chapter.

OVD0022 loop A large number of invalid input messages were received from more than one PE shelf on the loop. The loop has been disabled. A fault may exist on the following:

1. Network card for loop.

2. Peripheral Buffer or Controller for the loop.

3. PE cabling.

4. Any PE card.

ACTION: See “How to use Manual Print LD 77” on page 806 in this chapter.

OVD0023 l s A large number of invalid input messages was received from shelf s. Attempts to disable the offending PE card(s) failed; the loop has been disabled. A fault may exist on the following:

1. Peripheral Buffer or Controller on the shelf.

2. Any PE card on indicated shelf.

3. Network card for the loop.

4. PE cabling.

ACTION: See “How to use Manual Print LD 77” on page 806 in this chapter.

OVD0024 l s Shelf s has been disabled due to overload. A fault may exist on the following:

1. Peripheral Buffer or Controller on the shelf.

2. Any PE card on that shelf.

ACTION: See “How to use Manual Print LD 77” on page 806 in this chapter.

OVD0031 ps Excessive or invalid input has been detected from Peripheral Signaling card. The card was disabled. This message indicates a probable fault in:

1. Peripheral Signaling card.

2. One of the network card associated with the PS.

3. Conference card or its network cable. (Found only on SL-1 L, VL, LE and XL systems.)

ACTION: See “How to use Manual Print LD 77” on page 806 in this chapter.

OVD0032 loop Too many messages from loop DTI2 loop. Loop is disabled.

ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501).

OVD0033 loop ch

Channel **ch** of a DTI loop is disabled due to overload. A fault may exist in the DTI card, carrier or cables.

ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501). 

OVL — Overlay Loader

The Overlay Loader manages the Overlay area in memory that is used to load administration and maintenance programs.

The facility to disable the primary tape unit, if the unit is faulty, is included in the Overlay Loader. The commands to disable the tape unit will be issued only when no other Overlay activity is in progress; for instance, when an abort command is issued preceding the disable command.

Problems and status of the Overlay Loader are indicated in OVL messages.

How the OVL works

After the Log In sequence and password, the Overlay Loader (OVL) becomes active and accepts commands keyed from the SDI terminals. The Overlay Loader will respond to the commands as follows:

- ◆ **LD xx** — loads non-resident administration and maintenance programs from tape or disk into the overlay area, and then the loaded program assumes control. The xx represents the number of the desired non-resident program.
- ◆ **ENLT** — enables the tape interface or the MSI or FDU or MDU card.
- ◆ **DIST** — disables the tape interface or the MSI or FDU or MDU card.
- ◆ **STAT** — prints the status of the tape interface or the MSI or FDU or MDU card.
- ◆ **END** — ends the control of the current non-resident program without aborting the overlay area, allowing the person who is logged in to maintain control.

- ◆ **** — aborts the current overlay program, allowing another program to be loaded into the overlay area. For example, if the Meridian 1 is in the midnight or daily routine phase, it will immediately put a diagnostic program into the overlay area, logging out the previous user.
- ◆ LD XX D — for systems running on Release 19 and later software, this command forces the overlay to load from the disk rather than from cache memory.

OVL messages

OVL0000	Program identifier. It indicates that you are logged into the system. ACTION: The overlay loader is ready for you to enter any of the six commands listed in the previous section.
OVL0001	Loading already in progress. ACTION: Wait for completion of loading or enter **** to halt loading.
OVL0003 xx	Requested program xx is not in the tape directory. ACTION: Contact your technical support group to see if the desired program should be in the directory. For example, if you request LD 29 Memory Management to loaded into the overlay area on a Meridian SL-1NT, XT, Options 51, 51C, 61, 61C, 71 or 81, this message appears, because Memory Management is not applicable to these systems.
OVL0004	1. Checksum failure. Re-enter load request. ACTION: Use the LD 22 D command to force the overlay to load from the disk rather than the cache buffers, or turn off switch 4 on the MSI card and load overlay LD 22 from the floppy drive. If you choose the later option, remember to turn switch 4 on again when you are finished. Enter PRT CFN (or CEQU, if applicable) to verify how many cache buffers are allocated. Refer to the <i>X11 Administration</i> (553-3001-311). Use LD 17 CACH to reduce the number of cache buffers. Try only 20 cache buffers in the system as each buffer uses 19,000 words of memory. Consider the Multi-User feature as it requires a minimum of four cache buffers. A possible restore to the hard disk may be required to have the hard disk load overlays properly. In this case use the RES command in LD 43 to copy the entire contents of the floppy to the hard disk. If you need help with the commands or system responses go to the “EDD — LD 43 Equipment Data Dump” on page 389 in this guide. Expand the memory if the option is available on your system and if the use of all 32 allowable cache buffers is required.

2. Receiving this message when loading overlays or when other users attempt to log on to the system.

ACTION: Load an overlay using the LD xx D command.

Load an overlay from the floppy drive instead of the hard disk (turn switch 4 off on the MSI). Use LD 22 and verify how many cache buffers are allocated and reduce or eliminate them.

A possible restore to the hard disk may be required to have the hard disk load the overlays properly.

The system hard drive may be faulty.

Check for insufficient memory to run the Multi-User feature and for too many overlays loaded for access.

Use only 20 cache buffers in the system. Each buffer uses 20K of memory.

Expand the memory if the option is available, and if the use of all 32 allowable cache buffers is required.

OVL0005 Tape unit not ready for use.

ACTION: Confirm that the tape cartridge is properly seated.

OVL0008 1. Unexpected or erroneous data found on tape.

ACTION: Interchange the active and backup tapes and re-enter the load command.

2. Receiving this message when loading overlays or when other users attempt to log onto the system.

ACTION: Load an overlay using the LD xx D command.

Load an overlay from the floppy drive instead of the hard disk (turn switch 4 off on the MSI). Use LD 22 and verify how many cache buffers are allocated and reduce or eliminate them.

A possible restore to the hard disk may be required to have the hard disk load the overlays properly.

The system hard drive may be faulty.

Check for insufficient memory to run the Multi-User feature and for too many overlays loaded for access.

Use only 20 cache buffers in the system. Each buffer uses 20K of memory.

Expand the memory if the option is available, and if the use of all 32 allowable cache buffers is required.

OVL0009 1. Tape contains software generic different from that resident in system memory. The programs are not compatible and overlay program requested was not loaded.

ACTION: Load the overlay from the target software instead of from the source software. If you need help refer to the *Software Conversion Procedures* (553-2001-320). Refer to the *Circuit Pack Installation & Testing NTP* and following the steps verify that the switch settings on the MSI/FDI are set to access the proper source. If your system uses tape, replace the tape in the drive with the one that was used when the system was loaded.

2. Receiving this message when attempting to load LD 43 after upgrading to an Option 21E, Release 19.

ACTION: Load the overlay from the target software instead of the source software. Verify that the switch settings on the MSI/FDI are set to access the proper source.

OVL0010 Overlay program exceeds allowed maximum size. A tape programming error has been made.

ACTION: Contact your technical support group.

OVL0011xx MID

System is automatically executing maintenance Overlay xx. 32 PBXT—This output means that Overlay 32 is being run, and Message Waiting lamp tests are scheduled.

ACTION: DO NOT log in until these tasks are completed; they may be essential to maintain system integrity. After a few minutes, press the carriage return or enter key to recheck the system status.

OVL0012 Incorrect command format.

ACTION: Check to make sure your data is correct and re-enter the command.

OVL0013 Invalid input command.

ACTION: Check to make sure your data is correct and re-enter the command.

OVL0014 Incorrect parameters.

ACTION: Check to make sure your data is correct and re-enter the command.

OVL0015 Password is incorrect.

ACTION: Check to make sure your data is correct and re-enter the correct password.

OVL0016 Allowed limits of password exceeded.

ACTION: Wait and reattempt log in again.

OVL0017 Overlay cannot be loaded from a TTY.

ACTION: Use the correct password and try again.

OVL0018 Password does not have access to this customer.

1. OVL0020 System has aborted the current Overlay program because another TTY has successfully logged in
2. The Overlay area is required because of a system alarm, a system audit or daily routine.

ACTION: Contact your technical support group.

OVL0020 System has aborted the current overlay program because:

1. A TTY has successfully logged in.

ACTION: Contact your technical support group to determine who will have priority access to the overlay area.

2. The overlay area is required because of a system alarm, a system audit, or daily routine.

ACTION: Wait until this condition is completed.

- OVL0021 aaa System requires the overlay area one of the following tasks. The codes for **aaa** are as follows:
MID = daily midnight routines are scheduled
ALRM = system alarm has been triggered
AUD = system requires software audit
CDR = system requires test of CDR facility
SMFR = soft memory failure recovery
PBXT = PBXT Message Waiting Lamp tests are scheduled
ACTION: Complete your present work as soon as possible and enter **** followed by LOGO.
- OVL0022 Manual loading of this program is prohibited.
ACTION: Ensure that this is the command you wanted to use.
- OVL0023 Loading overlay program from this TTY is not allowed.
ACTION: Check to make sure you are using the correct DTE and re-enter the command from the correct DTE.
- OVL0024 M3900 download pointer NIL.
- OVL0058 Permanent interrupt condition detected in primary tape. The tape unit has been disabled.
ACTION: Replace the drive unit by following the steps in the *Hardware Replacement* (553-3001-520).
- OVL0059 Tape Interface card is not responding. Primary tape cannot be enabled until fault is cleared.
ACTION: Replace the tape interface card by following steps in the *Hardware Replacement* (553-3001-520).
- OVL0060 History File package not equipped.
ACTION: Contact your technical support group.
- OVL0061 A user is active in the overlay.
ACTION: Do not log in. Contact your technical support group and determine if the present user should finish before you log in.
- OVL0066 X11 Release 1 to Release 2 conversion CR1R2 X09r17 to X11R2 conversion C97R2.
ACTION: Information only, no action required.
- OVL0068 Add new NARS/BARS, CDP data to existing customer—BLD1.
ACTION: Information only, no action required.
- OVL0069 Build the DN. Translation base of the new data loaded via BLD1-BLD2.
ACTION: Information only, no action required.
- OVL0070 ATTN admin PBX set service change.
ACTION: Information only, no action required.
- OVL0071 ATTN admin SL-1 set service change.
ACTION: Information only, no action required.
- OVL0073 DTI service change.
ACTION: Information only, no action required.

- OVL0086 S1ESN ESN Overlay 1.
ACTION: Information only, no action required.
- OVL0087 S2ESN ESN Overlay 2.
ACTION: Information only, no action required.
- OVL0088 SCAUT—Authcode overlay (removed from 24).
ACTION: Information only, no action required.
- OVL0090 S3ESN ESN Overlay 3.
ACTION: Information only, no action required.
- OVL0093 SCTEN service change tenant data blocks.
ACTION: Information only, no action required.
- OVL0099 Software tool to replace one or more existing global procedure in core with load global.
ACTION: Information only, no action required.
- OVL0111 The overlay area is being used. The data output with the OVL0111 is defined below.
1. If **OVL0111 = 00 IDLE**, System is idle. A login will result in a > prompt.
ACTION: Information only. Log in if you want to.
 2. If **OVL0111 = xx BKGD**, Overlay area is currently executing background task (Overlay nn). A login will result in a > prompt indicating that background task has been aborted and the overlay loader is ready for further commands.
ACTION: Information only. Log in if you want to.
 3. If **OVL0111 = 00 TTY x**, then TTY x has control of the overlay area. No Overlay program is loaded.
ACTION: Before you log in, contact your technical support group to determine who has access to the overlay area.
 4. If **OVL0111 = nn TTY x**, then TTY x or maintenance set has control of the overlay area. Overlay program nn is loaded.
ACTION: Contact your technical support group to determine who will have priority access to the overlay area before you log in.
 5. If **OVL0111 = 00 SL1**, maintenance set has control of the overlay area. No Overlay program is loaded.
 6. If **OVL0111 = nn yyy**, The system is automatically executing a maintenance task. DO NOT log in unless absolutely necessary, until these tasks are completed. They may be essential to maintain system integrity. Recheck system status by pressing the carriage return key again after a few minutes. The value yyy may be:
MID = daily midnight routines are scheduled
ALRM = system alarm has been triggered
AUD = system requires software audit

CDR = system requires test of CDR facility

PBXT = PBXT message waiting tests

SMFR = soft memory failure recovery

If the input device is an SL-1 telephone, OVL0111 is represented by a busy tone or overflow tone. The telephone can be returned to the call processing mode by going Off-Hook, then On-Hook. This procedure is useful if you do not wish to abort the current overlay activity.

ACTION: Information only, no action required.

OVL0202 The Route member does not exist.

ACTION: Refer to the *X11 Administration* (553-3001-311). To check the route members, use LD 21 RDB and re-enter command.

OVL0305 A bad message has been received from the System Monitor (NT8D22).

ACTION: Use the "STAT XSM" command in LD 37 to check the System Monitor status. Check the cabling between the System Monitor and the SDI port.

OVL0306 This overlay cannot be active during Peripheral Software Download (PSDL).

ACTION: Wait until the PSDL is complete and use the SUSP command to suspend the PSDL. Load the required program (LD xx SUSP), but use the SUSP command with caution.

OVL0307 You do not have access to the Resident Debugger (LD 8).

ACTION: Contact your technical support group.

OVL0308 Incorrect password entered for the Resident Debugger (LD 8).

ACTION: Obtain the correct password and try again.

OVL0309 You do not have access to that overlay.

ACTION: The Limited Access Password (LAPW) is in effect.

OVL0310 With LAPW enabled, maintenance sets are not allowed to load this overlay.

ACTION: Information only, no action required.

OVL0352 List requested is not system speed call list (Network Speed Call).

ACTION: Check your database and re-enter the command.

OVL0353 The security cartridge cannot be read, or the cartridge ID does not match the ID in the directory file. LD 135 and LD 137 can still be accessed.

ACTION: Contact your technical support group.

OVL0354 The tape ID does not match the system ID. An incorrect tape or disk is being used, or there is a system ID cartridge malfunction on MSI. LD 135 and LD 137 can still be accessed.

ACTION: Contact your technical support group.

OVL0355 The directory file cannot be read to obtain the ID for comparison to security and system IDs. LD 135 and LD 137 can still be accessed.

ACTION: Contact your technical support group.

- OVL0400 Failed logon attempts by incorrect password (PWD1 or PWD2). Output data may be either of the following:
 x = TTY x is locked out. Too many invalid passwords
 x y = x failed logins on TTY y
 TTYx y = TTYx was locked out y times.
ACTION: You must wait till the LAPW timer expires which could be up to 60 minutes, then attempt to log in again with the proper password.
- OVL0401 The Audit Trail buffer is full, and will now start to wrap.
ACTION: Information only, no action required.
- OVL0402 There is not enough memory for the Audit Trail, and it will now start to wrap.
ACTION: Check the available memory, and add more if necessary.
- OVL0403 x You have logged on in HOST mode on TTY port x. Other ports will not receive any messages (CDR, BUG, ERR, MTC, SCH or TRF) output to this port.
ACTION: Information only, no action required.
- OVL0404 x aaa bbb
 The TTY port x is in HOST mode and this TTY will not receive message types: aaa bbb. MTC represents all maintenance messages when the message types can be CDR, BUG, ERR, MTC, SCH or TRF.
ACTION: Program the USER prompt in LD 17 to add Messages.
- OVL0405 xx Attempt to load an Overlay program xx on A2 disk.
ACTION: Use LD 43 RES to copy contents of backup floppy diskettes to hard drive, or insert floppy diskette A2 to access LD xx.
- OVL0406 Low speed link is used by the other terminal.
ACTION: Information only, no action required.
- OVL0407 xx yy Requested number of cache buffers cannot be allocated. Protected data-store is below safety limit. Increase the memory before more cache buffers can be allocated. Where:
 xx = the number of buffers requested
 yy = the number of buffers allocated
ACTION: Unload the cache buffers and re-enter the overlays.
- OVL0408 xx There are too many priority overlays. xx = number of priority overlays which have been removed automatically.
ACTION: Do not assign more priority overlays than allowed. For further information, refer to the *X11 Administration* (553-3001-311), LD 17 prompt CACH for limit.
- OVL0409 Initialization of an OVL pipe failed.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- OVL0410 No pipe is available for use.
ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.
- OVL0411 LD 135, and LD 137 are the only LDs available for task overlays.
ACTION: Information only, no action required.

- OVL0412 Cannot spawn the requested overlay task.
ACTION: Contact your technical support group.
- OVL0413 Cannot kill the overlay task.
ACTION: Re-enter the command, and if the problem still occurs contact your technical support group.
- OVL0414 Send character to overlay task through pipe failed.
ACTION: Contact your technical support group.
- OVL0415 Displayed after a successful login if the Last Login Identification feature is enabled. It contains the time and date of the last login and the number of failed login attempts. The format is **TTYxx nn PWD yyy mm/dd hh:mm**
xx = the TTY port number
nn = number of failed log in attempts count since the last login at this port
yyy = password identification
yyy = 1 for PWD1
yyy = 2 for PWD2
00-99 = indicates LAPW password number between 00 and 99
mm/dd = last login date
hh:mm = last login time
ACTION: Information only, no action required.
- OVL0416 You cannot monitor this port.
ACTION: Information only, no action required.
- OVL0417 Password level is incorrect. Login with PWD2 password, or a LAPW password that allows the command.
ACTION: Contact your technical support group.
- OVL0418 The monitor feature is already in use.
ACTION: Use MON OFF to turn off the monitoring feature before using it on another port.
- OVL0419 Send Print (SPRT) is already in use.
ACTION: Use SPRT OFF to turn the feature off, then use SPRT xx to turn it on, on another port.
- OVL0420 That port is busy, or already logged in.
ACTION: Information only, no action required.
- OVL0421 That port does not physically exist.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 PRT to check the port programming.
- OVL0422 That TTY port type is not SCH or MTC.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 PRT to check the port programming.
- OVL0423 This is not a logged in port.
ACTION: Information only, no action required.

- OVL0424 The maximum number of users are already logged in.
ACTION: Information only, no action required.
- OVL0425 You cannot force logout yourself.
ACTION: Check the port number when using the FORC command.
- OVL0426 1. There is not enough overlay memory available for the overlay data area.
ACTION: Use the LD 22 D command to force the overlay to load from the disk rather than the cache buffers, or turn off switch 4 on the MSI card and load overlay LD 22 from the floppy drive. If you choose the later option, remember to turn on switch 4 when you are finished.
Enter PRT CFN (or CEQU, if applicable) to verify how many cache buffers are allocated. Refer to the *X11 Administration* (553-3001-311). Use LD 17 CACH to reduce the number of cache buffers. Try only 20 cache buffers in the system as each buffer uses 19,000 words of memory. Consider the multi-user feature also, as it requires a minimum of four cache buffers.
A restore to the hard disk may be required for the hard disk to load overlays properly. In this case use RES in LD 43 to copy the entire contents of the floppy to the hard disk. If you need help with the commands or system responses go to the “EDD — LD 43 Equipment Data Dump” on page 389 in this guide.
Expand memory if the option is available on your system and if the use of all 32 allowable cache buffers is required.
2. Receiving this message when loading overlays or when other users attempt to log onto the system.
ACTION: Load an overlay using the LD xx D command.
Load an overlay from the floppy drive instead of the hard disk (turn switch 4 off on the MSI). Load OVL#22 and verify how many cache buffers are allocated and reduce or eliminate them.
A restore to the hard disk may be required for the hard disk to load the overlays properly.
The system hard drive may be faulty.
Check for insufficient memory to run the Multi-User feature and for too many overlays loaded for access.
Use only 20 cache buffers in the system. Each buffer uses 20K of memory.
Expand the memory if the option is available and if the use of all 32 allowable cache buffers is required.
- OVL0427 The disk unit is busy.
ACTION: Try again later.
- OVL0428 Login name and password combination is invalid.
ACTION: Check to make sure your data is correct and re-enter the command. If you still cannot log in, contact your technical support group.
- OVL0429 1. Overlay memory space is in use.
ACTION: Try again or load a different overlay.

2. Receiving this message when attempting to load an overlay.

ACTION: If Multi-User is available, type WHO on the TTY to show you who is logged into the system and FORCxx to force the terminal to show you who is using the overlay area to log off. If you do not know the second level password, contact your technical support group.

OVL0430	Send message command is already turned off.
OVL0434	Unable to initialize system message lookup. ACTION: Contact your technical support group.
OVL0435 n	Invalid lookup type received by help task: n . ACTION: Contact your technical support group.
OVL0436 n m	B-tree read failed for language n , m = rrn. ACTION: Contact your technical support group.
OVL0437 n	Unable to open message file for language n . ACTION: Contact your technical support group.
OVL0438 n	Could not open B-tree index file for language n . ACTION: Contact your technical support group.
OVL0439 n	Unable to read B-tree root page for language n . ACTION: Contact your technical support group.
OVL0440 n	B-tree initialization failed for language n . ACTION: Contact your technical support group.
OVL0441	Help text could not be found for the specified error code. ACTION: Information only, no action required.
OVL0442	The error code specified is not a valid error code. ACTION: Information only, no action required.
OVL0443	Unable to send request. ACTION: Re-enter the command.
OVL0444	Unable to create help task queue. ACTION: Verify commands in the <i>X11 Administration</i> (553-3001-311).
OVL0446	The LON and LOF commands are not applicable to MSDL TTY. ACTION: Check the database and re-enter the commands.
OVL0447	Use LD 135 for Option 81 Core Common Equipment Diagnostic. LD 35 does not apply. ACTION: Information only, no action required.
OVL0448	System message lookup is temporarily unavailable. ACTION: Wait 30 seconds and repeat the request.
OVL0451	TTY is not a low speed link.
OVL0700	Resident debug package is not equipped. ACTION: Information only, no action required.

- OVL0777 Resident debug package is already loaded.
ACTION: Information only, no action required
- OVL0778 LSL with flow type of MAIL is not accessible from a pseudo TTY.
ACTION: Make sure that this is the command you wanted to use.
- OVL0779 There is more than one LSL configured in the system.
ACTION: Use AX n, where n is the TTY number of the LSL to be connected to.
- OVL0781 This overlay is not allowed for IP expansion cabinet. 

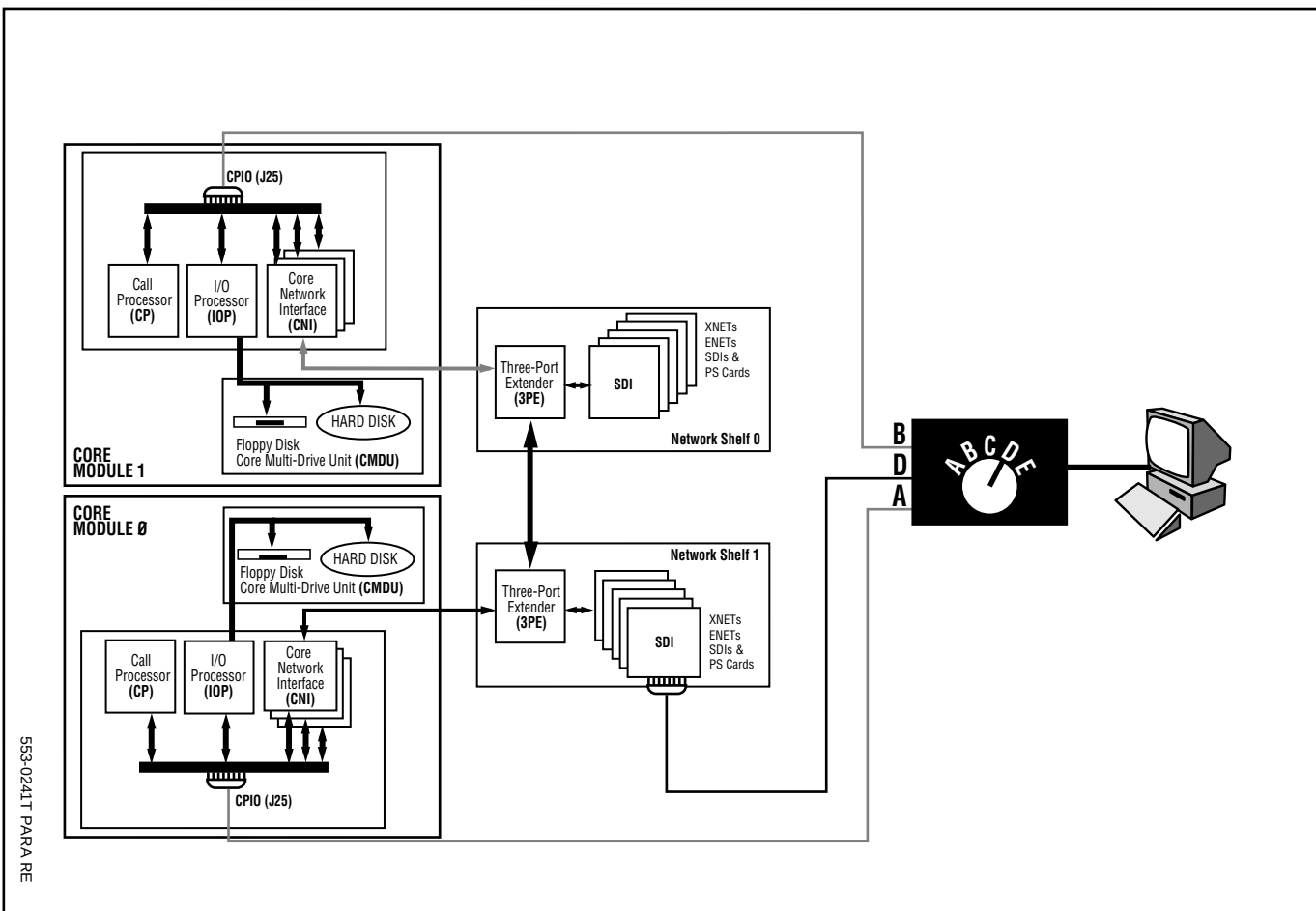
Understanding parallel reload

**CAUTION**

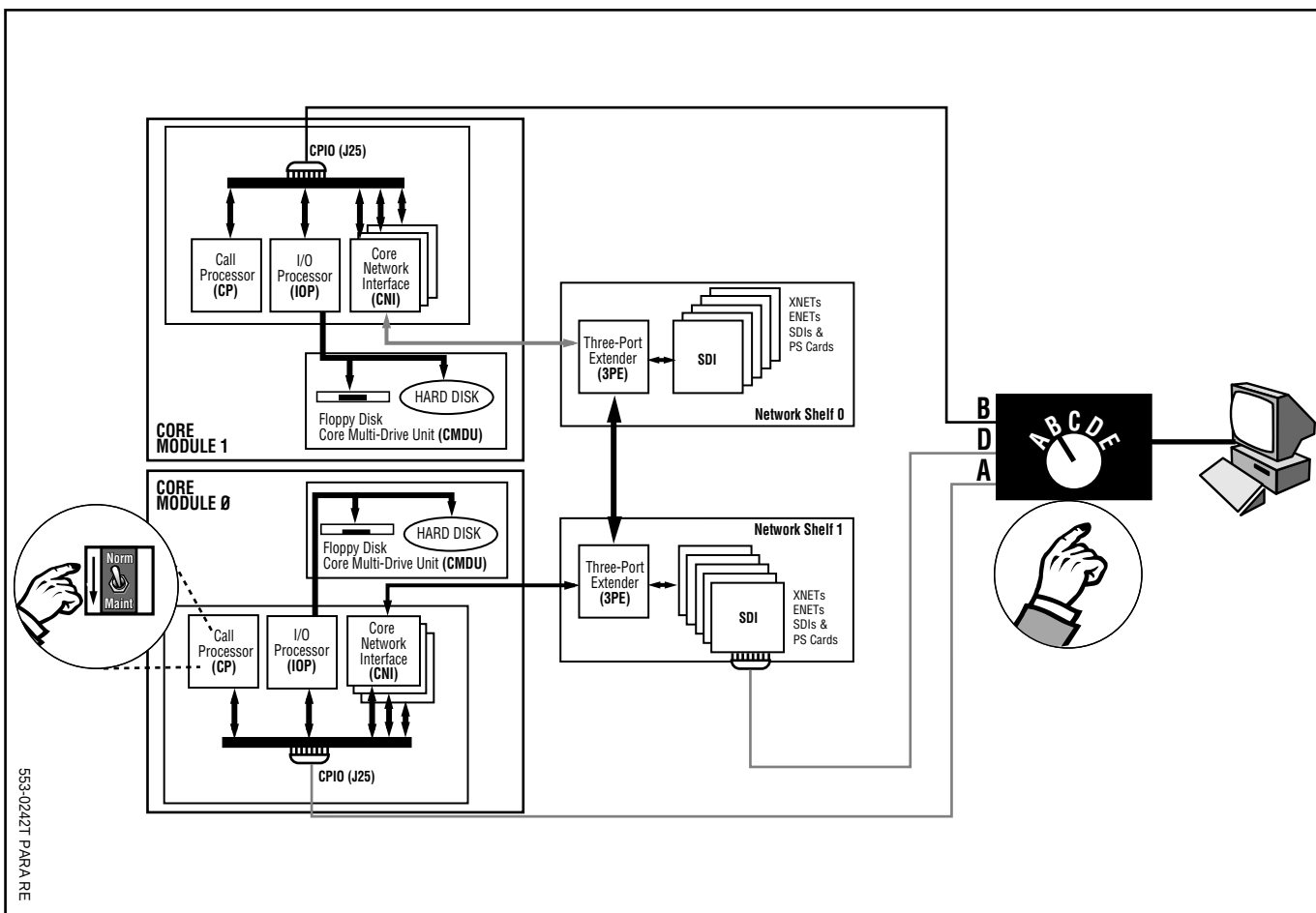
Do not use this chapter to perform a parallel reload

This chapter is intended to assist you to understand the parallel reload process. It is not intended to instruct you on how to perform a parallel reload.

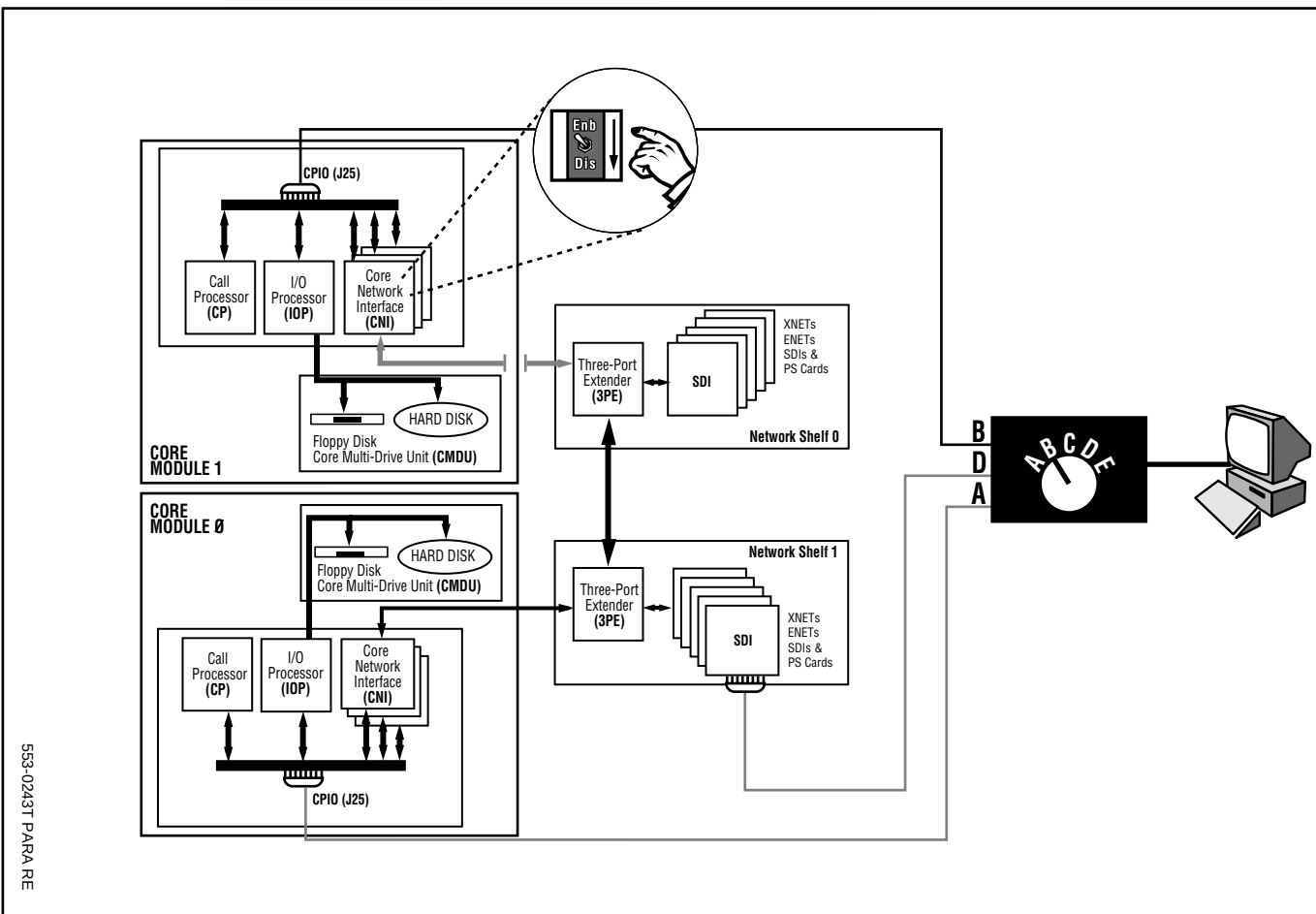
If you wish to perform a parallel reload, use the *Software Conversion Procedures* (553-2001-320).



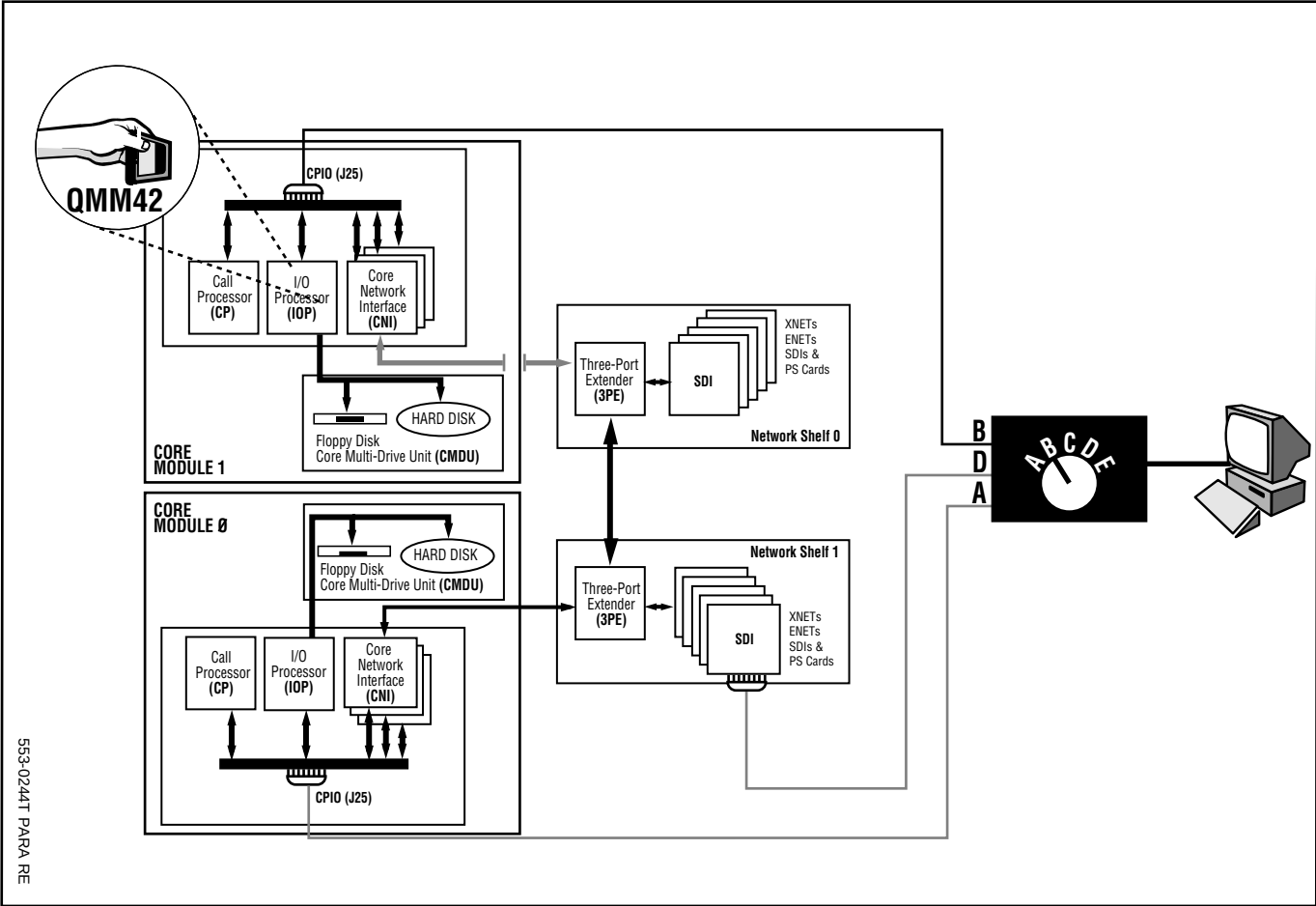
1. The TTY switch box dial is in position D. That allows the status of the CP, CNI, MEM and SYNC to be checked.



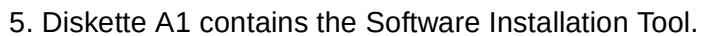
2. The CPØ is switched to MAINT forcing CPØ to remain in the call processing mode. The TTY switch box is switched to B allowing you to monitor CORE1.

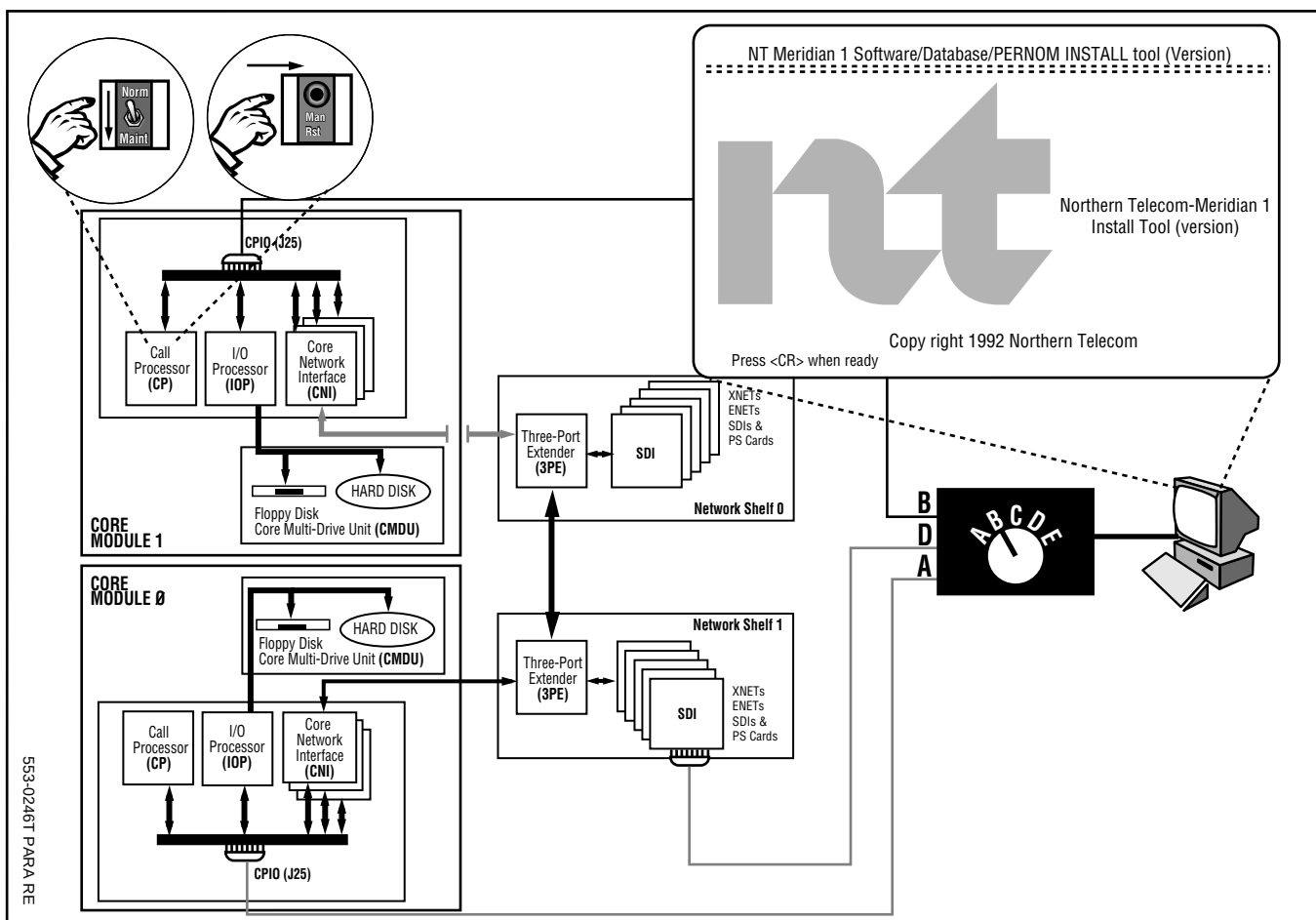


3.The CNI cards are switched to DIS, isolating CORE 1 from the network.

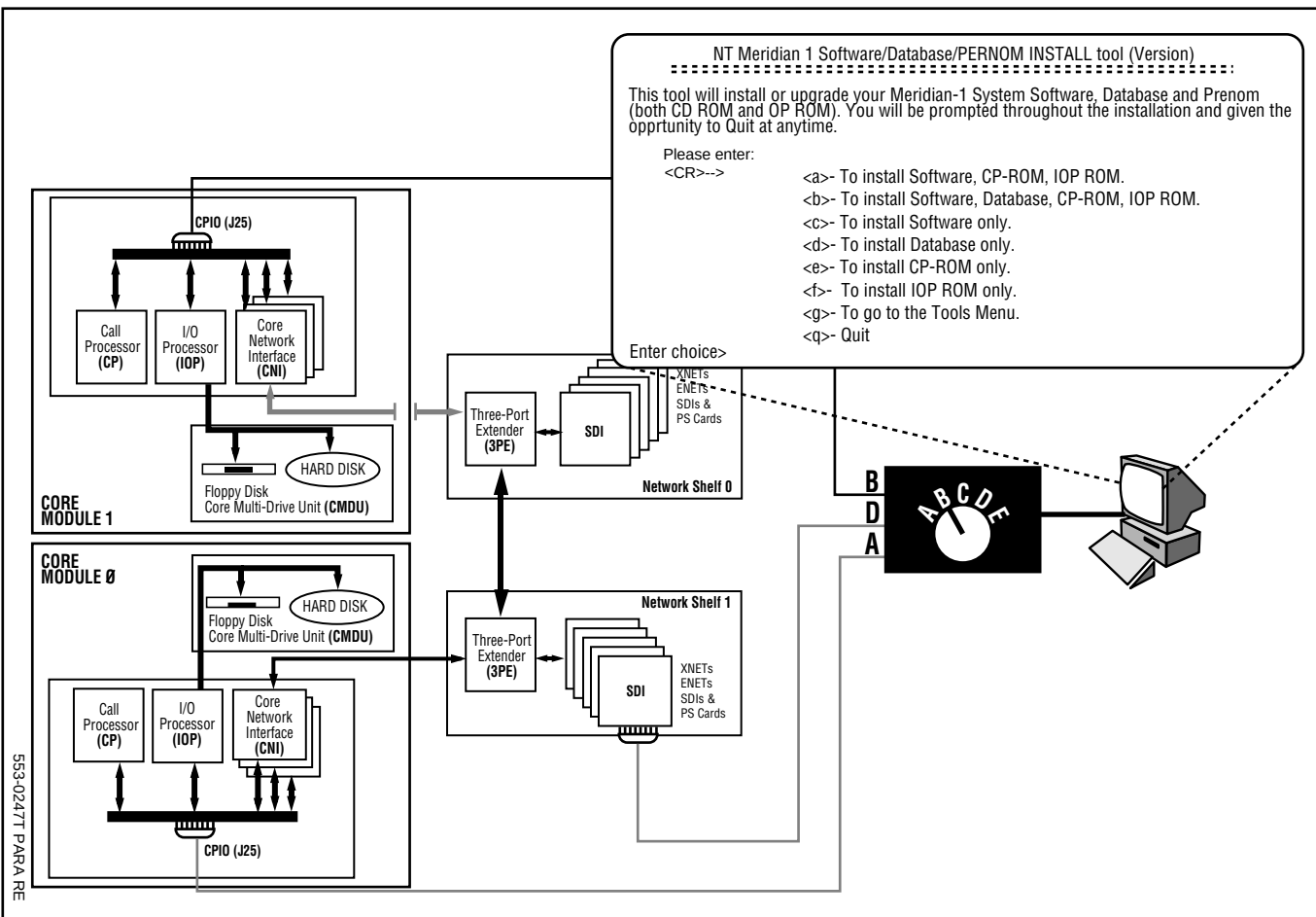


4. The target cartridge allows the new software to be loaded into CORE 1.

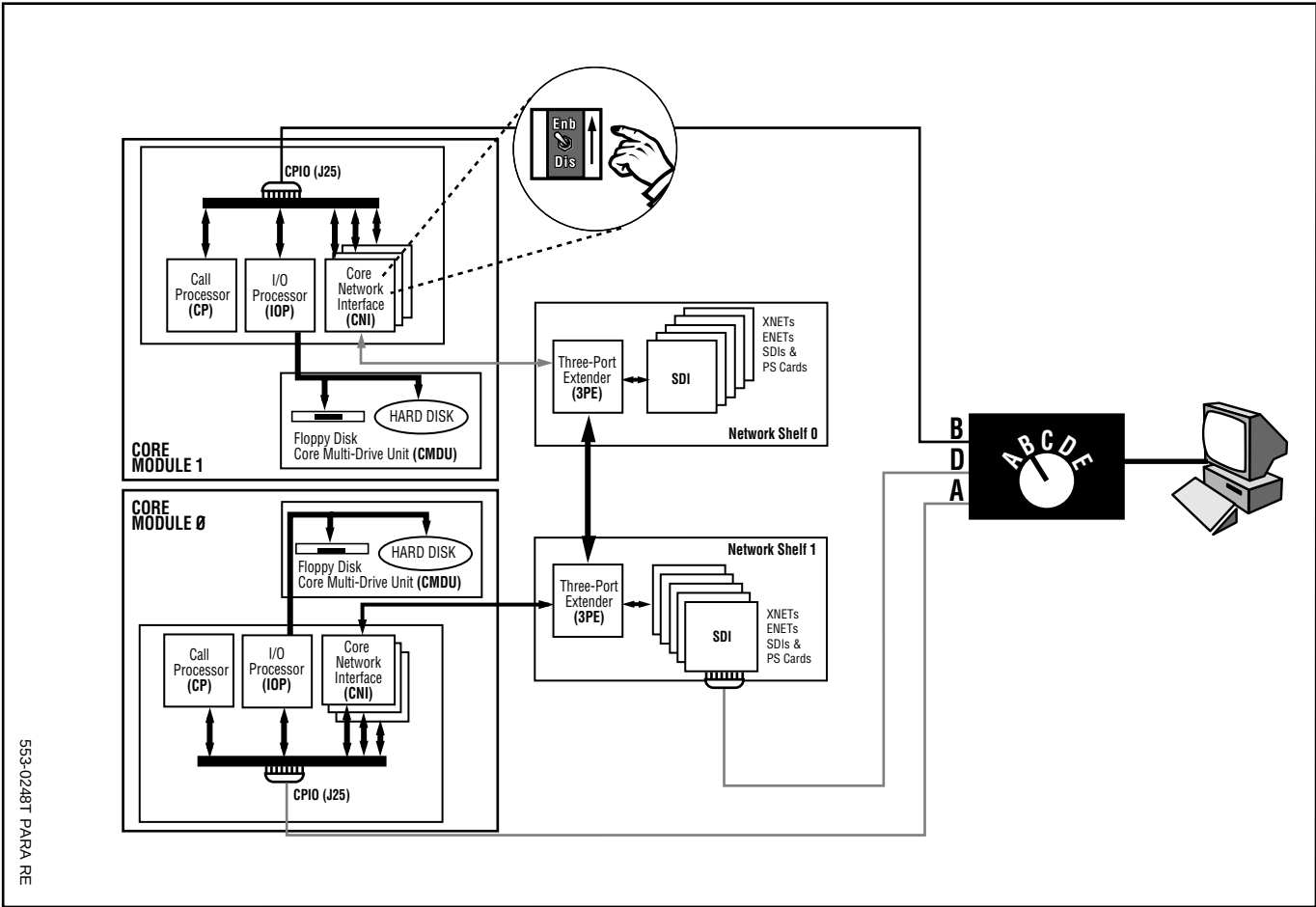




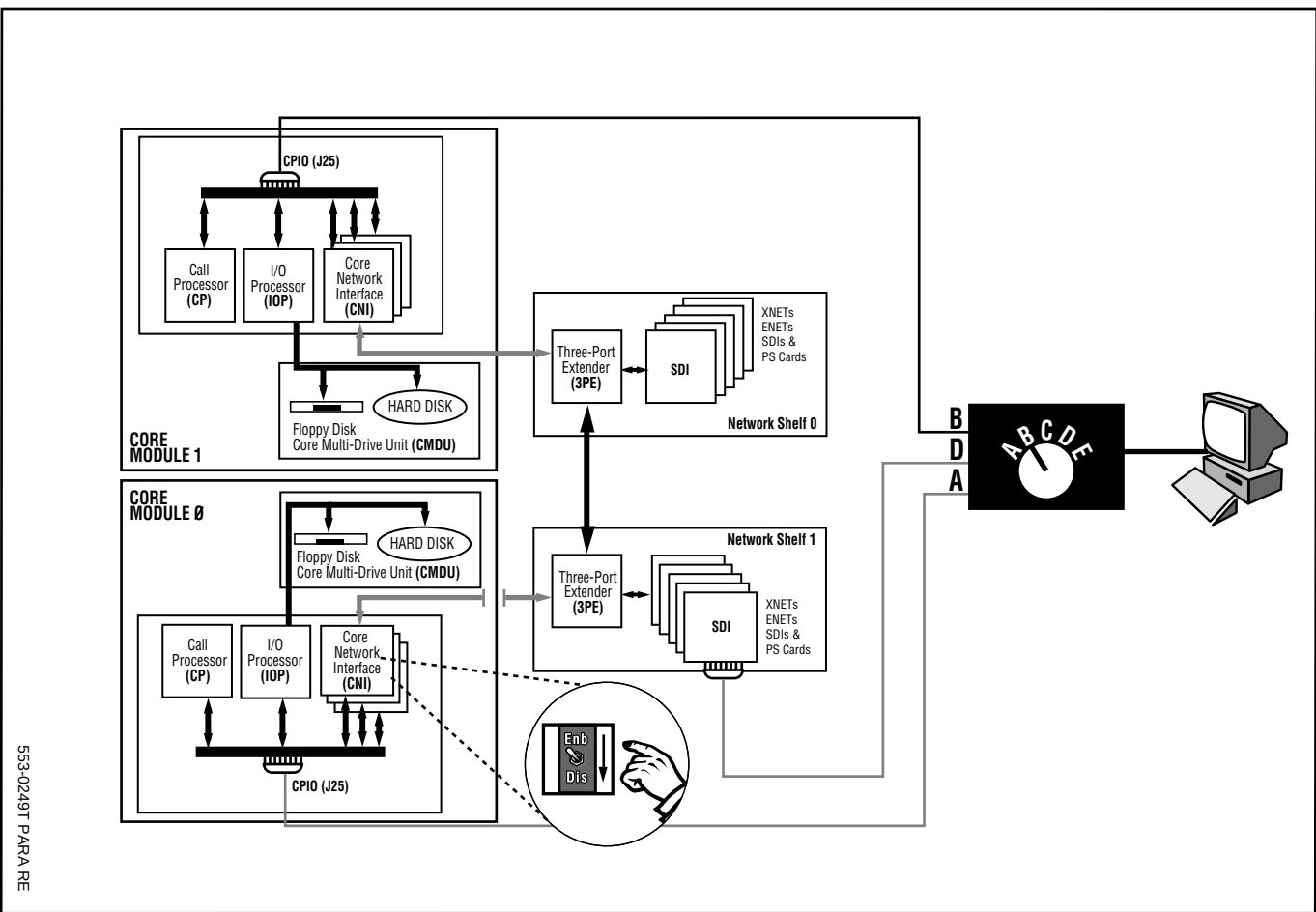
6. Switch to MAINT keeps CP1 active. Pressing the MAN RST button causes a system reload, enabling the Software Installation Tool on the TTY.



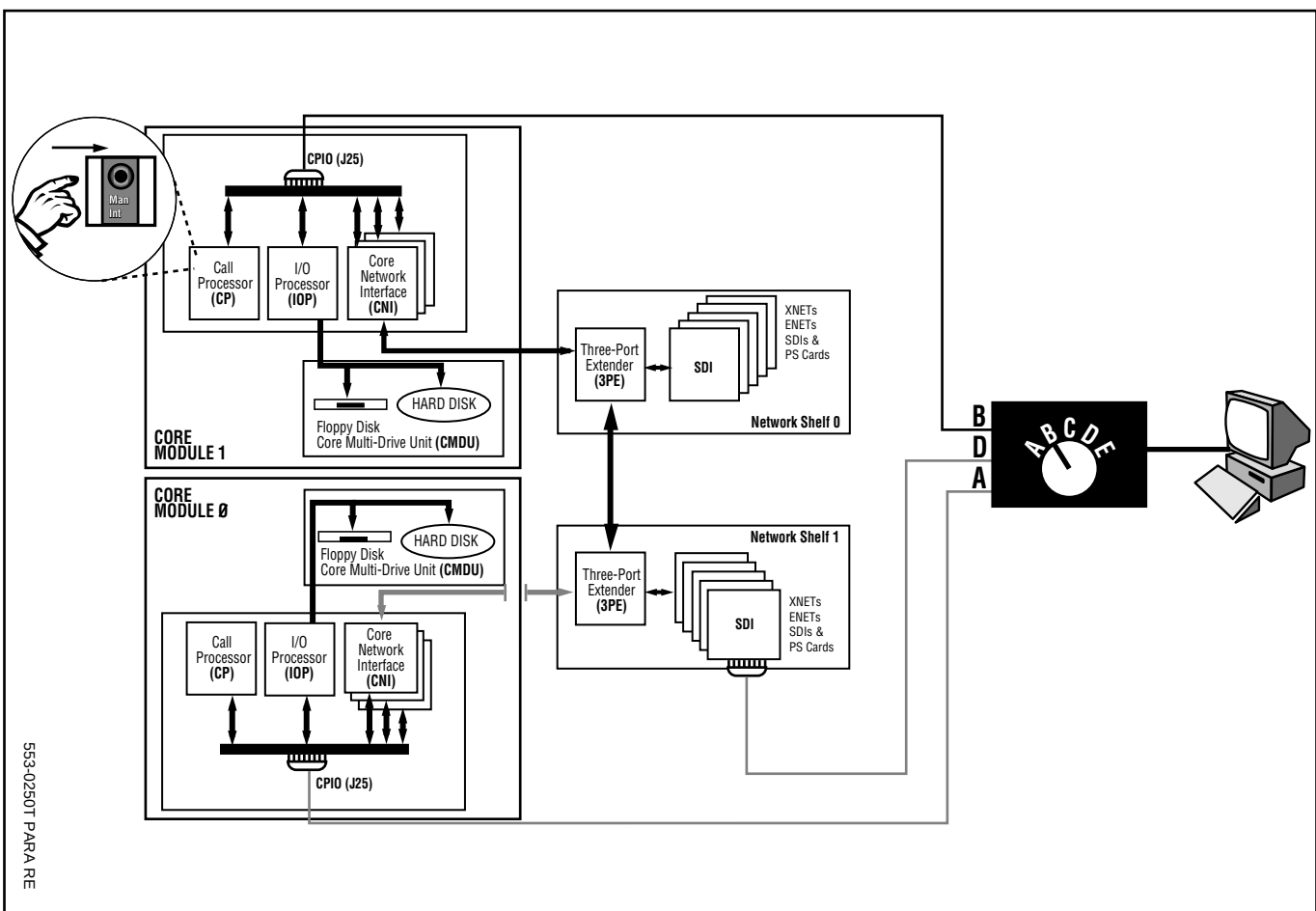
7. Using the Installation Tool allows the installation of the system software using diskettes 2 to 9; customer database using diskette 10; updating ROMs and re-booting CORE 1 with the target software.



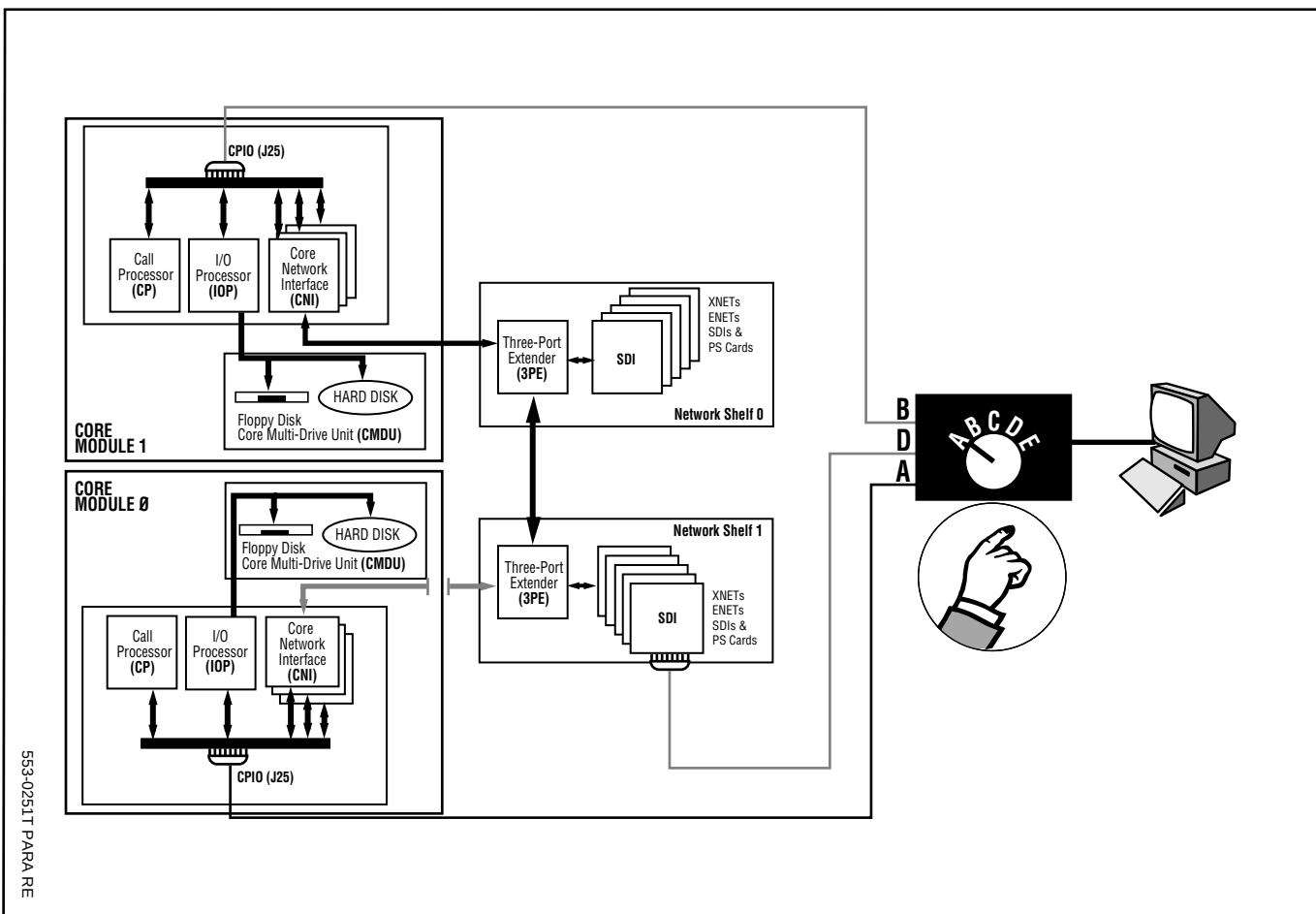
8. The CNI cards are switched to ENB, connecting CORE 1 to the networks.



