UNIVERGE SV9500

FP95-115 V5

Operations and Maintenance Manual

NWD-165814-001
ISSUE 8.0

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NWD-165814-001
ISSUE 8.0
OCTOBER, 2017

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CBCN Control of Broadcasting for NDM . . . 959
CBCV Control of Broadcasting for VNDM . . . 960
CBKS Control Backup Station . . . 962
CBND Calculate Bandwidth Data . . . 964
CCSE Change of Common Signaling Channel Equipment . . . 966
CDBU Change of Dch Backup . . . 967
CFCS Control of Flash Card System . . . 968
CLPB Control of Local Phone Book . . . 969
CMNT Control of SR-MGC/Geographic Redundancy Maintenance . . . 971
CMOD Change of System Mode . . . 998
CMWL Control Message Waiting Lamp . . . 1001

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2. PRECAUTIONS 1235
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4. DELETING PATCH FILES 1238
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CHAPTER 1
GENERAL

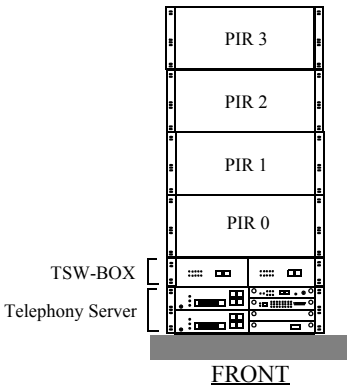
1. ABOUT THIS MANUAL

This manual describes routine system maintenance procedures and fault repair procedures. This chapter explains the system configuration as well as how to follow the manual and provides precautions pertaining to maintenance jobs as a whole. Be sure to read this chapter thoroughly before starting the required maintenance project.

2. SYSTEM ACCOMMODATION

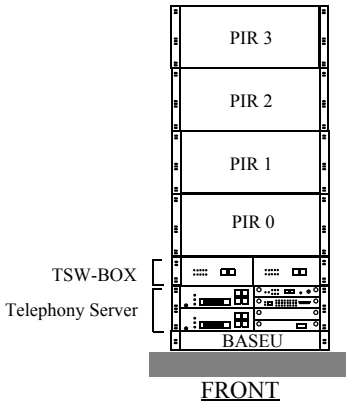
The following shows a fully expanded system (AC-powered Model, 1-IMG) as an example.

AC-powered Model, 1-IMG Type



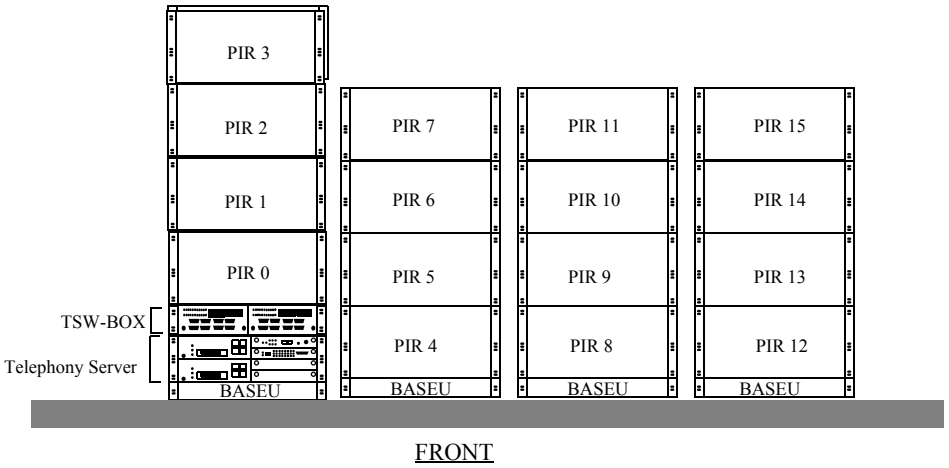
The following shows a fully expanded system (DC-powered Model, 1-IMG) as an example.

DC-powered Model, 1-IMG Type

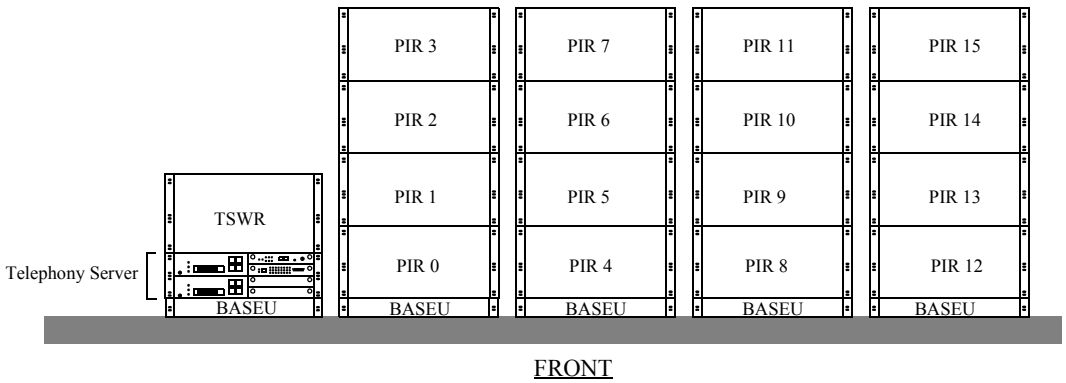


The following shows a fully expanded system (DC-powered Model, 4-IMG) as an example.

DC-powered Model, 4-IMG (When Using TSW-BOX)



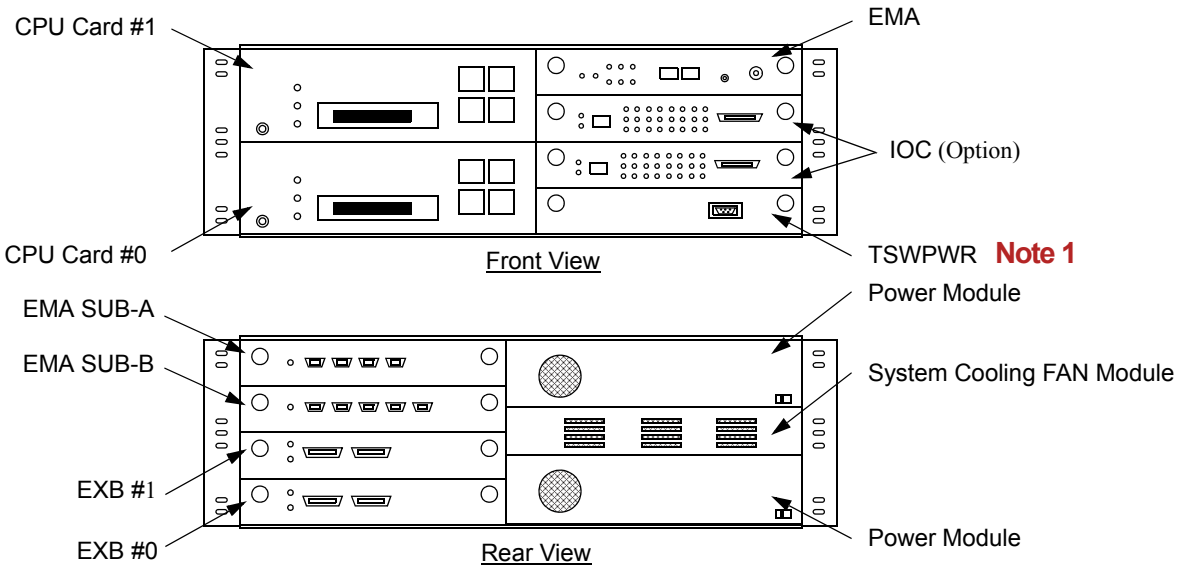
DC-powered Model, 4-IMG (When Using TSWR)



2.1 Telephony Server

Telephony Server can accommodate the following cards and modules:

- CPU card
- EMA card
- IOC Card (option)
- TSWPWR Card **Note 1**
- EMA SUB-A (option: required for PIRs) card
- EMA SUB-B (option: required for MMG system) card
- EXB-TSWR (option: required for TSW-BOX/TSWR) card
- Power Module
- System Cooling FAN Module

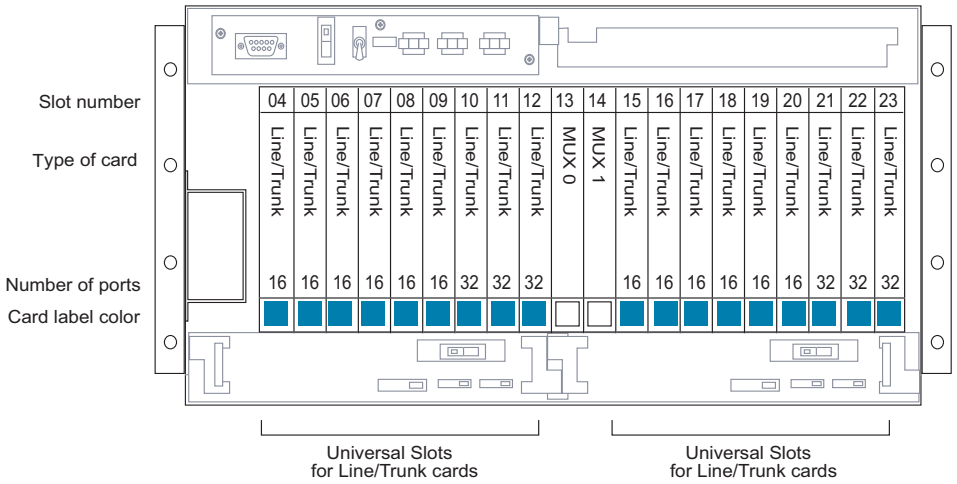


Note 1: TSWPWR card is required only for the system using TSW-BOX.

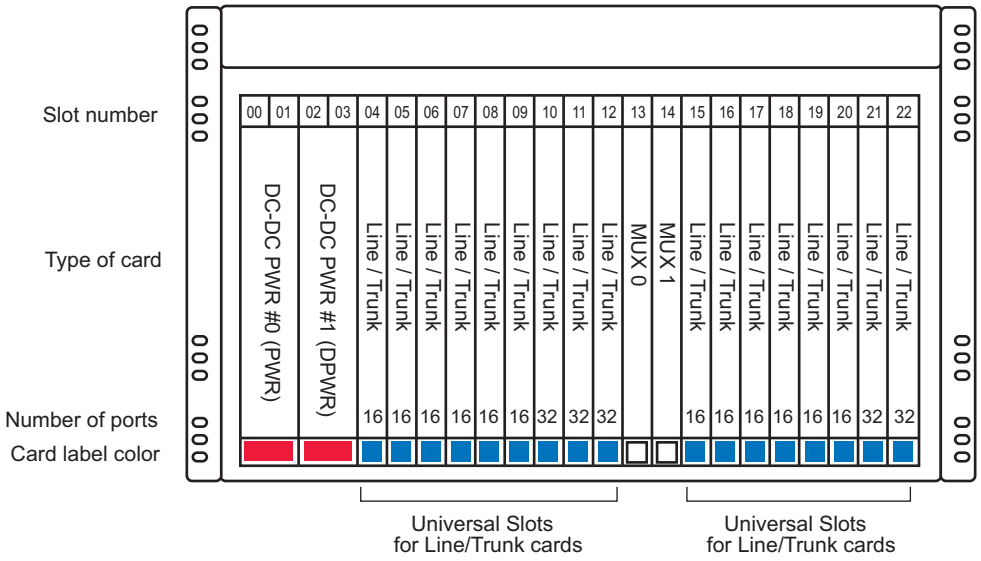
2.2 PIR and TSWR

The following figures show the slot configuration and the condition of mounted circuit card types.

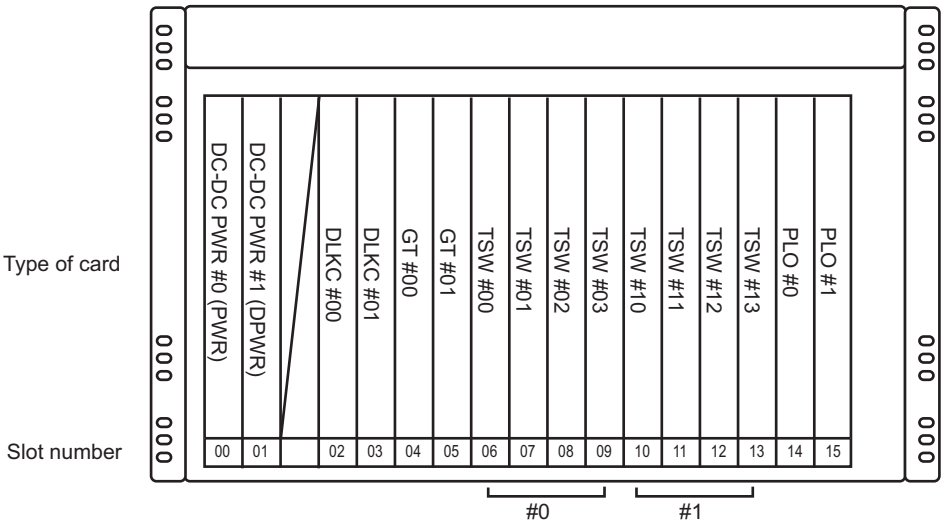
7U-PIR Slot Accommodation



8U-PIR Slot Accommodation



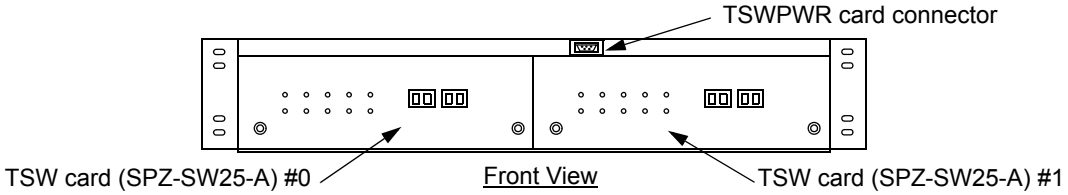
TSWR Slot Accommodation



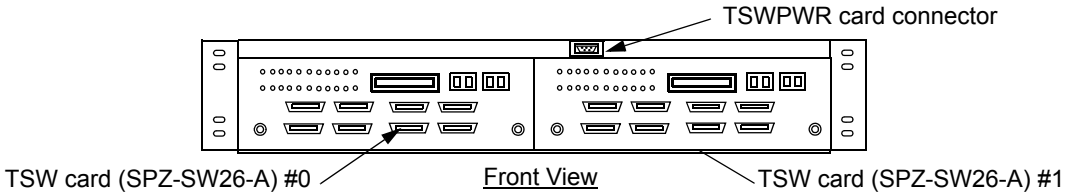
2.3 TSW-BOX

TSW-BOX can accommodate the following card:

- TSW card (SPZ-SW25-A)



- TSW card (SPZ-SW26-A)



3. GLOSSARY

The following is a list of typical technical terms that are used in this document.

C-Level Infinite Loop

B-Level Infinite Loop

Port Microprocessor (PM)

Ready Error

Parity Error

Monitor Restart (Phase 0)

Phase 1 Restart

PM (Line/Trunk Card) Make-Busy Restart

Data Copy Restart

MEM (Memory)

- C-Level Infinite Loop

  A program repeatedly executes specific routines due to a fault of the main memory, data destruction, etc. The program is not able to process normally. This faulty condition is referred to as Program Infinite Loop. C-Level infinite loop is a state where a specific program is endlessly repeated, blocking periodical programs to be executed.

- B-Level Infinite Loop

  This is a state where a program infinite loop has occurred during connection processing and the connection for the next call is not able to process.

- Port Microprocessor (PM)

  Each line/trunk card mounted in the PIR is equipped with a processor called Port Microprocessor (PM), which continuously supervises the lines/trunks.

- Ready Error

  For acknowledging the connection between the CPU and a circuit card, an interface signal called Ready Signal is used. When the CPU has accessed a specific circuit card and the normality of the connection is acknowledged, the Ready Signal is returned to the CPU within a certain time period. If the Ready Signal is not returned to the CPU within the above time period after access, the situation is referred to as Ready Error.

- Parity Error

  For confirming the normality of data transfer between the CPU and the circuit card under the control of the CPU, a parity check is made. When an error is detected in a parity check, it is referred to as Parity Error. Parity check means to confirm the normality of data by adding an error detecting parity bit to a set of data to transfer.

  When a set of data is transferred, a parity bit is added to the data so that the data has an even-number of "1" bits (referred to as Even Parity). When there is an odd-number of "1" bits in the received one set of data, it is detected as an error.

- Monitor Restart (Phase 0)

  Monitor Restart processing suspends current processing in progress without applying any hardware controlling, allowing the system to restart its operations from the Monitor Program. The system abandons only the processing of the calls being handled by the program, and maintains all the connections that have already been established. In the case of CPU system fault such as out-of-memory fault, the system executes the monitor restart after outputting the system message and setting the hidden memory fault.

- Phase 1 Restart

  The system is initialized. All connections except for basic two-way connections (STN-STN, STN-TRK, TRK-TRK) that have already been established are forcibly released.

- PM (Line/Trunk Card) Make-Busy Restart

  In this processing, the faulty PM (Line/Trunk Card) is isolated from the system and, at the same time, the calls associated with that faulty PM (Line/Trunk Card) are released. No calls related to the faulty PM (Line/Trunk Card) are processed and the system normally runs without the faulty PM (Line/Trunk Card).

- Data Copy Restart

  In a system of dual configuration, the RAM memory (including the data memory) is copied from the ACT-side CPU into the STBY-side CPU, and ACT/STBY is changed over and monitor restart is executed.

  In the case of this restart processing, only the ACT-side CPU and the STBY-side CPU are changed over without any effect on the current connections. However, no call processing is executed while the restart processing is in progress (from copying until the end of the changeover).

- MEM (Memory)

  A memory module that is mounted on the CPU Card.

4. HOW TO READ PRECAUTIONS, DIAGNOSTIC, AND FAULT REPAIR INFORMATION

4.1 Precaution about Diagnostic Procedure/Fault Repair Procedure

When performing diagnostic procedures/fault repair procedures, ***always*** adhere to the following actions:

(1) When replacing a circuit card with a spare, handle the circuit card using the Field Service Kit.

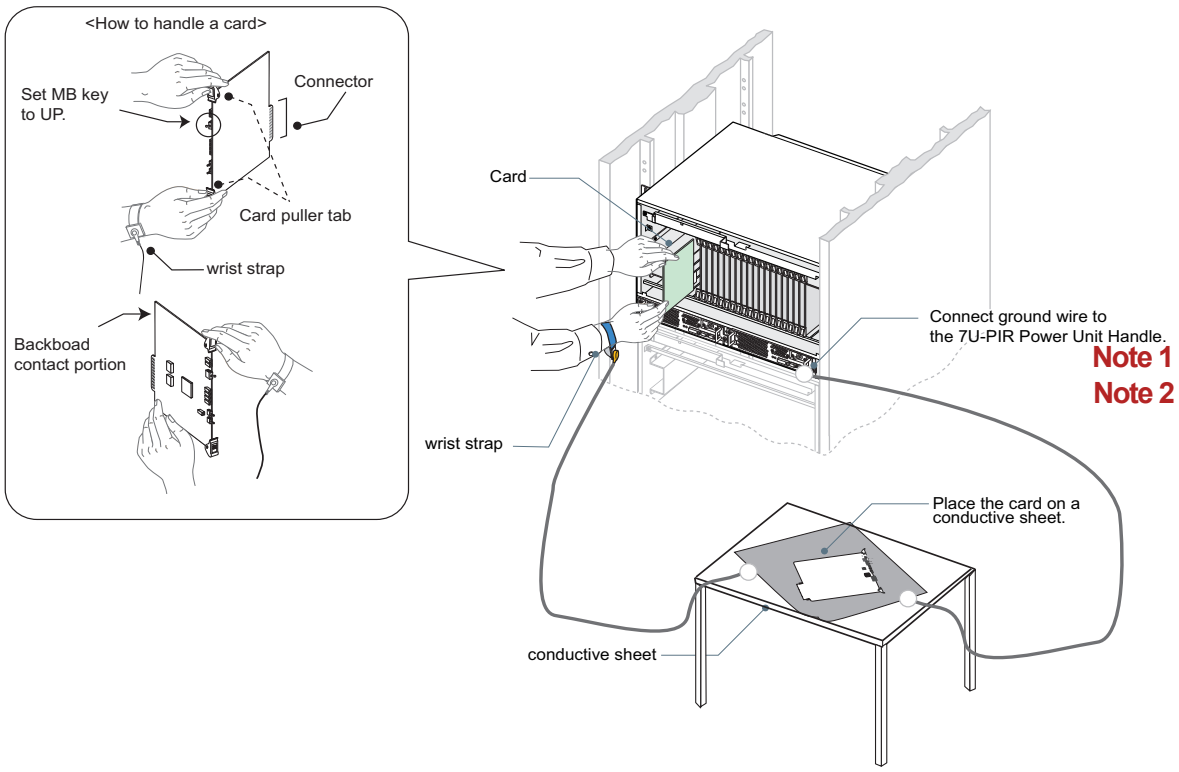
(a) To protect the circuit card from static electricity, wear a wrist strap before handling the circuit card.

(b) Before extracting the circuit card from its mounting slot, make sure to turn the card off by setting its MB switch to the UP position.

(2) When holding a circuit card by hand, wear gloves and be careful not to touch mounted parts, gold-plated terminal, etc., on the circuit card.

The 3M® Model 8012 Portable Field Service Kit, shown in the figure below, is recommended as an effective countermeasure against static electricity.

How to Handle Circuit Cards

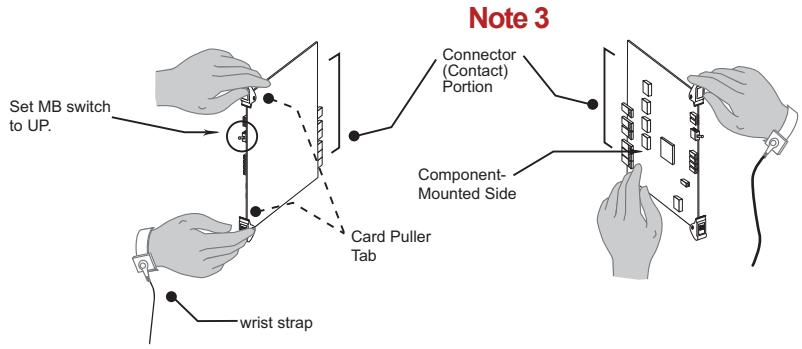


Note 1: A ground wire should be connected to the frame which is not coated by an insulating material.

Note 2: In the case of 8U-PIR, connect ground wire to the frame of the rack.

How to Hold a Circuit Card

When holding a circuit card with bare hands, do not touch the component mounted side of the card or the connector portion.

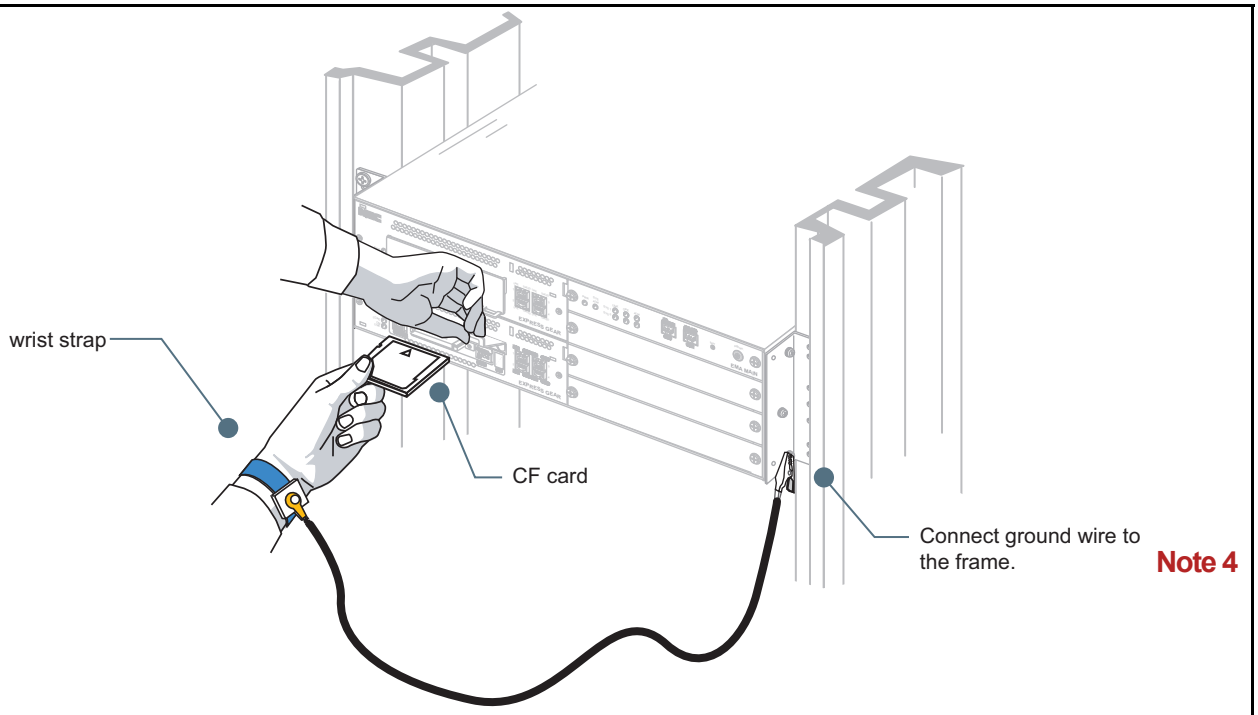


Note 3: Do not touch the Gold-Plated Terminal with bare hands.

(3) Be sure to take appropriate anti-static measures when handling a CF card.

Note: Do not insert or remove the CF card while the Telephony Server is in operation. Turn it OFF first.

How to Handle a CF card



Note 4: A ground wire should be connected to the frame which is not coated by an insulating material.

(4) When a circuit card appears faulty, check the following items before replacing it with a spare:

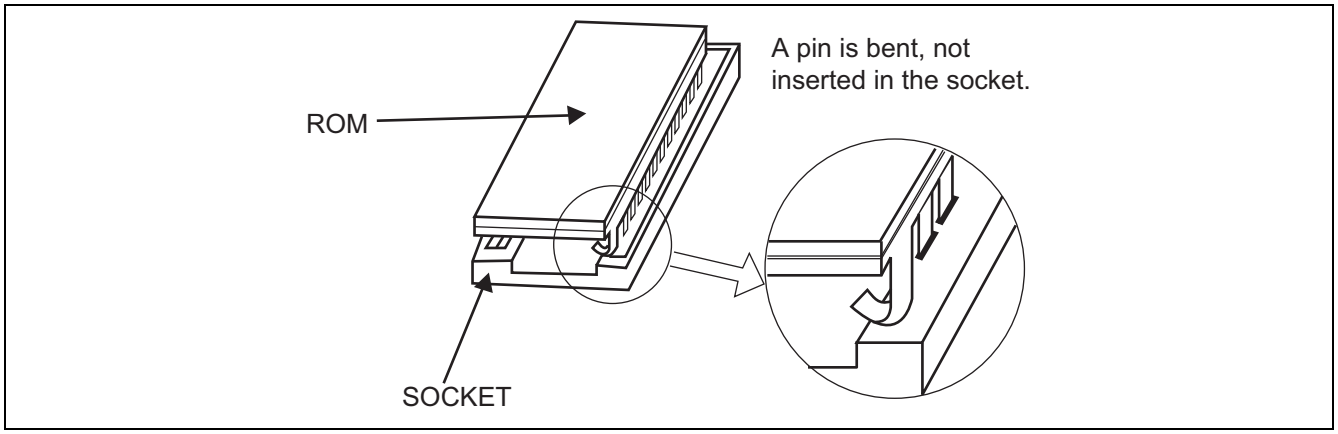
(a) Poor connector contact at the circuit card may be responsible for the fault. Repeat insertion and extraction of the circuit card a few times. Clean the connector portion, and recheck for proper operation.

(b) Check the lead wires of vertically-mounted parts (resistors, capacitors, etc.) to ensure they have not shorted each other or broken.

(c) Check the back side of the circuit card to see if there is any short-circuited soldered portion, or modified cross connection wires erroneously left unconnected.

(d) Check the ROMs to ensure proper seating in the IC socket. The figure below shows a leg that is bent and not set in the socket.

How to Set the ROM in IC Socket

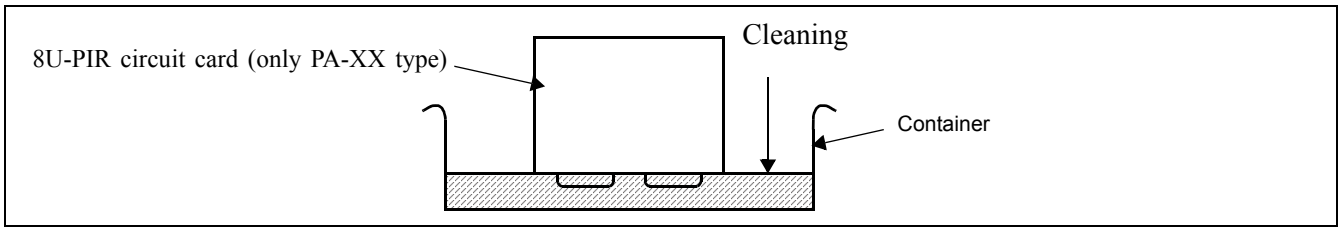


(5) How to clean the connector portion (gold-plated terminal):

Note: This step is required only for 8U-PIR circuit cards.

(a) Dip the gold-plated terminal portion in the cleaning fluid for three to five seconds (only PA-XX type circuit card), as shown in the figure below.

How to Clean the Connector Portion

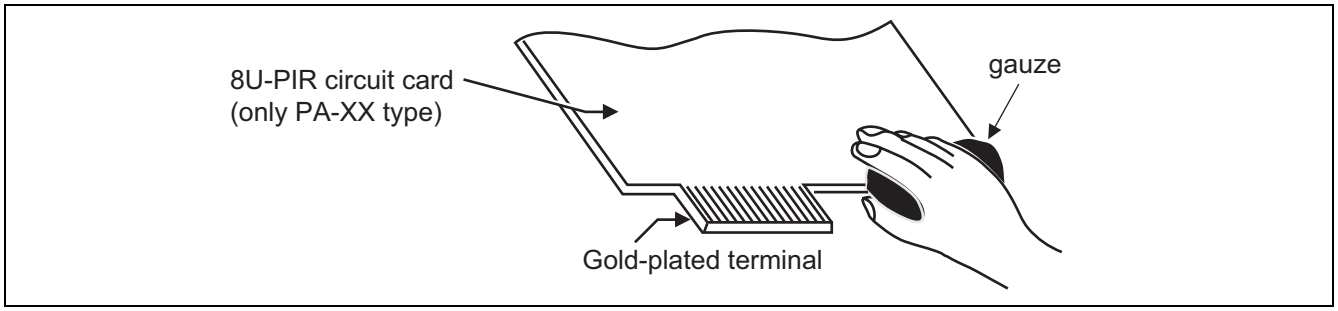


Note: Some of the parts are subject to damage if they come in contact with the cleansing liquid. Be careful to allow only the connector portion (gold-plated terminal) to contact the cleaning liquid.

Note: Be sure to use fresh cleaning fluid (FREON or isopropyl alcohol).

(b) Using a soft cotton cloth, wipe both sides of the connector portion (gold-plated terminal) clean (only PA-XX type circuit card), as shown in the figure below.

How to Clean Gold-Plated Terminal



Note: Use cloth (gauze, etc.) to clean.

Note: After wiping, be careful not to leave lint on the surface of the circuit card.

(6) When a check on the flat cable or LT cable is directed in the tree, check the following items:

(a) Make a visual check to see if the connector is properly connected.

(b) Poor connector contact may be responsible for the fault. Repeat connection and disconnection a few times, and check again to see if the connector is properly connected.

(c) Perform continuity test on the flat cable.

(7) When replacing the circuit card is directed in the tree, replace the circuit card with a spare as per Chapter 5.

(8) When multiple circuit cards appear faulty, before replacing them with spares, remount them (one at a time) into their slots, to determine which cards should be replaced.

- The following is an example where the fault was recovered after the replacement of circuit cards:

START

- Set the first circuit card back into its mounting slot
  - If the fault recurs: Replace the circuit card.
- Set the second circuit card back into its mounting slot
  - If the fault recurs: Replace the circuit card.
- Set the third circuit card back into its mounting slot
  - If the fault recurs: Replace the circuit card.

END

If a circuit card is found faulty, send the faulty circuit card for repair.

(9) When a fault recovery is completed, use the RALM command to clear all the alarm indications and registered system messages. If required, restore temporary cross connections and transient data for testing to the original ones.

4.2 How to Follow Diagnostic Procedure/Fault Repair Procedure

(a) Diagnostic Work

A fault diagnostic procedure by system message is explained in the TREE format on an individual system message basis.

- Proceed with judgment as to whether the fault status coincides with the indicated status, following the sequence beginning from START.
- How to proceed with the diagnosis work is explained in the figure below.

STEP 1 Determine whether the fault coincides with the fault status (1) in the figure entitled "Diagnostic Work Items and Symbols Example."

STEP 2 If the fault status does coincide, the fault is indicated by (2). Repair the fault by referring to the relevant section in Chapter 4. Otherwise, proceed to (3).

STEP 3 Perform the work indicated by (3). The result of the work (3) is broken down as indicated by (4).

STEP 4 Determine whether the result of work (3) coincides with the status indicated by (5). If so, the fault(s) is/are indicated either by (6) or by (7). If not, proceed to the next Step.

STEP 5 Perform the work indicated by (8), and if the result of the work is the same as the status indicated, the fault is indicated by (9). If the fault repair work indicated by (9) affects another normal line, recheck the work as indicated by (10).

(b) Fault Repair Procedure

A fault repair procedure is explained by means of TREE format in Chapter 4. The following explains how to follow the TREE format and proceed with designated work. See the figure entitled "Recovery Procedure Example."

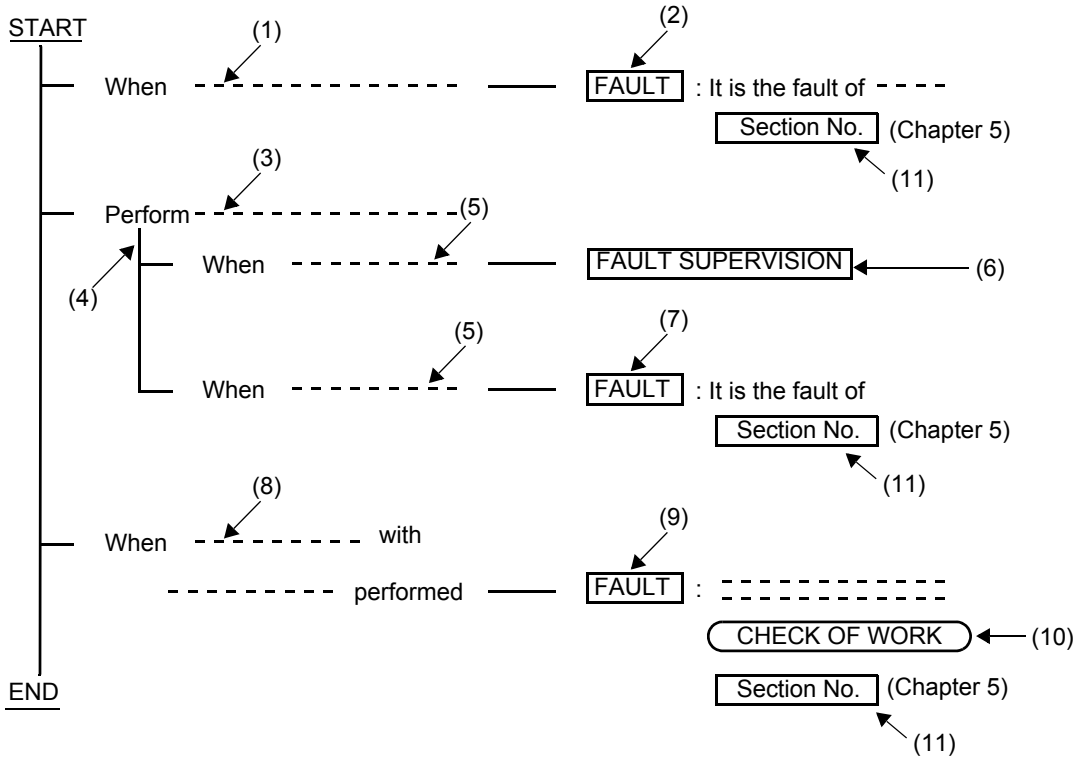
- Begin from START and proceed with the necessary repair work following the sequence.
- When a faulty circuit card (or circuit cards) is suspected, replace the faulty circuit card with a spare in accordance with the work procedure pertaining to that specific circuit card.

STEP 1 Replace the circuit card indicated by (A) with a spare and check it. Perform the detailed work as per (B). If the fault status is beyond repair, proceed to the next step.

STEP 2 If the range of the fault or the system configuration is as indicated by (C), perform a check as indicated by (D). If the fault status is beyond repair, proceed to the next step.

STEP 3 Replace the circuit card indicated by (E) with a spare and check it. The detailed procedure indicated by (G) varies with the system configuration indicated by (F).

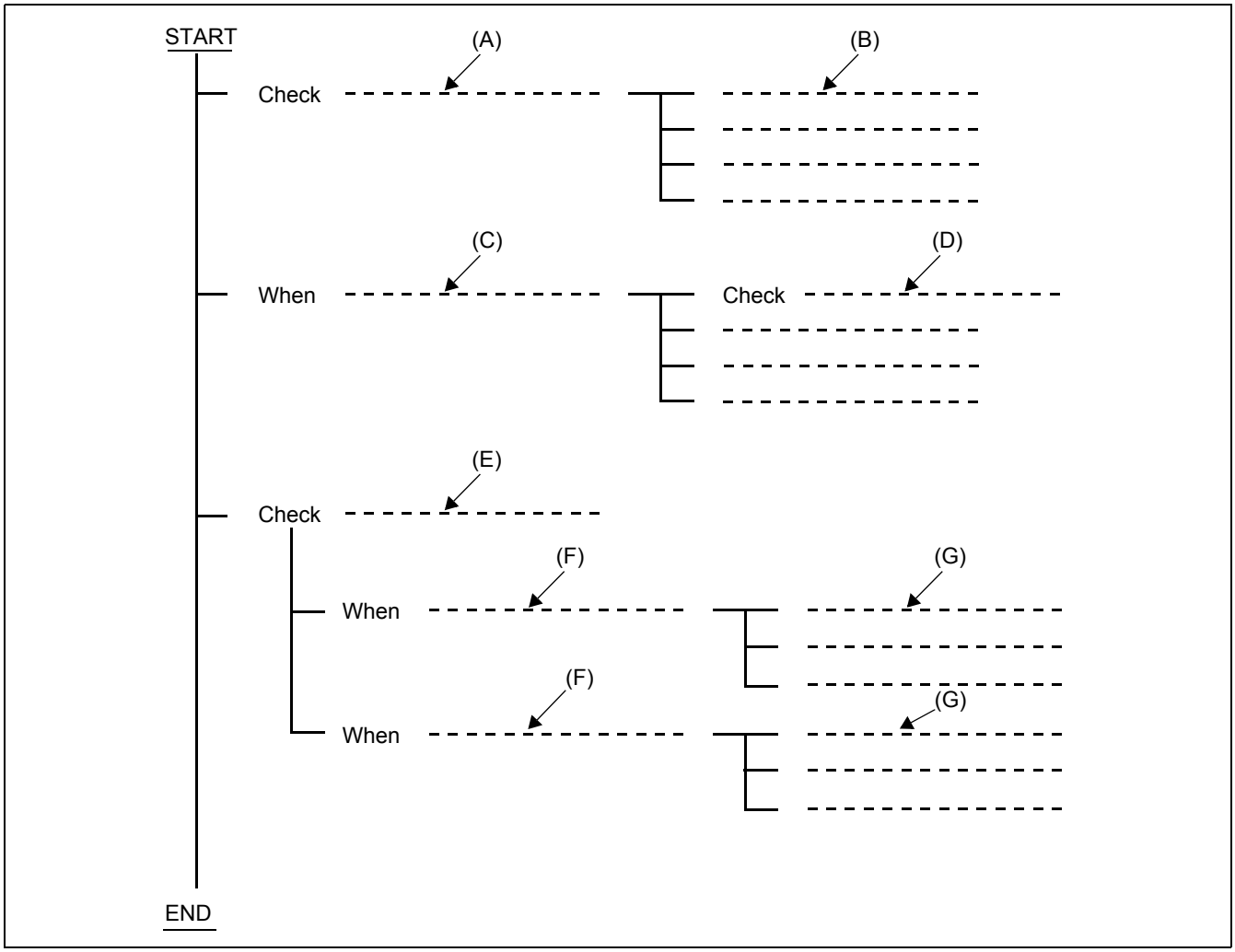
Diagnostic Work Items and Symbols Example



Note:

(1):	Judgment of fault status
(2),(6),(7),(9):	When the fault status coincides with the indication, the cause of the fault is indicated.
(11):	When repairing the fault, refer to the relevant section in Chapter 4.
(3):	Operating items for diagnosis
(4):	Branching of the result of the operation
(5):	Judgment of the status of the result of the operation
(8):	When operating method is unknown, refer to Chapter 5.

Recovery Procedure Example



5. REPORTING FAULT TO NEC

When the cause of a fault is uncertain, make note of the situation involved and report it to NEC. When forwarding faulty circuit cards to NEC, exercise caution to protect from static electricity.

5.1 Fault Reporting Method

The following three items must be included in the report without fail:

(1) Faulty situation (reports should be similar to "Dial Tone is not heard only on individual lines," "incoming C.O. line calls are not able to be terminated only to a specific ATTCON/DESKCON," etc.)

- Faulty phenomena

  On lifting the handset, Dial Tone is not heard but side tone is heard, etc.

- History of fault

  When did the fault occur? What kind of repair procedure has been executed? Does the fault still exist or not exist? etc.

- Range of fault

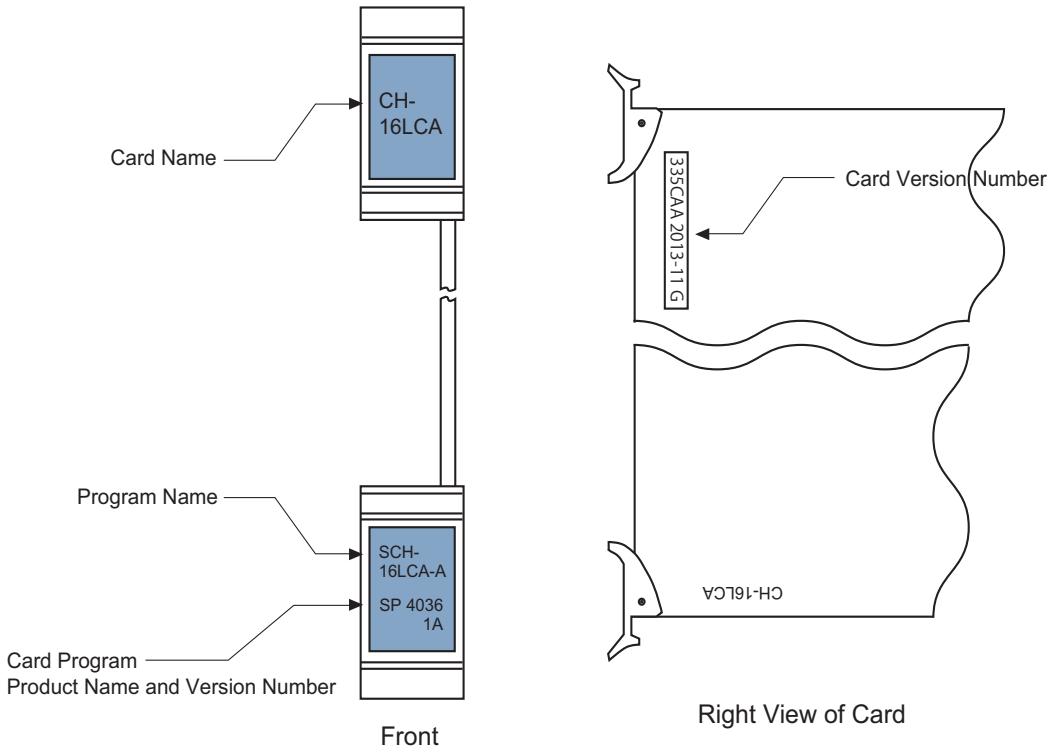
  Range of fault should be reported: Single line?, Specific trunk?, Specific circuit card?, Specific PIR?, Whole system?, etc.

(2) Circuit Card Version Number, Program Name, and Program Package Version Number of the circuit card. See the following figures:

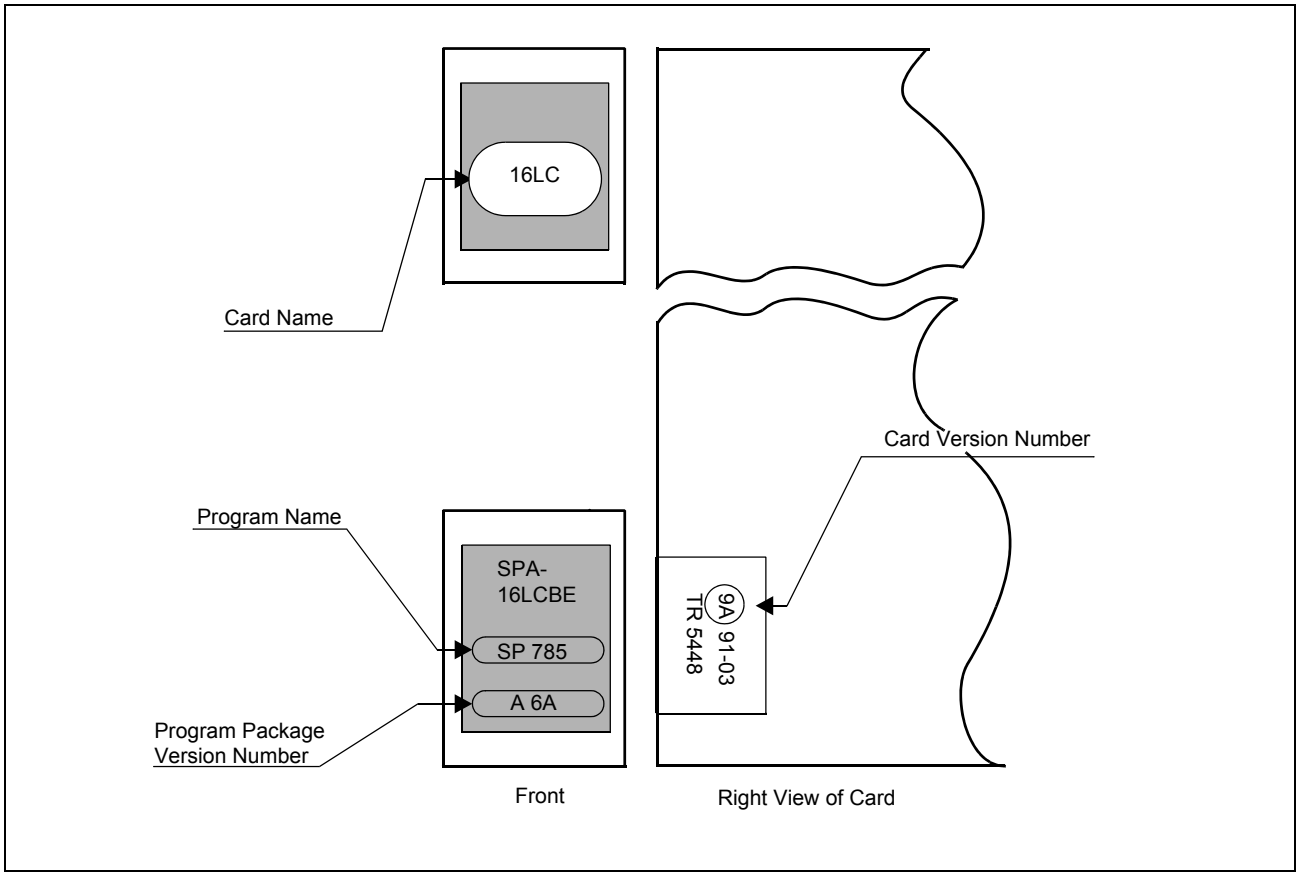
Version Number, Program Name, and Program Package Version Number for 7U-PIR Card (7U-PIR circuit card)

Version Number, Program Name, and Program Package Version Number for 8U-PIR Card (8U-PIR circuit card)

Version Number, Program Name, and Program Package Version Number for 7U-PIR Card



Version Number, Program Name, and Program Package Version Number for 8U-PIR Card



5.2 Forwarding Faulty Circuit Card Method

Send the faulty circuit card to the NEC agent to whom a request is made for a replacement card. Adhere to the following procedure for sending the faulty circuit card:

(1) Insert connector covers onto the circuit card terminals.

(2) Put the circuit card into a static electricity protective bag.

(3) Pack the circuit card with air cap, etc.

(4) Set the circuit card into the cardboard box for that specific circuit card.

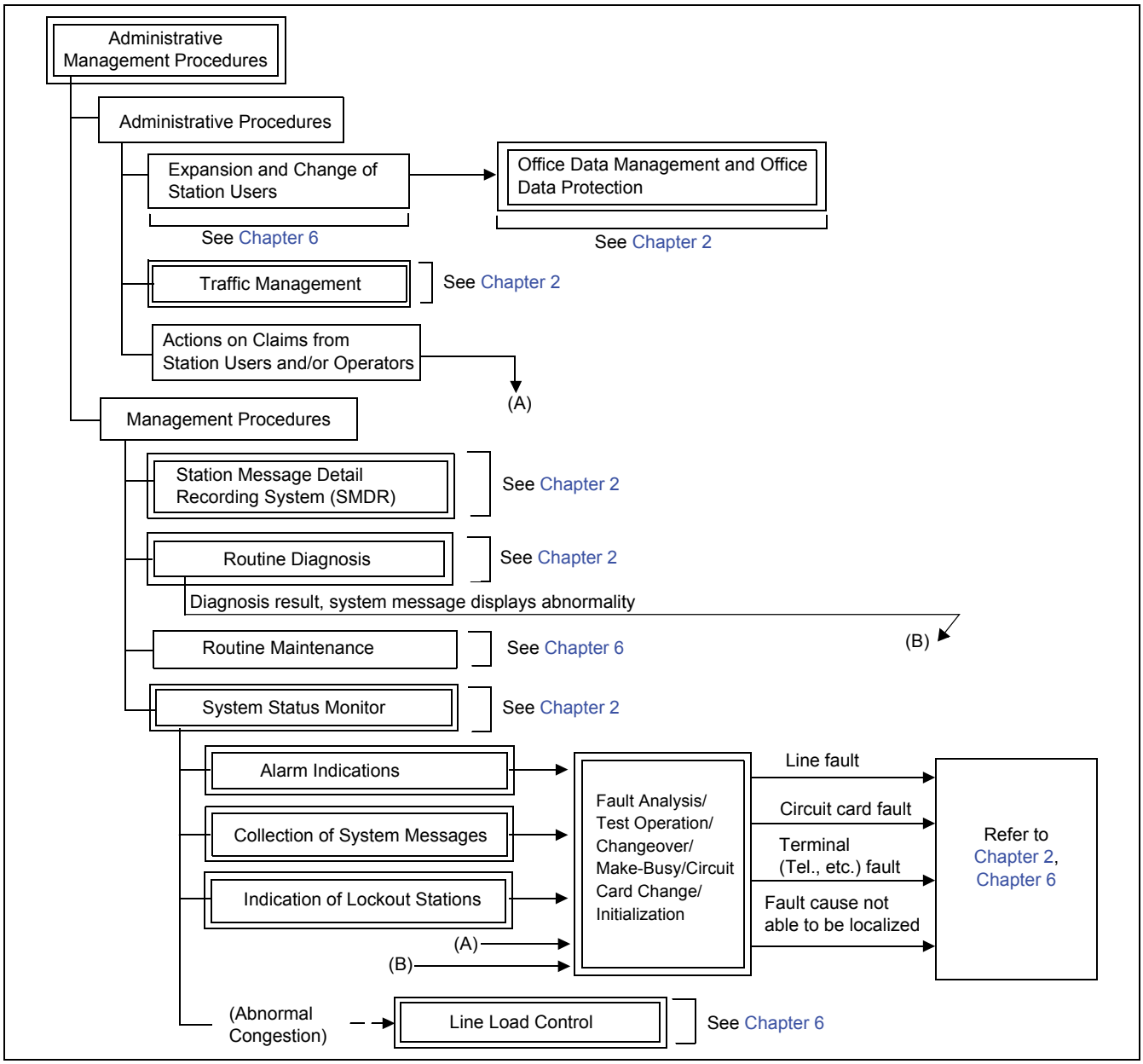
(5) If multiple circuit cards are sent, set each circuit card in a separate cardboard box and stuff the box with shock absorbing material.

Note: When sending a faulty circuit card, put it in a static guard bag. To prevent damage, **never** place the circuit card in a vinyl bag or ship it without a protective bag.

6. SYSTEM MAINTENANCE OUTLINE

This chapter explains the outline of fault diagnosis and duties necessary to maintain the system. The following figure shows the workflow of the administrative management procedures.

Flow of Administrative Management Procedures



7. BASIC KNOWLEDGE

This section identifies the information necessary for the system operations and maintenance procedures.

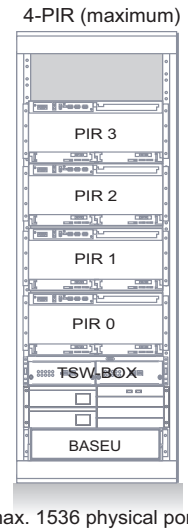
- System Configuration
- Line Equipment Numbers (LENS)
- Local Partition (LP) Number
- Fault Detecting Function
- Range of Faults Specification

7.1 System Configuration

The following figure shows the system configuration of the fully expanded 1-IMG and 4-IMG type. For details on each module accommodation, see the figures entitled "Face Layout of 1-IMG System," "Face Layout of 4-IMG System (Telephony Server and TSW-BOX)," "Face Layout of 4-IMG System (Telephony Server and TSWR)," and "Face Layout of 4-IMG System (each IMG)."

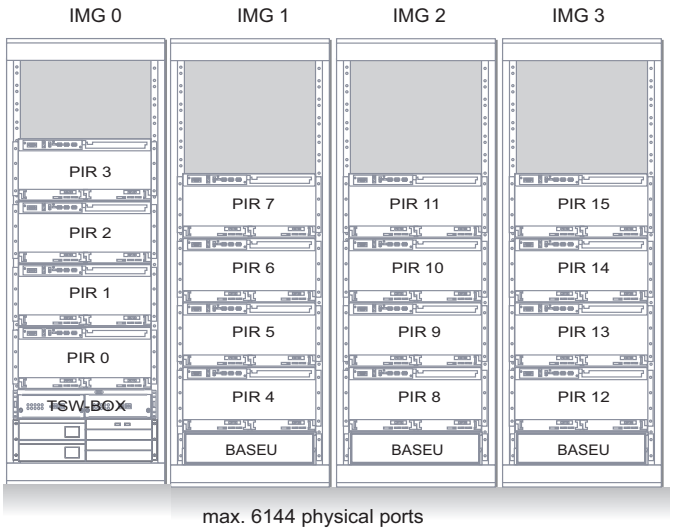
System Configuration

1-IMG (DC Powered Model)



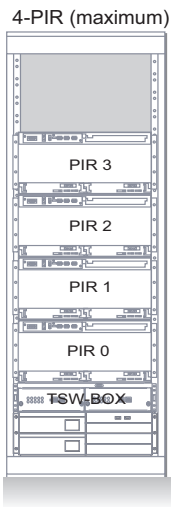
max. 1536 physical ports

4-IMG (When Using TSW-BOX)



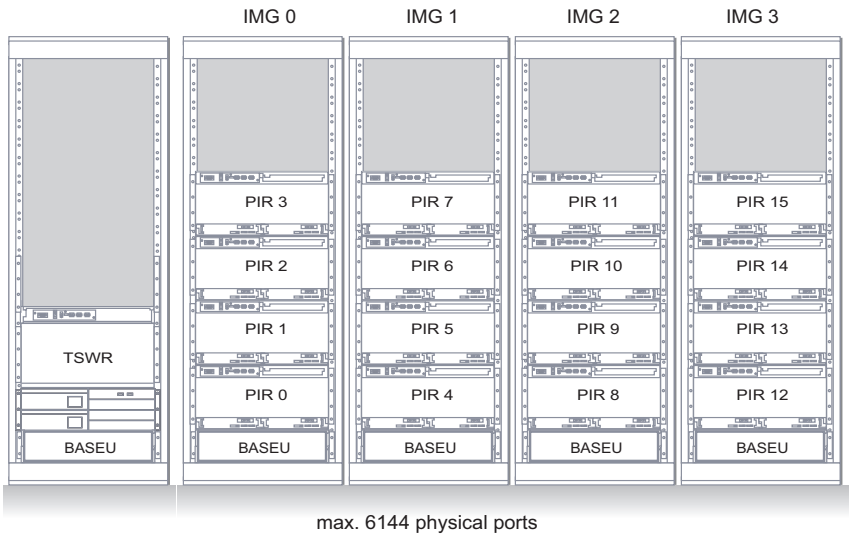
max. 6144 physical ports

1-IMG (AC-Powered Model)



max. 1536 physical ports

4-IMG (When Using TSWR)

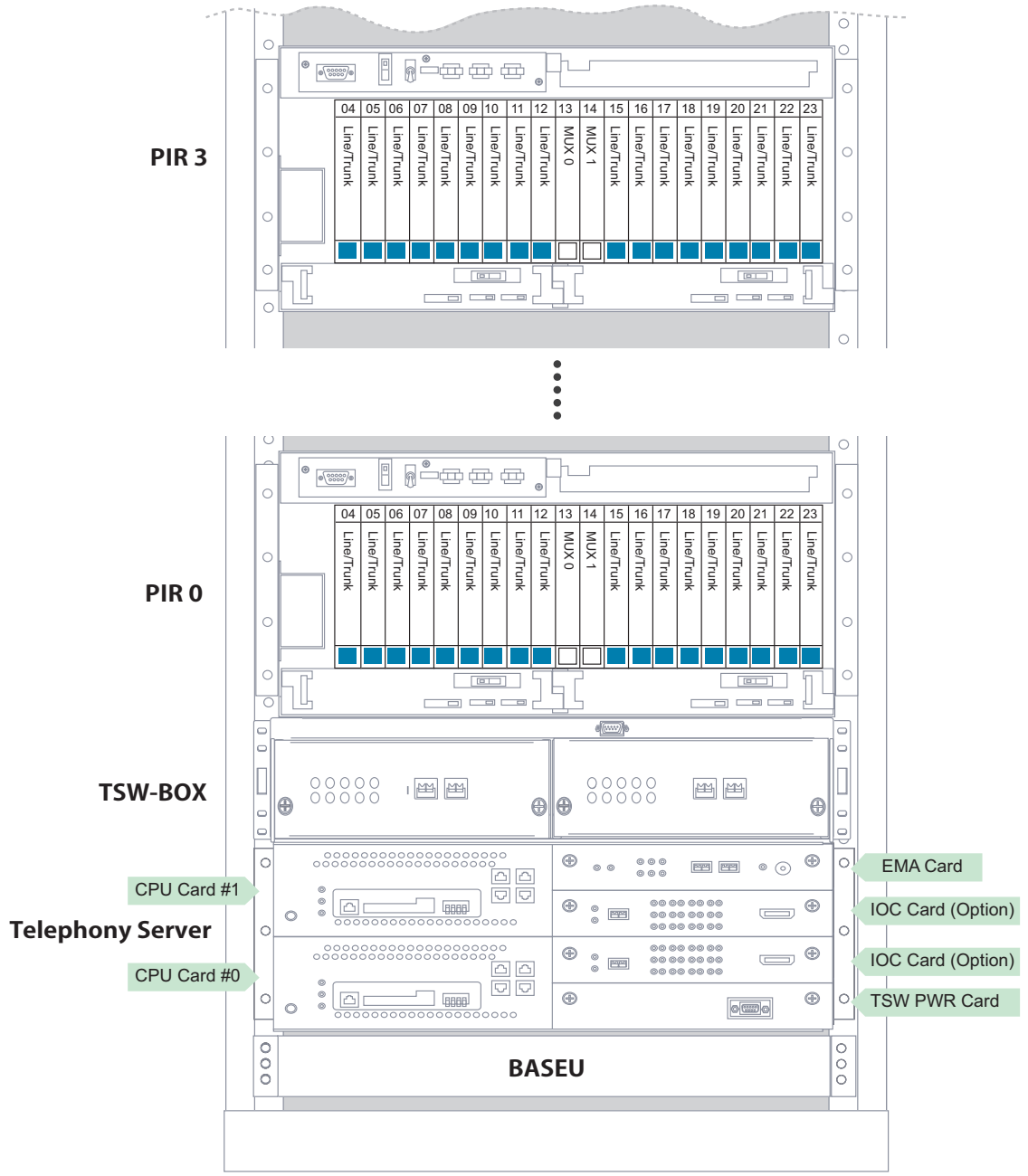


max. 6144 physical ports

PIR: Port Interface Rack
BASEU: Base unit

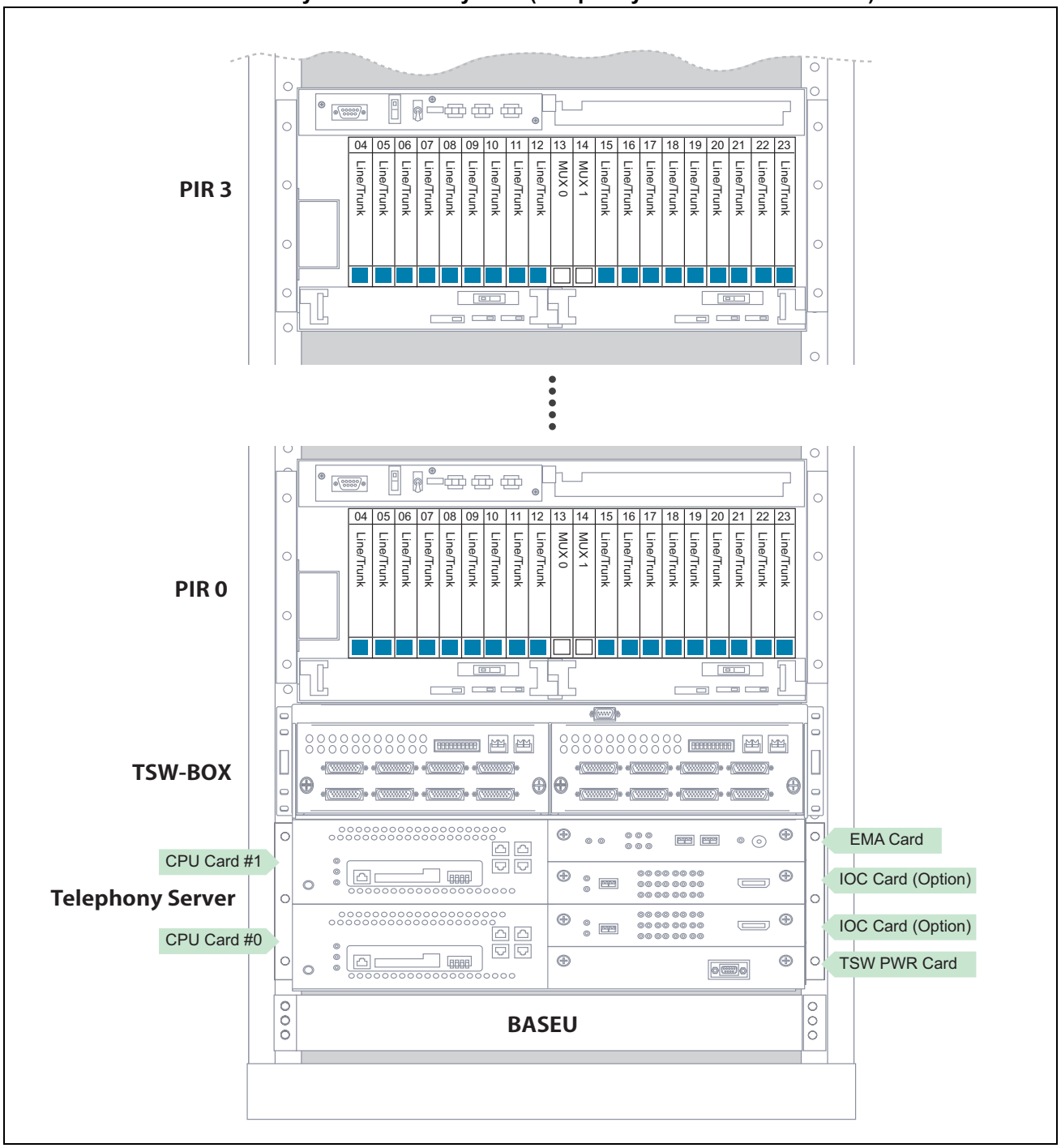
Note: The above figure shows the layout image of 7U-PIR as an example.