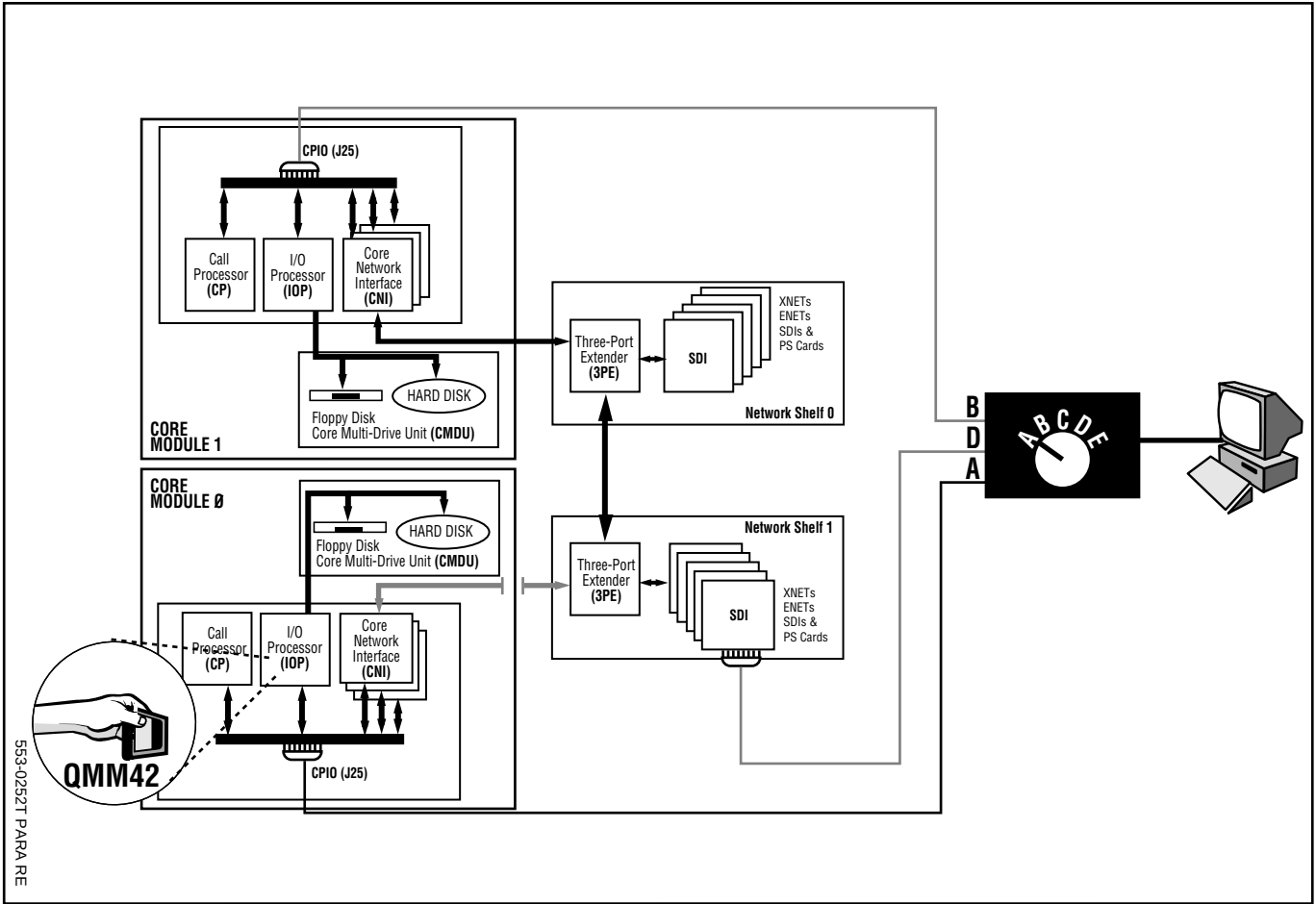
9. The CNI cards are switched to DIS, isolating CORE 0 from the networks.



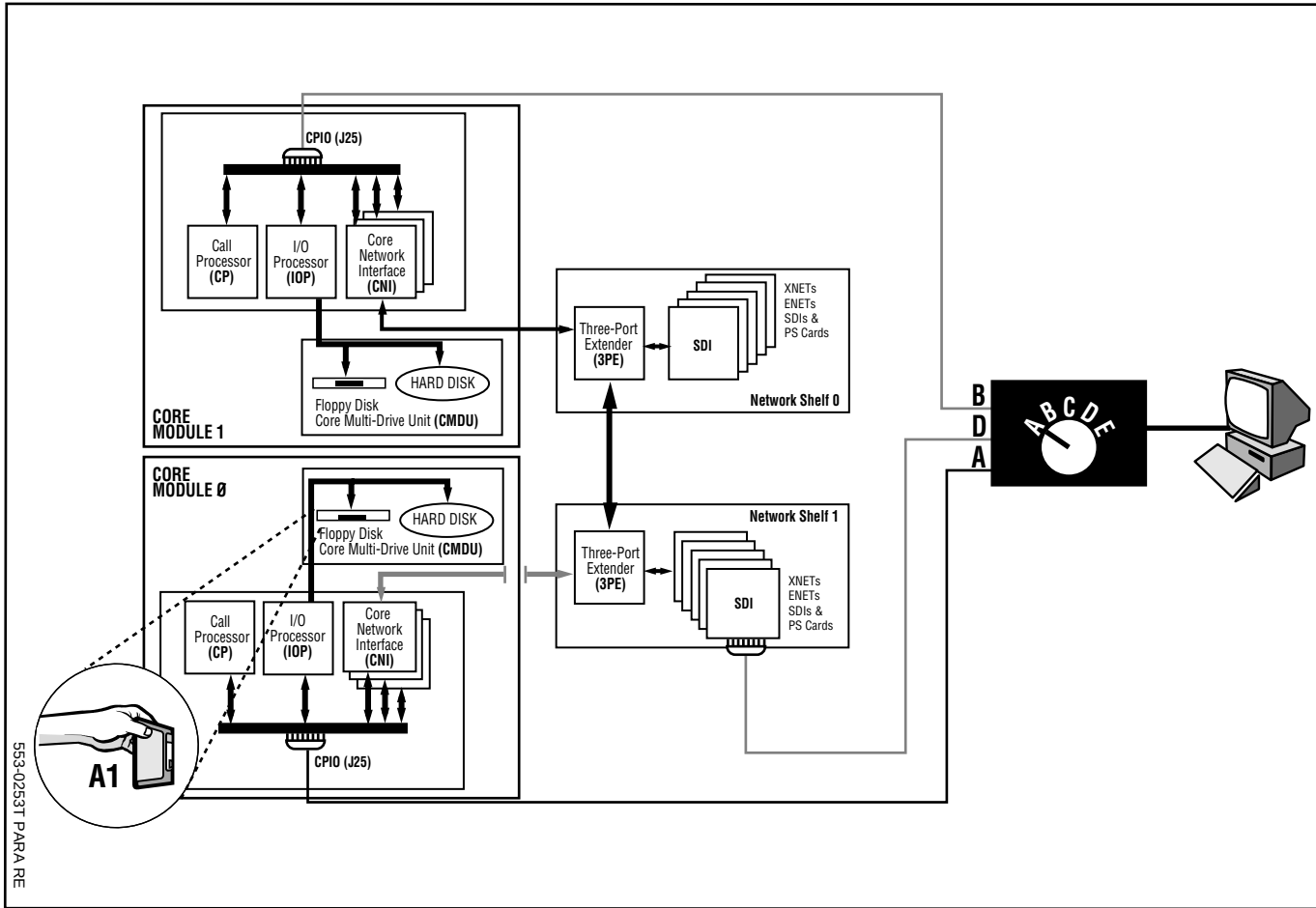
10. The MAN INT button is pressed, updating CORE 1 memory with call processing data (Udata) contained in the network card memories.



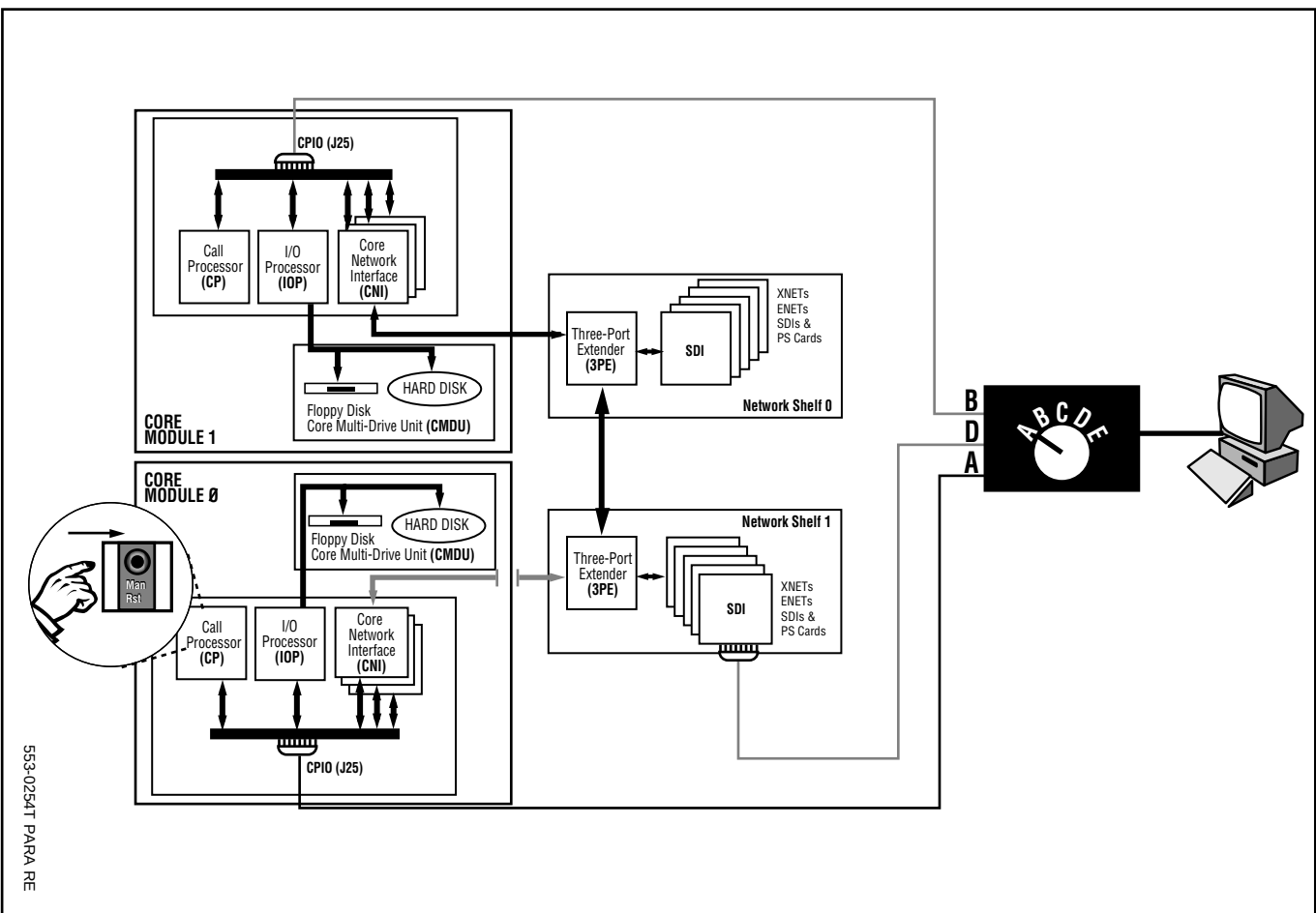
11. The TTY switch box dial is switched to A, allowing you to monitor CORE Ø.



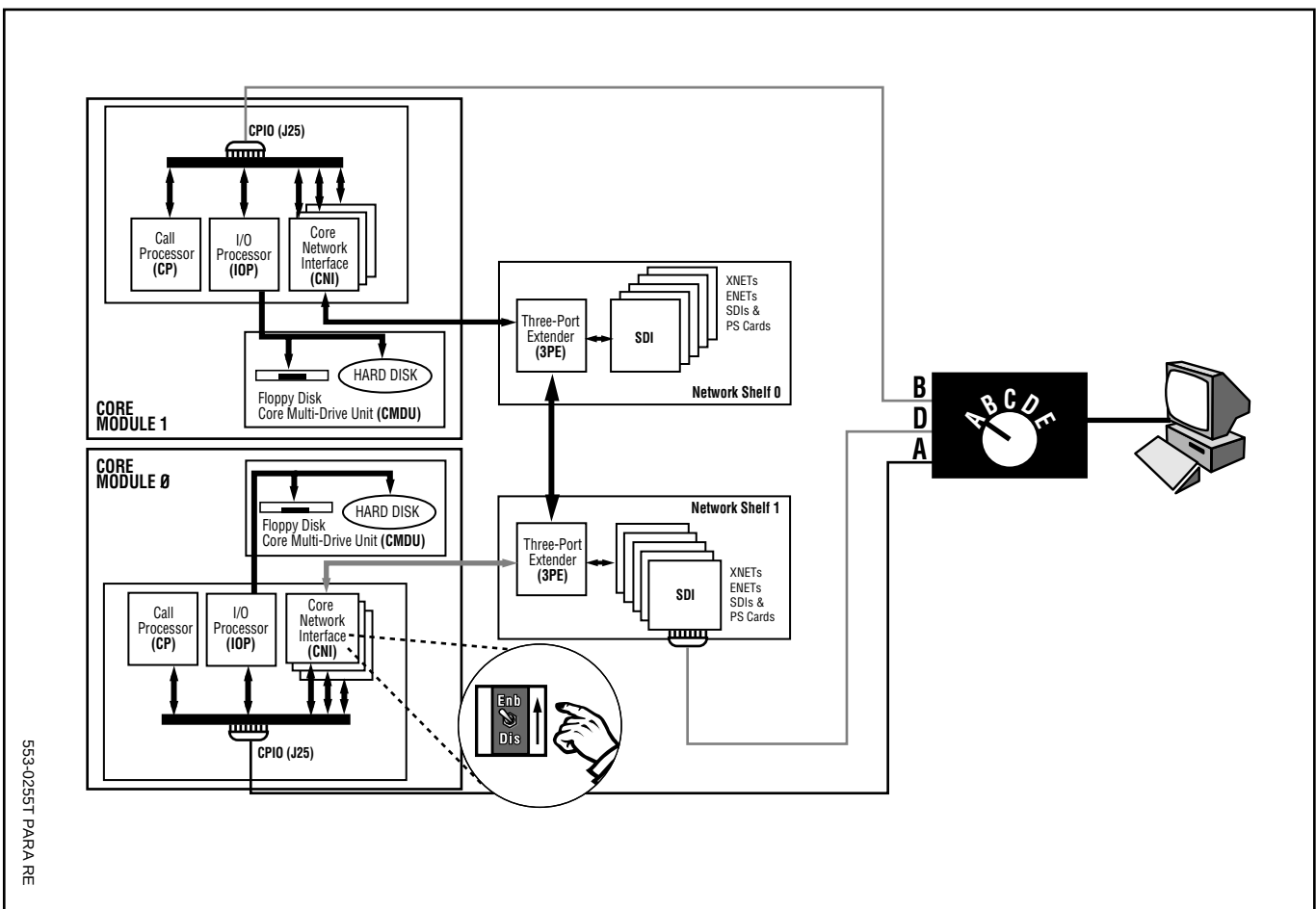
12. The target cartridge allows the new software to be loaded into CORE Ø.



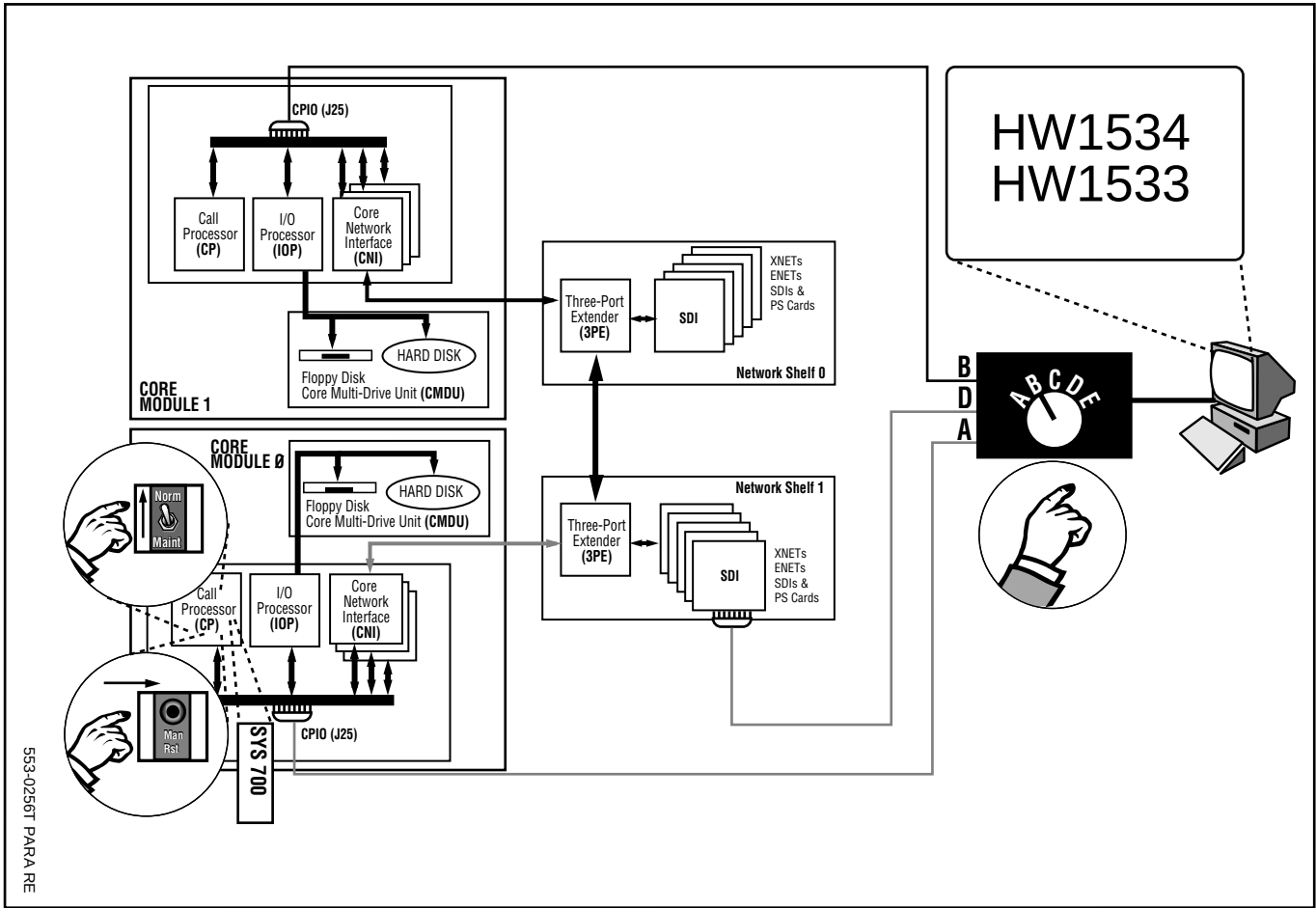
13. Diskette A1 contains the Software Installation Tool.



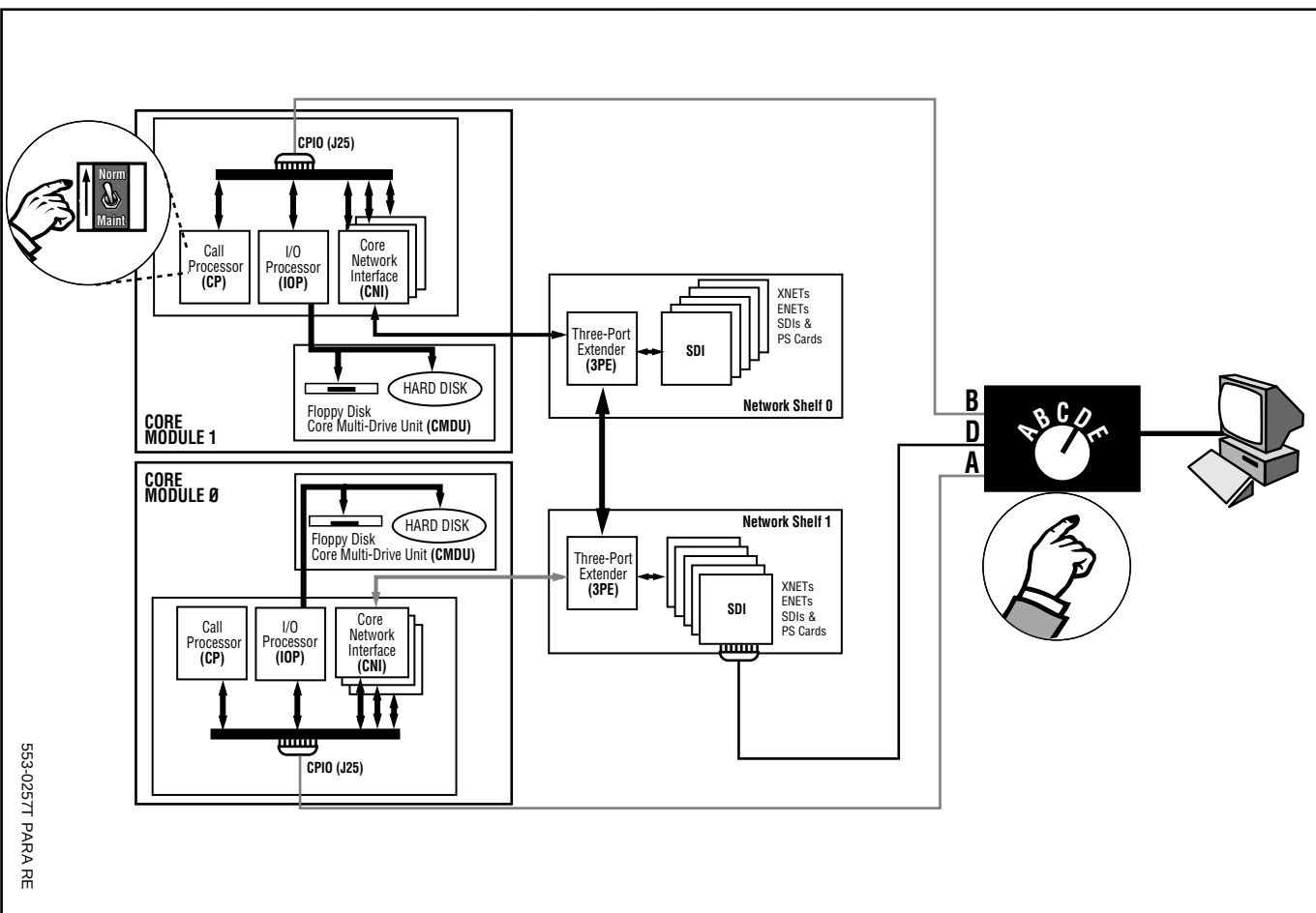
14. The MAN RST button is pressed causing a system reload, enabling the Software Installation Tool on the TTY. The installation tool installs the system software, customer database, updates ROMs and re-boots CORE Ø.



15. The CNI cards are switched to ENB, connecting CORE 0 to the networks.



16. The MAN RST button is pressed causing a system reload on CORE 0. When SYS700 appears, switch to NORM for normal operation. The HW messages indicate that the memories are synchronized.



17. The TTY switch box dial is switched to D, allowing you to monitor the system. CP1 is switched to NORM, for normal operation. Parallel reload is completed. Check status of CP, CNI, MEM and SYNC.



PCH — System Patch Reports

System Patch Reports is a resident program. PCH does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

PCH messages

PCH0100	Cannot create semaphore. ACTION: Contact your technical support group.
PCH0101	An invalid semaphore ID or task timed out. ACTION: Contact your technical support group.
PCH0102	Warning: failed to add symbol n to symbol table. ACTION: Contact your technical support group.
PCH0103	Warning: failed to remove symbol n from symbol table. ACTION: Contact your technical support group.
PCH0107	Cannot write back activate memory list. Patch data inconsistency might have occurred. ACTION: Contact your technical support group.
PCH0108	Program corruption. Restore-memory list is null. ACTION: Contact your technical support group.
PCH0109	Program corruption. Activate-memory list is null. ACTION: Contact your technical support group.
PCH0110	PATCH x ACTIVATED. Name = a, Ref# = b, PRS# = c, File = d. ACTION: Contact your technical support group.
PCH0111	PATCH x DEACTIVATED. Name = a, Ref# = b, PRS# = c, File = d. ACTION: Contact your technical support group.
PCH0113	Cannot restore back memory. Patch data inconsistency might have occurred. ACTION: Contact your technical support group.
PCH0115	Error activating patch x. buildMemLists call failed. ACTION: Contact your technical support group.
PCH0116	Error writing memory. Cannot activate patch x. ACTION: Contact your technical support group.

PCH0117	Error writing memory. Cannot deactivate patch x. ACTION: Contact your technical support group.
PCH0119	Cannot load patch. System contains maximum number of patches already. ACTION: A Patch must be removed before a new one can be added.
PCH0120	Error writing to retention file. Retention info might be out of synch. ACTION: Contact your technical support group.
PCH0123	Error loading patch from n. ACTION: Contact your technical support group.
PCH0124	Internal error, cannot get summary patch status at this time. ACTION: Check the report log file for further information.
PCH0125	Internal error, cannot deactivate patch at this time. ACTION: Check the report log file for further information.
PCH0126	Internal error, cannot activate patch at this time. ACTION: Check the report log file for further information.
PCH0127	Internal error, cannot load patch at this time. ACTION: Check the report log file for further information.
PCH0129	Internal error, cannot get detailed patch status at this time. ACTION: Check the report log file for further information.
PCH0130	Internal error, cannot remove patch at this time. ACTION: Check the report log file for further information.
PCH0131	Error deleting patch status record. Record not found. ACTION: Contact your technical support group.
PCH0132	Patch status tail pointer is null. ACTION: Contact your technical support group.
PCH0133	Invalid patch level received in patchload. ACTION: Contact your technical support group.
PCH0134	Full patch path length exceeded. ACTION: Contact your technical support group.
PCH0136	Patch filename empty in patchload. ACTION: Contact your technical support group.
PCH0137	Patch filename is not a full path in patchload. ACTION: Contact your technical support group.
PCH0138	Patch handle out-of-range in patchload ACTION: Contact your technical support group.
PCH0139	Cannot allocate memory for patchload. ACTION: Contact your technical support group.

PCH0141	Error reading patch file during patchload. ACTION: Contact your technical support group.
PCH0142	Patch Release x does not match the system Release y. ACTION: Recreate the patch for the system release.
PCH0143	Cannot determine default patch directory from DLO. ACTION: Contact your technical support group.
PCH0144	Patch retention array not initialized. ACTION: Contact your technical support group.
PCH0200	Cannot initialize patch semaphore. ACTION: Contact your technical support group.
PCH0201	Warning: cannot initialize patch retention. Patch retention will not be possible. ACTION: Contact your technical support group.
PCH0202	Warning: patch retention at diskos level failed. Some or all diskos patches may not have been retained. ACTION: Contact your technical support group.
PCH0203	Unable to open patch file n. ACTION: Contact your technical support group.
PCH0204	Cannot allocate protected memory for patch ACTION: Contact your technical support group.
PCH0205	Error in reading patch file n. ACTION: Contact your technical support group.
PCH0206	Memory patch from n to m is out-of-range. ACTION: Remake and retry the patch.
PCH0207	Memory patch mismatch between expected and actual. Either the patch was created incorrectly or it is the wrong patch for this software release. ACTION: Contact your technical support group.
PCH0208	Error accessing patch file n. ACTION: Contact your technical support group.
PCH0210	Error registering Patch Midnight routine with tod24Add. ACTION: Contact your technical support group.
PCH0211	Address to patch (x) is out of range. Patch corrupt or incorrupt for s/w load. ACTION: Remake the patch and try again.
PCH0212	Address of patch code (x) is out-of-range. ACTION: Take the patch out, then try to load and activate it again.
PCH0213	Failed to find start of WORKSHED loop near x. ACTION: Contact your technical support group.

PCH0214	System error. Patcher cannot be initialized. ACTION: Contact your technical support group.
PCH0215	Invalid patch file format. ACTION: Remake and retry the patch.
PCH0216	Unexpected code at start of SL-1 global procedure n. The patch might not match the release that is loaded. ACTION: Contact your technical support group.
PCH0217	Unexpected code in SL-1 patch global procedure n. ACTION: Remake and retry the patch.
PCH0219	Unexpected code in SL-1 global procedure n. ACTION: Remake and retry the patch.
PCH0220	NULL filename passed to readInPatch. ACTION: Contact your technical support group.
PCH0221	Unexpected code at start of C function n at x. The patch might not match the release that is loaded. ACTION: Contact your technical support group.
PCH0222	Checksum of patch read into memory x. Does not match expected checksum x. ACTION: Contact your technical support group.
PCH0223	Error reading patch file to compute checksum. ACTION: Contact your technical support group.
PCH0224	Error writing checksum to patch file. ACTION: Contact your technical support group.
PCH0300	Handle n out-of-range in writeRetenRec. ACTION: Contact your technical support group.
PCH0301	Retention structure not initialized. Patcher is most likely unusable. ACTION: Contact your technical support group.
PCH0302	Cannot open patch retention file n. ACTION: Contact your technical support group.
PCH0303	Error accessing patch retention file n. ACTION: Contact your technical support group.
PCH0304	Error writing to patch retention file n. ACTION: Contact your technical support group.
PCH0305	Error closing patch retention file n. ACTION: Contact your technical support group.
PCH0306	Internal error, patch retention not initialized. ACTION: Contact your technical support group.

- PCH0307 Cannot get patch retention directory from DLO.
ACTION: Contact your technical support group.
- PCH0308 Error remaining patch retention file from n to m. Patch retention may not be performed properly.
ACTION: Contact your technical support group.
- PCH0309 Error creating patch retention file n.
ACTION: Contact your technical support group.
- PCH0310 Patch retention array reinitialized.
ACTION: Contact your technical support group.
- PCH0311 Patch retention file recreated.
ACTION: Contact your technical support group.
- PCH0312 Cannot allocate protected memory for patch retention.
ACTION: Contact your technical support group.
- PCH0313 Error initializing patch retention file. Make sure the disk is OK. Retention info may be out-of-date.
ACTION: Contact your technical support group.
- PCH0314 Internal error, unknown patch retention level.
ACTION: Contact your technical support group.
- PCH0315 Cannot allocate Diskos memory for patch retention.
ACTION: Contact your technical support group.
- PCH0316 Error reading temporary patch retention file n. Retention may not be performed properly.
ACTION: Contact your technical support group.
- PCH0317 Bad patch retention record, handle = x. Patch retention data and file will be reinitialized. Retention info may be lost.
ACTION: Contact your technical support group.
- PCH0318 Cannot get semaphore for patch retention.
ACTION: Contact your technical support group.
- PCH0319 Error retaining patch from x.
ACTION: Contact your technical support group.
- PCH0320 Cannot retain patch from n. It is already loaded.
ACTION: Contact your technical support group.
- PCH0321 Retention data inconsistency, patch handle = x.
ACTION: Contact your technical support group.
- PCH0322 Cannot activate retained patch, handle = x.
ACTION: Contact your technical support group.
- PCH0323 Error initializing patch retention data. Patcher inoperable.
ACTION: Contact your technical support group.

PCH0400	Internal error, invalid parameter memSpec. ACTION: Contact your technical support group.
PCH0401	Internal error, invalid empty memSpec. ACTION: Contact your technical support group.
PCH0402	Internal error, invalid memlist elements. ACTION: Contact your technical support group.
PCH0403	Internal error, invalid argument to patch fix hits. ACTION: Contact your technical support group.
PCH0404	Cannot get task n priority, errno x. ACTION: Contact your technical support group.
PCH0405	Cannot restore task n priority back to y, errno z. ACTION: Contact your technical support group.
PCH0406	Internal error, null memSpec. ACTION: Contact your technical support group.
PCH0407	Warning: patchMemWrite task list full! (size=x) ACTION: Contact your technical support group.
PCH0408	Cannot suspend task x, errno y. ACTION: Contact your technical support group.
PCH0409	Could not write memory because it is being accessed by a task. ACTION: Contact your technical support group.
PCH0410	Warning: cannot resume task n, errno y. ACTION: Contact your technical support group.
PCH0411	Internal error, null memList. ACTION: Contact your technical support group.
PCH0412	PatchMemWrite request is out-of-range. ACTION: Contact your technical support group.
PCH0500	Cannot get semaphore for patch sanity check. ACTION: Contact your technical support group.
PCH0501	Cannot deactivate patch suspected to be bad. ACTION: Contact your technical support group.
PCH0502	Deactivating patch suspected to be causing sysload. ACTION: Contact your technical support group.
PCH0503	Cannot update patch days-in-service at midnight. ACTION: Contact your technical support group.
PCH0504	Deactivating patch suspected to be causing initializations. ACTION: Contact your technical support group. 

PWR — Power and System Monitor

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Meridian SL-1NT/XT power apparatus

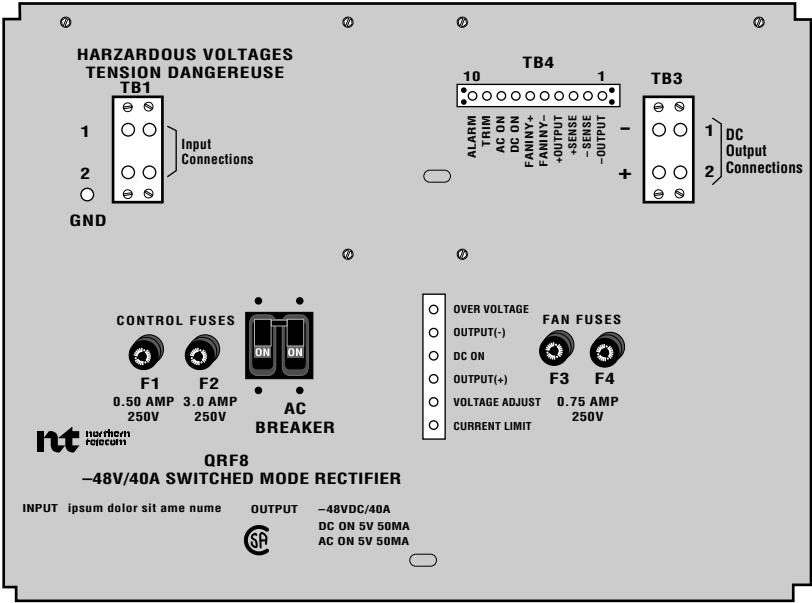
The Meridian SL-1NT/XT power apparatus consists of the following:

- ◆ QRF8 rectifier
- ◆ -48 volt regulator
- ◆ Ringing generator
- ◆ 30 volt converter
- ◆ 10 volt converter
- ◆ 5/12 volt converter
- ◆ Power monitor
- ◆ Power control shelf
- ◆ J2412 Power distribution plant

QRF8 — Rectifier

Purpose

The QRF8 Rectifier provides the -48volt supply for the Meridian SL-1LE, MS, N, NT and the QCA96 SL-1N.



553-0200T QRF8(PWR)

Function

The QRF8 - 48V rectifier is used as a battery eliminator to supply 40 amps to the second stage of power conversion in the system and as a battery charger for a reserve battery supply.

The battery equipment usually consists of a string of 24 individual lead-acid cells, producing approximately 2V dc power cell, connected in a series to provide -48V dc at the output terminals.

Battery equipment is required when system operation is to be maintained during a commercial power failure. The reserve battery is float-charged from the system rectifiers.

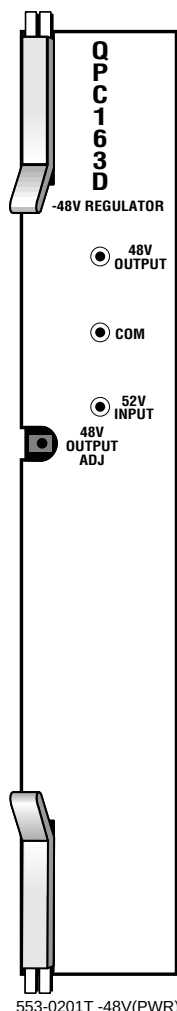
The rectifier maintains delivery of power at -42V dc during momentary fluctuations in commercial input supply voltage of less than 100 ms

Features

The QRF8 - 48V rectifier has the following features:

- ◆ 48V dc rectifier
- ◆ strap options for 115, 208 and 230V ac operation

- 48V Regulator — Forty eight volt regulator



Purpose

The QPC163 - 48V regulator provides 120 Hz filtering of the -48V dc talk battery for trunks and 500 or 2500 type sets.

Function

One QPC163 - 48V regulator is required for each 15 amps of current drain from PE shelves. The maximum draw from the PE shelf is 3 amps.

Features

The faceplate includes the following features:

- ◆ a -48 volt output meter test connection
- ◆ a common (ground, earth) meter test connection
- ◆ a -52 volt input meter test connection
- ◆ a factory sealed -48 volt output adjustment potentiometer

RNG GEN — Ringing Generator



553-0202T QPC187(PV)

Purpose

The QPC187 Ringing generator converts -48V dc to 86V/105V ac, and provides 20 Hz ringing supply for 500/2500-type telephone sets.

Function

The ringing generator supplies sufficient power to ring 24 NE-C4 type ringers simultaneously. From vintage “E” onward, the power is doubled to supply 50 NE-C4 ringers.

One ringing generator is required for each PE cabinet serving 500 or 2500 type line circuits.

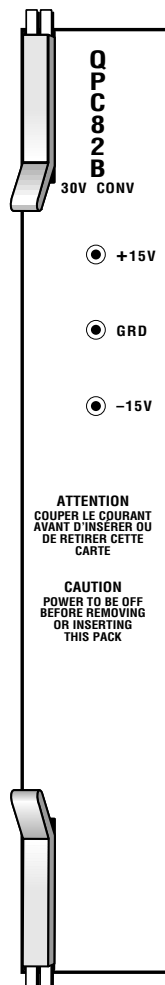
Features

The faceplate includes the following features:

- ◆ a 20Hz output meter test connection*
- ◆ a ground (earth) meter test connection

*A test voltage is present at this test connection rather than 86V/105V ac

30V CONV — Thirty volt converter



553-0203T 30VCON(PWR)

Purpose

The QPC82 30V converter converts -48V dc to $\pm 15V$ dc supplies for Meridian 1 proprietary telephones.

Function

Use a QPC82C or later vintage.

One QPC82 converter is required for every 20 BCS line circuit cards in a cabinet, or 192 Meridian 1 proprietary telephones.

The QPC82 card is adjusted at the factory to provide adequate voltage. Field testing is not required unless a complete failure is suspected. If the measured voltage is zero, the card needs to be replaced. Any voltage greater than zero indicates the card is fully operational, and within the approved operating specifications.

Features

The faceplate includes the following features:

- ◆ a +15 volt output meter test connection
- ◆ a ground (earth) meter test connection
- ◆ a -15 volt output meter test connection

10V CONV — Ten volt converter



Purpose

The QPC80 10V converter, transforms -48V dc to $\pm 10V$ dc supply for PE shelf cards.

Function

Use a QPC80E or later vintage.

One QPC80 is required for every five PE shelves in a cabinet equipped with QPC464 Buffers.

One QPC80 is required for every 14 PE shelves in a cabinet equipped with QPC659 Dual Loop Buffers.

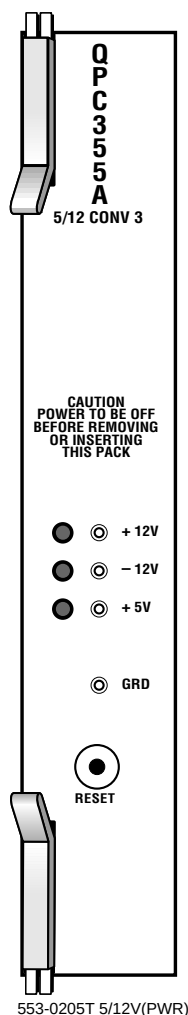
The QPC80 card is adjusted at the factory to provide adequate voltage. Field testing is not required unless a complete failure is suspected. If the measured voltage is zero, the card needs to be replaced. Any voltage greater than zero indicates the card is fully operational, and within the approved operating specifications.

Features

The faceplate includes the following features:

- ◆ a +10 volt output meter test connection
- ◆ a ground (earth) meter test connection
- ◆ a -10 volt output meter test connection

5/12V CONV — Five/twelve volt converter



Purpose

The QPC355 and QPC190 converts -48V dc to $\pm 5/12V$ dc, used for power CE and network cards.

Function

The QPC355 QPC190 converter provides over voltage shutdown and over current protection.

One power card is required for each CPU, memory, and network shelf.

The QPC355 QPC190 converter provides over voltage and over current protection, through using the reset button on the faceplate.

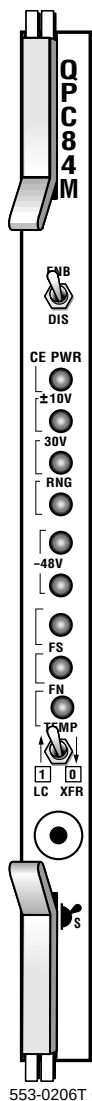
Features

The faceplate includes the following features:

- ◆ a +12 volt output meter test connection
- ◆ a -12 volt output meter test connection
- ◆ a +5 volt output meter test connection
- ◆ a -5 volt output meter test connection*
- ◆ a ground (earth) meter test connection
- ◆ an over voltage reset button

* QPC355 does not provide -5V.

QPC84 — Power Monitor



553-0206T QPC84(PWR)

Purpose

The QPC84 monitors the following system voltages:

- ◆ CE power
- ◆ $\pm 10V$ dc
- ◆ 30V dc
- ◆ ringing generator 86V ac - 20 Hz
- ◆ -48V dc in rectifier/PE cabinet
- ◆ fuse status
- ◆ air flow status (FN)

Function

Use the QPC84P or later version. One QPC84 power monitor is required per cabinet.

The power monitor controls the following:

- ◆ major and minor alarm circuits; major via hardware, minor via CPU and software
- ◆ emergency transfer
- ◆ system reset for Meridian SL-1S, M, MS
- ◆ system shutdown due to high temperature

Features

The faceplate includes the following features:

- ◆ LED for tolerance indication of voltage levels
- ◆ line transfer and system reset
- ◆ option switches on the component side of the card allow or defeat certain alarm or transfer conditions

PWR CONT SHELF — Power Control Shelf

Circuit breakers

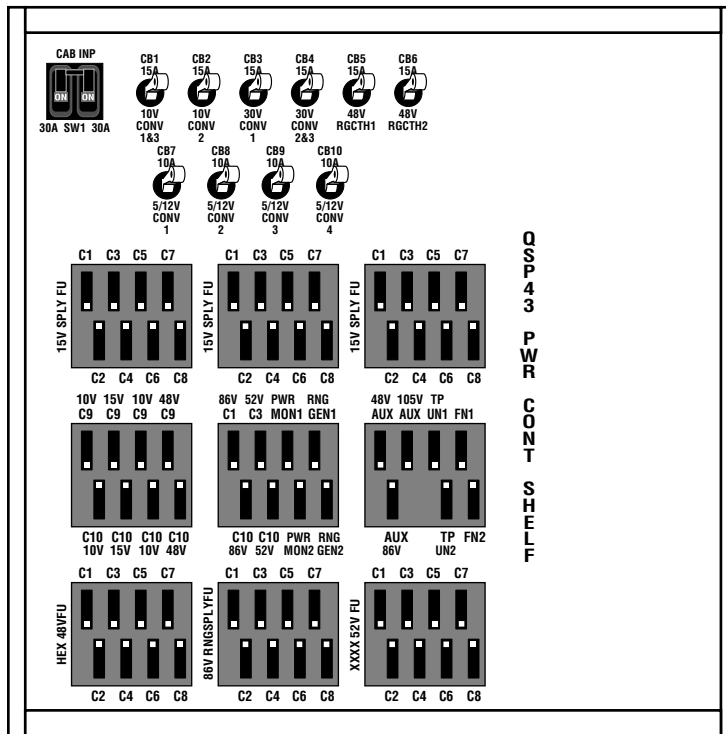
Circuit breakers, located on the rear of the power control shelf, protect the input to the shelf and the cards. The breakers also act as a switch allowing the power to be shut off when changing the power cards.

Fuses

Fuses, arranged in blocks of eight, protect the output of the power cards. The fuses are identified by a “C” and correspond to the power plug label of each peripheral equipment shelf power plug.

Power input

Terminal TB2 is the -48V dc and ground input to the power control shelf. Terminals 1 (blue wire) and 2 (red wire) are for the -48V dc, terminals 3 and 4 (black) are for ground.



553-0207T PCS(PWR)

J10

Jack 10 extends emergency transfer signals, ground and -48V dc, originating from the power monitor card, to the cross-connect field.

J9

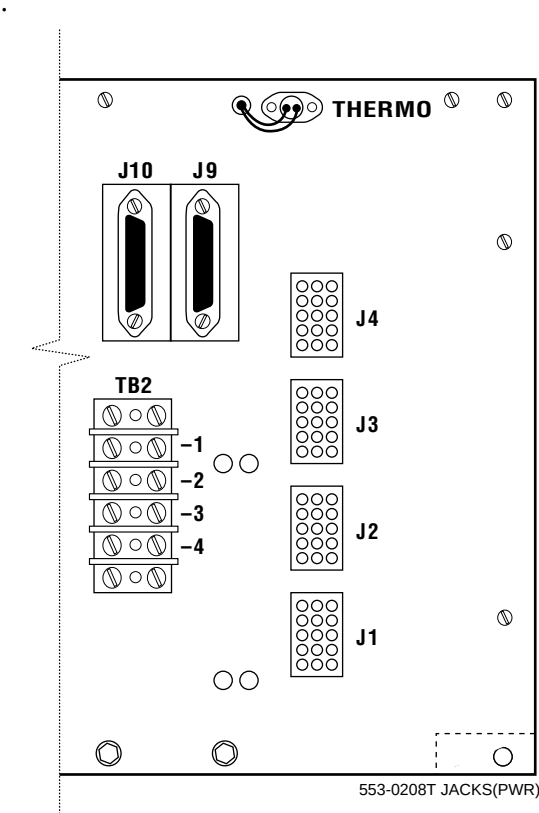
Jack 9 provides the power monitor card with access to the processor through the CE shelf connector C12.

Thermo

The thermo is a sensing device which opens and trips the cabinet input circuit breaker when the temperature rises above 68°C.

J1 J2 J3 J4

These are Jacks which extend the various converter card outputs to the Peripheral Equipment shelves through the “C” power plugs.



J2412 (QCA 13) — Power Distribution Plant

The J2412 Power Distribution Plant, commonly known as a QCA13 power cabinet, is actually housed in a QCA13 power cabinet.

Purpose

The J2412 Power Distribution Plant is used to power larger systems, such as Meridian SL-1 XN, XT and Option 71.

Function

A plant may consist of up to three power cabinets. Each power cabinet can contain up to four rectifiers and a control panel. A system can have a total of up to 10 rectifiers connected in parallel.

Features

The J2412A Control Panel houses:

- ◆ a control printed circuit card fuse — CONT
- ◆ rectifier sense leads fuses — RC1 to RC10
- ◆ a volt meter fuse — VM
- ◆ a switch for control card removal and/or replacement — ENB, DIS
- ◆ a control card disable alarm LED — DIS
- ◆ a fuse alarm LED — FA
- ◆ an equalize timer switch for auto charging: 1&2 on for 1.25 hr, 1&3 on and 2 off for 2.5 hr, 1&4 on and 3 off for 5 hr
- ◆ an equalize alarm showing function — EQL
- ◆ an ac failure alarm LED — REC AC
- ◆ a rectifier output failure alarm LED — REC FAIL
- ◆ voltage test jacks — GRD and -48V
- ◆ float adjustment — ADJ LF and HF
- ◆ float and voltage alarms LEDs — LF HF LV HV
- ◆ voltage adjustment — ADJ LV and HV

-48V Distribution Fuses

The -48 V dc cabinet power distribution fuses, rated at 30 amps, have 1-1/3A QFF fuses as blown 30 amp fuse indicators.

J2357 Rectifier

Purpose

The J2357 Rectifier supplies the -48 V dc power to the QCA13 cabinet.

Function

The input transformer can be arranged to accommodate 240 V ac phase to neutral, 240 V ac line-to-line, 208 V phase-to-phase, 120 V ac line-to-neutral, 120 V ac phase-to-neutral, at 50 or 60 Hz.

The line alternating current is applied through a double-poll-single-throw circuit breaker.

Output is -48 V dc, with a range from -44 V to -60 V, at 55 amps. Output rectifier circuit breakers, CB1 to CB4, are rated at 70 amps.

Features

The J2412A Control Panel houses:

- ◆ a double-poll-single-throw circuit breaker
- ◆ output rectifier circuit breakers, CB1 to CB4
- ◆ a 1-1/3 amp to protect the control circuitry
- ◆ test jacks to measure output voltage
- ◆ a meter showing discharge current
- ◆ a LED indicating rectifier failure

Meridian SL-1ST power apparatus

The Meridian SL-1ST operates on -48V dc, which comes from commercial power through a rectifier and draws the following in various configurations:

- ◆ base model — 10 amps at 110 V ac
- ◆ 2-tier model — 9 amps at 220 V ac
- ◆ 3-tier model — 12 amps at 220 V ac

The rectifier and power unit are located in the cabinet base. The power unit supplies the voltages required by the circuit cards located on the CE shelf and the lower PE shelf. The power unit also provides ringing voltage for 500 and 2500 sets in all 3 tiers of the cabinet.

In the second and third tiers, each PE shelf has its own power converter which supplies those PE shelves with all the voltages required by the circuit packs.

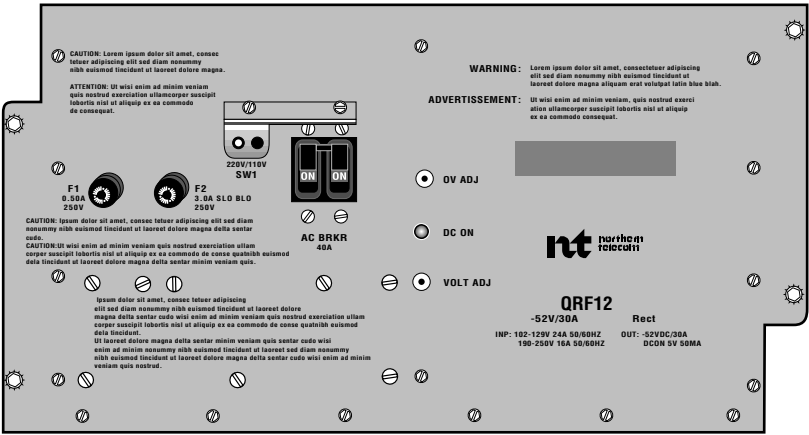
The Meridian SL-1ST/STE power apparatus consists of the following:

- ◆ QRF12 rectifier
- ◆ QUX19 power distribution unit
- ◆ QUX20 power distribution unit
- ◆ QUAA3 power unit
- ◆ QPC703 power supply
- ◆ QPC704 power monitor
- ◆ 30/150 volt converter
- ◆ QPC706 power converter
- ◆ MFA 150 power system
- ◆ MPP600 Modular power plant

QRF12 — Rectifier

Purpose

The QRF 12 Rectifier is provides power for the Meridian SL-1 ST, STE, Option 21, 51, 51C, 61, and 61C.



553-0209T QRF12(PWR)

Function

The QRF12 rectifies 50 or 60 Hz alternating current of 117 V, 208 V or 220 V to unregulated -48V dc. The rectifier has the ability to trickle-charge system batteries, if so equipped.

Features

The QRF12 Rectifier has the following features:

- ◆ a clamped 220volt/110volt switch
- ◆ a ganged 40 amp input circuit breaker
- ◆ fuse F1 and F2
- ◆ a 0 voltage adjust potentiometer
- ◆ a float voltage adjust potentiometer
- ◆ a DC on LED

QUX19 — Power Distribution Unit

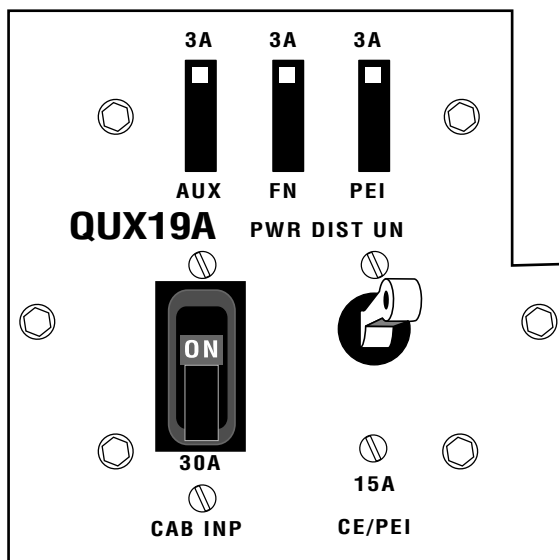
Purpose

The Power Distribution unit distributes the -48V dc supplied by the rectifier to the CE shelf and the first PE shelf.

Features

The faceplate includes the following features:

- ◆ main circuit breaker
- ◆ CE/PE circuit breakers
- ◆ fuses for auxiliary equipment
- ◆ fan for third tier only
- ◆ PE shelf fuse



553-0210T QUX19A(PWR)

QUX20 — Power Distribution Unit

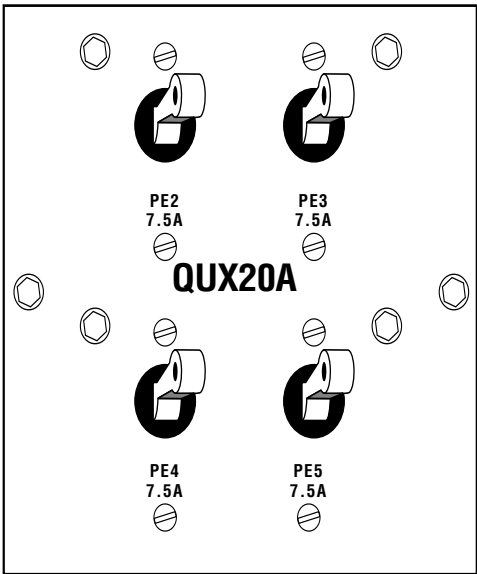
Purpose

The QUX20 distributes the -48V dc supplied by the rectifier to the PE shelves located in the second and third tiers.

Features

The faceplate includes the following features:

One circuit breaker for each PE shelf.



553-0211T QUX20A(PWR)

QUAA3A PWR UN — Power Unit

Purpose

The QUAA3A power unit supplies -48V dc and ringing voltage for the system.

Features

The QUAA3A supplies -48V dc via the QUX20 to the power converters in the second and third tier PE shelves.

The QUAA3A power unit regulates the -48V dc used by the CE and first-tier PE.

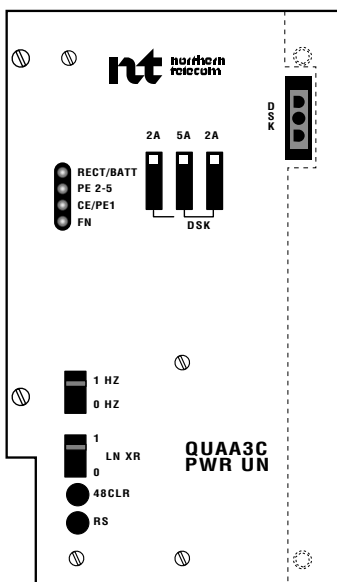
The power unit provides ringing voltage for the system.

The QUAA3A Power Unit, located to the left of the power shelf in the base unit, contains two printed circuit packs:

- ◆ QPC 703 Power Supply which provides voltages used by the CE and first-tier PE
- ◆ QPC 704 Power Monitor

Features

- ◆ ring generator fuse
- ◆ disk drive fuses
- ◆ power connector for disk drive



553-0212T QUAA3A(PWR)

QPC703 — Power Supply

Purpose

QPC 703 Power Supply which provides voltages used by the CE and first-tier PE

Function

The QPC703 is a dc to dc converter. It converts -48 volts dc to +5 volts, ± 10 volts and ± 12 volts, for r the CE, PE and floppy disk drives.

The QPC703 is located within the QUAA3 Power Unit as a printed circuit card.

Features

The QPC703 does not show features as it is part of the QUAA3.

QPC704 — Power Monitor

Purpose

The QPC704 Power Monitor, is located in the QUAA3 Power Unit and monitors the following:

- ◆ system voltages
- ◆ fusing
- ◆ power faults
- ◆ temperature
- ◆ fan

Function

The power monitor provides the following:

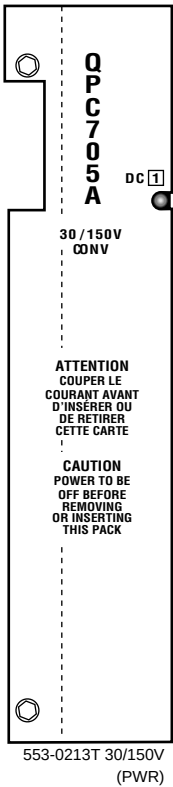
- ◆ PE1 line transfer when any fault which will impede normal call processing is detected
- ◆ line transfer upon request of the processor
- ◆ generate a reset for the common equipment, on power-up
- ◆ regulate -48 V dc used by Peripheral Equipment first-tier (PE1)

Features

The faceplate includes the following features:

- ◆ rectifier on LED
- ◆ PE shelf 2 to 5 power on LED
- ◆ CE/PE shelf 1 power on LED
- ◆ fan on LED
- ◆ 25/20 ringing voltage selection switch
- ◆ line transfer switch
- ◆ -48 V dc reset button for PE shelf 1
- ◆ reset button

30/150V CONV — Converter



The QPC705 30/150V is used only in conjunction with telephones terminated on PE shelf one of the first tier.

Purpose

Converts -48 V dc to:

- ◆ ±15 V dc supply for Meridian 1 proprietary telephones
- ◆ -150 V dc supply for message waiting feature of the 2500 type telephones

Features

The faceplate includes the following features:

A LED when lit, indicates that the converter is functioning.

QPC706 — PE Power Converter

Purpose

The QPC706 provides power for the PE cards on the second and third-tier.

Function

The QPC706 Power converter is supplied -48 V through the QUX20 power distribution and converts that voltage to the following:

- ◆ +6 V dc
- ◆ ± 10 V dc
- ◆ ± 15 V dc
- ◆ -150 V dc
- ◆ -48 V dc regulated

The QPC706 provides a line transfer signal to the power monitor if the +6 V, ± 10 V, or the -48 V fails, and provides a fault indication to the power monitor if a power fault is present on the PE shelf.

Features

The faceplate includes the following features:

A LED when lit, indicates that the converter is functioning.

Option 51/61/71/81 power apparatus

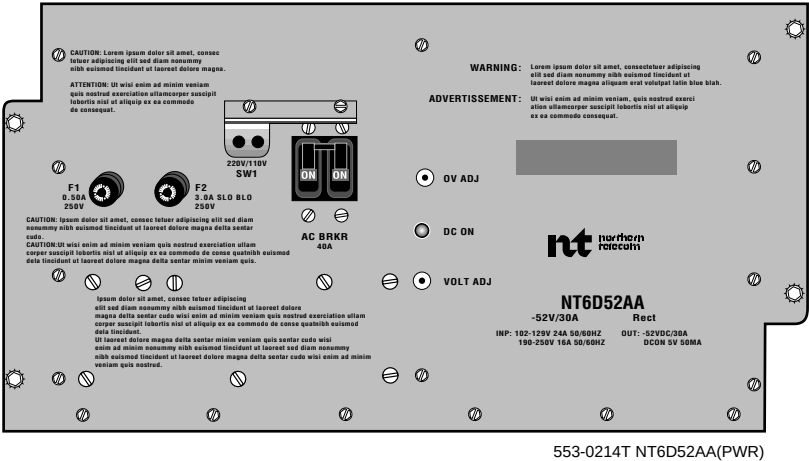
The Option 51/51C/61/61C/71/81/81C power apparatus consists of the following:

- ◆ NT6D52 switched mode rectifier
- ◆ NT5C03 switched mode rectifier
- ◆ CPE power supply, AC or DC version
- ◆ CE power supply, AC or DC version
- ◆ PE power supply, AC or DC version
- ◆ Ringing generator, AC or DC version
- ◆ NT8D22 system monitor
- ◆ MFA 150 power system
- ◆ MPP 600 modular power plant
- ◆ System 600/48 DC power system

NT6D52AA — Switched Mode Rectifier

Purpose

The NT6D52AA switched mode rectifier -48V/30A is used with the direct current version of Options 21 and 61.



Function

The NT6D52AA rectifies 50 or 60 Hz alternating current of 117 V, 208 V or 220 V to unregulated -48V dc. The rectifier has the ability to trickle-charge system batteries, if so equipped.

Features

The NT6D52AA Rectifier has the following features:

- ◆ a clamped 220volt/110volt switch
- ◆ a ganged 40 amp input circuit breaker
- ◆ fuse F1 and F2
- ◆ a 0 voltage adjust potentiometer
- ◆ a float voltage adjust potentiometer
- ◆ a DC on LED

NT5C03BJ — Switched Mode Rectifier

The NT5C03BJ Switched mode rectifier -48V/50A is used with Option 71 and 81 D.C. version.

Purpose

The NT5C03BJ Switched mode rectifier supplies the -48 V dc power to the QCA13 cabinet for Option 71 and 81.

Function

The input transformer can be arranged to accommodate 240 V ac phase to neutral, 240 V ac line-to-line, 208 V phase-to-phase, 120 V ac line-to-neutral, 120 V ac phase-to-neutral, at 50 or 60 Hz.

The line alternating current is applied through a double-poll-single-throw circuit breaker.

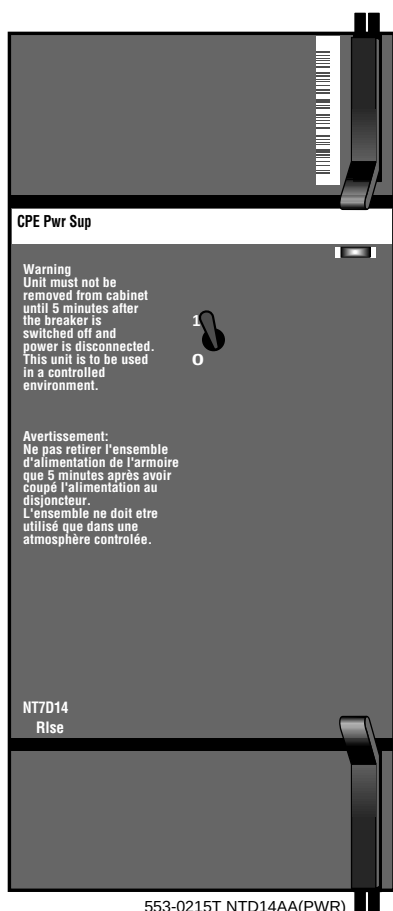
Output is -48 V dc, with a range from -44 V to -60 V, at 55 amps. Output rectifier circuit breakers, CB1 to CB4, are rated at 70 amps.