Face Layout of 1-IMG System



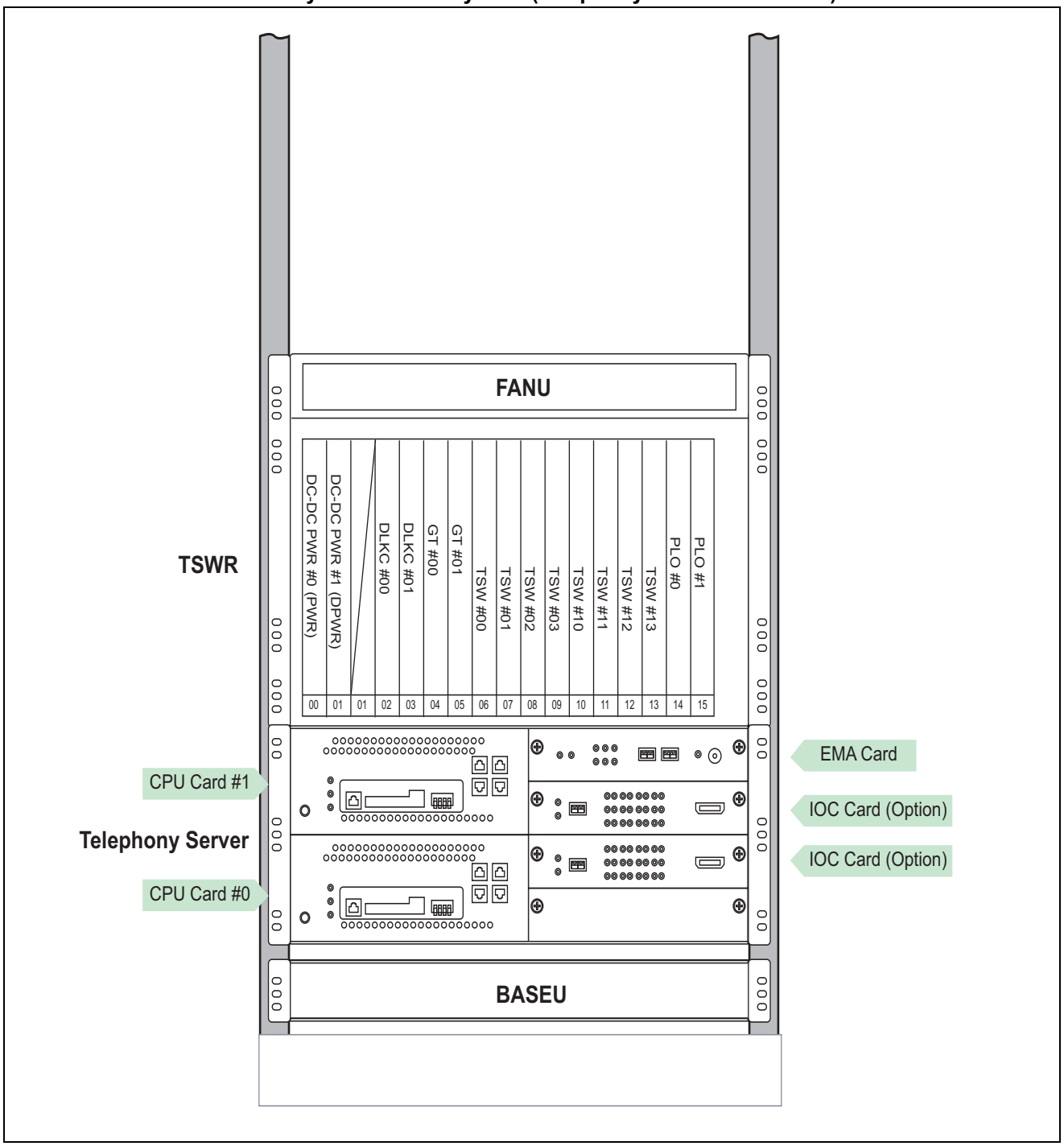
Note: The above figure shows the layout image of 7U-PIR as an example.

Face Layout of 4-IMG System (Telephony Server and TSW-BOX)

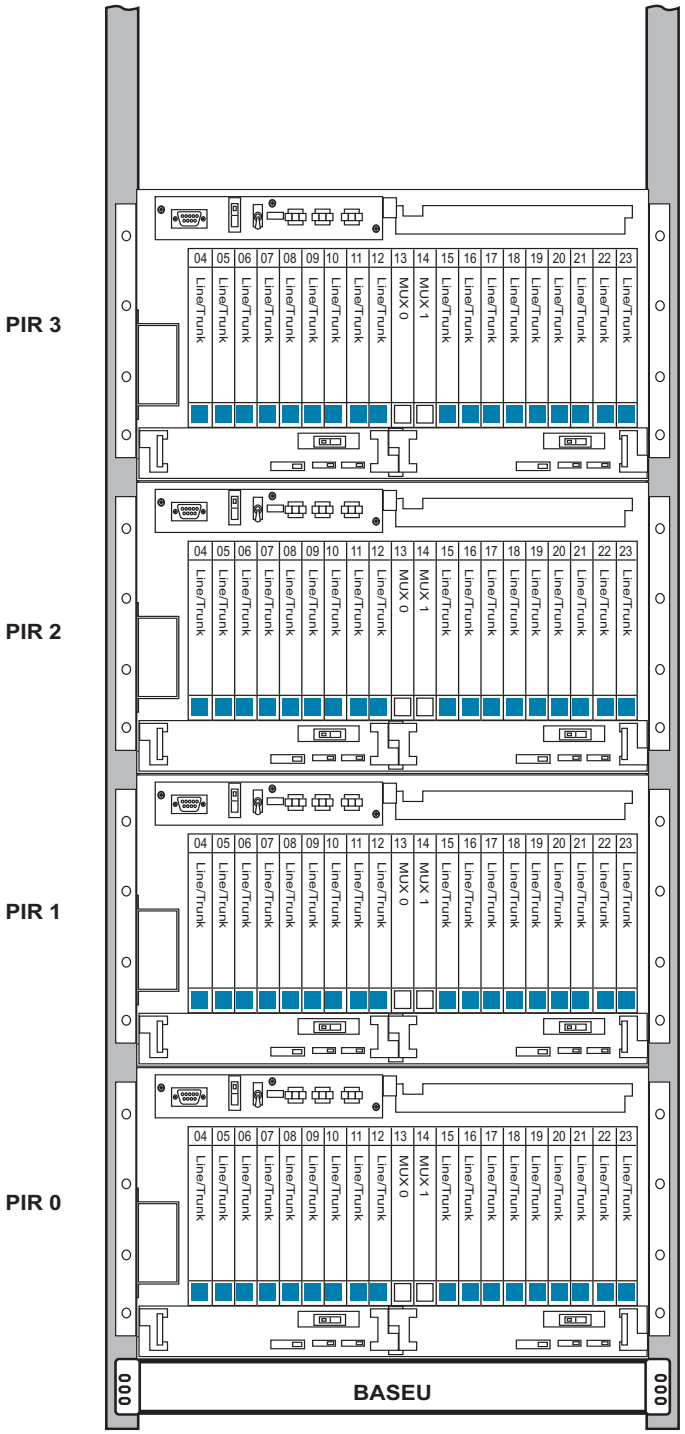


Note: The above figure shows the layout image of 7U-PIR as an example.

Face Layout of 4-IMG System (Telephony Server and TSWR)



Face Layout of 4-IMG System (each IMG)



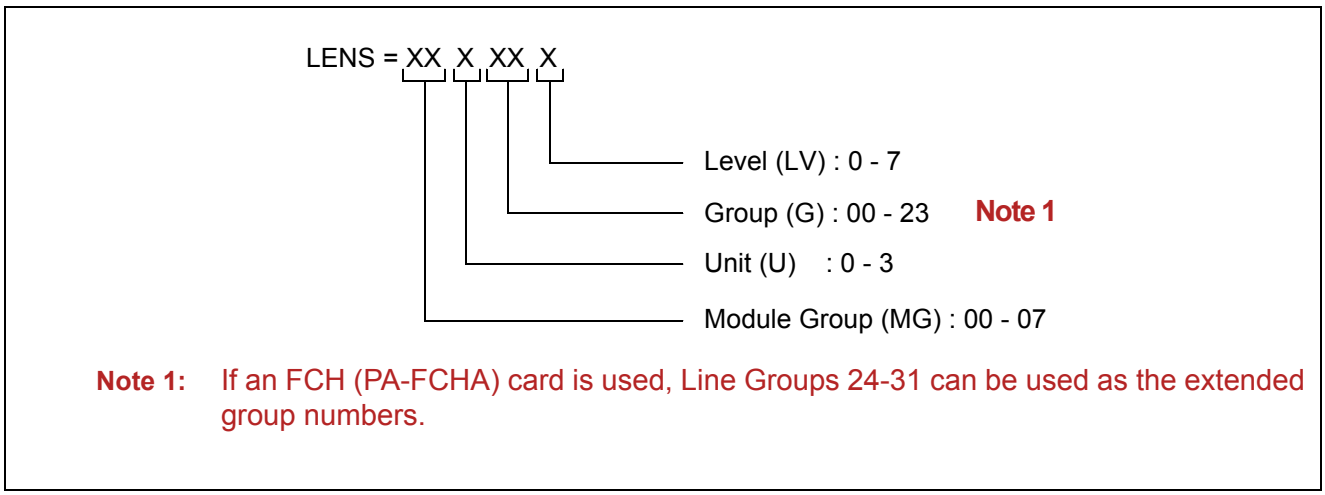
Note: The above figure shows the layout image of 7U-PIR as an example.

7.2 Line Equipment Numbers (LENS)

The Line Equipment Numbers (LENS) are used to specify the location of a circuit (trunk/port) in any of the PIR universal slots. Refer to the figures in this section, and confirm the LENS format used in the system.

As shown in the figure below, the LENS consists of six digits: two digits for Module Group (MG), one digit for Unit (U), two digits for Group (G), and one digit for Level (LV).

LENS Format

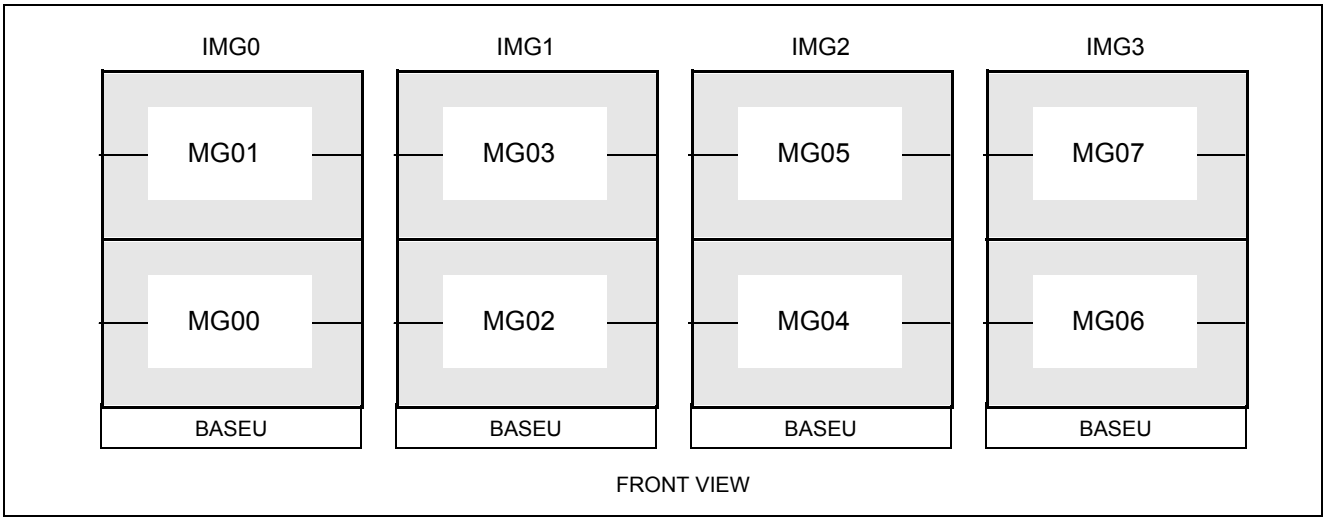


Note 1: If an FCH (PA-FCHA) card is used, Line Groups 24-31 can be used as the extended group numbers.

7.2.1 Module Group

The following figure explains the Module Group (MG). In a fully expanded system, the MG number ranges from 00 to 07.

Module Group Allocations

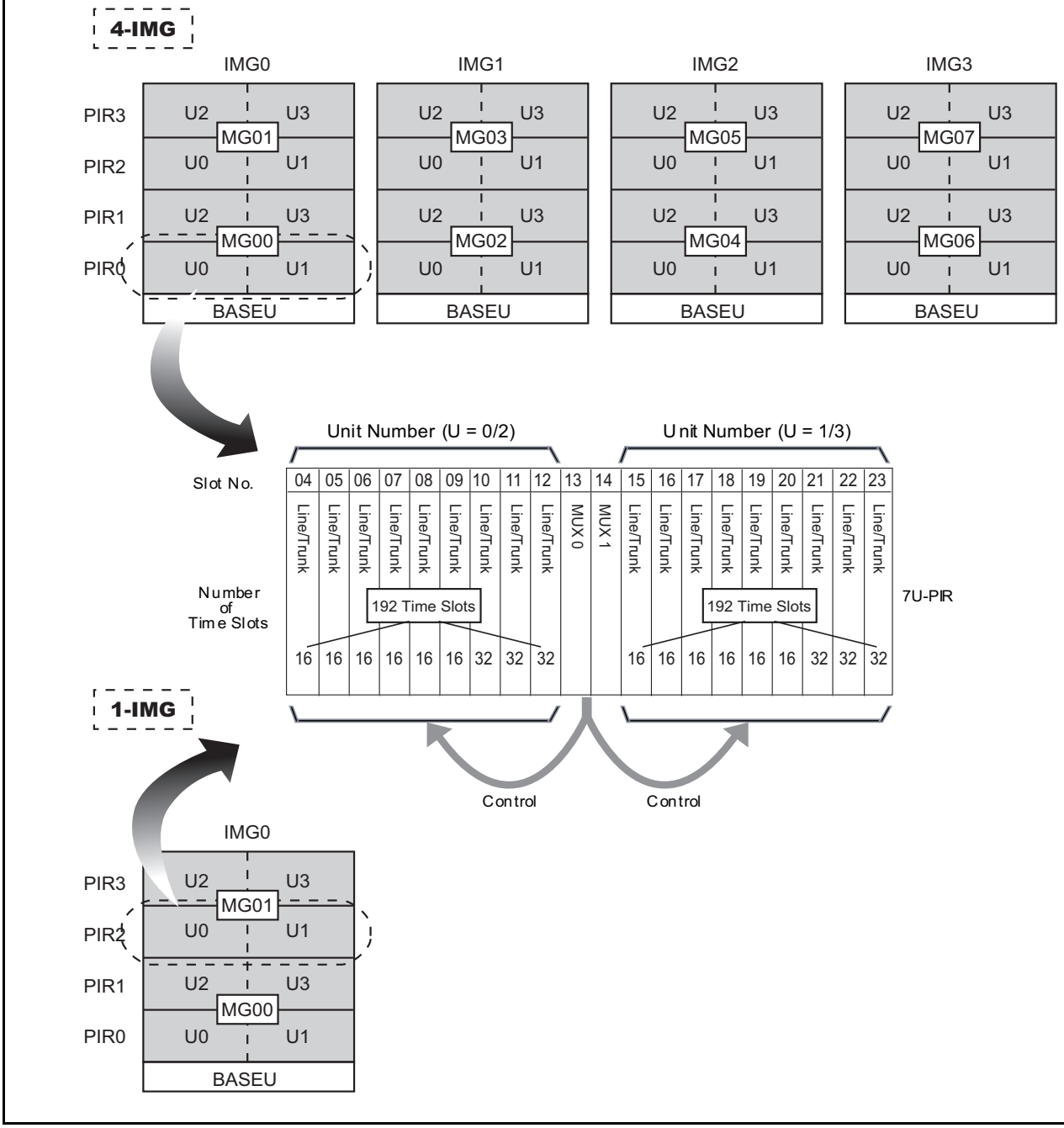


7.2.2 Unit

The figure entitled "Unit Number Allocations," that represents a fully expanded system, explains the Unit (U) numbers. The numbers range from 0 to 3, and each unit represents the PIR Universal Slot 04-12 (U 0/2) or 15-23 (U 1/3).

Unit Number Allocations

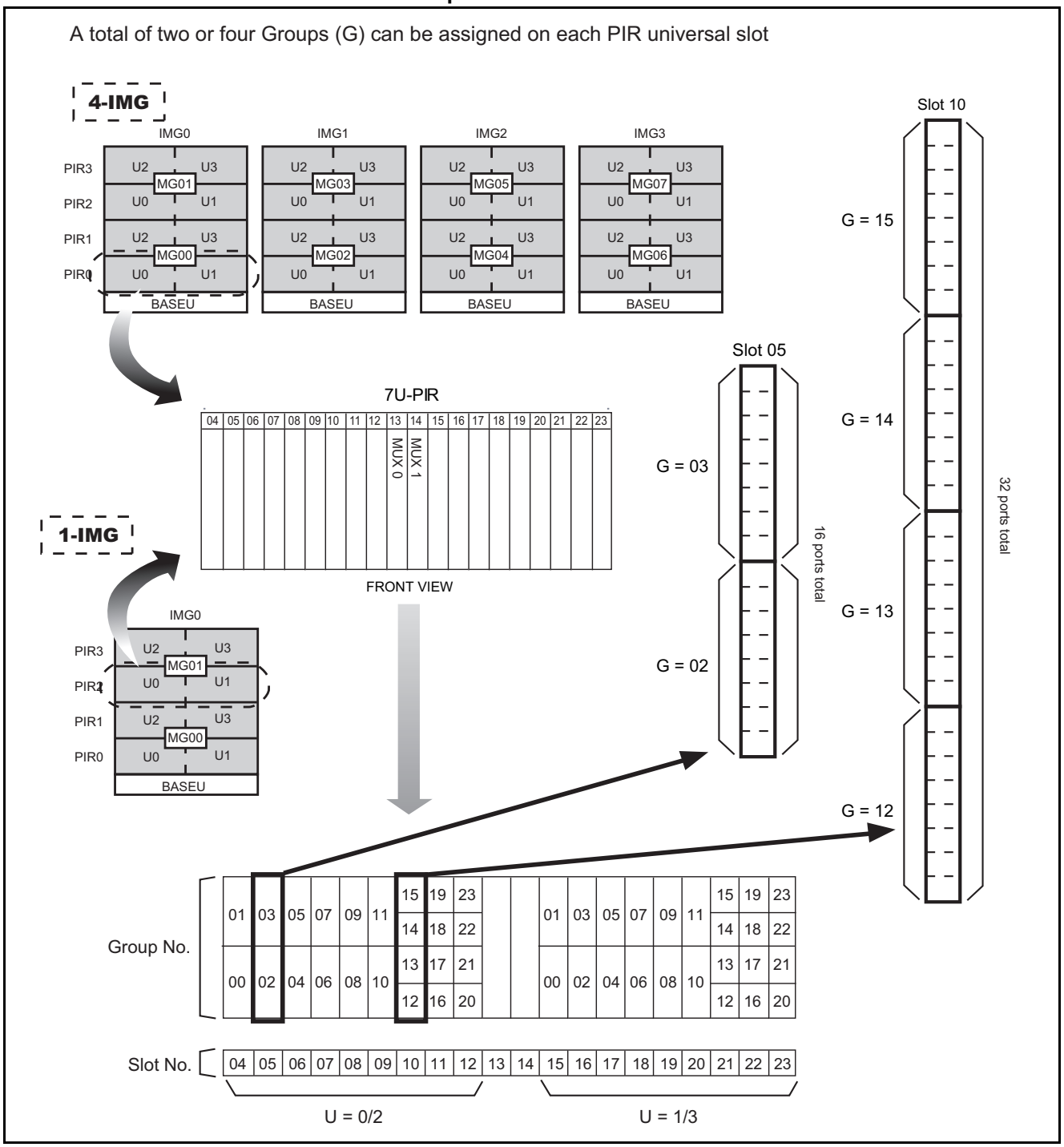
On each Module Group (MG: 00 - 07), a total of four Units (U0-U3) can be assigned.



7.2.3 Group

The Group (G) numbers are allocated as shown in the figure below. A total of two Groups are assigned on each universal slot within the PIR. Slots 10, 11, 12, 21, 22, 23 can contain a total of four Groups as an exception.

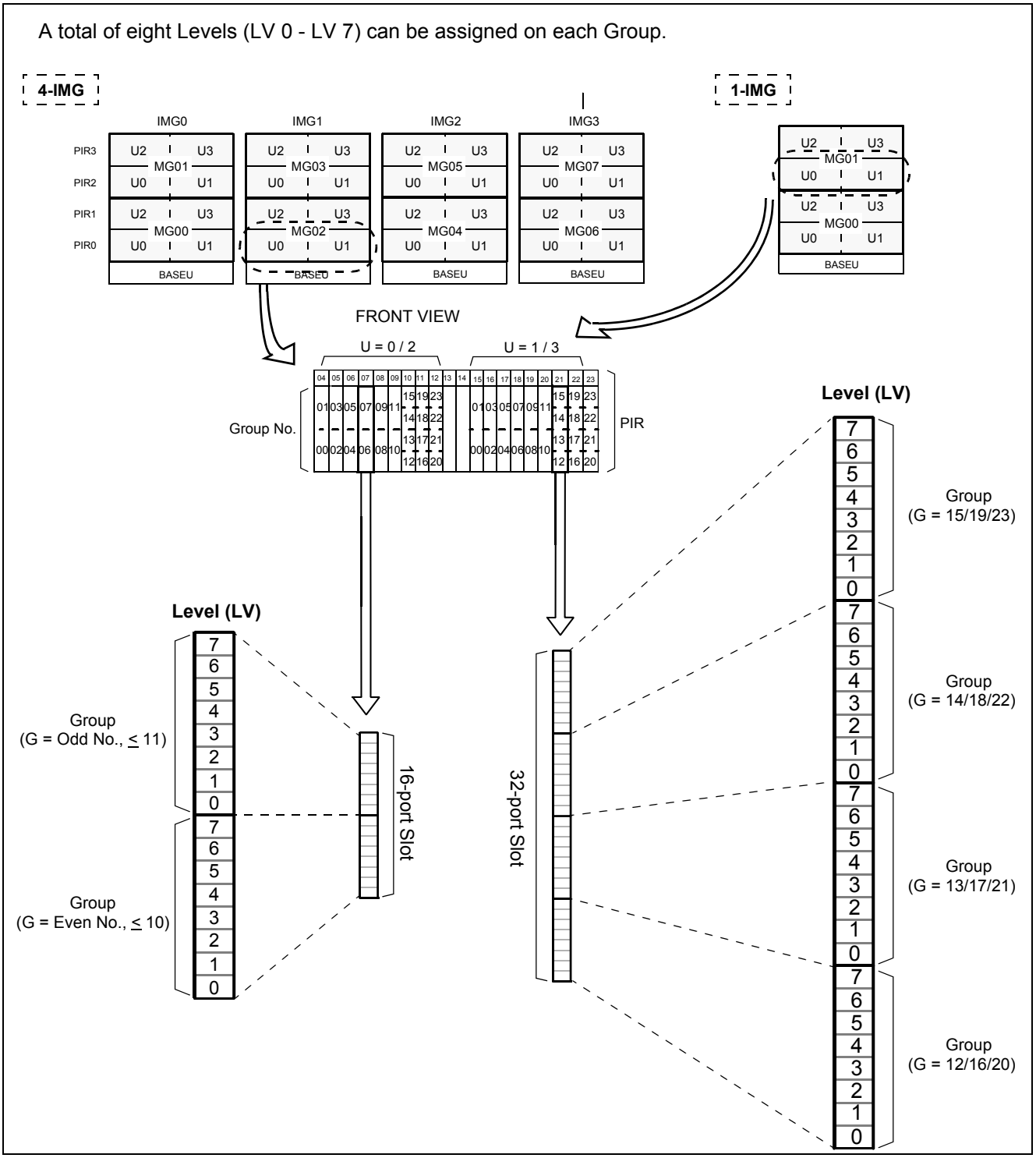
Group Number Allocations



7.2.4 Level

The following figure explains the Level (LV) numbers. There are a total of eight Levels (LV 0 - LV 7) on every Group number, that ranges from 00 to 31.

Level Number Allocations



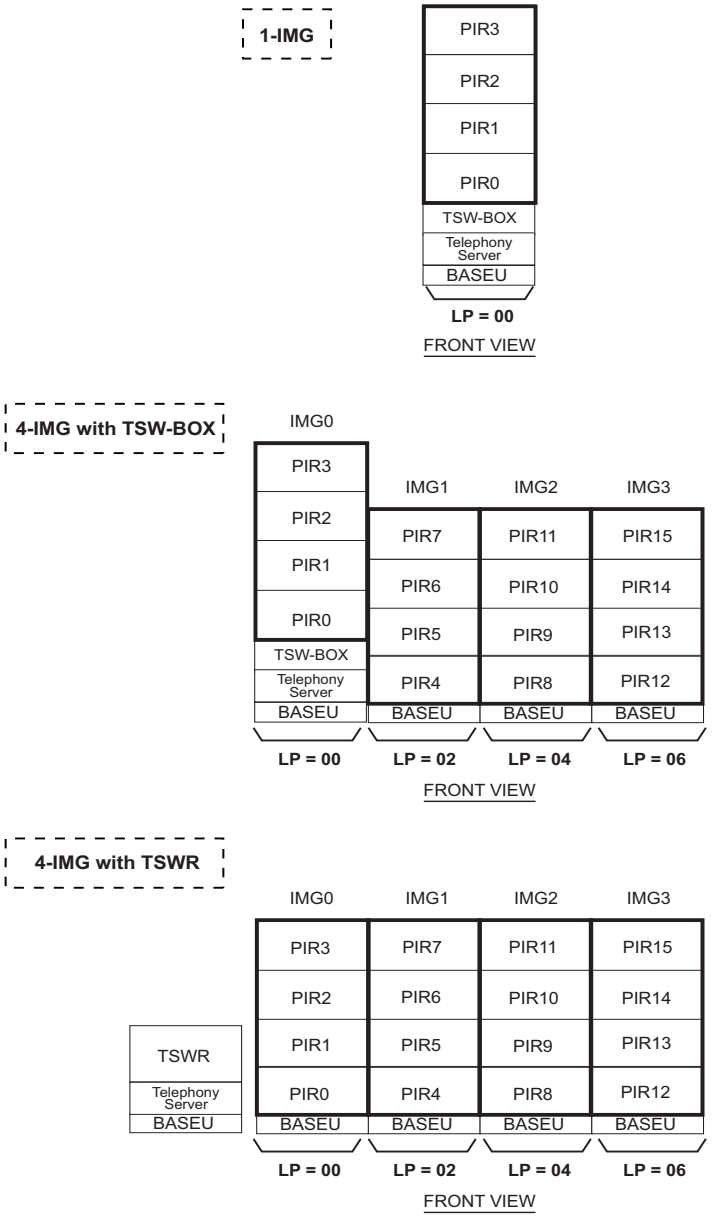
7.3 Local Partition (LP) Number

The Local Partition (LP) number refers to a logical local processor number, theoretically assigned for each IMG that consists of four (or less) Port Interface Racks (PIR). Though the local processor does not actually exist in any of the IMGs, the system can apply the two-digit LP number to each IMG (see the figure below) on its data memory program. The LP numbers are used primarily in the following cases:

- Display of system messages
- Assignment of line load control data (ALLC command)
- Backup for Call Forwarding/Speed Calling data, etc.

LP Number Allocations

The Local Partition number (two digits, even number) is assigned as follows.



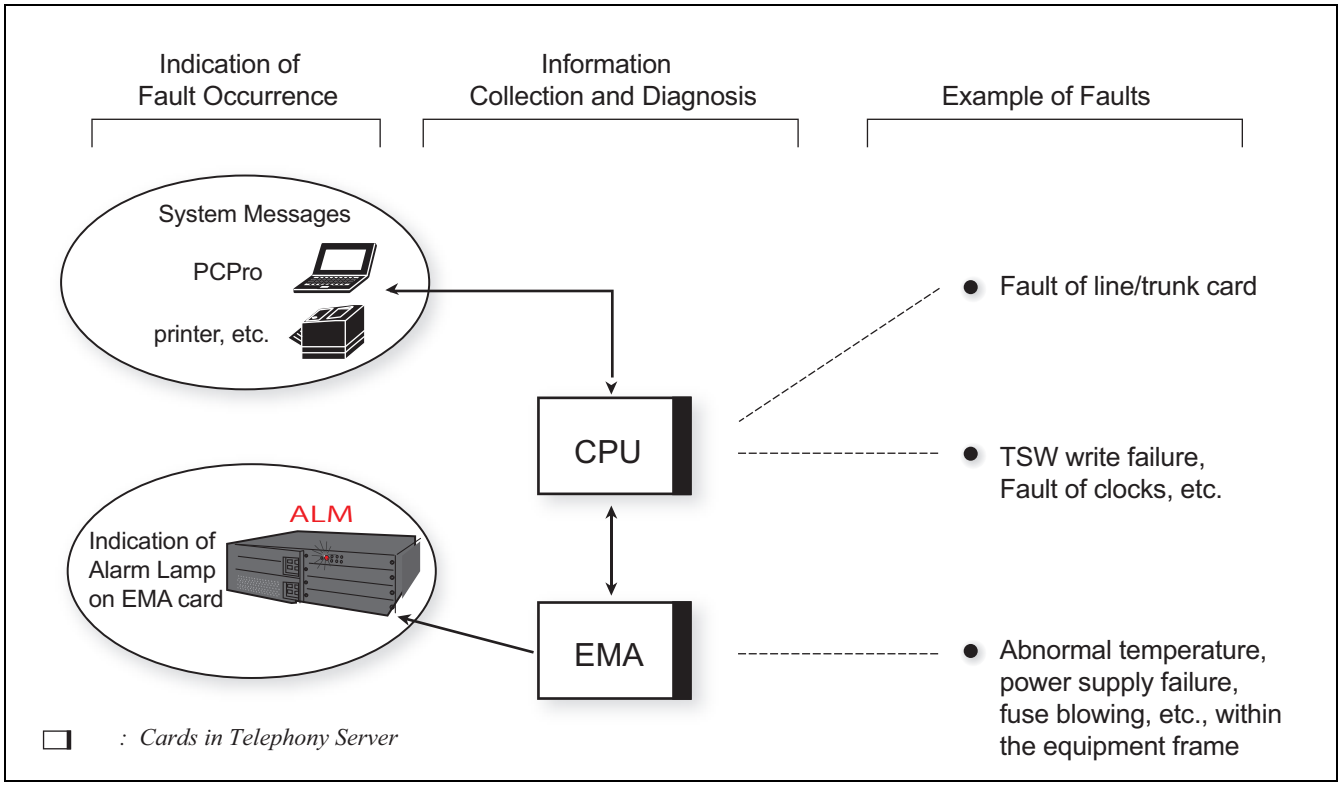
7.4 Fault Detecting Function

The system finds a fault by its fault detecting circuit and the fault detecting program. Once a fault occurs, the system initiates a remedial action such as system changeover, make-busy setting, or restart processing by the automatic diagnosis function. This action reduces the influence of the fault so that system servicing may be minimized. The result of the process taken and the fault situation are indicated for equipment concerned.