Features

The NT5C03BJ Control Panel houses:

- ◆ a double-pole-single-throw circuit breaker
- ◆ output rectifier circuit breakers, CB1 to CB4
- ◆ a 1-1/3 amp to protect the control circuitry
- ◆ test jacks to measure output voltage
- ◆ a meter showing discharge current
- ◆ a LED indicating rectifier failure

CPE Pwr Sup AC — Power Supply



553-0215T NTD14AA(PWR)

Purpose

The NT7D14AA CE/PE Power supply AC is used with Option 21.

Function

The Common, and Peripheral Equipment Power Supply ac rectifies 208 or 240 V ac to +5 V, +8.5 V, +15 V, +12 V, -48 V, and -150 V dc voltages used to power peripheral and common equipment, supply talk battery, and light Message Waiting Lamps on 500 or 2500 telephones. It provides 10 sources of selectable ac ringing voltage outputs superimposed on -48 V dc. The frequency and voltage options are 20 or 25 or 50 Hz and 70 or 75 or 80 or 86 V ac. It is located to the left of the module, in the slot labeled “CE/PE Pwr Sup”.

One (CE/PE) Power Supply ac is used in each of the following ac modules:

- ◆ Common Peripheral Equipment Module — NT8D11AC
- ◆ Remote Peripheral Equipment Module — NT8D47AA

Features

The faceplate includes the following features:

- ◆ a LED when lit, indicates that the converter is functioning
- ◆ a circuit breaker

CPE Pwr Sup DC — Power Supply

Purpose

The NT6D43AA CE/PE Power supply DC is used with Option 21.

Function

The (CE/PE) Power Supply dc converts -48 V dc to +5 V, +8.5 V, +15 V, +12 V, -48 V, and -150 V dc voltages used to power peripheral and common equipment, supply talk battery, and light Message Waiting Lamps on 500 or 2500 telephones. It provides 10 sources of selectable ac ringing voltage outputs superimposed on -48 V dc. The frequency and voltage options are 20 or 25 or 50 Hz and 70 or 75 or 80 or 86 V ac. It is located to the left of the module, in the slot labeled “CE/PE Pwr Sup”.

One (CE/PE) Power Supply dc is used in each of the following dc modules:

- ◆ Common, Peripheral Equipment Module — NT8D11DC
- ◆ Remote Peripheral Equipment Module — NT8D47DC

Features

The faceplate includes the following features:

- ◆ a LED when lit, indicates that the converter is functioning
- ◆ an on/off toggle switch

Common Equipment Power Supply (DC)



553-0216T NT6D41AA
(PWR)

Purpose

The NT6D41AA Common Equipment power supply DC is used with System Options 61 and 71.

Function

The Common Equipment Power Supply dc is used in the common equipment modules in dc systems. It is located in the first slot on the left in the module labeled “CE Pwr Sup”. It converts -48 V dc to + 5 V dc and + 12 V dc to provide all the required voltages for CE and network circuit cards.

One Common Equipment Power Supply dc is used in each of the following dc modules:

- ◆ CPU Module — NT8D34DC
- ◆ Network Module — NT8D35DC
- ◆ CPU/Network Module — NT6D39DC

Two Common Equipment Power Supply dc cards are used in the NT6D44DC Meridian Mail Module.

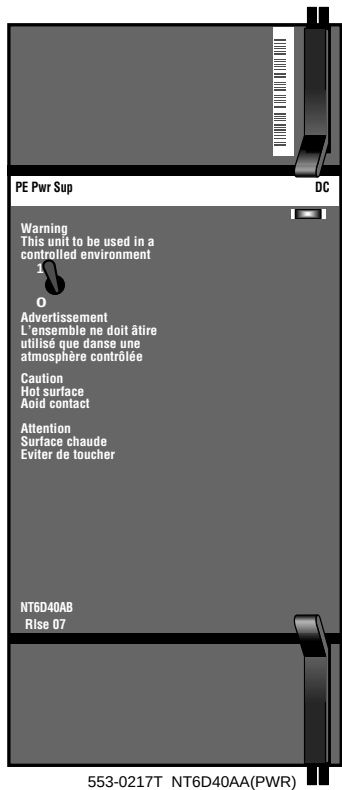
Features

The faceplate includes the following features:

- ◆ a LED when lit, indicates that the converter is functioning
- ◆ an on/off toggle switch*

* use the vintage AD and later as vintage AB toggle switch did not always restore power unless the switch was turned off and on several times.

Peripheral Equipment Power Supply (DC)



553-0217T NT6D40AA(PWR)

Purpose

The NT6D40AA Peripheral Equipment power supply DC is used with all systems.

Function

The Peripheral Equipment Power Supply dc is used to provide power to all peripheral equipment modules in dc systems. It converts -48 V dc to + 5 V dc, + 8.5 V dc, + 10 V dc, + 15 V dc and -48V dc voltages used to power peripheral equipment logic cards and to supply talk battery to lines and trunks. This power supply is located in the far left hand card slot labeled “PE Pwr Sup”.

One Peripheral Equipment Power Supply dc is used in each of the following dc modules:

- ◆Intelligent Peripheral Equipment Module — NT8D37DC
- ◆Peripheral Equipment Module — NT8D13DC

Features

The faceplate includes the following features:

- ◆a LED when lit, indicates that the converter is functioning
- ◆an on/off toggle switch*

* use the vintage AD and later as vintage AB toggle switch did not always restore power unless the switch was turned off and on several times

Peripheral Equipment Power Supply (AC)

Purpose

The NT8D06AA Peripheral Equipment power supply AC is used with all systems.

Function

The Peripheral Equipment Power Supply ac is used to provide power to all peripheral equipment modules in ac systems. It converts 208 and 240 V ac to + 5 V dc, + 8.5 V dc, + 10 V dc, + 15 V dc and -48V dc voltages used to power peripheral equipment logic cards and to supply talk battery to lines and trunks. This power supply is located in the far left-hand card slot labeled “PE Pwr Sup”.

One Peripheral Equipment Power Supply ac is used in each of the following ac modules:

- ◆ Intelligent Peripheral Equipment Module —NT8D37AA
- ◆ Peripheral Equipment Module —NT8D13AA

Features

The faceplate includes the following features:

- ◆ a LED when lit, indicates that the converter is functioning
- ◆ a circuit breaker

Rng Gen DC — Ringing Generator

Purpose

The NT6D42C Ringing Generator DC is used with all systems.

Function

The Ringing Generator dc operates from a nominal -48 V dc input and provides 16 sources* of selectable ac ringing voltage outputs superimposed on -48 V dc. The frequency and voltage options are 20 or 25 or 50 Hz and 70 or 75 or 80 or 86 V ac. It also supplies -120 or 150 V dc Message Waiting lamp 500 and 2500 telephone applications. The Ringing Generator dc mounts in the PE modules to the right of the Peripheral Equipment Power Supply dc.

One Ringing Generator dc is used in each of the following, when these dc modules support 500 and 2500-type analog sets:

- ◆ Intelligent Peripheral Equipment Module — NT8D37DC
- ◆ Peripheral Equipment Module — NT8D13DC

Features

The faceplate includes the following features:

- ◆ a LED when lit, indicates that the converter is functioning
- ◆ an on/off toggle switch



Rng Gen AC — Ringing Generator

Purpose

The NT8D21AA Ringing Generator AC is used with all systems.

Function

The Ringing Generator ac, operates from a nominal 208 or 240 V ac input and provides 16 sources* of selectable ac ringing voltage outputs, which are superimposed on -48 V dc. The frequency and voltage options are 20 or 25 or 50 Hz and 70 or 80 or 86 V ac. It supplies -150 V dc to Message Waiting Lamp 500 and 2500 telephone applications. The Ringing Generator AC is located in the PE modules to the right of the Peripheral Equipment Power Supply.

One Ringing Generator AC is used in each of the following, when these AC Modules support 500 or 2500 type analog telephones:

- ◆ Intelligent Peripheral Equipment Module — NT8D37AA
- ◆ Peripheral Equipment Module — NT8D13AA

Note: * Release 15 software provides eight sources.

Features

The faceplate includes the following features:

- ◆ a LED when lit, indicates that the converter is functioning
- ◆ a circuit breaker

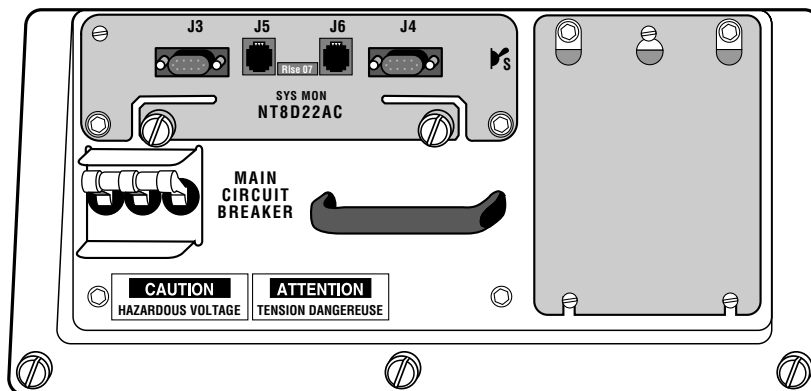
NT8D22 SYS MON — System Monitor

The NT8D22AB System Monitor is used on all systems.

One System Monitor (SM) is mounted in the Power Distribution Unit, which is located at the rear of the pedestal of each UEM column.

The SM reports the status of power related hardware for its column on all active input/output data terminals or TTYs.

One master and up to 63 slave System Monitors are allowed per system.



553-0219T NT8D22AB(PWR)

NT8D22AB System Monitor (continued)

The SM located in the column containing the CPU is the master SM, and the SMs located in the other columns are slaves.

Purpose

The master SM will poll the slave SMs and will report the status of power related hardware to the CPU on the following:

- ◆ column thermal status
- ◆ power supplies
- ◆ fan operation
- ◆ power fail transfer
- ◆ Uninterrupted Power Supply (UPS) for AC Option 21 only
- ◆ circuit breakers and LEDs

A ribbon cable coming from the master SM backplane connector is plugged into a RS232C port on a Serial Data Interface (SDI) card. The SDI card passes the SM status report on to the CPU which results in the CPU sending a Power and System Monitor (PWR) message to the maintenance terminals.

Features

The SM contains DIP switches allowing a SM to be programmed for:

- ◆ master SM or slave SM
- ◆ use in hybrid systems (UEM and SL-1 cabinets) or non-hybrid systems (all UEM)
- ◆ the number of slave units installed
- ◆ master SM identity (0) and slave identity (1-63)

Faceplate

The Faceplate contains the following jacks:

- ◆ J3, which extends an alarm cable to the MDF, providing emergency transfer signals to the cross-connect field
- ◆ J5, which extends the daisy chain connection from J6 of the previous SM (not connected on the Master SM)
- ◆ J6, which extends the daisy chain connection to J5 of the next SM
- ◆ J4, which extends to the UPS or DC distribution box

MFA 150 power system

Purpose

The NT5C90 Modular Front Access (MFA 150) power system is a 4 ft. x 23 in. rack mounted -48VDC power plant, with a capacity of up to 150 Amps.

Function

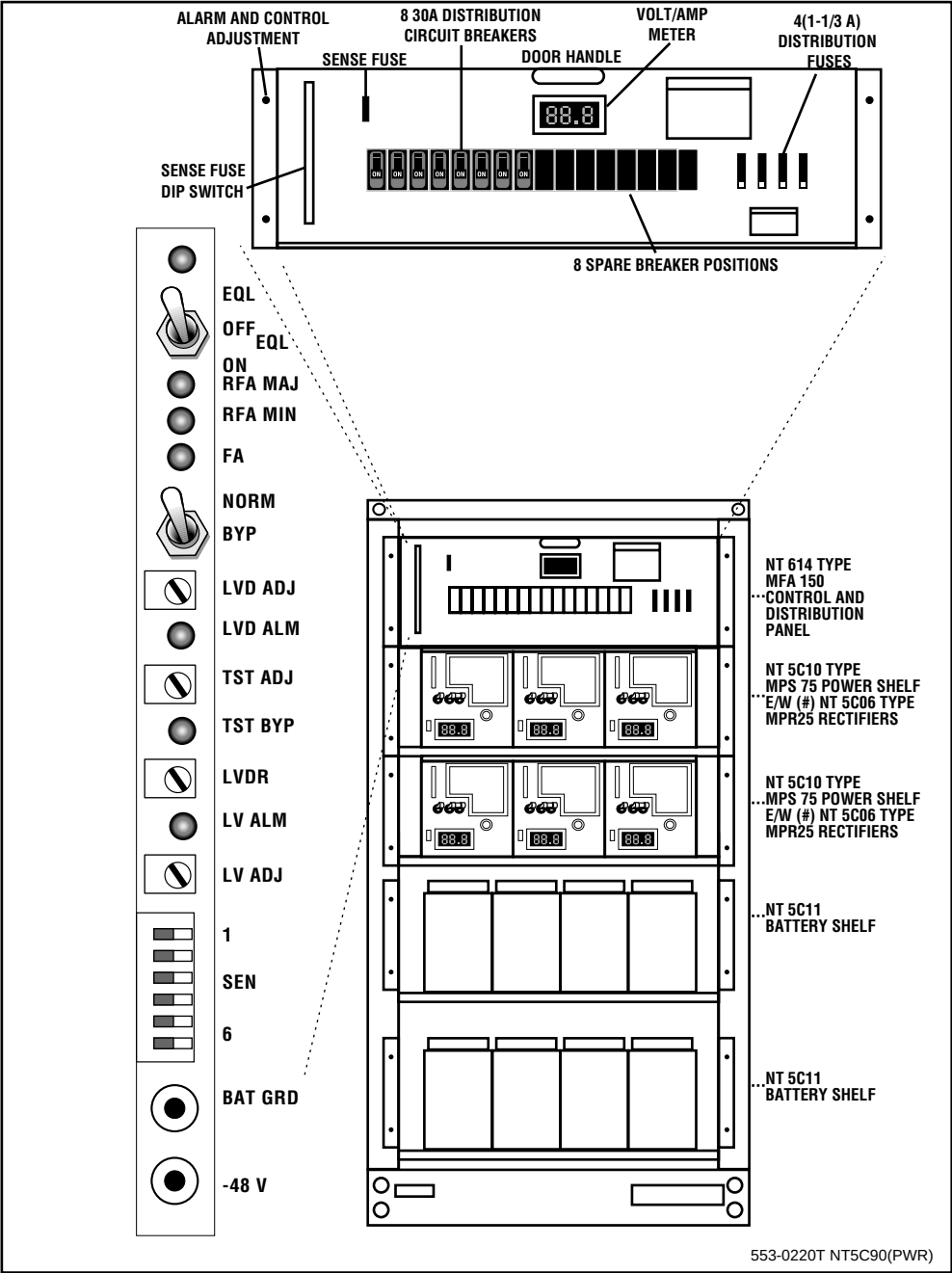
The MFA 150 system uses up to six switched mode Modular Power Rectifiers (MPR 25), each providing up to a 25 Amp output. MPRs can be added without a power system shutdown.

Input voltages range from 176 to 264 VAC, at 47 to 63 Hz.

The power system can operate with or without batteries. It can use external batteries or can be equipped with two optional rack-mounted battery trays.

The MFA 150 system will interface to the master system monitor to provide, at the maintenance terminal, low voltage, fuse, breaker, and rectifier failure alarms.

A Low Voltage Disconnect relay contactor removes the DC from the load circuit breakers before the batteries become exhausted.



Features

The NT6C14 Control and Distribution Panel has the following features:

- ◆ positive, negative, and battery bus bars, which are accessible from the top
 - up to sixteen 30 Amp load circuit breakers
 - sense fuse
 - volt/amp meter
 - four -48V auxiliary output fuses — QFF fuses from .25 A to 5 A
 - alarm indicators and adjustment strip, top to bottom, as follows:
 - equalize LED, indicating that the equalize switch is on
- ◆ equalize switch, which raises the voltage by 7 VDC* to equalize the charge on all battery cells
- ◆ rectifier failure alarm major where a LED indicates two or more MPR failures**
- ◆ rectifier failure alarm minor where a LED indicates a single MPR failure**
- ◆ fuse alarm LED which indicates a tripped circuit breaker or a blown fuse**
- ◆ normal/bypass switch, which bypasses the low voltage disconnect contactor allowing adjustment of low voltage limits
- ◆ low voltage disconnect adjustment potentiometer, which sets the contactor disconnect voltage at -43.5 VDC*
- ◆ low voltage disconnect alarm LED, which indicates when DC is removed from the load circuit breakers**
- ◆ test adjustment potentiometer, which allows the DC voltage to be raised and lowered to test the threshold settings
- ◆ test bypass alarm LED, which lights when the test switch is in the test mode

- ◆ low voltage disconnect reset adjustment potentiometer, which sets contactor reset, returning DC voltage to the circuit breakers at -50 to -50.5 VDC*
- ◆ low voltage alarm LED, which lights when the voltage is below limit
- ◆ low voltage adjustment potentiometer, which sets the low voltage limit to -43 VDC*
- ◆ sense DIP switches which allow the load to be disconnected individually from the six MPR rectifiers to facilitate their adjustment
- ◆ voltage test points

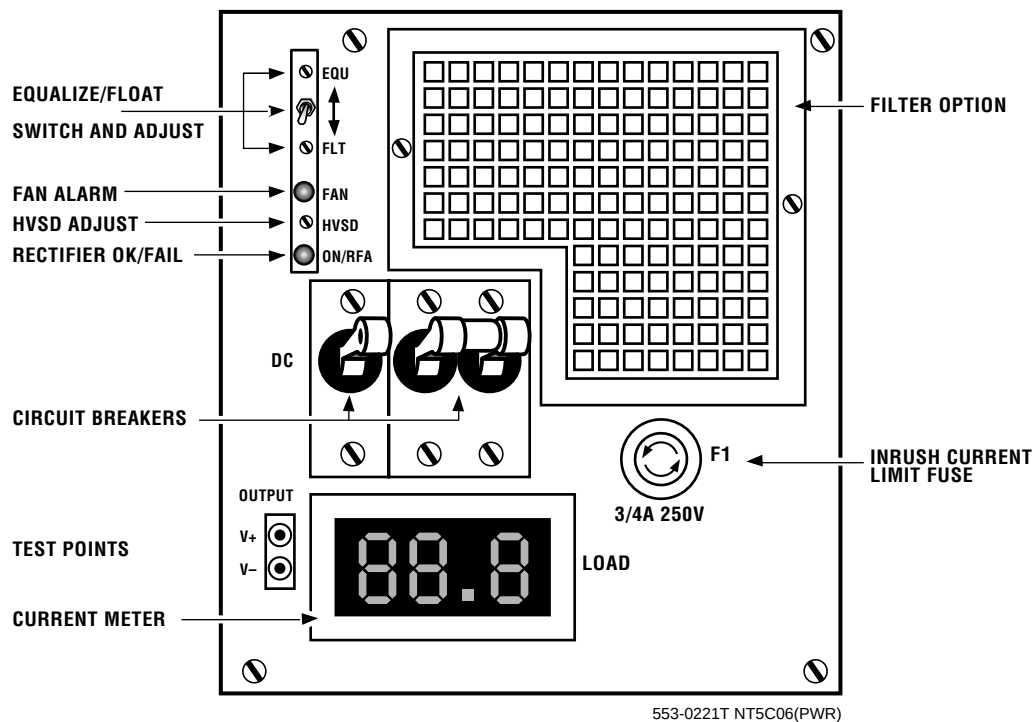
* Factory settings

** Transmits a failure alarm to maintenance TTY

MPR25 Modular Power Rectifier

The NT5C06 contains the following:

- ◆ alarm indicators and adjustment strip, top to bottom, as follows:
 - equalize adjustment potentiometer, which sets voltage.7 VDC* higher than the float voltage
 - equalize switch, which allows adjustment of the float voltage
 - float adjustment potentiometer, which sets the float voltage at -54 VDC*
 - fan alarm LED, which lights when air flow through the MPR25 stops**
 - high voltage shut down adjustment potentiometer, which sets the high voltage shut down level at -56.5 VDC*, due to an MPR25 internal fault**



- ◆ on/rectifier failure alarm LED. When the LED is green the MPR25 is operating normally. When the LED is red the MPR25 has failed.**
 - DC circuit breaker that controls DC output from MPR25**
 - AC circuit breaker that controls input AC to MPR25**
 - voltage test points, with protection from short circuit at test points
 - three digit output current meter, that shows the load on the MPR25
 - in rush current limit fuse, that protects the input circuitry against an MPR25 internal short circuit**

* Factory settings

** Transmits a failure alarm to maintenance TTY

MPP 600 Power Plant

Purpose

The MPP 600 Power Plant is a -48V dc power plant, with a capacity of up to 600 amps.

Function

The MMP 600 is a modular power distribution and control system. The system uses up to 12 NT5C07 MPR50 plug-in rectifiers to provide 600 amps in 50 amp increments.

One system can consist of one or two cabinets, with each cabinet providing up to 300 amps.

The system contains a NT6C14PF Control Board and a NT6C14PG Meter Control Board.

MPR50 Modular Power Rectifier

Each MPR50 switched mode plug-in rectifier requires one 20 amp feed of single-phase 50/60 Hz., from 208V to 240V ac input.

System 600/48 DC power

Purpose

The System 600/48 DC is a front access power plant that provides -48V dc power plant, with a capacity of up to 600 amps. The System 600/48 would be typically power large systems such as the Option 61C or 81C.

Function

The power system consists of up to two cabinets, a Main cabinet and a Supplemental cabinet, with each cabinet supplying up to 300 amps.

The System 600/48 allows the replacement of MPR50 rectifiers, Control Board and the addition of the Supplemental cabinet while under power.

The System 600/48 can provide a Major Alarm trigger to the XSM for the following events:

- ◆ High voltage shut down (HVSD)
- ◆ High voltage (HV)
- ◆ Battery on discharge (BOD)
- ◆ Low voltage (LV)
- ◆ Low voltage disconnect (LVD)
- ◆ Alarm bus supply (ABSF)
- ◆ Internal fuse alarm (INT FA)
- ◆ Multiple rectifier fail alarm (RFA)

How the PWR works

The system monitor has built in diagnostics that can output PWR messages indicating power and temperature status or failures.

PWR Message format

The output format for all PWR messages is:

PWRxxxx hw sm uem u

where,

hw = hardware type, possible values are:

CRBK = Circuit Breaker

DCSP = DC power supply

FANU = Fan Unit

PFTC = Power Fail Transfer Card

PWSP = Power Supply including the ringing generator

THSW = Thermal Switch

UPSA = Uninterruptible Power Supply Alarm

XSMC = System Monitor Card

Note: Only DCSP failures can cause an entire IPE module not to function or the ringing generator on an indicated module not to function.

sm = System Monitor (0-63), 0 = the master System Monitor

uem = Universal Equipment Module, possible values are:

- 0** = bottom UEM or not applicable
- 1** = second UEM
- 2** = third UEM
- 3** = top UEM

u = power unit number, possible values are:

- 0** = not applicable
- 1** = power unit 1
- 2** = power unit 2

PWR Message example

PWR0018 DCSP 4 1 2

PWR messages

- PWR0000 hw System monitor or power supply is OK. Output may be:
PWR0000 XSMC — System Monitor is OK
PWR0000 PWSP — Power unit is OK
ACTION: Information only, no action required.
- PWR0001 There is a partial failure on the power supply.
ACTION: Replace the indicated power supply, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0002 There is a complete failure on the power supply.
ACTION: Replace the indicated power supply, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0003 The power supply is not installed or has been removed.
ACTION: Install the power supply if applicable or replace the indicated power supply, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0004 A circuit breaker has tripped and the system has overheated.
ACTION: Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0005 One or more fans has failed in the blower unit.

Note: This message occurs when the NT7D17AC or NT7D17DC fan shelf in the Option 21 systems is turned on. This is not an error condition if PWR0005 is followed by PWR0046 (sensor alarm cleared) and PWR0045 (fan functioning).

ACTION: Replace the blower unit, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0006

Blower air probe temperature sensor alarm. This indicates one of the following:

1. Blower air probe temperature sensor has reached 55 degrees C (131 degrees F).

ACTION: Check for a clogged air filter. If a dirty air filter is not damaged, you can clean it with warm water and mild detergent. Do not use compressed air as it may damage the filter. When the filter is completely dry, you can reinsert it in the pedestal. Investigate whether you need to clean the filters more often than the recommended frequency of once a month.

Check the ambient air temperature and if the room is uncomfortably hot, then ventilate or air condition the room. If the ventilation or the air conditioner is faulty, repair or replace them.

2. Blower unit has lost power.

ACTION: Replace the blower unit by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

3. Blower unit air probe temperature sensor is faulty or disconnected.

ACTION: Replace or reconnect the temperature sensor by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0007

Column temperature has reached 70 degrees C (158 degrees F). If the blower has reached 55 degrees C (PWR0006 message), then the circuit breaker will trip in 30 seconds.

ACTION: Pay closer attention to the actions of PWR0006, but hurry.

PWR0010 hw

For PWR010 UPSA: Uninterruptible Power Supply (UPS) alarm condition.

The meaning depends on the UPS manufacturer.

1. Alpha UPS, Best Inc. UPS and Lorain UPS — inverter is ON.

ACTION: Information only, no action required.

2. Exide UPS — AC power failed.

ACTION: Information only and no action required, unless you want to ask your commercial power supplier when they will restore the AC power.

3. For PWR010 DCSP: DC trip alarm is ON; circuit breaker has tripped.

ACTION: Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0012 hw

For PWR012 UPSA: Uninterruptible Power Supply (UPS) Summary alarm (condition 2).

1. The meaning depends on the UPS manufacturer.

Best Inc. UPS — Summary alarm is ON.

ACTION: Follow Best Inc. fault clearing manual's instructions.

Loraine UPS— bypass is ON.

ACTION: Follow Loraine fault clearing manual's instructions.

Exide UPS — bypass is ON.

ACTION: Follow Exide fault clearing manual's instructions.

Alpha UPS — low battery.

ACTION: Follow Alpha fault clearing manual's instructions.

2. For PWR012 DCSP: DC alarm is ON.

ACTION: Check the DC power supply indicated. Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0013 Slave System Monitor is not responding.

ACTION: Check the serial link cable or replace the System Monitor, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0014 System Monitor failed self-test.

ACTION: Replace the System Monitor, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0015 SL-1 NT, RT, ST or XT cabinet has a power problem.

ACTION: For the RT and ST, check the rectifier and power unit at the bottom of the cabinet for any green LEDs not lit, fuses blown, or circuit breakers tripped and investigate the cause. Replace the component that caused the power problem, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

ACTION: For the NT, check the power monitor card for a red LED lit, fuses blown, or circuit breakers tripped and investigate the cause. Replace the component that caused the power problem, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

ACTION: For the XT, check the Control Panel in the QCA 13 cabinet for a red LED lit, fuses blown, or circuit breakers tripped and investigate the cause. Replace the component that caused the power problem, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

PWR0016 Power fail transfer has been activated.

ACTION: Information only and no action required, however you should look for a message indicating what caused this message.

PWR0017 DCON 0 alarm is ON.

ACTION: Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.

- PWR0018 DCON 1 alarm is ON.
ACTION: Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0019 DCON 2 alarm is ON.
ACTION: Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0020 DCON 3 alarm is ON.
ACTION: Investigate the cause of tripped circuit breaker. Replace the component that caused the circuit breaker to trip, by following the steps in the *Hardware Replacement* (553-3001-520) and verify that the fault is cleared.
- PWR0044 Circuit breaker had been reset.
ACTION: Information only, no action required.
- PWR0045 Fan unit repaired.
ACTION: Information only, no action required.
- PWR0046 Blower unit air probe temperature sensor is now less than 55 degrees C (131 degrees F).
ACTION: Information only, no action required. If you were not involved with lowering the temperature, you should investigate why the temperature is falling.
- PWR0047 Column temperature now less than 70 degrees C (158 degrees F). Circuit breaker trip signal is released.
ACTION: Information only, no action required. If you were not involved with lowering the temperature, you should investigate why the temperature is falling.
- PWR0050 hw For PWR050 UPSA: Uninterruptible Power Supply (UPS) alarm condition 1 has been cleared. For PWR050 DCSP: DC trip alarm is OFF (circuit breaker has been reset).
ACTION: Information only, no action required.
- PWR0052 hw For PWR052 UPSA: Uninterruptible Power Supply (UPS) alarm condition 2 has been cleared.
ACTION: Information only, no action required.
- PWR0053 Slave System Monitor is now responding.
ACTION: Information only, no action required.
- PWR0054 System Monitor passed self test.
ACTION: Information only, no action required.
- PWR0055 SL-1 NT, RT, ST or XT cabinet alarm condition has been cleared.
ACTION: Information only, no action required.
- PWR0056 Power fail transfer deactivated.
ACTION: Information only, no action required.
- PWR0057 DCON 0 alarm has been cleared.
ACTION: Information only, no action required.

- PWR0058

DCON 1 alarm has been cleared.
ACTION: Information only, no action required.
- PWR0059

DCON 2 alarm has been cleared.
ACTION: Information only, no action required.
- PWR0060

DCON 3 alarm has been cleared.
ACTION: Information only, no action required. 

RCV — Recovery Messages

Recovery Messages is a resident program. RCV does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

How RCV works

An auto-recovery mechanism will prevent an initialize caused by a broken queue software error.

If the software error can be resolved, an RCV message is printed on the maintenance TTY.

If the software error cannot be resolved, an INI fault code 000C is printed on the maintenance TTY.

If multiple RCV messages are received, an INI fault code 000C is printed identifying the software errors. However, the initialize is delayed until after the midnight routines to prevent call processing interruptions.

Before X11 Release 19.30, the INI fault code 000C also identified errors different from those identified in RCV messages. With Release 19.30 and later, the INI fault code 001D identifies errors that the auto-recovery mechanism cannot prevent.

RCV messages

- RCV0000

An invalid queue block type was found. The auto-recovery mechanism has taken appropriate action to avert INI0000 000C.

ACTION: Contact your technical support group if you receive multiple RCV messages within a 24-hour period.
- RCV0001

Invalid queue information was found. The auto-recovery mechanism has taken appropriate action to avert INI0000 000C.

ACTION: Contact your technical support group if you receive multiple RCV messages within a 24-hour period.
- RCV0002

A broken queue problem was detected. The auto-recovery mechanism has taken appropriate action to avert INI0000 000C.

ACTION: Contact your technical support group if you receive multiple RCV messages within a 24-hour period.
- RCV0003

Invalid information was found in the queue header block. The auto-recovery mechanism has taken appropriate action to avert INI0000 000C.

ACTION: Contact your technical support group if you receive multiple RCV messages within a 24-hour period. 

RPT — System Reporting

System Reporting is a resident program. RPT does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

RPT messages

- RPT0001 Begin suppression of <filename>.
ACTION: Information only. No action required.
- RPT0002 End suppression of <file name>.
ACTION: Information only. No action required.
- RPT0003 Unknown report (not in database). category **x**, report **y**. See categories listed below:
 3 = TTY
 4 = COID
 5 = SCSI
 6 = DBMT
 7 = DLO
 8 = OSM
 9 = SRPT
 10 = BUG
 11 = BERR
 12 = CNI
 13 = HWI
 14 = BIC
 15 = CCED
 16 = CMON
 17 = PCH
 18 = IOD
 19 = OVL
ACTION: Check the database and re-enter the command.
- RPT0004 **x** reports missing in log just before **x**.
ACTION: Check the command. If the problem persists, contact your technical support group. 

SCSI — Small Computer System Interface

How the SCSI works

Small Computer System Interface is a resident program. SCSI does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

Small Computer System Interface (SCSI) messages appear when problems are encountered relating to the SCSI low level software.

SCSI messages

SCSI0001	Unable to initialize Interrupts for SCSI. ACTION: Contact your technical support group.
SCSI0002	Unable to initialize floppy drive x. ACTION: Contact your technical support group.
SCSI0003	Unable to initialize SCSI controller on IOP. ACTION: Be sure IOP is in place and enabled.
SCSI0004 x	File system initialization failed for floppy x. ACTION: Contact your technical support group.
SCSI0006	Floppy Disk INIT: Block device INIT failed for CMDU x. ACTION: Contact your technical support group.
SCSI0008 x	Floppy Disk: Unknown floppy controller in CMDU x not supported. ACTION: Contact your technical support group.
SCSI0009 x	Hard disk in CMDU x is not responding. ACTION: Check the CMDU power, and the hard disk cables.
SCSI0010 x y	Hard Disk Test: Partition x in CMDU y is not initialized. ACTION: Reinstall the software from the installation disks.

SCSI0011 w x y z

Read Test: Read failed near sector w, errNo x, sense y, addSense z. The following lists explain the errNo, sense and addSense messages:

ErrNo

0x370001=Device Not Ready
 0x370002=Write Protected
 0x370003=Medium Error
 0x370004=Hardware Error
 0x370005=Illegal Request
 0x370006=Blank Check
 0x370007=Aborted Command
 0x370008=Volume Overflow
 0x370009=Unit Attention
 0x37000a=Select Timeout
 0x37000b=Logical Unit Number (LUN) Not Present
 0x37000c=Illegal Bus ID
 0x37000d=No Controller
 0x37000e=REQ Sense Error
 0x37000f=Device Unsupported
 0x370010=Illegal Parameter
 0x370011=Semaphore Timeout

Sense

0x00 = No error. Nothing specific to report
 0x01 = The command was completed successfully with some recovery performed by the drive.
 0x02 = Not ready.
 0x03 = Nonrecoverable error fault from the medium or an error in the recorded data.
 0x04 = Nonrecoverable hardware failure.
 0x05 = There was an illegal parameter in the command.
 0x06 = Some drive parameters have been changed, the drive has been reset, or a power_on_reset occurred.
 0x07 = A write operation was attempted on a write protected device.
 0x09 = Vendor unique.
 0x0B = The drive aborted the command.
 0x0E = Source data did not match data read from the medium.

addSense

0x00 = No additional information
 0x01 = No index signal
 0x02 = Seek timeout
 0x03 = Write fault
 0x04 = Drive not ready
 0x05 = Drive not selected
 0x06 = Recalibrate failure
 0x07 = Multiple drives selected
 0x09 = Tracking error
 0x10 = ID CRC or ECC error occurred
 0x11 = Read error.Dat ECC
 0x12 = No address mark found in ID field
 0x13 = No address mark found in Data field

0x14 = No record found
 0x15 = Seek error
 0x16 = Data synchronization mark error
 0x17 = Data read with retries
 0x18 = Data read with ECC correction
 0x19 = Bad defect list
 0x1A = Parameter overrun
 0x1C = No primary defect list found
 0x20 = Invalid command
 0x21 = Invalid logical block address
 0x22 = Illegal function for device type
 0x24 = Illegal field in command
 0x25 = Invalid Logical Unit Number (LUN)
 0x26 = Illegal field in parameter list
 0x27 = Write protected
 0x29 = Power-on reset, or SCSI bus reset occurred
 0x2A = Drive parameters were changed
 0x31 = Format failed
 0x32 = No more spare sectors available for reallocating defective sectors
 0x40 = Buffer RAM failure, or parity error
 0x41 = ECC failure
 0x42 = Power-on diagnostic
 0x43 = Message rejected
 0x44 = Internal controller or firmware error
 0x45 = Select/Reselect timeout
 0x47 = Parity error on the SCSI bus
 0x48 = Initiator detected error
 0x49 = Illegal message
 0x9D = Motor never gets up to speed
 0x9E = Motor drops out of legal speed range
 0xA2 = External RAM failure
 0xA3 = Reassign Blocks Read failure
 0xA5 = Defect list is out-of-order
 0xAE = Bad parameters in mode page
 0xAF = Buffer corrupted
 0xB0 = Drive recalibrating
 0xB1 = Drive not up to speed

ACTION: Contact your technical support group.

SCSI0012 x Floppy drive in CMDU x is not responding.

ACTION: Check the CMDU power, and the IOP to IOP cables.

SCSI0013 Floppy Disk Test: Floppy disk is not initialized.

ACTION: Contact your technical support group.

SCSI0014 x y CMDU x is not active, using CMDU y.

ACTION: Check the CMDU power, and the IOP to IOP cables.

SCSI0015 Hard Disk Init: Both hard disks are disabled.

ACTION: Check the CMDU power, and the IOP to IOP cables.

SCSI0016 x File system initialization failed for x.

ACTION: Reinstall the software from the installation disks.

SCSI0017 w x y z

Error writing to floppy disk, sector w, errNo x, sense y, addSense z. The following lists explain the errNo, sense and addSense messages:

ErrNo

0x370001=Device Not Ready

0x370002=Write Protected

0x370003=Medium Error

0x370004=Hardware Error

0x370005=Illegal Request

0x370006=Blank Check

0x370007=Aborted Command

0x370008=Volume Overflow

0x370009=Unit Attention

0x37000a =Select Timeout

0x37000b =Logical Unit Number (LUN) Not Present

0x37000c =Illegal Bus ID

0x37000d=No Controller

0x37000e=REQ Sense Error

0x37000f =Device Unsupported

0x370010=Illegal Parameter

0x370011=Semaphore Timeout

Sense

0x00 = No error. Nothing specific to report

0x01 = The command was completed successfully with some recovery performed by the drive.

0x02 = Not ready.

0x03 = Nonrecoverable error fault from the medium or an error in the recorded data.

0x04 = Nonrecoverable hardware failure.

0x05 = There was an illegal parameter in the command.

0x06 = Some drive parameters have been changed, the drive has been reset, or a power_on_reset occurred.

0x07 = A write operation was attempted on a write protected device.

0x09 = Vendor unique.

0x0B = The drive aborted the command.

0x0E = Source data did not match data read from the medium.

addSense

0x00 = No additional information

0x01 = No index signal

0x02 = Seek timeout

0x03 = Write fault

0x04 = Drive not ready

0x05 = Drive not selected

0x06 = Recalibrate failure

0x07 = Multiple drives selected

0x09 = Tracking error

0x10 = ID CRC or ECC error occurred

0x11 = Read error, Data ECC
 0x12 = No address mark found in ID field
 0x13 = No address mark found in Data field
 0x14 = No record found
 0x15 = Seek error
 0x16 = Data synchronization mark error
 0x17 = Data read with retries
 0x18 = Data read with ECC correction
 0x19 = Bad defect list
 0x1A = Parameter overrun
 0x1C = No primary defect list found
 0x20 = Invalid command
 0x21 = Invalid logical block address
 0x22 = Illegal function for device type
 0x24 = Illegal field in command
 0x25 = Invalid Logical Unit Number (LUN)
 0x26 = Illegal field in parameter list
 0x27 = Write protected
 0x29 = Power-on reset, or SCSI bus reset occurred
 0x2A = Drive parameters were changed
 0x31 = Format failed
 0x32 = No more spare sectors available for reallocating defective sectors
 0x40 = Buffer RAM failure, or parity error
 0x41 = ECC failure
 0x42 = Power-on diagnostic
 0x43 = Message rejected
 0x44 = Internal controller or firmware error
 0x45 = Select/Reselect timeout
 0x47 = Parity error on the SCSI bus
 0x48 = Initiator detected error
 0x49 = Illegal message
 0x9D = Motor never gets up to speed
 0x9E = Motor drops out of legal speed range
 0xA2 = External RAM failure
 0xA3 = Reassign Blocks Read failure
 0xA5 = Defect list is out of order
 0xAE = Bad parameters in mode page
 0xAF = Buffer corrupted
 0xB0 = Drive recalibrating
 0xB1 = Drive not up to speed

ACTION: Contact your technical support group.

SCSI0018 w x y z

Error reading from floppy disk, sector w, error x, sense y, addSense z. The following lists explain the error, sense and addSense messages:

ErrNo

0x370001 = Device Not Ready

0x370002 = Write Protected

0x370003 = Medium Error

0x370004 = Hardware Error

0x370005=Illegal Request
 0x370006=Blank Check
 0x370007=Aborted Command
 0x370008=Volume Overflow
 0x370009=Unit Attention
 0x37000a =Select Timeout
 0x37000b=Logical Unit Number (LUN) Not Present
 0x37000c =Illegal Bus ID
 0x37000d =No Controller
 0x37000e=REQ Sense Error
 0x37000f =Device Unsupported
 0x370010=Illegal Parameter
 0x370011=Semaphore Timeout
 Sense
 0x00 = No error. Nothing specific to report
 0x01 = The command was completed successfully with some recovery performed by the drive.
 0x02 = Not ready.
 0x03 = Nonrecoverable error fault from the medium or an error in the recorded data.
 0x04 = Nonrecoverable hardware failure.
 0x05 = There was an illegal parameter in the command.
 0x06 = Some drive parameters have been changed, the drive has been reset, or a power_on_reset occurred.
 0x07 = A write operation was attempted on a write protected device.
 0x09 = Vendor unique.
 0x0B = The drive aborted the command.
 0x0E = Source data did not match data read from the medium.
 addSense
 0x00 = No additional information
 0x01 = No index signal
 0x02 = Seek timeout
 0x03 = Write fault
 0x04 = Drive not ready
 0x05 = Drive not selected
 0x06 = Recalibrate failure
 0x07 = Multiple drives selected
 0x09 = Tracking error
 0x10 = ID CRC or ECC error occurred
 0x11 = Read error.Dat ECC
 0x12 = No address mark found in ID field
 0x13 = No address mark found in Data field
 0x14 = No record found
 0x15 = Seek error
 0x16 = Data synchronization mark error
 0x17 = Data read with retries
 0x18 = Data read with ECC correction
 0x19 = Bad defect list
 0x1A = Parameter overrun
 0x1C = No primary defect list found

0x20 = Invalid command
 0x21 = Invalid logical block address
 0x22 = Illegal function for device type
 0x24 = Illegal field in command
 0x25 = Invalid Logical Unit Number (LUN)
 0x26 = Illegal field in parameter list
 0x27 = Write protected
 0x29 = Power-on reset, or SCSI bus reset occurred
 0x2A = Drive parameters were changed
 0x31 = Format failed

ACTION: Contact your technical support group.

SCSI0020 No response from hard disk in both CMDUs, or hard disks were incorrectly initialized.

ACTION: Be sure the CMDU power is on, and the cables are in place. Reinstall the software from the installation disks if necessary.

SCSI0021 x Active shelf x has no active CMDU.

ACTION: Be sure that there is a CMDU card on the active core shelf.

SCSI0022 x Controllor self test failed.

ACTION: Contact your technical support group.

SCSI0023 No active CMDU present.

ACTION: Be sure that the CMDU is enabled, the power is on, and the cables are in place.

SCSI0024 Error reading from active hard disk.

ACTION: Contact your technical support group.

SCSI0025 Error reading from standby hard disk.

ACTION: Contact your technical support group.

SCSI0026 w x y z

Error writing to active hard disk, sector w, errNo x, sense y, addSense z. The following lists explain the errNo, sense and addSense messages.

ErrNo

0x370001=Device Not Ready
 0x370002=Write Protected
 0x370003=Medium Error
 0x370004=Hardware Error
 0x370005=Illegal Request
 0x370006=Blank Check
 0x370007=Aborted Command
 0x370008=Volume Overflow
 0x370009=Unit Attention
 0x37000a=Select Timeout
 0x37000b=Logical Unit Number (LUN) Not Present
 0x37000c=Illegal Bus ID
 0x37000d=No Controllor
 0x37000e=REQ Sense Error
 0x37000f =Device Unsupported
 0x370010=Illegal Parameter

0x370011=Semaphore Timeout

Sense

0x00 = No error. Nothing specific to report

0x01 = The command was completed successfully with some recovery performed by the drive.

0x02 = Not ready.

0x03 = Nonrecoverable error fault from the medium or an error in the recorded data.

0x04 = Nonrecoverable hardware failure.

0x05 = There was an illegal parameter in the command.

0x06 = Some drive parameters have been changed, the drive has been reset, or a power_on_reset occurred.

0x07 = A write operation was attempted on a write protected device.

0x09 = Vendor unique.

0x0B = The drive aborted the command.

0x0E = Source data did not match data read from the medium.

addSense

0x00 = No additional information

0x01 = No index signal

0x02 = Seek timeout

0x03 = Write fault

0x04 = Drive not ready

0x05 = Drive not selected

0x06 = Recalibrate failure

0x07 = Multiple drives selected

0x09 = Tracking error

0x10 = ID CRC or ECC error occurred

0x11 = Read error.Dat ECC

0x12 = No address mark found in ID field

0x13 = No address mark found in Data field

0x14 = No record found

0x15 = Seek error

0x16 = Data synchronization mark error

0x17 = Data read with retries

0x18 = Data read with ECC correction

0x19 = Bad defect list

0x1A = Parameter overrun

0x1C = No primary defect list found

0x20 = Invalid command

0x21 = Invalid logical block address

0x22 = Illegal function for device type

0x24 = Illegal field in command

0x25 = Invalid Logical Unit Number (LUN)

0x26 = Illegal field in parameter list

0x27 = Write protected

0x29 = Power-on reset, or SCSI bus reset occurred

0x2A = Drive parameters were changed

0x31 = Format failed

0x32 = No more spare sectors available for reallocating defective sectors

0x40 = Buffer RAM failure, or parity error

0x41 = ECC failure

0x42 = Power-on diagnostic
 0x43 = Message rejected
 0x44 = Internal controller or firmware error
 0x45 = Select/Reselect timeout
 0x47 = Parity error on the SCSI bus
 0x48 = Initiator detected error
 0x49 = Illegal message
 0x9D = Motor never gets up to speed
 0x9E = Motor drops out of legal speed range
 0xA2 = External RAM failure
 0xA3 = Reassign Blocks Read failure
 0xA5 = Defect list is out of order
 0xAE = Bad parameters in mode page
 0xAF = Buffer corrupted
 0xB0 = Drive recalibrating
 0xB1 = Drive not up to speed

ACTION: Contact your technical support group.

SCSI0027 w x y z

Error writing to standby hard disk, sector w, errNo x, sense y, addSense z. The following lists explain the errNo, sense and addSense messages:

ErrNo

0x370001=Device Not Ready
 0x370002=Write Protected
 0x370003=Medium Error
 0x370004=Hardware Error
 0x370005=Illegal Request
 0x370006=Blank Check
 0x370007=Aborted Command
 0x370008=Volume Overflow
 0x370009=Unit Attention
 0x37000a=Select Timeout
 0x37000b=Logical Unit Number (LUN) Not Present
 0x37000c=Illegal Bus ID
 0x37000d=No Controller
 0x37000e=REQ Sense Error
 0x37000f =Device Unsupported
 0x370010=Illegal Parameter
 0x370011=Semaphore Timeout

Sense

0x00 = No error. Nothing specific to report
 0x01 = The command was completed successfully with some recovery performed by the drive.
 0x02 = Not ready.
 0x03 = Nonrecoverable error fault from the medium or an error in the recorded data.
 0x04 = Nonrecoverable hardware failure.
 0x05 = There was an illegal parameter in the command.
 0x06 = Some drive parameters have been changed, the drive has been reset, or a power_on_reset occurred.
 0x07 = A write operation was attempted on a write protected device.
 0x09 = Vendor unique.

0x0B = The drive aborted the command.
0x0E = Source data did not match data read from the medium.
addSense
0x00 = No additional information
0x01 = No index signal
0x02 = Seek timeout
0x03 = Write fault
0x04 = Drive not ready
0x05 = Drive not selected
0x06 = Recalibrate failure
0x07 = Multiple drives selected
0x09 = Tracking error
0x10 = ID CRC or ECC error occurred
0x11 = Read error.Dat ECC
0x12 = No address mark found in ID field
0x13 = No address mark found in Data field
0x14 = No record found
0x15 = Seek error
0x16 = Data synchronization mark error
0x17 = Data read with retries
0x18 = Data read with ECC correction
0x19 = Bad defect list
0x1A = Parameter overrun
0x1C = No primary defect list found
0x20 = Invalid command
0x21 = Invalid logical block address
0x22 = Illegal function for device type
0x24 = Illegal field in command
0x25 = Invalid Logical Unit Number (LUN)
0x26 = Illegal field in parameter list
0x27 = Write protected
0x29 = Power-on reset, or SCSI bus reset occurred
0x2A = Drive parameters were changed
0x31 = Format failed
0x32 = No more spare sectors available for reallocating defective sectors
0x40 = Buffer RAM failure, or parity error
0x41 = ECC failure
0x42 = Power-on diagnostic
0x43 = Message rejected
0x44 = Internal controller or firmware error
0x45 = Select/Reselect timeout
0x47 = Parity error on the SCSI bus
0x48 = Initiator detected error
0x49 = Illegal message
0x9D = Motor never gets up to speed
0x9E = Motor drops out of legal speed range
0xA2 = External RAM failure
0xA3 = Reassign Blocks Read failure

0xA5 = Defect list is out of order
 0xAE = Bad parameters in mode page
 0xAF = Buffer corrupted
 0xB0 = Drive recalibrating
 0xB1 = Drive not up to speed

ACTION: Contact your technical support group.

SCSI0028 w x y z

Error reading from active hard disk, sector w, errNo x, sense y, addSense z. The following lists explain the errNo, sense and addSense messages:

ErrNo

0x370001=Device Not Ready
 0x370002=Write Protected
 0x370003=Medium Error
 0x370004=Hardware Error
 0x370005=Illegal Request
 0x370006=Blank Check
 0x370007=Aborted Command
 0x370008=Volume Overflow
 0x370009=Unit Attention
 0x37000a=Select Timeout
 0x37000b=Logical Unit Number (LUN) Not Present
 0x37000c=Illegal Bus ID
 0x37000d=No Controller
 0x37000e=REQ Sense Error
 0x37000f =Device Unsupported
 0x370010=Illegal Parameter
 0x370011=Semaphore Timeout

Sense

0x00 = No error. Nothing specific to report
 0x01 = The command was completed successfully with some recovery performed by the drive.
 0x02 = Not ready.
 0x03 = Nonrecoverable error fault from the medium or an error in the recorded data.
 0x04 = Nonrecoverable hardware failure.
 0x05 = There was an illegal parameter in the command.
 0x06 = Some drive parameters have been changed, the drive has been reset, or a power_on_reset occurred.
 0x07 = A write operation was attempted on a write protected device.
 0x09 = Vendor unique.
 0x0B = The drive aborted the command.
 0x0E = Source data did not match data read from the medium.

addSense

0x00 = No additional information
 0x01 = No index signal
 0x02 = Seek timeout
 0x03 = Write fault
 0x04 = Drive not ready
 0x05 = Drive not selected

0x06 =	Recalibrate failure
0x07 =	Multiple drives selected
0x09 =	Tracking error
0x10 =	ID CRC or ECC error occurred
0x11 =	Read error.Dat ECC
0x12 =	No address mark found in ID field
0x13 =	No address mark found in Data field
0x14 =	No record found
0x15 =	Seek error
0x16 =	Data synchronization mark error
0x17 =	Data read with retries
0x18 =	Data read with ECC correction
0x19 =	Bad defect list
0x1A =	Parameter overrun
0x1C =	No primary defect list found
0x20 =	Invalid command
0x21 =	Invalid logical block address
0x22 =	Illegal function for device type
0x24 =	Illegal field in command
0x25 =	Invalid Logical Unit Number (LUN)
0x26 =	Illegal field in parameter list
0x27 =	Write protected
0x29 =	Power-on reset, or SCSI bus reset occurred
0x2A =	Drive parameters were changed
0x31 =	Format failed
0x32 =	No more spare sectors available for reallocating defective sectors
0x40 =	Buffer RAM failure, or parity error
0x41 =	ECC failure
0x42 =	Power-on diagnostic
0x43 =	Message rejected
0x44 =	Internal controller or firmware error
0x45 =	Select/Reselect timeout
0x47 =	Parity error on the SCSI bus
0x48 =	Initiator detected error
0x49 =	Illegal message
0x9D =	Motor never gets up to speed
0x9E =	Motor drops out of legal speed range
0xA2 =	External RAM failure
0xA3 =	Reassign Blocks Read failure
0xA5 =	Defect list is out of order
0xAE =	Bad parameters in mode page
0xAF =	Buffer corrupted
0xB0 =	Drive recalibrating
0xB1 =	Drive not up to speed

ACTION: Contact your technical support group.

SCSI0029 x Error reading from standby hard disk, sector x.

ACTION: Contact your technical support group.

SCSI0030 x	Hard disk synchronization error. CMDU x is not the active disk. ACTION: Contact your technical support group.
SCSI0031	Synchronization failed because one or both hard disks are disabled. ACTION: Check the standby CMDU power and cables.
SCSI0032	Synchronization failed because one or both hard disks are not initialized. ACTION: Contact your technical support group.
SCSI0033	Raw file system INIT failed for floppy drive x. ACTION: Contact your technical support group.
SCSI0034	Active drive partition bigger than standby. ACTION: Contact your technical support group.
SCSI0036	Comparison failed between Active and Standby hard disks for x. ACTION: Contact your technical support group.
SCSI0037	Synchronization called with invalid CMDU number x. ACTION: Contact your technical support group.
SCSI0038	Synchronization failed for x. ACTION: Contact your technical support group.
SCSI0039	No standby CMDU present. Be sure standby CMDU power is on, and cables are in place. ACTION: Contact your technical support group.
SCSI0040	Timeout before writing active hard disk sector x. ACTION: Contact your technical support group.
SCSI0041	Timeout before writing standby hard disk sector x. ACTION: Contact your technical support group.
SCSI0042	Timeout before reading active hard disk sector x. ACTION: Contact your technical support group.
SCSI0043	Timeout before reading standby hard disk sector x. ACTION: Contact your technical support group.
SCSI0044	Watchdog timeout while accessing disk ACTION: Contact your technical support group.
SCSI0100	CMDU Y, Error Reading from Hard Disk, sector X, errNo Z, sense W, addSense V. ACTION: Contact your technical support group.
SCSI0101	CMDU Y, Error Writing to Hard Disk, sector X, errNo Z, sense W, addSense V. ACTION: Contact your technical support group.
SCSI0102	CMDU X, Timeout before Reading from Hard Disk sector Y. ACTION: Contact your technical support group.
SCSI0103	CMDU X, Timeout before Writing to Hard Disk sector Y. ACTION: Contact your technical support group.

- SCSI0104 CMDU X, Filename F Date D Time T Size S.
ACTION: Contact your technical support group.
- SCSI0105 Files that are different in Dir: X.
ACTION: Contact your technical support group.
- SCSI0106 Files that are different in Partition: P.
ACTION: Contact your technical support group.
- SCSI0107 This message is printed when list items exceed the allowable parameters.
ACTION: Contact your technical support group.
- SCSI0108 x Partition X: Sector number%d does not match.
ACTION: Contact your technical support group.
- SCSI0109 x y CMDU x in Active Side is not latest, using CMDU y.
ACTION: Contact your technical support group.
- SCSI0110 Partition parameters of the Active and Standby drives are different.
ACTION: Contact your technical support group.
- SCSI0111 Cannot decide latest CMDU, going with CMDU X.
ACTION: Contact your technical support group.
- SCSI0112 Partition X: reporting Y sectors to sync. This is greater than partition size Z, o will Sync complete partition.
ACTION: Reinstall the software from the installation diskettes if required. 

SDL — Peripheral Software Download

Peripheral Software Download is a resident program. SDL does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

The Peripheral Software Download (PSDL) feature stores Peripheral Software (PSW) on disk for:

- ◆ Network Cards (NT8D04) card
- ◆ Network/DTR (NT8D16)
- ◆ Controllers cards (NT8D01)

The PSW is downloaded to the peripheral cards when:

- ◆ system initialization occurs
- ◆ the card is enabled via ENLL and ENXP commands in LD 30 and LD 32
- ◆ the card undergoes power up reset

Control of the initialization downloaded is defined in LD 97.

SDL messages

SDL0000 text Peripheral Software Download has occurred. The output format is:

SDL000 device, **VERSION** x, mode

device:

XNET loop = NT8D08 Network card loop number

XNPD loop = NT8D16 Network/DTR card loop number

XPEC xpec# (loop shelf) = NT8D01 Controller card

VERSION x = Peripheral Software version (0-99)

mode:

FAST MODE (from initialization)

MAINT MODE (by ENLL command in LD 30/LD 32)

BKGD MODE (second attempt after initialization)

ACTION: Information only, no action is required.

- SDL0100 status Current status of the Peripheral Software Download process. status:
BUSY (download in process)
IDLE
SUSP (user loading a program with SUSP option)
ABRT (aborting)
ACTION: Information only, no action is required.
- SDL0101 Maintenance bit is not ON for the TN.
- SDL0102 TNTRANS failed for the download TN.
- SDL0103 Bad sub packet data length.
- SDL0104 First data byte in the packet is not H.0B.
- SDL0105 Bad packet data length.
- SDL1301 Failure in starting the PSW download process.
ACTION: Do a manual initialization and try the download again. If still unsuccessful, do a manual SYSLOAD.
CAUTION: Initialization and SYSLOAD will interrupt call processing.
- SDL1302 Failure in continuing the PSW download process.
ACTION: Do a manual initialization and try the download again. If still unsuccessful, do a manual SYSLOAD.
CAUTION: Initialization and SYSLOAD will interrupt call processing.
- SDL2100 Cannot allocate memory for PSDL output buffers.
ACTION: Contact your technical-support group.
- SDL2110 e hw a v m
 Failed to download software to device. Where **e** is the cause of the error, as follows:
 1 = Acknowledgment time-out error
 2 = Peripheral Software (PSW) version or checksum error
 3 = PSW record checksum error
 4 = PSW record format error
 5 = Card firmware state error
 Where **hw** is the card name, as follows: **XNET** (Network Card), **XPEC** (Peripheral Controller), etc. Where **a** is the card address, as follows:
 Loop for Network Card, Network/DTR Card
XPEC # (loop shelf) for Peripheral Controller
 Where **v** is the PSW version
 Where **m** is the mode. as follows:
FAST MODE (from initialization)
MAINT MODE (by ENLL command in LD 30)
BKGD MODE (second attempt after initialization from background program
 Hw (3902 3903 3904 3905) for M3900 flash download
 e (cause of the error for M3900) can be:
 1 = Timeout error
 2 = PSW checksum error
 3 = Record checksum error
 4 = Record format error

5 = Firmware state error
 6 = Invalid page number received
 7 = Unrequired page delivered during download
 18 = Flash memory cannot be erased (M3900)
 19 = Error detected while programming flash (M3900)
 20 = An application is currently active, download cannot proceed.(M3900)
 21 = verification byte incorrect (M3900)

ACTION: Try to download to the card by using the appropriate enable command.

SDL2401 Failed to allocate a Call Register for Peripheral Software Download (PSDL).

ACTION: Do a manual initialization and try the download again.

CAUTION: Initialization will interrupt call processing.

SDL4200 All target devices in the current Peripheral Software Download (PSDL) list failed download.

ACTION: Do a manual SYSLOAD and try download again.

CAUTION: this will interrupt call processing. If this message reappears after the download, use a different set of system disks and try download again. If this message reappears after the download, replace all the cards involved, one at a time, by following the steps in the *Hardware Replacement* (553-3001-520). After each card is replaced try a download.

SDL5201 Invalid SL-1 software version.

ACTION: Refer to the *Administration Guide*. Use LD 22 PRT, PSWV to check the software version on disk. Contact your technical-support group.

SDL5202 Peripheral Software (PSW) is not configured on the disk.

ACTION: Contact your technical-support group.

SDL5301 Insufficient memory for the Peripheral Software (PSW) subdirectory.

ACTION: Try manual initialization and retry the command.

CAUTION: Initialization will interrupt call processing.

SDL5302 v The Peripheral Software (PSW) version v can not be found on the disk.

ACTION: Contact your technical-support group.

SDL5303 t The Peripheral Software (PSW) Type cannot be found on the disk. Where t is the requested device type, as follows:

XNET= Network card
XPND= Network/DTR card
XPEC= Controller card

ACTION: Contact your technical-support group.

SDL7111 loop Failure in writing Peripheral Software (PSW) data to a loop.

ACTION: Replace the network card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared,

SDL7112 loop The Peripheral Controller, Network or Network/DTR card has requested an SDL download. The PSDL is waiting to recover the bad cards; but, they can also be recovered by the midnight SDL Audit.

ACTION: If the program was loaded manually, enter * * * * or END as soon as possible.

- SDL7113 Trying to put the Peripheral Controller, Network or Network/DTR card into the PSDL tree has failed five times. These cards will not be recovered by SDL.
ACTION: Press the Man. Int. button to initialize the system.
- SDL7114 The SDL recovery request for this Peripheral Controller has been ignored, because of more than 10 requests so far today.
ACTION: Contact your technical-support group.
- SDL7115 loop The SDL recovery request for this Network or Network/DTR card has been ignored, because of more than 10 requests so far today.
ACTION: Contact your technical-support group.
- SDL7116 The request for SDL auto-recovery has not been queued nor processed. The system can't get a three-word data block.
ACTION: Contact your technical-support group.
- SDL7117 x y z An error occurred when downloading PSW records to the MSDL/MISP card. Where **x** is the card type being downloaded, as follows:
H.4 = MISP base code
H.5 = BRIL application
H.6 = BRIT application
H.7 = MSDL base code
H.8 = SDI application
H.9 = DCH application
H.10 = AML application
Where **y** is the card address to which download was done (INDEX number of MSDL/MISP)
Where **z** is the status of card (CSTAT value) for card type. MSDL base code and MISP base code. Status of card (STAT value) for applications on MSDL/MISP card.
ACTION: Check the state of the MSDL card. Try to disable and enable MSDL/MISP card from the software. If the problem persists, contact your technical support group.
- SDL7118 x y z An error occurred when downloading PSW records to the MSDL/MISP card. Meridian 1 was not able to send messages to MSDL/MISP card. Where **x** is the card type being downloaded, as follows:
H.4 = MISP base code
H.5 = BRIL application
H.6 = BRIT application
H.7 = MSDL base code
H.8 = SDI application
H.9 = DCH application
H.10 = AML application
Where **y** is the card address to which download was done (INDEX number of MSDL/MISP)
Where **z** is the return value from MSDLMISP_HDLR, as follows:
H.0 = Request to send message failed
H.2 = MSDL/MISP card is not operational
H.5 = No buffer available to send message to MSDL/MISP card
ACTION: Check the state of the MSDL card. Try to disable and enable MSDL/MISP card from the software. If the problem persists, contact your technical support. 