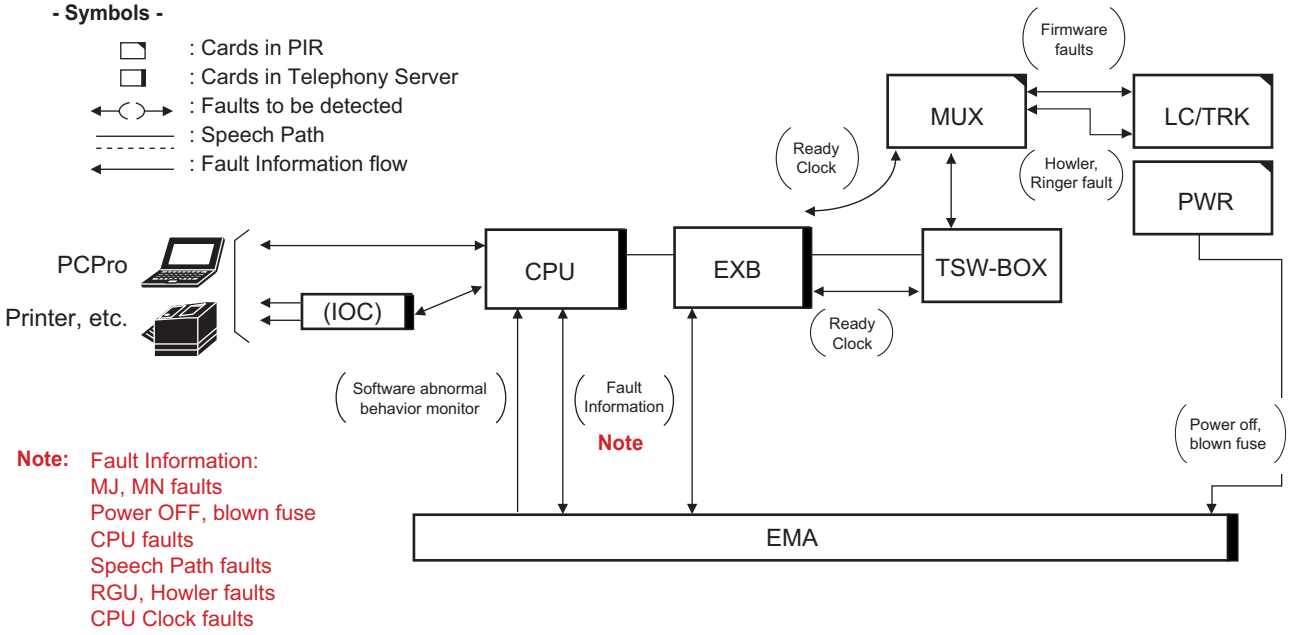
Among the faults, those related to speech path (noise, one-way speech, speech inability, etc.) are not detectable. Since these fault reports are obtained from a station or operator, periodic trunk tests must be performed without failure to detect faults related to speech path.

The following figures show an outline of fault detection. The figures entitled "Fault Detection Block Diagram (1-IMG/4-IMG with TSW-BOX)" and "Fault Detection Block Diagram (4-IMG with TSWR)" show a block diagram of fault detection.

Fault Detection General Diagram

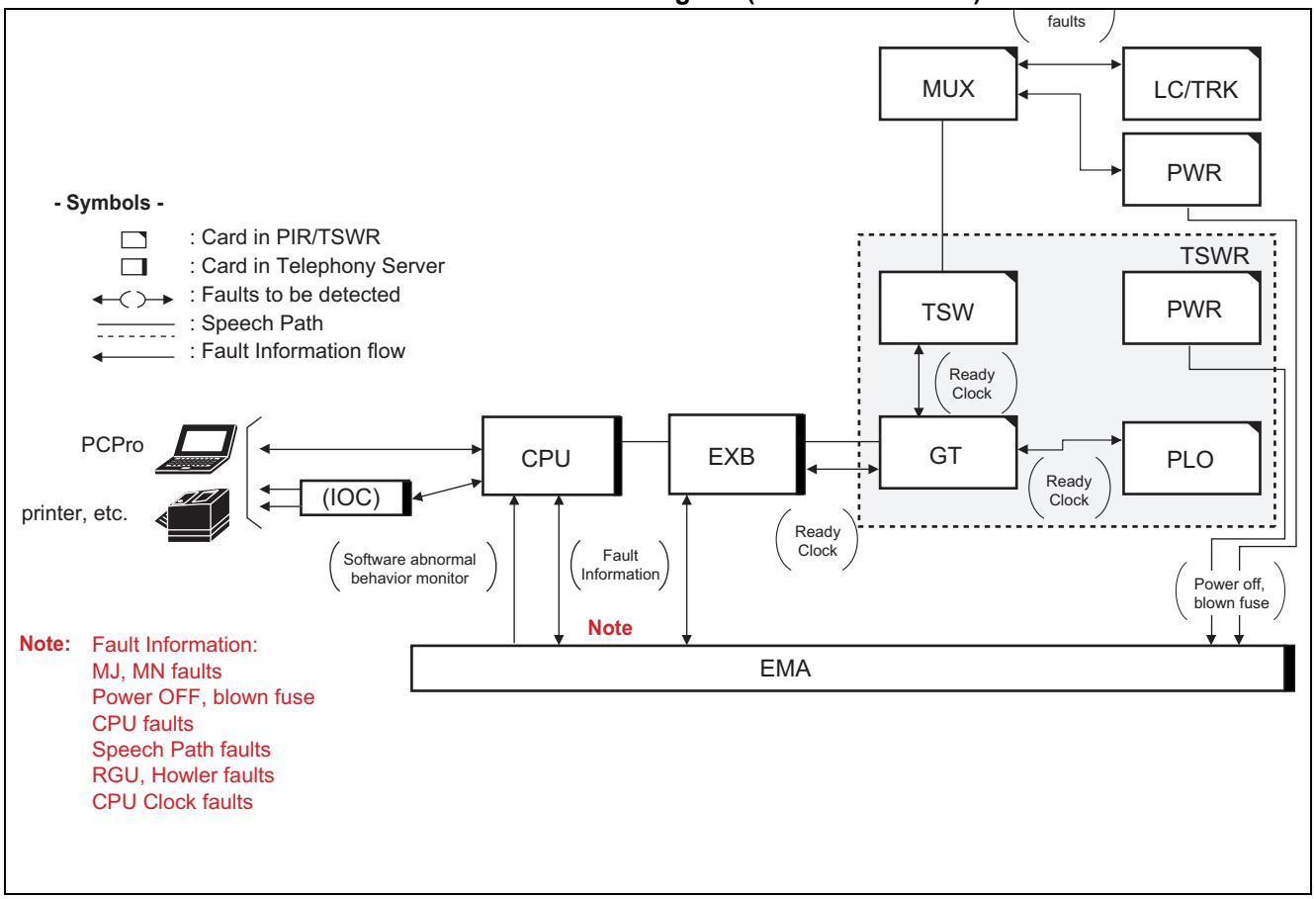


Fault Detection Block Diagram (1-IMG/4-IMG with TSW-BOX)



SYMBOL	MEANING	SYMBOL	MEANING
CPU	Central Processing Unit	EXB	GT card
EMA	Emergency Alarm Controller	PWR	Power Supply
IOC	I/O Controller	TSW	Time Division Switch
LC/TRK	Line/Trunk	MUX	Multiplexer

Fault Detection Block Diagram (4-IMG with TSWR)



SYMBOL	MEANING	SYMBOL	MEANING
CPU	Central Processing Unit	PWR	Power Supply
EMA	Emergency Alarm Controller	DLKC	Data Link Controller
IOC	I/O Controller	TSW	Time Division Switch
LC/TRK	Line/Trunk	MUX	Multiplexer
GT/EXB	Gate card	TSWR	Time Division Switch Rack

(a) Main Faults

Faults that may occur in the system can be generally categorized into Processor System Fault, Speech Path System Fault, Line/Trunk Fault, etc.

- Processor System Fault

  The CPU alarm detecting circuit continuously monitors whether the CPU is working normally. If a fault is detected, the CPU calls out the diagnostic program, that identifies the cause of the fault and determines whether the fault is temporary or permanent. When the fault affects system operations, Active/Standby status of the CPU is changed over (provided that the system has dual configuration).

- Bus System Fault

  The CPU transfers line/trunk card control information to the associated peripheral circuits via IO Bus. When a party error is detected in the transfer data or when the required information cannot be transferred from a circuit card, the CPU identifies the cause of the fault, changes over the CPU so that system operation is not affected, and executes restart processing.

- Speech Path Fault

  The CPU monitors the operating status of the TSW card, the occurrence of errors in writing data to the switch memory, and the basic clocks supplied to the speech path. Upon detecting a fault, the CPU identifies the cause of the fault, determines whether the fault is temporary or permanent, and executes required processing such as changeover of the TSW system.

- Others

  The alarm detecting circuit on the EMA card continuously monitors the occurrence of faults in the 7U-PIR Power Unit/PWR supply cards, such as abnormal status within the equipment frame, and lights the alarm lamp on the front when a fault is detected.

(b) Lamp Indications on the Front Cover

When a fault occurs, the corresponding lamp on the front of EMA card indicates the location of the fault.

7.5 Range of Faults Specification

(1) Upon receiving a fault report from a station user or an operator, the technician can assume a faulty card exists if the range affected by the fault can be determined. For the detailed procedure, refer to Chapter 6. Use the following actions to check the MDF:

(a) Check the LENS of the reporter (Station or ATTCON/DESKCON).

(b) Check other circuits of the circuit card in which the reporter (station line or ATTCON/DESKCON) is located.

(c) Check the other groups (other circuit cards mounted in the same module) in the module in which the reporter is located.

(d) Check lines in each of the other modules on the basis of multiple lines.

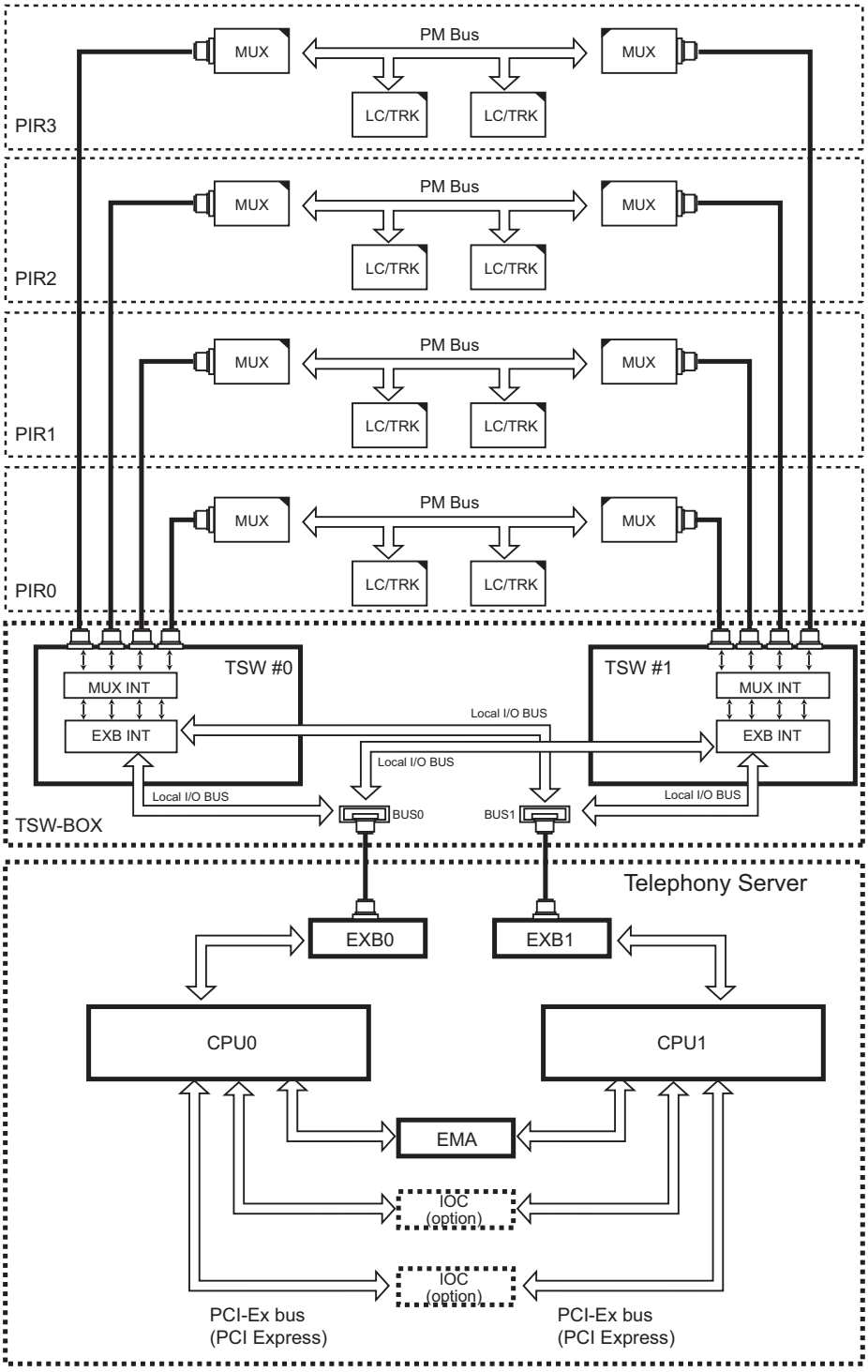
(2) If the fault cannot be detected by the system (a fault related to the speech path such as noise during speech, one-way speech, speech inability), the range of (a) through (d) (itemized above) should be limited.

(3) When a major fault is detected in the dual systems, the CPU or TSW system automatically changes over if the fault range is (c) and (d). In this case, the whole module involved is placed into make-busy status even if the fault is partial, and the station lines currently operating normally become faulty status. Diagnose the fault from the content of the system message displayed and repair the fault as required.

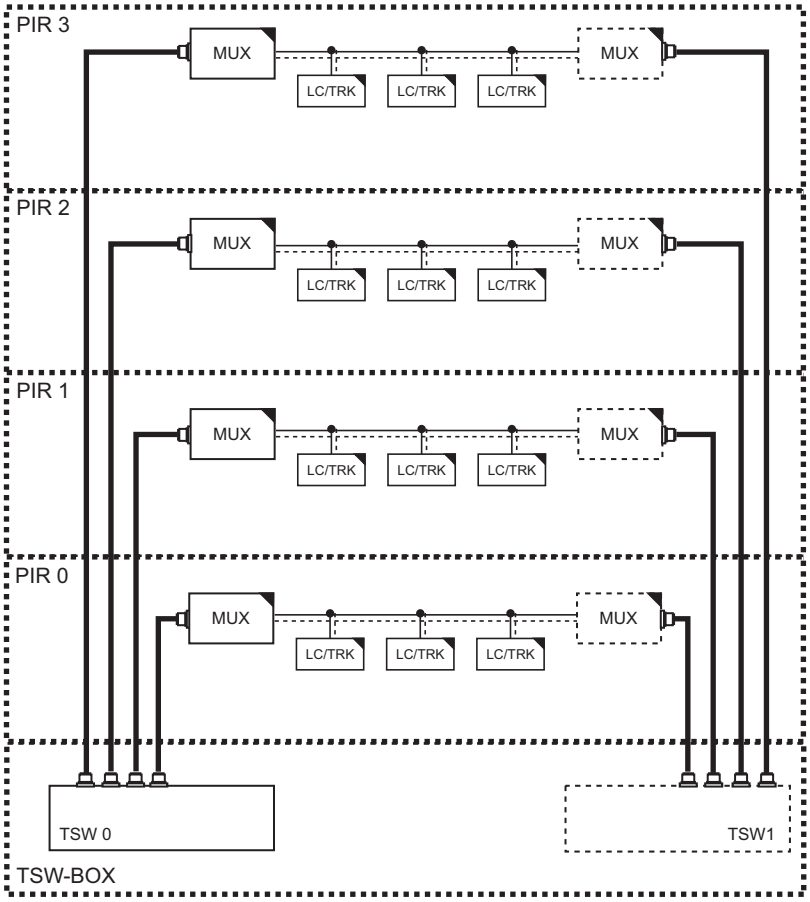
(4) To narrow down the range of faults, consider the system circuitry that consists of the control (see the figure entitled "System Block Diagram (1-IMG)"/"System Block Diagram (4-IMG with TSW-BOX)"/"System Block Diagram (4-IMG with TSWR)) and speech path systems (see the figure entitled "Speech Path Block Diagram (1-IMG)"/"Speech Path Block Diagram (4-IMG with TSW-BOX) (1 of 2)"/"Speech Path Block Diagram (4-IMG with TSWR) (1 of 2)"and "Range of Speech Path Fault (1-IMG)"/"Range of Speech Path Fault (4-IMG)").

(5) As seen from the block diagrams in the figure entitled "System Block Diagram (1-IMG)" through the figure entitled "Range of Speech Path Fault (4-IMG)," if a fault that affects the common portions occurs, all other associated portions will be affected by this fault. When CPU and TSW are provided in dual configuration, they will be automatically changed over as far as the fault is detectable by the system.

System Block Diagram (1-IMG)



Speech Path Block Diagram (1-IMG)

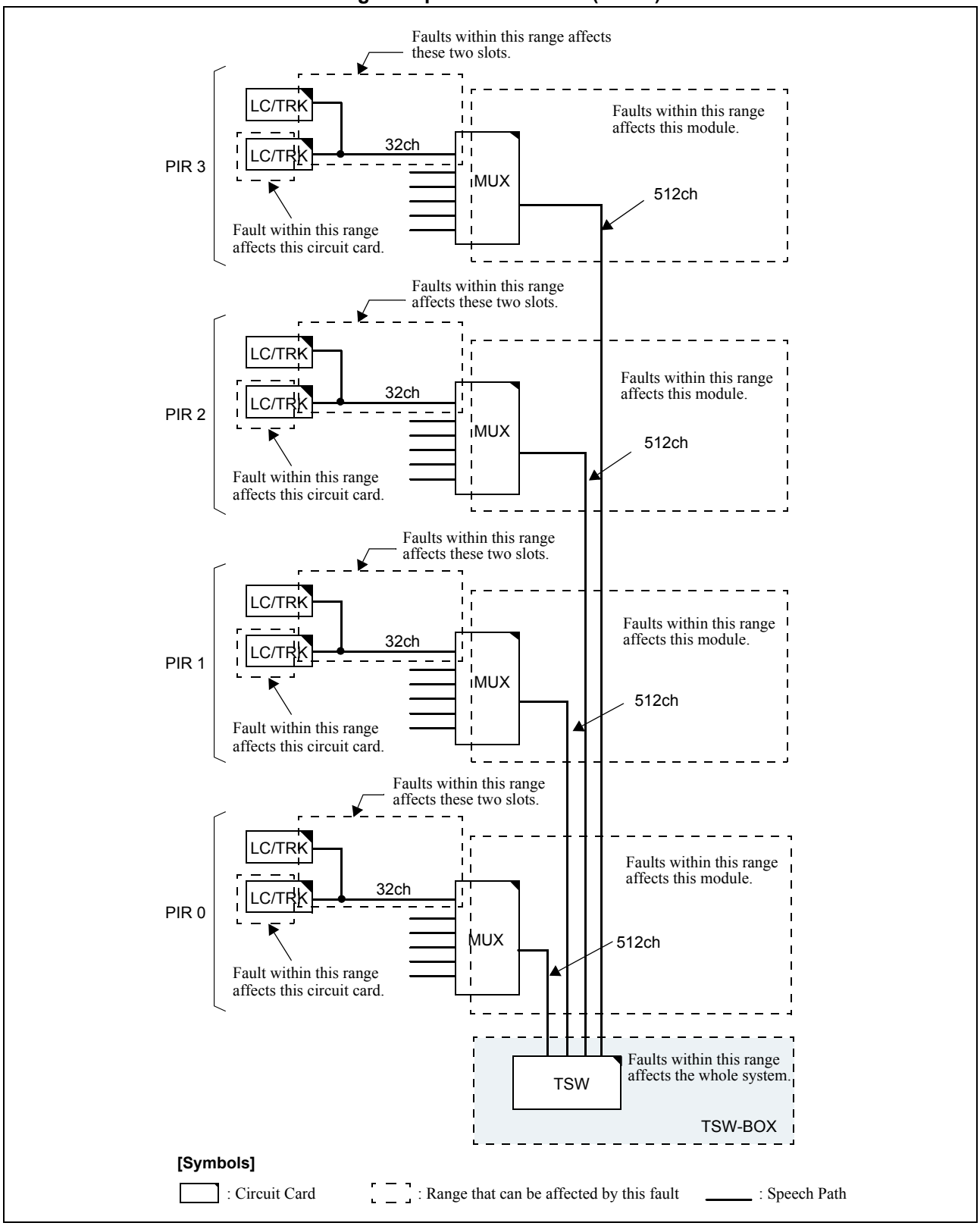


[Symbols]

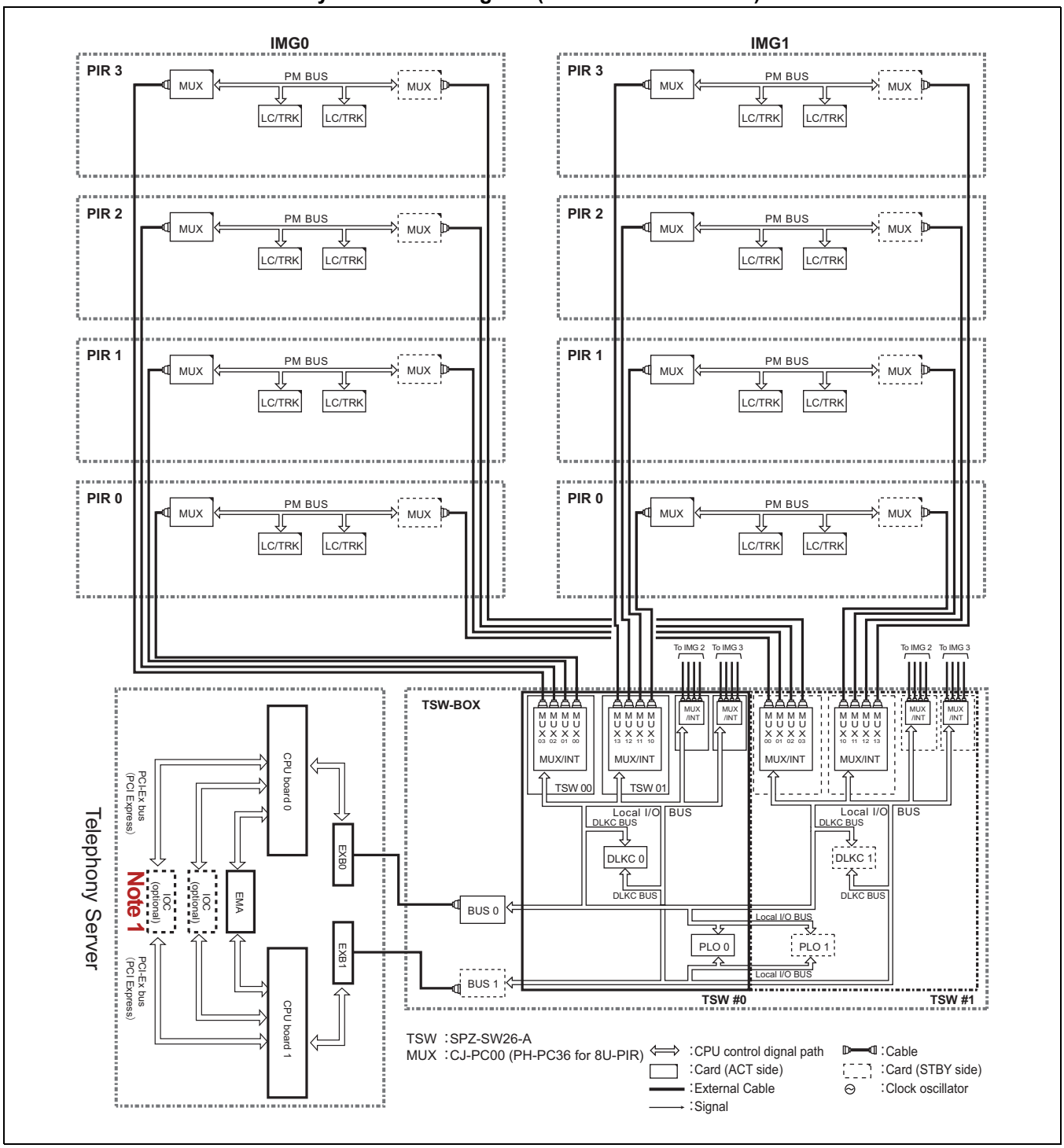
: Speech path : Cable TSW : SPZ-SW25-A

: Card (ACT) : Card (STBY) MUX : CJ-PC00 (PH-PC36 for 8U-PIR)

Range of Speech Path Fault (1-IMG)



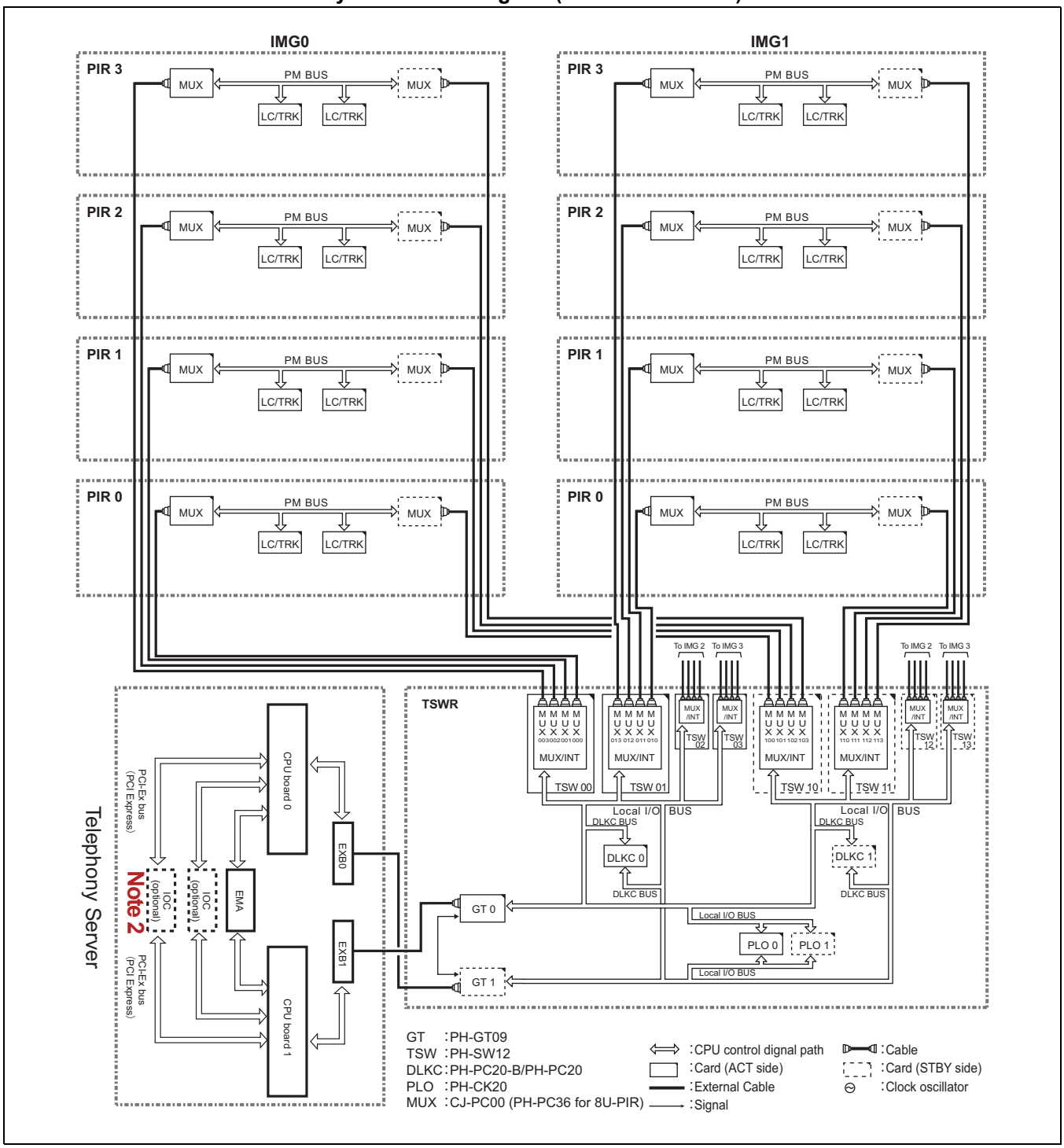
System Block Diagram (4-IMG with TSW-BOX)



Note: Circuit cards shown by dotted lines are operated in STBY mode.

Note 1: IOC card is optional.

System Block Diagram (4-IMG with TSWR)

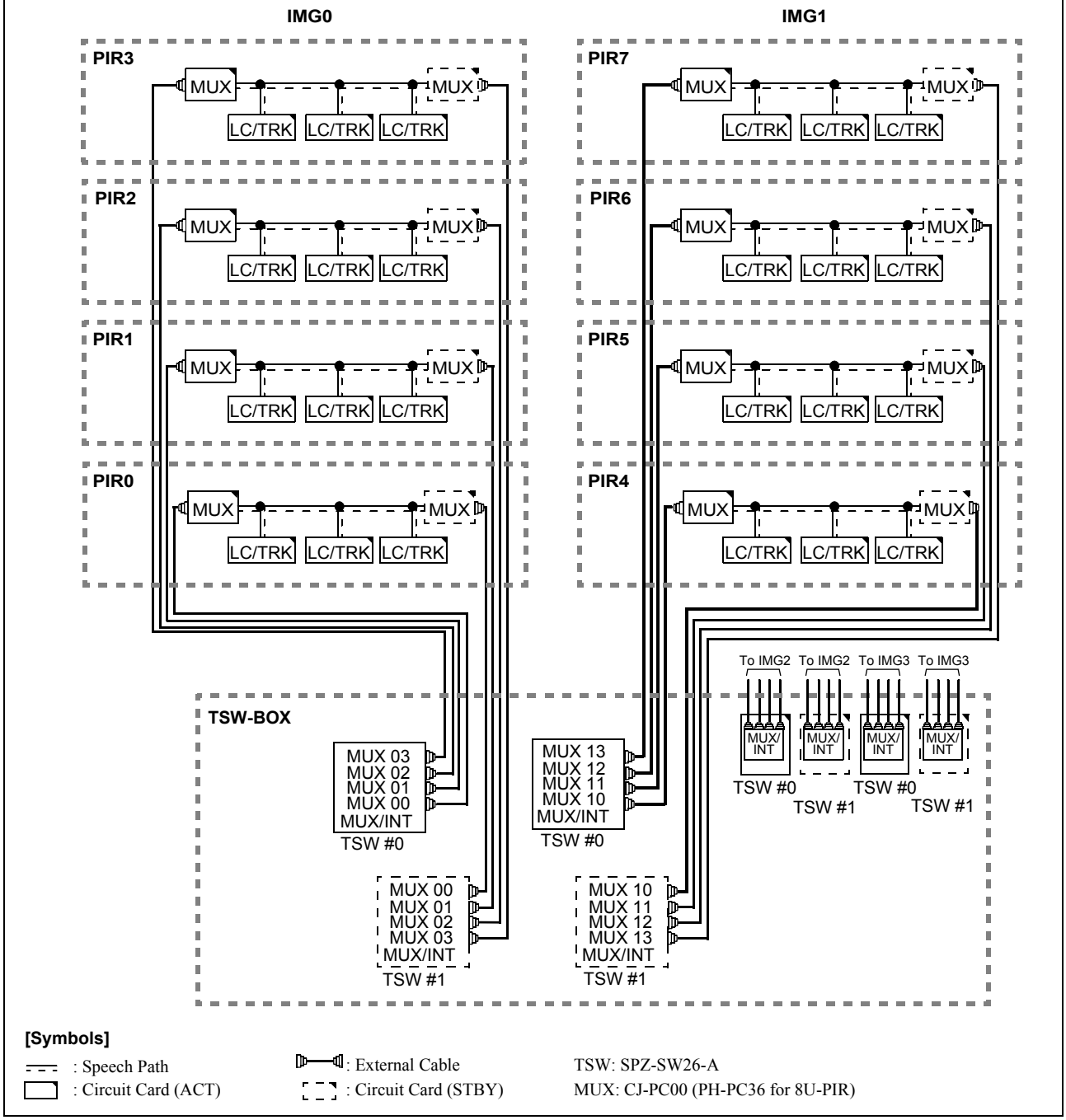


Note: Circuit cards shown by dotted lines are operated in STBY mode.

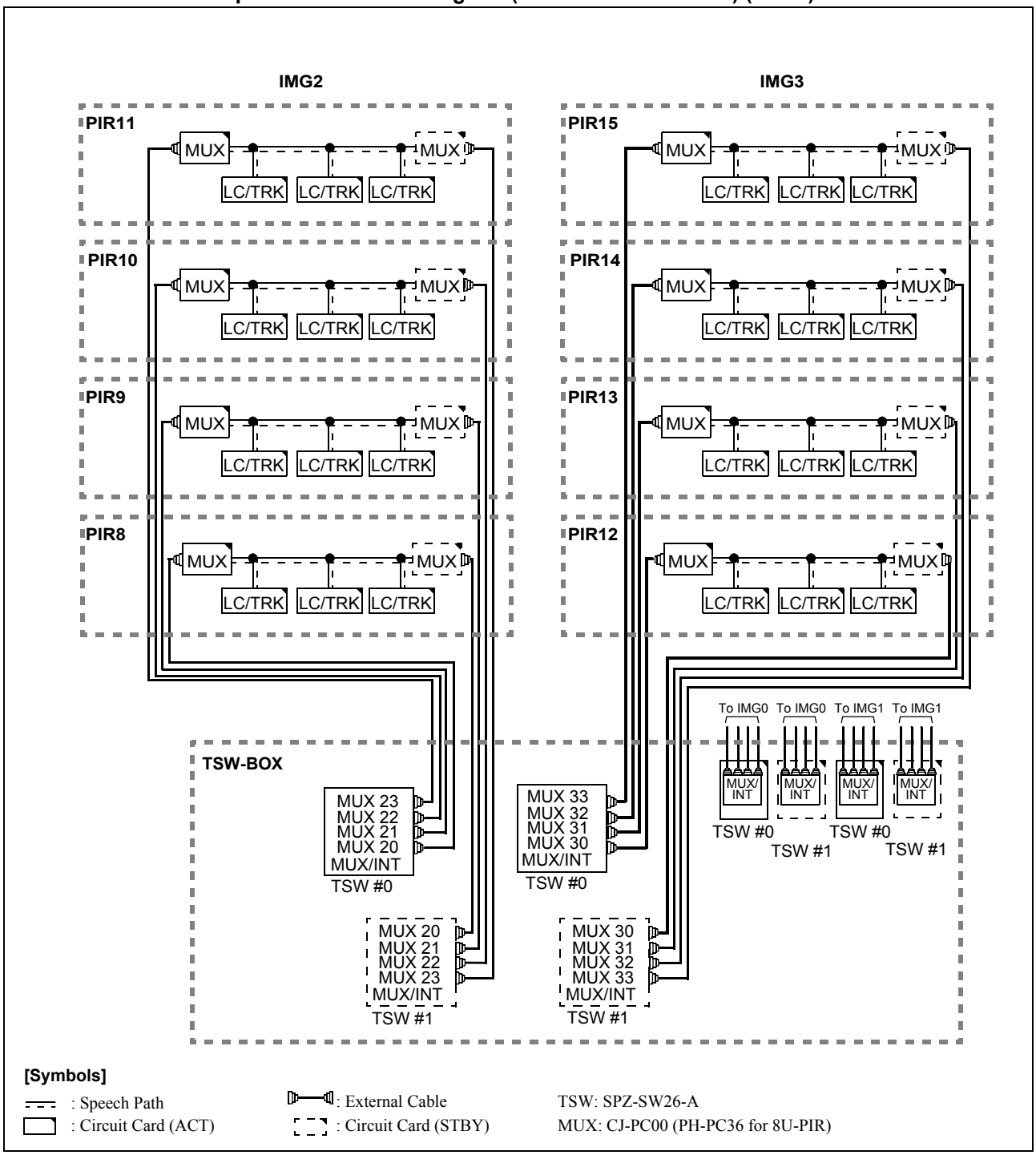
Note: When the CPU ACT/STBY is changed over, GT will also be changed over in TSWR.

Note 2: IOC card is optional.

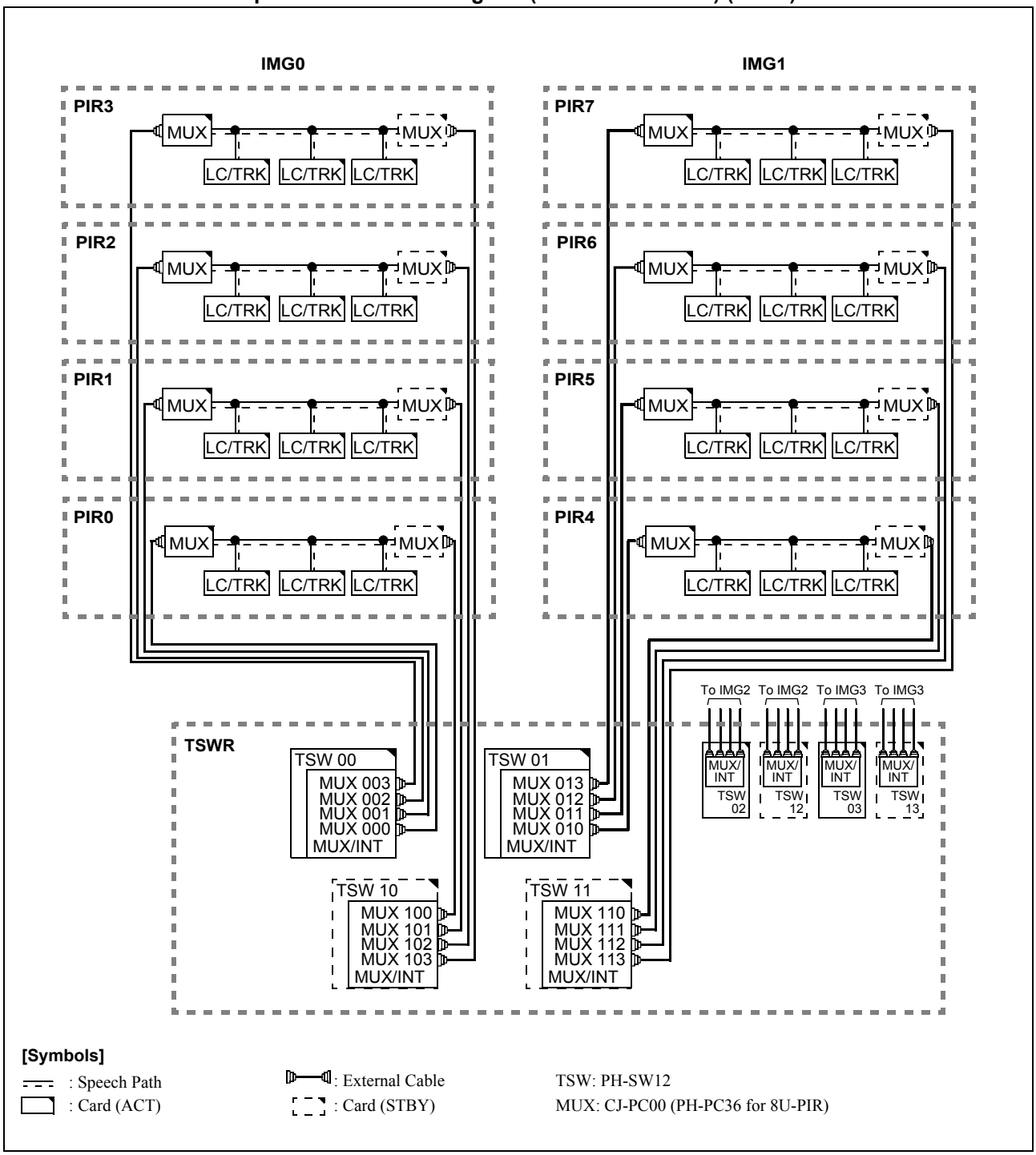
Speech Path Block Diagram (4-IMG with TSW-BOX) (1 of 2)



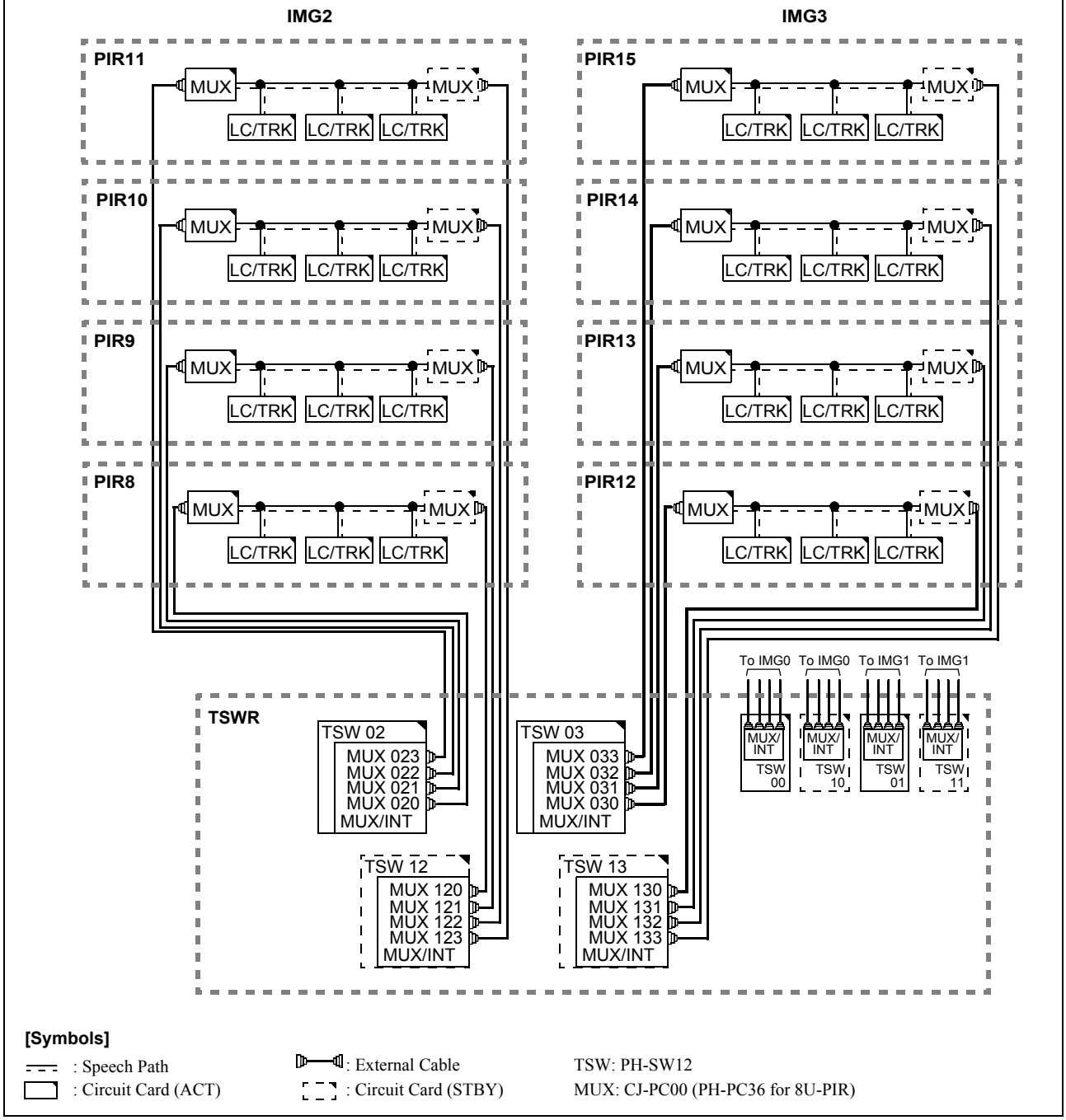
Speech Path Block Diagram (4-IMG with TSW-BOX) (2 of 2)



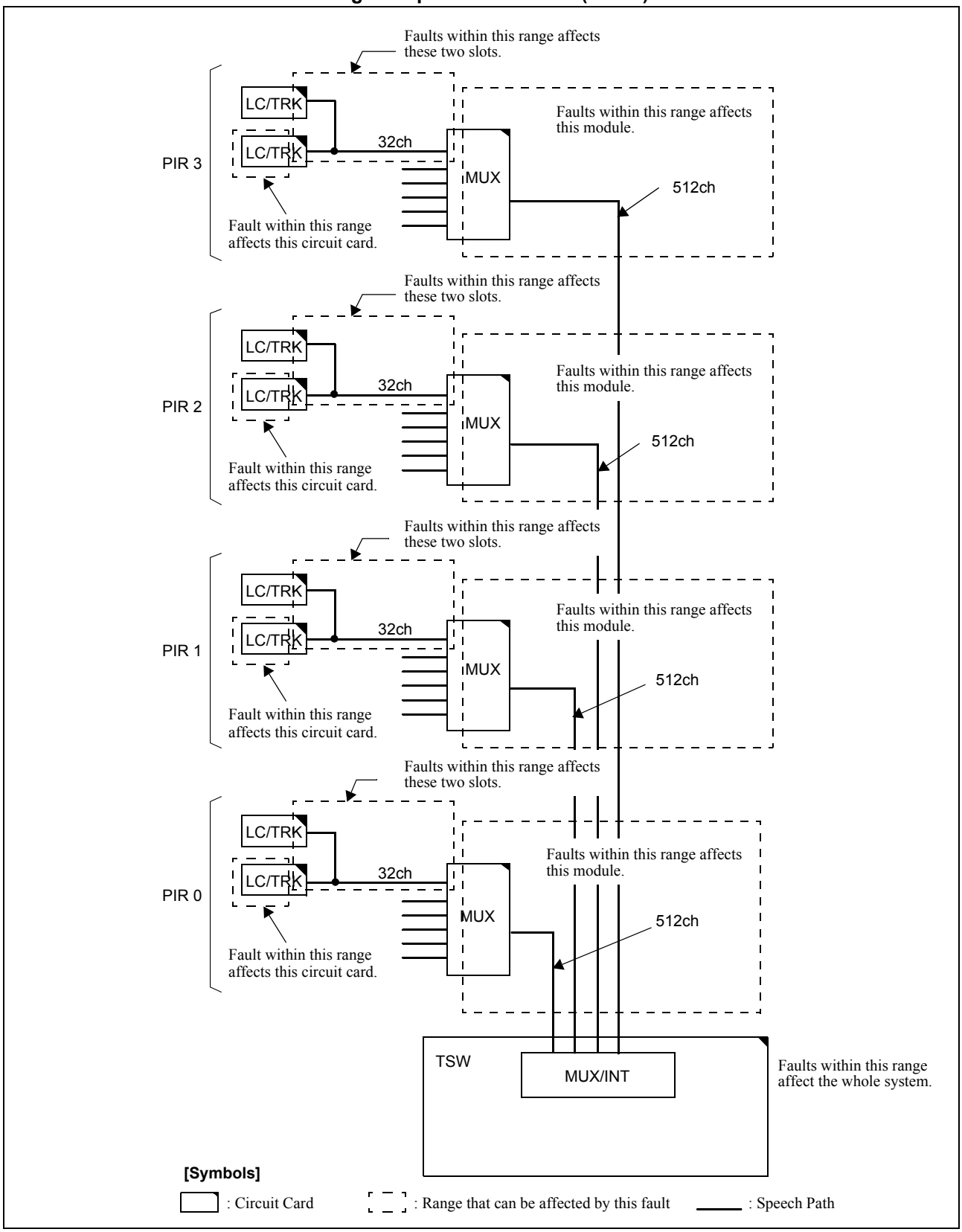
Speech Path Block Diagram (4-IMG with TSWR) (1 of 2)



Speech Path Block Diagram (4-IMG with TSWR) (2 of 2)



Range of Speech Path Fault (4-IMG)



CHAPTER 2
OPERATIONS OF TELEPHONY SERVER

This chapter covers the following topics in this order:

1) HOW TO SET THE CURRENT DATE AND TIME
2) ALARM INDICATIONS
3) INITIALIZATION PROCEDURE OF THE SYSTEM
4) ROUTINE DIAGNOSIS
5) OFFICE DATA MAINTENANCE
6) UNIT/CARD REPLACEMENT PROCEDURE
7) FAN REPLACEMENT PROCEDURE
8) SYSTEM CONTROL PROCEDURES
9) SYSTEM INSTALLING STATUS DISPLAY
10) TRAFFIC MANAGEMENT
11) STATION MESSAGE DETAIL RECORDING SYSTEM (SMDR)
12) REDUNDANT DATA MEMORY BACKUP FOR OFFICE DATA
13) RTP INFORMATION OUTPUT
14) DTERM IP CALL INFORMATION DISPLAY
15) IP DEVICE PC PORT REMOTE CONTROL
16) LICENSE REGISTRATION INFORMATION DISPLAY
17) FTP SERVER SUPPORT (LAN1)
18) VOICE LOOPBACK
19) PREVENTATIVE MAINTENANCE NOTIFICATION
20) IP STATION FAULT MANAGEMENT
21) ADDING/UPDATING LICENSE FILE
22) DISPLAY OF IP MODULE OPERATION STATUS
23) CONTROL OF TERMINAL REGISTRATION
24) FIRMWARE DOWNLOAD (CH CARDS OTHER THAN IPPAD/DAT)
25) FIRMWARE DOWNLOAD (IPPAD)
26) FIRMWARE DOWNLOAD (DAT)
27) IP EQUIPMENT STATUS DISPLAY
28) PREFERENCE SETTING - MULTI-LINE TELEPHONE WITH PCPRO

1. HOW TO SET THE CURRENT DATE AND TIME

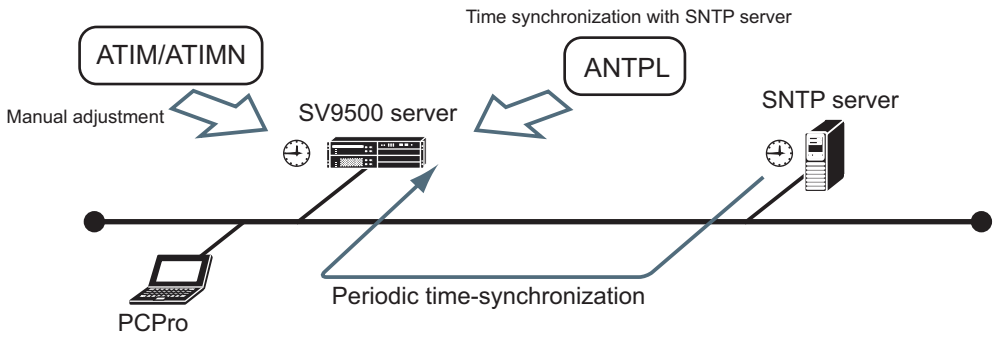
1.1 General

System clock can be manually or automatically adjusted as shown below. For automatic adjustment, an SNTP server is required.

Note: Not applicable for SV9500 Prepackaged Server Model.

NO.	SNTP SERVER	COMMAND	EXPLANATION
1	not used	ATIM/ATIMN	By pressing the Set button on this command, the specified date and time are applied to the system.
2	used	ANTPL	By specifying an SNTP server with start time to obtain time information from the server, time adjustment will be automatically performed on a daily basis.

How to Set the Current Date and Time



Note: Synchronize the clock of the machine running PCPro to the exact time through an SNTP server.

1.2 Programming to Specify How to Set Date and Time

(1) When Not Using SNTP Server

STEP 1 ATIM/ATIMN

Date, Time, and Day Light Savings (Start/End) can be specified on this command. By pressing the **Set** button on the command, the specified Date and Time will be applied to the system that is in operation.

(2) When Using SNTP Server

STEP 1 ATIM

When using Day Light Savings, set the data by using the ATIM command.

STEP 2 ANTPL (SNTP Setting)

By this command, set time for time-synchronization (SNTP) service as well as an SNTP server by using the domain name or IP address. Time adjustment will be automatically performed on a daily basis. IP Address of the DNS Server must be set using the ADTM command when SNTP server is specified the domain name.

Note: For the details, refer to UNIVERGE SV9500 Data Programming Manual - Business.

Note: Activation of time-synchronization (SNTP) service is limited to once a day. Thus, if the ANTPL command is used to change the start time for SNTP service after SNTP service is already active for that day, the change takes effect from the following day. Activate the SNTP service manually by pressing the **Execute** button when immediate time adjustment is needed.

Example:
1) Existing start time for SNTP service is 01:00.
2) At 03:00, the ANTPL command is used to change the start time from 01:00 to 05:00.
3) The next start time for SNTP service is 05:00 the next day.

1.3 How to Adjust Date and Time

When the system is rebooted, the clock information will also be reset. Adjust the date and time by one of the following procedures after system reboot.

(1) When Not Using SNTP Server

STEP 1 Execute the ATIM/ATIMN command.

STEP 2 Set the current date and time.

STEP 3 Click on the **Set** button to apply the date and time.

(2) When Using SNTP Server

STEP 1 Execute the ANTPL command.

STEP 2 Click on the **Execute** button to synchronize the date and time of the specified SNTP server.

2. ALARM INDICATIONS

If trouble occurs in the system, the system activates an appropriate remedial action such as system changeover, make-busy of the card, restart processing by executing the automatic diagnostic function. Results of the action taken and the faulty situation are displayed by the alarm indication and system message(s). This section describes the alarm indication. For the system messages, refer to Chapter 3.

2.1 Kinds of Alarm Indications

The system will alert the maintenance personnel of any failure occurred in the system by the following indications.

(a) Alarm Lamps

- Front panel
- Each card
- Each peripheral equipment **Note 1**
- PCPro

Note 1: When major alarms or minor alarms are generated in the system, the alarm lamp on Attendant Console lights red. This lamp is enabled by setting the basic data for Attendant Console. For the basic data setting, see “Attendant Console (ATTCON) Data” of Chapter 2 in Data Programming Manual - Business.

(b) System Messages

- Displayed on the PCPro

2.2 How to Stop Alarm Indications

To stop the alarm indication after the failure is solved, do the following.

STEP 1 Execute the DFTD command from PCPro to collect the recorded system messages.

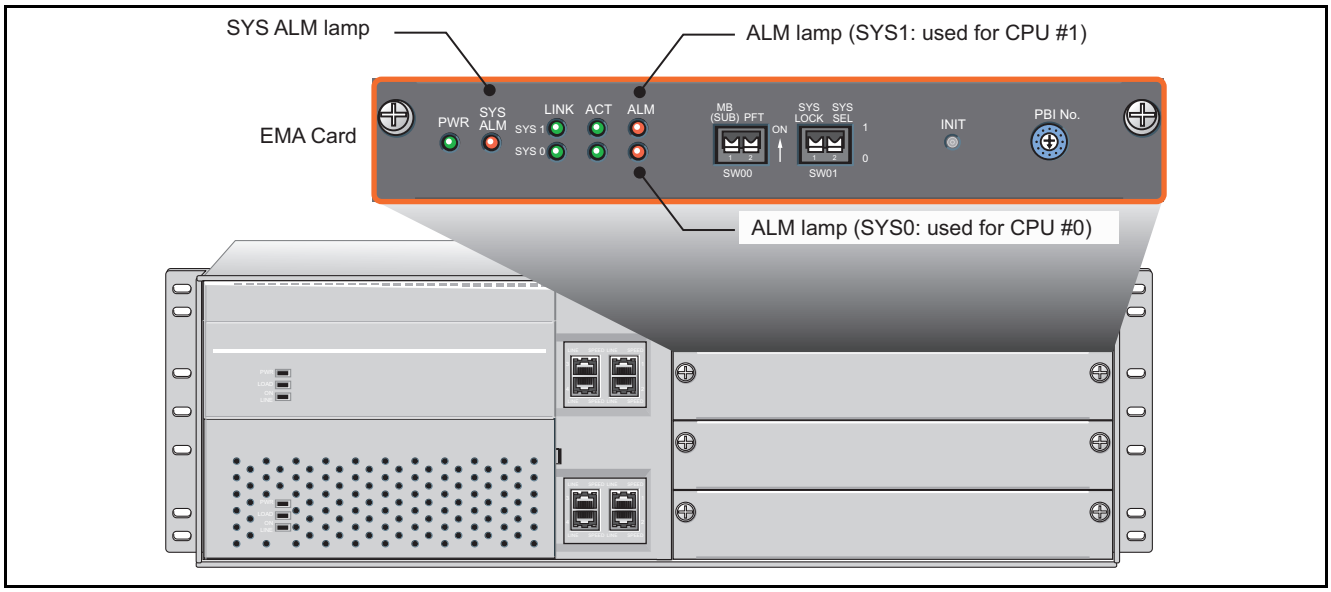
STEP 2 Execute the RALM command from PCPro.

Note: When RALM is executed, all system messages will be cleared. Be sure to collect the system messages before using RALM.

2.3 Alarm Indications

The system has alarm lamps on EMA card as shown below. The table below lists the meaning of each lamp.

Alarm Indications on EMA card



NAME		COLOR	DESCRIPTION		REMARKS
SYS ALM lamp		Red	Flashes in 1-second cycle.	MN (minor) alarm: One of the system cooling fans is faulty, etc.	
			Lights.	MJ (major) alarm: Two or more system cooling fans are faulty, etc.	
		OFF	No failure is detected.		
ALM lamp	SYS 0	Red	Lights when failure occurs on software operation in CPU #0 (software operation failure during system operation).		
			Flashes when failure occurs on software operation in CPU #0 (software operation failure on starting up the system).		
		OFF	No alarm is detected.		
	SYS 1	Red	Lights when failure occurs on software operation in CPU #1 (software operation failure during system operation).		
			Flashes when failure occurs on software operation in CPU #1 (software operation failure on starting up the system).		
		OFF	No alarm is detected.		

2.4 Variable Alarm Indication

This allows users to make a flexible change of system message output grades that range 0 to 3 and alarm lamp grades that consist of MJ, MN, SUP and NONE. The maintenance personnel can give a proper alarm grade to each system message according to their requirements. When assigning no data, the default alarm grades are automatically applied.

Note: The alarm grade of system message [6-A] cannot be changed.

Note: Use the LLMG (Listup of Alarm Grade Data) command TYPE=3 to output the default value of alarm lamp grade for system message.

COMMAND	COMMAND FULL NAME
ALMG	Assignment of Alarm Grade Data
ASYD	SYS1, Index 91, Bit 2 and Bit 3

Variable Alarm Indication Data Assignment

Assign the following data for modifying the default alarm grade.

START

ALMG : **Assign output grade and alarm lamp grade on a system message basis.**

FK: Fault Message Kind (0-7, 10-17, 20-27, 30-37)
FI: Fault Message Index (A-Z)
LMP: Alarm Lamp Grade (0-3)
GRD: Output Grade (0-3)
SYSM GRD: System Alarm Lamp Output Grade (0-3) **Note 1**

Note 1: Indicates the setting status of output grade for System Alarm Lamp and system message, which can be assigned by ASYD, SYS1, Index 91, Bit 2 and Bit 3.

ASYD : **Assign the output grade of System Alarm Lamp and system message on a node basis.**

SYS1, Index 91, Bit 2 and Bit 3

b3	b2	
0	0	= Output all fault
0	1	= Output the fault higher than Grade 1 (SUP/MN/MJ)
1	0	= Output the fault higher than Grade 2 (MN/MJ)
1	1	= Output the fault higher than Grade 3 (MJ)

END

3. INITIALIZATION PROCEDURE OF THE SYSTEM

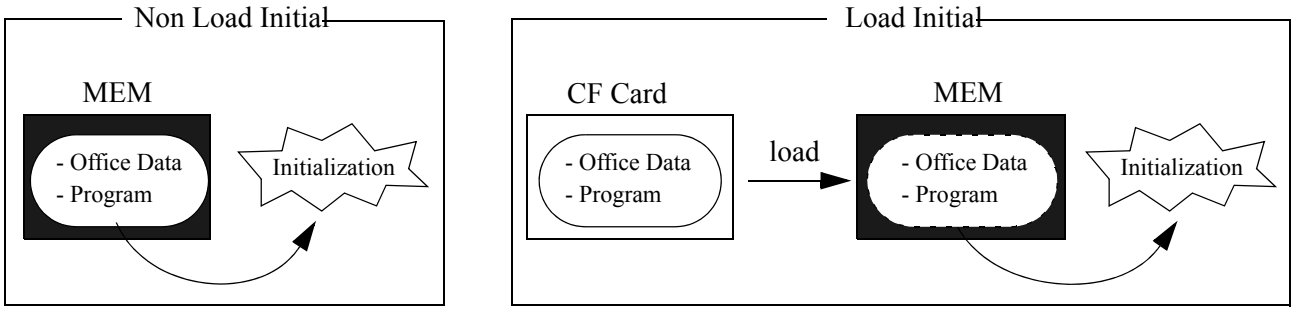
3.1 General

This section explains how to initialize the system. The following can be used:

- PCPro (SINZ)
- Telephony Server Maintenance Menu
- By INIT switch Operation on EMA card
- By Turning OFF/ON the System

WARNING **When the system is initialized, all calls in progress will be disconnected.**

System initialization can be roughly divided to "Non Load Initial" and "Load Initial." The former reboots the system using the program and office data that are currently loaded in the memory. On the other hand, the latter loads the office data (and program) into the memory before rebooting the system. After loading the data into the memory, system initialization will take place. Available initialization types vary depending on type of operations.



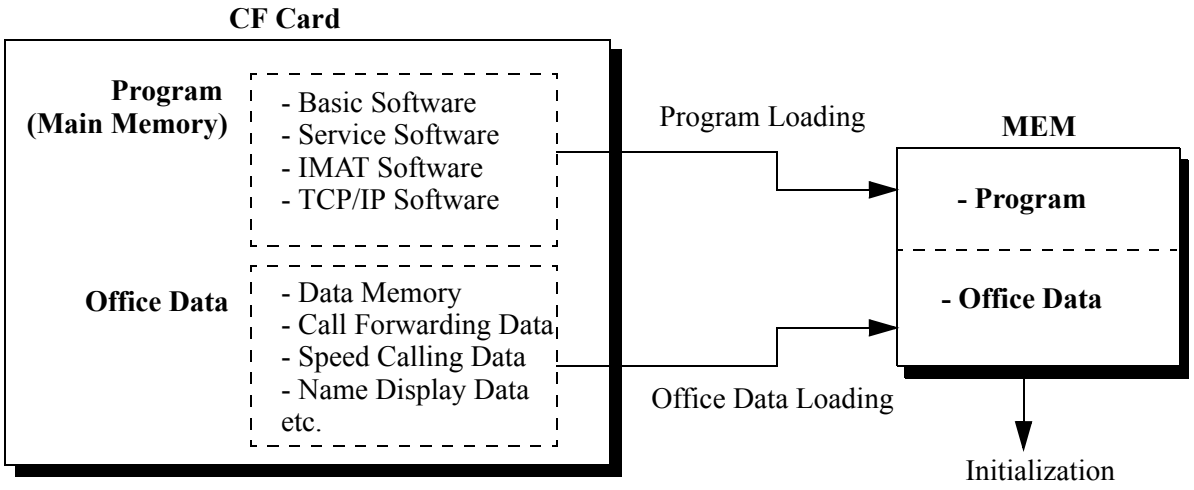
The relationship of operation types and Initialization types is as follows.