SECA — Security Administration Alarm

Security Administration Alarm is a resident program. SECA does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

SECA messages

- SECA0001 Authcode violation has been detected.
ACTION: Refer to the Operator Data for information regarding the origin of the Authcode violation. To get the Operator Data the Alarm Filter Format must be turned on.
- SECA0002 An unauthorized user (identified by its ANI/CLI) tried to reach called number (service) given in message data. 

SRPT — System Reports

How the SRPT works

System Reports is a resident program. SRPT does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

The SRPT messages appearing during the normal system operation. Some are warning messages, and indicate that an action must be taken. Others are information messages, and indicate the system’s activity and progress.

SRPT messages

SRPT0008 xxxx

FTP access locked out. Too many bad login attempts. Last source IP address: xx (All FTP ports locked out for 10 minutes)

SRPT0009

FTP access re-enabled.

SRPT0010 xxxx

PDT access locked out. Too many bad login attempts. (PDT access locked out for 10 minutes)

SRPT0011 yyyy

PDT access re-enabled.

SRPT0012 xxxx

FTP access locked out. Too many bad login attempts. Last source IP address: xx (All FTP ports locked out for 10 minutes)

SRPT0013 yyyy

FTP access re-enabled.

SRPT0014 xxxx

PDT access locked out. Too many bad login attempts. (PDT access locked out for 10 minutes)

SRPT0015 xxxx P

DT access re-enabled.

- SRPT0720 x ROM OS x: Cold Start. Running on CP y.
ACTION: Information only, no action required.
- SRPT0721 x y ROM OS x: Cold Start. Running OS version y created z.
ACTION: Information only, no action required.
- SRPT0722 ROM OS x: Loading “diskos” from /f0/p/os/diskos.
ACTION: Information only, no action required.
- SRPT0723 ROM OS x: Loading “diskos” from /f0/diskos.
ACTION: Information only, no action required.
- SRPT0724 ROM OS x: Loading “diskos” from /f1/p/os/diskos.
ACTION: Information only, no action required.
- SRPT0725 ROM OS x: Loading “diskos” from /f1/diskos.
ACTION: Information only, no action required.
- SRPT0726 ROM OS x: Loading “diskos” from /p/os/diskos.
ACTION: Information only, no action required.
- SRPT0727 ROM OS x: Loading “diskos” from /p/diskos.
ACTION: Information only, no action required.
- SRPT0728 “ROM PS x: “ “diskos” ”rom/flash/flashos”.
- SRPT0730 x y z
OS x: Cold Start. Release: a Created: b.
ACTION: Information only, no action required.
- SRPT0731 x y z
OS x: Warm Start. Release: a. Created: b. Last Cold Start: c (from d). Last Warm Start: e (total: f)
ACTION: Information only, no action required.
- SRPT0750 INI x: INI on side y due to System Cold Start.
ACTION: Information only, no action required.
- SRPT0751 INI x: starting INI on side y due to z. Previous INI: side a at b. INIs since switchover (c): d, e. INIs since cold start (f): g, h.
ACTION: Information only, no action required.
- SRPT0752 INI x: INI completed in y seconds.
ACTION: Information only, no action required.
- SRPT0754 INI due to “x”. Previous INI: “y”. \ INIs since cold start: z
ACTION: Information only, no action required.
- SRPT0760 SWD: Swd watchdog timer expired on task {name}.
- SRPT0770 TOD x: Midnight job server starts on side y. Number of jobs to do: z.
ACTION: Information only, no action required.

SRPT0771	TOD x: Midnight job server restarts on side y. Reason: error in job #a. Skipping first b jobs. ACTION: Information only, no action required.
SRPT0772	TOD x: Skipping midnight job y. ACTION: Information only, no action required.
SRPT0773	TOD x: Starting midnight job y. ACTION: Information only, no action required.
SRPT0774	TOD x: Midnight jobs completed on side y. ACTION: Information only, no action required.
SRPT0775	TOD x: Midnight jobs partially completed. Job List corrupted. ACTION: Consider performing a Warm Start.
SRPT0780	RST x: MANUAL INIT IN PROGRESS. ACTION: Information only, no action required.
SRPT0781	RST x: COLD START IN PROGRESS - Reason y. ACTION: Information only, no action required.
SRPT0782	RST x: WARM START IN PROGRESS - Reason y. ACTION: Information only, no action required.
SRPT0783	RST x: Restart threshold exceeded for Task ID = y. ACTION: Information only, no action required.
SRPT0784	RST x: Warning: unregistered task being restarted - TID = y. ACTION: Contact your technical support group.
SRPT0785	RST x: Task being deleted, TID = y. ACTION: Information only, no action required.
SRPT0786	RST x: Task being restarted, TID = y. ACTION: Information only, no action required.
SRPT0787	RST x: System Recovery failure: Task “y”. ACTION: Reinitialize the system with the MANUAL INIT button (top).
SRPT0788	RST x: “RESTART” subsystem failure (no automatic restart). Note: A database could be lost “If” a reload (cold start) occurs, because the system has probably not performed any data dumps at midnight. ACTION: Reinitialize the system with the MANUAL INIT button (top).
SRPT0789	RST x: Exception-caused task restart: TID = %p, vec = %p, pc = %p. ACTION: Contact your technical support group.
SRPT0790	RST x: SL-1 requested warm start - INIT reason {x}.
SRPT1000	Incorrect security device.
SRPT1020	CardLAN: connection x closed.

SRPT1021	CardLAN: Server socket x created.
SRPT1022	CardLAN: Connection x accepted with socket x.
SRPT1023	100BaseT: Configuration is provided from iprem.db database in the reported directory.
SRPT1024	100BaseT: Configuration is from defaulted values.
SRPT4500 x	Skipping slot x: cannot calc addr to check for GP w/ cable. ACTION: Contact your technical support group.
SRPT4501 x	Skipping slot x: cannot get cardID. ACTION: Contact your technical support group.
SRPT4502	CP SINGLE MODE: Timeout waiting for response from remote CP. ACTION: Contact your technical support group.
SRPT4503	CP SINGLE MODE: remote Processor pack not CP. ACTION: Reseat or replace remote processor with a CP.
SRPT4504	CP SINGLE MODE: no CP-CP cable. ACTION: Check that the CP cables are properly connected.
SRPT4505	CP SINGLE MODE: no remote power. ACTION: Check the CE power supply on the remote CORE shelf. Check that the CMB cable is properly connected.
SRPT4506	CP SINGLE MODE: both shelves have same IDs. ACTION: Change the DS4 Jumpersetting to correspond to each side.
SRPT4507	CP SINGLE MODE: both switches = MAINT. ACTION: Check to ensure that one or both the CP Norm/Maint switches are in the Norm mode (Up).
SRPT4508	CP SINGLE MODE: could not synch Common Storage Area (CSA) space ACTION: Contact your technical support group.
SRPT4509	Could not set CP semaphore bit (side x). ACTION: Contact your technical support group.
SRPT4510	CP single mode: memory shadow test failed. ACTION: Reseat or replace the Standby CP.
SRPT4511 x	Cannot open BIC window (slot x); cannot chk for GP cable. ACTION: Contact your technical support group.
SRPT4512 x	Cannot close BIC window (slot x). ACTION: Contact your technical support group.
SRPT4513 x	Could not get CP semaphore bit (slot x). ACTION: Contact your technical support group.
SRPT4514 x	Skipping slot x cannot calc addr to see if CP bit set. ACTION: Contact your technical support group.

- SRPT4515 Unable to find the active CMDU.
ACTION: Contact your technical support group.
- SRPT4516 Unable to find the diskos.sym file.
ACTION: Contact your technical support group.
- SRPT4517 x CP: Switching from CPU %d to preferred side.
ACTION: Information only, no action required.
- SRPT4538 LDR: Inconsistencies in boundaries of previous sl1 load.
ACTION: Contact your technical support group.
- SRPT4539 LDR: Inconsistencies in boundaries of previous ovl load.
ACTION: Contact your technical support group.
- SRPT4540 LDR: Error loading SL1 file into memory.
ACTION: Contact your technical support group.
- SRPT4541 LDR: Error loading overlay file into memory.
ACTION: Contact your technical support group.
- SRPT4542 LDR: Error in loading, last address = x.
ACTION: Contact your technical support group.
- SRPT4543 LDR: Error returned from “segInit2(x)”.
ACTION: Contact your technical support group.
- SRPT4544 LDR: Error getting dloPathFileName for sl1res.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4545 LDR: Unable to open “x”.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4546 LDR: Error: sl1_start_addr = x, last sl1_prot_addr = y.
ACTION: Contact your technical support group.
- SRPT4547 LDR: Error initializing sl1 pool and data area.
ACTION: Contact your technical support group.
- SRPT4548 LDR: Error getting dloPathFileName for ovlres.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4549 LDR: Unable to open “x”.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4550 LDR: Error in loading, last sl1 address = x.
ACTION: Contact your technical support group.

- SRPT4551 LDR: Ovl start addr (x) overlaps end of sl1 area (y).
ACTION: Contact your technical support group.
- SRPT4552 LDR: Error ovl_start_addr = x, last_ovl_prot_addr = y.
ACTION: Contact your technical support group.
- SRPT4553 LDR: Error initializing overlay data area.
ACTION: Contact your technical support group.
- SRPT4554 LDR: Error calling ovlres entry.
ACTION: Contact your technical support group.
- SRPT4555 LDR: Invalid parameter to ldrNextPage, address = x.
ACTION: Contact your technical support group.
- SRPT4556 LDR: seek error while loading (OVL or INSTALL) code file.
ACTION: Contact your technical support group.
- SRPT4557 LDR: Error reading a_out header from file (OVL or INSTALL).
ACTION: Reload the system with the MANUAL RELOAD button. Reinstall the software from the installation diskettes.
- SRPT4558 LDR: Invalid a_out header in file.
ACTION: Contact your technical support group.
- SRPT4559 LDR: Error reading link header.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4560 LDR: Invalid link header in file.
ACTION: Contact your technical support group.
- SRPT4561 LDR: Module not linked to page boundary.
ACTION: Contact your technical support group.
- SRPT4562 LDR: seek error while loading (OVL or INSTALL) code file.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4563 LDR: Error reading a_out hdr into memory (OVL or INSTALL).
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4564 LDR: Error reading text seg from disk into memory (OVL or INSTALL).
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4565 LDR: Error reading data seg from disk into memory (OVL or INSTALL).
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.

- SRPT4566 LDR: seek error while loading sl1 code.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4567 LDR: Error reading a_out file from sl1 file.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4568 LDR: Invalid a_out header in sl1 file.
ACTION: Contact your technical support group.
- SRPT4569 LDR: Error reading link header from sl1 file.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4570 LDR: Invalid link header in sl1 file.
ACTION: Contact your technical support group.
- SRPT4571 LDR: Module not linked to page boundary.
ACTION: Contact your technical support group.
- SRPT4572 LDR: seek error while loading sl1 code.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4573 LDR: Error reading a_out hdr from disk into memory.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4574 LDR: Error reading text seg from disk into memory.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4575 LDR: Invalid data segment in sl1 module.
ACTION: Contact your technical support group.
- SRPT4576 LDR: Error accessing sl1 code file.
ACTION: Reload the system with the MANUAL RELOAD button (bottom). Reinstall the software from the installation diskettes.
- SRPT4577 LDR: Error reading data seg from disk into memory (SL-1).
ACTION: Reload the system with the MANUAL RELOAD button (bottom).
- SRPT4578 LDR: Invalid a_out header in memory (OVL or INSTALL).
ACTION: Contact your technical support group.
- SRPT4579 LDR: Invalid link header in memory (OVL or INSTALL).
ACTION: Contact your technical support group.
- SRPT4580 LDR: End of protected data = x (OVL or INSTALL).
ACTION: Contact your technical support group.

SRPT4581	LDR: Unprot data start x overlaps prot data end at y (OVL or INSTALL). ACTION: Contact your technical support group.
SRPT4582	LDR: Error copying data from PROT to UNPROT for Static Modules. ACTION: Reinitialize the system with the MANUAL INIT button (top). Reload the system with the MANUAL RELOAD button (bottom).
SRPT4583	LDR: Invalid a_out header in memory (SL-1). ACTION: Contact your technical support group.
SRPT4584	LDR: Invalid link header in memory (SL-1). ACTION: Contact your technical support group.
SRPT4585 x	LDR: End of protected data = x (SL-1). ACTION: Contact your technical support group.
SRPT4586 x y	LDR: Unprot data start x overlaps prot data end at y (SL-1). ACTION: Contact your technical support group.
SRPT4587	LDR: Error copying data from PROT to UNPROT for SL-1 Modules. ACTION: Reinitialize the system with the MANUAL INIT button (top).
SRPT4588	Auxiliary processor has been reset.
SRPT4589	System security device is not functioning or has been removed.
SRPT4590	System security device problem has been resolved.
SRPT4591	PDT password reset successful. ACTION: Contact your technical support group.
SRPT4592	PDT password reset attempt failed. ACTION: Information only, no action required.
SRPT4593	PDT password file restored from backup. ACTION: Information only, no action required.
SRPT4594	Unable to mount device because of Database Upgrade Tool or an incompatible PCMCIA card has been inserted on device a: or b: ACTION: Contact your technical support group.
SRPT4595	Failed to read IOP Card ID on Core Side x.
SRPT4596	IOP cards are not identical.
SRPT4597	KC: failed to retrieve data from keycode file: {file name}.
SRPT4598	"KC mismatch: System ID in keycode " "n" " and in direct.rec".
SRPT4599	"KC x: " "n" " does not match the direct record. Keycode value = x, direct.rec value = y".
SRPT4600	KC x: Keycode Error Code: n.
SRPT4601	KC: The new Keycode has been enabled.
SRPT4602	KC: The new Keycode has been rejected. Use KSHO in LD 143 to check it.
SRPT4603	"KC x: Cannot open file " "{file name} " " ".
SRPT4604	KC x: Security Device error on Core side x.

- SRPT4605 "KC x: Internal Format error keycode file "{file name}"".
- SRPT4606 "KC x: Validation error in keycode file "{file name}"".
- SRPT4607 "KC x: Parameter Extraction error from keycode file "{file name}"".
- SRPT4608 "KC x: Keycode Enhancement error using keycode file "{file name}"".
- SRPT4609 "KC x: error. From file. "{file name}"". To file: "{file name}"". Error = y".
- SRPT4610 "KC: failed to remove file: "{file name}"". Error = x".
- SRPT4611 "KC: failed to get data from the "{file name}"" file. Code = n".
- SRPT4612 KC: file x y z.
- SRPT4613 "KC Error. "x" returns with error code: y. "z" error".
- SRPT4614 KC Envelope Error: x.
- SRPT4615 Security Device on Core Side is missing.
ACTION: Check and reseal security device.
- SRPT4616 Security Device on Core Side x is corrupted.
ACTION: Check and reseal security device
- SRPT4617 Security Device on Core Side x is invalid.
ACTION: Check and reseal security device.
- SRPT4618 KC: Keycode file is missing.
ACTION: Please reinstall software from CDROM.
- SRPT4619 Last Archive Procedure had failed.
No archives were completed since month day hour: minute: second year.
ACTION: Use LD 143 to perform Attended Backup (ABKO)
- SRPT4620 Error x while y status of last archive.
- SRPT4621 Results of the last Backup are not available. Reason: x.
- SRPT4622 Security Device on Core Side x is missing.
ACTION: Check and reseal security device.
- SRPT4623 Security Device on Core Side is corrupted.
ACTION: Check and reseal security device.
- SRPT4624 Security Device on Core Side is invalid.
ACTION: Check and reseal security device.
- SRPT4625 Keycode file type of x is not supported.
ACTION: Check that correct keycode is used.
- SRPT4626 Can't read keycode file {file name} - insufficient buffer.
- SRPT4627 IO problem for Keycode x.
ACTION: Check that correct keycode is used.
- SRPT4628 Keycode file {file name} has wrong format.
ACTION: Check that correct keycode is used.

- SRPT4629

Keycode file {file name} is not found.
ACTION: Check that correct keycode is used.
- SRPT4630

CRC problem for Keycode x.
ACTION: Check that correct keycode is used. 

SYS — System Loader

In this chapter

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How the SYS works

This program will output SYS messages due to problems with the following:

- ◆ faulty essential hardware: CPU, RAM and primary storage device
- ◆ incompatible software packages
- ◆ corrupted, missing or invalid programmable data

Causes of system reload

A system reload occurs when:

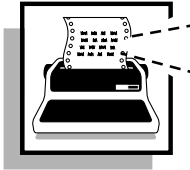
- ◆ the system is powered-on
- ◆ the system RESET button is pressed
- ◆ the RELOAD buttons on the Changeover and Memory Arbitrator cards are pressed simultaneously
- ◆ a CE fault or power failure has caused some of the system memory contents to be destroyed



For more information refer to the *You should know this* chapter, “Software maintenance tools” on page 49, “What the system does when things go wrong” on page 52, in this document. An occurrence of a system reload is indicated by SYS messages. The system reload process takes about five to 25 minutes to complete on all systems except the Option 51C, 61C, 81 and 81C. During this time, call processing ceases throughout the entire system.

Example of SYS messages

The following is an example of a system loader message for Option 81.



```

SYS0700 02 - ROM created on Wed Sep 28
01:13:13 PDT 1994
SYS0702 24 - DRAM size (in megs) - Banks 123456
populated
SYS0700 04 - Booting ROM OS
(other information)
SYS0000 000400 000000 000000 000000 CPU 1
SYSDB RLS/ISS: 1932 DATE/TIME: NOT AVAIL.
RECS 50
SYSLOAD RLS: 19
ISSUE: 32
DONE

```

The following is an example of a system loader message for Option 61:



```

SYS0000 000400 00000F FFFFFFFF 00 CPU 1
SYS0100 CPU 0
SYSLOAD RLS: 19
ISSUE 32
DONE

```

The following is an explanation of fields that appear in system reload messages:

- ◆ **SYS0000** = Output code. The output code SYS0000 always appears as shown in the preceding example.
- ◆ **000400** = Source field. Cause of the system reload as shown below.
 - 0400** = Power switched on or Reset button(s) pressed
 - 0803** = Segmented Bus Extender fault
 - 0805** = Switched CPUs due to hardware or software fault
 - 1000** = Parity error
 - 2000** = Watchdog timeout
 - 4000** = Write-protect violation

8000 = Response timeout

◆ **00000F** = Address field. Fault address.*

◆ **FFFFFF** = Display field. Last maintenance code display.*

◆ **00** = Display code for a previous fault as shown below.

001X = Extender-generated bus fault

002X = Page 0 memory test fault

003X = Memory page decoding fault

004X = Switch CPU fault

◆ **CPU 1** = CPU used for the system load

* The number of digits in these fields vary between systems.

SYS messages

SYS0000

SYSLOAD has taken place.

For Omega machines, output may be one of:

1. SYS0000 0500 = Machine may have been switched on with a tape or disk in place. No action.
2. SYS0000 CPU x = SYSLOAD controller switch from one CPU to the other, subsequent to SYS0000 {source} {...(see below)}.
3. SYS0000 {source} {page} {addr} {dis} code {prev} CPU x.
4. SYS0000 {source} {addr} {dis} CODE {prev} CPU x

Where: {source} = cause of SYSLOAD. Given only if a fault is detected. {source} may be one of:

0400 = Power-on reset

0803 = Network disconnected from CPU (faulty connection from SBE to network or defective or disabled SBE; SL-1 XN only)

0805 = Soft switch

1000 = Parity error

2000 = Watchdog

4000 = Write-protect violation

8000 = Response timeout

{page} = Fault page (4-digits hexadecimal)

{addr} = Fault address (4 to 6 digits hexadecimal)

{dis} = Last maintenance code digit display (2-digits hexadecimal)

CODE {prev} = previous history fault. May be one of:

001X—Extender-generated bus fault
 002X—Page 0 memory test fault
 003X—Memory page decoding fault
 004X—Switch CPU fault
 CPU x = CPU number used for SYSLOAD

For C types machines (81, 81C, 61C and 51C) machines, output is as follows:

Format of the message is:

xxyy 0 {addr} {dis} CPU z

Where:

xx = cause of SYSLOAD. Given only if a fault is detected. xx is one the following HEX numbers:

04 = Hardware reset (i.e. Powerupt or manual reset)
 08 = Software reset (i.e. not a hardware reset and not a sanity reset)
 20 = Sanity reset (i.e. Hardware watchdog timer timed out)

Where:

yy = is the most recent trap source, set to one of the following HEX codes:

21 Hardware Sanity Timeout
 22 SWO: Failure on switchover
 23 SWO: Too many switchovers
 24 WARM: Disk OS Warmstart failure
 25 WARM: Too many Disk OS Warmstarts
 26 WARM: Disk OS not loaded
 27 RESET: Forced Switchover in progress
 28 RESET: Soft Reset in progress
 29 TASK: Unable to create msg queue
 2A Protected Memory checksum failure
 2B INFO: Disk OS Warmstart begins
 2C INFO: DRAM is uninitialized
 2D Restart: Can't delete safe task
 2E RESET: Task threshold exceeded
 2F WARM: Exception vector threshold exceeded
 30 WARM: total Exception threshold exceeded
 31 WARM: Non-bus error exception in interrupt
 32 WARM: Exception handling already busy
 33 WARM: Exception call to RestartTask() failed
 34 RESET: Manual INIT requested
 35 SEG: Checksum failure detected
 36 SEG: Disk OS Text segment corrupted
 37 SEG: Disk OS partitions corrupted
 38 DISKOS: Unable to load SL1
 39 DISKOS: Unable to start SL1
 3A INSTALL: reboot after installation
 3B IOP Bus Error on active IOP
 3C Parity Error on both sides
 3D Parity Error in Split mode
 3E Parity Error - remote SIMM: missing
 3F Parity Error - remote SIMM: disabled
 40 HI: bus error recommended action
 41 HI: bus error TASK_RESTART for safe task

42 HI: Warm Start not possible
 43 SWD expired for task with Warmstart option
 <44 - 48 unused>
 49 OS: manual (PDT) request (TRP)
 4A OS: request to reboot (sysToMon) (reboot x)
 4B OS: Reset task initialization failed
 4C OS: Scheduler initialization failed
 4D OS: S/W watchdog initialization failed
 4E OS: Protected Memory initialization failed
 4F OS: Security Cartridge check failed
 50 OS: Normal recovery from bus error
 51 OS: Unable to recover from bus error
 52 OS: Unable to run "diskos"
 53 OS: Unable to load "diskos"
 54 OS: Disk volume initialization failed
 55 OS: SCSI initialization failed
 56 OS: DOS file system initialization failed
 57 OS: IOP initialization failed
 58 OS: Exception handlers initialization failed
 59 OS: IO subsystem initialization failed
 5A OS: Clock initialization failed
 5B OS: Failed during Loader run
 5C OS: Failed to spawn Loader task
 5D OS: kernel initialization failed
 5E OS: diskos Prot mem seg overlaps Unprot mem seg
 5F Operating System level command to coldstart.
 {addr} - Fault address (4 to 8 digits hexadecimal)
 {dis} = Last maintenance code digit display (2 digits hexadecimal)
 CPU z = CPU number used for SYSLOAD

SYS0001 FATAL

System real-time clock (RTC) does not respond. The Peripheral Signaling card or the Clock Controller card may be faulty.

ACTION: Replace the PS or CC card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared and the system starts to reload. If the system does not reload contact your technical support group immediately.

SYS0002 FATAL

Configuration record not found. The system is not able to load with this storage medium.

ACTION: Replace active storage medium with backup disk(s). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD. After pressing the button(s), verify that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0003 FATAL

Unable to allocate sufficient memory to load firmware. A memory fault must be cleared or more memory must be equipped.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared and that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0004 FATAL

Unable to allocate the overlay area. A memory fault must be cleared or more memory must be equipped.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared and that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0005 FATAL

DN translator program not on storage medium. A vital program is missing from the storage medium.

ACTION: Replace active storage medium with backup disk(s). Press RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD. After pressing button the (s), verify that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0006 FATAL

Primary storage medium has permanent interrupt. The fault must be cleared and the storage device reenabled.

ACTION: If the system does not start to reload, replace the Multi- Disk Unit or Floppy Disk Unit by following the steps in the *Hardware Replacement* (553-3001-520). If the system does not start to reload, replace the Mass Storage Interface or Floppy Disk Interface card by following the steps in the *Hardware Replacement* (553-3001-520). If the system does not reload contact your technical support group immediately.

SYS0007

D70 Network Mode data cannot be loaded when the Master Mode package 309 is restricted.

SYS0008 FATAL

Active CPU faulty. Force a switch to idle CPU.

ACTION: Place the MAINT/NORM switch in the MAINT position on the idle IF card. The faceplate LED on the idle IF card should be lit. If the system does not reload contact your technical support group immediately.

SYS0009 FATAL

Not enough memory for operation. A memory fault must be cleared or more memory must be equipped.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared and that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0010 FORCED

Memory 0 failure. Memory 0 is associated with CPU 0. If more than one memory module on any shelf fails, then suspect bus extenders.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared.

SYS0011 FORCED

Memory 1 failure. Memory 1 is associated with CPU 1. If more than one memory module on any shelf fails, then suspect bus extenders.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared.

SYS0012 TBAR Package is not equipped. FTOP in CDB reset to FRES.

SYS0013 % Cannot load UIPE JTTC data when JTTC package (#335) is restricted.

SYS0014 Existing data removed because FCDR package is restricted.

SYS0015 JTTC Package is not equipped; data lost.

SYS0016 DMWI package removed since neither MW, IDA or DPNSS package is equipped.

ACTION: Equip with the appropriate package.

SYS0017 Only digital consoles can have an IADN.

SYS0018 Default CLID info is present but the MMCS package is not equipped.

ACTION: Sysload again with MMCS package #317

SYS0019 International CLID info is present, but the MMCS package is not equipped.

ACTION: Sysload again with MMCS package #317 equipped.

SYS0020 FATAL

There is a memory failure on protected data store, memory card 0.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared and that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0021 FATAL

There is a memory failure on protected data store, memory card 1.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared and that the system is reloading. If the system does not reload contact your technical support group immediately.

SYS0022 The Path Replacement RCAP (PRI/PRO) is removed because the QSIG SS package #316 is restricted.

SYS0023 All QSIG Supplementary services RCAP are removed since the GF package is not equipped.

ACTION: Equip package 305. Sysload and reconfigure the QSIG RCAP for supplementary services.

- SYS0024 Invalid message type detected when transferring a loss plan (losp) file. Transmission can be adversely affected.
ACTION: Call the manufacturer.
- SYS0025 A loss plan structure was found in illegal state.
ACTION: Call the manufacturer.
- SYS0026 No cards were specified in transfer of the data from card.db file. Transmission will be adversely affected.
ACTION: Call the manufacturer.
- SYS0027 Invalid message type detected when transferring an attribute (attr) file data. Transmission will be adversely affected.
ACTION: Call the manufacturer.
- SYS0028 Too many GTDs were specified in the attr.db file loaded.
ACTION: Call the manufacturer
- SYS0029 The starting GTD specified in the attr.db file was beyond the limit in the system.
ACTION: Contact your technical support group.
- SYS0030 No GTD definitions were supplied. Transmission will be adversely affected.
ACTION: Call the manufacturer.
- SYS0031 The ending GTD specified in the attr.db file was beyond the limit in the system.
ACTION: Call the manufacturer
- SYS0032 Memory could not be allocated for storing TNs for GDLS default port type allocation.
ACTION: Call the manufacturer.
- SYS0033 No list of TNs for default port type allocation was found.
ACTION: Call the manufacturer.
- SYS0034 A problem occurred during the reading of the GDLS loss plan files.
ACTION: Call the manufacturer.
- SYS0035 Trying to load Numeris Master Mode data with MMCS or Master Mode packages not equipped. The data will be lost.
ACTION: Equip Packages 309 and 317 and re-load.
- SYS0036 CNAME package has been automatically turned off because the system is not equipped with the CPND package.
ACTION: Contact your technical support group.
- SYS0037 CMOD unit data is discarded because the system is CNUMB AND CNAME package restricted.
ACTION: Contact your technical support group.
- SYS0038 The CIS MFS package is equipped and the CIST package is not equipped.
- SYS0039 ICS MFS package equipped and CIST package not equipped.
ACTION: Enable the CIST package and reload the system.

- SYS0040 I/O device number 0 is an incorrect type. An error has been made in the data on the storage medium.
ACTION: To correct the I/O device number 0 type, refer to the *X11 Administration* (553-3001-311) and use LD 17. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0041 I/O device number 1 is an incorrect type. An error has been made in the data on the storage medium.
ACTION: To correct the I/O device number 1 type, refer to the *X11 Administration* (553-3001-311) and use LD 17. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0042 CMOD list is not created due to a lack of memory.
ACTION: Contact the distributor and request the expansion of the system memory size.
- SYS0043 Invalid CMOD unit number (i.e. >31) is encountered. CMOD unit is not added into the system CMOD list.
ACTION: A system memory corruption might have occurred. Contact your technical support group.
- SYS0050 The CPU has no spare memory module. Not for system Options NT, XT, RT, 51, 61, 71, 61C and 81.
ACTION: Add more memory by following the steps in the *Hardware Replacement* (553-3001-520).
- SYS0051 DMI entry has been discarded due to a missing FNP (160) package
ACTION: Contact your technical support group.
- SYS0052 SIDE is defined on a DASS2 route but the MMCS package is not equipped.
- SYS0053 Microcellular packages restricted. Mobility related data will be removed from database.
ACTION: For Microcellular/Mobility, packages 302 (.MOSR) and 303 (.MMO) are required. Contact your technical support group.
- SYS0054 Mobility related data blocks are removed. Possibly, superloop does not exist.
ACTION: Contact your technical support group.
- SYS0055 Invalid value in the EBLN ISM parameter.
- SYS0060 The CPU has no spare memory module. There are too many logical units, TDS or MFSD loops for the I/O table. Not for system Options NT, XT, RT, 51, 61, 71, 61C and 81.
ACTION: Add more memory by following the steps in the *Hardware Replacement* (553-3001-520).
- SYS0061 RCAP CTO or ECTO is removed during sysload because BNE package is not equipped.
- SYS0062 MSMN Package unrestricted with MC32 package #350 restricted.

- SYS0063 Invalid data found while building DMC Index table for DCS units.
- SYS0064 Invalid data found while building DMC Index table for DCS units.
- SYS0065 Unable to allocate the FDL_STRUCT.
- SYS0066 FXS info is present but the FXS package is not equipped.
ACTION: Sysload again with FXS package #152 equipped.
- SYS0067 Survivability ISM exceeds Survivability ISM limit.
- SYS0068 <key#> TN <TN#>
 BCS data block limits have caused some keys above <key#> on TN <TN#> to be discarded.
- SYS0069 BCS block overflow. Some keys will be deleted.
- SYS0070 FATAL
 There is a primary storage medium fault. The storage medium is not ready or a head fault has been detected. On an Option 51 or 61, this message can also be caused by an SDI paddle board.
ACTION: Replace the storage medium with backup disk(s). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD. After pressing the button(s), verify that the system is reloading. If the system does not reload contact your technical support group immediately. For an Option 51 or 61, replace the SDI paddle board by following the steps in the *Hardware Replacement* (553-3001-520).
- SYS0071 A record could not be read from the storage medium. A storage medium fault is indicated. The system may still load, even though data or programs are missing.
ACTION: Replace the storage medium with the backup disk(s). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD. To check for correct programmable data after the system reloads, refer to the *X11 Administration* (553-3001-311) and use LD 22, 21 and 20. Check for proper system operation.
- SYS0072 A storage device function timed out. A fault in the storage device interface (TI or MSI) or storage device (TU or MSU) is indicated. The system may still load even though data or programs are missing.
ACTION: Replace the Multi-Disk Unit or Floppy Disk Unit by following the steps in the *Hardware replacement* guide. Replace the storage medium with backup disk(s). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD. To check for correct programmable data after the system reloads, refer to the *X11 Administration* (553-3001-311) and use LD 22, 21 and 20. Check for proper system operation. If the system does not operate properly, replace the Mass Storage Interface or Floppy Disk Interface card by following the steps in the *Hardware Replacement* (553-3001-520). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD.

- SYS0073 Data could not be accessed from one tape track or disk address. A fault in the storage device interface (TI or MSI) or storage device (TU or MSU) is indicated. System may still load even though data or programs are missing.
- ACTION:** Replace the Multi-Disk Unit or Floppy Disk Unit by following the steps in the *Hardware replacement* guide. Replace the storage medium with the backup disk(s). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD. To check for correct office data after the system reloads, refer to the *X11 Administration* (553-3001-311) and use LD 22, 21 and 20. Check for proper system operation. If the system does not operate properly, replace the Mass Storage Interface or Floppy Disk Interface card by following the steps in the *Hardware Replacement* (553-3001-520). Press the RESET button or both RELOAD buttons simultaneously to restart the SYSLOAD.
- SYS0079 Both CPUs are faulty.
- ACTION:** Check for INI and CED messages following this SYS message and follow the instructions provided to clear the fault. (Look for something common to both.)
- SYS0080 The active CPU is faulty. Initiating CPU switch.
- ACTION:** This message is for information only. Check for INI and CED messages following this SYS message and follow the instructions provided to clear the fault on the active CPU.
- SYS0081 The physical available memory does not match the configuration memory, but fulfills minimum requirement to allow a sysload.
- ACTION:** To correct the configuration memory use LD 17 and refer to the *X11 Administration* (553-3001-311).
- SYS0082 A Segmented Bus Extender is configured but not equipped.
- ACTION:** Install a SBE card, referring to the installation guide.
- SYS0083 A Segmented Bus Extender is equipped but not configured.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 17 to configure the SBE.
- SYS0084 The secondary memories are disabled, and all primary memories are used. (Procedure DO_OVLY_AREA.)
- ACTION:** Check for INI and CED messages following this SYS message and follow the instructions provided to clear the fault.
- SYS0085 SMART ROM MTYP 0 assumed (procedure CHECK_ROM_TAG).
- ACTION:** Contact your technical support group.
- SYS0086 Corrective ROM MTYP 192 assumed (procedure CHECK_ROM_TAG).
- ACTION:** Contact your technical support group.
- SYS0087 There is a memory configuration error (procedure BUILD_MOD_MAP).
- ACTION:** To correct the configuration record, refer to the *X11 Administration* (553-3001-311) and use LD 17. Use LD 43 EDD to correct the programmable data on the primary storage medium. You may have to use a backup disk if the primary storage medium is corrupted.

SYS0088 QPC_{xxx}y

ROM issue not compatible with software issue (procedure CHECK_ROM_TAG), where **xxx** is the QPC code and **y** is the vintage code of the ROM.

Systems with vintage B and later ROM cards can disregard this message. All normal operations on an upgraded system are unaffected.

ACTION: Contact your technical support group.

SYS0089CPU p b

Memory block **b** on page **p** is not configured. (Procedure ISSUE_ERRORS.) Not for system Options NT, XT, RT, 51, 61, 71, 61C and 81.

ACTION: Contact your technical support group.

SYS0090 xx

Memory **xx** failure. This message may indicate an incorrect ROM card. For system Options XN, NT, XT, RT, 51, 61 and 71 the value of xx can be:

00 = memory card 0 of CPU 0

01 = memory card 1 of CPU 0

02 = memory card 2 of CPU 0

10 = memory card 0 of CPU 1

11 = memory card 1 of CPU 1

12 = memory card 2 of CPU 1

For all other system options:

0= page 0 memory 0

0=page 1 memory 0

0=page 2 memory 0

2=page 8 memory 0

2=page 9 memory 0

2=page 10 memory 0

3=page 12 memory 0

3=page 13 memory 0

3=page 14 memory 0

10=page 0 memory 1

10=page 1 memory 1

10=page 2 memory 1

11=page 4 memory 1

11=page 5 memory 1

11=page 6 memory 1

12=page 8 memory 1

12=page 9 memory 1

12=page 10 memory 1

13=page 12 memory 1

13=page 13 memory 1

13=page 14 memory 1

This message may indicate an incorrect ROM card.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared.

SYS0091 x Page decoding fault on memory **x** (0 or 1). Page decoding faults cause all the memory cards being tested at the time of the failure to be marked failed. Not for system Options NT, XT, RT, 51, 61, 71, 61C and 81.

ACTION: Contact your technical support group.

SYS0092 x There is a CMA fault, CMA card located with memory **x** (0 or 1)

ACTION: Replace the CMA card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

SYS0093 INHIBITS xxxx

If multiple reload attempts occur, past history failures may cause serious assumed fault conditions indicated by **xxxx** as follows.

1. If **xxxx = 0001**, Primary page 0 assumed faulty. No attempt is made to test this memory card.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the memory fault.

2. If **xxxx = 0002**, Secondary page 0 assumed faulty. No attempt is made to test this memory card.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the memory fault.

3. If **xxxx = 0004**, Primary page decode assumed faulty. No attempt is made to test the memory.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the memory fault.

4. If **xxxx = 0008**, Secondary page decode assumed faulty. No attempts are made to test the memory cards on this memory shelf.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the memory fault.

5. If **xxxx = 0010**, Enabling Segmented Bus Extenders has caused a bus fault. The extenders are not enabled.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the extender faults.

6. If **xxxx = 0020**, Switching to the standby CPU is not attempted.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the CPU fault.

7. If **xxxx = 0040**, Execution from active CPU is not attempted.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the CPU fault.

8. If **xxxx = 0080**, Trap sequence determined primary page 0 faulty. Card will be re-tested.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the memory fault.

9. If **xxxx = 0100**, Trap sequence found that the secondary page 0 is faulty. The card will be re-tested.

ACTION: Check for INI and CED messages following this SYS message and follow the instructions provided to clear the memory fault.

SYS0094 x Memory page **x** passes the test but the memory page is not in the configuration. Memory cards that are installed and not identified in the configuration record are tested, but not used for loading programs or data. Such cards are indicated by **x** which can be the same as for SYS0090.

ACTION: Replace the Memory card(s) by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared.

SYS0095 x Indicated split memory option for the memory card differs from the majority. (The data store memory split option is verified on a "majority opinion" basis of each memory card and the configuration record. For SL-1 LE and VLE only).

ACTION: Information only, no action required.

SYS0096 The configuration changed from split to nonsplit. The configuration record differs from both memory cards concerning the "split data store" option. In this event, the configuration record is changed to agree with the majority. For SL-1 LE and VLE only.

ACTION: Information only, no action required

SYS0097 The configuration changed from nonsplit to split. The configuration record differs from both memory cards concerning the "split data store" option. In this event, the configuration record is changed to agree with the majority. For SL-1 LE and VLE only.

ACTION: Information only, no action required

SYS0098 x Memory **x** changed from unequipped to equipped. Configuration-equipped memory cards are forced to be consistent with the split option and with minimum system requirements. Memory cards which are incorrectly equipped are indicated by **x** as follows: For SL-1 LE and VLE only.

00 = page 0 memory 0

00 = page 1 memory 0

00 = page 2 memory 0

10 = page 0 memory 1

10 = page 1 memory 1

10 = page 2 memory 1

ACTION: Verify switch settings for circuit cards by following the steps in the installation guide.

SYS0099 x Memory **x** changed from equipped to not-equipped. **x** is interpreted as for SYS0098. For SL-1 LE and VLE only.

ACTION: Verify switch settings for circuit cards by following the steps in the installation guide.

SYS0100 The CPU switchover has been initiated by SYSLOAD. This is a normal code during a system reload.

ACTION: Information only, no action required.

SYS0101 code xxx

Where CODE can be:

PROG—Program **xxx** has length error.

INTR—Intrinsic length error.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0102 code xxx

Where the code can be:

PROG = Vector number out of range, program **xxx**.

INTR = Intrinsic number out of range.

ACTION: Reload the system using the backup software as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0103 code xxx

Where the code can be:

PROG = Program **xxx** already loaded.

INTR = Intrinsic already loaded.

ACTION: Reload the system using the backup software as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0104 INTR 0

No intrinsic on storage medium. This is a warning only.

ACTION: Information only. If this message reappears contact your technical support group.

SYS0105 PROG xxx

Meridian 1 assembler routines are not supported. Programs containing such code will not be loaded.

ACTION: Information only. If this message reappears contact your technical support group.

SYS0106 The program number is in old compiler format.

ACTION: Information only. If this message reappears contact your technical support group.

SYS0190 A valid TN is in the DN block and the TN is rejected.

ACTION: Contact your technical support group.

SYS0191 An invalid TN is in the DN block; and the TN is rejected from DN block.

ACTION: Contact your technical support group.

- SYS0201 There is a data block length error. Output data depends on the software as follows:
X11: xxxx yyyy (data structure identifier & index number)
X08: TN l s c u — terminal number.
ACTION: Contact your technical support group for help identifying xxxx yyyy. To correct the problem refer to the *X11 Administration* (553-3001-311) and use LD xx. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0202 TN l s c u
Station type does not match the card type.
ACTION: Contact your technical support group.
- SYS0203 TN l s c u
Secondary attendant block forces out TN already loaded.
ACTION: To correct the secondary attendant block refer to the *X11 Administration* (553-3001-311) and use LD 12. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0204 TN l s c u
Unit number of Digitone receiver not zero.
ACTION: To correct the Digitone receiver unit number refer to the *X11 Administration* (553-3001-311) and use LD 13. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0205 TN l s c u
Unit number of trunk not zero or one.
ACTION: To correct the trunk unit number refer to the *X11 Administration* (553-3001-311) and use LD 14. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0206 Loop number out-of-range.
ACTION: To correct the loop number range refer to the *X11 Administration* (553-3001-311) and use LD 17. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0207 Shelf not in configuration record (local or remote).

ACTION: To configure the local or remote shelf refer to the *X11 Administration* (553-3001-311) and use LD 17. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0208 TN l s c u

Invalid pointer to station data.

ACTION: To correct the telephone data refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0209 Identical data block encountered twice.

ACTION: To out one of the identical data blocks refer to the *X11 Administration* (553-3001-311) and use the appropriate LD xx. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0210 ARS data block does not exist.

ACTION: Contact your technical support group.

SYS0211 ARS user codes exceed table size.

ACTION: Contact your technical support group.

SYS0212 SCL DND template number exceeds length of list allocated. EDD error.

ACTION: To correct the template number length refer to the *X11 Administration* (553-3001-311) and use LD 18 and LD 10, 11, 12 for SCL, and LD 15, 26, and LD 10, 11, and 12 for DND. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0213 Attempt to use nonexistent ARS schedule block.

ACTION: Contact your technical support group.

SYS0214 Conversion error.

ACTION: Try the conversion again. If this message reappears contact your technical support group.

SYS0215 Storage medium directory error.

ACTION: Try a backup copy of the software. If the problem continues, replace the storage medium by following the steps in the *Hardware Replacement* (553-3001-520).

- SYS0216 Patch block error.
ACTION: Contact your technical support group.
- SYS0218 Limit on number of storage medium, teletype and History File units exceeded (limit is 16 units).
ACTION: After the system recovers, use LD 22 CFN to ensure the correct number of TTY devices are programmed.
- SYS0219 Incompatible feature packages are enabled. Attendant Overflow Position feature package is changed to restricted because Centralized Attendant Service Main or Remote feature package is not restricted.
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service to set or reset the proper package restriction flag. You can use LD 22 PRT, PKGxxx to check the restricted status of the package.
- SYS0227 Unable to allocate enough Program Data Store for converted Meridian SL-1 station.
ACTION: To check the memory map refer to the *X11 Administration* (553-3001-311) and use LD 29. Add memory if needed.
- SYS0229 Same as SYS0227.
ACTION: See SYS0227 action.
- SYS0230 Customer Data Block (CDB) does not exist when loading Automatic Call Distribution (ACD) blocks.
ACTION: To resolve conflict between CDB and ACD blocks, refer to the *X11 Administration* (553-3001-311) and use LD 15 or LD 23. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0231 Number of ACD blocks exceeds list size, or the ACD DN does not exist in DN tree.
ACTION: To correct the list size or add the ACD DN, refer to the *X11 Administration* (553-3001-311) and use LD 23. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0232 key cust dn
Illegal ACD-DN.
ACTION: To remove ACD-DN refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

- SYS0233 Data assigned to SL-1 ACD key is invalid, or the data assigned cannot be used with 500/2500 sets as ACD stations.
- ACTION:** To correct the invalid ACD key or the assigned data, refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0234 Number of stations assigned to ACD group exceeds maximum.
- ACTION:** To correct the number of stations refer to the *X11 Administration* (553-3001-311) and use LD 23. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0236 Authorization code data block does not exist.
- ACTION:** To program an authorization code data block, refer to the *X11 Administration* (553-3001-311) and use LD 88. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0237 Too many authorization codes in authcode table.
- ACTION:** To remove authorization codes, refer to the *X11 Administration* (553-3001-311) and use LD 88. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the “programmable data”. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the “programmable data” using LD 20, 21 or 22 to ensure that it is valid.
- SYS0240 CDB does not exist for Direct Inward System Access (DISA) data block.
- ACTION:** To program the customer number, refer to the *X11 Administration* (553-3001-311) and use LD 24. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0241 Too many DISA data blocks in DISA list.
- ACTION:** To correct DISA data blocks, refer to the *X11 Administration* (553-3001-311) and use LD 24. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

- SYS0242 Number of dial intercom groups exceeds maximum allowed in customer data block.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 15 to correct the number of dial intercom groups. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the “programmable data”. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the “programmable data” using LD 20, 21 or 22 to ensure that it is valid.
- SYS0245 Too many different BCS telephone configurations or PBX telephone configurations have been created. Make more sets with identical feature configurations and key layouts.
ACTION: To correct feature configurations and key layouts, refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0250 Tree data blocks corrupted. Tree will be released.
ACTION: Contact your technical support group.
- SYS0251 Unable to locate New Flexible Code Restriction (NFCR) pointers table.
ACTION: Contact your technical support group.
- SYS0252 Unable to locate tree block pointers table.
ACTION: Contact your technical support group.
- SYS0253 <TN> SPCA Class of Service only allowed for IPE, TIE, E&M, trunks with MIA class of service. Class of service changed to SPCD.
ACTION: DO NOT DATADUMP.
- SYS0254 The number fo digital Tn’s exceeds the Digital TN Limit and no further Tn’s can be sysloaded.
ACTION: Contact your technical support group.
- SYS0255 The number of analog TN’s exceeds the Analog TN limit and no further analog TN’s can be sysloaded.
ACTION: Contact your technical support group.
- SYS0256 Unable to allocate memory for PLUGIN data block.
ACTION: Contact your technical support group.
- SYS0257 PLUGIN pkg not equipped, PLUGIN data cleared.
ACTION: Contact your technical support group.
- SYS0258 x Plugin x is disabled. PLUGIN x performs a different function in the current release with respect to the previous release.
- SYS0260 RCAP UUS1 is removed during sysload because BNE package is not equipped.
- SYS0262 Existing EuroISDN diversion remote capability is removed since the BNE package is restricted.
ACTION: Enable the BNE package and sysload the machine again.

- SYS0263 Existing EuroISDN diversion remote capability is removed since the BNE package is restricted.
ACTION: Enable the BNE package and sysload the machine again.
- SYS0264 The number of ISDN B Channels exceeds the ISDN Channel limit and no further TNs can be sysloaded.
- SYS0265 The number of DTI Channel TNs exceeds the DTI Channel limit and no further TNs can be sysloaded.
- SYS0266 The number of Analog Trunk TNs exceeds the Analog Trunk TN limit and no further TNs can be sysloaded.
- SYS0267 The number of Data Port TNs exceeds the Data Ports limit and no further TNs can be sysloadec.
- SYS0268 The number of Phantom Port TNs exceeds the Phantom Ports limit and no further TNs can be sysloaded.
- SYS0269 The number of CLASS Telephone TNs exceeds the CLASS Telephones limit and no further TNs can be sysloaded.
- SYS0270 The number of Attendant Console TNs exceeds the Attendant Consoles limit and no further TNs can be sysloaded.
- SYS0277 The number of ITG ISDN Trunks exceeds the ITG ISDN Trunks limit and no further trunks can be sysloaded.
- SYS0278 FFC package restricted. Changing CLS from ERCA to ERCD.
- SYS0279 Virtual and Host Terminal data block cannot be loaded when the VIRT_OFFICE_PKG is not equipped.
- SYS0300 tn Customer data block does not exist.
ACTION: To program a customer data block refer to the *X11 Administration* (553-3001-311) and use LD 15. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the “programmable data”. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the “programmable data” using LD 20, 21 or 22 to ensure that it is valid.
- SYS0301 ACD supervisor key assigned to an agent station.
ACTION: To correct the key assignment refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0302 ACD display queue key has invalid ACD DN.
ACTION: To correct the display queue key refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

- SYS0303 More than 9 supervisors are assigned to a simple ACD DN.
ACTION: To correct the assigned supervisors refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0304 Agent key assigned but agent does not exist.
ACTION: To program the agent refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0305 Agent key identifies agent who already has another supervisor.
ACTION: To correct the agent key refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0306 Agent key assigned identifies a supervisor station.
ACTION: To correct the agent key refer to the *X11 Administration* (553-3001-311), and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0307 Attempt to assign an ACD agent function to a noonday set.
ACTION: To correct the problem refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.
- SYS0308 Attempt to assign a 'call supervisor' key to the supervisor.
ACTION: To correct the assignment refer to the *X11 Administration* (553-3001-311) and use LD 10 or 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0310 key cust dn

Illegal digits in DN.

ACTION: To correct the secondary attendant block refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0311 Not-ready-key is assigned to a non-ACD station.

ACTION: To correct the key assignment refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0312 CAS key assigned to a telephone but CAS data blocks do not exist.

ACTION: To correct the CAS data block refer to the *X11 Administration* (553-3001-311) and use LD 15. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0315 A function requiring a LED is assigned to a non-LED key.

ACTION: To correct the LED assignment refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0316 CAS key assigned to a telephone but CAS data blocks do not exist.

ACTION: To correct the CAS data block refer to the *X11 Administration* (553-3001-311) and use LD 15. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0317 More than 10 CAS keys have been assigned to telephones.

ACTION: To correct the CAS keys refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0320 TN l s c u

DN assigned dials operator.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to check the telephone database.

SYS0330 TN l s c u

Shorter DN already exists. For **SYS0330xxxx, xxxx** is the DN concerned.

ACTION: To correct the DN refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0340 TN l s c u

Longer or equal length DN already exists.

ACTION: To correct the DN refer to the *X11 Administration* (553-3001-311) and use LD 11. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0350 TN l s c u

Loop number in Directory Number block does not match TN.

ACTION: Contact your technical support group.

SYS0360 TN l s c u

Trunk member number out of range.

ACTION: To correct the member number refer to the *X11 Administration* (553-3001-311) and use LD 14. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0370 TN l s c u

Route data block does not exist.

ACTION: To correct the route number refer to the *X11 Administration* (553-3001-311) and use LD 14. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0380 TN l s c u

Attendant member number out of range or in use.

ACTION: To correct the attendant number refer to the *X11 Administration* (553-3001-311) and use LD 12. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0385

TN of the terminal is not the prime DN of attendant.

ACTION: To correct the prime DN refer to the *X11 Administration* (553-3001-311) and use LD 12. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0390 TN l s c u

Attendant Directory Number block of wrong type.

ACTION: To correct the attendant block refer to the *X11 Administration* (553-3001-311) and use LD 12. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0391

Invalid TN for attendant.

ACTION: To correct the TN for the attendant refer to the *X11 Administration* (553-3001-311) and use LD 12. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0400 TN l s c u

Assigned DN has more than 16 stations. Release 12 and earlier software can only have 16 Multiple Appearance DNs. Release 30 allows up to 30.

ACTION: To check Multiple Appearance DNs refer to the *X11 Administration* (553-3001-311) and use LD 20 DN. Use LD 10 or LD 11 to correct.

SYS0410 TN l s c u

DN call type in conflict, i.e., single vs. multiple.

ACTION: To correct the secondary attendant block refer to the *X11 Administration* (553-3001-311) and use LD 12. Replace the primary storage disk with a second copy. Use LD 43 EDD to dump the corrected data to the second copy disk. This gives you a clean copy of the programmable data. If you get an EDD0016 No Go Bad Data message, use the EDD CLR command and perform a system reload from the second copy. After the system is reloaded, check the programmable data using LD 20, 21 or 22 to ensure that it is valid.

SYS0420	Network loop in configuration record conflicts with existing loop. ACTION: Contact your technical support group.
SYS0421	Tone loop in configuration record conflicts with existing loop. ACTION: Contact your technical support group.
SYS0422	Conference loop in configuration record conflicts with existing loop. ACTION: Contact your technical support group.
SYS0423	MF Sender in configuration record conflicts with existing loop ACTION: Contact your technical support group.
SYS0430	Private DN in trunk data block conflicts with existing DN. ACTION: Contact your technical support group.
SYS0500	CPU test failed on nonactive CPU. ACTION: Replace the card(s). 1. MISC or Interface (IF) card ACTION: Replace the MISC or IF card(s) by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message reappears try the next card on the list. 2. CPU card or Function (FN) card ACTION: Replace the CPU or IF card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). If this message reappears contact your technical support group.
SYS0510	Changeover and Memory Arbitrator (CMA) card failed to respond. Faulty CMA pack. ACTION: Replace the CMA card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify the fault is cleared.
SYS0511	CMA card indicated that nonactive CPU failed CPU test. Probable fault on nonactive CPU or CMA pack. ACTION: Replace the CMA card by following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify the fault is cleared.
SYS0514	The loop does not exist in LD 73.
SYS0520	Unable to find data for other CPU after switchover. ACTION: Force the CPU to become active by placing the Norm/Maint switch to the Maint position. This procedure will cause an INI. Place the switch back to the Norm position when done.
SYS0600	Emergency conference group out-of-range (0 to 9). ACTION: Check to ensure the data is correct.
SYS0601	Emergency conference member out-of-range (1 to 10). ACTION: Check to ensure the data is correct.
SYS0602	Software problem. If message persists, call manufacturer. ACTION: Check to ensure the data is correct.
SYS0603	Two TNs assigned as the same member of the same group. ACTION: Check to ensure the data is correct.

SYS0606 id index

Customer data block number read from the storage medium record header greater than the size of the customer data block pointer array. The output data is defined as follows:

id = Destructor Identifier.

index = Index number definition.

The meaning of the possible **id index** are:

ESN = Customer number where an error occurred while loading ESN data block (ESN_DATA_BLK).

ESNS = Data block index where an error occurred while loading supplementary digit block (ESN_SDR_BLK).

ESNL = Customer number where an error occurred while loading location route block (ESN_LOC_RTE_BLK).

ESNR = Data block index where an error occurred while loading route list (ESN_RTE_LIST_BLK).

ESND = Data block index where an error occurred while loading digit manipulation block (ESN_DM_BLK).

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0607 id index

Electronic Switched Network (ESN) data structure was loaded from storage medium but a corresponding customer data block to reference this structure does not exist. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0608 id index

More than one ESN data block was loaded from storage medium for the same customer. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0609 id index

One of the ESN data structures which are referenced from the ESN data block was loaded but the ESN data block does not currently exist for the corresponding customer. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0610 id index

Insufficient protected data store for supplementary digit pointer block. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0611 id index

The supplementary digit restriction index read from the storage medium record header is greater than the maximum value, which is stored in the ESN data block. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0612 id index

More than one supplementary digit restriction block was found on storage medium for the same customer and index. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0613 id index

Insufficient protected data store memory space to set up the route list pointer block. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0614 id index

Route list index read from the storage medium record header greater than the maximum value, which is stored in the ESN data block. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0615 id index

More than one route list block was found on storage medium for the same customer and index. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0616 id index

Insufficient protected data store memory space to set up the digit manipulation pointer block. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0617 id index

Digit manipulation index read from the storage medium record header is greater than the maximum value, which is stored in the ESN data block. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0618 id index

More than one digit manipulation block was found on storage medium for the same customer and index. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0619 id index

More than one location route block was found on storage medium for the same customer and index. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0620 id index

Insufficient protected data store memory space to set up a block in the network translation tree. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0621 id index

One of the translation table digits read from the storage medium is out of range. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0622 id index

The same sequence of digits has been read from storage medium for the specified network translation table. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0623 id index

Cannot enter any more ARS digit manipulation records into ESN digit manipulation block, because ESN DM block is full. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0624 id index

Cannot convert ARS codes other than three digits in length. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0625 id index

Cannot convert digit manipulation entry as length is greater than 20 digits. See SYS0606 for output data.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0626

NARS is not available.

ACTION: To ensure that the NARS packages are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. If the NARS packages are not on the disk, contact your technical support group.

SYS0627	Translation data is corrupted. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0628	Route list pointer. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0629	Trunk route data. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0630	Location route data. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0631	Route list entry data. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0632	Insufficient protected data store memory space to set up the Free Calling Area Screening (FCAS) pointer block. ACTION: Add more memory, if possible, by following the steps in the <i>Hardware Replacement</i> (553-3001-520).
SYS0633	More than one FCAS NXX block was found on storage medium for the same customer, index and NPA. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0634	The FCAS index read from the storage medium record header is greater than the maximum value, which is stored in the ESN data block. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0638	NARS—Invalid NXX. ACTION: Use LD 90 to check for NXX code.
SYS0639	NARS—FCAS data cannot be accessed. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
SYS0640	Cannot perform data conversion for this generic/release/version of storage medium. ACTION: Contact your technical support group.
SYS0641	The value of the variable 'BLOCKTYPE' was out of range. This variable is set to the storage medium header word 'TAPEBLOCKTYPE'. ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS0642 The customer data block number read from the storage medium record header is greater than the customer data block pointer size.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0643 No customer data block exists to which authcode can be attached.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0644 The block number read from the storage medium record header does not match the expected block number.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0645 More than one block was read from storage medium with the same block identification.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0646 The authcode header table (AUTH_TABLE_BLK) does not exist to which the remaining authcode data blocks may be attached.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0647 Authcode conversion can occur only in conjunction with the BAUT package and not the NAUT package.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS0648 During conversion, more different class codes were read from storage medium than there is room in the new class code table.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0649 Attempt to allocate protected data store memory space failed.
ACTION: Contact your technical support group.
- SYS0650 During conversion, two authcodes which contained identical digits were loaded.
ACTION: To print the AUB block and check the AUTH codes refer to the *X11 Administration* (553-3001-311) and use LD 88.
- SYS0653 Cannot allocate space for NCTL block which should be split from the ESN data block.
ACTION: To print out the NCTL information refer to the *X11 Administration* (553-3001-311) and use LD 87.
- SYS0654 More than one Coordinated Dialing Plan (CDP) list was found on storage medium for the same customer.
ACTION: To print out the CDP information refer to the *X11 Administration* (553-3001-311) and use LD 87.

- SYS0655 The index for the TDET block was 0 or greater than the maximum size.
ACTION: To print out the RDB and check the TDET prompt refer to the *X11 Administration* (553-3001-311) and use LD 21. Reprogram in LD 16 and use LD 43 to datadump. Perform another Sysload.
- SYS0666 Cannot allocate memory for DCH table of PTRs.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0667 c PRA option for customer **c** was turned off because ISA is restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS0668 x Cannot load data block for DCH **x** when the ISA and/or DTI packages are restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS0669 loop Cannot load data block for PRI **loop** when the ISA and/or DTI packages are restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS0670 r c Cannot load route **r** for customer **c** when the ISA package is restricted and the route configured to have B channels.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS0671 r c SDN option for route **r** in customer **c** is turned off because ISA is restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS0672 The provisioned ROM (QPC717) does not support Expanded Memory.
ACTION: Make sure that the QPC717 is a D vintage.
- SYS0673 The MISC/PS board (QPC709) has been fitted with an improved ROM (QPC717D).
ACTION: Information only, no action required.
- SYS0674 The Meridian ST ROM (QPC717D) with MISC/PC (QPC709C) and the expanded memory boards (QPC814)—MTYP 768 is assumed. Only issued when the configuration record indicates something other than 768.
ACTION: Information only, no action required.

SYS0700 xx This message indicates self-test results, and call processing status. **xx** refers to appended numbers that follow the SYS0700 message itself. Each set of numbers is associated with a specific call processing or self-test activity. They appear as the activity takes place.

- 00** = Begin CP board reset
- 01** = Begin SRAM self- test
- 02** = ROM created on <date>
- 03** = Beginning DRAM self-test
DRAM being configured
- 04** = Booting ROM Operating System

ACTION: Information only, no action required.

SYS0701 xx This message indicates self-test results, and call processing status. **xx** refers to appended numbers that follow the SYS0701 message itself. Each set of numbers is associated with a specific call processing or self-test activity. They appear as the activity takes place.

- 01** = ASIC ICC failure
- 02** = SRAM test failure
- 03** = CP test failure
- 04** = HPM test failure
- 05** = PEROM checksum failure
- 06** = SRA ASIC failure
- 07** = CMB ASIC failure
- 08** = BIC ASIC failure
- 09** = Duarte test failure
- 10** = Time of day clock failure
- 11** = No DRAM available
- 12** = LCD display test failure

ACTION: Replace the CP card by following the instructions in the *Fault Maintenance* and *Fault Clearing Guides*.

SYS0702 x x x x x x

DRAM size (in megabytes). Each **x** indicates a bank populated, with a maximum of 6 banks available.

ACTION: Information only, no action required.

SYS0703 xxxx Self-tests completed. **xxxx** refers to the test flags. 0FFF indicates that all the tests passed.

ACTION: Information only, no action required.

SYS0704 Soft reset completed.

ACTION: Information only, no action required.

SYS0705 xx This message indicates self-test results, and call processing status. **xx** refers to appended numbers that follow the SYS0705 message itself. Each set of numbers is associated with a specific call processing or self-test activity. They appear as the activity takes place.

- 00** = CPU speed unknown
- 01** = CPU speed less than 25 Mhz
- 02** = CPU speed at 25 Mhz

- 03 = CPU speed between 25 Mhz and 33 Mhz
- 04 = CPU speed at 33 Mhz
- 05 = CPU speed between 33 Mhz and 40 Mhz
- 06 = CPU speed at 40 Mhz
- 07 = CPU speed greater than 40 Mhz

ACTION: Information only, no action required.

SYS0706 xx Software full reset, or software warm reset. **xx** refers to the following explanations.

- 00 = Low level debugger command to warm start, or unexpected exception or interrupt occurred during early reset sequence
- 01 = Hardware sanity timeout (once)
- 02 = SWO: failure on switchover
- 03 = SWO: too many switchovers
- 04 = WARM: disk OS warm start failure
- 05 = WARM: too many disk OS warm starts
- 06 = WARM: disk OS not loaded
- 07 = RESET: forced SWO in progress
- 08 = RESET: soft reset in progress
- 09 = TASK: unable to create message queue
- 10 = Protected memory checksum failure
- 11 = INFO: disk OS warm start begins
- 12 = INFO: DRAM is initialized
- 13 = RESET: cannot delete verified task
- 14 = RESET: task threshold exceeded
- 15 = WARM: Exc vector threshold exceeded
- 16 = WARM: Exc total threshold exceeded
- 17 = WARM: Exc handling already busy
- 18 = WARM: Exc restart task failed
- 19 = RESET: manual INIT requested
- 20 = SEG: checksum failure detected
- 21 = SEG: disk OS text segment corrupted
- 22 = SEG: disk OS partitions corrupted
- 23 = DISKOS: unable to load Meridian 1
- 24 = DISKOS: unable to start Meridian 1
- 27 = Bad active IOP is detected
- 28 = Parity error on both sides
- 29 = Parity error on split sides
- 30 = Parity error - remote SIMM is missing
- 31 = Parity error - remote SIMM is disabled
- 41 = OS manual (PDT) request
- 42 = OS request to reboot (sysToMon)
- 43 = OS RST - initialization failed
- 44 = OS SKD - initialization failed
- 45 = OS SWD - initialization failed
- 46 = OS PMEM - initialization failed
- 47 = OS security check failed
- 48 = OS normal recovery from BER
- 49 = OS unable to recover from BER
- 50 = OS unable to "diskos"

- 51 = OS unable to load "diskos"
 - 52 = OS VOL - initialization failed
 - 53 = OS SCSI - initialization failed
 - 54 = OS DOS - initialization failed
 - 55 = OS IOP - initialization failed
 - 56 = OS EXC - initialization failed
 - 57 = OS IOS - initialization failed
 - 58 = OS clock initialization failed
 - 59 = OS failed during loader run
 - 60 = OS failed to spawn loader task
 - 61 = OS kernal initialization failed
 - 62 = OS "diskos" P segment overlaps U segment
 - 63 = Operating system level command to cold start
- For reason 63, xx appears as a "-1." Output looks like SYS0706 -1

ACTION: Contact your technical support group.

SYS0720 x Running VxWorks Boot OS. X11 Release **x**.

ACTION: Information only, no action required.

SYS0721 Cannot access <filename>.

ACTION: Contact your technical support group.

SYS0722 x Cannot load <filename> to **x**.

ACTION: Contact your technical support group.

SYS0723 x Boot OS restart reason **x**.

ACTION: Information only, no action required.

SYS0724 Boot OS exception.

ACTION: Information only, no action required.

SYS0800 Unable to allocate Peripheral Signaling (PS) polling table.

ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the "CED — LD 35 Common Equipment Diagnostic" on page 247 in this guide.

SYS0802 i t n Unable to allocate protected TN block or translator for CMF incoming or outgoing table. Output: **i** = incoming/outputgoing, **t** = table number, **n** = level number.

ACTION: Contact your technical support group.

SYS0803 Unable to allocate protected directory block.

ACTION: Contact your technical support group.

SYS0804 Unable to allocate protected loop block.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS0805 Unable to allocate dial intercom group block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0806 Unable to allocate protected Flexible Feature Table.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0807 Unable to allocate protected Radio Paging data for a radio paging system or a translation table entry.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0808 Unable to allocate memory for Group data link.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0809 Unable to allocate ARS UAC table or schedule block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0810 Unable to allocate 'do not disturb' block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0811 Ext DIG5 block without Basic block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0812 Ext MR block without Basic block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0813 Aux Customer block without Basic block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS0814 ftc c r t n
 FTC class access code table is missing. Where:
ftc = Flexible toll and code
c = Customer number
r = Route number
r = AC (FTC access code table)
 = QUL (FTC qualify code table)
n = 13 (class 1)
 = 14 (class 2)
 = 15 (class 3)
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0815 ftc c r q n

Code restriction master head table or FTC head table is missing.

ftc = Flexible toll and code
c = Customer number
r = Route number
q = FTC qualify code table
n = 16 (class 1)
 = 17 (class 2)
 = 18 (class 3)

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0821 SYS2 Procedure SETBLOCK: memory block has not been allocated.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0822 SYS2 Procedure SETUPTNTERMLOOP. Protected group block does not exist. (PGROUPPTR=NIL).

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0823 SYS2 Procedure SETUPTNTERMLOOP. Protected loop block does not exist. (PLOPPTR=NIL).

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0824 SYS2 Procedure SETUPTN TERM LOOP. Protected loop block exists and the loop is remote.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0825 SYS2 Procedure SETUPTNCARD. Protected card block does not exist. (PCARDPTR=NIL).

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0826 Unable to allocate protected DTI block.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0827 Unable to allocate protected group block.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0900 Unable to allocate memory for the overlay area.

ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

SYS0901 code xxx

Where code is defined as:

INTR = Unable to allocate enough memory for the intrinsic xxx. **PROG** = Unable to allocate enough memory for program xxx.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0905 Unable to transfer program to memory other than page 2.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0910 Memory map for active memories invalid. Program error.

ACTION: Check the full, active memory map in LD 29, use CHG to correct the problem. For further assistance, contact your technical support group.

SYS0920 Memory map for active memories invalid. Program error.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS0999 FATAL

Major alarm (power fail transfer) tripped by software because of insufficient protected memory.

ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

SYS1000 Card density greater than loop density.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to check the card density. Use LD 22 CFN to check the loop density. Determine which needs correcting. Use LD 10 or 11 to correct card density and LD 17 to correct loop density.

SYS1001 Card density less than higher equipped units.

ACTION: To check the card and unit density refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB. Use LD 10 or LD 11 to correct the card or unit density.

SYS1002 Card block not found on storage medium for unit block found on storage medium.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS1003 No card block for secondary attendant.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS1004 Customer station group header tables does not exist.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS1005 Not enough protected data store can be allocated for pretranslation.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS1006 Station group entry number is greater than MAX_SGRP
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1007 Pretranslation table number is greater than MAX_PRXL.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1008 MFC conversion is not supported for this conversion.
ACTION: Information only, no action required.
- SYS1009 No NLC data exists to load the NLC ARS block. (NLC_ARS_LOAD).
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1010 The corresponding NLC block does not exist for the NLC ARS block (NLC_ARS_LOAD).
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1011 No NLC data exists to load the NLC DNL lists. (NLC_ARS_LOAD).
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1012 The corresponding NLC block does not exist for the NLC DNL block. (NLC_DNL_LOAD).
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1013 SSTB I/O
 Unable to allocate protected supplementary service tables. Where, **I/O** = 0 for incoming, 1 for outgoing.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1014 CMF g t n
 MFC conversion for levels greater than 2 are not supported. Where:
g = 0 for incoming, 1 for outgoing,
t = table number,
n = level number.
ACTION: Information only, no action required.
- SYS1015 AUTH data block does not exist.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS1016 SARG number is greater than SARG_MAX.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1017 Not enough protected data store can be allocated for SARG block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS1018 Not enough protected data store can be allocated for AUTH_PTR table.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS1019 Not enough protected data store can be allocated for AUTHCODE block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS1020 Not enough room exists in AUTH_PTR_TABLE.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1026 CMF_TIE_PACKAGE not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS1027 CMF_DID_PACKAGE not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS1028 NWK_PACKAGE not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS1056 Unit number of DTD, MFC, MFE out of range.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS1057 MFE package not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS1058 MFE data corruption.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group. For further assistance, contact your technical support group.
- SYS1059 Caller's Name Display: Cannot set up special name table.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check the special name table. For further assistance, contact your technical support group.
- SYS1060 Caller's Name Display: The average size of the name is not configured.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check MXLN. For further assistance, contact your technical support group.
- SYS1061 Caller's Name Display: The maximum number of names is not configured.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check MXLN. For further assistance, contact your technical support group.
- SYS1062 Caller's Name Display: Not enough memory for names.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check the U data and P data. For further assistance, contact your technical support group.
- SYS1063 Caller's Name Display: No memory reserved for names.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check the U data and P data. For further assistance, contact your technical support group.
- SYS1064 Caller's Name Display: Cannot find TN for dumped name.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check for the missing TN. For further assistance, contact your technical support group.
- SYS1065 Caller's Name Display: Name is loaded for TN that has no CND data.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check CND data. For further assistance, contact your technical support group.
- SYS1066 Caller's Name Display: Corruption during stealing from name pool.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1067 Caller's Name Display: Trying to dump CND data for nonexistent attendant.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check the CND data. For further assistance, contact your technical support group.
- SYS1068 Caller's Name Display: Cannot find secondary attendant block.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 95 to print and then check for missing secondary attendant block. For further assistance, contact your technical support group.

- SYS1069 Caller's Name Display: Trying to dump a monitored area title for a customer that does not exist.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1070 Caller's Name Display: Cannot set up display group table.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS1082 adon Tape contains VNET package but is missing CR_ADDON package. Any networking call attempts will fail.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS1083 Digit buffering is not supported and outpulsing rate is reset to 100ms.
ACTION: Information only, no action required.
- SYS3000 c Customer c is missing from Call Park data block. The system cannot load the data block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3001 c Cannot build DN because DN information is missing from Call Park block for customer c.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 50 to correct missing DN information.
- SYS3002 c dn Cannot build the remainder of the Call Park DNs for Customer c. **dn** is failed DN.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3003 Speed Call list is partially missing.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3004 Cannot build DN for ESN test maintenance lines.
ACTION: Contact your technical support group.
- SYS3005 Fatal. Conversion was not done properly. Wrong generic/release.
ACTION: Check for proper source and target software. If the problem is not corrected contact your technical support group.
- SYS3006 Conversion flag not set.
ACTION: Check for proper source and target software. Re-attempt conversion
- SYS3007 SCC data table is required.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3008 Card density on storage medium is greater than configured loop density.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 22 CFN to print and check for correct loop density. Use LD 10, LD 11 or LD 14 to correct.

- SYS3009 Card density in protected card block does not equal the card density on storage medium.
ACTION: Use LD 32 IDC to check the affected card. Use LD 10, LD 11 or LD 14 to correct.
- SYS3010 Encountered card block with wrong card type.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 97 FDLC to perform a forced download.
- SYS3011 The expected number of card records not received from storage medium.
ACTION: Try a backup set of software. If the fault does not clear, contact your technical support group.
- SYS3012 A higher density loop has a lower density card record for upper units.
ACTION: Use LD 32 STAT to check card density. Use LD 10, LD 11 or LD 14 to correct the fault.
- SYS3013 ADM trunk type not supported. Route or trunk data block discarded.
ACTION: Information only, no action required.
- SYS3015 Unable to allocate Protected Data Store (PDS) for set relocation.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3016 Unable to allocate PDS for history, traffic, or TTY log file buffer.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3017 Unable to allocate PDS for tone detector block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3018 File LAST missing from tape list.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3019 Multiple Programmable Code/DID ranges block found with no location code.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3020 There is a Multiple Programmable Code and DID ranges block for a location code that does not have a MNXX block defined. MNXXX was allocated anyway.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3021 The pointer to MNXXX block was not nil (possibly two MNXXX blocks for this location code).
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS3022 There is a Multiple Programmable Code and DID ranges block for a location code but the length is zero.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3024 Data block can only be loaded when DTI package is selected. On code but the length is zero.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3025 Data block can only be loaded when AMP package is selected.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3026 Attempt to allocate pds for Tenant Data Block failed.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3027 Block header customer number too large.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3028 Block header route number too large.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3029 Block header tenant number too large.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3030 Tenant data blocks out of order, presumed missing.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3031 Essential tenant data blocks are missing, Sysload disabled tenant service.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3032 Tenant service package restricted but tenant data block detected.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS3034 Tenant service should not be packaged with mini-CDR.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3035 Digital set data block cannot be loaded when digital set package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3036 M3000 data block cannot be loaded when M3000 package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3037 The first part of an atm schedule block was lost.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3038 MSI Hardware register fault.
ACTION: Replace the MSI card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- SYS3039 BG TIME/CATEGORY block without AUX CUST BLK.
ACTION: Contact your technical support group.
- SYS3040 AWU time on the TN has been erased.
ACTION: Information only, no action required.
- SYS3041 SLST package not allowed on SL-1 N machine. Trap is called.
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service to set the SLST package restriction flag.
- SYS3042 Two supervisors have a NSVC key assigned for this ACD-Dn.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 11 to correct the key assignment.
- SYS3043 The ACD NSVC key is assigned to an invalid ACD-DN.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 11 to correct the key assignment.
- SYS3044 The ACD NSVC key is assigned to an agent's station.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 11 to correct the key assignment.
- SYS3045 The NSVC key is assigned to an illegal DN lamp key.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 11 to correct the key assignment.

- SYS3046 Cannot allocate memory space for Speed Call List header table.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3047 Automatic conversion is not available for a given database. Database on tape is not updated to minimum release.
ACTION: Use the correct conversion procedure by following the steps in the *System and Software Upgrade Guide*.
- SYS3048 Expecting an extension block on tape which is not there.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3049 An illegal extension block is read by the tape. Block that has been read is not is not an extension of the previous block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3050 The primary block is missing from the tape. The extension block read from the tape needs a primary block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3051 Cannot load FTC data block if FTC is not packaged.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3052 Cannot get Protected Data Block for Auxiliary Customer Block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3053 Cannot get Protected Data Block for creating Table 0.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3054 Mini CDR module is entered when either DNXP or CDRE is present. Mini CDR is not supported when either DNXP or CDRE (or both) are present.
ACTION: Information only, no action required.
- SYS3055 Digital Set Package not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3056 Customer ID for given Prexl_block is out of range.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS3057 Customer data block does not exist for given prexl_block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3058 System out of memory. Cannot create storage for prexl_block because no more PDS available.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS3060 c zz ss
 DN's hundreds group conflict with a shorter hundreds group.
 c = customer number
 zz = conflicting hundreds group
 ss = is the shorter existing group
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3061 c xx yyyy
 This DN's hundreds group conflicts with a different hundreds group within this database.
 c = customer number
 xx = conflicting hundreds group
 yyyy = is the longer existing group
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3062 Private DN has already been defined as non-private DN line setup fail.
ACTION: Information only, no action required.
- SYS3063 FGD package is restricted; FGD block could not be loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS3064 FGD block number exceeds length of list allocated.
ACTION: Refer to the *ISDN PRI: Maintenance* (553-2901-501).
- SYS3065 Unit number of MFVE receiver not zero or one.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3066 Unit number of MFR receiver is not zero.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS3067 Can not allocate P_NKDM_TABLE for given customer. Remove unnecessary configuration.
ACTION: Contact your technical support group.
- SYS3068 Fatal error; no space for the conversion program.
ACTION: Make sure you are using the correct target software, ROM and memory cards.
- SYS3069 Fatal error; the conversion program is not on the storage medium.
ACTION: Make sure you are using the correct target software, ROM and memory cards.
- SYS3070 Fatal error, Conversion error: wrong version or wrong storage medium issue
ACTION: Make sure you are using the correct target software.
- SYS3071 CPND NAME dn
A CPND name associated with the given DN was not loaded into memory because it was too long, invalid or there was not enough protected data store available.
ACTION: Re-enter the name in LD 95. If there are many of these messages then evaluate the available protected data store.
Change all sets with 'AST' to "NO" on the original software, then convert again. Verify the proper ISM parameters are met.
- SYS3072 Block index is out of range for given ovflw_index_block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3073 Block index does not correspond with given ovflw_index_block. Block index is within range but it does not match with given ovflw_index_block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3074 Ran out of memory. Cannot allocate PDS for AUTH_TABLE_block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the "CED — LD 35 Common Equipment Diagnostic" on page 247 in this guide.
- SYS3076 No more PDS. Cannot allocate PDS for ATM_Sch_Blk.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the "CED — LD 35 Common Equipment Diagnostic" on page 247 in this guide.
- SYS3077 No more PDS. Cannot allocate PDS for Cust_ATM_MHT block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the "CED — LD 35 Common Equipment Diagnostic" on page 247 in this guide.

- SYS3078 Cust ID out of range. ATM_Sch_Blkc customer ID is out-of-range of cDataPtr.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3079 Customer Data is missing. No customer data exist for given cust ID for ATM_Sch_Blkc.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3080 Hour given is out of range. ATM_Sch_Blkc number of hours out of range of 24 hours.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 21 to check the schedule Use LD 16 to correct out of range of hours.
- SYS3081 The value of printer is NIL. No ATM_Sch_Root_Ptr exist for given Cust_ID.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 21 to check the schedule. Use LD 16 to correct the schedule.
- SYS3082 No more protected data store. Cannot allocate PDS for ATM_Sch_Rovt_Ent block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS3084 Unable to allocate head/subhead table block for FGD ANI data.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS3085 No NPA data block exists to which NXX data block can be attached.
ACTION: Use LD 90 to check the Bars/Nars programing.
- SYS3086 No NXX data block exists to which SUB data block can be attached.
ACTION: Use LD 90 to check the Bars/Nars programing.
- SYS3087 The block number read is greater than the block number expected.
ACTION: Contact your technical support group.
- SYS4007 LLC data block found but feature is not packaged. Data block not loaded into the system.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4009 Cannot allocate memory for PNI Table.
ACTION: To check the U data and P data, refer to the *ISDN PRI: Maintenance* (553-2901-501). For further assistance, contact your technical support group.
- SYS4010 Cannot allocate memory for PNI customer table.
ACTION: To check the U data and P data, refer to the *ISDN PRI: Maintenance* (553-2901-501). For further assistance, contact your technical support group.

- SYS4011 Cannot allocate memory for PNI count table.
ACTION: To check the U data and P data, refer to the *ISDN PRI: Maintenance* (553-2901-501). For further assistance, contact your technical support group.
- SYS4012 MAX_DGT_MAN_TBLS equal MAX_DM_TBLS. The system cannot automatically create a new Home Location Code (HLOC) Digit Manipulation Index. (DMI).
ACTION: Use LD 86 and 90 to check the DMI for HLOC and correct if necessary.
- SYS4013 Patch block error.
ACTION: Contact your technical support group.
- SYS4014 Aries set data block cannot be loaded when Aries set package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4015 SYS cust number is out-of-range. The cust ID of ICI Table Block is bigger than the size of cDataPtr.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4016 No customer data block exists for given cust ID, of ICI Table block.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4017 No protected data store exists to allocate a new ICI table block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4020 c r t INC CMF TBL in non VNET route has been zeroed, where **c** = customer number, **r** = a route number, and **t** = an incoming CMF signalling table associated with the route.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4021 c r t ISST TBL in non VNET route has been zeroed, where **c** = customer number, **r** = route number, and **t** = an incoming supplementary service table associated with the route.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4023 Unable to free unused PS for later PDS use.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4024 x x 256W chunks of memory are available.
ACTION: Information only, no action required.
- SYS4025 Only top 256 elements of MS were saved when moving STK or adjusting its size.
ACTION: Information only, no action required.

- SYS4026 Only top 256 elements of RAS were saved when moving STK or adjusting its size structures.
ACTION: Information only, no action required.
- SYS4033 Loop block not allocated due to cap limit.
ACTION: Information only, no action required.
- SYS4034 Duplicate clock source option.
ACTION: Information only, no action required.
- SYS4035 Card block not allocated due to cap limit.
ACTION: Information only, no action required.
- SYS4036 Page 5 option set, bug logical Page 509 not on page 5. No memory enhancement performed (XN and L only).
ACTION: Check the full, active memory map in LD 29, and use CHG to correct the problem. For further assistance, contact your technical support group.
- SYS4038 MSM package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4040 5 or 6 Hunt and Night DNs, and all Display DNs have been removed because the ENP pkg is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4041 Display DNs are being removed because the customer does not have EDN option selected.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 21 CDB to check the EDN option.
- SYS4100 The ICDR data exists on the system tape but the ICDR package is disabled for the software active on the switch. All telephone sets and attendant consoles ICDR options are removed.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4101 The MCT data exists on the system tape but the MCT packages is disabled for the software active on the switch. MCT options have been reset.
ACTION: Check the full, active memory map in LD 29 and use CHG to correct the problem. For further assistance, contact your technical support group.

- SYS4102 Tape contains Enhanced Hot Line data but EHOT package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4103 Hot Line Package must exist for EHOT package to be enabled.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4105 This DN and all following DNs have been removed by Capacity *X11 Administration* (553-3001-311).
ACTION: Information only, no action required.
- SYS4106 This PSTRN trunk and all following PSTN trunks have been removed by Capacity Administration.
ACTION: Information only, no action required.
- SYS4107 This attendant and all following attendants have been removed by Capacity Administration.
ACTION: Information only, no action required.
- SYS4108 Total number of DNs removed by Capacity Administration.
ACTION: Information only, no action required.
- SYS4109 Total number of PSTN trunks removed by Capacity Administration.
ACTION: Information only, no action required.
- SYS4110 Total number of attendants removed by Capacity Administration.
ACTION: Information only, no action required.
- SYS4111 Pilot DN block exists but tape is not equipped with GPHT package. PDBs are not loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4112 nn More than 16 logical units cannot be configured. Therefore TTY **nn** is no longer configured.
ACTION: Information only, no action required.
- SYS4200 Network Attendant Service (NAS) schedule block found on disk, but the NAS package is restricted. NAS data was not loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4201 One of NARS, NCOS or BRTE package required by Network Attendant Service (NAS) is restricted. NAS data was not loaded.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4202 Warning: the disk is equipped with Network Attendant Service (NAS) and at least one of Attendant Overflow Position (AOP), Centralized Attendant Service Main (CASM) or CAS Remote (CASR). These packages are mutually exclusive. If the customer is using NAS, the AOP, CASM and CASR packages must be restricted.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4203 P_AUX_CDB is missing for the Network Attendant Service (NAS) schedule block to be loaded. NAS data was not loaded.
- ACTION:** Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4204 The SDI_RECORD cannot be loaded or allocated during SYSLOAD.
- ACTION:** Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4205 Data can only be loaded when PRI2 package is selected.
- ACTION:** Information only, no action required.
- SYS4206 Data can only be loaded when PRI2, DTI2, BRIT, or BRIL package is selected.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4207 c No memory block (PDS) for Console Presentation Group (P_cpg_data_blk) during conversion. Attendant parameters for customer **c** are lost.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4209 BKGD Port ID of “IS” changed to its ASCII equivalent “01”. This was done because the previously defined BKGD port of “IS” conflicts with a new message type in the Hospitality Voice Services (HVS) feature.
- ACTION:** Continue to use the new port ID or “01”, or change it to another valid ID. This error does not inhibit a subsequent data dump.

- SYS4210 xxx Where **xxxx** can be one of the following codes: 216 DDSL number exceeds length of list allocated; 563 Bad DPNSS channel block (data is lost). These codes correspond to SYS0216 and SYS0563 on SLX systems.
- ACTION:** Contact your technical support group.
- SYS4211 CPG number is out of range (1-63).
- ACTION:** To check for the correct CPG number refer to the *X11 Administration* (553-3001-311) and use LD 50.
- SYS4212 Customer number for CPG data block is out-of-range (0-99).
- ACTION:** To check for the correct customer number refer to the *X11 Administration* (553-3001-311) and use LD 50.
- SYS4213 CPG (1-63) data block found but the CPG basic package (CPG_BAS_PACKAGE) is not equipped.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4214 No Protected Data Store (PDS) to allocate the CPG data block.
- ACTION:** Install more memory if applicable. Use the LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4215 No Protected Data Store (PDS) to for CPG0 data block at SYS2 wrap up time.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test memory. If memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4216 The protected CPG pointer block is nil (DNXL module) for a configured customer.
- ACTION:** Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4217 Customer configured, no CPG0 data block SYS2 will recover with the default values.
- ACTION:** To check the CPG0 data block refer to the *X11 Administration* (553-3001-311) and use LD 50.
- SYS4218 ATL package not equipped.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4219 Cannot find the ACD Block for this Target Table.
- ACTION:** Use LD 23 to check the NACD programming.

- SYS4220 Invalid DN for this NACD Target Table.
ACTION: Use LD 23 to check the NACD programming.
- SYS4221 Cannot find the ACD Block for this Source Table.
ACTION: Use LD 23 to check the NACD programming.
- SYS4222 Invalid DN for this NACD Source Table
ACTION: Use LD 23 to check the NACD programming.
- SYS4223 Not enough Protected Data Store to set up FSNS pointer block.
ACTION: Install more memory if applicable. Use the LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4224 More than one FSNS XXX block was found for the same customer, index and NPA.
ACTION: Check Bars/Nars programming
- SYS4225 The FSNS index record header was found to greater than the maximum value which is stored in the ESN data block.
ACTION: Check Bars/Nars programming
- SYS4226 Missing MCAD_TABLE entries on FTC conversion. Cadence data will be set to the defaults.
ACTION: Contact your technical support group.
- SYS4227 Cannot get Protected Data to create a new MCAD ENTRY table. Cadence data will be set to the defaults.
ACTION: Contact your technical support group.
- SYS4257 On a cold start, this message reports the RLS/ISSUE/DATE/TIME, size in records and sequence number of the DATABASE last used for data dump.
ACTION: Information only, no action required.
- SYS4301 Aries data block cannot be loaded unless the Aries Package is equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4304 The system has found some corrupted LAPW data
ACTION: To print the LAPW data refer to the *X11 Administration* (553-3001-311) and use LD 22. If you do not know the secondary password, contact your technical support group.
- SYS4305 The root pointer is not set. The LAPW data will not be loaded.
ACTION: To print the LAPW data refer to the *X11 Administration* (553-3001-311) and use LD 22. If you do not know the secondary password, contact your technical support group.

- SYS4306 The LAPW package is not equipped. The LAPW data will not be loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4307 PLDN package is not equipped; data has been cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4308 Bad data encountered while loading DN_GHBLK.
ACTION: Contact your technical support group.
- SYS4309 Unable to allocate PDS GPHT data block.
ACTION: Install more memory if applicable. Use the LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4310 Bad data encountered while loading SCL_P_GHBLK.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4311 l s c u The key template for the BCS set at this TN is missing. The data block cannot be loaded.
ACTION: The set must be redefined.
- SYS4312 Attendant Alternative Answering (AAA) and Attendant Forward No Answer (AFNA) are mutually exclusive.
ACTION: Information only, no action required.
- SYS4313 When a disk with IMS data and packages has been dumped to disk, and an IMS package is missing, then two SYS4313 messages are output on SYSLOAD instead of SYS0802.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4314 PRI2 loop
 Conversion of PRI2 data block is not provided.
ACTION: After conversion check PRI database and re-enter if needed.
- SYS4315 The Automatic Number Identification package (ANI) package 12 is not equipped. The data has been lost.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4317 The database on tape is developmental, before the final issue.
ACTION: Except for testing, use a standard database.
- SYS4318 1.5 and 2.0 RPE cannot coexist, 2.0 is removed.
ACTION: Information only, no action is required if you use 1.5 RPE. If you use 2.0 RPE, contact your technical support group.
- SYS4319 No RPE2 package. RPE2 not loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4320 CASM package (26) is not allowed on this machine type.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4321 CASR package (27) is not allowed on this machine type.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4322 Dedicated trunks cannot be assigned to an ISA service route.
ACTION: Check your database in LD 16 and LD 14.
- SYS4323 The step flag is turned off. Stepping to an ISA route is not allowed.
ACTION: To check the STEP refer to the *X11 Administration* (553-3001-311) and use LD 21. Use LD 16 to correct.
- SYS4324 The step flag is turned off. Stepping to an ISA service route is not allowed.
ACTION: To check the STEP refer to the *X11 Administration* (553-3001-311) and use LD 21. Use LD 16 to correct.
- SYS4325 The step flag is turned off. Stepping to a nonexisting route is not allowed.
ACTION: To check the STEP refer to the *X11 Administration* (553-3001-311) and use LD 21. Use LD 16 to correct.
- SYS4326 l s c A card number has been found during SYSLOAD which is out-of-range. Valid card numbers are:
ENET: 1 - 10
Network/DTR card (NT8D18): 0-9 and 15
Network (NT8D04) card: 0-15
ACTION: To determine the correct range use LD 32 IDC l or IDC l s c and LD 97 to correct the problem.

- SYS4327 DO NOT USE LD 43 TO DATADUMP. SYSTEM INFORMATION WILL BE LOST. This TN is greater than the limit and cannot SYSLOAD.
ACTION: Have your technical support group contact Nortel Networks Customer Service for replacement software with expanded limits.
- SYS4328 DO NOT USE LD 43 TO DATADUMP. SYSTEM INFORMATION WILL BE LOST. This ACD Agent/Supervisor is greater than the limit and cannot SYSLOAD.
ACTION: Have your technical support group contact Nortel Networks Customer Service for replacement software with expanded limits.
- SYS4329 DO NOT USE LD 43 TO DATADUMP. SYSTEM INFORMATION WILL BE LOST. This ACD DN is greater than the limit and cannot SYSLOAD.
ACTION: Have your technical support group contact Nortel Networks Customer Service for replacement software with expanded limits.
- SYS4330 DO NOT USE LD 43 TO DATADUMP. SYSTEM INFORMATION WILL BE LOST. This AST set is greater than the limit and cannot sysload. If you datadump, system information will be lost.
ACTION: Have your technical support group contact Nortel Networks Customer Service for replacement software with expanded limits.
Change all sets with “AST” to “NO” on the original software, then convert again. Verify the proper ISM parameters are met.
- SYS4332 The IFC type of the ISA service route and the ISA route do not match.
ACTION: Refer to *ISDN PRI: Maintenance* (553-2901-501).
- SYS4333 The ISDN package is restricted in this event. You cannot load the DCH number.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4334 The PRA package is restricted. You cannot load the DCH number.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4335 The DCH mode is dedicated in the ESL mode, and the ESL package is restricted. You cannot load the DCH number.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4336 This telephone set is declared incorrectly as an ACD Agent station.
ACTION: Correct your database in LD 11.
- SYS4337 The ACD_POS_LST_PTR for the ACD-DN is not set correctly.
ACTION: Contact your technical support group.

SYS4338 xxxx yyyyyy

ACD Package A is not equipped. The FFC package cannot be loaded.

xxxx = FFC type (LILO or NRDY)

yyyyyy = FFC that will not be loaded

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4339 The Virtual Network Service (VNS) data block cannot be loaded.

ACTION: Contact your technical support group.

SYS4340 Those DNs cannot be built because the DN information is missing from the Virtual Network Services (VNS) data block.

ACTION: Contact your technical support group.

SYS4341 The rest of those DNs cannot be built because there is no valid Customer Block existing.

ACTION: Contact your technical support group.

SYS4342 RPA package is not equipped. RPA data lost.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4343 Nil cust_no/ffc/rpa_dn pointer. RPA data lost.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS4344 Corruption in ffc rpa system parameter block; data lost.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

SYS4345 This customer lost the SDAC data because the neither the SUPP nor PRTRANS packages are equipped.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4346 The ISDN International package is restricted from that operation. The TSYNC data is not loaded.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4347 c The DN information for customer c is missing. The system cannot build a DN in the database.

ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS4348 The Time Synchronization (TSYNCH) package has been found, but the International ISDN supplemental features are restricted from its use. The TSYNCH data is not loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4349 c You cannot build a TSYNCH DN, because the DN information for that customer c is missing.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4350 Hospitality IDC tree block not loaded since Hospitality package is unequipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4351 Hospitality IDC tree block is not loaded.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4352 Hospitality package is removed since some of the packages it requires are missing.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4353 Hospitality Authcode block not loaded.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4356 Mini-CDR is not allowed on the Option 11. The package has been disabled.
ACTION: To ensure that all the packages you have ordered are on the cartridge refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the cartridge. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4357 The Remote Peripheral Equipment (RPE) package is not allowed the Option 11. The package has been disabled.
ACTION: To ensure that all the packages you have ordered are on the cartridge refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the cartridge. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4358 The RPE2 package is not allowed on the Option 11. The package has been disabled.
ACTION: To ensure that all the packages you have ordered are on the cartridge refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the cartridge. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4359 Program type in the program header is invalid.
ACTION: Contact your technical support group.
- SYS4360 Conflicting information found in program header.
ACTION: Contact your technical support group.
- SYS4361 Overlay number in program header is out of range.
ACTION: Check to be sure the proper ROM is installed.
- SYS4362 No program ROM was found.
ACTION: Check to be sure the proper ROM is installed.
- SYS4363 Checksum on program ROM failed.
ACTION: Replace the ROM card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify the fault is cleared.
- SYS4365 Fatal error: DNXL program not found on the storage medium.
ACTION: To ensure that all the packages you have ordered are on the disk, refer to the *X11 Administration* (553-3001-311), use LD 22 PRT, PKG Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4366 Fatal error: SYS4 program not found on the storage medium. (Please note that SYS4366 is only on the X81 stream at this time.)
ACTION: To ensure that all the packages you have ordered are on the disk, refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4367 Fatal error:
ACTION: If packages IDA, DPNSS, and DASS are equipped, the QPC948B ROM must be used. This message will always be given in conjunction with a SYS0088 message.
- SYS4368 Fatal Error: The DNXL program cannot be found on the storage medium.
ACTION: Contact your technical support group.
- SYS4369 Fatal Error: The SYS4 program cannot be found on the storage medium.
ACTION: Contact your technical support group.
- SYS4370 Fatal Error: You must use QPC948B ROM if any of the following packages are equipped: IDA, DPNSS and DASS.
ACTION: Make sure you have installed the correct ROM by following the instructions in the *System and Software Upgrade Guide*.
- SYS4371 RPA data lost; in proc rpax_parm_blk; dnxlptr is nil.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4372 rpa data lost; in proc rpax_parm_blk; rpa_ffc_parm_ptr already exists.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS4373 RPA data lost; in proc rpax_parm_blk; not enough memory for rpax parameter blk.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4374 RPA data lost; in proc rpsys_head_blk; rpa_system_ptr: p_aux_cust_hdr not nil, data already exists.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4375 RPA data lost; in proc rpsys_head_blk, not enough memory for rpa_system_blk or system parameter block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4376 RPA data lost; in proc rpsys_parm_blk, rpa_system_ptr: p_aux_cust_hdr is nil.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4377 RPA data lost; in proc rpsys_parm_blk, rpa_system_parm_ptr[]: sys_head_ptr not nil. Data already exists.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4378 RPA data lost; in proc rpsys_parm_blk, not enough memory for rpa traffic block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware replacement* guide. For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4379 RPA data lost; in proc rpa_dnpsa_tree, not enough memory for rpa dn block or dn-psa block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4380 RPA data lost; in proc rpa_dnpsa_tree, digit should not be 0.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4381 RPA data lost; in proc rpa_dnpsa_tree, result from rpa_trans is not.rpa_invalid_dn
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS4382 RPA data lost; in proc rpa_trans, dnxlptr is nil or digit_count > maximum size of digit corruption in dn psa tree.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4383 RPA data lost; in proc valid_ffc, wrong data type.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4384 PGIP and PGSP FFCs will not be rebuilt when loading phase 6.65 and up.
ACTION: Information only, no action required.
- SYS4385 Data block is unusable. It was dumped on an issue prior to 6.67; data lost.
ACTION: Try to Sysload on a backup set of software. If the fault continues contact your technical support group.
- SYS4387 Cannot get pds for the idc name block.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4391 1.5 Mb/s DTI/PRI pad category table data can only be loaded when GPRI package (167) is equipped.
ACTION: Enable package #167 to load 1.5 Mbps DTI/PRI pad category tables. To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4392 The site IDs in the Flash directories (SCORE and cartridge) do not match.
ACTION: This is only a warning and does not affect the system load.
- SYS4393 x Flash ROM on device x has failed checksum. x = 4 indicates cartridge Flash ROM and x = 8 indicates SCORE Flash ROM.
ACTION: Order and replace the Flash ROM.
- SYS4394 x Can not find a directory record on device x. x = 4 indicates cartridge Flash ROM and x = 8 indicates SCORE Flash ROM. If x is not shown then system should not load.
ACTION: Contact your technical support group.
- SYS4395 Unable to read a control record.
ACTION: Contact your technical support group.
- SYS4396 Reserved.
ACTION: Contact your technical support group.
- SYS4397 Both Flash ROMs failed checksum.
ACTION: Contact your technical support group.

- SYS4398 Flash handler status is not idle.
ACTION: Contact your technical support group.
- SYS4399 The cartridge has failed security check.
ACTION: Make sure you have the proper key codes and try again.
- SYS4400 Could not post-process Digital DPNSS Signaling Link (DDSL).
ACTION: Contact your technical support group.
- SYS4401 Analogue Private Network Switching System (APNSS) TN lost.
ACTION: Contact your technical support group.
- SYS4402 FAXS package is removed because EES package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4405 AMP package (78) is not allowed on this machine type.
ACTION: Information only, no action required.
- SYS4406 MFC package (128) is not allowed on this machine type.
ACTION: Information only, no action required.
- SYS4407 MFE package (135) is not allowed on this machine type.
ACTION: Information only, no action required.
- SYS4408 L1 package (188) is not allowed on this machine type.
ACTION: Information only, no action required.
- SYS4409 RPA package (187) is not allowed on this machine type.
ACTION: Information only, no action required.
- SYS4410 X25 package (153) is not allowed on this machine type.
ACTION: Information only, no action required.
- SYS4411 Prerequisite package is missing during a sysload with EMCT package. EMCT package is restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4412 x The I/O address of port x is the same as a previously built port. Port x will be taken out of the configuration record (LD 17).
ACTION: Information only, no action required.
- SYS4413 The number of Logical Terminal IDs has reached the limit. No further LTIDs can be loaded.
ACTION: Information only, no action required.

- SYS4414 Cannot allocate protected storage.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4415 Cannot find Digital Subscriber Loop (DSL) data.
ACTION: Contact your technical support group.
- SYS4416 Basic Rate Interface (BRI) package restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4417 MISP cannot be associated with line card because protected loop data block for the card does not exist.
ACTION: Contact your technical support group.
- SYS4418 MISP cannot be associated with line card because protected card data block for the card does not exist.
ACTION: Contact your technical support group.
- SYS4419 Cannot find USID map.
ACTION: Information only, no action required.
- SYS4420 dn WARNING: Multiple TNs associated with BRI dn.
ACTION: Information only, no action required.
- SYS4421 The number of DSLs has reached the limit. No further DSLs can be loaded.
ACTION: Information only, no action required.
- SYS4422 The JDMI package is not support on this machine type.
ACTION: Information only, no action required.
- SYS4423 CUST x DN xx
 During DN translation in sysload, no MARP or more than one MARP was found in the database for **DN nnnn** in customer **x**. Only one MARP should be defined for a DN. The MARP database information for **TN l s c u** has been corrected and a default MARP TN selected for the DN. This corrected database can be saved or altered further by service change before saving with a data dump.
ACTION: Use LD 10 or 11 to alter MARP and use LD 43 to save changes to the primary data store.
- SYS4424 Invalid ROM version. Install ROM for X11 Release 18.
ACTION: Install the proper ROM by following the instructions in the *System and Software Upgrade Procedure Guide*.

- SYS4425 WARNING: Memory autoconfiguration has occurred. Verify that the installed memory agrees with the tested memory. Adjust MTPY prompt in LD17 if multiple cards are in use.
Output:
MEMORY AUTOCONVERSION
MTYP xxxx xxxx xxxx
MEMORY MAX ADDRESS IS yyyyy
where:
xxxx = memory type configured (768, 1MEG, etc.)
yyyy = highest configured address (i.e. 1FFFFFF for 2Meg)
ACTION: Information only during an upgrade.
- SYS4426 MSDL/MISP master table does not exist or cannot be allocated. Output: MSDL/MISP
<msdlmisp index in decimal>.
ACTION: Contact your technical support group.
- SYS4427 MSDL/MISP index is invalid. Output: SYS4427 MSDL/MISP <msdlmisp index in
decimal>.
ACTION: Contact your technical support group.
- SYS4428 MSDL/MISP MSDL_MISP_BLOCK does not exist. Output: SYS4428 SID BLK
<msdlmisp index in decimal>.
ACTION: Contact your technical support group.
- SYS4429 Conv: No memory is available. Can not allocate the phy_dump_array structure.
ACTION: Make sure you have the proper ROM and memory card installed before you
attempt the upgrade.
- SYS4430 Conv: No memory is available. Can not allocate the p_async_block structure.
ACTION: Make sure you have the proper ROM and memory card installed before you
attempt the upgrade.
- SYS4431 SYS4431 = Conv: The conversion of ESDI asynchronous data block failed, because the
corresponding P_ASYNC_BLOCK cannot be found, due to a database corruption.
ACTION: Contact your technical support group.
- SYS4432 Conversion of CSL failed: The ESDI parameter download data block is missing from the
database.
ACTION: Reload the source software and ensure there are no problems, then dump to the
target software.
- SYS4433 Conversion of CSL failed: The ESDI parameter download data block is not set up for the
synchronous mode.
ACTION: Correct ESDI for Synchronous mode.
- SYS4434 Conv: The required entry in DUMP_CARD_TYPE structure is not free and is in use by
another IO unit. Output:
INDX: <occupied physical address in decimal>
CARD: <card type in decimal. This is the card type occupying the entry, which we assumed
to be free.>
ACTION: Contact your technical support group.

- SYS4435 Conv: The XSM is lost because the SDI data block was not previously created, due to an earlier error.
ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 17 to program the XSM.
- SYS4436 The block PHY_ARRAY is missing. It must exist and should have been loaded from tape. Therefore this is a database corruption.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4437 SDI x The P_SDI_BLK_PTR pointer is nil for the given logical SDI number in decimal. This indicates one of the following:
1. Corruption in the configuration record.
 2. Corruption in the P_SDI_BLK_PTR
- To be consistent, CONFIGTTYOP is zeroed out for the specific device.
ACTION: Contact your technical support group.
- SYS4438 Corrupt database. Bad card type. Only SDI, SDI2, XSDI, SDI4, DCHI and MSDL cards are allowed for asynchronous I/O. Output:
CARD: <card type in decimal>
SDI: <sdi number in decimal>
ACTION: Contact your technical support group.
- SYS4439 SDI x The P_SDI_BLK_PTR pointer is nil for the given SDI number in decimal. This indicates one of the following:
1. Corruption in the configuration record.
 2. Corruption in the P_SDI_BLK_PTR
- To be consistent, CONFIGTTYOP is zeroed out for the specific device.
ACTION: Contact your technical support group.
- SYS4440 Procedure GET_PHY_BLK failed: dev_no is not valid. Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.
- SYS4441 Procedure GET_PHY_BLK failed: port_no is not valid. Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.

- SYS4442 Procedure GET_PHY_BLK failed: Too many TTY, printer, DCH, AML or MSDL units.
Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.
- SYS4443 Procedure GET_PHY_BLK failed: Undefined logical application type. Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.
- SYS4444 Procedure GET_PHY_BLK failed: Cannot allocate PDS for the physical IO block. Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.
- SYS4445 Procedure GET_PHY_BLK failed: Too many loop devices and serial card devices. Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.
- SYS4446 Procedure GET_PHY_BLK failed: Cannot find the physical IO block previously allocated.
Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.
- SYS4447 Procedure GET_PHY_BLK failed: The port is already in use by another application.
Output:
LU TYPE: <logical application type in decimal>
LOG NUM: <logical application number in decimal>
DEV NUM: <physical device number in decimal>
PRIO NUM: <IO polling table priority number in decimal>
OPTION: <optional parameter in decimal>
ACTION: Contact your technical support group.

- SYS4448 The MSDL/MISP socket ID data structures do not exist.
ACTION: Contact your technical support group.
- SYS4449 Database corruption. The P_ESDI_TBL_HDR is nil. Output: CSL <esdi number in decimal>.
ACTION: Contact your technical support group.
- SYS4450 Database corruption. The content of pointer P_ESDI_BLK_PTR[ESDI_PORT_NO]: P_ESDI_TBL_HDR is nil. Output: CSL <esdi number in decimal>.
ACTION: Contact your technical support group.
- SYS4451 The given AML number is removed from the VAS list belonging to the given VAS number, since the protected AML data block belonging to the given AML number, does not exist. Output: VAS <vas number in decimal>.
ACTION: Contact your technical support group.
- SYS4452 Corruption: The ESDI block number 49 is removed from X11 Release 18. It is not allowed to exist in X11 Release 18 and later, databases. Output: ESDI <esdi number in decimal>.
ACTION: Information only, no action required.
- SYS4453 Corruption: The CSL block number 50 is removed from X11 Release 18. It is not allowed to exist in X11 Release 18 and later, databases. Output: AML <aml number in decimal>.
ACTION: Information only, no action required.
- SYS4454 Corruption. The PHY_BLK_PNTR is nil. The pointer should point to PHY_ARRAY and must have been loaded from tape previously. As a result the given AML block is disregarded. Output: AML <aml number in decimal>.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4455 x Warning: AML x is not loaded because the address is occupied by a previously loaded device. X11 Release 17 and earlier can configure an unused ESDI AML on top of an existing port. X11 Release 18 and later removes the unused ESDI.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4456 The logical IO table header for csl_log_appli type for the given logical AML number cannot be set up. As a result the given AML block is disregarded. Output: AML <aml number in decimal>.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4457 The X25 block type (i.e., block 75) is no longer supported. Output: X25 <X25 number (i.e., esdi number) in decimal>.
ACTION: Information only, no action required.

- SYS4458 The logical master head IO tables cannot be allocated due to lack of memory. As a result the given DCH block is disregarded. Output: DCH <dch number in decimal>.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4459 The AML number is out of range. Output: AML <aml number in decimal>.
- ACTION:** Use LD 22 to check the configuration record.
- SYS4460 The SDI number is out of range. Output: SDI <sdi number id decimal>.
- ACTION:** Use LD 22 to check the configuration record.
- SYS4461 WARNING: Since the physical dump array block is not loaded from tape then it is created blindly. The reasons that the block is missing from tape are:
1. Conversion from Release 17 to 18 failed.
- ACTION:** Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
2. The tape has only the minimum database, that is, only the configuration record and no other datablocks. This last case is not a database conversion or loading corruption and is normal.
- ACTION:** Information only, no action required.
- SYS4462 Failed to allocate memory for logical master head I/O table, or failed to allocate memory for the physical DUMP_CARD_TYPE structures.
- ACTION:** Check for the proper ROM or install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4463 Failed to allocate memory for P_ASYNC_BLOCK structure. Output: INDX: <sdi number in decimal>.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4464 The asynchronous application type is not allowed on the ESDI card type starting from RLS 18. Output: INDX: <sdi number in decimal>.
- ACTION:** Information only, no action required.
- SYS4465 Warning: Since the card type for the given SDI application type was bad, the memory previously allocated for the given SDI application type, is released. Output: INDX: <sdi number in decimal>.
- ACTION:** Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.

- SYS4466 Warning: Since user types are defined but their logical SDI data structures do not exist, due to a corruption, the user types are cleared from the configuration record data structure.
Output: INDX: <sdi number in decimal>.
ACTION: Contact your technical support group.
- SYS4467 XSDI Block type number 93 is no longer supported starting from X11 Release 18.
ACTION: Information only, no action required.
- SYS4468 XSDI Out of PDS to allocate SDI_MHT_BLK block type.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test memory. If memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4469 The History File cannot be allocated, because of package restriction, or because there is no more space in the IO polling table.
ACTION: Contact your technical support group.
- SYS4470 ISM limit for the D-channel is reached. The total D-channels configured on the existing database, is more than the number the customer is allowed to have. Output: DCH <dch number in decimal>.
ACTION: Information only. Check ISM parameters in LD 22 REQ SLT.
- SYS4471 ISM limit for the AML is reached. The total AML links configured on the existing database, is more than the number the customer is allowed to have. Output: AML <aml number in decimal>.
ACTION: Information only. Check ISM parameters in LD 22 REQ SLT.
- SYS4472 Both MSDL and BRI packages are restricted, so the data associated with the MSDL or MISP cards is not loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4473 The block type_sid_blk (#104) cannot be loaded because MSDL package 222 is restricted. Output: SID BLK <msdlmisp index in decimal>.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4474 Corrupt database. Bad card type. Only DCHI and MSDL cards are allowed for DCH links. Output:
CARD: <card type in decimal>
DCHI <dch number in decimal>
ACTION: Contact your technical support group.

- SYS4475 Corrupt database. Bad card type. Only ESDI and MSDL cards are allowed for AML links.
Output:
CARD: <card type in decimal>
AML <aml number in decimal>
ACTION: Contact your technical support group.
- SYS4476 FNP package not equipped, cannot load DTAD data.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4477 FC68 package 223, and Japan Trunk package 97, are mutually exclusive. FC68 package is turned off automatically.
ACTION: Information only, no action required.
- SYS4478 TN is thrown out because the size of the protected TN block has exceeded 255 words.
ACTION: Information only, no action required.
- SYS4479 Fatal error: The SYSPP program cannot be found on the storage medium.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4480 Cannot allocate memory for a group I/O table.
ACTION: Contact your technical support group.
- SYS4481 The Network Call Pickup package has been restricted because some or all of its prerequisite packages are not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4488 WARNING: the ARDL package (#304) and the OPAO package (#104) are mutually exclusive. ARDL package is turned off automatically.
ACTION: Contact your technical support group.
- SYS4500 x Skipping slot x. Cannot calculate address to check for CP with cable.
ACTION: Contact your technical support group.
- SYS4501 x Skipping slot x. Cannot get card ID.
ACTION: Contact your technical support group.
- SYS4502 Timeout waiting for response from remote CP. Check that both CPs have the same number of SIMMs.
ACTION: Information only, no action required.
- SYS4503 Remote processor is not CP. Be sure remote processor is CP.
ACTION: Contact your technical support group.

- SYS4504 CP redundancy impossible. No CP to CP cable.
ACTION: Check to ensure cables are attached. If cables are attached remove them and check for bent pins.
- SYS4505 CP redundancy impossible. There is no remote power.
ACTION: Check the CE power supply on the remote Core module. Make sure the CP to CP cable is properly connected.
- SYS4506 CP redundancy impossible. Both shelves have the same ID.
ACTION: Set the JB4 jumper on the backplane so both sides do not match.
- SYS4507 CP redundancy impossible. Both switches are in MAINT.
ACTION: Check that at least one of the CP Norm/Maint switches is in Norm mode (up).
- SYS4508 CP single mode: could not synchronize CSA space.
ACTION: Contact your technical support group.
- SYS4509 Could not set CP semaphore bit (side x).
ACTION: Contact your technical support group.
- SYS4510 CP single mode: memory shadow test failed.
ACTION: Reseat the standby CP and use SHDW in LD 135 to restore redundancy. If redundancy cannot be restored, replace the CP card by following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- SYS4511 x Cannot open BIC window (slot x). Cannot check for CP cable.
ACTION: Contact your technical support group.
- SYS4512 x Cannot close BIC window (slot x).
ACTION: Contact your technical support group.
- SYS4513 x Could not get CP semaphore bit (side x).
ACTION: Contact your technical support group.
- SYS4514 x Skipping slot x, cannot calculate address to see if CP bit is set.
ACTION: Contact your technical support group.
- SYS4515 Unable to find the active CMDU.
ACTION: Unseat and reseat the IOP and CMDU cards and then reload.
- SYS4516 Unable to find the diskos.sym file.
ACTION: Contact your technical support group.
- SYS4517 x Switching from CPU x to preferred side.
ACTION: Information only, no action required.

- SYS4520 Cannot get available memory for SL-1 Memory Control from Memory management. Sysload fails due to lack of memory.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4521 Cannot turn on memory protection. Input address is invalid.
ACTION: Contact your technical support group.
- SYS4522 Cannot turn off memory protection. Input address is invalid.
ACTION: Contact your technical support group.
- SYS4523 yyyy mm dd:hh:mm:ss
 HD0 Database datadumped yyyy/mm/dd hh:mm:ss.
ACTION: Information only, no action required.
- SYS4525 yyyy mm dd:hh:mm:ss
 HD0 Database datadumped yyyy/mm/dd hh:mm:ss.
ACTION: Information only, no action required.
- SYS4527 iiii dd/mm/yyyy hh:mm:ss rr
 This message refers to the X11 Release and issue **iiii**, date and time **dd/mm/yyyy hh:mm:ss** and size **rr** of the database to be sysloaded. The date and time indicate when the file was last written.
ACTION: Information only, no action required.
- SYS4528 yyyy mm dd hh mm ss
 HD Database datadumped yyyy/mm/dd hh:mm:ss.
ACTION: Information only, no action required.
- SYS4529 yyyy mm dd hh mm ss
 FD0 Database datadumped yyyy/mm/dd hh:mm:ss.
ACTION: Information only, no action required.
- SYS4530 yyyy mm dd hh mm ss
 FD1 Database datadumped yyyy/mm/dd hh:mm:ss.
ACTION: Information only, no action required.
- SYS4531 During conversion, XTD and/or RDB DFQ has been changed to XTDT.
ACTION: Use LD 97, LD 20 and LD 21 to ensure that configuration is as desired for XTD operation.
- SYS4532 The CPSI entry cannot be allocated; the limit for SIO devices has been reached.
ACTION: Information only, no action required.

- SYS4533 Cannot allocate protected data store for XTD Table.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test memory. If memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4534 Warning: IEN package or SACP package not equipped. Configured IEN ICI keys are removed. Procedure REMOVE_IEN_ICI (module SYSPP).
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4535 Warning: IEN Block Timer is reset to its default value because SACP or NAS package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4538 Inconsistencies in boundaries of previous sl1 load.
ACTION: Contact your technical support group.
- SYS4539 Inconsistencies in boundaries of previous ovl load.
ACTION: Contact your technical support group.
- SYS4540 Error loading SL-1 file into memory.
ACTION: Contact your technical support group.
- SYS4541 Error loading Overlay file into memory.
ACTION: Contact your technical support group.
- SYS4542 Error in loading, last address <n>.
ACTION: Contact your technical support group.
- SYS4543 Error returned from segInit2<n>.
ACTION: Contact your technical support group.
- SYS4544 Error getting dloPathFileName for ovlres.
ACTION: Reinstall software from installation disks and reload the system.
- SYS4545 Unable to open <filename>.
ACTION: Reinstall software from installation disks and reload the system.
- SYS4546 Error sl1_start_addr <n>, last sl1_prot_address <x>.
ACTION: Contact your technical support group.
- SYS4547 Error initializing SL-1 pool and data area.
ACTION: Contact your technical support group.

SYS4548	Error getting dloPathFileName for ovlres. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4549	Unable to open <file name>. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4550	Error in loading, last SL-1 address <n>. ACTION: Contact your technical support group.
SYS4551	Overlay start address <n> overlaps end of SL-1 area <x>. ACTION: Contact your technical support group.
SYS4552	Error ovl_start_addr <n>, last_ovl_prot_addr <x>. ACTION: Contact your technical support group.
SYS4553	Error initializing Overlay data area. ACTION: Contact your technical support group.
SYS4554	Error calling ovlres entry. ACTION: Contact your technical support group.
SYS4555	Invalid parameter to ldrNextPage, address <n>. ACTION: Contact your technical support group.
SYS4556	Seek error while loading (OVL or INSTALL) code file. ACTION: Reload the system using backup software. If the fault still exists contact your technical support group.
SYS4557	Error reading a_out header from file (OVL or INSTALL). ACTION: Reinstall software from installation disks and reload the system.
SYS4558	Invalid a_out header in file. ACTION: Contact your technical support group.
SYS4559	Error reading link header. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4560	Invalid link header in file. ACTION: Contact your technical support group.
SYS4561	Module not linked to page boundary. ACTION: Contact your technical support group.
SYS4562	Seek error while loading (OVL or INSTALL) code file. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4563	Error reading a_out header into memory (OVL or INSTALL). ACTION: Reinstall the software from the installation disks and reload the system.
SYS4564	Error reading text segment from disk into memory (OVL or INSTALL) ACTION: Reinstall the software from the installation disks and reload the system.

SYS4565	Error reading data segment from disk into memory (OVL or INSTALL). ACTION: Reinstall the software from the installation disks and reload the system.
SYS4566	Seek error while loading SL-1 code. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4567	Error reading a_out file from SL-1 file. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4568	Invalid a_out header in SL-1 file. ACTION: Contact your technical support group.
SYS4569	Error reading link header from file. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4570	Invalid link header in file. ACTION: Contact your technical support group.
SYS4571	Module not linked to page boundary. ACTION: Contact your technical support group.
SYS4572	Seek error while loading code. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4573	Error reading a_out header from disk into memory. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4574	Error reading text segment from disk into memory. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4575	Invalid data segment in SL-1 module. ACTION: Contact your technical support group.
SYS4576	Error access in code file. ACTION: Reinstall the software from the installation disks and reload the system.
SYS4577	Error reading data segment from disk into memory. ACTION: Reload the system by pressing the Manual Reload button.
SYS4578	Invalid a_out header in memory (OVL or INSTALL). ACTION: Contact your technical support group.
SYS4579	Invalid link header in memory (OVL or INSTALL). ACTION: Contact your technical support group.
SYS4580 x	End of Protected data = x (OVL or INSTALL). ACTION: Contact your technical support group.
SYS4581 x y	Unprotected data start x overlaps Unprotected data end at y (OVL or INSTALL). ACTION: Contact your technical support group.

- SYS4582 Error copying data from Protected memory to Unprotected memory for static modules.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4583 Invalid a_out header in memory.
ACTION: Contact your technical support group.
- SYS4584 Invalid link header in memory.
ACTION: Contact your technical support group.
- SYS4585 x End of Protected data = x.
ACTION: Contact your technical support group.
- SYS4586 x y Unprotected data start x overlaps Protected data end at y.
ACTION: Contact your technical support group.
- SYS4587 Error copying data from Protected memory to Unprotected memory for SL-1 modules.
ACTION: Reload the system using the backup software, as the primary software may be corrupted. If the fault persists, contact your technical support group.
- SYS4588 Feature Group D not allowed on Option 11 machine. Package 158 has been disabled.
ACTION: Information only, no action required.
- SYS4589 Customer n has DITI = YES in LD 15 but the DID to TIE package (176) is equipped, DID to TIE calls will be restricted by the DID to TIE package.
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service to set the DID to TIE package restriction flag. You can use LD 22 PRT, PKGxxx to check the restricted status of the package.
- SYS4590 BRIT package restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4592 BRIL package restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4593 Either the BRIL or the BRIT package needs to be equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4594 BRIL application will not be configured on any MISP because the BRIL package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4595 BRIT application will not be configured on any MISP because the BRIT package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4596 xx yy PEMD data in the route datablock was erased due to PEMD package restriction.
xx = customer number
yy = route number
ACTION: Contact your technical support group.
- SYS4600 The DTI package is restricted and either the BRIT package is restricted or the DTI2 package is equipped or the PRI2 package is equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4601 M911 package is restricted, therefore NPID block cannot be loaded in memory.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4602 NPID block exceeds length of block allocated.
ACTION: Refer to ISDN Primary Rate Interface NTP.
- SYS4605 xx SICA Table xx is erased due to PEMD package restriction.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4606 x That CDR Link port has been removed.
x = port number
ACTION: Information only, no action required.
- SYS4607 x That Low Speed Link port has been removed.
x = port number.
ACTION: Information only, no action required.

- SYS4608 The port allocated for STA is being used by another application.
ACTION: To check the Single Terminal Access port refer to the *X11 Administration* (553-3001-311) and use LD 22. Use LD 17 to correct.
- SYS4609 STA logical number is out-of-range.
ACTION: To check the Single Terminal Access port refer to the *X11 Administration* (553-3001-311) use LD 22. Use LD 17 to correct.
- SYS4610 STA logical number is out-of-range.
ACTION: Contact your technical support group.
- SYS4613 Protected loop block does not exist.
ACTION: Contact your technical support group.
- SYS4614 Cannot update card pointers to BRSC data block because card data blocks exist.
ACTION: Contact your technical support group.
- SYS4615 Cannot associate BRSC with line card because protected card data block does not exist.
ACTION: Contact your technical support group.
- SYS4616 xxxx yyyy
 Unable to allocate protected data storage for DCH call reference table.
 xxxx = mnemonic of feature affected
 yyyy = name of data structure affected
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4617 Unable to allocate protected data storage for limited access to overlays (LAPW). The LAPW package has been restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4620 Attendant Blocking of DN cannot be enabled because Semi-Automatic Camp-On is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4621 s s Kwords of expanded memory have been auto-configured. MTyp prompt in LD 17 has been updated. This message will only occur on a new system installation.
ACTION: No action required. This is the standard message for the auto-installation of expanded memory.