Relationship between Initialization Types and Available Operations

X: Available -: Not Available

Initialization Type		Available Operations			
		PCPro (SINZ)	Telephony Server Maintenance Menu	INIT Switch Operation (EMA card)	Tuning Off/On
Non Load Initial		X	-	X	-
Load Initial	Office Data Load Initial	X	-	-	-
	Office Data Load & Program Load Initial	X	-	-	-
	Restart (Program & Office Data Load & System Initial (OS Restart))	X	X	-	X

Office Data Load and Program Load



3.2 Initialization by PCPro (SINZ)

All initialization types shown below are available.

- Non Load Initial
- Office Data Load Initial
- Office Data Load & Program Load Initial
- Restart (Program & Office Data Load & System Initial (OS Restart)) **Note 1**

Note 1: Use shutdown option on the SINZ command.

STEP 1 Execute SINZ from the PCPro.

STEP 2 Select an appropriate initialization type, and then click the **Execute** button.

- Initialization starts.
- PCPro is automatically placed in logout state.

Note: For the detail, refer to SINZ in this manual.

STEP 3 Make sure that the SYS ALM lamp (red) lights on the EMA card.

STEP 4 Log in to the system again from the PCPro.

STEP 5 Set the current date and time from the PCPro. (Refer to How to Adjust Date and Time.)

STEP 6 Release the indicated alarm. (Refer to How to Stop Alarm Indications.)

3.3 Initialization by Telephony Server Maintenance Menu

The following initialization type is available.

- Restart (Program & Office Data Load & System Initial (OS Restart))

STEP 1 Start Internet Explorer.

STEP 2 Type "http://xxx.xxx.xxx.xxx:9801/" into the address bar to access Initialization by Telephony Server Maintenance Menu. **Telephony Server Maintenance Menu Login** screen appears. After the login, **Telephony Server Maintenance Menu** screen appears.

Note: "xxx.xxx.xxx.xxx" represents the LAN1 IP address of the destination Telephony Server.

Note: The default for both user name and password is "admin". You are recommended to change user name and password from Advanced Menu.

STEP 3 Click the **Reboot** button in the **SYSTEM CONTROL** area (in the upper right-hand part of the screen).

STEP 4 The **Reboot** dialog box appears. Click the **Reboot** button in the dialog Box.

STEP 5 The Telephony Server (CPU) is restarted.

STEP 6 Confirm that the PWR, Link, and ACT lamps on the EMA card are lit green.
* When the initialization process is complete, the ACT lamp lights up green.

STEP 7 Set the current date and time from the PCPro. (Refer to How to Adjust Date and Time.)

3.4 Initialization by INIT Switch Operation (EMA card)

The following initialization type is available.

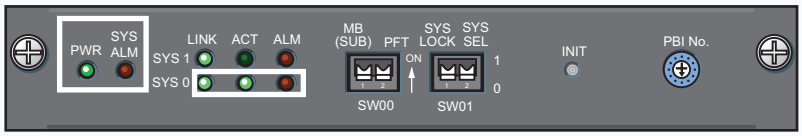
- Non Load Initial

  All calls will be disconnected. The system will be rebooted by using program and office data that are in the MEM.

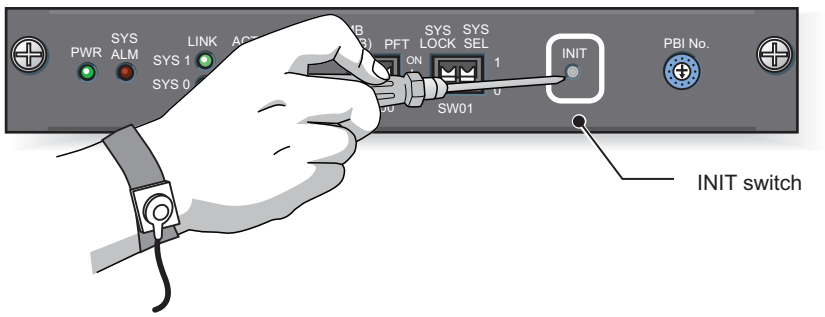
[MEM]
- Program
- Office Data

→ **Initialization**

STEP 1 Identify which system of CPU is in operation. The following shows an example when the system is operating by CPU #0.

Lamp Layout on EMA Card (when CPU #0 is active)	Lamp (Color)	Status
	PWR (Green)	On
	SYS ALM (Red)	Off
	LINK (Green)	On
	ACT (Green)	On
	ALM (Red)	Off

STEP 2 Press the INIT switch on the EMA card to start Non Load Initial.



STEP 3 Check the lamp indications on the EMA card.

Lamp (Color)	Status
PWR (Green)	On
LINK (Green)	On
ACT (Green)	On
SYS ALM (Red)	On

STEP 4 Set the current date and time from the PCPro. (Refer to How to Adjust Date and Time.)

STEP 5 Release the indicated alarm. (Refer to How to Stop Alarm Indications.)

3.5 Initialization by Turning OFF and ON the System

This section explains how to start up the system that has been shut down for some reason. If the system cannot be initialized by the SINZ/Telephony Server Maintenance Menu/INIT switch, shut down the system and restart the system by this procedure. Available initialization type is as follows:

- Restart (Program & Office Data Load & System Initial (OS Restart))

3.5.1 How to Start Up the System by Turning OFF/ON

This procedure assumes that the system has been shut down for some reason.

STEP 1 Turn off the power of the system referring to Chapter 5 How to Turn ON/OFF Whole System.

STEP 2 Turn on the power again referring to Chapter 5 How to Turn ON/OFF Whole System.

STEP 3 Make sure that the system is in normal operation.

Lamp (Color)	Status
PWR (Green)	On
LINK (Green)	On
ACT (Green)	On
ALM (Red)	On

STEP 4 Set the current date and time from the PCPro. (Refer to How to Adjust Date and Time.)

STEP 5 Release the indicated alarm. (Refer to How to Stop Alarm Indications.)

4. ROUTINE DIAGNOSIS

For confirming its own servicing status, the system automatically executes self diagnosis every day, and displays the result of the diagnosis as a system message. By this function, possible causes for trouble can be discovered in an early stage and possible trouble can be prevented from remaining undetected.

4.1 Related System Data

- ASYD, SYS1, Index 86,

  Bit 0 – When routine diagnosis starts, and the result of the routine diagnosis is normal, the result displays as system message [7-O].

  0/1: Not displayed/Displayed

  Bit 1 – When the result of the routine diagnosis is abnormal, it displays as system message [7-P].

  0/1: Not displayed/Displayed

  Bit 3, Bit 2 – Processing at the time when Trunk Ineffective Hold is detected. **Note 1, Note 2**

BIT		The trunks being held at present are forcibly released, except the trunks being held on two-way calls (station-to-station call, station-to-trunk, external trunk-to-external trunk call).	All trunks being held at the present are forcibly released	LENS of the trunk detected display as system message [7-P]
Bit3	Bit2			
0	0	X	—	X
0	1	—	—	X
1	0	—	X	X

Note 1: Trunk Ineffective Hold is a continuous state other than idle state within a predetermined duration while routine diagnosis is in progress. Whether it is detected/not detected, it is assigned by ASYD, SYS1, Index 89.

Note 2: When Trunk Ineffective Hold on the FCCS Network is detected, setting of ASYD, SYS1, Index 86, Bit 2/Bit 3 and SYS1, Index 89, Bit 4/Bit 5 must be the same at all nodes on the network.

- SYS1, Index 87, 88 - Routine Diagnosis Start Time

  Start time should be such a time which the traffic of the office is the lowest.

Index 87	0 | 2	(Hour)	2:00 a.m. is the start time.
Index 88	0 | 0	(Minute)	

To stop the routine diagnosis, set FF respectively to Index 87, 88.

- SYS1, Index 89, 90 — Routine Diagnosis Items: The item corresponding to each bit is to execute once a day.

- Single System Configuration

  Index 89 b1 — DM Check (DM = Data Memory)
  0/1 = No/Yes

  b4 — Trunk Ineffective Hold Check **Note 3**, **Note 4**, **Note 5**
  0/1= No/Yes

  b5 — Trunk Ineffective Hold Detection**Note 3**, **Note 4**, **Note 5**
  0/1 = No/Yes

  b6 — Call Forwarding Memory Clear **Note 6**
  0/1 = No/Yes

  Index 90 b1 — Routine Backup (see Index 304-306)
  0/1 = No/Yes

- Dual System Configuration

  Index 89 b1 — DM Check (DM = Data Memory)
  0/1 = No/Yes

  b2 — TSW Active/Standby Changeover for Dual Systems
  0/1= No/Yes

  b3 — CPU Active/Standby Changeover for Dual Systems
  0/1= No/Yes

  b4 — Trunk Ineffective Hold Check **Note 3**, **Note 4**, **Note 5**
  0/1= No/Yes

  b5 — Trunk Ineffective Hold Detection **Note 3**, **Note 4**, **Note 5**
  0/1 = No/Yes

  b6 — Call Forwarding Memory Clear **Note 6**
  0/1 = No/Yes

  Index 90 b1 — Routine Backup (see Index 304-306)
  0/1 = No/Yes

Note 3: When Trunk Ineffective Hold Check or Trunk Ineffective Hold Detection is executed while bit 0 of ASYDL SYS1 Index 1034 is set to 1, Virtual Register Ineffective Check is also enabled.

Note 4: There is a limit on the number of CCIS trunks per LP for this diagnostic process to work. The maximum number of CCIS trunks for each LP is 150 (A maximum of 150 ports can be configured as CCIS trunks).
For an LP where more than 150 CCIS trunks are registered, system message [7-P] ([52H] “Trunk Ineffective Hold Detected Impossible”) is generated, and the diagnostic task is not executed (For other LPs where no such error is detected, the task is conducted as scheduled).

Note 5: The setting of CCIS Control System Interoffice Audit Test (ASYD, SYS1, Index 188, Bit 0: 0/1= Required/Not Required) is valid only when activating TRK Ineffective Hold Check function of the periodic test, and releases the Ineffective Hold Trunk of self/ destination node.
If there is peer to peer by “CCIS over IP with PHC” service in self office, assign this system data to “1= Not required”, only Ineffective Hold Trunk is released (Regarding opposite trunk, depending on whether Ineffective Hold Check is checked or not in the opposite node).

Note 6: It is enabled when ASYD, SYS1, Index 89, Bit 6=1 (Routine Diagnosis Call Forwarding Memory Clear is executed) is assigned.

- ASYD, SYS1, Index 232, Bit 0: Call Forward All Clear (0/1=No/Yes)
- ASYD, SYS1, Index 232, Bit 1: Call Forward Busy Clear (0/1=No/Yes)
- ASYD, SYS1, Index 232, Bit 2: Call Forward No Answer Clear (0/1=No/Yes)

4.2 Routine Diagnosis Result

The result of routine diagnosis displays as a system message.

Normally ended: [7-O]

Abnormality detected: [7-P] Refer to Chapter 3 for more details.

In case an abnormality is detected, initiate necessary processing explained in Chapter 5.

4.3 Routine Backup

By assigning ASYD, SYS1, Index 90, Bit 1=1(executing Routine Backup), Office Data backup can be executed during Routine Diagnosis.

<How to Backup>
Assign ASYD, SYS1, Index 90, Bit 1=1 (executing Routine Backup) in advance, assign the office data from the following system data to be backed up.

- Single System Configuration

  Index 304 Bit 0 — Individual Speed Calling Data Saving
  0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

  Bit 1 — Call Forwarding Data Saving
  0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

  Bit 2 — Remote Call Forwarding Data Saving
  0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

  Bit 3 — Name Display Data Saving
  0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 4 — User Assign Soft Key Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 5 — Number Sharing Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 6 — Call Block Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 7 — Call Block Individual Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Index 305 Bit 0 — Expanded Speed Calling Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 1 — CFL (Call Forwarding-Logout) Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 2 — Dterm IP SPD (One-Touch Speed Calling) Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 3 — DM/LDM/NDM Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 5 — MA-ID Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 6 — SIP Call Forwarding/Password Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 7 — Mobility Access Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Index 306 Bit 0 — Phone book Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 1 — ACD Data Memory Saving
0/1 = Out/In Service (Data is valid when SYS1, Index 90, Bit 1=1)

- Dual System Configuration

Index 304 Bit 0 — Individual Speed Calling Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 1 — Call Forwarding Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 2 — Remote Call Forwarding Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 3 — Name Display Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 4 — User Assign Soft Key Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 5 — Number Sharing Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 6 — Call Block Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 7 — Call Block Individual Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Index 305 Bit 0 — Expanded Speed Calling Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 1 — CFL (Call Forwarding-Logout) Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 2 — Dterm IP SPD (One-Touch Speed Calling) Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 3 — DM/LDM/NDM Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 5 — MA-ID Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 6 — SIP Call Forwarding/Password Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Bit 7 — Mobility Access Data Saving
0/1 = Out/In Service (This data is valid when SYS1, Index 90, Bit 1=1)

Index 306 Bit 0 — Phone book Data Saving
0/1 = Out/In Service (Data is valid when SYS1, Index 90, Bit 1=1)

Bit 1 — ACD Data Memory Saving
0/1 = Out/In Service (Data is valid when SYS1, Index 90, Bit 1=1)

4.4 Precautions on Routine Backup

Regard the following precautions when executing a Routine Backup.

(1) Conditions when Routine Backup conflicts with Office Data backup by the MEM_HDD or MEM_HDD_N command

- When Routine Backup is executed first

  When Office Data backup is executed by the MEM_HDD or MEM_HDD_N command, this execution will be aborted by a confliction error. Office Data backup by the preceding command will not be performed.

- When Office Data backup by the MEM_HDD or MEM_HDD_N command is executed first

  The Routine Backup will be executed after the Office Data backup by the MEM_HDD or MEM_HDD_N command finishes. However, if more than 10 minutes have passed since the Routine Backup was executed and the backup process by the command has not yet finished, the Routine Backup will not be performed because of timeout.

(2) Conditions when Routine Backup conflicts with a switchover of system mode for a dual configuration system

- When Routine Backup is executed first

  The switchover of system mode will be aborted by a confliction error. The system mode will not be changed.

- When the switchover of system mode is executed first

  Routine Backup will be aborted by a confliction error. A backup process by a Routine Diagnosis will not be performed.

(3) For a dual configuration in a FCCS Network, when a command which reads out a data is executed toward a node under a Routine Backup process from another node, a transmission error between nodes may occur according to the execution timing.

(4) In the Single System Configuration, the result of a periodic backup of the STBY side is always shown as “Normal End” in system messages 7-O and 7-P.

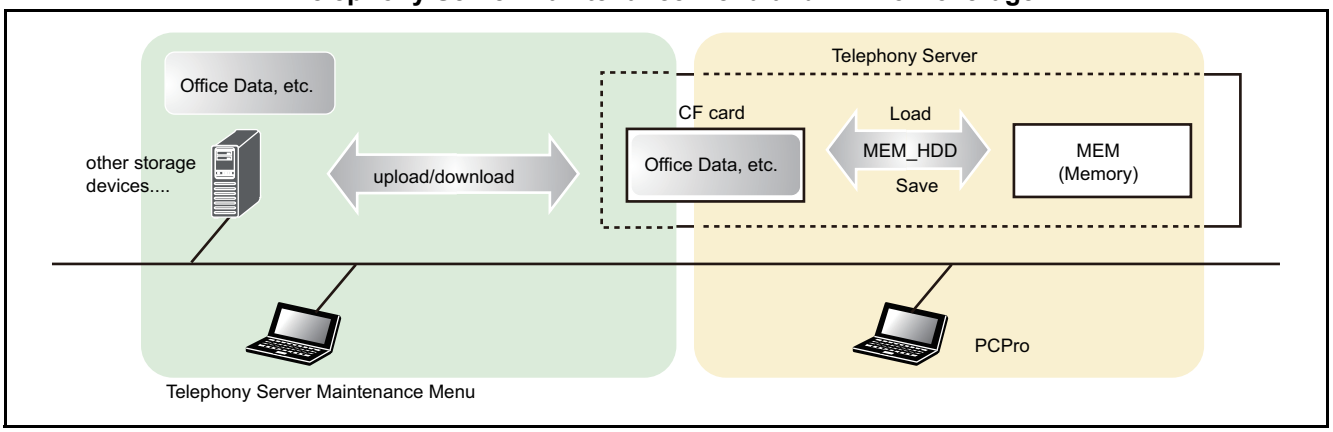
5. OFFICE DATA MAINTENANCE



5.1 Office Data Maintenance

(1) Office data that is stored in memory during the operation can be backed up to the CF card mounted on the Telephony Server. Also, office data stored in the CF card can be copied and stored in other storage devices such as hard disk by using Telephony Server Maintenance Menu.

Telephony Server Maintenance Menu and PCPro Coverage



(2) Saving the office data

The system operates according to the office data, so make sure to save the latest office data to the CF card. Otherwise, re-assignment of whole office data will be necessary if memory is corrupted for some reason. In this case, all services will be stopped during the data assignment.

Viewing and confirming office data by the routine diagnosis is the best way to reduce possible system failures. Always keep the following at an easily accessible place.

(a) Configuration Sheets

Use a pencil to record the latest data in the configuration sheets.

(b) CF card for backup data

Prepare another CF card to store the office data as an backup data.

5.2 Office Data Maintenance Procedure

Procedures to maintain the office data are listed below:

STEP 1 Make a plan for data modification - Write into the configuration sheets

STEP 2 Modify the data - Write into the configuration sheets

STEP 3 Make up the list - Write into the configuration sheets

STEP 4 Save the current data from MEM to CF card.

STEP 5 Verify the data in the MEM and the CF card.

5.3 Office Data Backup



The office data of the Telephony Server can be backed up in the CF card (s) or other storage devices such as the hard disk of a PC. Use the following for each type of backup:

Data transfer between MEM and CF card

- with MEM_HDD (MEM_HDD_N)

Data transfer between CF card and PC

- with Telephony Server Maintenance Menu

Note: Do not extract the CF card while the Telephony Server is in operation.

Backup for One-Touch Speed Calling Data

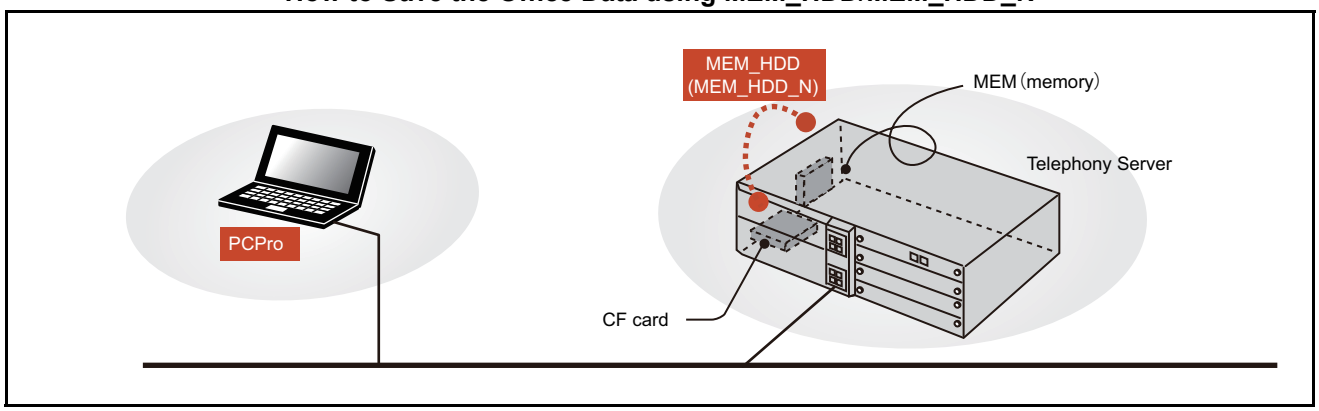
- By the BOSD command

5.3.1 Data Transfer between MEM and CF card

MEM_HDD / MEM_HDD_N

Current data that is loaded in MEM, can be saved to the CF card by using MEM_HDD/MEM_HDD_N.

How to Save the Office Data using MEM_HDD/MEM_HDD_N



The following data can be saved to the CF card from MEM.

- Data Memory
- Name Display
- Wireless Call Forwarding
- Call Forwarding
- Speed Calling
- User Assign Key
- Number Sharing
- ACD Data Memory
- Call Block
- Call Forwarding-Logout
- One-Touch Speed Calling for DtermIP

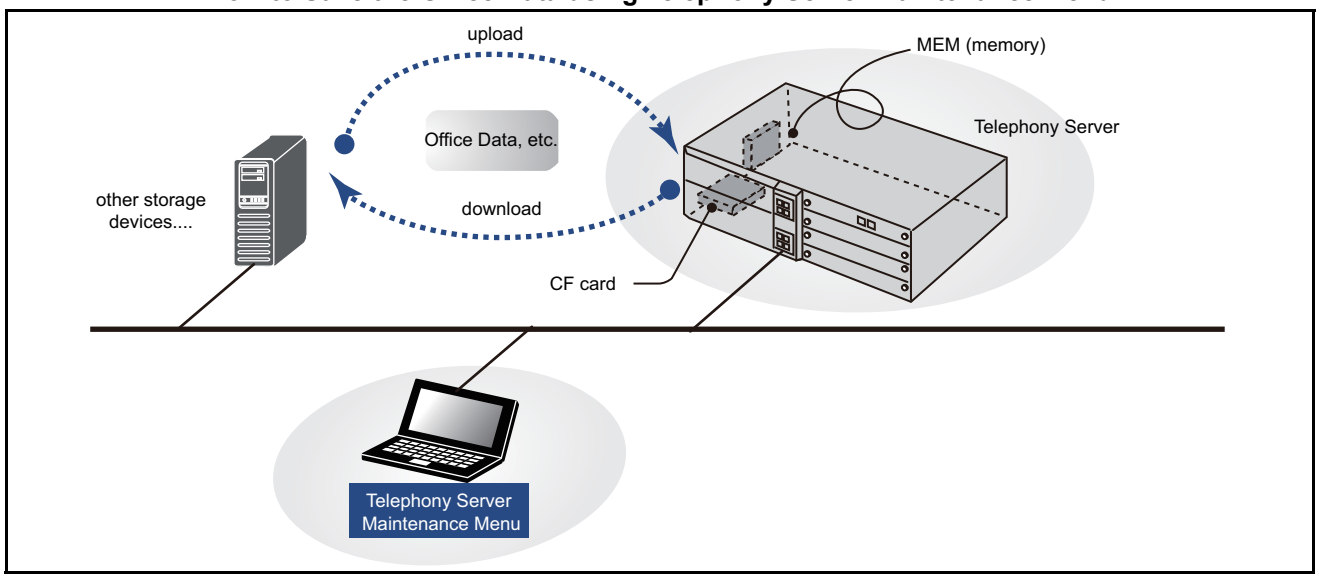
- SPD Name Data
- Message Area ID Data
- SR-MGC Data (Available only when PCPro logs in to SR-MGC and MEM_HDD is selected.)
- SIP Terminal Call Transfer
- Mobility Access Data
- Local Phone book Data
- Soft Switch Data (Available for MEM_HDD only.)

5.3.2 Data Transfer between CF Card and PC

Telephony Server Maintenance Menu

The office data stored in the CF card of Telephony Server can be saved (downloaded) in other storage device by using Telephony Server Maintenance Menu. Also, office data stored in other storage device can be loaded (uploaded) by using this menu.

How to Save the Office Data using Telephony Server Maintenance Menu



The following data can be saved to other storage devices from the CF card.

- Data Memory
- Name Display
- Wireless Call Forwarding
- Call Forwarding
- Speed Calling
- User Assign Key
- Number Sharing
- ACD Data Memory
- Call Block
- Call Forwarding-Logout
- One-Touch Speed Calling for DtermIP
- SPD Name Data
- Message Area ID Data
- SIP Terminal Call Transfer

- Mobility Access Data
- Local Phone book Data

<How to Download the Office Data (from CF card to PC)>

STEP 1 Start Internet Explorer.

STEP 2 Type "http://xxx.xxx.xxx.xxx:9801/" into the address bar to access Telephony Server Maintenance Menu. **Telephony Server Maintenance Menu Login** screen appears. After the login, **Telephony Server Maintenance Menu** screen appears.

Note: "xxx.xxx.xxx.xxx" represents the LAN1 IP address of the destination Telephony Server.

Note: The default for both user name and password is "admin". You are recommended to change user name and password from Advanced Menu.

STEP 3 Click the **Download** button for **Office Data** on **Telephony Server Maintenance Menu** screen. The **Office Data Download** dialog box appears in the lower right portion of the screen.

STEP 4 Select a drive (Drive B or Drive C) that contains the data to be downloaded.

STEP 5 Click the **Download** button on the **Office Data Download** dialog box.

STEP 6 Save the data to a folder on the PC.

<How to Upload the Office Data (from PC to CF card)>

STEP 1 Start Internet Explorer.

STEP 2 Type "http://xxx.xxx.xxx.xxx:9801/" into the address bar to access Telephony Server Maintenance Menu. **Telephony Server Maintenance Menu Login** screen appears. After the login, **Telephony Server Maintenance Menu** screen appears.

Note: "xxx.xxx.xxx.xxx" represents the LAN1 IP address of the destination Telephony Server.

Note: The default for both user name and password is "admin". You are recommended to change user name and password from Advanced Menu.

STEP 3 Click the **Upload** button for **Office Data** on **Telephony Server Maintenance Menu** screen. The **Office Data Upload** dialog box appears in the lower right portion of the screen.

STEP 4 Select a destination drive (Drive B or Drive C).

STEP 5 Click the **Browse** button on the dialog box and specify the Office Data file to be uploaded.

STEP 6 Click the **Upload** button on the **Office Data Upload** dialog box to upload the specified data.

STEP 7 Execute "Office Data Load & System Initialize" with the SINZ command.

5.3.3 Backup for One-Touch Speed Calling Data

(1) The followings are methods to backup One-Touch Speed Calling data.

- Backup the One-Touch Speed Calling data into maintenance PC by the BOSD command.
- Backup the One-Touch Speed Calling data into CF card by the MEM_HDD/MEM_HDD_N command.

(2) The followings are types of One-Touch Speed Calling data.

- One-Touch Speed Calling number data for Digital terminals
- One-Touch Speed Calling number data for IP terminals
- One-Touch Speed Calling name data for DESI-Less terminals

(3) The relationship between the types of One-Touch Speed Calling data and the backup methods of One-Touch Speed Calling data is as follows.

X: Backup is available -: Backup is not available

	One-Touch Speed Calling number data for Digital terminals	One-Touch Speed Calling number data for IP terminals	One-Touch Speed Calling name data for DESI-Less terminals
BOSD Command	X	X **Note 1**	-
MEM_HDD/MEM_HDD_N Command	-	X	X

Note 1: System data assignment (ASYD, SYS1, Index 507, Bit 3=1) is required.

5.3.3.1 One-Touch Speed Calling data backup by BOSD command

The backup of One-Touch Speed Calling data for Digital terminals/IP terminals can be executed by the BOSD command. Also, the backup data can be checked and loaded. For the detail of BOSD command, see “BOSD” in Chapter 7.

[Precautions]

(a) To backup the One-Touch Speed Calling data for IP terminals, assign System Data (ASYD, SYS1, Index 507, Bit 3=1).

(b) The range of backup can be specified by choosing the parameter "by Station" or "by LENS" of Data Type Selection in BOSD command.

- When “by Station” is chosen, One-Touch Speed Calling data will be loaded to the same station number. Therefore, when you change the accommodating location for some reason such as when moving the stations, execute backup with this command beforehand, and load the backup data after changing the accommodating location of station data.
- When “by LENS” is chosen, One-Touch Speed Calling data will be loaded to the same accommodating location. Therefore, even if the station number is changed, the data will be loaded to the same accommodating location.

(c) It takes approximately 10 seconds to load the data per station. It is recommended that the backup be divided per station number or LENS depending on the number of stations before saving the data.

5.3.4 Explanations on Each Item

- Call Forwarding Data and One-Touch Speed Calling Data

  The data for Call Forwarding and Speed Calling features can be saved.
  You can check whether the backup has been executed properly by checking the Auto Verify Afterward checkbox on the MEM_HDD command.
  Call Forwarding (All Calls, Busy, Don’t Answer) and Speed Calling features are set/canceled from each station, and the data is written on the memory of the system. Therefore, on the occasion that the memory data is changed after the data saving, an error message is detected when “Verify HDD against MEM” is executed.

- Wireless Call Forwarding Data

  Call Forwarding data assigned on each PS can be saved in CF card.

- User Assign Key Data

  Soft key information assigned on each DtermIP can be saved in CF card.

- Number Sharing Data

  Number Sharing data can be saved in CF card. Also, Dual Station Call data can be saved in CF card.

- Speed Calling Data for DtermIP

A maximum of 20 telephone numbers (40 telephone numbers when PAGE function for one-touch key changeover is adapted) allocated to the Speed Dialing keys on a Desktop terminal can be saved.

Note: There is no compatibility between Speed Calling data between Digital terminals and IP terminals.

Note: For the detail of backup for One-Touch Speed calling data, see Backup for One-Touch Speed Calling Data.

- SIP Terminal Transfer Information

  SIP terminal (WLAN Handset (MH Series)/SP Controlled Standard SIP terminals) data is backed up.

- ACD Data Memory

  When taking a backup of the ACD data memory, you can see the result by using “Auto Verify Afterward” of MEM_HDD.

  Note: The setting/deleting of the ACD data can be changed (written into the system memory) by using a MIS or an external application. Therefore, if it is changed after taking the backup, “Verify HDD against MEM” of MEM_HDD will end in an error.

- Soft Switch Data

  Switch setting data that can be set by the ASSW command is backed up.

- Individual Call Block Data

  Data for 16 Caller IDs registered in Individual Number List, Startup ON/OFF, and Anonymous Call Block is backed up.

5.4 CF Card Initialization

For information about the initialization of a CF card, refer to “CF Card Initialization” in Appliance Model Installation Manual.

6. UNIT/CARD REPLACEMENT PROCEDURE

This section explains procedures for replacing various control cards that are mounted on Telephony Server.

CPU Card Replacement Procedure

EMA Card Replacement Procedure

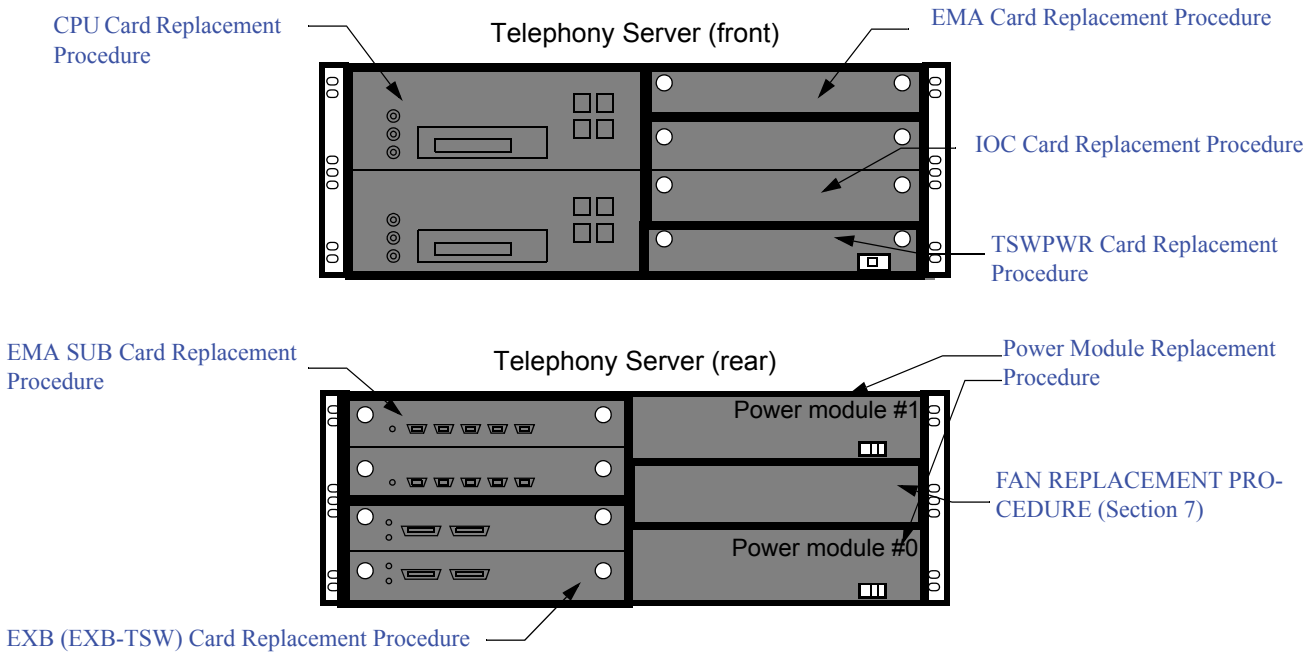
EMA SUB Card Replacement Procedure

EXB (EXB-TSW) Card Replacement Procedure

IOC Card Replacement Procedure

TSWPWR Card Replacement Procedure

Power Module Replacement Procedure



6.1 CPU Card Replacement Procedure

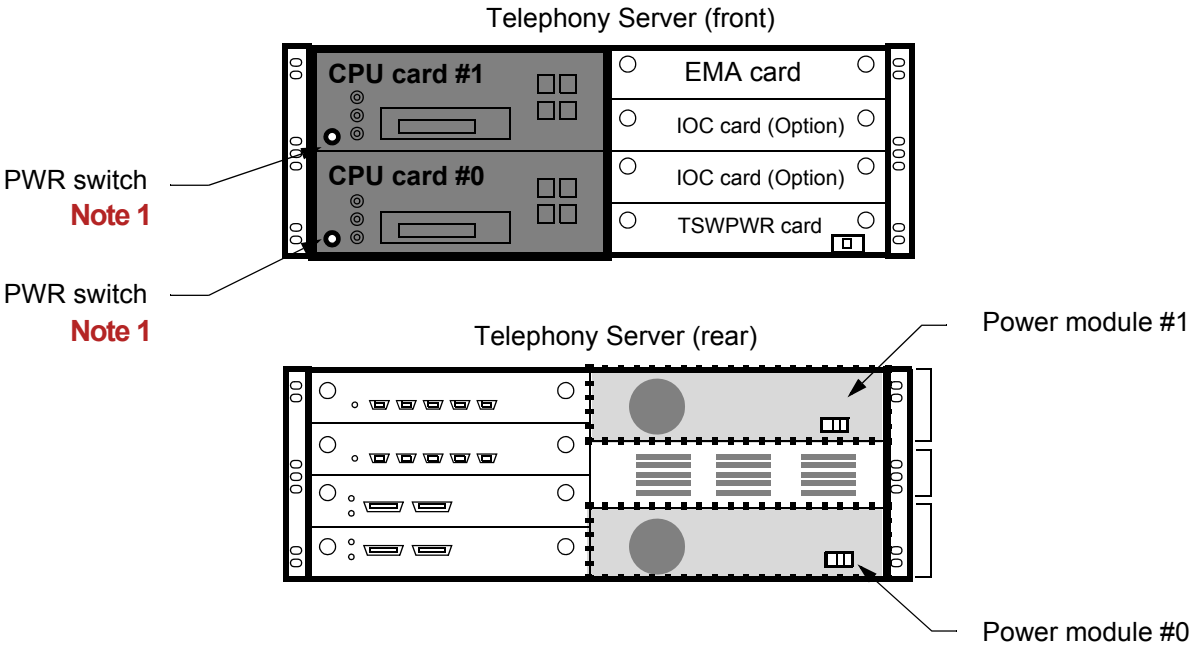


This section explains how to replace the CPU card. This card controls the call process for the system.

Be careful when operating switches on the CPU card. The mishandling may cause a critical influence to the system.

Note: If a system has the dual CPU configuration, you can replace the CPU card while the system is in operation.

WARNING **Be careful in operating switches on the card to prevent ESD and physical damage.**



Note 1: When Telephony Server Maintenance Menu - **Shutdown** button is not available or does not work, press the PWR switch to use auto-shutdown of the CPU card. If auto-shutdown does not work, press the PWR switch for four seconds to shut down the CPU card.

[1] CPU Card Replacement Procedure for CPU Single Configuration

WARNING **When the system is CPU single configuration, the whole system must be shut down.**

[Start]

STEP 1 Turn off the Telephony Server.

<Telephony Server Maintenance Menu>

(1) Click the **Shutdown** button in the **SYSTEM CONTROL** area of **Telephony Server Maintenance Menu** screen. The **Shutdown** dialog box appears in the lower right portion of the screen.

(2) Click the **Shutdown** button in the **Shutdown** dialog box.

(3) Make sure that the PWR lamp is off on the CPU card.

(4) Turn off the power switch (press the right side of the switch) on the Power module. **Note 1**

Note 1: Be sure to confirm the PWR lamp on the CPU card is off before turning off the power switch on the Power module.

<By switch operation>

*When Telephony Server Maintenance Menu - **Shutdown** button is not available or does not work, follow these procedures to shut down the CPU card.*

(1) Press the PWR switch (located on the lower left side of the front of the CPU card) to execute auto-shutdown. **Note 2**

(2) Make sure that the PWR lamp is off on the CPU card. **Note 3**

(3) On the Power module, press the power switch to the right to turn off the module.

Note 2: You should use auto-shutdown to turn off the power in almost every case. However, if it does not work, press and hold the power switch for four seconds to force the system to shut down.

Note 3: Be sure to confirm the PWR lamp is off on the CPU card before turning off the power switch on the Power module.

STEP 2 Turn off the PIR (s) and TSWR when they are accommodated. If not skip this step.

<For 1-IMG>

Turn off the power (7U-PIR power unit or PWR/DPWR cards) in the following order:

PIR0→PIR1→PIR2→PIR3 (smaller number PIR first)

<For 4-IMG with TSW-BOX>

Turn off the power (7U-PIR power unit or PWR/DPWR cards) in the following order:

PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

<For 4-IMG with TSWR>

Turn off the power (7U-PIR power unit or PWR/DPWR cards) in the following order:

(1) TSWR

(2) PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

STEP 3 Disconnect the LAN cables from the front connector.

Note: It is recommended to put a mark on the cable and make sure not to reconnect the wrong one.

STEP 4 Remove the front cover.

STEP 5 Remove the CF card from the CPU card.

STEP 6 Loosen the screws from the CPU card.

STEP 7 Pull the CPU card slowly toward you to remove it from the system.

STEP 8 On the new CPU card, set the switches exactly the same as those of the old CPU card.

STEP 9 Insert the new CPU card to the CPU slot.

Make sure that the connector is firmly inserted to the system.

STEP 10 Fasten the new CPU card with the screws.

STEP 11 Insert the removed CF card to the slot.

STEP 12 Attach the front cover again.

STEP 13 Reconnect the LAN cables.

STEP 14 Turn on the PIR (s) and TSWR when they are accommodated. If not skip this step.

<For 1-IMG>

Turn on the power (7U-PIR power unit or PWR/DPWR cards) in the following order:

PIR0→PIR1→PIR2→PIR3 (smaller number PIR first)

<For 4-IMG with TSW-BOX>

Turn on the power (7U-PIR power unit or PWR/DPWR cards) in the following order:

PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

<For 4-IMG with TSWR>

Turn on the power (7U-PIR power unit or PWR/DPWR cards) in the following order.

(1) TSWR

(2) PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

STEP 15 Turn on the Telephony Server.

Turn on the power switch (press the left side of the switch) on the Power module.

STEP 16 Make sure that the system is placed in normal operation by checking the following lamps.

- The PWR lamp on the CPU card lights steady green.

- The ON LINE lamp on the CPU card will change as follows:
  (1) OFF→(2)FAST flash→(3)SLOW flash→(4)steady ON

- The ACT lamp for SYS 0 on the EMA card lights steady green.

STEP 17 Set the clock information referring to "How to Adjust Date and Time."

[End]

[2] CPU Replacement Procedure for CPU Dual Configuration

Replacement procedure explained here assumes the following scenario as an example:

- CPU card (#1) must be replaced
- CPU card (#1) is operating as ACT

Therefore, in the following explanation, replace #1 with #0 as needed when performing this procedure on the actual system.

Note: When the system is CPU-dual configuration, system shutdown is not necessary for CPU replacement.

[Start]

STEP 1 Make sure the CPU to be replaced is placed in STBY mode.

- The ACT lamp of SYS 0 side lights green: CPU card #0 is in ACT mode.

- The ACT lamp of SYS 1 side lights green: CPU card #1 is in ACT mode.

STEP 2 If the CPU to be replaced is in ACT mode, place it in STBY mode. If not, start from STEP 5.

Use the CMOD command from PCPro.

Note: MODE switch - 4 is Make Busy Request (MBR) switch. CPU ACT/STBY can be switched by this switch. See "How to Change over CPU Card" - "CPU Changeover by Switch Operation" for more details.

STEP 3 With the CTSP command, move terminals registered to the CPU to be replaced to the other CPU.

(1) Access the CTSP command and click the **Get** button.

(2) Assign the following values to the parameters.
- Select **All Release** for **Change Type**.
- Select **Force** for **PH Select**.
- Specify the MPH-ID for the CPU to be replaced.

(3) Click the **Execute** button. The **Processing is being executed** dialog box appears.

(4) Ensure that all terminals have registered to SP-PHD in the ACT side CPU by checking the **PHD** field of **MPH-ID Registration Terminal Information**.

(5) Click the **Stop** button on the **Processing is being executed** dialog box. **Note 1**

Note 1: Clicking the **Stop** button stops sending terminal reset requests and permits registration to SP-PHD. This may cause some of the terminals to re-register to SP-PHD. Be sure to click the **Stop** button after confirming that the connection switchover is complete.

STEP 4 Make sure the CPU to be replaced is placed in STBY mode.

The ACT lamp on the EMA card is changed? (In this example, SYS 0: ACT lamp lights green.)

Note: No operation is needed using SW01 switch (SYS LOCK/SYS SEL) on the front side of EMA card. Ensure that SW01 switch (SYS LOCK/SYS SEL) is set to OFF (down).

STEP 5 Turn off the STBY side CPU card.

<Telephony Server Maintenance Menu>

(1) Click the **Shutdown** button in the **SYSTEM CONTROL** area of **Telephony Server Maintenance Menu** screen. The **Shutdown** dialog box appears in the lower right portion of the screen.

(2) Click the **Shutdown** button in the **Shutdown** dialog box.

(3) Make sure that the PWR lamp is off on the CPU card. **Note 2**

Note 2: Be sure to confirm the PWR lamp is off on the CPU card before proceeding to the next step.

<By switch operation>

*When Telephony Server Maintenance Menu - **Shutdown** button is not available or does not work, follow the procedure below to shut down the CPU card.*

(1) Press the PWR switch (located on the lower left side of the front of the CPU card) to execute auto-shutdown. **Note 3**

(2) Make sure that the PWR lamp is off on the CPU card. **Note 4**

Note 3: You should use auto-shutdown to turn off the power in almost every case, however if it does not work, press and hold the power switch for four seconds to force the system to shut down.

Note 4: Be sure to confirm the PWR lamp goes off on the CPU card before proceeding to the next step.

STEP 6 Disconnect the LAN cables from the CPU card that is shut down.

Note: It is recommended to put a mark on the cable not to reconnect a wrong cable.

STEP 7 Remove the front cover.

STEP 8 Remove the CF card from the CPU card.

STEP 9 Loosen the screws from the CPU card.

STEP 10 Pull the CPU card slowly toward you to remove from the system.

STEP 11 On the new CPU card, set the switches exactly same as those of the old CPU card.

STEP 12 Insert the removed CF card to the CF slot on the new CPU card.

STEP 13 Insert the new CPU card to the CPU slot.

Make sure that the connector is firmly inserted to the system.

Note: Being inserted into the connector, the CPU card is automatically powered on.

STEP 14 Fasten the new CPU card with the screws.

STEP 15 Reconnect the LAN cables.

STEP 16 Make sure that the new CPU shows no abnormality by checking lamps on the front.

- The PWR lamp on the CPU card lights green.

- The ON LINE lamp on the CPU card will change as follows:
  (1) OFF→(2)FAST flash→(3)SLOW flash→(4)steady ON

STEP 17 Switch over the CPU ACT/STBY to test the newly replaced CPU card.

Use the CMOD command from PCPro.

STEP 18 Make test calls to see that newly replaced CPU card is operating normally.

STEP 19 Attach the front cover.

[End]

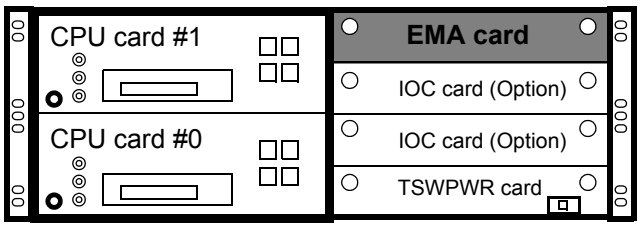
6.2 EMA Card Replacement Procedure



EMA card is mounted in the Telephony Server. The main functions of the card are as follows:

- Designation of ACT/STBY status of the CPU
- Detection of abnormality within the system
- Control of the PFT (NCU) card

Telephony Server (front)



Note: Functions provided by EMA card are not available during the replacement process, when Power Failure Transfer (PFT) will be activated if PFT is provided.

Note: EMA SUB (EMA SUB-A/EMA SUB-B) cards are powered by EMA card. Therefore, functions performed by EMA SUB-B cards can also not be used during EMA card replacement. See EMA SUB Card Replacement Procedure.

[Start]

STEP 1 Loosen the screws from the EMA card.

STEP 2 Pull the EMA card toward you slowly to remove from the system.

Note: PFT function will start operating if NCU card is provided.

STEP 3 On the new EMA card, set the switches exactly same as those of the old EMA card.

STEP 4 Insert the new EMA card to the system. (Insert the connector to the system firmly.)

PWR lamp lights green on the front panel of the EMA card.

STEP 5 Fasten the new EMA card with the screws.

Note: PFT function will stop operating automatically.

STEP 6 Set the clock information referring to "How to Adjust Date and Time".

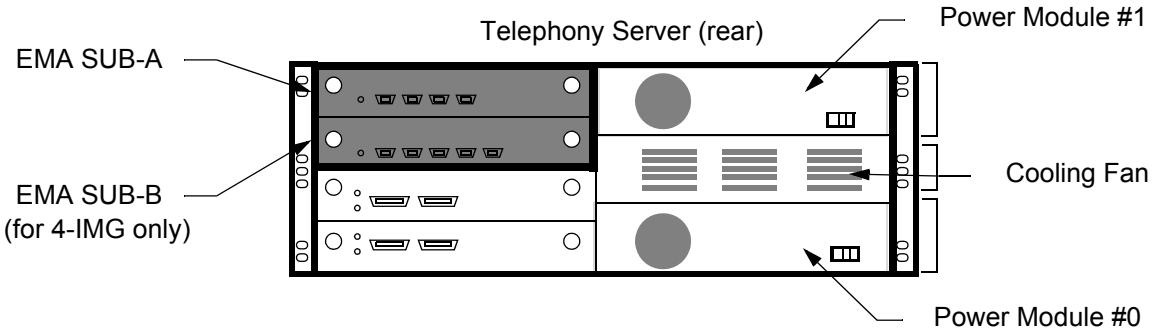
[End]

6.3 EMA SUB Card Replacement Procedure



This card is used for system having PIR only. EMA SUB (EMA SUB-A/EMA SUB-B) cards are mounted on the rear side of Telephony Server. The main functions of the card are as follows:

- EMA SUB-A: Collects the alarm information from PIRs.
- EMA SUB-B: Collects the alarm information from TSWR and other frames.



Note: Functions provided by EMA SUB cards are not available during the replacement process.

[Start]

STEP 1 Set “SW00-1 [MB (SUB)]” on the front panel of EMA card to “ON (Upward)”.

STEP 2 Disconnect the cables from the connector of the EMA SUB card.

STEP 3 Loosen the screws on the EMA SUB card.

STEP 4 Remove the EMA SUB card.

STEP 5 Attach a new EMA SUB card.

STEP 6 Insert the cable to the connector.

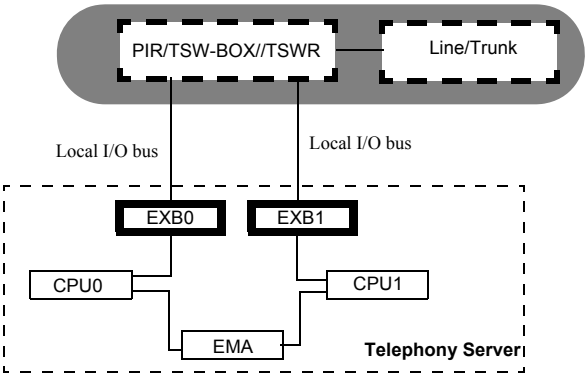
STEP 7 Set SW00-1 [MB (SUB)] on the front panel of EMA card to “OFF (Downward)”.

[End]

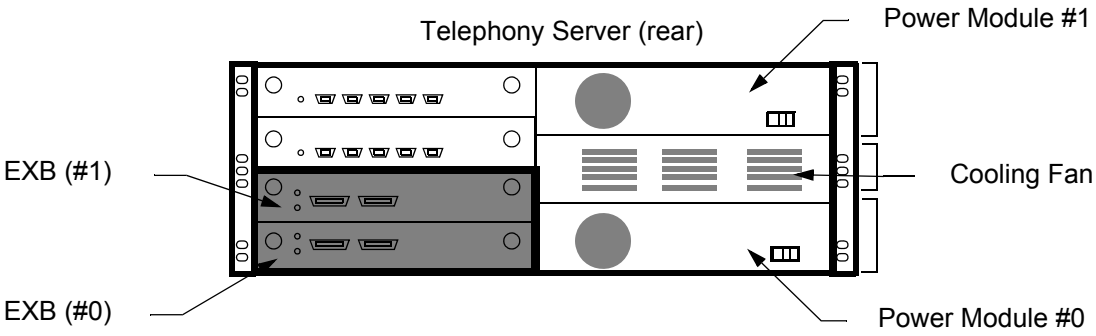
6.4 EXB (EXB-TSW) Card Replacement Procedure



EXB (EXB-TSW) cards are mounted on the rear side of Telephony Server with PIR. The main function of the card is to provide an interface between CPU and TSW-BOX/TSWR through Local I/O bus. When CPU is provided in dual configuration, ACT/STBY of EXB card and CPU always switches over in combination.



WARNING **When the system is CPU single configuration, the whole system must be shut down for EXB card replacement.**



EXB - Replacement Procedure for CPU Single Configuration

WARNING	When the system is CPU single configuration, the whole system must be shut down.

[Start]

STEP 1 Turn off the Telephony Server.

<Telephony Server Maintenance Menu>

(1) Click the **Shutdown** button in the **SYSTEM CONTROL** area of **Telephony Server Maintenance Menu** screen. The **Shutdown** dialog box appears in the lower right portion of the screen.

(2) Click the **Shutdown** button in the **Shutdown** dialog box.

(3) Make sure that the PWR lamp goes off on the CPU card. **Note 1**

(4) On the Power module, press the power switch to the right to turn off the module.

Note 1: Before proceeding to the next step, confirm the PWR lamp on the front of CPU card is off.

<By switch operation>

*When Telephony Server Maintenance Menu - **Shutdown** button is not available or does not work, follow the procedure below to shut down the CPU card.*

(1) Press the PWR switch on the lower left front of the CPU card to execute auto-shutdown. **Note 2**

(2) Make sure that the PWR lamp on the front panel of the CPU card is turned off.

(3) On the Power module, press the power switch to the right to turn off the module. **Note 3**

Note 2: You should use auto-shutdown to turn off the power in almost every case, however if it does not work, press and hold the power switch for four seconds to force the system to shut down.

Note 3: Be sure to confirm the PWR lamp is off on the CPU card before turning off the power switch on the Power module.

STEP 2 Turn off the PIR (s) and TSWR (for 4-IMG with TSWR only) when they are accommodated. If not, skip this step.

<For 1-IMG>

Turn off the 7U-PIR power unit or PWR/DPWR cards in the following order.

PIR0→PIR1→PIR2→PIR3 (smaller number PIR first)

<For 4-IMG with TSW-BOX>

Turn off the power (7U-PIR power unit or PWR/DPWR cards) in the following order.

PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

<For 4-IMG with TSWR>

Turn off the power (7U-PIR power unit or PWR/DPWR cards) in the following order.

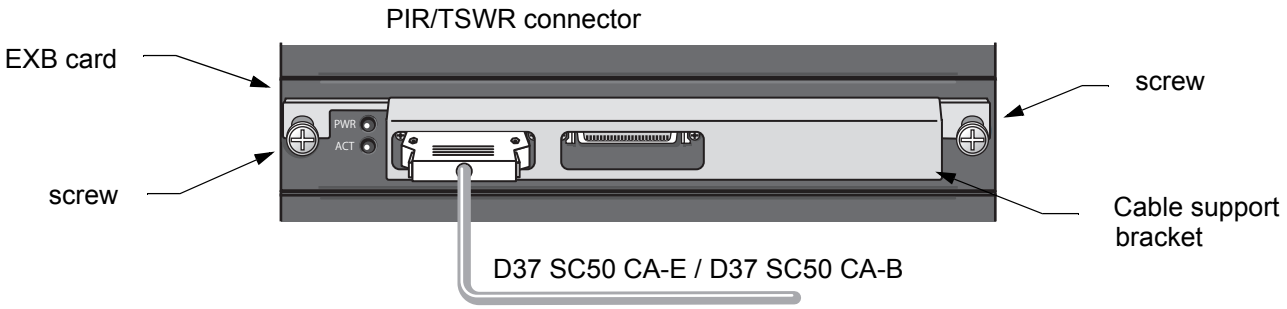
(1) TSWR

(2) PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

STEP 3 Disconnect the bus cable from the EXB card.

- 1-IMG/4-IMG with TSW-BOX: D37 SC50 CA-E (TSWR connector)

- 4-IMG with TSWR: D37 SC50 CA-B (TSWR connector)



STEP 4 Loosen the screws on the EXB card.

STEP 5 Remove the cable support bracket. Keep the bracket for later step.

STEP 6 Pull the EXB card slowly toward you.

STEP 7 Insert a new EXB card by placing it on the slots of the server, and then securely insert into the connector provided on the server.

STEP 8 Place the both ends of the cable support bracket on the screws.

STEP 9 Fasten the cable support bracket on the EXB card by tightening the screws.

STEP 10 Insert the bus cable to the connector again.

STEP 11 Turn on the PIR (s) and TSWR when they are accommodated. If not, skip this step.

<For 1-IMG>

Turn on the 7U-PIR power unit or PWR/DPWR cards in the following order.

PIR0→PIR1→PIR2→PIR3 (smaller number PIR first)

<For 4-IMG with TSW-BOX>

Turn on the power (7U-PIR power unit or PWR/DPWR cards) in the following order.

PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

<For 4-IMG with TSWR>

Turn on the power (7U-PIR power unit or PWR/DPWR cards) in the following order.

(1) TSWR

(2) PIR0→PIR1→PIR2→....→PIR15 (smaller number PIR first)

STEP 12 Turn on the Telephony Server.

Turn on the power switch (press the left side of the switch) on the Power module.

STEP 13 Make sure that the system is placed in normal operation.

- The PWR lamp on the CPU card lights green.

- The SYS 0 side ACT lamp on the EMA card lights green.

STEP 14 Make sure that the newly replaced EXB card is operating normally in the system.

The PWR lamp lights green on the EXB card.

Note: If the lamp does not light green, make sure that the EXB card is securely inserted into the main unit.

STEP 15 Make test calls to see that newly replaced EXB card is operating normally.

(1) Place test calls using stations / trunks accommodated in PIR.

(2) Check whether any system messages related fault are output or not. Use DFTD from PCPro.

Note: If any fault is found, check the following:
- EXB card is securely inserted into the main unit?
- Bus cable is securely inserted into the connector?

[End]

EXB - Replacement Procedure for CPU Dual Configuration

[Start]

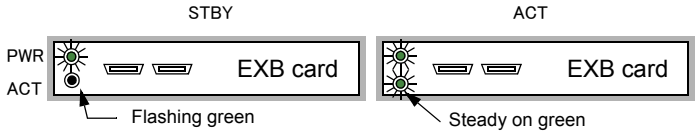
Replacement procedure explained here assumes the following scenario as an example:

- EXB card (#1) must be replaced
- EXB card (#1) is operating as ACT

Therefore, in the following explanation, replace #1 with #0 as needed when performing this procedure on the actual system.

Note: When this system is CPU-dual configuration, system shutdown is not necessary for EXB replacement.

STEP 1 Make sure the EXB card to be replaced is placed in STBY mode. ACT/STBY can be identified by the ACT lamp on the EXB card.



- The ACT lamp is steady ON (green): This EXB card is in ACT mode.

- The ACT lamp flashes (green): This EXB card is in STBY mode.

If the EXB card to be replaced is in STBY mode, proceed to STEP 3.

STEP 2 If the EXB to be replaced is in ACT mode, switch over CPU ACT/STBY. **Note 1**

Use the CMOD command from PCPro to switch over CPU ACT/STBY.

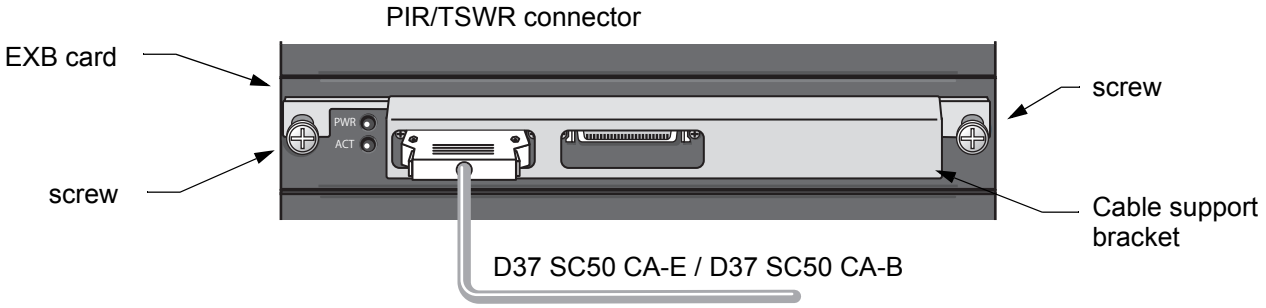
Note 1: When CPU is provided in dual configuration, ACT/STBY of EXB card and CPU always switches over in combination.

Note: MODE switch - 4 is Make Busy Request (MBR) switch.

STEP 3 Disconnect the bus cable from the EXB card that is placed in STBY mode.

- 1-IMG/4-IMG with TSW-BOX: D37 SC50 CA-E (TSWR connector)

- 4-IMG with TSWR: D37 SC50 CA-B (TSWR connector)



STEP 4 Loosen the screws on the EXB card.

STEP 5 Remove the cable support bracket.

STEP 6 Pull the EXB card slowly toward you.

STEP 7 Insert the new EXB card by placing it on the slots of the server, and then securely insert into the connector provided on the server.

STEP 8 Place the both ends of the cable support bracket on the screws.

STEP 9 Fasten the EXB card by tightening the two screws onto the server.

STEP 10 Insert the bus cable to the connector again.

STEP 11 Make sure that the newly replaced EXB card is operating normally in the system.

The PWR lamp lights green on the EXB card.

Note: If the lamp does not light green, make sure that the EXB card is securely inserted into the main unit.

STEP 12 Switch over the CPU ACT/STBY to test the newly replaced EXB card.

(1) Use the CMOD command from PCPro.

(2) Place test calls using stations / trunks accommodated in PIR.

(3) Confirm whether any system messages related fault are output or not. Use DFTD from PCPro.

Note: If any fault is found, check the following:
- EXB card is securely inserted into the main unit?
- Bus cable is securely inserted into the connector?

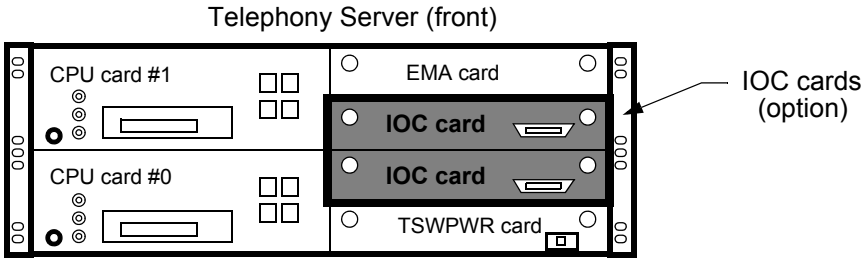
[End]

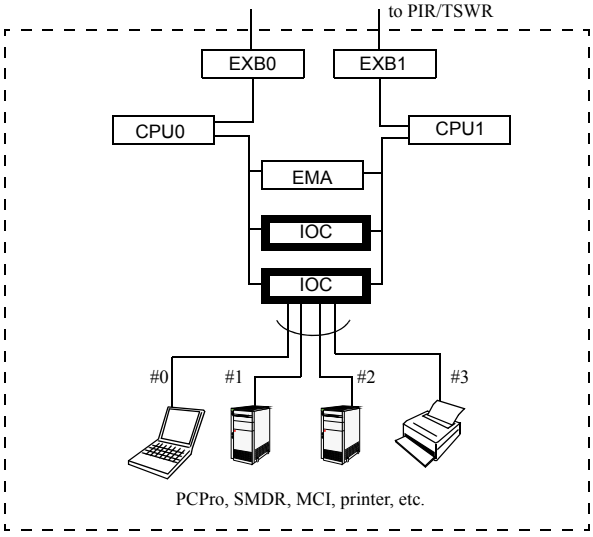
6.5 IOC Card Replacement Procedure



IOC card (optional) is mounted on the front side of Telephony Server. One card provides four ports of serial interface. During IOC card replacement, all pieces of equipment (i.e. PCPro, SMDR, MCI) that are connected to the IOC card cannot be used. A maximum of two IOC cards can be used in the system.

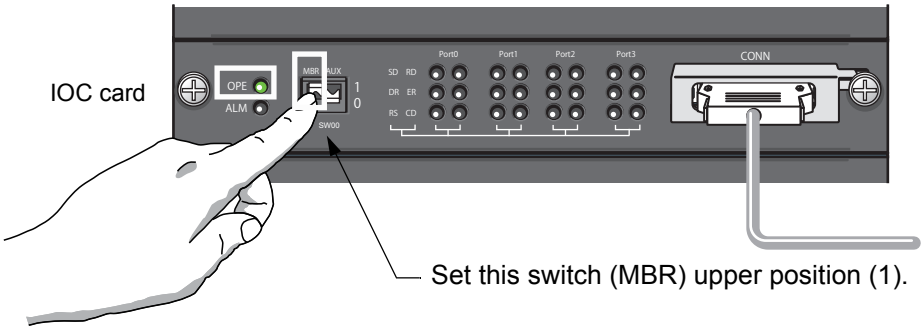
WARNING **During IOC card replacement, all pieces of equipment that are connected to the IOC card cannot be used.**





[Start]

STEP 1 Turn on MBR switch (left side of SW00) on the IOC card to be replaced.



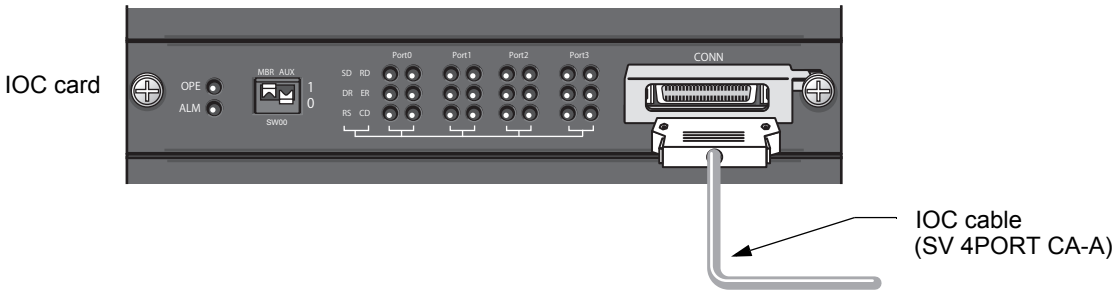
The OPE lamp on the card changes as follows:

- OPE lamp starts flashing

- OPE lamp goes off

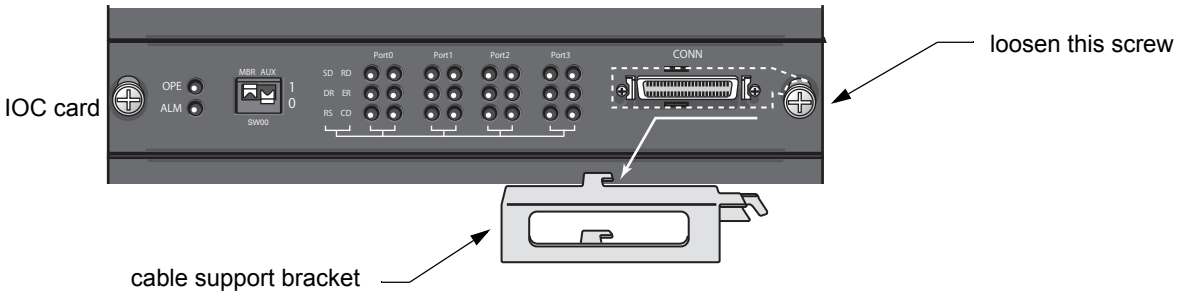
Note: During IOC card replacement, the system does not send the text data (i.e. SMDR data) to the connected equipment. The text data is temporarily stored in the buffer memory of the system, and it is automatically sent to the equipment when the replaced IOC card is placed in operation.