- SYS4623 IPRA package is restricted, but there is an international interface. The interface cannot be enabled with the current software packaging.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4624 The number of Meridian 1 Packet Handler Digital Subscriber Loops (DSLs) reached the limit. No further MPH DSLs can be sysloaded.
ACTION: Information only, no action required.
- SYS4625 B-channel TN not in MPH loop data block.
ACTION: Contact your technical support group.
- SYS4626 LAPB data block does not exist.
ACTION: Contact your technical support group.
- SYS4627 X25P data block does not exist.
ACTION: Contact your technical support group.
- SYS4628 Resident code is compressed, but the decoding table does not exist.
ACTION: Contact your technical support group.
- SYS4629 Meridian 1 Packet Handler (MPH) package is restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4630 The MPH application cannot be configured on an MISP because the MPH package is restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4631 KD3 Package unequipped - Data is discarded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4632 MFK5/MFK6 data corruption.
ACTION: Contact your technical support group.
- SYS4633 n Cannot load data block for PRI loop **n** when INBD package is restricted.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4634 n Backup D-channel **n** is not loaded for this interface.
ACTION: Information only, no action required.
- SYS4635 Cannot allocate Protected Data Store for AOC parsing tables.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4636 The Voice Mailbox Administration data block exists without the feature configured.
ACTION: Contact your technical support group.
- SYS4637 The Voice Mailbox Administration data block contains invalid TNs.
ACTION: Contact your technical support group.
- SYS4638 There is no memory available to build the Voice Mailbox data block.
ACTION: Contact your technical support group.
- SYS4639 Voice Mailbox data exists without the feature package configured. The mailbox data has been discarded.
ACTION: Contact your technical support group.
- SYS4640 Voice Mailbox Administration application data exists with the feature package restricted. The application data is discarded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4641 Superloops 32, 36, 40, 48 have been added to the configuration. This only occurs when upgrading to the Option 11E CPU and these loops do not already exist.
ACTION: No action required. Standard message for the auto-configuration of superloop data.
- SYS4642 Superloops 32, 36, 40, 48 have NOT been added to the configuration. This message only occurs when upgrading to the Option 11E CPU and one of these loops is already configured.
ACTION: Check that the configuration is as desired. If a third box is being added to the system then Superloops 32, 36, 40, and 48 must exist.
- SYS4643 M2317 data block cannot be loaded when package is not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4645 Only one of the language packages may be equipped. The MLMS feature has been disabled (Option 61C/81 only).
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4646 Mismatch between language pkg read at cold start and during SYSLOAD (Option 61C/81 only).
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4647 The MLMS language packages is allowed on Option 61C/81 systems only. The packages were disabled.
ACTION: Information only, no action required.
- SYS4648 III Phantom loop III is found, but the PHTN package is restricted. Phantom loop III is not loaded. All phantom TNs configured on this loop will not be loaded and existing SYS messages will be given.
OUTPUT: III = phantom loop
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4649 MCT data exists without the MCT package. The data is cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4650 SCDR data exists without the SCDR package. The data is cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4651 CDR link and the MCT packages are mutually exclusive. The CDR link package is turned off.
ACTION: Information only, no action required.
- SYS4653 A BCS Phantom loop is found, but either the phantom or csl package is not equipped.
ACTION: Remove the loop and all associated data. Refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4654 Procedure SAMM_PBX_SRVR Standalone Meridian Mail server not loaded - out of PDATA
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4655 Procedure SAMM_PBX_SRVR. Too many Standalone Meridian Mail servers loaded, not included in the table, TN not loaded.
- ACTION:** Contact your technical support group.
- SYS4656 Cannot allocate protected data store for xpec. This error message will be called from new proc SETUP_INIT_XPEC in MODULE SYS4XXX.
- ACTION:** Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS4657 Warning. Existing CIST data are removed because CIST package 221 is restricted.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4658 Existing ACRL data is removed because the ACRL package is restricted.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4663 TN 0 0 0 0 is not valid. TN is rejected.
- ACTION:** This is not a problem. Call your technical support group to have the TN removed.
- SYS4664 LAPW password nn is removed because it is a Set Based Administration password and the ADMINSET package is restricted.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4665 Set Based Administration logon limits are set to zero because the ADMINSET package is restricted.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

- SYS4666 The ADMINSET package is equipped, but one of its dependant packages (FFC package, LAPW package, Multi-User package) is restricted. Set Based Administration login limits are set to zero.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4667 On sysload, CCB data exists, but the CCB package is restricted. CCB data is cleared.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4668 Call Pickup Network Wide cannot be loaded as ISDN package 145 is restricted.
- ACTION:** Load with the ISDN package equipped.
- SYS4669 The DPNSS_ES package is equipped, but the DPNSS package is not. Since DPNSS is a pre-requisite for DPNSS_ES, DPNSS_ES is forced unequipped.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4679 CAC defined for BCS, PBX or route exceeds the CIS maximum range for CAC (9). CAC is set to CIS default value for CAC (3).
- ACTION:** Contact your technical support group.
- SYS4690 China Attendant Monitor Package (CHINA) package 285 is not equipped but the Attendant Monitor option is allowed, then the options are reset to disable the China Attendant Monitor feature.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4691 BTD package is not equipped, the BTD tables have been removed.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4692 Unable to allocate protected memory for BTD Table 0.
- ACTION:** Contact your technical support group.
- SYS4693 IDC package is removed since NFRC package is missing.
- ACTION:** To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4694: CDB cc and/or RDB rr

Due to unequipped IDC package, IDC data has been lost in customer **cc** or IDC data has been lost in Route **rr** of Customer **cc**.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4695 The mnemonic, filter and exception tables have been removed. NOTE: Their functionality has been replaced by the new Event Default and Preference Tables for Option 81 switches.

ACTION: Information only, no action required.

SYS4696 Auto-configuration of conference loop 62, 94 or 95 could not be done. Loop 62 , 94 or 95 has already been defined.

ACTION: Check your configuration record and redefine loop 62 for conference.

SYS4697 Auto-configuration of conference loop 62, 94 or 95 has performed successfully.

SYS4698 If package 46 is not equipped and the feature is, it indicates that package 46 is not equipped and that the TMAR bit for customer y is cleared.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4699 WARNING: Existing ARDL data is reset to its default values, because ARDL package is restricted.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4700 A Secondary Call Park Block has been discarded due to CPRKNET package missing.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4701 Customer Call Park option changed from CPN to CPA due to CPRKNET package missing.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4702 A Secondary Call Park Block has been discarded since the customer does not have a Primary Call Park Block.

ACTION: Contact your technical support group.

SYS4706 Warning: Clear CPP or TCPP for a non-ISDN trunk route if the OPOA package is equipped.

SYS4707 x Removing TAT entry in RCAP since TAT package is not equipped, where x = D-channel number.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4708 x Removing TAT database from D-channel that does not reside on the MSDL card, where x = D-channel number.

SYS4712 cust PTU or MFC package not equipped; PTU data cleared in customer data block. Equip PTU and MFC packages and reload if PTU is required.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4713 cust route

PTU or MFC package not equipped; PTU data cleared in route data block. Equip PTU and MFC packages and reload if PTU is required.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.

SYS4714 cust table-number

PTU and MFC packages are not quipped. PTU data cleared in incoming R2MF table.

ACTION: Equip PTU and MFC packages and reload if PTU is required.

SYS4716 The VDN block cannot be loaded during SYSLOAD. The VNS database cannot be restored.

ACTION: Redefine the VDN data block.

SYS4717 The ARDL package (#304) and the OPOA package (#104) are mutually exclusive. ARDL package is automatically turned off.

ACTION: Contact your technical support group.

SYS4718 Cannot load EuroISDN Network Mode data when Master Mode package is restricted.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software

SYS4719 table-number

PTU and MFS packages are not equipped. PTU data cleared in outgoing R2MF table.

ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software

- SYS4720 Either the Speed Call or System Speed Call package is restricted and the data exists.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4722 Customer Call Park data is lost due to Call Park database memory allocation problems.
ACTION: Contact your technical support group.
- SYS4723 Customer option is changed to CPD due to Call Park database memory allocation problem.
ACTION: Contact your technical support group.
- SYS4729 xx xx = %DNIS MMCS informations were found and MMCSS package is restricted, the fields are set to default value INDGT, PRDL, INDI, DTIM, DIG#, DIIE.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS4730 Phantom DTI2 loop {lll} is found, but either the ISPC package or the DTI2 package is restricted. Phantom DTI2 loop {lll} is not loaded. All phantom DTI2 TNs configured on this loop will not be loaded and existing SYS messages will be given.OUTPUT: lll = phantom loop
ACTION: Unrestrict the ISPC package and the DTI2 package and then reload the PBX if necessary.
- SYS4731 Unable to allocate protected memory for CLID Block or CLID table. Some CLID entries may be lost.
ACTION: Use Overlay 21 to print the CLID entries. Configure the entries that are needed.
- SYS4732 {TN} x MFC/MFE/MFK5/MFK6 trunk: the MF digi5t transmit level (MFL) for this trunk has been changed to an MF transmit level identifier (MFLI) and has been given a default value of 0. x is the former MFL, value for the TN.
ACTION: Use LD 97 to change the system transmit levels (MFTL0 and MFTL1) and LD 14 to change the MFLI for each trunk.
- SYS4750 This template contains keys at the end that exceed the phone set capacity. These keys are removed and replaced by NULL_KEY.
ACTION: Reconfigure the phone set that uses this template.
- SYS4751 The keys in this phone set are removed at the end since they exceed capacity (see SYS4750 for more). User may need to reconfigure the keys on this set. The phone set will not be taken out of service.
ACTION: Since some keys are lost at the end, use the overlay and reconfigure the keys if necessary.

- SYS5714 Cannot allocate protected data store for XTD Table.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS6692 x1 x1 = %Invalid input when the MMCS package is not equipped
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS6693 x2 x2 = %DTM should be defined to have PRDL=DNIS.
- SYS8980 Data block can only be loaded when STIE package is equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8981 ICP Package not equipped.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8982 Attempt to write a protected bit field for a specific bit offset and bit width which do not fit in a 16 bit word.
ACTION: Contact your technical support group.
- SYS8983 CLED package not equipped, data cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8984 Digital console package not equipped, data cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8985 FFC code corruption.
ACTION: Contact your technical support group.
- SYS8986 Flexible Feature Code is out of Protected Data (PDATA) storage.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.

- SYS8987 FFC customer pointer is missing. The FFCs are not ready.
ACTION: Contact your technical support group.
- SYS8988 FFC package (139) is not equipped. FFCs have been removed.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8989 mmmm ddd ppp
Package not equipped, FFC will not be loaded. Where:
mmmm = mnemonic of FFC not loaded
ddd = digits of FFC not loaded
ppp = package not equipped
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8990 OPCB package not equipped, data cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8991 Supp package not equipped, special service list data cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8992 MPO package is restricted but MPO data is found. MPO data is cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8993 DTI2 - DTI2 package not equipped, data cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8994 DTI2 - JDMI package not equipped, data cleared.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS8995 ART head table not found, data lost.
ACTION: Contact your technical support group.

- SYS8996 Unable to allocate protected data store for TBAR.
ACTION: Install more memory if applicable. Use LD 35 STAT MEM to get the memory status and use MEM xx to test the memory. If the memory test fails, replace the memory card by following the steps in the *Hardware Replacement* (553-3001-520). For further assistance with the commands or system responses refer to the “CED — LD 35 Common Equipment Diagnostic” on page 247 in this guide.
- SYS8997 Duplicate Art number found, date lost.
ACTION: Contact your technical support group.
- SYS8998 ART number out of range, data lost.
ACTION: Contact your technical support group.
- SYS8999 TBAR package not equipped, data not loaded.
ACTION: To ensure that all the packages you have ordered are on the disk refer to the *X11 Administration* (553-3001-311) and use LD 22 PRT, PKG. Check to ensure that there are no extra packages on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software.
- SYS9026 DPNSS1 MWI: an NSI table cannot be restored.
ACTION: Redefine the MWI NSI table.
- SYS9027 Existing MFS data is removed because the CISMFS package is restricted.
- SYS9028 System is not ESA packaged. ESA data has been discarded.
ACTION: Contact your technical support group.
- SYS9029 ESA data is for an undefined customer. ESA data has been discarded.
ACTION: Contact your technical support group.
- SYS9030 System is not ESA_CLMP packaged. ESA_APDN has been reset to YES.
ACTION: Contact your distributor if the system packaging is incorrect.
- SYS9031 Invalid DFCL configuration is encountered in the ESA block. DFCL has been reset to null.
ACTION: Contact your distributor if the system packaging is incorrect.
- SYS9032 NI-2 CBC package not equipped. NI-2 CBC data lost.
ACTION: Install NI-2 CBC package.
- SYS9033 Diversion remote capability is removed since the QSIG-SS package is restricted.
ACTION: Enable the QSIG-SS package and Sysload the system again.
- SYS9034 The RCAP MQC is removed because the MEET package is restricted.
ACTION: Contact your technical support group.
- SYS9037 Customer has configured a RAN route with data requesting the RAN broadcast package but RAN broadcast package restricted. Broadcast capability removed from route, ringback tone provided while waiting and new RAN machine types changed.
ACTION: Enable RAN Broadcast package. DO NOT DATADUMP, system information will be lost.

- SYS9038 Number of broadcasting routes exceeds ISM limit. Broadcast capability removed from route.
ACTION: Customer must contact distributor to increase ISM limit. DO NOT DATADUMP, system information will be lost.
- SYS9039 Number of broadcast RAN connections exceeds ISM limit.
ACTION: Customer must contact distributor to increase ISM limit. DO NOT DATADUMP, system information will be lost.
- SYS9040 Customer has broadcasting music route configured but music Broadcast package restricted.
ACTION: Enable music Broadcast package. DO NOT DATADUMP, system information will be lost.
- SYS9041 TBAR Package is not equipped. FTOP in CDB reset to FRES.
- SYS9063 Invalid trunk type encountered in trunk TN block.
- SYS9064 The MMCS or IVR packages are restricted. VPA cls cleared.
- SYS9066 Trying to load some NI-2 Master Mode data with MMCS or Master Mode or NI-2 packages unequipped. These data will be lost.
ACTION: Equip packages 309 or 317 or 291 and re-load.
- SYS9069 Trying to load some French Code Abonne Network Side data with MMCS or DTI2 or FCANS package unequipped. The data will be lost.
ACTION: Equip packages 317 or 129 or 343.
- SYS9070 CPP//CPPO database defined for the route is discarded because CPP/CPPO is not equipped.
- SYS9071 ERDN datas ('Redundancy for ethernet on Core feature) have been discarded due to MMCS package restriction.
ACTION: For ERDN feature, MMCS package #317 is required. Contact your technical support group.
- SYS9072 CTMO data (CDN time-out) has been cleared due to MMCS package restrictions.
ACTION: For CTMO, MMCS package #317 is required. Contact your technical support group.
- SYS9115 Unable to allocate protected memory for ANI block or ANI Table. Some ANI Entries could be lost.
ACTION: User Overlay 21 to print the ANI Entries. Try to configure the entries that are needed, or contact your technical support.
- SYS9116 The PRA package is restricted in the system.
- SYS9117 Taiwan R1 data in RDB but package is off. Data is lost.
ACTION: Equip TWR1 package and reload. Contact your technical support group.
- SYS9118 Taiwan R1 data in the trunk data block but the package is off. Data is lost.
ACTION: Action: Equip TWR1 package and reload. Contact your technical support group.
- SYS9120 The QSIG call transfer remote capability is removed during the sysload since the QSIG-SS package is restricted.
ACTION: Equip the package #316 and sysload a second time. Reconfigure RCAP to ETI or CTO.

- SYS9123 Unable to allocate memory for the access prefix block or access prefix table.
ACTION: A memory fault must be cleared or more memory must be equipped.
- SYS9124 Access prefix data cannot be loaded as ISDN package #145 is restricted.
ACTION: Feature DAPC is part of the ISDN package #145.
- SYS9125 The ACLI package is not equipped.
ACTION: Equip the ACLI package.
- SYS9126 System is PRA package restricted. ICS data is discarded while sysloading.
ACTION: Contact your technical support group.
- SYS9127 System is DTI package restricted. ICS data is discarded while sysloading.
ACTION: Contact your technical support group.
- SYS9128 Package #350 unrestricted with package #240 restricted.
ACTION: Contact your technical support group.
- SYS9129 Package #350 restricted with MWUN set to 32.
ACTION: Contact your technical support group.
- SYS9130 Incompatible units have been configured on the same line card.
ACTION: Contact your technical support group.
- SYS9131 FDID IDC tree block not loaded since FDID package (362) is not equipped.
ACTION: Equip package 362 and re-load.
- SYS9132 One or more of the following packages required for FDID (362) is missing: NFCR (49), CCOS (81), BGD (99), RMS (100), IDC (113).
ACTION: Check the package dependencies for this feature, equip the necessary packages, and reload.
- SYS9134 Unable to allocate memory for access prefix block or access prefix table.
ACTION: A memory fault must be cleared or more memory must be equipped.
- SYS9135 Access prefix data cannot be loaded as the ISDN package #145 is restricted.
ACTION: The feature DAPC is part of the ISDN package #145.
- SYS9137 The prompts related to the BSFE feature are set to default values as the BFS package is not equipped.
ACTION: Contact your technical support group.
- SYS9138 The number of portable TNs exceed the Portable Limit and no further portable TNs can be sysloaded.
- SYS9148 The FGD package is not equipped: FGNO value is lost in DGCR.
- SYS9150 Phantom TN superloops are moved to current loop +32 and Phantom TN cards are moved to current card +20 (for Option 11C only).
ACTION: Contact your technical support group. 

TDS — LD 34 Checking TDS, DTR and Tone Detectors

In this chapter

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this of this guide*.

How the TDS works

The digitone receiver portion of the Tone and Digit Switch (TDS) diagnostic, checks for a response to all digitone frequencies. The TDS diagnostic also tests tone detectors and dial tone detectors.

Digitone Receiver

The digitone receiver (DTR) has two basic functions as follows:

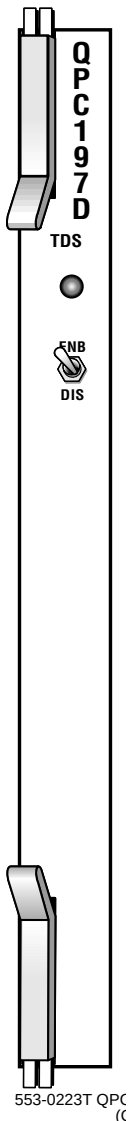
- ◆ Routes dial tone from the Tone and Digit Switch to DTMF or MF4 telephone sets and DTMF trunks.
- ◆ Converts digitone from DTMF telephone sets and trunks to MESSINs.

One DTR services one telephone or trunk at a time.

DTRs are chosen by the system in cyclic order from the highest TN to the lowest TN.

DTR commands		
Command	Description	Release
List disabled DTR or XTD		
SDTR	List the TNs of all disabled DTR or XTD units	xtd-8
List disabled DTR or XTD Unit		
SDTR I s c (u)	Get status of specified DTR or XTD card or unit.	basic-1
List all disabled Digitone Receivers		
STAT	List TNs of all disabled digitone receivers NONE is output if there are no disabled digitone receivers	basic-1
Disabled DTR or XTD Unit		
DISR I s c (u)	Disable specified Digitone receiver or XTD card or unit.	xtd-8
Test a Digitone Receiver		
DTR I s c (u)	Test specified unit on digitone receiver card or unit. This test may be performed while the card is enabled or disabled. If a disabled card passes the test, it is enabled automatically. This command also applies to the XTD.	xtd-8
Enable a DTR		
ENLR I s c (u)	Enable specific Digitone receiver.	basic-1
Stop a test		
END	Stop execution of current command. May also abort LD 34.	basic-1

TDS — Tone and Digit Switch



The Tone and Digit Switch is a network type circuit that only transmits on the network bus. Most systems have a TDS card on each network shelf.

Purpose

The Tone and Digit Switch is used to do the following:

- ◆ generate tones required by the system
- ◆ activate the digit out-pulsing relays on the trunk cards

Function

The CPU selects the required tones or dial pulse digits by writing commands into the control memory of the TDS which gates them onto the TDS network link during the proper timeslots. The TDS performs two functions:

Tones - Generates the following tones from ROM in the form of eight bit PCM:

- ◆ **ringing for the 1000 series telephones*** consists of 553 and 660 Hz both with 3rd and 5th harmonics modulated at 10 or 20 Hz
- ◆ **miscellaneous tone** consists of 440 Hz
- ◆ **dial tone** consists of 350 and 440 Hz
- ◆ **ringback tone** consists of 440 and 480 Hz, on for 2 seconds and off for 4 seconds
- ◆ **high tone** consists of 480 Hz
- ◆ **low tone** consists of 480 and 620 Hz, Busy tone at 60 ipm, Overflow at 120 imp
- ◆ **digitone** consists of digits 0 to 9, *, #

Dial pulse - Generates dial pulse by sending zeros to close and ones to open the trunk pulsing relays on a trunk card.

Features

The faceplate includes the following features:

- ◆ an LED, when lit indicating a disabled card
- ◆ an ENB/DIS switch to hardware enable or disable the card

The component side of the card contains straps which allow selection of the following:

- ◆ 10 or 20 Hz ringing option for SL-1 and 1000 series telephones *
- ◆ high or low tone

* Digital 2000 and 3000 series telephones ringing is generated from within the telephone.

TDS commands		
Command	Description	Release
List all disabled Tone Detector		
STAD	List all disabled Tone Detectors NONE is output if there are no disabled tone detectors.	basic-1
Check status of a Tone Detector		
STAD I s c (u)	Get status of Tone Detector card or unit. The status is either idle, busy, maintenance busy or not equipped.	basic-1
Test a Tone Detector		
TDET I s c (u)	Perform self-test and tone detection on specified card or unit. Performs the self-test and basic tone detection functions of the Meridian 1/Meridian SL-1 Tone Detector card or unit. This test may be performed while the card is enabled or disabled. If a disabled card passes the test, it is enabled automatically.	basic-1
Stop a test		
END	Stop execution of current command. May also abort LD 34.	basic-1
Disable a Tone Detector card		
DISD I s c	Disable the specified Meridian 1/Meridian SL-1 Tone Detector card. Disables both units and lights the LED.	basic-1
Disable a Dial Tone Detector		
DISD I s c (u)	Disable specific dial tone detector. If both units on the card are disabled and the card LED lights.	basic-1
Enable a Tone Detector		
ENLD I s c (u)	Enable tone detector on specified card or unit.	basic-1

Conf/Tds — Conference Tone and Digit Switch



The Conference Tone and Digit Switch (CT) card combines the functionality of the existing conference and tone and digit switch. It occupies one network slot and uses two network loops.

Purpose

The conference portion of the CT card remains the same, except that both A or Mu law are now provided. The Tone and Digit Switch (T& DS) portion of the card now provides 256 tones, Music Trunk Interface (MTI) and Multi- Frequency Sender (MFS) tones.

Function

Conference - The selection of A law or Mu law is set in software according to a country code. The code information is downloaded from the CPU to an onboard CT microprocessor unit, which sets the card in the proper companding mode.

Tone and Digit Switch - The 256 tones are generated from 1mega-bit EPROM.

A Master Cadence Table (MCT) will store up to 256 ringing cadences. The MCT table is created by the user for their particular country and is downloaded from the CPU during CT card enabling or initialization. The default is the North American MCT. The CT microprocessor firmware is used to generate the cadences freeing the CPU for other tasks.

Music Trunk Interface, for certain international markets, uses external cards providing eight channels of music announcements, record tones and cadences. These announcements can come from an analog Music Trunk or Kapsch Digital announcer.

Multi Frequency Sender tones are provided for the signaling of ANI digits over CAMA trunks to toll switching CAMA, TOPS or TSPS offices.

Features

The faceplate includes the following features:

- ◆ an LED for Conf and an LED for TDS, when lit indicating a disabled function
- ◆ an ENB/DIS switch to hardware enable or disable the card
- ◆ a connector (J1) to attach a Music Trunk Interface

The component side of the card contains a switch to set the attenuation levels and warning tone on or off, and a strap to set the warning tone level.

Conf/T&DS commands

Command	Description	Release

List all TDS Loops

STAT loop	Get status TDS loop. The response may include OPS DSBL , indicating that the outpulsing function of the TDS card has been disabled. FAULTY HW: NO RESPONSE = loop identified as faulty by the LRIP function. Refer to the FHW chapter.	basic-1

Disable a TDS

DISL loop	Disable tone and digit loop. For Conference/TDS/MFS cards see note with ENLL command.	basic-1

Disable Conf/TDS/MFS

DISX I	Disable Conf/TDS/MFS card on loop I and I + 1. Disables the entire combined Conference, Tone and Digit Switch, and MF Sender (NT8D17) card. Both the even numbered TDS/MFS loop and adjacent conference loop are disabled. loop = 0, 2, 4, . . . 158 The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions. However, this only prevents the loop from being used by software and does not affect the hardware status of the card. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. This command can be used in LD 34, LD 38 and LD 46.	xct-15

Enable TDS

ENLL I	Enable tone and digit switch loop I. For Conference/TDS/MFS cards the DISX and ENLX commands must be used whenever the faceplate switch of the card has been toggled. ENLL will software enable the card but the card will not be properly reset.	basic-1

Conf/T&DS commands (continued)		
Command	Description	Release
Enable Conf/TDS/MFS		
ENLX I	Enable Conf/TDS/MFS card on loop I and I + 1. This command can be used in LD 34, LD 38 and LD 46. Enables the entire combined Conference, Tone and Digit Switch, and MF Sender (NT8D17) card. Both the even numbered TDS/MFS loop and adjacent conference loop are enabled. (loop = 0, 2, 4,. . . 158) The Conf/TDS card is not enabled automatically when it is inserted. Both loops must have been previously disabled. This command initiates card tests and the download of software. The DISL and ENLL commands can be used on the even number loop for the TDS/MFS functions. However, this only prevents the loop from being used by software and does not affect the hardware status of the card. The DISX and ENLX commands are recommended. The ENLX command must be used if the DISX command was used to disable the card. Enabling more than 16 conference loops may cause the system to lockup.	xct-15

Maintenance telephone commands

The following commands are used from a maintenance telephone to test the various tones. Both the command and the dial pad equivalents are shown.

Maintenance telephone commands		
Command	Description	Release
Select table number		
8225#xx##	TABL#xx## Select table number xx. If this command is not issued before any tone request command, then table 0 is assumed (Generic X11 with supplementary features).	basic-4
Remove any active tone		
2##	C## Remove any active tone.	basic-1
Busy tone		
279#loop##	BSY#loop## Provide busy tone from tone and digit loop.	basic-1
Call Waiting tone		
294#loop##	CWG#loop## Give call waiting tone from loop.	basic-1
Camp-On tone		
267#loop##	CMP#loop## Provide Camp-On tone from loop.	basic-1
Dial tone		
342#loop##	DIA#loop## Provide dial tone from tone and digit loop.	basic-1
Distinctive Ringing		
3764#loop##	DRNG#loop## Provide distinctive ringing from loop.	basic-1

Maintenance telephone commands (continued)		
Command	Description	Release
Distinctive Ringing		
5374#loop##	JDRG#loop## Provide distinctive ringing from loop.	basic-8
Interrupted dial tone		
5438#loop##	JIDT#loop## Provide interrupted dial tone from loop.	basic-8
Intrusion tone		
486#loop##	ITN#loop## Provide intrusion tone from loop.	basic-1
Outpulsing		
2878#xx##	CUST#xx## Test outpulsing for customer XX.	basic-1
Overflow tone		
683#loop##	OVF#loop## Provide overflow tone from loop.	basic-1
Override tone		
673#loop##	ORD#loop## Provide override tone from loop.	basic-1
Paid Call Restriction tone		
7278#loop##	PCRT#loop## Test the Paid Call Restriction (PCR) tone after the TABL command.	pcr-7
Ringback tone		
725#loop##	RBK#loop## Provide Ringback tone from loop.	basic-1
Ring tone		
764#loop##	RNG#loop## Provide ring tone from loop.	basic-1

Maintenance telephone commands (continued)

Command	Description	Release

Signals through Kapsch digital announcer or music interface

266x#loop##	ANNx#loop## Provides signals coming through source number x of KAPSCH Digital Announcer or Music Interface.	basic-6

Special dial tone

735#loop##	SDL#loop## Give special dial tone from loop.	basic-1

Test outpulsing

677#loop#x#	OPS#loop#x## Test outpulsing from Meridian 1/Meridian SL-1 to idle trunk. Outpulses from tone and digit loop using the 10 or 20 pps outpulser to any idle trunk. This command connects the Meridian 1/Meridian SL-1 telephone to the trunk and a test call on the trunk may be made using the outpulses selected. Where: xx = 10 or 20 representing the trunk class of service (LD 14 CLS = P10 or P20). When the test call is completed, the program must be re-entered by keying SPRE 91 before entering another command, where SPRE denotes the Special Service Prefix code, unique for each customer.	basic-1

Test tone

878#loop##	TST#loop## Provide test tone from loop.	basic-1

Test tone and cadence number

9288#loop#t#c##	XCTT#loop#t#c## Test tone and cadence number on Conference/TDS/MFS card. Where: loop = loop number of Conference/TDS/MFS (NT8D17) t = tone number c = cadence number Refer to Flexible Tone and Cadences (553-2711-180) for the Conference/TDS tone and cadence numbers.	xct-15

Maintenance telephone commands (continued)

Command	Description	Release
Tone to last party		
857#loop##	TLP#loop## Provide tone to last party from the tone and digit loop.	basic-1

TDS messages

TDS0000	Program identifier indicating that the program has been loaded. ACTION: The TDS program is loaded and ready for you to enter commands.
TDS0001 loop	TDS loop has incorrect Digitone cycle. Outpulsing from that TDS may be faulty, or 100 ms Digitone burst is being used in a system defined for a 50 ms operation or vice versa. ACTION: Replace the TDS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
TDS0002 loop	TDS loop is transmitting erroneous Digitone frequencies. Digitone outpulsing from that TDS will be faulty. ACTION: Replace the TDS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
TDS0003 loop	20 pps outpulser on TDS loop has bad timing or is not producing the correct number of pulses per request. 20 pps outpulsing is faulty. ACTION: Replace the TDS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
TDS0004 loop	10 pps outpulser on TDS loop has bad timing or is not producing the correct number of pulses per request. 10 pps outpulsing is faulty. ACTION: Replace the TDS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
TDS0005 loop	An outpulser on TDS loop did not complete a digit. 10 or 20 pps outpulsing is faulty. ACTION: Replace the TDS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
TDS0006 loop	All outpulsers on TDS loop have been disabled due to a system I/O interface fault. ACTION: Use DISX 1 to disable and ENLX 1 to enable the TDS loop.
TDS0008 loop	The Digitone pulse on TDS loop did not complete cycle. Digitone outpulsing is faulty. ACTION: Replace the TDS card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

- TDS0010 loop Channel errors. Bad channels are disabled. Capacity of TDS is reduced. Outpulsing and/or tone faults may occur.
- ACTION:** Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0011 loop x
- The Tone Detector is unable to detect tone **x** generated by TDS **loop**, where:
- x** = 1 for Dial Tone
 - x** = 2 for Busy Tone
 - x** = 3 for Overflow Tone
 - x** = 4 for Ringback Tone
 - x** = 5 for Test Tone
- ACTION:** Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0012 Loop is not an active TDS. It is disabled. This code will only occur with a test that is invoked manually.
- ACTION:** Use ENLL l to enable the card prior to testing. Re-enter the command.
- TDS0013 loop TDS not allowed in that **loop**.
- ACTION:** Ensure that this is the command you wanted to use.
- TDS0014 loop Tone path could not be established to tone and digit **loop**.
- ACTION:** Use STAT l to check for disabled TDS loops. If none are disabled, try later when traffic is reduced.
- TDS0015 loop TDS **loop** is not responding. Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
1. TDS **loop** is not responding.
- ACTION:** Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- If the fault persists, suspect:
2. any other TDS card
- ACTION:** Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
3. the Peripheral Signaler (PS) card
- ACTION:** Replace the PS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0016 TDS is already enabled.
- ACTION:** Ensure that this is the command you wanted to use.
- TDS0017 No TDS available for Digitone receiver testing.
- ACTION:** Try later when traffic is reduced.

- TDS0018 xx yy The digit sent **xx** from CCITT TDS did not match the digit received **yy** from the DTR.
- ACTION:** Use DISX 1 to disable and ENLX 1 to enable the TDS. If the problem persist replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0019
1. Faulty TDS. Start at the first or most likely cause and go down the list until the fault is cleared. If the fault does not clear, call your technical support group.
- ACTION:** Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Incompatible (μ -law or A-law) TDS.
- ACTION:** Make sure the proper hardware is being used.
3. Faulty DTR card.
- ACTION:** Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0020
- Card disabled. To test card, it must first be enabled.
- ACTION:** Use ENLL 1 to enable the card.
- TDS0021
- Invalid unit used with DTR, ENLR or DISR command. Each Digitone Receiver uses TN pair.
- ACTION:** Re-enter the command using an even number unit.
- TDS0032 loop
- Card not responding.
- ACTION:** Check to make sure your data is correct and re-enter the command. If the card is not physically present in the shelf and should be, install a TDS card and program the TDS loop. If the card is physically present in the shelf, replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0100 l s c
- The specified Digitone receiver has been disabled due to lack of response or faulty operation. The DTR card indicated in the message is disabled only if 50 percent of system Digitone Receivers (DTRs) have not already been disabled. This failure rate will always leave 50 percent of Digitone Receivers enabled, regardless of performance.
1. Suspect a faulty DTR card.
- ACTION:** Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. Suspect a faulty TDS card if the fault persists or if more than one Digitone receiver is shown as faulty.
- ACTION:** Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TDS0101 l s c
- Specified Digitone receiver has been disabled due to loss of speech transmission capability. As for TDS0100.
1. Suspect a faulty DTR card.
- ACTION:** Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. Suspect a faulty TDS card if the fault persists or if more than one Digitone receiver is shown as faulty.

ACTION: Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0102 Digitone receiver requested is busy.

ACTION: Try again later.

TDS0103 TN specified is not equipped to be a Digitone receiver.

ACTION: Ensure that this is the command you wanted to use.

TDS0104 No Digitone Receiver found.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command. Use PRT or LTN in LD 20 to print list of DTRs.

TDS0105 l s c The specified Digitone Receiver has been disabled due to a failure to detect A, B, C, D digits. Card is disabled only if 50 percent of system Digitone Receivers have not already been disabled. This failure rate always leaves 50 percent of Digitone Receivers enabled.

1. Suspect a faulty DTR card.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. Suspect a faulty TDS if fault persists or if more than one Digitone receiver is shown faulty.

ACTION: Replace the TDS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0120 The ANN command cannot be used. ANN command is used for Kapsch Digital announcer or Music interface.

ACTION: Ensure that this is the command you wanted to use.

TDS0121 The source number is out-of-range (1-8).

ACTION: Check to make sure your data is correct and re-enter the command.

TDS0201 The last request is not finished executing. Only END is allowed. The END will terminate the execution.

ACTION: Use the END command to end the test or wait until the test has finished.

TDS0202 Invalid parameter. Wrong number of parameters for this command.

ACTION: Check to make sure your data is correct and re-enter the command.

TDS0203 Invalid command.

ACTION: Ensure that this is the command you wanted to use.

TDS0204 Loop is out-of-range. Loops 0 to 159 only are allowed.

ACTION: Check to make sure your data is correct and re-enter the command.

TDS0205 Shelf is out-of-range.

ACTION: Check to make sure your data is correct and re-enter the command.

TDS0206 Card is out-of-range.

ACTION: Check to make sure your data is correct and re-enter the command.

- TDS0207

Unit is out-of-range (0 to 1).
ACTION: Check to make sure your data is correct and re-enter the command.
- TDS0208

Command requested is allowed only from a maintenance telephone. Tones or outpulsing cannot interact with a TTY. You cannot hear a tone through a DTE.
ACTION: Use a maintenance telephone to enter the command.
- TDS0209

Customer does not exist.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TDS0210

Card does not exist in database.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TDS0212

Requested trunk type that uses the desired outpulser is not available. Be sure the system contains the desired trunks. If they exist, all trunks in that category may be busy or unequipped.
ACTION: Information only, no action required.

TDS0301 l s c (u) x y

The specified tone detector has been disabled due to faulty operation or lack of response, where x and y indicate the mode and test it has failed. The rest of the testing is canceled.

x	y	Mode
0004	0001	—Mode I Precise Tone
0004	0003	—Mode I Tone Duration > 50 ms
0004	0005	—Mode I Tone Duration > 300 ms
0004	0005	—Mode I Tone Duration > 300 ms, Tone is turned off at 256 ms
0005	0001	—Mode I Precise Busy Tone
0005	0003	—Mode I Non-Precise Busy Tone
0006	0001	—Mode I Precise Overflow Tone
0006	0003	—Mode I Non-Precise Overflow Tone
0006	0005	—Mode I Tone Duration < 300 ms
0007	0001	—Mode I Ringback Tone
0007	0003	—Mode I Any Tone
0008	0001	—Mode I Special Common Carrier Dial Tone
0009	0001	—Mode I Unidentified Tone
0009	0003	—Mode II Unidentified Tone
0009	0005	—Mode IV Test Tone
0009	0007	—Mode III Test Tone
0009	0009	—Mode III Test Tone (Tone is turned off at 5.5 s)
000A	0001	—Mode V Single Frequency Tone
000A	0003	—Mode V Dual Frequency Tone

ACTION: Use the STAD command to list any disabled tone detectors. Use the TDET command to test the tone detectors and, if necessary, replace faulty detector cards, following the steps in the *Hardware Replacement* (553-3001-520).

TDS0302 l s c (u)

The specified tone detector has been disabled; unable to perform self-test.

ACTION: Use the STAD command to list any disabled tone detectors. Use the TDET command to test the tone detectors and, if necessary, replace faulty detector cards, following the steps in the *Hardware Replacement* (553-3001-520).

TDS0303 l s c (u)

Terminal number specified is not designated as a tone detector.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

TDS0304

No TDS is available for tone detector testing.

ACTION: Wait for the TDS card to become idle and attempt the test again.

TDS0310

Tone Detector (TDET) package is restricted.

ACTION: Information only, no action required.

TDS0311 l s c (u)

Specified TN is not an MFR.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

TDS0312

No MFR units are configured.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

TDS0313

Some units of MFR card are busy, test not done.

ACTION: Be patient. Try again later.

TDS0314

No MFS available for MFR test.

ACTION: Be patient. Try again later.

TDS0315 l s c u

MFR unit is busy. Test not performed.

ACTION: Be patient. Try again later.

TDS0316

MFR is disabled due to faulty operation.

ACTION: Replace the MFR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0317

Digitone Receiver's (NT8D16) Peripheral Controller (NT8D01) is disabled, nothing is performed.

ACTION: Use ENXP x or ENXP XPC x in LD 32 to enable the peripheral controller and re-enter the command.

TDS0318

Superloop number must be a multiple of 4.

ACTION: Check to make sure your data is correct and re-enter the command.

TDS0319

Digitone Receiver (NT8D16) failed self test.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0320	Digitone Receiver (NT8D16) does not respond. Check Digitone Receiver and the Network Card/Peripheral Controller (NT8D04/NT8D01) communication path to the card for a fault. ACTION: Replace the DTR card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.
TDS0400	FTC table 0 used for tone tests. ACTION: Information only, no action required.
TDS0411	Dial Tone Detector package is not equipped. ACTION: Information only, no action required.
TDS0412	Dial Tone Detector and Tone Detector packages are not equipped. ACTION: Information only, no action required.
TDS0500	ANN command cannot be used because the Message Intercept (MIN) package is not equipped. ACTION: Information only, no action required.
TDS0501	Source number out-of-range. Only 8 external sources (1 to 8) can be defined for testing. ACTION: Check to make sure your data is correct and re-enter the command.
TDS0502	ENLX (Enable) or DISX (Disable) commands are only used on Conference/TDS/MFS cards. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TDS0503	The Conference/TDS/MFS card is already enabled/disabled. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TDS0504	Received an unexpected message from the Conference/TDS/MFS card. ACTION: Use the DISX command to disable the card and retry the ENLX command to enable the card.
TDS0505	The Enable command (ENLX) did not receive the down-load complete message within 6 seconds. ACTION: Check to make sure the faceplate switch is in the Enb position and re-enter the command.
TDS0506	Tone or cadence number is out-of-range. ACTION: Check to make sure your data is correct and re-enter the command.
TDS0507	The TLP Supplementary package is not equipped. ACTION: Information only, no action required.
TDS0508	The SSD scanning message received no response from the DTR/XDTR. The faulty DTR is disabled. ACTION: Replace the DTR card following the steps in the <i>Hardware Replacement</i> (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0511 l s c u x

DTR/XDTR fails to respond to SSD scanning message for **x** times prior to the DTMF tone detection test.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0512 l s c u x d

DTR/XDTR fails to detect the **d** digit for **x** times prior to the DTMF tone detection test is testing.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0513 l s c u x

DTR/XDTR fails to detect all the digits for **x** times when the DTMF tone detection test with the fast TDS is testing.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0514 l s c u x

DTR/XDTR fails to pass the digit through for **x** times when continuity test is testing.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0520

DTR and TDS commands are not supported for slot 0.

ACTION: To test these devices do a DISX 0 and then ENLX 0.

TDS0521

Equipment cannot be enabled due to disabled Tone and Digit Switch (TDS).

ACTION: Use OVL 34 to enable before proceeding.

TDS0522

New MFC/MFE/MFK5/MFK6 units on Card 0 can only be enabled by ENLX in LD 34.

ACTION: To enable these units, go into LD 34 and perform ENLX 0.

TDS0827

Multiple SSD messages of the same DTMF digit are received from the same NT8D16 Digitone Receiver during a DTR or TDS test in LD 34. If this problem occurs every time, replace the card.

ACTION: Replace the DTR card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TDS0828 loop

Attempting to enable Conference/TDS card during midnight routines. The Tone and Digit Switch and Digitone Receiver diagnostic program (LD 34) tests cards used in generating and detecting tones in the Meridian SL-1 system. Response to commands for the Dial Tone Detector card are output as DTD messages. Response to commands for the Tone and Digit Switch card are output as TDS messages.

ACTION: Information only, no action required.

TDS0829

A command with the same functionality is supported in Overlay 32. 

LD 1 — Template Audit

Templates are used to store data which is common to many telephones. This includes items such as key functions and class of service. The Template Audit program saves protected memory by eliminating unused or duplicate telephone templates.

**CAUTION:**

Beware of the following issues as they could cause you problems.

- ◆ Due to the Real Time impact of this program and the large amount of data being scanned, the Template Audit should be run during low traffic hours.
- ◆ The Template Audit should not be aborted unless it is critically necessary. An interrupted audit can corrupt templates. Telephones using corrupted templates will have degraded service and will have to be reprogrammed to restore the templates.
- ◆ If a system initialization occurs during the Template Audit, the program is automatically aborted. It should be restarted as soon as possible after this occurs.
- ◆ The audit printout only appears on the TTY that requested the Template Audit program to run.
- ◆ The Template Audit program cannot be run as a background task.
- ◆ To confirm that extraneous templates have been removed and that all counts have been corrected to their proper value, rerun the audit program.
- ◆ A datadump (LD 43) should be run after a template audit is executed.

LD 1 also performs the following consistency checks:

User Count Scan

All telephones in the system are scanned to find the total number of users for a template.

If a template is found to have no users, the entire template is removed with the warning message **NO USERS FOUND**. If a template is found to have an incorrect user count, the correct user count is written to the template, and the warning message **USER COUNT LOW** or **USER COUNT HIGH** is output. If the user count is accurate, the message **USER COUNT OK** is output.

Duplicate template scan

Each template is checked against every other template for possible duplication. A template is considered a duplicate of another if all of the following conditions are met:

- ◆ the checksums are the same
- ◆ the template lengths and the hunt offsets are the same
- ◆ all template entries are the same

If a match is found, the warning message **DUPLICATE OF xxxx** is output. A scan is then initiated to locate all users of the current template and move them to the matched template.

For each user found, the template number in the telephone data block and the user count is updated. After all of the users of the current template are moved to the matched template, the current template is removed.

Template checksum audit

A checksum is a binary sum of the template length, hunt offset, and template entries. The checksum is calculated for each template and compared with the existing template checksum. If the existing checksum is correct, the message **CHECKSUM OK** is output. Otherwise, the checksum is corrected with the warning message **CHECKSUM WRONG**.

Key/Lamp Strip Audit

Two checks are made to correct Key/Lamp Strip (KLS) corruption. First, the template length is compared to the number of KLS indicated in the protected line block. The second check verifies that the last word of the template reflects a **NULL** key.

If these checks detect any discrepancies, they are corrected with the warning message **CORRUPTED KLS.**

These corrections alter the checksum of the template. This is identified and corrected by the checksum audit.

Sample operation

The audit begins when the program (LD 1) is loaded. All templates are scanned in the following sequence, beginning with template one:

- 1 PBX telephones
- 2 BCS telephones

Following is an example of the system information which is generated during a Template Audit:

TEMPLATE AUDIT

STARTING PBX TEMPLATE SCAN

TEMPLATE 0001 USER COUNT LOW CHECKSUM OK

TEMPLATE 0002 USER COUNT HIGH CHECKSUM OK

TEMPLATE 0003 NO USERS FOUND

•
•
•

STARTING Sell TEMPLATE SCAN ?TEMPLATE 0001
USER COUNT OK CHECKSUM OK

.

.

.

TEMPLATE 0067 USER COUNT OK CHECKSUM
WRONG

TEMPLATE 0068 USER COUNT OK CHECKSUM OK
DUPLICATE OF 0014

.

TEMPLATE 0082 USER COUNT OK CHECKSUM OK

.

TEMPLATE 0120 USER COUNT OK

TEMPLATE AUDIT COMPLETE

Note: The report does not indicate that template inconsistencies
have been corrected. 

TEMU — Tape Emulation

Tape Emulation is a resident program. TEMU does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

TEMU messages

TEMU0001	Failure during initialization of tape emulation. ACTION: Contact your technical-support group.
TEMU0002	x failure giving command semaphore. ACTION: Contact your technical-support group.
TEMU0003	x invalid command sent to tape emulation. ACTION: Contact your technical-support group.
TEMU0004	x semaphore creation failed. ACTION: Contact your technical-support group.
TEMU0005	x tape task init failed. ACTION: Contact your technical-support group.
TEMU0006	x tape task activation failed. ACTION: Contact your technical-support group.
TEMU0007	Failure creating tape emulation task. ACTION: Contact your technical-support group.
TEMU0008	x failure taking command semaphore. ACTION: Contact your technical-support group.
TEMU0009	x unknown command sent to tape task. ACTION: Contact your technical-support group.
TEMU0010	Error occurred writing HI database. ACTION: Contact your technical-support group.
TEMU0011	Error occurred backing up database. ACTION: Be sure Floppy Diskette is properly inserted.

TEMU0012	Error occurred restoring database. ACTION: Check that Floppy Diskette is properly inserted.
TEMU0013	Error occurred swapping primary/secondary databases. ACTION: Contact your technical-support group.
TEMU0014	Temu task timeout, where: cmd = x , data = y , stat = z . ACTION: Contact your technical-support group.
TEMU0020	x failure opening file y . ACTION: Contact your technical-support group.
TEMU0021	x failure obtaining size of file y . ACTION: Contact your technical-support group.
TEMU0022	x failure renaming file y to z . ACTION: Contact your technical-support group.
TEMU0023	WARNING - x failure opening file y . ACTION: Contact your technical-support group.
TEMU0028	Failure opening database files for reading. ACTION: Contact your technical-support group.
TEMU0029	Failure closing database files after reading. ACTION: Contact your technical-support group.
TEMU0030	x failure opening file y for writing. ACTION: Contact your technical-support group.
TEMU0032	Failure opening database files for writing. ACTION: Contact your technical-support group.
TEMU0037	Failure closing database files after writing. ACTION: Contact your technical-support group.
TEMU0038 x y	Error skipping x records. ACTION: Contact your technical-support group.
TEMU0040	Invalid read in write sequence. ACTION: Contact your technical-support group.
TEMU0041	Failure reading record from x file. ACTION: Contact your technical-support group.
TEMU0042	x failure reading from y file during Query. ACTION: Contact your technical-support group.
TEMU0043	x failure reading from fd y . ACTION: Contact your technical-support group.
TEMU0044	x failure writing to fd y . ACTION: Contact your technical-support group.

- TEMU0045 **x** failure seeking to **y** for **z** in file.
 ACTION: Contact your technical-support group.
- TEMU0046 **x y** **x** failure at **y** in file.
 ACTION: Contact your technical-support group.
- TEMU0047 Attempt to write **x** record.
 ACTION: Contact your technical-support group.
- TEMU0048 Database disk volume is full.
 ACTION: Contact your technical-support group.
- TEMU0049 WARNING: record no mismatch, curr = **x**, rec = **y**.
 ACTION: Contact your technical-support group.
- TEMU0050 Begin write not at 1st data rec, curr = **x**, rec = **y**.
 ACTION: Contact your technical-support group.
- TEMU0051 Failure writing record to **x** file.
 ACTION: Contact your technical-support group.
- TEMU0053 Attempt to write unknown record type **x**.
 ACTION: Contact your technical-support group.
- TEMU0056 DB **x** request illegal during write sequence.
 ACTION: Contact your technical-support group.
- TEMU0059 **x** WARNING - failure closing **y** file.
 ACTION: Contact your technical-support group.
- TEMU0061 Failure copying dir **x** contents to **y**.
 ACTION: Contact your technical-support group.
- TEMU0062 Database **x** removable media failed.
 ACTION: Contact your technical-support group.
- TEMU0071 Failure during database query.
 ACTION: Contact your technical-support group.
- TEMU0072 **x** failure moving dir **y** contents to **z**.
 ACTION: Contact your technical-support group.
- TEMU0073 Failure swapping primary database with secondary.
 ACTION: Contact your technical-support group.
- TEMU0074 **x** failure copying **y** file to **z** file.
 ACTION: Contact your technical-support group.
- TEMU0075 **x** failure **y** dir **z** for copy.
 ACTION: Contact your technical-support group.
- TEMU0076 Copy source dir **x** is empty.
 ACTION: Contact your technical-support group.

TEMU0077	Failure copying dir file x to y . ACTION: Contact your technical-support group.
TEMU0079	x failure to y diskette vol during formatting. ACTION: Contact your technical-support group.
TEMU0080	x no diskette in active CMDU drive y . ACTION: Contact your technical-support group.
TEMU0081	x failure formatting diskette in active CMDU drive y . ACTION: Contact your technical-support group.
TEMU0082	x open failure for hi dir y on active CMDU diskette. ACTION: Contact your technical-support group.
TEMU0083	Diskette on active CMDU drive x is write protected. ACTION: Contact your technical-support group.
TEMU0085	x failure y dir z for rename. ACTION: Contact your technical-support group.
TEMU0086	Rename source dir x is empty. ACTION: Contact your technical-support group.
TEMU0087	x failure renaming dir file y to z . ACTION: Contact your technical-support group.
TEMU0088	WARNING: x file was not preallocated on disk. ACTION: Contact your technical-support group.
TEMU0100	Failure obtaining file/dir name x from DLO. ACTION: Contact your technical-support group.
TEMU0101	Database version is grater than current issue: S/W issue x y - DB issue x y ACTION: Reconfigure the data and do a data dump.
TEMU0102	Bad issue number in data file ACTION: Reconfigure the data and do a data dump.
TEMU0103	Name too long : x / y ACTION: Contact your technical-support group.
TEMU0104	Data dump failed for multi-language. Refer to previous messages to determine what caused the situation. ACTION: Restart the data dump after clearing the originating problems.
TEMU0105	Failure to open/create dir on PCM-CIA ACTION: Check whether the PCMCIA card is inserted. Contact your technical support group.
TEMU0106	Unable to get PSDL files from the system. ACTION: Depends on the feature set. Some systems do not require the presence of the PSDL file.

TEMU0107	PSDL file cannot be opened or does not exist in the system. ACTION: Depends on the feature set. Some systems do not require the presence of the PSDL file.
TEMU0108	Config/Database file cannot be found in the system. ACTION: Contact your technical support group.
TEMU0109	Unable to get config/database file path. ACTION: Contact your technical support group and check for the existence of the disk.sys file in the system.
TEMU0110	Error occurred while restoring internal database. ACTION: Some files may be not restored or re-named properly. Contact your technical support group.
TEMU0111	Error occurred while backing up internal database. ACTION: Might lose the internal backup capacity. Contact your technical support group.
TEMU0112	Error occurred while backing up external database. ACTION: Check that PCMCIA data drive is properly inserted. Some files might not be backed up. Contact your technical support group.
TEMU0113	Error occurred restoring external database. ACTION: Check that PCMCIA data drive is properly inserted. Contact your technical support group.
TEMU0114	Restore from internal backup drive failed. ACTION: Try again. If the problem persists contact NT support.
TEMU0115	zdrv: Drive full, file%s not backed up, where s is the file name. ACTION: Contact your technical support group.
TEMU0116	zdrv: Error back up file%s, where s is the file name. ACTION: Contact your technical support group.
TEMU0117	zdrv: Error creating internal backups, retrying. Some files might not be backed up. ACTION: Contact your technical support group.
TEMU0118	zdrv: Unable to create internal backups. ACTION: Contact your technical support group.
TEMU0119	Could not get patch retention information; no patches will be backed up. ACTION: Verify the existence of the reten file and contact your technical support group.
TEMU0120	zdrv: Failed to install zdrv driver. ACTION: Contact your technical support group.
TEMU0121	zdrv: Drive ID%X%X differs from system ID ACTION: Contact your technical support group.
TEMU0122	zdrv:%s and%s have differing time stamps, where s = file name.
TEMU0123	zdrv: Restoring s, where s is the file name.

- TEMU0124 zdrv: Failed to restore s, where s is the file name.
 ACTION: Contact your technical support group.
- TEMU0171 xx Failure giving command semaphore on Expansion Cabinet xx.
- TEMU0172 xx Failure getting command from main cabinet on expansion cabinet xx.
- TEMU0173 xx Failure receiving a message from tape task on expansion cabinet xx.
- TEMU0174 Message queue creation failed.
- TEMU0175 xx Failure obtaining file/dir name xx from DLO.
- TEMU0176 xx yy
 Failure transferring the file xx to expansion cabinet yy.
- TEMU0177 xx Failure sending command on expansion cabinet xx.
- TEMU0178 xx Failure connecting to expansion cabinet xx.
- TEMU0179 xx Failure getting reply from expansion cabinet xx.
- TEMU0180 xx Timeout waiting reply from expansion cabinet xx.
- TEMU0181 xx Cannot determine address of expansion cabinet xx.
- TEMU0182 Software Release not compatible on expansion cabinet xx.
- TEMU0183 Expansion cabinet %d is non survivable
- TEMU0184 Database synchronization failed on cabinet xx. Tape Task status is xx.
- TEMU0185 failure obtaining file/dir name form DLO on cabin xx.
- TEMU0186 Failure renaming file on cabinet xx.
- TEMU0187 Unsupported command on cabinet xx. 

TFC — LD 2 Set Time and Date

In this chapter

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For more information refer to the *Traffic Measurement: Formats and Output* (553-2001-450) and the *X11 Maintenance* (553-3001-511) for a complete listing of the LD 2 commands.

How to use LD 2 traffic commands

LD 2 is used to set traffic options, the system ID, the date, and the time. The conventions used to describe the traffic commands are as follows:

- ◆ a period (.) prompt indicates that the system is ready to receive a new command
- ◆ a double dash (--) indicates that the system is ready to receive data
- ◆ a space <sp> prompt indicates that the space bar should be pressed
- ◆ a carriage return <cr> prompt indicates that the return key should be pressed

Note: The message TFC0000 output on the switch indicates that the traffic program is running.

Print time and date

To print the current time and date

Enter TTAD

An example of a time and date printout

TTAD WED 24 11 1995 15 41 49

The TTAD format is: day-of-the-week, day, month, year, hour, minute, second

Set time and date

To set the time and date

Enter STAD (day) (month) (year) (hour) (minute) (second) <cr>

An example of an input

STAD 24 11 1995 15 41 49<cr>

Note: Except for the year, the other entries in the time of day output are 2-digit numbers. The year may be any year from 1901 to 2099 inclusive. It may be input as a full 4-digit field or as a 2-digit short form. The 2-digit short form is assumed to be in the range 1976 to 2075 and the appropriate addition is made when calculating the day-of-the-week and leap years.

Adjust system clock

The small differences in the electronic components that comprise the Meridian 1 system clock, might cause it to run a few milliseconds fast or slow each day. Set the system time, using an accurate time source. Wait for a few days, or even one week. Print the time and the date at an exact time with reference to the source used when setting the system clock. Compare the source time to the print out time and determine if the system clock is fast or slow.

For example, if the system clock is 12 seconds fast over a one week period, this equates to a gain of 1.7 seconds per day. Use the Set Adjustment command to subtract 1.7 seconds per day. The adjustment is automatically performed during the midnight routine.

To print the current adjustment

Enter TDTA

An example of an adjustment printout

TDTA 1 113 (x yyy)

The TDTA format is:

x = 0 for negative increment (slow down the clock)

x = 1 for positive increment (speed up the clock)

yyy = 0-60 second adjustment in increments of 100 ms

To set the adjustment

Type **SDTA 1 113 -- x yyy<cr>**

An example of setting the adjustment

SDTA 1 113 -- 0<sp>017<cr>

The SDTA format is:

x = 0 for negative increment (slow down the clock)

x = 1 for positive increment (speed up the clock)

yyy = 0-60 second adjustment in increments of 100 ms

Set and print Daylight Savings Time

With X11 release 19 and later, you can program daylight saving time changes to occur automatically.

- ◆ You can set the date to change to daylight savings, and to return to standard time.
- ◆ You can print the daylight saving time change settings.
- ◆ The system clock must be running on daylight savings time to be updated automatically.
- ◆ The daylight saving time change settings are not erased during a system reload.

To print the current change setting

Enter TDST

Example — change setting printout -

SDST OFF

FWTM APR 1 SUN 2 (AT 02:00 2/4/1995)

BWTM OCT L SUN 2 (AT 02:00 29/10/1995)

To enable the automatic change

Enter SDST ON

To disable the automatic change

Enter SDST OFF

To set the clock to move forward

Enter FWTM (month) (week) (day) (hour)

The FWTM format is:

month = 1 - (4) - 12 [1 is January-default (4) is April-12 is December]

week = (1) - 5 - L [1 is the first week-5 is the fifth week, L is the last week of the month]

day = (1) - 7 [default (1) is Sunday-7 is Saturday]

hour = 1 - (2) - 22 [1 is midnight-default(2) is 1:00 am-22 is 11:00 pm]

To set the clock to move backward

Enter BWTM (month) (week) (day) (hour)

The BWTM format is:

month = 1 - (10) - 12 [1 is January-default (4) is October-12 is December]

week = (1) - 5 - L [1 is the first week-5 is the fifth week, L is the last week of the month]

day = (1) - 7 [default (1) is Sunday-7 is Saturday]

hour = 1 - (2) - 22 [1 is midnight-default(2) is 1:00 am-22 is 11:00 pm]

Print alarm and exception filter summary

With X11 release 19 and later, you can print the alarm status.

For further information, refer to *X11 system management applications* in the *Fault Clearing Guide Book 3 of 3*.

To print the alarm status

Enter ASUM

How traffic works

Traffic measurements are essential for monitoring the performance of the Meridian 1. All Meridian 1 systems are equipped with traffic data accumulation capabilities which function as part of the normal call processing. Traffic data must be selected, activated, and have a traffic TTY defined before it is printed out.

Traffic data collection

There are five aspects to traffic data collection, as follows:

Accumulation

Any traffic action is automatically updated in the Accumulation Registers. Data in the Accumulation Registers cannot be accessed directly.

Holding

Data from the Accumulation Registers is transferred to the Holding Registers in accordance with user-defined schedules. Data in the Holding Registers can be examined at any time and will not change until the next scheduled transfer update. When data is transferred from Accumulation to Holding Registers, the Accumulation Registers are reset to zero.

Printing

When data is transferred to the Holding Registers, only the scheduled traffic options selected will be printed. However, any data for any of the options can be manually printed at any time.

Control

The Schedules, Printing Options, Threshold Levels and other traffic parameters are controlled by LD 2 commands.

Outputting

The cycle of transferring data from Accumulation to Holding Registers and the Outputting of data, is repeated in accordance with the schedules defined in LD 2. Only the terminal(s) defined in the configuration record receive the traffic data output for automatic printing. Any TTY however, can be used to invoke data at any time.

System reports

Of the 12 System Reports available, TFS004 Processor Load is the most useful to technicians.

TFS004 Processor load - Input and Output Buffer Overflow Peg Counts and Call Register Overflow Peg Counts are more in line with a technicians job than the other ten outputs. A peg count is any number other than 0 which appears in a TFS004 peg count field.

The configuration record, LD 17, is used to establish the number of the following:

- ◆ Low Priority Input Buffers (LPIB)
- ◆ High Priority Input Buffers (HPIB)
- ◆ 500 Output Buffers (500B)
- ◆ SL1 Output Buffers (SL1B)
- ◆ Number of Call Registers (NCR)

If there are insufficient buffers or call registers assigned, then calls or features are lost.

TFS004 printouts are used to monitor buffer and call register overflow peg counts, as follows:

- ◆ Each output buffer peg count indicates a lost or incomplete feature.
- ◆ Each input buffer peg count indicates a call that could not be initiated.
- ◆ Each call register peg count indicates a call that has been lost.

Example of a TFS004 printout

200	TFS004	
147423	321786	00141
00000	00000	
00000	00000	
00000		

00000	00000	00000
00000	00000	
00000	00000	00000

TFS004 Format

System ID	TFS004	
Idle cycle count	CPU attempts	Load peak peg count
HPIB overflow peg count	LPIB overflow peg count	
500B overflow peg count	SL1B overflow peg count	
CR overflow peg count		
Rated Call Capacity (Note)	Max Real Time Used (RTU) (Note)	Percent of RTU (Note)
Number of eliminated observations (Note)	Hour of Max RTU (Note)	
LLC1 blocked calls	LLC2 blocked calls	LLC3 blocked calls

Note: Asterisks appear in these fields when the information is insufficient to generate a report.

Peg count action

If you observe peg counts in the HPIB, LPIB, 500OB, SL-1OB or CR fields, increase the indicated buffer or call register by 10 percent. Refer to the *administration input/output guide*. Use LD 17 PARM to change buffers and call registers.

To print a current system report schedule

Enter TSHS

Example of a current system report schedule printout
TSHS 01 01 31 12 (sd sm ed em)

00 23 1 (sh eh so)
1 2 3 4 5 6 7 (d d d d d d d)<cr>

sd = start day (1-31)sm = start month (1-12)

ed = end day (1-31)em = end month (1-12)

sh = start hour (0-23)eh = end hour (0-23)

so = schedule options:

0 = no traffic scheduled1 = hourly on the hour

2 = hourly on the half hour3 = every half hour

d = day of the week:1= Sunday to 7 = Saturday

To set or change a current system report schedule

Type SSHS **01 01 31 12 - -** sd sm ed em<cr>

00 23 1 - - sh eh so<cr>

1 2 3 4 5 6 7 - - d d d d<cr>

sd = start day (1-31)sm = start month (1-12)

ed = end day (1-31)em = end month (1-12)

sh = start hour (0-23)eh = end hour (0-23)

so = schedule options:

0 = no traffic scheduled1 = hourly on the hour

2 = hourly on the half hour3 = every half hour

d = day of the week:1= Sunday to 7 = Saturday

To print a TFS004 non-scheduled report at any time

Type INVS 4

TFC messages

TFC messages provide responses to commands entered in LD 2. The remaining TFC messages are actual traffic outputs are detailed in the *Traffic Measurement: Formats and Output* (553-2001-450).

TFC0200	Syntax error. Illegal character has been input. ACTION: Check to make sure your data is correct and re-enter the command.
TFC0201	The parameter specified is out-of-range. ACTION: Check to make sure your data is correct and re-enter the command.
TFC0202	The loop specified is not equipped. ACTION: Check to make sure your data is correct and re-enter the command.
TFC0203	The card specified is not equipped. ACTION: Check to make sure your data is correct and re-enter the command.
TFC0204	The unit specified is not equipped. ACTION: Check to make sure your data is correct and re-enter the command.
TFC0205	Program bug — should never happen. ACTION: Contact your technical-support group.
TFC0206	Customer specified is not equipped. ACTION: Check to make sure your data is correct and re-enter the command.
TFC0207	Traffic Print program is busy with scheduled output. ACTION: Be patient. You are entering commands faster than the system can handle them.
TFC0208	Traffic Control program cannot be invoked from a maintenance set. ACTION: Re-enter the command from the TTY.
TFC0209	The Network Traffic (NTRF) feature is not equipped. ACTION: Ensure that this is the command you wanted to use.
TFC0210	There is no ESN customer data block. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TFC0211	There is no ESN Data for the requested item. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TFC0212	The NCOS data block does not exist in the system. ACTION: Ensure that this is the command you wanted to use.
TFC0213	IMS or Command and Status Link (CSL) package not equipped. ACTION: If this command is the one you want to use, refer to the <i>administration guide</i> . Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.

- TFC0214 Channel specified is not equipped. X08: Password does not have access to system commands.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TFC0215 Invalid input for Digital Trunk Interface (DTI) loop.
ACTION: Check to make sure your data is correct and re-enter the command.
- TFC0216 Command and Status Link (CSL) package not equipped.
ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.
- TFC0220 System cannot allocate space for Line Load Control (LLC) data block.
ACTION: Contact your technical-support group.
- TFC0221 Invalid command: Line Load Control (LLC) is not enabled.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TFC0223 The ISA package is not equipped.
ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.
- TFC0400 The user does not have access to system commands.
ACTION: Contact your technical-support group.
- TFC0401 The user does not have access to this customer.
ACTION: Contact your technical-support group.
- TFC0402 The user does not have access to Line Load Control commands.
ACTION: Contact your technical-support group.
- TFC0403 NAS package is not equipped.
ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.
- TFC0404 ISDN INTL SUP package (30B+D) is not equipped.
ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.
- TFC0405 Invalid DN entered.
ACTION: Check to make sure your data is correct and re-enter the command.
- TFC0406 The time synchronization DN has to be set for the new customer.
- TFC0407 RPA package is not equipped.
ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.
- TFC0408 No BRI package equipped.
ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.
- TFC0409 Failed to request information from the MISP.
ACTION: Contact your technical-support group.

TFC0410 Calculation for the next Daylight Savings Time and Standard Time change cannot be done, because the system clock is not set.

ACTION: Set the system clock or use SDST ON command to enable the automatic change function.

TFC0411 FWTM AT {time} {date}

The system clock has been changed forward one hour for Daylight Savings Time change.

ACTION: Information only, no action is required.

TFC0412 BWTM AT {time} {date}

The system clock has been changed backward one hour for Standard Time change.

ACTION: Information only, no action is required.

TFC0414 The Meridian 1 Packet Handler package is not configured. You cannot schedule TFS0015 if this package is not equipped.

ACTION: If this command is the one you want to use, refer to the *administration guide*. Use LD 22 PRT, PKG to ensure that all the packages you have ordered are on the disk.

TFC0415 Failed to request BRSC traffic information from MISP. MISP loop number and BRSC TN are printed.

ACTION: Check MISP and BRSC states.

TFC0416 Currently, it is not the same customer you have just entered in the INVC command. If no previous SCFT, default is customer 0.

ACTION: Use TCFT/SCFT commands to find out or change the customer you are collecting features for.

TFC0419 A conference loop was overflowing. There may not be enough available slots on the loop.

ACTION: Contact your technical-support group

TFC0420 ISDN Semi Permanent Connection (ISPC) package is not equipped. In Overlay 2, a request to set/clear Customer Traffic Report for ISPC links establishment (type=10) has been done using SOPC or COPC command but the ISPC is not enabled.

ACTION: Select a different report type or Unrestrict the ISPC package and reload PBX if necessary.

TFC0421 ISDN Semi Permanent package is not equipped. In Overlay 2, a request set/clear the Customer Traffic Report for ISPC links established (type = 10) was attempted using the SOPC or COPC command.

ACTION: Select a different report type, or Unrestrict the ISPC package and reload the PBX if necessary. 

TMF — Test Multi-frequencies

Test Multi-frequencies is a resident program. TMF does not have an overlay load (LD) associated with it. For more information refer to “Software maintenance tools” on page 49 in the *You should know this* chapter.

TMF messages

TMF0000	Program identifier. ACTION: The TMF program is loaded and ready for you to enter commands.
TMF0001	Invalid input: there are more than four characters in one field. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TMF0002	Invalid input: garbage datatype. ACTION: Check to make sure your data is correct and re-enter the command.
TMF0003	Invalid input: command field unknown. ACTION: Ensure that this is the command you wanted to use.
TMF0004	Invalid input: too many parameters. ACTION: Check to make sure your data is correct and re-enter the command.
TMF0005	Last command is still in progress. ACTION: Be patient. You are entering commands faster than the system can handle them.
TMF0006	Invalid TN. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TMF0007	Invalid DOD trunk. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TMF0008	Trunk is busy or disabled. ACTION: Use STAT l s c u in LD 32 to determine if trunk is busy or disabled. If the trunk is busy, try later when idle. If the trunk is disabled, use ENLC l s c u in LD 32 to enable the trunk. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
TMF0009	Invalid TN. Shelf out-of-range (0 to 3). ACTION: Check to make sure your data is correct and re-enter the command.

- TMF0010 Invalid TN. Card out-of-range (1 to 10).
ACTION: Check to make sure your data is correct and re-enter the command.
- TMF0011 Invalid set TN.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TMF0012 Defined telephone is busy or disabled.
ACTION: Use STAT l s c u in LD 32 to determine if the telephone is busy or disabled. If the telephone is busy, try later when idle. If the telephone is disabled, use ENLC l s c u in LD 32 to enable the telephone. If you need help with the commands or system responses go to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- TMF0013 Package restricted, overlay not allowed to load.
ACTION: No action required.
- TMF0014 Signalling type not defined.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TMF0015 Signalling type already defined.
ACTION: Ensure that this is the command you wanted to use.
- TMF0016 Command not valid for MFE signalling.
ACTION: Ensure that this is the command you wanted to use.
- TMF0017 Trunk Busy - DSI Timing.
ACTION: Be patient.
- TMF0018 Use loop and channel for digital loop TN.
ACTION: Check to make sure your data is correct and re-enter the command.
- TMF0019 Invalid Digital Loop TN.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- 

TRA — LD 80 Tracing Calls

In this chapter

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter.

How the TRA works

This program provides a means of tracing the progression of calls by printing a report on the call register contents.

Call Trace

The Call Trace program examines the call registers for only an instant in time and does not update information as the call progresses.

The trace commands operate only when the diagnostic is active. Using the ******** command will stop the trace function.

Enhanced Call Trace

With Call Trace Enhancement, the program provides a report each time the call register contents are updated with information.

TNs can be traced for a period of one second to 24 hours.

Up to three TNs or digital trunks can be tracked.

A time stamp with date and time in hours, minutes, and seconds is printed on the first line of each trace report.

The Multi-user Login package 242, is required, and must be enabled in LD 17.

It is recommended that the baud speed be set to 4800 or higher when using enhanced call trace. If you use a lower baud speed, this may overflow the print buffer, as the I/O ports have the lowest workschedule priority and will cause an initialization.

The enhanced trace enable commands will operate according to a defined time period even when the diagnostic is not active. Using the ******** command will not stop the enhanced trace function.

Network Call Trace

For Network Call Trace see NCT chapter.

When to use TRA

Incomplete internal calls

When a call does not progress to the proper termination of established, a trace of that call to reveal the contents of main and auxiliary progress markers will indicate where the call stopped.

Tracing incomplete trunk calls

This is used for tracing trunk calls where there is another switch involved that has an influence on the connection, supervision, and tear down of the call. The main and auxiliary progress markers are especially helpful with trunk call tracing.

Alphabetical list of Call Trace outputs

This section provides definitions of the data output by the various Call Trace commands.

ACTIVE = the call is active

AUX_NARS = Network Automatic Route Selection (NARS) data to follow

AUX_PM = auxiliary progress mark may be any of the following depending on the **MAIN_PM**:

- ◆ **ABSORBING** = performing digit manipulation on the call
- ◆ **AWAIT ANI** = waiting for Automatic Number Identification information
- ◆ **AWAITREPLY** = CPU is waiting for a response during a dial sequence
- ◆ **BSYG** = busy tone to originator
- ◆ **CDR - CALLRECORD** = CPU is outputting a CDR record
- ◆ **CDR - TIMING** = CPU is computing a CDR record
- ◆ **COMPLETE** = dialing is complete

- ◆ DNTRANS = DN translation to TN in progress
- ◆ FAREND-OFF = far-end off-hook
- ◆ NARS = call is a network call
- ◆ NOOUTPULS = outpulsing complete, originator receiving ringback
- ◆ OUTPUTSING = outpulsing digits related to the call
- ◆ OVLF = resources not available, returning overflow to originator
- ◆ PAUSING = timed pause in a trunk call dialing sequence
- ◆ SPEEDCALL = performing speed call
- ◆ TEMPPATH = software timing, occurs when outpulsing digits on trunks
- ◆ TOLLCHECK = checking access restrictions for the call

AUX_RGAT_PM = Ring Again over trunk information

BEARER CAP = bearer capability, such as voice, 64K clear, 64K restricted and 56K

BUSY = unit or DN is busy

CALL REF #PRI = Call Reference number assigned by the system

CALL STATE = specifies the PRI call as active or inactive

CALLED NO = PRI dialed number

CALLING NO = PRI home location code and DN of originating party

CONF = Conference call

COS_ORIG COS_TERM = Class of Service restrictions for originating and terminating party. Possible values are:

- ◆ **UNR** = Unrestricted
- ◆ **TLD** = Toll Denied
- ◆ **SRE** = Semi-Restricted
- ◆ **FRE** = Fully Restricted
- ◆ **FR1** = Fully Restricted class 1
- ◆ **FR2** = Fully Restricted class 2
- ◆ **CUN** = Conditionally Unrestricted
- ◆ **CTD** = Conditionally Toll Denied

DARK_CONSOLE = the call is being temporarily released by a console. Three types of recall are also output.

- ◆ **RLSED** = console released the call is getting recall
- ◆ **FLASH** = Flash recall
- ◆ **CAMP** = Camp-On recall

DIAL DN = the dialed number

DIAL xxx yy TTR zz = TDS on loop xxx and timeslot yy connected to Digitone Receiver timeslot zz

DG_MAN xxx FCA_INDEX xxx TOD x = Digit Manipulation Index, Free Area Screening, and Time of Day value

DIRECT MW_CALL = Message Waiting indication is being given

DSBL = the unit has been disabled

DST = console destination information to follow

EMR100 = ACD emergency conference

EXP_ROUTE = identifies an expensive route is being used for an ESN call

IDLE = TN or key is idle

HLD = number of calls On-Hold at the console

HOLD = call is On-Hold

LOCKOUT = the unit is in lockout state

LOOP = attendant console LPK key

MAIN_PM = this is the main progress mark which identifies the state of the call, possible values are listed below. See also AUX_PM.

- ◆ BUSY = originator is receiving busy tone
- ◆ CDR = CPU is processing Call Detail Recording records
- ◆ DELAY DIAL = CPU is in a timing sequence while establishing a delay dial start trunk call
- ◆ DIAL = one or more digits have been dialed, system requires more digits
- ◆ ESTD = call is established between the originating and terminating party allowing them to communicate
- ◆ HALFDISC = Trunk with answer supervision has not received a disconnect signal from the far end during trunk idling
- ◆ READY = CPU is ready to process a function for the originating TN
- ◆ REOR = originator is receiving intercept treatment
- ◆ RING = originator is receiving ringback tone
- ◆ WAIT = Dial Tone Waiting queue
- ◆ WINKON = CPU is in a timing sequence while establishing a wink start trunk call
- ◆ MARP = indicates the TN is Multiple Appearance Redirection Prime

MBSY = unit is in maintenance busy state

NARS_PM = NARS call progress mark

NEW_RLIST_INDEX NWQ_RLIST_ENTRY = network queue route list index and route list entry

NCOS_ORIG, NCOS_TERM = Network Class of Service for originating and terminating party

OHQ/CBQ = call is in the Off-Hook queue or Call Back queue

ORIG = originating party information, identifies the TN or DN where the call originates, output depends on type of telephone or console (Refer to “Originating and terminating formats” on page 1079, that follow, for a description of the output.)

PRIORITY NWQ_EXT_ROUTE = the priority in the queue and extended route queuing

PTY SLOT = TDS priority timeslot; reserved by the CPU while a user is receiving tones (this timeslot may be required by the CPU to further process the call). Normally PTY SLOT is the same timeslot as SLOT.

QUEUE = a call may be in one of the following CPU timing queues:

128 = 128 ms timing queue

2S = 2 second timing queue

CAD = cadence

CDR = Call Detail Recording processing queue

DIAL = dialing queue

IDLE = idle queue

NONE = call is not in a timing queue

RING = ringing queue

RCVR xx SET yy = timeslot to the Digitone Receiver (xx) and the telephone (yy)

RGAT_PM = Ring Again progress mark

RL_IND xx RL_ENT xx = NARS/BARS route list index and entry number

SRC = console source information to follow

SBSY = unit is software busy

SLOT = the timeslot used by the originator and terminator

TALKSLOT = identifies the timeslot and junctor (if applicable) used by the originator and terminator

TDTN = Tone Digit Switch loop and timeslot

TERM = terminating party information, identifies the TN or DN where the call terminates, output depends on type of telephone or console (Refer to “Originating and terminating formats” on page 1079, that follow, for the description of the output.)

TGAR_ORIG, TGAR_TERM = Trunk Group Access Restriction for originating and terminating party

TTR = Digitone Receiver TN

Originating and terminating formats

The Call Trace originating and terminating party information depends on the types of telephone, console or trunk as shown below.

- ◆ Single line telephones:
 - **ORIG l s c u cust dn 500**
 - **TERM l s c u cust dn 500**
- ◆ Multi-line telephones:
 - **ORIG l s c u key# keytype cust dn settype**
 - **TERM l s c u key# keytype cust dn settype**
- ◆ Attendant Consoles:
 - **ORIG l s c u cust att# lpk# ATTN consoletype**
 - **TERM l s c u cust att# lpk# ATTN consoletype**
- ◆ Trunks:
 - **ORIG l s c u rtyp RMBR rrr mmm**
 - **TERM l s c u rtyp RMBR rrr mmm**

Explanation of the above originating and terminating party format is as follows:

- ◆ **l s c u** = TN
- ◆ **consoletype** = console type (ATT, 1250, 2250)
- ◆ **cust** = customer number
- ◆ **dn** = directory number
- ◆ **key#** = multi-line telephone key number
- ◆ **keytype** = multi-line telephone key type (SCR, MCR, HOT, etc.)
- ◆ **lpk#** = console loop key number
- ◆ **rrr mm** = trunk route and member number
- ◆ **rtyp** = trunk route type (TIE, CO, FX, etc.)
- ◆ **settype** = multi-line telephone type (SL1, 2008, 2317, etc.)

Example trace of a call placed to a 500-type set

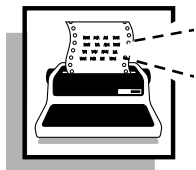
The scenario is as follows. An active call from key 0 on an M2008, to a 500-type telephone and customer number is 06.

The trace command is used to elicit an output:

- ◆ TRAC 4 0 5 0 (4 0 5 0 is the TN of the telephone), or
- ◆ TRAC 6 5100 (6 is the customer number and 5100 is the DN of the telephone)

LD 80 output to the maintenance terminal is as follows:

ACTIVE TN 004 0 05 00
ORIG 04 0 0 05 00 6 SCR 0 5100 2008
TERM 008 0 03 06 6 2121 500
DIAL DN 2121
MAIN PM ESTD
TALKSLOT ORIG 22 TERM 29
QUEUE NONE



From the above output the Call Trace information is as follows:

- ◆ **ACTIVE** = the status of the call at the instant Call Trace was applied
- ◆ **ORIG** = the unit originating the call or calling set:
 - 004 0 05 00 = terminal number; loop 4, shelf 0, card 5, unit 0
 - 6 = customer
 - SCR 0 5100 = single call ringing, key 0, DN of 5100
 - 2008 = telephone type

- ◆ TERM = the unit terminating the call or the called set:
 - 008 0 03 06 = terminal number; loop 8, shelf 0, card 3, unit 6
 - 6 = customer
 - 2121 = DN of the terminating set
 - 500 = telephone type
- ◆ DIAL DN 2121 = indicates the DN or digits dialed by the originating set
- ◆ MAIN PM ESTD = indicates the call has progressed to the established state and the sets are in the voice and data mode
- ◆ TALKSLOT ORIG 22 TERM 29 = tells the originating telephone is assigned time slot 22 and the terminating telephone is assigned time slot 29
- ◆ QUEUE NONE = neither set is in any queue

Enhanced trace example

The enhanced call trace output includes a time stamp that appears on the first line of the output.

The TN or digital trunk prints out only when there has been a change to the call register. The TN or trunk is printed only once.

Sample output:

```
.14:00:02 12/25/1992
```

```
KEY 0 MCR MARP ACTIVE TN 001 0 02 01
```

```
ORIG 001 02 01 0 SCR MARP 1 5011 SL1
```

```
TERM 001 0 02 00 0 MCR MARP 1 5006 SL1
```

```
DIAL DN 5006
```

```
MAIN_PM ESTD
```

```
TALKSLOT ORIG 19 TERM 21
```

```
QUEU NONE
```

```
KEY 1 TRN IDLE
```

```
KEY 2 A03 IDLE
```

```
.
```

```
.
```

```
.
```

```
KEY 8 RND
```

```
KEY 9 RLS
```

```
.14:00:04 12/25/1992
```

```
IDLE TN 015 04
```

Example trace of an outgoing ISDN Call

The scenario is: outgoing call from key 0 on an M2317, to 500-type telephone customer number is 05

The trace command is used to elicit an output:

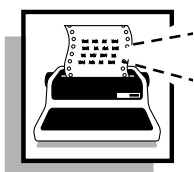
◆ **TRAC 5 6050** (5 is the customer number and 6050 is the telephone DN), or

◆ **TRAC 16 0 2 0** (16 0 2 0 is the telephone TN)

LD 80 output to the maintenance terminal is as follows:

ACTIVE TN 016 0 02 00

ORIG 016 0 02 00 5 SCR 0 6050 2317



TERM 018 16 TIE RMBR 24 12

DIAL DN 7873107

MAIN PM ESTD

TALKSLOT ORIG 13 TERM 13

QUEUE NONE

---- ISDN PRA CALL (TERM) ----

CAL REF # = 16

BEARER CAP = VOICE

CALL STATE = 10 ACTIVE

CALLING NO = 4376050

CALLED NO = 7873107

From the above output the Call Trace information as follows:

- ◆ **ACT**
IVE = the status of the call at the instant Call Trace was applied
- ◆ **ORIG** = the originator of the calls telephone set:
 - M2317 = telephone type
 - TN = 016 0 02 00
 - DN = 6050 on SCR key 0
- ◆ **TERM** = the PRI TIE trunk terminating the call:
 - Outgoing PRI TIE trunk: loop 018 channel 16; route 24 member 12
- ◆ **DIAL DN** = the digits dialed by the originating set, 7873107
- ◆ **MAIN PM** = the call has progressed to the established state and the sets are in the voice and data mode
- ◆ **TALKSLOT** = the originating telephone is assigned time slot 13 and the terminating PRI TIE is assigned time slot 13
- ◆ **QUEUE** = neither set nor trunk is in any queue

There are three basic commands:

- ◆ **TRAC** for tracing sets and trunks
- ◆ **TRAT** for tracing attendant consoles
- ◆ **TRAD** for tracing calls through Computer PBX Interface (CPI), Digital Trunk Interface (DTI), Primary Rate Interface, or Digital Link Interface (DLI) loops.

The TRAC command can be used to print the tone detector TN if a tone detector is used at the time of the call trace.

TRA basic commands		
Command	Description	Release
Trace calls associated with telephone set keys		
TRAC I s c u k	Trace call associated with key k on specified unit.	basic-1
Trace calls by DN or local steering codes		
TRAC c dn	Trace calls for customer c Directory Number or Local Steering Code dn .	basic-1
Trace unit calls on telephone sets and trunks		
TRAC I s c u	Trace calls associated with this unit. If a trace is performed on a DTR, an error message is output.	basic-1
Trace Attendant Console calls		
TRAT c a	Trace calls for customer c , attendant a .	basic-1
TRAT c a k	Trace calls associated with key k of attendant console a for customer c .	basic-1
TRAT I s c u	Trace attendant calls, this unit.	basic-1
TRAT I s c u k	Trace attendant calls on key k .	basic-1
Trace Basic Rate Interface calls		
TRAC I s c DSLx	Trace calls on Digital Subscriber Loop x (0-7). BRI DNs can be traced with the TRAC C DN command. For TRAC L S C U, enter U = DSL0 to DSL7 for Digital Subscriber Loops.	bri-18
Trace route calls, list type and status		
TRAC c acid	List route number, type and status of each trunk for customer c .	basic-1
TRAC c r m	Trace calls, customer c , route r , member m .	basic-1

TRA basic commands (continued)		
Command	Description	Release

Print auxiliary data related to NARS, Bars, CDP or RGA

TRAC xx...xx DEV	Print auxiliary data	basic-1
TRAT xx...xx DEV	print auxiliary data.	basic-1

Print the auxiliary data related to the call for Network Alternate Route Selection (NARS), Basic Alternate Route Selection (BARS), Coordinated Dialing Plan (CDP) or Ring Again (RGA). this additional data can be retrieved by appending DEV to any of the TRAC commands. Example:
TRAC I s c u DEV

When TYPE is output, E = extended route (not expensive).

Enhanced trace commands		
Command	Description	Release

Trace information

FITR Get information about the enhanced trace function. This command queries the TNs or Digital trunks being traced with the ENTC and ENTDC commands.

basic-19

The output is shown as follows:

ENTRY	TN or TRUNK	TIME	STATUS
1	001 0 01 01	0030	OFF
2	015 04	1200	OFF

Enable the enhanced trace command for a TN

ENTC l s c u t Enable the enhanced trace command for a TN. basic-19

This command enables the trace capability for the TN specified. Note that this command does not start the trace immediately. Use the GOTR command to begin the trace operation.

Where: **l** = loop, **s** = shelf, **c** = card, **u** = unit and **t** = the length of time the trace command operates.

The format for the trace command duration (**t**) is HHMM, where **HH** = hours (0-23) and **MM** = minutes (0-59). For example, for a duration of 5 minutes, t = 0005; for 1 hour, t = 0100.

The time duration must be at least 1 minute, and no more than 23 hours.

Enable the enhanced trace command for a digital trunk.

ENTD l c h t Enable the enhanced trace command for a digital trunk. basic-19

This command enables the trace capability for the TN specified. Note that this command does not start the trace immediately. Use the GOTR command to begin the trace operation.

Where: **l** = loop, **s** = shelf, **c** = card, **u** = unit and **t** = the length of time the trace command operates.

The format for the trace command duration (**t**) is HHMM, where **HH** = hours (0-23) and **MM** = minutes (0-59). For example, for a duration of 5 minutes, t = 0005; for 1 hour, t = 0100. The time duration must be at least 1 minute, and no more than 23 hours.

Enhanced trace commands (continued)		
Command	Description	Release
Begin enhanced trace commands		
GOTR	Begin enhanced trace commands. This command starts the trace operation specified with the ENTC and ENTDC commands.	basic-19
Disable all enhanced trace commands		
DALL	Disable all enhanced trace commands. This command disables all trace commands enabled with ENTC or ENTDC command. You must stop the trace with the STPT command before disabling all the commands with DALL.	basic-19
Disable the enhanced trace operation.		
DIST n	Disable the enhanced trace operation. This command disables the trace command enabled with ENTC or ENTDC command. This command is used once a trace command is started then stopped. Where: n = the entry number (as seen with the FITR command)	basic-19
Stop the enhanced trace command		
STPT	Stop the enhanced trace command. This command stops the enhanced trace operation specified with the ENTC and ENTDC commands. This can be used at any time during the trace operation. This does not disable the commands; they can be restarted with the GOTR command. When they are restarted, the duration timer is reset. For example: the timer is set at 30 minutes, but the trace is stopped after 2 minutes. When the trace is restarted (GOTR) the timer is set to 30 minutes.	basic-19

Enhanced trace commands (continued)

Command	Description	Release

Disable enhanced trace commands by a maintenance telephone

nn+9913+x=y	The enhanced trace commands can be disabled through a maintenance telephone by dialing the following: nn = customer SPRE access code 9913 = feature code to display for message display control x = action code (0 to deactivate) yy = message monitor code (02 for enhanced trace messages) A second dial tone indicate that the command was successful. Overflow tone is heard if the command is entered incorrectly. Once this command has been entered, a user entering FITR from the TTY will receive the period (.) prompt.	basic-19

TRA messages from LD 80 input errors

The TRAcE messages are the systems response to keyboard input commands that cannot be acted upon by the LD 80 call trace diagnostic.

TRA0100	Illegal command. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0101	Illegal input parameters. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0105	Input DN is special prefix. ACTION: Check to make sure your data is correct and re-enter the command. To check for a special prefix, use LD 21 PRT CDB, and look for SPRE.
TRA0106	Illegal input parameters. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0108	Illegal digits stored in Call Register. ACTION: Contact your technical support group.
TRA0110	Fails TNTRANS (or loop disabled). ACTION: Use STAT 1 in LD 32 to check to see if the loop is disabled. If the loop is disabled, use the ENLL 1 to enable the card.
TRA0111	Fails TNTRANS. ACTION: Contact your technical support group.
TRA0112	Fails TNTRANS. ACTION: Contact your technical support group.
TRA0113	Fails TNTRANS. ACTION: Contact your technical support group.
TRA0120	Fails DNTRANS. ACTION: Contact your technical support group.
TRA0121	Call trace fails. ACTION: Re-enter the command.
TRA0122	Call trace fails. ACTION: Re-enter the command.
TRA0130	Call trace fails. ACTION: Re-enter the command.
TRA0142	Attendant number exceeds the maximum number defined. ACTION: Check to make sure your data is correct and re-enter the command.

TRA0150	Digitone Receiver (TTR/DTR) cannot be traced. ACTION: Input * (uppercase 8) and carriage return to stop the printout.
TRA0160	Specified key does not exist. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0180	Loop is not a Digital Trunk loop. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0181	Channel to TN conversion failed. ACTION: Re-enter the command.
TRA0182	Loop is a DTI loop. ACTION: Use the TRAD command.
TRA0190	TN cannot be traced. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0191	DN cannot be traced. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0201	Route member out-of-range. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0202	Route member does not exist. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0253	MFR cannot be traced. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0300	A Local Steering Code (LSC) without an associated DN cannot be traced. ACTION: Check to make sure your data is correct and re-enter the command.
TRA0301	Your TNTRANS:TDET_TN has failed. Your PRINT_TDET may be corrupted by the procedure RGAT_INSERT_TIME. ACTION: Contact your technical support group.
TRA0304	Invalid digit stored in BRI message Call Register. ACTION: Contact your technical support group.
TRA0305	The Multi-User Login feature is not active. ACTION: Refere to the <i>X11 Administration</i> (553-3001-311), use LD 22 PRT, PKG to ensure that package 242, MULTI_USER is on the disk. Use LD 22 PRT, CFN to check if prompt MULTI_USER = YES, if not use LD 17 to change the response.
TRA0306	The time duration is out-of-range. ACTION: Check to make sure your data is correct and re-enter the command. The correct time format is: hh = 00-23, mm = 00-59.
TRA0307	Illegal digit(s) in stored M911 Auxiliary Call Register. ACTION: Contact your technical support group.

- TRA0308 Illegal digit(s) stored in DN field.
ACTION: Contact your technical support group.
- TRA0309 More than 3 ENTC/ENTD commands have been entered. You cannot enter the commands again.
ACTION: Check to make sure your data is correct.
- TRA0310 The Trace has been stopped because the traced TN or Digital trunk has been relocated or removed.
ACTION: Information only, no action required.
- TRA0311 More than one GOTR has been entered. You cannot enter the command again.
ACTION: Check to make sure your data is correct.
- TRA0312 The same TN or Digital trunk has been entered more than once. The same TN or Digital trunk cannot be traced simultaneously by the enhanced trace commands.
ACTION: Check to make sure your data is correct and re-enter the command.
- TRA0313 You must enter ENTC/ENTD before entering GOTR.
ACTION: Check to make sure your data is correct and re-enter the command.
- TRA0314 You must enter the STPT command before entering DALL ENTC or DALL ENTD.
ACTION: Check to make sure your data is correct and re-enter the command.
- TRA0317 Cannot use Enhanced trace on a phantom TN/DN.
ACTION: Use the regular trace commands.
- TRA0319 An illegal digit is stored in the TWR1 CLID field.
ACTION: Contact your technical support group. 

TRK — LD 36, 41 Trunk Diagnostic

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Before changing circuit cards, be aware of the procedures outlined in “Do this when you replace circuit cards” on page 44, found in the *You should know this* chapter in this guide.

Identifying resident and non resident messages

How to tell resident trunk messages from non-resident

Resident

The following TRK ranges identify resident trunk messages:

TRK0100 to TRK0136

TRK0150 to TRK0153

TRK0155 to TRK0156

TRK0160 to TRK0186

TRK0210 to TRK0236

TRK0240 to TRK0256

Non-resident

TRK messages not listed above are non-resident trunk messages, including TRK0222 without a TN, TRK0236 without a TN and TRK0243. These non-resident TRK messages are output when LD 36 and LD 41 are manually invoked or run automatically as a daily routine.

How the TRK works

The following three paragraphs describe trunk messages generated by the system.

Detects trunk connection failures with a threshold setting

The resident trunk diagnostic detects analog trunk seizure and supervision failures. Each failure activates a counter. The counter increments for a failure and decrements when proper seizure and supervision occurs. The counter starts at zero but never goes below zero. When the counter value exceeds a fixed threshold of 30, a TRK message outputs to a maintenance terminal identifying a failed trunk.

Resets the threshold

The threshold can only be exceeded once for a specific fault type per trunk route. Therefore only one TRK message will appear on the maintenance terminal even if the trunk continues the same failure. The following actions reset the threshold counter to zero:

- ◆ a technician using the RSET command in LD 36 or LD 41
- ◆ a daily or background routine running LD 36 or LD 4
- ◆ a system initialization

Sets threshold counting values

LD 16 sets the increment count or “*ic*” and decrement count or “*dc*” values. These values define a percentage of total attempts needed to exceed the threshold or return the count to zero. Therefore a high *ic* value increases the counter more rapidly, causing the counter to exceed the threshold with fewer detected failures than a low *ic* value.

Using trunk messages

When a resident trunk message and an accompanying TN appear on a maintenance DTE, perform a LD 36 or LD 41 manual test on the trunk.

In addition to resident trunk messages on the maintenance DTE, a record is kept in the system memory for each threshold violation error message. Trunks which have been identified by such a message can be listed by entering the LD 36 or LD 41 command LOVF for any trunk route.

Potentially, a trunk may fail by not detecting incoming calls. The resident trunk threshold mechanism cannot be used to detect such failures, so the Meridian 1 maintains a count of the number of days since an incoming call was received on each trunk. The LD 36 or LD 41 LMAX command can check for trunks that have been idle or not used for days. Depending on trunk traffic, this could indicate a faulty trunk card.

It is possible to determine the number of days since an incoming call was processed for each trunk using the LD 36/41 LDIC command. Subsequently trunk tests should be performed on those trunks showing the highest counts.

Resident trunk message format

Messages output by the resident trunk diagnostic have the following format:

TRK*wxy* **L S C U**

wx is a two digit number indicating the type of analog trunk as follows:

10=WATS

11=FEX

12=CCSA

13=DID

15=CO

16=Tie

17=Paging

18=Dictation

19=Recorded Announcement

20=AIOD

21=CCSA - ANI

22=CAMA

23=RLT - main; CAS systems

24=ATVN; AUTOVON systems

25=RLT - Remote

26=Modem

y is the last number in the TRK message indicating the problem. For example: 0 = SHORT HOLD (with the LD 16 RDB prompt shown in brackets). Various problems are listed as follows:

TRKwx0 = SHORT HOLD (HOLD)—An unacceptably large percentage of calls on the trunk were held for a short period. This applies to trunks which are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

TRKwx1 = SEIZURE FAILURE (SEIZ)—Seizure supervision from the far-end can take several forms: some CO/Exchange line trunks are seized by the far-end placing ringing on the Ring lead (B lead in the UK) or grounding the Tip lead (A lead in the UK). Some loop start trunks are seized by a low resistance termination on the trunk leads. Some trunks are seized by battery and ground placed on the trunk leads, and some E & M trunks are seized by a ground placed on the E lead.

TRKwx2 = RINGING ON SEIZED TRUNK (ILLR)—Ringing is present on the answered trunk call.

TRKwx3 = RING OR GROUND DETECTOR FAILURES (RGFL)—Specifies the percentage threshold for trunks which fail to produce the expected ringing and ground changes.

TRKwx4 = SUPERVISION FAILURE (SVFL)— Answer supervision to the far-end can take several forms. Some loop start trunks provide answer supervision by reversing battery and ground on the trunk leads. Some E & M trunks provide answer supervision by placing battery on the M lead. Some CO trunks provide answer supervision by placing low resistance on the loop.

TRKwx5 = REPETITIVE MESSAGES —The trunk is sending incorrect data to the processor. Threshold is a fixed value and is not overlay programmable.

TRKwx6 = RELEASE FAILURE—No disconnect supervision is being received from the trunk.

Why two loads?

Insufficient space in the overlay area requires the trunk diagnostic to be split into two programs. Program 41 is an extension of program 36.

Using LD 36 and LD 41 for testing

LD 36 and LD 41 allow trunks to be tested from either the Meridian 1 site or a remote test center.

When testing from a site

The maintenance DTE is connected directly to the Meridian 1 and individual trunks can be seized and a test call can be performed on the trunk in the normal manner.

When testing from a remote test center

The maintenance DTE is located some distance from the Meridian 1 and they are connected through modems. In this case a speech path must be set up to monitor the testing. This is accomplished by directing the Meridian 1 system call to a telephone directory number (DN) at the test center. Tests are performed on the Meridian 1 trunks by entering commands at the DTE and the technician can listen for dial tone, outpulsing and test tones with the test center telephone.

Tone indicates good trunks

When a trunk is seized, the system prompts “DN?” for a DN. When the DN is entered, the system calls that number automatically. When the call is answered a pure tone indicates the validity of the speech path. New trunks can be tested in the same manner with the maintenance telephone.

Note 1: When the Trunk Failure Monitor (TFM) package 182 is activated, a failed trunk is displayed as BUSY. The failed trunk remains in the BUSY state and is not enabled or disabled by the enable/disable command.

Note 2: When LD 36 is defined as a midnight or daily routine, this program searches for trunks not used during the day and updates the total number of days that the trunks have been idle.

List of commands

Commands in this section, listed in the following order, will do the following:

LD 36 or LD 41:

- ◆ clear minor alarms and the maintenance display
- ◆ check card status
- ◆ list threshold overflows
- ◆ reset thresholds
- ◆ end test

LD 36:

- ◆ remotely test a trunk
- ◆ disable or enable a unit
- ◆ list the days when a trunk was last used
- ◆ list when no supervision was received
- ◆ test music and recorded announcement trunks
- ◆ test Periodic Pulse Metering (PPM) trunks
- ◆ query trunks for which no disconnect supervision was received
- ◆ test Automatic Number Identification (ANI) trunks

LD 41:

- ◆ test Automatically Identified Outward Dialing (AIOD) trunks

LD 36 and LD 41 common commands

Command	Description	Release
Clear minor alarms or CPU display		
CDSP	Clear the maintenance display on active CPU to 00 or blank.	basic-1
CMIN ALL	Clear minor alarm indication on all attendant consoles.	basic-1
CMIN c	Clear minor alarm indication on attendant consoles for customer c.	basic-1
Check trunk card status		
STAT I s c	Check software status of card.	basic-1
Disable trunk card for replacement		
DISC I s c	Disable specified card for replacement. Disabled DID trunks are placed in the answer state. If Recorded Telephone Dictation (RTDT) cards are to be software enabled or disabled, the Out-of-Service (OS) lead should be connected to ground. On completion of the task, ground can be removed. When the Trunk Failure Monitor (TFM) package 182 is activated, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit, it stays in the BUSY state.	basic-1
Enable trunk card		
ENLC I s c	Enable specified card. If unit resides on a disabled shelf or card, then status is output and enable is not performed. When the Trunk Failure Monitor (TFM) package 182 is activated, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit, it stays in the BUSY state.	basic-1
List threshold overflows		
LOVF c r	List threshold overflows for specified customer and route. The overflows are kept in memory when the resident trunk monitor outputs a TRK message. This command allows you to list each threshold violation error message for any trunk route.	basic-1

LD 36 and LD 41 common commands (continued)		
Command	Description	Release
Reset thresholds		
RSET I s c u	Reset threshold counters to zero for specified trunk.	basic-1
Terminate test in progress		
END	Terminate test in progress	basic-1

LD 36 commands

LD 36 commands		
Command	Description	Release
Set up monitor link with test center		
CALL	Set up monitor link with test center. Same as the CALL I s c command except any PTRS trunk in the system can be selected. The CALL command must be terminated using the * command.	basic-1
Set up monitor link with test center		
CALL I s c u	Set monitor link with test center on this trunk. Set monitor link with test center on this trunk. Sets up a monitor link (call) between the Meridian 1/Meridian SL-1 and the test center on the trunk specified. The system prompts "DN?" for the directory number. When the PTRS directory number is entered, the system calls up that number automatically. When the call is answered, a pure tone indicates the validity of the link. This sequence can take up to 14 seconds on a trunk without answer supervision. The END command disconnects the call. The CALL I s c u command is not allowed when the diagnostic program is being run from a maintenance telephone. During the CALL command, On-Hook and Off-Hook signals from the maintenance telephone may initiate BUG105. Note: When the monitor is enabled, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit (it stays in the BUSY state).	basic-1

LD 36 commands (continued)		
Command	Description	Release
Disable trunk unit		
DISU I s c u	Disable specified unit. Disabled DID trunks are placed in the answer state. When the French (FRTA) package 197 is activated, the units on CO trunks are not busied when they are disabled. When the Trunk Failure Monitor (TFM) package 182 is activated, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit, it stays in the BUSY state.	basic-1
Enable trunk unit		
ENLU I s c u	Enable specified unit. If unit resides on a disabled shelf or card, then status is output and enable is not performed. When the Trunk Failure Monitor (TFM) package 182 is activated, a failed trunk is displayed as BUSY. The enable/disable command does not enable or disable the failed trunk unit, it stays in the BUSY state.	basic-1
List number of days last used and no disconnect supervision		
LDIC c r	List number of days since last incoming call for specified customer and route.	basic-1
LDIC I s c u	List number of days since last incoming call on specified trunk.	basic-1
LMAX c r	List trunk with maximum idle days for specified customer and route.	basic-1
LNDS c r	List trunks with no disconnect supervision for specified customer and route.	basic-1
Test music and recorded announcement trunks		
MUS c r	Test music device for specified customer and route.	basic-1
RAN c r	Test recorded announcement device for specified customer and route.	basic-1

LD 36 commands (continued)		
Command	Description	Release

Seize trunk for testing from a maintenance telephone

TRK I s c u	Seize trunk for testing. Seizes the specified trunk for outpulsing and testing. If the command is issued from a maintenance telephone, dial tone is heard followed by outpulsing when the directory number is entered. If a trunk is to be seized for outpulsing and testing from a remote test center (not a maintenance telephone), a monitor link, so you can hear the tones, must first be set up using the CALL I s c u command. This must not be over the trunk to be tested. With the monitor link set up, the TRK I s c u command is input to select the trunk to be tested. The system then prompts with "DN?" and the directory number is input via the TTY. Normal speech path connections are made between the monitor link and the trunk being tested. Disconnect by entering END, by going On-Hook if an SL-1 telephone is used or by entering *. END also disconnects the monitor link. Note: This command cannot be used to seize an ISL trunk.	basic-1

Test Periodic Pulse Metering (PPM) trunk

TPPM I s c u	Test the specified PPM trunk. This command is not applicable when the Meridian 1/Meridian SL-1 is connected to 1 TR 6 international ISDN PRA).	basic-1

LD 41 commands

LD 41 commands		
Command	Description	Release
Test Automatically Identified Outward Dialing (AIOD) trunk		
AIOD I s c	Test AIOD card	basic-1
AIOD MSG I s c	Output codes transmitted to Public Telephone Rated Service (PTRS). Output on TTY all 8-digit codes bring transmitted to PTRS by AIOD card. Response is OK if monitor is set. Not available in X11 Release 9 and later.	basic-1

TRK messages

TRK0000	LD 36 program identifier. ACTION: The TRK program is loaded and ready for you to enter commands.
TRK0001	Invalid command. ACTION: Ensure that this is the command you wanted to use.
TRK0002	Invalid argument(s). ACTION: Check to make sure your data is correct and re-enter the command.
TRK0003	Invalid or out-of-range TN. ACTION: Check to make sure your data is correct and re-enter the command.
TRK0004	Too many digits in the DN. ACTION: Check to make sure your data is correct and re-enter the command.
TRK0005	Unit requested is not a trunk. ACTION: Ensure that this is the command you wanted to use.
TRK0006	Unit requested or all trunks busy. ACTION: Wait until the unit or trunks are idle and re-enter the command.
TRK0007	Command not valid unless a monitor link exists. For example, a trunk link between the SL-1 system and the test center. ACTION: Refer to <i>Set up monitor link with test center</i> in the LD 36 commands table in this chapter. Use CALL command if you are at a test center or abort and reload from a Meridian 1 location.
TRK0008	No CO trunk defined in the system. Cannot use command. ACTION: Ensure that this is the command you wanted to use.
TRK0009	No maintenance telephone available for the call. Maintenance telephone may be busy. ACTION: Wait until the maintenance telephone is idle.

- TRK0010 Trunk must be a CO trunk.
ACTION: Ensure that this is the command you wanted to use.
- TRK0011 Call command not allowed from a maintenance telephone.
ACTION: Use the trunk command from a DTE directly.
- TRK0012 Customer or route does not exist or is out range.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 16 to program a route or use LD 20 or LD 21 RDB or CDB to check range of input. The range format for the customer is 0 to 9 and the route is 0 to 127.
- TRK0013 The unit requested is not an incoming trunk. Command is allowed only for incoming trunks.
ACTION: Ensure that this is the command you wanted to use.
- TRK0014 Unexpected call status change. For example, disconnect from far-end.
ACTION: Enter the request again. If the response is the same, try another test number.
- TRK0015 Another party attempted to use system maintenance set.
ACTION: Reissue the CALL or TRK command.
- TRK0016 Trunk command not valid for AIOD and RLT-main trunks. Command is allowed only for AIOD and RLT-main.
ACTION: Ensure that this is the command you wanted to use.
- TRK0017 Seize failure or failure to acknowledge seizing. Also occurs when LD 36 is used with a remote maintenance phone to dial an ISL TIE line. BUG3068 occurs at the far-end.
ACTION: Contact your technical support group for help in informing the far-end personnel.
- TRK0018 STAT, DISC and ENLC commands can only be used with trunk cards.
ACTION: Ensure that this is the command you wanted to use.
- TRK0019 Response to AIOD command. The card requested is busy or the system has AIOD traffic queued for the AIOD facility. This condition has not changed over the last 15 seconds.
ACTION: If it is required to force the test to continue, disable the card using the DISC command and re-enter the AIOD command.
- TRK0020 The card requested is not an AIOD card.
ACTION: Verify that the data is correct by using the STAT command. Re-enter the command.
- TRK0021 The AIOD card is not responding to signaling messages sent from the processor.
ACTION: Ensure that the card is in place. If it is and replacing the card has no effect, contact your technical support group.
- TRK0022 The AIOD card cannot be readied for use. Before using the AIOD trunk facility, the system sends a reset signal to the AIOD card to ready it for data transmission. Failure to acknowledge the reset signal within 1 s is considered a failure.
ACTION: Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0023 Error detection circuits on the AIOD facility are not functioning properly. These circuits are essential to signal the processor when incorrect data is being transmitted.
- ACTION:** Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0024 Cannot transmit data because no supervision from the CO/Exchange line has been detected. Before actual transmission of data can occur a bid or request to begin transmission is sent to the CO/Exchange line. Failure to acknowledge such a request within 4 seconds is considered a failure.
- ACTION:** Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card if the same message appears, contact your technical support group for help in informing the far-end personnel about supervision output.
- TRK0025 The signaling path has been interrupted during the transmission of AIOD data to the CO.
- ACTION:** Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). If the same message appears after replacing the card, check the modem for faults.
- TRK0026 Cannot release CO link. When the AIOD card has completed transmission of data, the CO signals a disconnect. If this signal is not received by the system within 1 second after the end of transmission then the sequence is considered to have failed.
- ACTION:** Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card if the same message appears, contact your technical support group for help in informing the far-end personnel about supervision output.
- TRK0027 The AIOD card is not completing its cycle. The AIOD card is expected to provide a signal that it has completed transmitting all data. Failure to provide this signal within 2 s after the start of data transmission is considered a failure.
- ACTION:** Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0028 In order to test the AIOD card, there must be one or more CO trunks in the system designated to use the AIOD facility and they must be idle.
1. CO trunks could be busy.
- ACTION:** Use STAT in LD 36 to determine if AIOD is busy. If all the CO trunks are busy, wait until they are idle and then re-enter the command. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
2. CO trunks are not designated to use the AIOD facility.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 AID to ensure that appropriate CO trunks in the system have been designated to use the AIOD facility. Use LD 14 to correct the fault.

- TRK0029 The error detection circuit on the AIOD card is detecting transmission errors. This indicates that faulty data is being presented to the CO or a fault exists in the error detection circuit.
ACTION: Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card if the same message appears, check with the CO to ensure that the data is not faulty.
- TRK0030 1. ANI trunks seizure failure.
ACTION: Check at the cross-connect field for the seizure condition.
2. Wink start signal (REQ-N1) not received or not properly received from far-end.
ACTION: Check the cross-connect field and with far-end for wink start signal.
3. Also wrong number of digits dialed or ANI access code (0/1) is missing.
ACTION: Check with the user for dialing the proper access code.
- TRK0031 ANI trunks calling number identification request (REQ-N2) not received or not properly received from far-end.
ACTION: Check at cross-connect field and with far-end.
- TRK0032 1. If you were using LD 36, Invalid command for modem-type trunks.
ACTION: Use LD 32 to test the Add-on Module (ADM) or Modem trunks.
2. If you were using LD 41, PPM buffer test failed.
ACTION: Replace the AIOD card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0033 TN is not a PPM trunk.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TRK0034 Pulses on E&M trunk are either bad or not received.
ACTION: Contact your technical support group for help in informing the far-end personnel.
- TRK0035 1. Route has no member.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 14 to program a trunk member alternately. Check to make sure your data is correct and re-enter the command.
2. Pules E&M card test failed.
ACTION: If the test fails again, the card may be faulty. Replace the E&M card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0036 PPM read request is pending on this card.
ACTION: Be patient.
- TRK0040 c r No recorded announcement (RAN), music (MUS) or automatic wake-up (AWK) device exists for the customer and route specified.
ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
- TRK0041 c r The RAN, MUS or AWK device specified for customer **c** and route **r** is not operable.
ACTION: Check the connections or change the RAN, MUS or AWK equipment.

TRK0042 c r The RAN, MUS or AWR device specified for customer **c** and route **r** is operating abnormally, i.e., not according to manufacturer's specifications.

ACTION: Check the connections or change the RAN, MUS or AWR equipment.

TRK0043 c r tn1 tn2

The RAN, MUS or AWR device specified has RAN trunks associated with it that are not in the trunk list specified for that route. **tns** specified are connected physically to a RAN, MUS or AWR device but trunk data does not reflect this.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 15 to change customer data or check wiring.

TRK0044 c r tn1 tn2

The RAN, MUS or AWR device specified has RAN trunks listed in its trunk list but the **tns** are not physically connected to RAN, MUS or AWR device. (This is the inverse of TRK0043).

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 14 to change trunk data or check wiring.

TRK0045 c r Too many trunks connected to RAN, MUS or AWR device for this customer and route. Limit is 100 trunks.

ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 14 OUT to remove some trunks.

TRK0100 tn WATS trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 seconds in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the WATS trunks and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the prompt HOLD needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the WATS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0101 tn **ACTION:** WATS trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized. Seizure supervision from the far-end can take several forms: certain trunks are seized by the far-end placing ringing on the Ring lead (B lead in the UK) or grounding the Tip lead (A lead in the UK), some loop start trunks are seized by a low resistance termination on the trunk leads, other trunks are seized by battery and ground placed on the trunk leads.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.

2. If messages come from several tns.

ACTION: To determine the route for the WATS trunk and the present SEIZ setting, use LD 20 TNB and LD 21 RDB respectively. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected. Refer to the *X11 Administration* (553-3001-311) for assistance.

3. If messages come from one tn.

ACTION: Replace the WATS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0102 tn WATS trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several tns.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the WATS trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct ILLR setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one tn.

ACTION: Replace the WATS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0103 tn WATS trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.

2. If messages come from several tns.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the WATS trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one tn.

ACTION: Replace the WATS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0104 tn WATS trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls. Answer supervision to the far-end can take several forms: WATS trunks provide answer supervision by placing low resistance on the loop.
1. If answer supervision was not sent to the far-end.
ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, replace the WATS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 2. If messages come from several **tns**.
ACTION: To determine the route for the WATS trunk and the present RGLF setting use LD 20 TNB and LD 21 RDB respectively. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.
 3. If messages come from one **tn**.
ACTION: Replace the WATS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0105 tn WATS trunk Repetitive messages. The trunk was sending incorrect data to the processor.
1. The loop start or ground start switches may not be set correctly.
ACTION: Refer to the *Circuit Pack Installation & Testing NTP* to check that the loop start and ground start switches on the trunk card are set correctly.
 2. If the switches are set correctly, the message could indicate a trunk card fault.
ACTION: Replace the WATS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 3. A high volume of transitions on the trunk facility. Threshold is fixed by the system.
ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.
- TRK0106 tn WATS trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going on-hook. This trunk will remain busy until disconnect supervision is received.
- ACTION:** Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check at the cross-connection field for disconnect supervision conditions.
1. If no supervision was received
ACTION: Contact your technical support group for help in informing the far-end personnel.
 2. If supervision was received
ACTION: Replace the WATS card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0110 tn FEX trunk or TWR1 trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the FEX trunks and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0111 tn

FEX trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized. Seizure supervision from the far-end can take several forms: certain trunks are seized by the far-end placing ringing on the Ring lead (B lead in the UK) or grounding the Tip lead (A lead in the UK), some loop start trunks are seized by a low resistance termination on the trunk leads, and other trunks are seized by battery and ground placed on the trunk leads.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the FEX trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0112 tn

FEX trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the FEX trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0113 tn FEX trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.
1. If both ringing and ground are not applied from the far-end.
ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.
 2. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the FEX trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.
 3. If messages come from one **tn**.
ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0114 tn FEX trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls. Answer supervision to the far-end can take several forms: FEX trunks provide answer supervision by placing low resistance on the loop.
1. If answer supervision was not sent to the far-end.
ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 2. If messages come from several TNs.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the FEX trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.
 3. If messages come from one TN.
ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0115 tn FEX trunk Repetitive messages. The trunk was sending incorrect data to the processor.
1. The loop start or ground start switches may not be set correctly.
ACTION: Refer to the *Circuit Pack Installation & Testing NTP* to check that the loop start and ground start switches on the trunk card are set correctly.
 2. If switches are correct, the message could indicate either a trunk card fault or
ACTION: Replace the FEX card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 3. A high volume of transitions on the trunk facility. Threshold is fixed by the system.
ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

TRK0116 tn FEX trunk Release failure. No disconnect supervision was received from the trunk within 60 s of a local set going on-hook. This trunk will remain busy until disconnect supervision is received.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check at the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0120 tn CCSA trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the CCSA trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CCSA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0121 tn CCSA trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized. Seizure supervision from the far-end can take several forms: certain trunks are seized by the far-end placing ringing on the Ring lead (B lead in the UK) or grounding the Tip lead (A lead in the UK), some loop start trunks are seized by a low resistance termination on the trunk leads, other trunks are seized by battery and ground placed on the trunk leads.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CCSA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0122 tn CCSA trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the CCSA prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the FEX trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0123 tn CCSA trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CCSA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0124 tn CCSA trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the CCSA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CCSA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0125 tn CCSA trunk Repetitive messages.
1. The trunk was sending incorrect data to the processor. The message could indicate either a trunk card fault or
- ACTION:** Replace the CCSA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. A high volume of transitions on the trunk facility. The threshold is fixed by the system.
- ACTION:** Contact your technical support group for help in checking the high volume of transitions on the trunk facility.
- TRK0126 tn CCSA trunk Release failure.No disconnect supervision was received from the trunk within 60 s of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received.
- ACTION:** Use LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.
1. If no supervision was received.
- ACTION:** Contact your technical support group for help in informing the far-end personnel.
2. If supervision was received.
- ACTION:** Replace the CCSA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0130 tn DID trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.
1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.
- ACTION:** Check for trunk users dialing the access code and quickly releasing the call before dialing digits.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the DID trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0131 tn DID trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.
- Seizure supervision from the far-end can take several forms: some loop signaling trunks are seized by a low resistance termination on the trunk leads, other trunks are seized by battery and ground placed on the trunk leads.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the DID trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0132 tn DID trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the DID trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0133 tn DID trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the DID trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0134 tn DID trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls. Answer supervision to the far-end can take several forms: some loop signaling trunks provide answer supervision by reversing battery and ground on the trunk leads.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the DID trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0135 tn DID trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message can indicate either of the following:

1. A trunk card fault.

ACTION: Replace the DID card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. A high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

TRK0136 tn DID trunk Release failure. No disconnect supervision was received from the trunk within 60 s of a local set going on-hook. This trunk will remain busy until disconnect supervision is received.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the DID trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0137 tn Partial dial time-out on DID trunk.

ACTION: If this message appears repeatedly, replace the DID card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0139 tn No response from Universal Trunk or E&M/Dictation Trunk.

ACTION: Try the command again. If the problem persists, check the Network Card or Controller (NT8D04/NT8D01) and the cable path to the Universal Trunk or E&M/Dictation Trunk card.

- TRK0150 tn CO trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.
1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.
- ACTION:** Check for trunk users dialing the access code and quickly releasing the call before dialing digits.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CO trunks and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0151 tn CO trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or the response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized. Seizure supervision from the far-end can take several forms: certain CO/Exchange line trunks are seized by the far-end placing ringing on the Ring lead (B lead in the UK) or grounding the Tip lead (A lead in the UK), some trunks are seized by a low resistance termination on the trunk leads, other trunks are seized by battery and ground placed on the trunk leads.
1. If there is no seizure supervision from the far-end.
- ACTION:** Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CO trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0152 tn CO trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.
1. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CO trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0153 tn CO trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CO trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0154 tn CO trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls. Answer supervision to the far-end can take several forms: CO trunks provide answer supervision by placing low resistance on the loop.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CO trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0155 tn CO trunk Repetitive messages. The trunk was sending incorrect data to the processor.

1. The loop start or ground start switches may not be set correctly.

ACTION: Refer to the *Circuit Pack Installation & Testing NTP* to check that the loop start and ground start switches on the trunk card are set correctly.

2. If switches are correct, the message could indicate a trunk card fault or

ACTION: Replace the CO card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

3. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

TRK0156 tn CO trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the CO trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0157 tn PPM read failure. An attempt to read the contents of the trunk register failed.

ACTION: Contact your technical support group.

TRK0160 tn TIE trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the TIE trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0161 tn TIE trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized. Seizure supervision from the far-end can take several forms: a ground placed on the E lead for E & M trunks. Reversal of battery and ground on tip and ring for loop signaling tie trunks.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the TIE trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0162 tn TIE trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the TIE trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0163 tn TIE trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the TIE trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0164 tn TIE trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls. Answer supervision to the far-end can take several forms: some E and M trunks provide answer supervision by placing battery on the M lead.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the TIE trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0165 tn TIE trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:

1. A trunk card fault.

ACTION: Replace the TIE card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

TRK0166 tn TIE trunk Release failure. No disconnect supervision was received from the trunk within 60 s of a local set going on-hook. This trunk will remain busy until disconnect supervision is received.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the TIE trunk card following the steps in the *X11 Administration* (553-3001-311). After replacing the card verify that the fault is cleared.

TRK0170 tn Paging trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the Paging trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Paging trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0171 tn Paging trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the TIE trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the TIE trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0172 tn Paging trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Paging trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the Paging trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0173 tn Paging trunk Ring or Ground Detection. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Paging trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Paging trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0174 tn Paging trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.
1. If answer supervision was not sent to the far-end
ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, replace the Paging trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 2. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Paging trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.
 3. If messages come from one **tn**.
ACTION: Replace the Paging trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0175 tn Paging trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:
1. A trunk card fault.
ACTION: Replace the Paging card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 2. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.
ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.
- TRK0176 tn Paging Trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received.
- ACTION:** Use LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.
1. If no supervision was received.
ACTION: Contact your technical support group for help in informing the far-end personnel.
 2. If supervision was received.
ACTION: Replace the Paging trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0177 MFR holding time has timed out on incoming TWR1 call.
ACTION: Contact your technical support group.
- TRK0180 tn Dictation trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the Dictation trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Dictation trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0181 tn Dictation trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Dictation trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Dictation trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0182 tn Dictation trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Dictation trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt ILLR needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the Dictation trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0183 tn Dictation trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Dictation trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Dictation trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0184 tn Dictation trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If conditions are not right, replace the Dictation trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Dictation trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Dictation trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0185 tn Dictation trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:

1. A trunk card fault.

ACTION: Replace the Dictation card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. A high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

TRK0186 tn Dictation trunk Release failure. In situations where the external dictation equipment busies out the trunk at the end of each call, TRK0186 messages do not indicate a fault.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the Dictation trunk card following the steps in the *X11 Administration* (553-3001-311). After replacing the card verify that the fault is cleared.

TRK0191 tn No control signal (CNTL) returned. A control signal indicating the status of Code-a-phone or Audichron has not been received by the processor in the last 5 minutes for Code-a-phone or 32 seconds for Audichron. The control signal can be either open or ground. When the control signal is open the machine is in announcing state. When the control signal is ground, the machine is in idle or start state.

ACTION: Check the cross connect field for proper conditions. If the proper conditions are not present replace the Code-a-Phone or Audichron. If the proper conditions are present replace the trunk card.

TRK0192 tn Start failure (STRT). To start Code-a-phone machine, a start pulse is sent from any one of the trunks connected to the machine. The control signal should change from “ground” to “open” within 2 seconds after the start pulse is sent. If this trunk fails to start the machine, the state of the control signal remains “ground” for all the trunks connected to the machine.

ACTION: Check the cross connect field for proper conditions. If the proper conditions are not present replace the Code-a-Phone. If the proper conditions are present replace the trunk card.

TRK0193 tn Illegal messages from trunk (ILLM). Any messages received from RAN trunk are considered illegal if they are out of sequence of duration or control signal that remains open is less than two seconds.

ACTION: Use the RAN test in LD 36, and check the wiring.

TRK0200 tn Reset acknowledge not received. Before using the AIOD trunk facility, the system sends a reset signal to the AIOD card to ready it for data transmission.

ACTION: If the card fails to acknowledge this command, Use LD 36 DISC and ENLC to replace the trunk card.

TRK0201 tn Transmission failure (TRFL). Error detection circuits on the AIOD card signaled either incorrect data being transmitted to the CO or that the established path between the CO and SL-1 installation has been interrupted.

ACTION: Check for the proper conditions at the cross connect field. If the conditions are good, use LD 36 DISC and ENLC to replace the trunk card. If the conditions are not good, contact your technical support group for help in informing the far-end personnel.

TRK0202 tn Failure to acknowledge transmit bit (TRAC). Before actual transmission of data can occur, a bid or request to begin transmission is sent to the CO. Failure to acknowledge such a request within four seconds is considered a failure.

ACTION: Contact your technical support group for help in informing the far-end personnel.

TRK0203 tn End of transmission or disconnect not acknowledged (ETAC). The AIOD card signals the system that it has completed transmission of data. Soon afterwards, the received by the system, the AIOD sequence is considered to have failed.

ACTION: Contact your technical support group and contact your technical support group for help in informing the far-end personnel.

- TRK0204 tn Illegal messages from trunk (ILM). Any messages to the processor from the AIOD card are considered illegal if they are random and can not be decoded, or are out of sequence.
- ACTION:** Check for a faulty card. Use LD 36 DISC and ENLC to replace the trunk card.
- TRK0210 tn CCSA-ANI trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. Short hold measurement can be set from 0 to 128 s in increments of two seconds. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.
1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.
- ACTION:** Check for trunk users dialing the access code and quickly releasing the call before dialing digits.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the CCSA-ANI trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0211 tn CCSA-ANI trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.
1. If there is no seizure supervision from the far-end.
- ACTION:** Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA-ANI trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0212 tn CCSA-ANI trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.
1. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA-ANI trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0213 tn CCSA-ANI trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA-ANI trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0214 tn CCSA-ANI trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA-ANI trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0215 tn CCSA-ANI trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:

1. A trunk card fault.

ACTION: Replace the CCSA-ANI card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

- TRK0216 tn CCSA-ANI trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going on-hook. This trunk will remain busy until disconnect supervision is received.
- ACTION:** Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.
1. If no supervision was received.
- ACTION:** Contact your technical support group for help in informing the far-end personnel.
2. If supervision was received.
- ACTION:** Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0220 tn CAMA trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. Short hold measurement can be set from 0 to 128 s in increments of two seconds. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.
1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.
- ACTION:** Check for trunk users dialing the access code and quickly releasing the call before dialing digits.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the CAMA trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the CAMA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0221 tn CAMA trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.
1. If there is no seizure supervision from the far-end.
- ACTION:** Monitor for proper conditions at the cross-connect frame. If conditions are not right, notify the far-end.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CAMA trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the CAMA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0222 tn With a TN identifier, this message is used for CAMA trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.
1. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CCSA-ANI trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.
 2. If messages come from one **tn**.
ACTION: Replace the CCSA-ANI trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0222 Without a TN identifier, this message is used as an indication that LD 42 is loaded into the overlay area and is ready to accept an input command from the keyboard of a maintenance terminal.
- ACTION:** The TRK program is loaded and ready for you to enter commands.
- TRK0223 tn CAMA trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.
1. If both ringing and ground are not applied from the far-end.
ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.
 2. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CAMA trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.
 3. If messages come from one **tn**.
ACTION: Replace the CAMA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0224 tn CAMA trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.
1. If answer supervision was not sent to the far-end.
ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the CAMA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
 2. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the CAMA trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the CAMA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0225 tn CAMA trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:

1. A trunk card fault.

ACTION: Replace the CAMA card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. A high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking the high volume of transitions on the trunk facility.

TRK0226 tn CAMA Trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the CAMA trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0230 tn RLT-main, CAS system trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.

1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.

ACTION: Check for trunk users dialing the access code and quickly releasing the call before dialing digits.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the RLT/CAS trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected. If messages come from one TN.

3. If messages come from one **tn**.

ACTION: Replace the RLT/CAS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0231 tn RLT-main, CAS systems trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.
1. If there is no seizure supervision from the far-end.
ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.
 2. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-main trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.
 3. If messages come from one **tn**.
ACTION: Replace the RLT-main trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0232 tn RLT-main, CAS systems trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.
1. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-main trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.
 2. If messages come from one **tn**.
ACTION: Replace the RLT-main trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0233 tn RLT-main, CAS systems trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.
1. If both ringing and ground are not applied from the far-end.
ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.
 2. If messages come from several **tns**.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-main trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.
 3. If messages come from one **tn**.
ACTION: Replace the RLT-main trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0234 tn RLT-main, CAS systems trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the RLT-main trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-main trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the RLT-main trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0235 tn RLT-main, CAS systems trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:

1. A trunk card fault.

ACTION: Replace the RLT-main card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking high volume of transitions on the trunk facility.

TRK0236 tn With a **tn** identifier is used for RLT-main, CAS systems trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received. TRK0236 (without a **tn** identifier) is used as an indication that LD 41 is loaded into the overlay area and is ready to accept an input command from the keyboard of a maintenance terminal.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check at the cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the RLT-main, CAS trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0237 tn Failure of far-end response to near-end seizure. The near-end did not recognize the wink signal from the far-end because:

1. the wink signal was not received within five seconds because of transmission delays or hardware failure, or
2. the wink signal was not within specification.

ACTION: Contact your technical support group for help in informing the far-end personnel.

- TRK0238 tn Far-end dialing failure. The near end did not receive sufficient digits to be able to complete the call. This can be caused by either of the following:
1. the far-end remained Off-Hook without sending any digits as faulty hardware caused a false seizure
 2. a sender was stuck, causing the inter-digital interval to exceed a threshold
- ACTION:** Contact your technical support group for help in informing the far-end personnel.
- TRK0240 tn RLT-remote trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.
- ACTION:** Check for trunk users dialing the access code and quickly releasing the call before dialing digits.
1. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT trunks and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.
2. If messages come from one **tn**.
- ACTION:** Replace the RLT trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0241 tn RLT-remote trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.
1. If there is no seizure supervision from the far-end.
- ACTION:** Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-remote trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the RLT-remote trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0242 tn RLT-remote trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-remote trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the RLT-remote trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0243 tn

RLT-remote trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-remote trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the RLT-remote trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

4. Inputs received from an idle trunk. RLT-remote trunk is an outgoing trunk and there is no input from the RLT-main when the trunk is in idle state. Any input received during the idle state increments the threshold and there is no decrement on the threshold.

ACTION: The problem could be caused by a faulty trunk card that sent out input messages, a problem on the line, or a faulty receiver on the trunk card. Use the LD 36 DISC and ENLC to replace the trunk card.

TRK0244 tn

ACTION: RLT-remote trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the RLT-remote trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the RLT-remote trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the RLT-remote trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0245 tn RLT-remote trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:
1. A trunk card fault.
- ACTION:** Replace the RLT-remote card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
2. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.
- ACTION:** Contact your technical support group for help in checking the high volume of transitions on the trunk facility.
- TRK0246 tn RLT-remote trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received.
- ACTION:** Use the LD 36 LNDs command to determine whether the trunk has remained in this state. Check the cross-connection field for disconnect supervision conditions.
1. If no supervision was received.
- ACTION:** Contact your technical support group for help in informing the far-end personnel.
2. If supervision was received.
- ACTION:** Replace the RLT-remote trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0250 tn Modem trunk Short Hold. An unacceptably large percentage of calls on the trunk were held for a short period. The failure to hold applies to trunks that are properly seized but disconnected sooner than the minimum hold time. The time a trunk is held, allowing the user to dial a directory number, can be set from 0 to 128 s in increments of two seconds.
1. This message can be caused by a telephone user dialing the trunk access code, releasing and repeating this action several times in succession.
- ACTION:** Check for trunk users dialing the access code and quickly releasing the call before dialing digits.
2. If messages come from several **tns**.
- ACTION:** Refer to the *X11 Administration* (553-3001-311) and use LD 20 TNB to determine the route for the Modem trunks, and LD 21 RDB to determine the present HOLD setting. Contact your engineering section for the correct HOLD setting. Use LD 16 if the setting of the HOLD prompt needs to be corrected.
3. If messages come from one **tn**.
- ACTION:** Replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.
- TRK0251 tn Modem trunk Seizure failure. More than a specified percentage of calls did not receive seizure supervision, either there was no response from the far-end or response was too late. On each occurrence, this trunk was released and another trunk within this trunk group or route was seized.

1. If there is no seizure supervision from the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Modem trunks and LD 21 RDB to determine the present SEIZ setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the SEIZ prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0252 tn Modem trunk Ringing on Seized Trunk. Ringing was not removed when the trunk call was answered. Indicates a trunk circuit card fault.

1. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Modem trunks and LD 21 RDB to determine the present ILLR setting. Contact your engineering section for the correct SEIZ setting. Use LD 16 if the setting of the ILLR prompt needs to be corrected.

2. If messages come from one **tn**.

ACTION: Replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0253 tn Modem trunk Ring or Ground Detection failure. Ring or ground detector changes were not received from the trunk on a large percentage of calls. On those incoming calls which should have had both ringing and ground applied, one or the other was not detected.

1. If both ringing and ground are not applied from the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, notify the far-end.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Modem trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0254 tn Modem trunk Supervision failure. The trunk did not return answer supervision on a large percentage of calls.

1. If answer supervision was not sent to the far-end.

ACTION: Monitor for the proper conditions at the cross-connect frame. If the conditions are not right, replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. If messages come from several **tns**.

ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 TNB to determine the route for the Modem trunks and LD 21 RDB to determine the present RGLF setting. Contact your engineering section for the correct RGLF setting. Use LD 16 if the setting of the RGLF prompt needs to be corrected.

3. If messages come from one **tn**.

ACTION: Replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0255 tn Modem trunk Repetitive messages. The trunk was sending incorrect data to the processor. The message could indicate either of the following:

1. A trunk card fault.

ACTION: Replace the Modem card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

2. There is a high volume of transitions on the trunk facility. The threshold is fixed by the system.

ACTION: Contact your technical support group for help in checking high volume of transitions on the trunk facility.

TRK0256 tn Modem Trunk Release failure. No disconnect supervision was received from the trunk within 60 seconds of a local set going On-Hook. This trunk will remain busy until disconnect supervision is received.

ACTION: Use the LD 36 LNDS command to determine whether the trunk has remained in this state. Check at cross-connection field for disconnect supervision conditions.

1. If no supervision was received.

ACTION: Contact your technical support group for help in informing the far-end personnel.

2. If supervision was received.

ACTION: Replace the Modem trunk card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

TRK0300 tn Link/DCHI state is not yet defined.

ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500).

TRK0301 loop The **loop** requested is the Digital Trunk Interface (DTI) or Primary Rate Interface (PRI);

ACTION: Refer to the *ISDN Basic Rate Interface: Maintenance* (553-3901-500) and use LD 60 DTI Diagnostic.

TRK0302 Trunk card failed selftest.

ACTION: Use LD 36 DISC and ENLC to replace the trunk card.

TRK0303 Superloop number must be a multiple of 4.

ACTION: Check to make sure your data is correct and re-enter the command.

TRK0304 Shelf number is undefined.

ACTION: Check to make sure your data is correct and if applicable, re-enter the command.

TRK0305	Card number is undefined. ACTION: Check to make sure your data is correct and if applicable, re-enter the command.
TRK0306	Unit number is out-of-range. ACTION: Check to make sure your data is correct and re-enter the command.
TRK0431 tn	Seizure acknowledgment expected on DID-DOD or NWK trunk but not received. ACTION: Contact your technical support group for help in informing the far-end personnel. Check the cross connection/test jack frame for proper conditions. Use LD 36 DISC and ENLC to replace the trunk card.
TRK0432 tn	Seizure acknowledgment not expected on DID-DOD or NWK trunk but received. ACTION: Contact your technical support group for help in informing the far-end personnel. Check the cross connection/test jack frame for proper conditions. Use LD 36 DISC and ENLC to replace the trunk card.
TRK0433 tn	Time-out when waiting for ready to outpulse. ACTION: Contact your technical support group for help in informing the far-end personnel.
TRK0434 tn	Time-out when waiting for stop to outpulse. ACTION: Contact your technical support group for help in informing the far-end personnel.
TRK0481 tn	A seizure acknowledgment was expected on dictation trunk but was not received. ACTION: Check the cross connection/test jack frame for proper conditions. If the proper conditions are not present, replace the dictation equipment. If the conditions are good, use LD 36 DISC and ENLC to replace the trunk card.
TRK0482 tn	A seizure acknowledgment was not expected on dictation trunk but was received. ACTION: Check the cross connection/test jack frame for proper conditions. If the proper conditions are not present, replace the dictation equipment. If the conditions are good, use LD 36 DISC and ENLC to replace trunk card.
TRK0483 tn	An off-hook from a private circuit/TIE trunk was received instead of a Number_Received signal. ACTION: Contact your technical support group for help in informing the far-end personnel.
TRK0501 tn	If the trunk is IPE, then Barring is applied to trunk tn ; otherwise, the trunk has been made busy due to Line Break Alarm Signal. Feature is XDID Barring or DID Trunk Failure Monitor. ACTION: Contact your technical support group for help in informing the far-end personnel.
TRK0502 tn	Barring is no longer applied. ACTION: Information only, no action required.
TRK0503 tn	TIE trunk has been made busy by a Line Break Alarm Signal. ACTION: Contact your technical support group for help in informing the far-end personnel.

- TRK0504 tn Tie trunk has been idled after a Line Break Alarm Signal correction.
ACTION: Information only, no action required.
- TRK0505 tn If the trunk is IPE, then Barring is no longer applied to trunk <tn>; otherwise, the trunk has been idled after Line Break Alarm Signal problem correction. Feature is XDID Barring or DID Trunk Failure Monitor.
ACTION: Information only, no action required.
- TRK0506 Expected signal not received from Radio Paging equipment. Call abandoned.
ACTION: Contact your technical support group for help in informing the far-end personnel.
- TRK0509 Answer expected from XCOT trunk but not received.
ACTION: Contact your technical support group for help in informing the far-end personnel.
- TRK0510 DN + Local Exchange Code together comprise more than 7 digits when trying to transmit ANI information on an X3W trunk.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 16 to check the LEC prompt.
- TRK0511 An invalid trunk signal was received on an X3W trunk. The signal was ignored.
ACTION: Information only, no action required.
- TRK0512 Shelf number out of range.
ACTION: Check to make sure your data is correct and re-enter the command.
- TRK0513 Card number out-of-range.
ACTION: Check to make sure your data is correct and re-enter the command.
- TRK0514 tn XFCOT Barring is applied to the trunk <unit>. (Barring is applied to the trunk unit identified by **tn**.)
ACTION: Information only, no action required.
- TRK0515 tn XFCOT Barring is no longer applied to the trunk <unit>. (Barring is no longer applied to trunk unit identified by **tn**.)
ACTION: Information only, no action required.
- TRK0516 l s c tn Partial failure of metering on card **l s c**. This is a hardware failure that may have affected metering activities on one or more calls on the card. If PPM is configured, then PPM has been affected, with the result that the CDR records for calls in progress may be incorrect. If Busy Tone Supervision is configured, then busy tone may not have been detected on calls in progress.
ACTION: Replace the affected card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

- TRK0517 l s c Fatal failure of metering on card l s c. This is a hardware failure that affects metering activities on the card. If PPM is configured, then PPM has been affected, with the result that further PPM reporting is disabled until either the card is disabled and re-enabled or pulled out and reinserted. The CDR records for calls in progress are incorrect.
- ACTION:** Use LD 36 DISC and ENLC to try disabling and re-enabling the card. If message appears again, it is most likely a hardware fault. Use LD 36 DISC and ENLC to replace the trunk card.
- TRK0518 tn The enable command attempted on an XDID/EAM or XDID/CIS or XFCOT unit is canceled because the unit is in a barred state.
- ACTION:** Use LD 36 DISU and ENLU to disable and re-enable the card (this will cause a TRK0519 message) and re-enter the command.
- TRK0519 tn **Warning:** The XDID/EAM unit in a barred state is changed to the disabled state after a disable command.
- ACTION:** Use ENLU l s c u in LD 32 to enable the unit. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- TRK0520 tn No far-end release message is received from the XDID/EAM unit after a call blocking sequence. The disable command on this unit is stopped. The unit is in a lockout state.
- ACTION:** Pull the jumper from the telephone company side and re-enter the command.
- TRK0521 tn The disable command has been aborted while waiting for a far-end release message on a XDID/EAM unit. As soon as the far-end release message is received, the XDID/EAM unit will still be disabled.
- ACTION:** Information only, no action required.
- TRK0522 A barring message is received in an invalid state from a XDID/XFCOT unit.
- ACTION:** Use DISU l s c u in LD 32 to disable and ENLU l s c u to enable the unit. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- TRK0524 ISA service route is not allowed for the command.
- ACTION:** Check the database and if applicable, re-enter the command.
- TRK0526 DP digit collection problem was revealed and reported by CDTI2/ CSDTI2 FW (incoming trunk).Trunk is locked out.
- ACTION:** Contact your technical support group
- TRK0527 Outgoing CIS E3W card requested CIS ANI download by means of TDS or XCT service loop, but TERNTN fails TNTRANS or FTDS package not equipped. Outgoing CIS E3W call will be released; trunk will be idled.
- ACTION:** Refer to the *X11 Administration* (553-3001-311), use LD 22 PRT, PKG to ensure that the FTDS package is on the disk. Have your technical support group contact Nortel Networks Customer Service for replacement software if the FTDS package is not present.

- TRK0528 Outgoing CIS E3W card requested CIS ANI download by means of TDS or XCT service loop, but TDS/XCT path request failed. Outgoing CIS E3W call will be released; trunk will be idled.
ACTION: Check TDS/ XCT and traffic of these service loops.
- TRK0529 Outgoing CIS E3W card fails to request CIS ANI download. Outgoing CIS E3W call will be released; trunk will be idled.
- TRK0530 Outgoing CIS E3W card fails to acknowledge CIS ANI already downloaded by means of TDS or XCT. Outgoing CIS E3W will be released; trunk will be idled.
ACTION: Use LD 36 DISC and ENLC to replace the CIS E3W card.
- TRK0531 tn An error has been detected on ISL E&M Tie, Unit will be put to MBSY.
ACTION: Contact your technical support group
- TRK0532 tn Error condition on ISL E&M Tie removed, Unit in IDLE state.
ACTION: Information only, no action required.
- TRK0533 tn The enable command is cancelled on this unit because an error exists on the ISL E&M TIE trunk.
ACTION: Contact your technical support group
- TRK0843 tn Off hook from TIE trunk instead of number received signal.
ACTION: Contact your technical support group for help in informing the local telephone company personnel.
- TRK3031 Trunk member in a route's trunk list does not exist.
ACTION: Information only, no action required.
- TRK3108 A trunk does not have wink start arrangement.
ACTION: Refer to the *X11 Administration* (553-3001-311), use LD 20 to check the start arrangement and use LD 14 STRI to correct if necessary. If not, contact your technical support group for help in informing the local telephone company personnel.
- TRK3115 Trunk does not have answer supervision.
ACTION: Contact your technical support group for help in informing the local telephone company personnel.
- TRK3116 Command with the same functionality is supported in Overlay 32.
- TRK3117 MF input timeout on incoming TWR1 call. Output data: trktn mfrtn tw_inc_pm clid/address information.
ACTION: Contact your technical support group.
- TRK3118 Invalid input received on incoming TWR1 call. Output data: trktn MFR tn tw_inc_pm clid/address information.
ACTION: Contact your technical support group.
- TRK3119 <mm/dd/yy hh:mm:ss> MNDN <aaaa> TN <TN>
SPC call disconnected.
ACTION: If the condition persists check the semi-permanent connection.

TRK3120 <mm/dd/yyyy hh:mm:ss> MNDN <aaaa> TN <TN>

The SPC call is connected. 

TSM — Time Slot Monitor

TSM messages

TSM0000	The program has been loaded. ACTION: The TSM program is loaded and ready for you to enter the commands.
TSM0002	An invalid command ACTION: Check to make sure your data is correct and re-enter the command.
TSM0003	An invalid parameter. ACTION: Check to make sure your data is correct and re-enter the command.
TSM0004 x ts ig	There is a failure on Cont Test: Link, Timeslot, ig . ACTION: Run an AUDIT Rx in LD 44, reattempt command.
TSM0005	The test is aborted as there are too many errors. ACTION: Re-attempt command later.
TSM0006	The test init failed clearing CM on ENW card. ACTION: Re-attempt command.
TSM0007 LK	CMD is running, type 'END' to abort. ACTION: Information only, no action required. 

XCT — Conference/TDS/MFS Card

How the XCT works

The XCT card provides conference, Tone and Digit Switch and Multifrequency Sender (MFS) circuits. XCT messages indicate hardware status and problems.

XCT messages

XCT0001 loop x

The Conference/TDS/MFS Card failed the self test. **x** = self test result message.

ACTION: If the test fails a second time, replace the XCT card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

XCT0002 loop x

The Conference/TDS/MFS Card failed the Input/Output test. **x** = I/O result message.

ACTION: If the test fails a second time, replace the XCT card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

XCT0003 loop

Failed download process to the Conference/TDS/MFS card. This may indicate communication trouble or checksum problems or the card is busy.

ACTION: Try the command again.

XCT0004 loop x y

The CPU received a message invalid to the current state of the Conference/TDS/MFS Card. **x** = message type received; **y** = the state of the card.

ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.

XCT0005 loop x

The CPU received an unrecognized message from the Conference/TDS/MFS Card. **x** = message received.

ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.

XCT0006 loop x

The Conference/TDS/MFS Card received an illegal message from the CPU.
x = message received.

ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.

XCT0007 loop x

Timeout waiting for response from the Conference/TDS/MFS Card. **x** = the state of the XCT.

ACTION: Re-enter the command.

XCT0008 loop n

Failed download process to the Conference/TDS/MFS Card because the CPU could not write to the card. This may indicate a removed card or hardware fault. **n** = the FCAD table entry number which failed to download. If **n** = 0, the failure occurred downloading system parameters.

ACTION: Replace the XCT card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

XCT0009 loop tn

The Conference/TDS/MFS Card sent a message to the CPU with an invalid Terminal Number.

ACTION: Contact your technical support group.

XCT0010 g

The CPU was unable to obtain a Call Register to perform a timing task.
g = Group loop number.

ACTION: Contact your technical support group.

XCT0011 L r

The Conference/TDS/MFS Card has been reset. **r** = hardware reset message.

ACTION: Information only, no action required.

XCT0100 loop x

The Conference/TDS/MFS Card failed to respond to a read or write.
x = outgoing message.

ACTION: Replace the XCT card following the steps in the *Hardware Replacement* (553-3001-520).

XCT0101 loop x

The Conference/TDS/MFS Card is disabled and needs download. This occurs when the two loops on the card are enabled separately.
x = the following text string: "XCT DNLD NEEDED USED ENLX CMD"

ACTION: Use the ENLX command in LD 34, LD 38 or LD 46 to enable the card.

XCT0102 loop x

The conference loop on Conference/TDS/MFS Card is in use. The Time Slot Memory (TSM) was not tested. **x** = the following text string: "XCT IN USE NO TSM TEST"

ACTION: Wait until the loop is idle.

XCT0103 The parameter down load failed for XTD. This error message will be called from new proc XTD_DOWNLOAD.

ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group.

XCT0104 The parameter down load failed for XTDS. This error message will be called from proc XTDS_DOWNLOAD.

ACTION: If this message appears repeatedly or is associated with a system problem, contact your technical support group. 

XMI — Network to Controller Message Interface

How the XMI works

The superloop network and controller cards have built in diagnostics that output XMI messages indicating problems with the communication between the NT8D04 Network Card and the NT8D01 Controller card.

Using the XMI Message table to clear faults

To clear most network to controller faults, the XMI action column suggests that you use LD 32 overlays found in the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721.

XMI messages

XMI0000 aaaa Message **aaaa** received from a Network Card (NT8D04). The possible messages are:

1. PLL UNLOCK EVENT. The Network card lost synch with the system clock.
 - a) If the message occurs when clocks are switched.

ACTION: Ignore the message.

- b) If messages occurring in a broken sequence or periodically.

ACTION: Switch the clocks.

- c) If messages occur often.

ACTION: Replace the Network card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card, verify that the fault is cleared. If the fault does not clear replace the clocks following the steps in the *Hardware Replacement* (553-3001-520).

2. Random XMI0000 messages may be generated if excessive Electrostatic Discharges (ESD) are allowed to enter the system. These messages may be safely ignored.

ACTION: Wear your ESD wrist strap when touching the Meridian 1 PBX and any of the related hardware.

3. MSG FROM SHELF x: XPEC ERROR 0001. This error is usually self-correcting. If may indicate a double timeslot problem or invalid call teardown

a) If messages occur rarely.

ACTION: Ignore the message.

b) If messages occur often.

ACTION: Replace the Network card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card, verify that the fault is cleared. If the fault does not clear replace the Peripheral Controller card following the steps in the *Hardware Replacement* (553-3001-520).

4. TN READ UNBLOCKED: CNT=x. A number of SSD messages were sent to the PS card but not acknowledged. In order to prevent the locking of the message path, the Network card assumed the message was received.

a) If messages occur rarely.

ACTION: Ignore the message.

b) If messages occur often.

ACTION: Replace the Network card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card, verify that the fault is cleared. If the fault does not clear replace the Peripheral Signaler card following the steps in the *Hardware Replacement* (553-3001-520).

ACTION: XNET POLLING FAILURE ON PORT x. RSIG LINK LOST ON PORT #x - REINITIALIZED. R71 DISASTER; CANNOT ALIGN TRANSCEIVERS. These messages indicate that the Controller is not responding to the Network card polling messages.

a) Faulty cabling between the Network and Controller cards.

ACTION: Replace the cabling between the Network and Controller cards following the steps in the *Hardware Replacement* (553-3001-520). After replacing the cabling verify that the fault is cleared.

b) Faulty Controller card.

ACTION: Replace the Controller card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

c) Faulty Network card.

ACTION: Replace the Network card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card verify that the fault is cleared.

Note: In X11 Release 15 and 16 “FRw APx SQy TPz” is output before the text, where “w” is the loop number. This data is not output in X11 Release 17 and later. Messages without text indicate that the Network or Controller cards have requested software download.

XMI0001 l s c A card polling failure. The specified card did not respond to the polling message.

ACTION: Use DISL l in LD 32 to disable and ENLL l to enable the loop. If the problem continues either replace the Network card or the Controller card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared.

- XMI0001 s Card s in the expansion cabinet has lost connection to the main cabinet.
ACTION: Check for loose cables, and contact your local technical group.
- XMI0002 l s c Card polling had been reestablished.
ACTION: Information only, no action required.
- XMI0002 XFIL 1
 The main fiber interface (MFI) local is operational.
ACTION: Information only, no action required.
- XMI0002 XFIR 2
 The expansion fiber interface (EFI) remote is operational in the first expansion cabinet.
ACTION: Information only, no action required.
- XMI0002 XFIR 3
 The expansion fiber interface (EFI) remote is operational in the second expansion cabinet.
ACTION: Information only, no action required.
- XMI0003 l s ts Continuity has failed on timeslot ts.
ACTION: Contact your technical support group.
- XMI0004 loop Loop generated too many XMI messages. Output of XMI0000 has been stopped.
ACTION: Use DISL l in LD 32 to disable and ENLL l to enable the loop. If the problem continues either replace the Network card or the Controller card following the steps in the *Hardware Replacement* (553-3001-520). After replacing the card(s) verify that the fault is cleared.
- XMI0005 L A S T t
 No message registers available in the idle queue. The printing of this message is disabled for one hour.
L = Loop or superloop number
A = Application number for this message
S = Sequence field for this message
T = Type of message
t = time of this message: hh:mm:ss dd/mm/yy format
ACTION: Information only, no action required.
- XMI0006 loop Five or more write attempts to Network card l failed.
ACTION: Use STAT l in LD 32 to check the Network card status. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- XMI0007 Card type does not match the database.
ACTION: Check to make sure your data is correct and re-enter the command.
- XMI0008 Card is not defined in the database.
ACTION: Check to make sure your data is correct and re-enter the command.

- XMI0100 The loop specified in the query request is invalid. That is, it is not a superloop, nor is it XI_LOOP_NONE.
ACTION: Refer to the *X11 Administration* (553-3001-311). Use LD 22 CFN to check for the specified loop.
- XMI0101 Trying to read/write to a disabled XNET/non-XNET loop.
ACTION: Use ENLL 1 in LD 32 to enable the Network card and try the test again. If you need help with the commands or system responses refer to the “NPR — LD 32 Checking loops, shelves, controllers, cards and units” on page 721 in this guide.
- XMI0102 card Card slot printed is not allowed for the type of card inserted. This is mainly for the system Option 11 DTI/PRI card which can only be used in slots 1 to 9 in the basic cabinet.
ACTION: Insert the card in the correct slot (1-9).
- XMI0103 The number of TNs created has exceeded the number of TNs allowed.
ACTION: Have your technical support group contact Nortel Networks Technical Assistance Service for additional TNs.
- XMI0104 The card is equipped in an expansion slot but there is no expansion cartridge on the CPU.
ACTION: Install the expansion cartridge on the CPU card.
- XMI0110 In LD 11 for the prompt CTYP (DLC Card Type) the configured value is XDLC but the card plugged in is a EDLC card.
- XMI0111 In LD 11 for the prompt CTRP (DLC Card Type) the configured value is EDLC but the card plugged in is an EDLC card. 

Terms and abbreviations

2 second timing

The timing interval used by the processor to control all two second timing activities. Examples of where 2 second timing is used, are ringing cadence and warning tones.

128 ms timing

The basic timing interval of call processing. The processor checks all timed activities eight times per second, or every 128 ms.

μ -law companding

In North America, companding is accomplished using a logarithmic law called, “255 Law Companded Pulse Code Modulation Digital Coding Standard” or μ -law. See companding.

?SYNTAX

An LD 77 message informing you of an input format non-conformity.

A-law companding

Except for North America, companding is accomplished using a logarithmic law called, A-law. See companding.

ACD (Automatic Call Distribution)

Application software that puts incoming calls in a queue to one or more telephones referred to as agent telephones. The longest-waiting call is sent to the agent telephone that has been idle for the longest time. Incoming calls can be given a priority and answered at a prioritized telephone as an option. There are enhancements which can be added to basic ACD functionality to help with management and reporting tasks and also to customize and enhance the treatment incoming calls are given. ACD software packages A, B, C, D, and Custom Controlled Routing offer enhancements to management tools and reports, in order to add to the functionality of basic ACD.

analog (500/2500 type) telephone

A name that replaces PBX set. The name describes a standard telephone set that works on many telephone systems. Examples of these systems are the Meridian 1, DMS or other vendors systems. Analog (500/2500 type) telephone describes the North American 500 set, United Kingdom analogue rotary dial, North American 2500 set, United Kingdom MF 4 and Unity telephones.

application processor

A special purpose computer that can be attached to the Meridian 1 system to decrease the load on the system processor. The application processor provides value-added and special services. Application processors are used with voice mail, interactive voice response, and automatic call distribution.

Aries set

A name for Meridian Modular Digital telephones, found in some fault messages. Meridian Modular Digital telephone is the marketing name for the following telephones: M2006, M2008, M2616, M2016S, M2216ACD.

auxpm (Auxiliary Progress Mark)

An auxiliary progress mark is used by the Meridian 1 system to follow widely spaced events. For example the auxpm will keep track of the waiting time for each digit during a dial sequence.

BRI (Basic Rate Interface)

An international standard for connecting terminals to a system. One BRI connection has two B-channels rated at 64 kbit/s each, and one D-channel rated at 16 kbit/s.

BCS (Business Communication Set)

A mnemonic found in some fault messages indicating a Meridian 1 proprietary telephone. See Meridian 1 proprietary telephone.

binary semaphore

A machine level software message sent when a file is opened. It prevents other users from opening the same file. The binary semaphore keeps the data in the file from being corrupted.

bootstrap

A program that allows the Meridian 1 system to reload and bring itself into an operating state automatically without human intervention. From the expression “pulling oneself up by your bootstraps”.

CDR (Call Detail Recording)

CDR records are printed when calls are dialed. CDR records show information about the number dialed, the telephones involved, and the duration of the call. Additional information can be printed when CDR enhancements are installed on a system.

call processing

The action of the processor executing the workschedule routine to complete tasks controlled by telephone users. Call processing involves connecting telephone users to other telephones or facilities.

call register

Call registers are located in a part of transient data memory. Call registers store temporary information about trunks and telephone sets in the process of establishing calls. Each telephone or trunk in use has a separate call register containing approximately 40 words of information. An example of the 40 words are Class of Service, features, and time slots in use. This information is known as transient data as it is held in a call register only for the duration of the call. Part of the call register information is transferred to the network or superloop cards. Once the information is transferred, the network or superloop cards set up and control the call. When the call is finished, the transient data is erased from the call register.

cardlan (Card Local Area Network)

Cardlan is a serial interface (RS422) link providing superloop (XNET), Peripheral Controller (PEC), and Intelligent Peripheral Equipment (IPE) card communication. The PEC is the master controller and all other cards are slaves. This link is used for:

- ◆ initializing the DS-30Y loop communications link between SNET and PEC
- ◆ initializing the IPE cards, that is, setting up the DS-30X bus protocol to IPE cards
- ◆ exchanging proprietary maintenance messages

- ◆ determining which IPE cards are installed, or not installed and if the card is reset
- ◆ identifying the card type for auto-configuration
- ◆ identifying the card ID and firmware version

carriage return

An instruction directing you to press the key on the keyboard marked ENTER, or RETURN. You press the key to tell the system you have finished a line of input. Carriage return is a carry over from the days when teletypewriters had a mechanical type basket. The type basket did actually return to the left side of the type platen, ready to type the next line of text.

CCSA (Common Control Switching Arrangement)

A service offered by AT&T for private networks that allows any telephone in the network to call another using a seven-digit number.

CE (Common Equipment)

A term for the part of the system that controls the operation of other system components. Common equipment is composed of CPU, memory, input/output ports, disk storage and sometimes includes the network equipment.

channel

A transmission path capable of carrying voice or data.

CO (Central Office)

In North America a central office is the facility containing the switching equipment that provides telephone service to subscribers in the immediate geographical area.

cold start

A name describing a Meridian 1 system loading the operating program into RAM. Equivalent to a system reload.

companding

Companding is derived from the words “compressing” and “expanding”. Companding is the process of compressing the amplitude range of a signal for transmission and then expanding the signal back to its original form at the receiving end.

The transmitted signal (speech) is normally a digital signal. An analog to digital conversion of speech is done in three steps. Sampling the analog signal, Quantizing the sample, and Encoding the quantized sample.

Sampling consists of taking a sample value, at a chosen instant in time, to represent the amplitude of the analog signal. Sampling is usually done at equal time intervals so that the original shape can be reconstructed later with reasonable fidelity from the samples. In 1933 Harry Nyquist determined that the sample rate had to occur at least twice the maximum frequency for reasonable fidelity. The sampling process is also known as Pulse Amplitude Modulation (PAM).

Quantizing is a process where each sample is assigned a value within a range of 0 to 127, for a total of 128 intervals or levels.

Encoding consists of converting the quantizing value into a digital signal. The digital signal consists of eight binary bits. The first seven bits are required to express the value 128 and the eighth bit to indicate polarity; 1 for positive; 0 for negative.

The process of sampling, quantizing, and encoding is known as Pulse Code Modulation (PCM). Eight bit PCM is an industry standard.

The PCM code for level +127 is all 1's and is known as quiet code. If the quantizing steps are equal, this will result in an undesirable random signal called quantizing noise. Quantizing noise is caused when the sample height falls between the steps on the quantum level. While the noise is small for strong signals it is very large for weak signals. The remedy is to provide many small steps in the weak signal range and few large steps in the strong signal range. The process of altering these steps is called companding. The analog signals are compressed before they are sampled, and subsequently transmitted as PCM. At the receiving end the PCM is decoded, quantized and reconstructed as analog, and then expanded.

configuration record

A programmable data block that describes the location and function of the CE hardware in the system. The configuration record is programmed in overlay load 17.

continuity test

A test that determines the continuation of the speech path between a Meridian 1 proprietary telephone and its network card. Also tests the continuation of the speech path between an analog line card unit and its network card.

Core

The processing and data storage portion of the Option 51C, 61C, 81and 81C systems. The Core equates to the Common Equipment in Meridian 1 systems.

Core number

The Option 61C, 81 and 81C systems has two redundant Core systems. The two Core systems are identified by the Core numbers 0 and 1.

COT (Central Office trunk)

A central office trunk is a circuit between a public exchange network switch and a Meridian 1 system.

cross-connect panel

Sometimes called the jumper panel or main distribution frame (MDF). The panel where wires from telephones and trunks are interconnected with corresponding wires from the system's line and trunks cards.

CSA trunk

Common Control Switching Arrangement trunk. See CCSA.

DCE (Data Circuit Terminating Equipment)

The formal name for a modem. Modem is an acronym for modulator-demodulator. The interfacing equipment that is sometimes required to convert digital signals from data terminal equipment (DTE) into quasi-analog signals. This conversion is needed for transmission over analog telephone communication circuits and vice versa.

DCON

An output message from a System Monitor indicating it sensed that DC is on.

delay dial

A trunk signal used to control the transfer of dialed digits. Upon seizure, the originating switch will not outpulse digits until the terminating switch does the following steps:

1. sends an off-hook to the originating switch
2. finds and attaches its digit collection equipment
3. sends an on-hook to the originating switch

The on-hook indicates the terminating switch can now accept digits. The time between on-hook and off-hook varies with equipment types.

DID (Direct Inward Dialing) trunk

A trunking feature that allows telephone callers connected to the public exchange network to dial directly to a telephone connected to the Meridian 1 system. DID happens without the intervention of an attendant or interactive voice system.

digital subscriber loop

Any one of eight physical Basic Rate Interface (BRI) ports on a BRI line card. Each port has two B-channels and one D-channel.

digital telephone

A telephone which uses digital signaling. An analog voice is converted into a digital signal within the telephone. A Macintosh, IBM-PC or other data terminal can be connected to the telephone. The data to and from that terminal is multiplexed on the same set of wires used by the telephone for voice calls.

Digitone

Tones used for signaling the digits 0 through 9, # and *. The tones are a combination of two voice frequencies, a high tone and a low tone. Two frequencies are used because if a single tone were used the human voice might inadvertently reproduce the tone in normal speech during a telephone call. Two frequencies prevent this.

download

To receive data from another device.

DTE (Data Terminal Equipment)

Equipment consisting of digital end devices that convert user information into data signals for transmission, and reconvert the received data signals into user information.

DTMF

Dual Tone Multi Frequency. See Digitone.

exchange network

The global network made up of telephone switches operated for the public by telephone utility companies and governments.

extender or extender pair

A term used to describe a 3 Port Extender (3PE) card, Segmented Bus Extender (SBE) card, and the cable that connects them. These components extend the processor's control to the network shelves. The SBE is located on the common equipment shelf, with the processor. The 3PE is located on the network shelf.

extra arguments

An indication that the system has received too many entries and cannot reach a conclusion.

far end

The remote PBX at the distant end where your Tie trunk or Private circuit terminates.

FATAL

A term describing a condition on a Meridian 1 that will not allow the system to reload its software until the condition is corrected.

father routine — son routine

A father routine is a main software routine with the son routine as a subset of the main routine.

fault address

The fault address is the ninth field of an INI message. In certain instances, the Fault Address field, can be decoded to indicate a faulty card. To decode a Fault Address, the Fault Page field of the INI message must indicate a hardware fault. See fault page.

fault page

An area of the address range for memory is set aside for hardware addressing. The area set aside for hardware addressing is called the I/O segment of memory or Page 3 of memory. If the system detects faulty hardware, Page 3 is indicated in the eighth field of the INI message.

FEX (Foreign Exchange) trunk

A trunk that provides telephone service to and from a public exchange switch that is outside the subscriber's exchange area. A user in one city can dial the access code for his FEX trunk and receive dial tone from the foreign public exchange switch. The user can also receive calls dialed from the foreign exchange switch.

FHWR (Localized Faulty Hardware Recovery)

The FHWR function is part of the Initialization Prevention and Recovery feature. The FHWR function disables faulty hardware detected by the LRIP, SRIP or LOIP functions. When the FHWR is active it causes FHW004, FHW005 or FHW006 messages to appear on all maintenance TTYs.

firmware

Software, data, and programming instructions stored permanently in Read Only Memory hardware. (It is neither soft nor hard, therefore it must be firm.) Firmware provides the basic function needed by the Meridian 1 system during start-up, software loading, and other periods when software may not be available in memory. Firmware does not require regular update.

flag bit

A software name describing the output of an electronic multivibrator or flip-flop. When a flag bit is set, the flip-flop outputs a voltage that allows electronic circuitry connected to it to react. For example, when a telephone goes off-hook, a flag bit is set in the telephone's line card. The line card flag bit in turn causes the network loop card connected to the line card to also set a flag bit. The peripheral signaler will lock on to the network flag bit when polling the loops for off-hooks.

FORCED

A name that describes a condition on a Meridian 1 where the system has reloaded its software, but will not function to full capacity until the condition is corrected.

FW (Firmware) is sane

A term that indicates a ROM resident program is not corrupted or changed. See firmware.

graceful switchover

An unforced processor switchover. For example, the standby processor becomes the active processor during the running of the midnight or daily routine.

group

A pair of interconnected network modules or shelves. A single network module or shelf is known as a half-group.

hard memory failure

A term that indicates the memory hardware is malfunctioning.

hardware sanity time-out

A term that describes the result of a hardware device failing to respond to a test within a specified period of time.

high level semaphore

When a file is opened, a high level software message or semaphore is sent to prevent others from using the same file at that time. Its purpose is to preserve the integrity of the data.

high-speed link

A communications channel that uses EIA RS422 or RS423 to connect the Meridian 1 to an applications processor. For example a high speed link connects the Meridian 1 to the Meridian MAX.

illegal input parameters

A message that indicates an entered response to a prompt that could not be accepted by the Meridian 1 system. Any entered response must match the system software list before the system will accept the response.

immediate start

A signal used on trunks to control the transfer of dialed digits. After a trunk seizure, the originating switch may start outputting digits to the terminating switch after a minimum delay of 70 ms.

input buffer

A storage area in transient data memory. The buffer stores input messages sent to the processor from a telephone or a trunk, indicating an off-hook, on-hook or dialed digits. The input buffer is used as temporary storage until the processor can complete a task and then handle the input message by placing the message information into a call register. There are two types of input buffers, high priority and low priority.

insufficient arguments

Indicates the Meridian 1 system has not received enough entries to reach a conclusion.

invalid command

A command was entered that is not listed in the Meridian 1 system software and cannot be executed.

invalid operand

A faulty address for an instruction or data.

ISDL (Integrated Services Digital Line Card)

Peripheral Equipment line cards that are used to support digital telephones. They can accommodate up to eight digital telephones and eight associated data terminals.

ISDN (Integrated Services Digital Network)

A digital telephony network that allows the transmission of voice and data using internationally approved protocols.

juncor

A passive device providing the interconnection for calls between network groups on multi-group Meridian 1 systems.

large twist

A party hosted by the rock and roll singer, Chubby Checker.

link

Another name for a communications channel or circuit.

LD (Load)

An abbreviation for the term load; otherwise known as overlay program.

LFBN (Line Forced Bypass Enable)

A ground signal from the system monitor used to start an emergency transfer in an NT8D39(DEES) unit or a QUA6 unit.

LFBNR (Line Forced Bypass Enable Return)

Line Forced Bypass Enable Return. A ground lead connecting the system monitor to an NT8D39 (DEES) unit or a QUA6 unit.

lockout mode

When a telephone or trunk remains off-hook longer than the preset time given for dialing a DN, a lockout timer expires. The timer causes the telephone or trunk to enter a busy state, return to an idle state, or to some other suitable condition.

LOIP (Network Loop Overload INI Prevention)

The LOIP function is part of the Initialization Prevention and Recovery feature. The LOIP function prevents a system initialization (INI000 0006) when a terminal loop overload is detected. When the LOIP is active it causes a FHW003 message to appear on all maintenance TTYs. See the LRIP definition for a list of network loops.

low level semaphore

When a file is opened, a machine level software message or semaphore is sent to prevent others from using the same file at that time. Its purpose is to preserve the integrity of the data.

low-speed link

A communications channel, using EIA RS232 to connect the Meridian 1 to a terminal.

lower write protect boundary

The lower address portion of the write protect memory segment.

LRIP (Network Loop Response Time-out INI Prevention)

The LRIP function is part of the Initialization Prevention and Recovery feature. The LRIP function prevents a system initialization (INI000 8000/A000/C000) when a network loop fails to respond to a processing request. When the LRIP is active it causes a FHW000 message to appear on all maintenance TTYs. The network loops include those listed in LD 22, as follows:

- ◆ CONF - Conference loops QPC236 QPC444
- ◆ DLOP - Digital loop QPC414
- ◆ DTI2 - Digital loop
- ◆ PRI- Digital loop
- ◆ DDCS - Digital Signaling loop QPC414
- ◆ MFSD - Multifrequency Sender loop QPC189
- ◆ MSIP - Multipurpose ISDN Signal Processor loop NT6D37
- ◆ REMO - Remote loop QPC414
- ◆ REMD - Remote loop QPC414
- ◆ REMQ - Remote loop QPC414
- ◆ SUPL - Superloops NT8D04 NT1P61
- ◆ TERM - Terminal loop QPC414
- ◆ TERD - Terminal loop QPC414
- ◆ TERQ - Terminal loop QPC414
- ◆ TDS - Tone & Digit Sender loops QPC197 QPC 251 QPC609 QPC610B
- ◆ XCT - Conference Tone & Digit Sender loop NT8D17

maintenance busy mode

A condition where a maintenance diagnostic disables a telephone or trunk.

masked

A software routine is prevented from being executed in a certain circumstance.

Meridian 1 telephone

A term replacing BCS set, describing a telephone set designed to operate exclusively with the Meridian 1 PBX. For example, the SL-1, M1009, M1109, M1309, M2009, M2018, M2112, M2006, M2008, M2317, M2616ACD, M2016S, M2216, and M3000 telephones.

messin

A 16 bit digital word. A messin sends off-hook or on-hook or dialed digit information to the processor. Messins originate in PE card units.

messout

See output buffer.

mnemonic

A code used as a memory aid. Mnemonic codes are used for programming and issuing commands.

module

1. Another name for a memory card.
2. A stylish aluminum box that holds a card cage. It is also called a Universal Equipment Module or UEM.

motherboard — daughterboard

A motherboard is a main circuit board or card with connectors or sockets that allows a subordinate circuit board (daughterboard) to be plugged into it.

Mu-law companding

Companding is the process of compressing the amplitude range of a signal for transmission. At the receiving end the compressed signal is expanded back to its original form. Companding is a contraction of compressing and expanding. In North America, companding is accomplished using a logarithmic law called, “255 Law Companded Pulse Code Modulation Digital Coding Standard” or μ -law. See companding.

MPU (Multi Processing Unit)

Multi Processing Unit. A processor that performs some of the tasks that would otherwise be performed by the CPU. For example, the IPE analog line card contains an MPU that interprets a series of on-hook,

off-hook rotary dial pulses as a DN. The MPU then passes the DN on to the CPU, saves CPU resources. Without the MPU, the CPU would have to set and control timers to ensure the incoming pulses are not hook-switch flashes, hits on the line, or that the caller has abandoned the call. See time stamp 2.

near end

The local Meridian 1 system where your Tie trunk or Private circuit terminates.

network memory word

An instruction in the network card memory. The network card memory is used to control the flow of PCM from one telephone to another.

not defined

A term that means not programmed.

not supported

A term indicating the software was not intended to do that.

office data

A term used to describe the data programmed on a Meridian 1 using the Administration overlay loads. The administration loads are as follows:

- ◆ LD 10 to LD 29
- ◆ LD 49 to LD 52
- ◆ LD 56 to LD 58
- ◆ LD 73 to LD74
- ◆ LD79
- ◆ LD 81 to LD 88
- ◆ LD 90
- ◆ LD 93 to LD 95
- ◆ LD 97

one-shot test

A test that only runs once.

out-of-range

An input on a DTE that is beyond the limit of entries listed in the software.

output buffer

A storage area in transient data memory used to keep output information to be sent to a telephone or trunk from the processor. The information, called a messout, will control relays on trunk cards, LEDs or LCDs on telephones, and so on. There are two types of output buffers, SL-1 and 500.

operator data

Information added to the end of a particular message when the Alarm Filter Format is on. Operator data is used to help in problem resolution.

OPR DAT (Operator Data)

See operator data.

P data (Protected)

The protected data store memory segment for Meridian SL-1NT, XT, Option 61, and 71 (or page 1, for previous systems), holds data blocks that have been entered on a DTE. P data describes the make up and provisioning or programmable data of the system. Some of the data blocks are as follows:

- ◆ configuration records (LD 17)
- ◆ customer data blocks (LD 15)
- ◆ route and trunk data blocks (LD 16, LD 14)
- ◆ telephone set data blocks (LD 10, LD 11)

packed TN

A packed TN is an SL-1 formatted TN. A 16 bit word is used by the software to address a loop-shelf-card-unit or as it is commonly referred to, a TN. Software writers convert the 16 bit words to hexadecimal format for ease of use. In most occurrences, the system inputs and outputs are decimal TNs. Sometimes the system outputs a hexadecimal format. If the system is dealing with single density PE cards, the hexadecimal output can be converted directly to a decimal TN.

With single density, bits 0 and 1 are used to identify the number of units (four) on the card and bits 6 and 7 identify the number of shelves (four) on the loop.

With double density PE cards, bits 0, 1 and 6 are used to identify the number of units (eight). With quad density PE cards, bits 0, 1, 6 and 7 are used to identify the number of units (sixteen). If the system is dealing with double or quad density PE cards, the hexadecimal output, called a packed TN, cannot be directly converted to a decimal TN. There are maintenance diagnostics that will convert packed TNs to unpacked TNs. An example of an unpacked TN is 4 0 12 14. The same TN packed is 04F2.

parameters

A range or limits set for entries in the software.

parity error

An error that occurred during transmission of data within the Meridian 1 circuitry. Parity errors are detected by the receiving end counting the number of 1 bits in the transmitted data. In the case of the Meridian 1 which uses even parity, the number of 1 bits should be an even number. If it is an odd number, a parity error is generated. A parity error will result in an initialization or a system reload.

PBX (Private Branch Exchange) set

A term replaced by Analog (500/2500 type) telephone. A PBX set is a standard telephone set that works on many telephone systems. Examples of these systems are the Meridian 1, DMS or other vendors systems. Analog (500/2500 type) telephone describes the North American 500 set, United Kingdom analogue rotary dial, North American 2500 set, United Kingdom MF 4 and Unity telephones.

PCM (Pulse Code Modulation)

See companding.

PE (Peripheral Equipment)

The part of the system composed of interface cards that connect to terminals such as telephones and trunks, and the shelves on which these cards reside.

PFTU (Power Fail Transfer Unit)

A term used for QUA4, QUA5, QUA6 and NT8D39 (DEES) transfer units. The term implies that an emergency transfer will only result from a loss of power. All transfer units can be connected to perform the emergency transfer function when the CPU cannot process calls, due to a system reload or CPU failure.

pointer or ptr

An address of a memory location.

port

The physical or electrical interface through which the Meridian 1 system is accessed.

primary memory

In a redundant Meridian 1 system either CPU can access both memories. CPU 0s primary memory is Memory 0 and its secondary memory is Memory 1. CPU 1s primary memory is Memory 1 and its secondary memory is Memory 0.

program counter

A register used by the processor to indicate the next instruction to be executed. The register's contents are generally memory addresses that point to the next instruction and are then automatically incremented.

program page

A memory layout used in the legacy (older) systems, when memory was costly. The pages are:

- ◆ Page 0 contains unprotected data store
- ◆ Page 1 contains protected data store
- ◆ Page 2 contains a ROM addressing range, an overlay area used for programming and diagnostic loads (LD xx) and generic data used to operate the system
- ◆ Page 3 consists of a range of addresses set aside for addressing cards and devices

The memory of the Meridian 1 NT, XT, Option 61 and 71 uses contiguous memory and is divided into soft segments. The soft segments are:

- ◆ Unprotected Data Store
- ◆ Protected Data Store
- ◆ Program Store

The soft segments relate to paged memory.

The data in the Unprotected and the Protected Data Store segments of is programmable data. This data is programmed into the Meridian 1 system using LD 10, LD 11, LD 12, LD 13, LD 14, LD 15, LD 16, LD 17, and so on. These data blocks in the NTPs may be referred to as Equipment Data or Office Data.

prompt

A mnemonic presented by the system when you are programming or issuing commands to the system.

protected data store

The protected data store memory segment for Meridian SL-1NT, XT, Option 61, and 71 (or page 1, for previous systems), holds data blocks that have been entered on a DTE. P data describes the make up and provisioning or programmable data of the system. Some of the data blocks are as follows:

- ◆ configuration records (LD 17)
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- ◆ telephone set data blocks (LD 10, LD 11)

redundant

A Meridian 1 with two processors is a redundant system. One processor controls the system while the other is in a standby mode. A redundant system is necessary to allow a software upgrade without interrupting service.

REMALA/REMALB (Remote Alarm A/Remote Alarm B)

A pair of contacts in an emergency transfer unit that close when the unit is activated. These contacts can be used to trigger hard alarms such as lights, bells or pocket pagers.

response time-out

A memory or I/O device does not respond to a read or write signal from the processor within 8 ms. A response time-out causes an initialize or a system reload.

response

A mnemonic you type in answer to a prompt when you are programming.

Rls xx (Release)

For example Rls 20. A release is a version of software that contains certain feature packages and enhancements.

secondary memory

In a redundant system either CPU can access both memories. CPU 0s primary memory is Memory 0 and its secondary memory is Memory 1. CPU 1s primary memory is Memory 1 and its secondary memory is Memory 0.

service change

See programmable data.

service loop

Another name for Tone & Digit Switch and Conference loops. Service loops provide services such as dial tone and multi-party calls.

set

Another term for telephone.

slot number

A numbered designator indicating where cards are located within the card cage of the modules.

soft memory failure

A term used to describe that software data in memory is corrupted.

software network map

A list used by the processor to keep track of timeslots in use for a particular network loop.

software package

A component of software that, if equipped, provides certain features and capabilities. Software packages are listed by a mnemonic or a number or both.

software-idled

A device is software-idled by a software command. The software command can be issued manually or issued automatically by the Meridian 1 system. Hardware-idled is done by placing the faceplate switch to the Dis position.

software-unequipped

A term that indicates something is not programmed. See program data.

split mode

When redundant processors work separately they are in the split mode. The split mode is used when performing a parallel reload of software. One processor controls call processing and the other processor is used to load the new software programs into memory.

SRIP (SDI Device Response Time-out INI Prevention)

The SRIP function is part of the Initialization Prevention and Recovery feature. The SRIP function prevents a system initialization (INI000 8000) when an SDI/Expanded SDI device fails to respond to a processing request. When the SRIP is active it causes FHW001 or FHW002 messages to appear on all maintenance TTYs. The SDI devices include those listed in LD 22, as follows:

- ◆ AML - Application Module Links QPC513 NT6D80
- ◆ BDCH- Backup D - channels QPC757E NT6D11
- ◆ DCH - D - channels QPC757E NT6D11
- ◆ DDSL/DTSL - Digital Signaling Links NT5K35AA NT5K75AA

- ◆ PTR - Printer ports QPC45 QPC139 QPC757E QPC841C
NT6D80 NT8D41AA
- ◆ STA - Single Terminal Access port NT6D80
- ◆ TTY - Terminal ports QPC45 QPC139 QPC757E QPC841C
NT6D63 NT6D80 NT8D41AA

standby

See redundant.

starting arrangement

The protocol used between Meridian 1 PBX and a Central Office to control digit collection. See immediate start, delay dial and wink start.

storage medium

A term used to refer to streaming tape, a floppy diskette or a hard disk.

strobe test

An electrical pulse used to transfer a pattern of 1s and 0s into and out of memory. The memory passes the test if the output pattern matches what was input.

switchover

A switchover occurs when the standby processor becomes the active processor.

system monitor

A component found in the lower rear of Meridian 1 equipment columns. The system monitor reports the status of power related hardware for its column to the processor. The processor subsequently sends the system monitor's message to the SDI data terminals.

tag number

A number identifying a test sequence.

TIE trunk

A dedicated circuit connecting (tying) two Meridian 1 systems or a Meridian 1 system and a PBX.

time slot

On the Meridian 1, a time slot provides a channel to pass a digital bit of voice or data between telephones. Each telephone or trunk in use requires a time slot. The basic number of time slots used per network loop is 32. Time slots are labeled from 0 to 31, with time slot 0 used for signaling and time slots 2 to 31 used to pass voice or data. Superloops use four groups of time slots or 128 time slots per Superloop card.

time stamp

There are two types of time stamp as follows:

1. A time stamp is output within five minutes of the processor detecting an problem to warn service personnel. For example, TIM061 09:00 9/3/1994 CPU0. The time stamp is normally accompanied by a message.
2. When a call register is established for a telephone or trunk, the processor marks the start time and each interval action time with a time stamp in milliseconds. The time stamps are used to start, stop and control timers. For example, a rotary dial telephone sends dialed digits as a series of precisely timed on/off-hooks. If the on-hook to off-hook time interval is short, the processor interprets this as a switch hook flash rather than a dialed digit. If an off-hook to on-hook transition lasts too long, the processor interprets this as a call which is finished or abandoned and tears down the connection.

TN (Terminal Number)

A physical or hardware location address, made up of a network loop number, PE shelf number, PE card number and unit number.

TNTRANS (TN Translator)

A table used by the processor to convert a TN to a DN. When a telephone goes off-hook, it sends its TN to the processor. The processor must match the TN to a DN in order to get the particulars about the telephone to service the call.

transient data

The same as U data. See unprotected data store.

tree

A software data structure.

TTY (Teletypewriter)

A data terminal used to transmit and receive commands and responses when you are programming. Generically a TTY refers to any dumb terminal or DTE used to pass ASCII data. A DTE used for communicating alphanumeric information with the Meridian 1 system. Literally, an electro-mechanical device developed in the early 1920s by the Teletype Corp. to pass data. The teletype looked similar to a typewriter.

U data (unprotected data)

See unprotected data store.

UEM (Universal Equipment Module)

A stylish aluminum box holding a card cage.

ungraceful switchover

A term that describes a forced processor switchover. Examples of ungraceful switchovers are: The diagnostic command SCPU to switch processors. The Normal/Maintenance switch on the standby processor placed in the Normal mode.

unpacked TN

An unpacked TN is a decimal TN. See TN and packed TN.

unprotected data

See unprotected data store.

unprotected data store

The same as U data. The unprotected data store memory segment holds data blocks used by the processor to update information about the progression of calls. When the calls are finished the processor tears down the calls or erases the information in the unprotected data store segment. The data blocks can be varied in number to accommodate the variety of lines or trunks installed, amount of traffic, and so on. They contain:

- ◆ high and low priority input buffers for MESSIN
- ◆ SL-1 and 500 output buffers for MESSOUT

- ◆ call registers - one call register of some 40 plus words is needed for each call and holds information such as;
 - calling TN
 - called TN
 - time slots in use
 - dialed digits
 - timed status
 - call progress markers
 - network paths in use

upper write protect boundary

The upper address portion of the write protect memory segment.

warm start

A term that describes the operating system restart and the SL-1 software task list restart. A restart of the SL-1 software task list only, is an initialization.

watchdog time-out

A timer used to check the processors ability to complete a task. On the completion of every processor task the processor must reset the watchdog timer within 1.024 seconds. A watchdog time-out causes an initialization or a system reload.

WATS (Wide Area Telephone Service) trunk

In North America, a circuit between a public exchange network switch and a Meridian 1 system. WATS telephone calls are billed at a reduced rate.

wink start

A signal used on trunks to control the transfer of dialed digits. The terminating switch finds and attaches its digit collection equipment, then sends a 140 ms off-hook, on-hook pulse to the originating switch that requests the digits to be sent.

workschedule

A list of tasks the processor performs that controls all activities of the Meridian 1 system.

write protect violation

An indication of an attempt to write into a protected area of memory. A write protect violation causes in a system reload.

X08

An early edition of the software package for International Business applications. X08 was replaced by X11 with Supplementary Features. With the release 20 software, X11 denotes global applications software.

X11

A software package for North American Business applications. With the release 20 software, X11 denotes global applications software.

XNET

A mnemonic for a superloop network card.

XPE0

The first module (PE shelf) cabled to a superloop.

XPE1

The second module (PE shelf) cabled to a superloop.

XPEC

A mnemonic for System Monitor.

XSM

A mnemonic for System Monitor. A component found in the lower rear of Meridian 1 equipment columns. The system monitor reports the status of power related hardware for its column to the processor. The processor subsequently sends the system monitor's message to the SDI data terminals. 

Meridian 1 Options 21 through 81C

Fault Clearing Guide

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