STEP 2 Disconnect the IOC cable (SV 4PORT CA-A) from the front connector.



STEP 3 Loose the right side screw and then remove the cable support bracket.

To remove the bracket, slide it to the left and pull it toward you.



STEP 4 Loosen the left side screw.

STEP 5 Pull the IOC card slowly toward you to remove from the system.

STEP 6 On the new IOC card, set the switches exactly same as those of the old IOC card.

Note: IOC card has S2 switch (4 - DIP switch).

STEP 7 Turn on the MBR switch (left side of SW00) on the new IOC card.

Set the MBR switch to the upper position (1).

STEP 8 Insert the new IOC card by placing it on the slots of the server, and then securely insert into the connector provided on the server.

STEP 9 Fasten the IOC card by tightening the two screws.

STEP 10 Insert the cable support bracket.

STEP 11 Connect the IOC cable (SV 4PORT CA-A) to CONN connector.

STEP 12 Turn off the MBR switch (left side of SW00) on the IOC card.

Set the MBR switch to the lower position (0).

STEP 13 Make sure the following.

OPE lamp starts flashing (IOC card is initialized)

Note: If the OPE lamp does not start flashing, check the following.
- IOC card is securely inserted into the main unit?
- The switch setting of the new IOC card is the same as that of old card?

STEP 14 Make sure equipment connected to the new card is operating normally.

Note: If it is not operating normally, make sure the IOC cable is securely inserted into the system.

6.6 TSWPWR Card Replacement Procedure

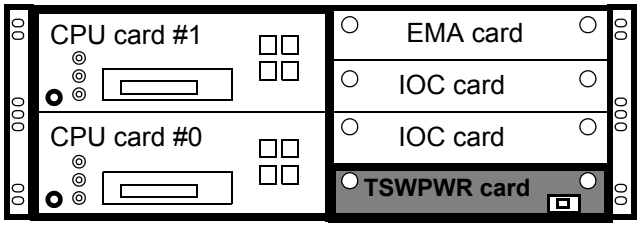


TSWPWR card is mounted on the front side of the Telephony Server. This card provides power to the TSW-BOX, which has a key role in call processing.

The replacement procedure for this card is as follows:

WARNING **Before replacing the TSWPWR card, shut down the whole system.**

Telephony Server (front)



[Start]

STEP 1 Turn off the Telephony Server.

<Through Telephony Server Maintenance Menu>

(1) Click the **Shutdown** button in the **SYSTEM CONTROL** area of **Telephony Server Maintenance Menu** screen. The **Shutdown** dialog box appears in the lower right portion of the screen.

(2) Click the **Shutdown** button in the **Shutdown** dialog box.

(3) Make sure that the PWR lamp on the front of the CPU card goes off. **Note 1**

(4) On the Power module, press the power switch to the right to turn off the module.

Note 1: Be sure to confirm the PWR lamp is off on the CPU card before proceeding to the next step.

<By Switch Operation>

*When Telephony Server Maintenance Menu - **Shutdown** button is not available or does not work, follow these procedures to shut down the CPU card.*

(1) Press the PWR switch (located on the lower left side of the front of the CPU card) to execute auto-shutdown. **Note 2**

(2) Make sure that the PWR lamp on the front of the CPU card goes off. **Note 3**

(3) On the Power module, press the power switch to the right to turn off the module.

Note 2: You should use auto-shutdown to turn off the power in almost every case, however if it does not work, press and hold the power switch for four seconds to force the system to shut down.

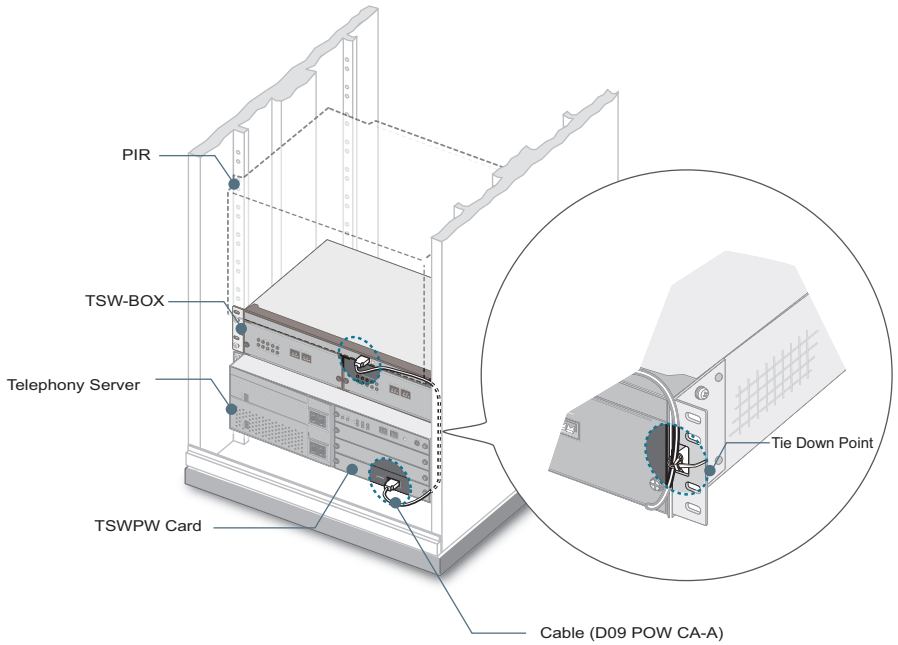
Note 3: Be sure to confirm the PWR lamp is off on the CPU card before turning off the power switch on the Power module.

STEP 2 Turn off the PIR (s) when they are accommodated. If not, skip this step.

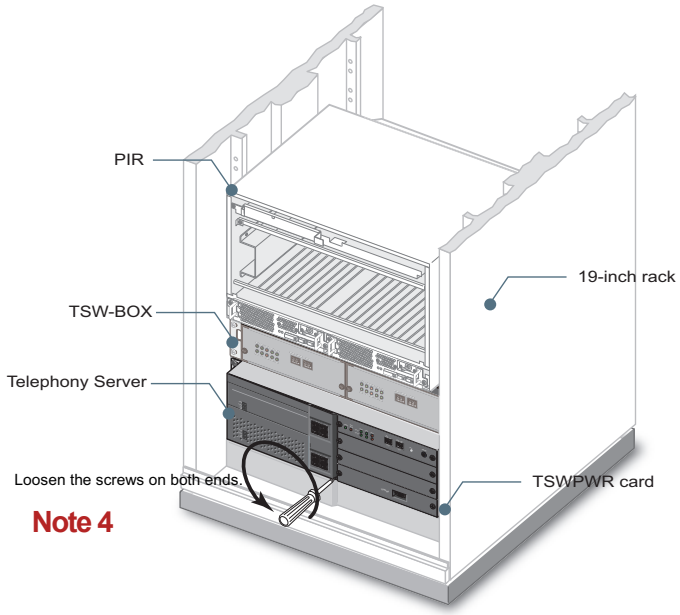
Turn off the 7U-PIR power units in ascending order of PIR number as follows:

PIR0→PIR1→PIR2→PIR3→... PIR15

STEP 3 Disconnect the cable (D09 POW CA-A) between the TSWPWR connector and the PWR connector of the TSW-BOX. The figure below shows an example for 1-IMG configuration.

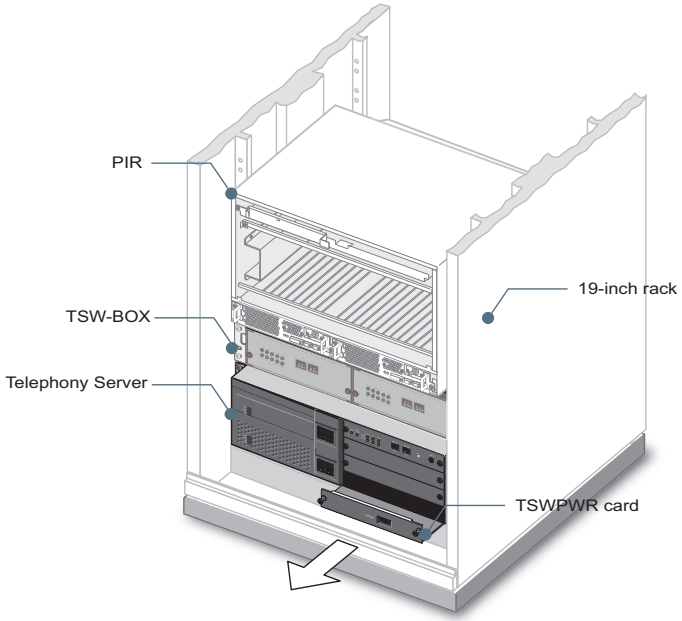


STEP 4 Loosen the screws on both ends (left and right) with a Phillips screwdriver.



Note 4: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 5 Pull the TSWPWR card slowly toward you to remove it from the Telephony Server.



STEP 6 Insert a new TSWPWR card into the Telephony Server.

STEP 7 Fasten the TSWPWR card by tightening the screws on both ends.

STEP 8 Connect the cable (D09 POW CA-A) between the TSWPWR connector and the PWR connector of the TSW-BOX.

[End]

6.7 Power Module Replacement Procedure

This subsection explains how to replace a power module that is mounted onto Telephony Server. When a failure occurs in a power module, a system message (6-A: System Failure) is issued. Analyze this system message, and replace the power module if necessary. For details of the system message, see 6-A System Failure (For Telephony Server).



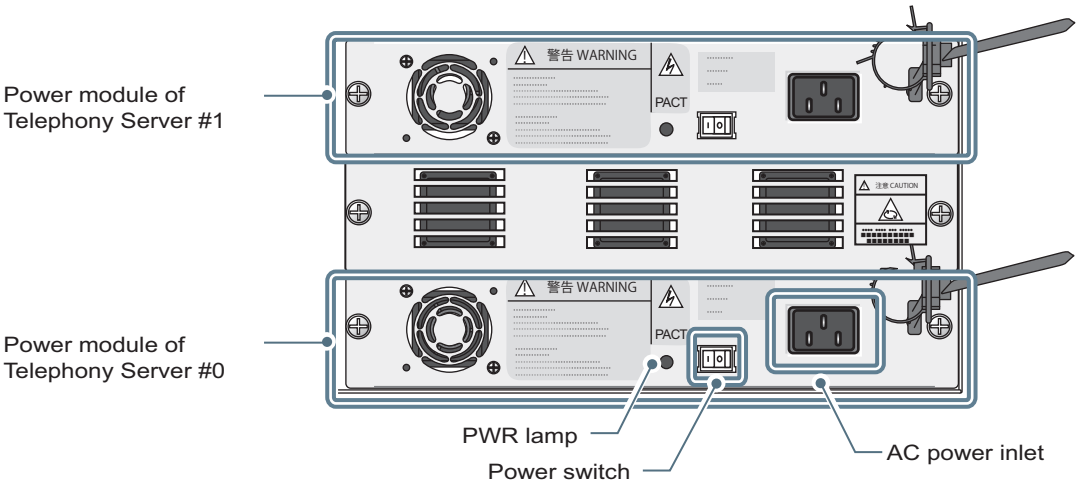
Procedure for replacing AC power module

Procedure for replacing DC power module

WARNING **When the power module is operating in dual configuration, be sure to replace the power module of one unit at a time. Never turn off the power of both systems at once.**

Procedure for replacing AC power module

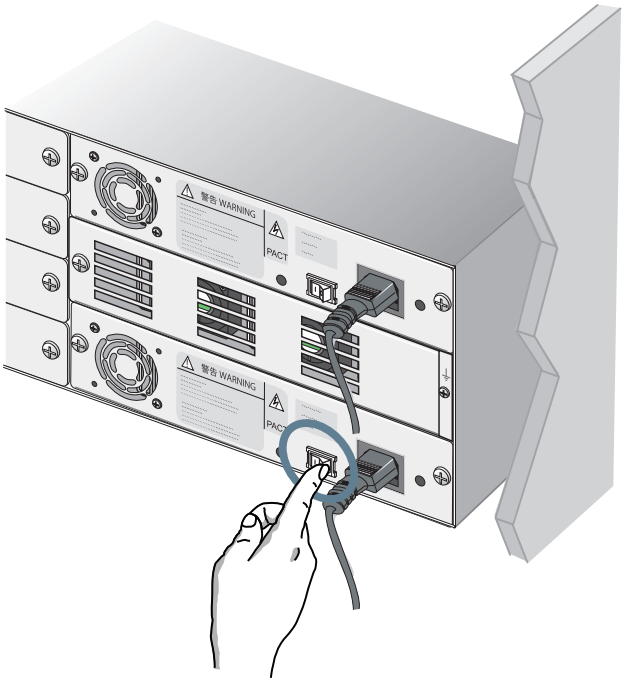
AC power module is mounted at the rear of the Telephony Server



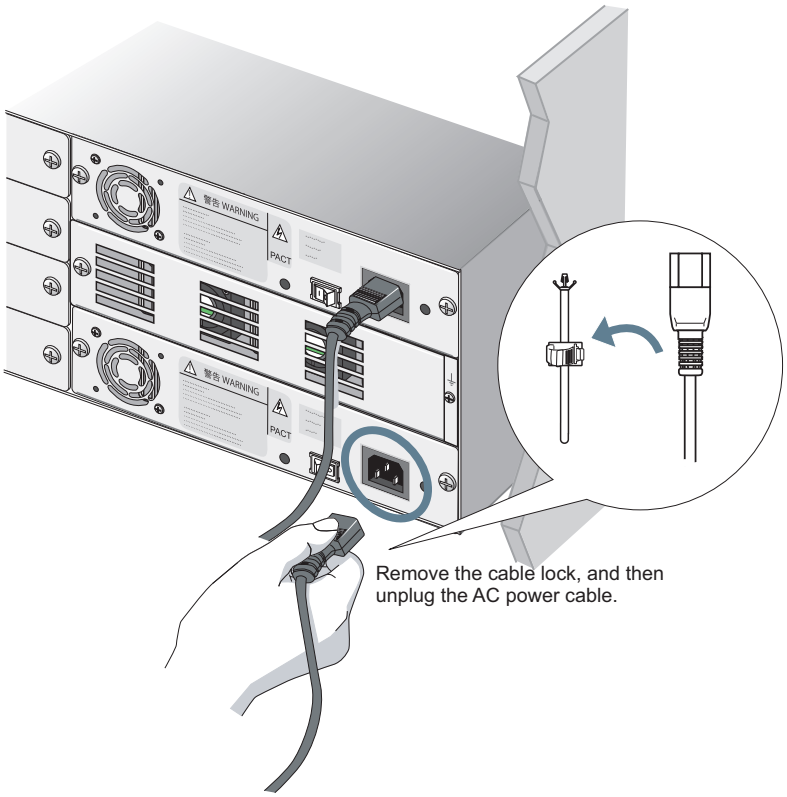
[Start]

Note: In this subsection, we explain how to replace the power module #0 as an example. When the power module is operating in dual configuration, and if you need to replace the power module #1 as well, complete the replacement of the module #0 first, and continue with that of #1 in the same procedure.

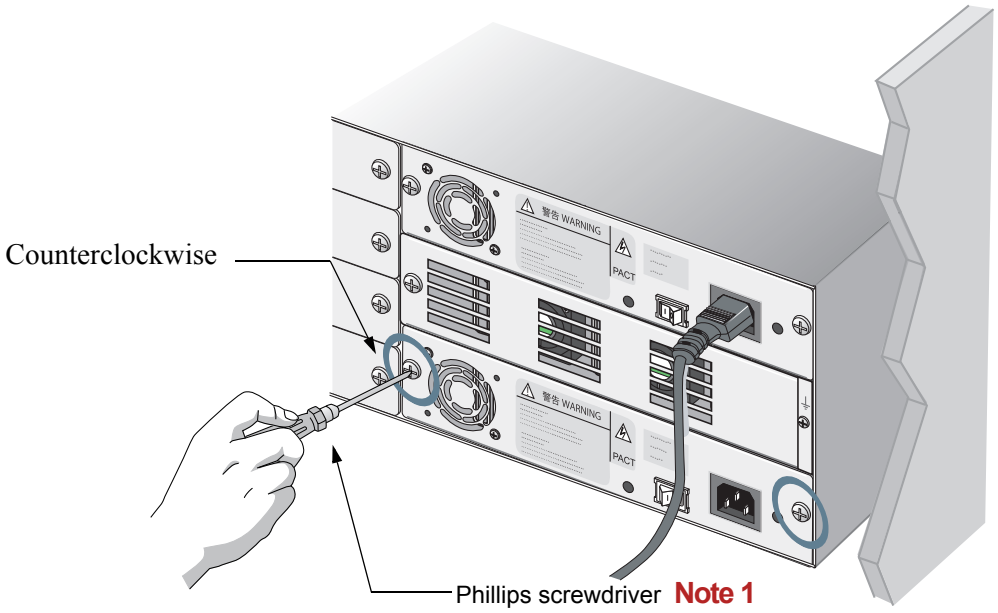
STEP 1 Turn off the power unit to be replaced



STEP 2 Disconnect the AC power cable from the power inlet.



STEP 3 Loosen the screws on both ends.



Note 1: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 4 Grab the loosened screws and pull the power module slowly toward you to remove from the system.

STEP 5 Insert the new power module to the system.

Note: Make sure that the power switch is turned off.

STEP 6 Fasten the power module by tightening the screws on both ends.

WARNING	**Be sure to fasten the screws that is located at both sides of the power module, as they serve as grounding to the whole system. If they are loose, static electricity may cause a system failure.**

STEP 7 Insert the AC power cable to the AC power inlet.

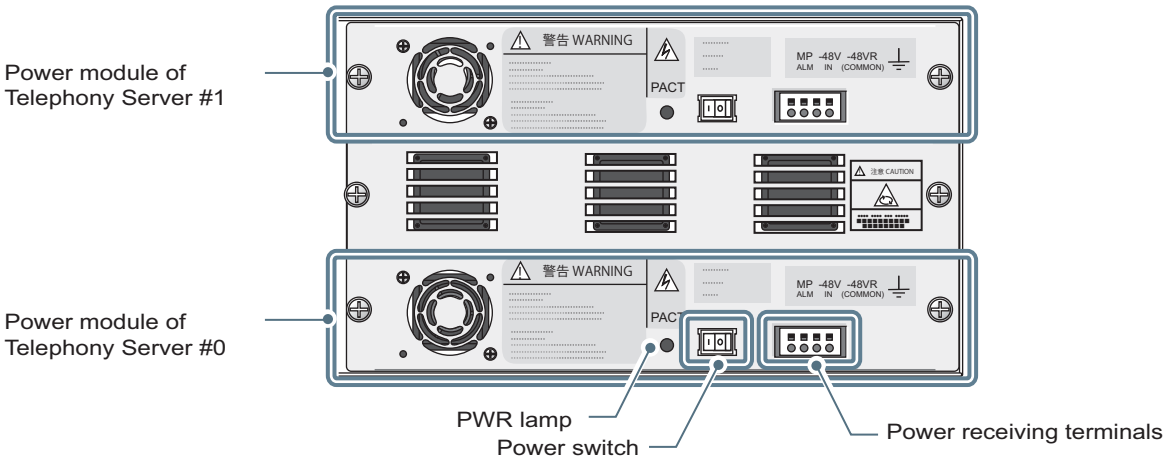
STEP 8 Turn on the power of the power module.

STEP 9 Make sure that the PWR lamp lights and the fan operates normally.

[End]

Procedure for replacing DC power module

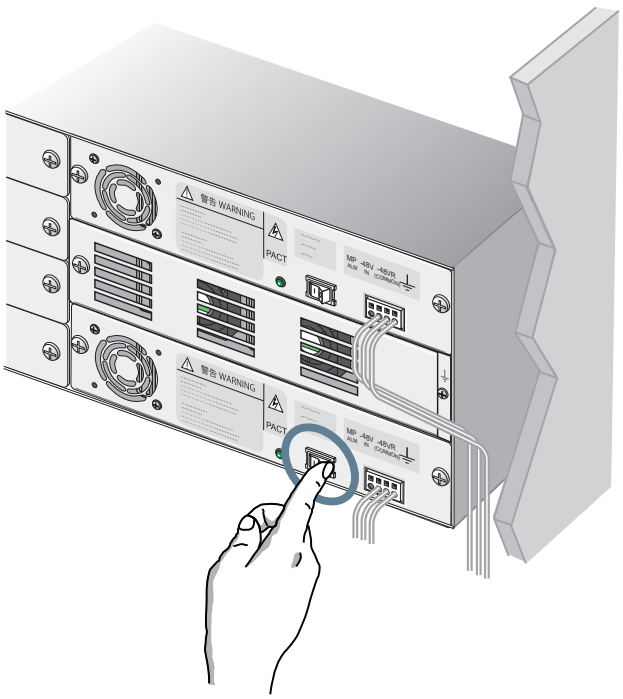
DC power module is mounted at the rear of the Telephony Server



[Start]

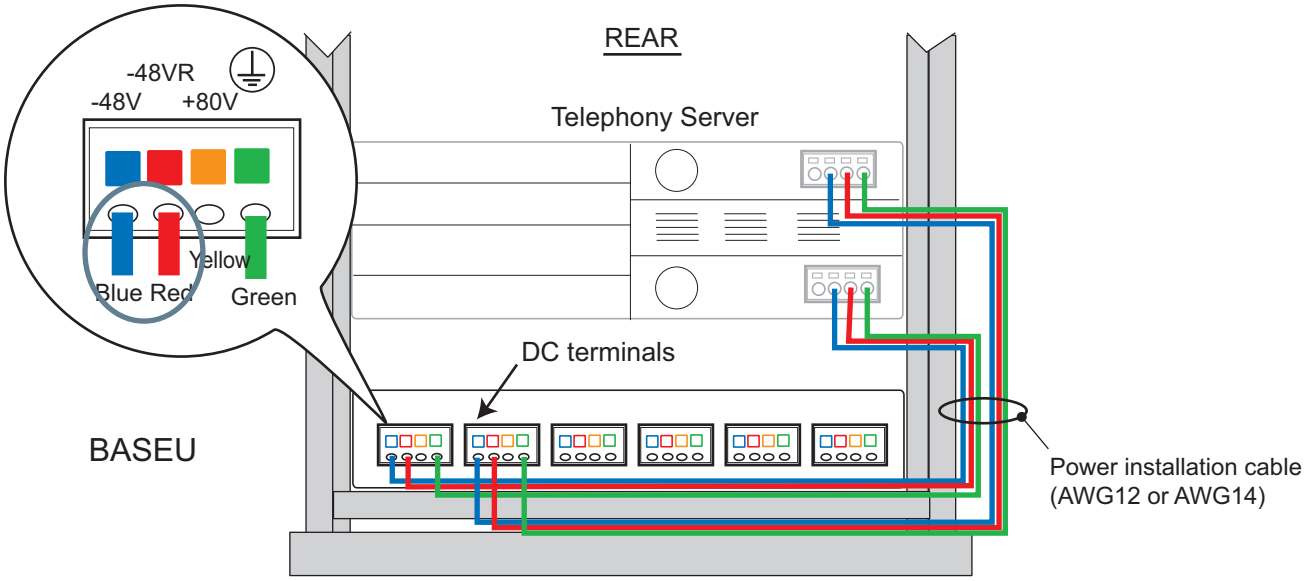
Note: In this subsection, we explain how to replace the power module #0 as an example. When the power module is operating in dual configuration, and if you need to replace the power module #1 as well, complete the replacement of the module #0 first, and continue with that of #1 in the same procedure.

STEP 1 Turn off the power unit to be replaced.



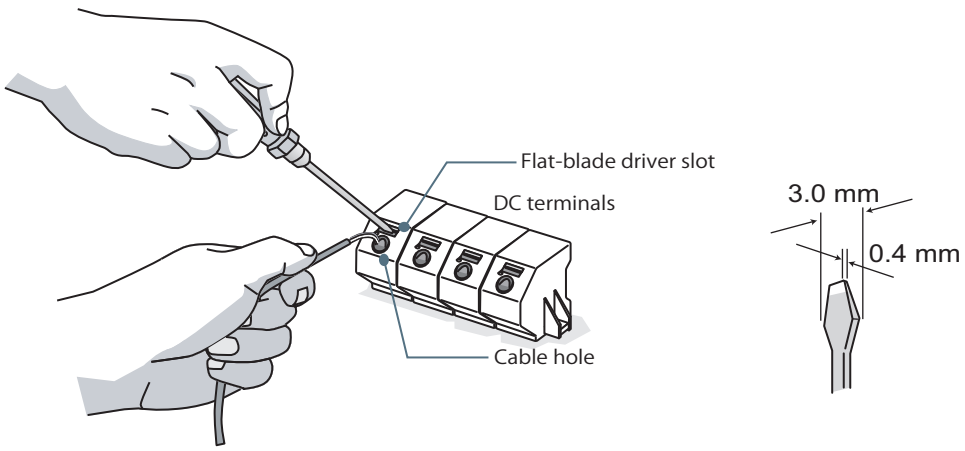
STEP 2 Disconnect the -48V power cable (blue) and the -48VR power cable (red) on the BASE unit from the power receiving terminals. Do not disconnect FE cable (green).

WARNING **Be sure to disconnect the power cable on the BASE unit first to prevent short circuit. Then disconnect the power cables on the power module.**

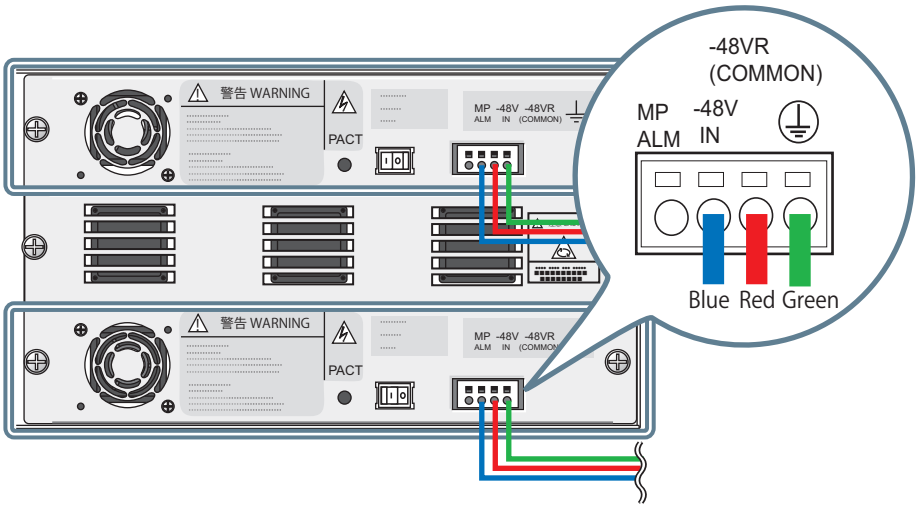


See the following figure, and disconnect the power installation cables (AWG 12 or AWG 14).

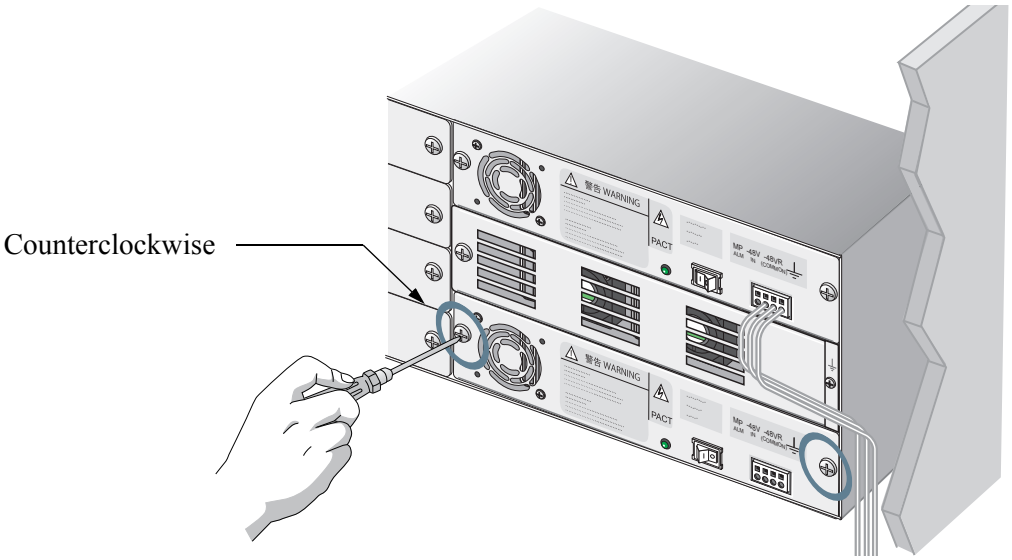
Note: Be careful not to touch the electric potential with the metallic part of the driver when connecting the power cable.



STEP 3 Check that the cables on BASE unit have been disconnected, and then disconnect all cables on the power module.



STEP 4 Loosen the screws on both ends.



Note: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 5 Grab the loosened screws and pull the power module slowly toward you to remove from the system.

STEP 6 Insert the new power module to the system.

Note: Make sure that the power switch is turned off.

STEP 7 Fasten the power module by tightening the screws on both ends.

WARNING	**Be sure to fasten the screws that is located at both sides of the power module, as they serve as grounding to the whole system. If they are loose, static electricity may cause a system failure.**

STEP 8 Connect all cables on the power unit.

STEP 9 Connect the power cables on the BASE unit; first -48VR (red), and then -48V (blue).

STEP 10 Turn on the power module.

STEP 11 Make sure that the PWR lamp lights and the fan operates normally.

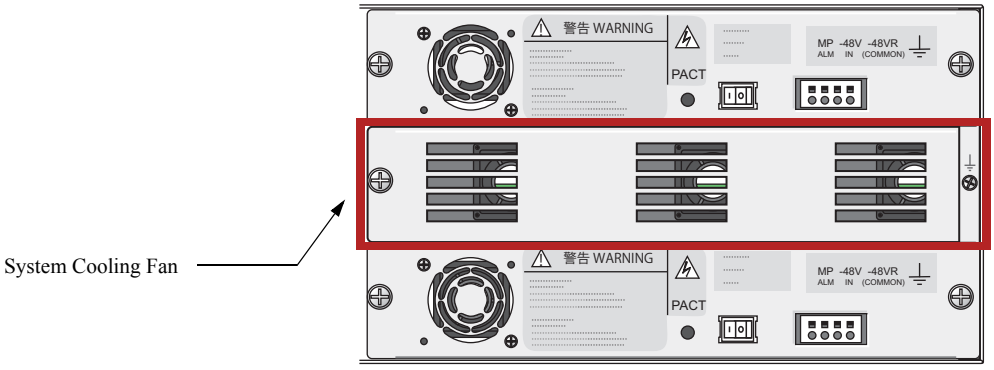
[End]

7. FAN REPLACEMENT PROCEDURE



The section explains how to replace a fan that is accommodated in the system cooling fan module. A fan can be replaced while the system is in operation. Three units of fan are accommodated as follows. Note that the figure below shows a DC-powered model as an example.

Accommodating Location of Fans (Rear Side)

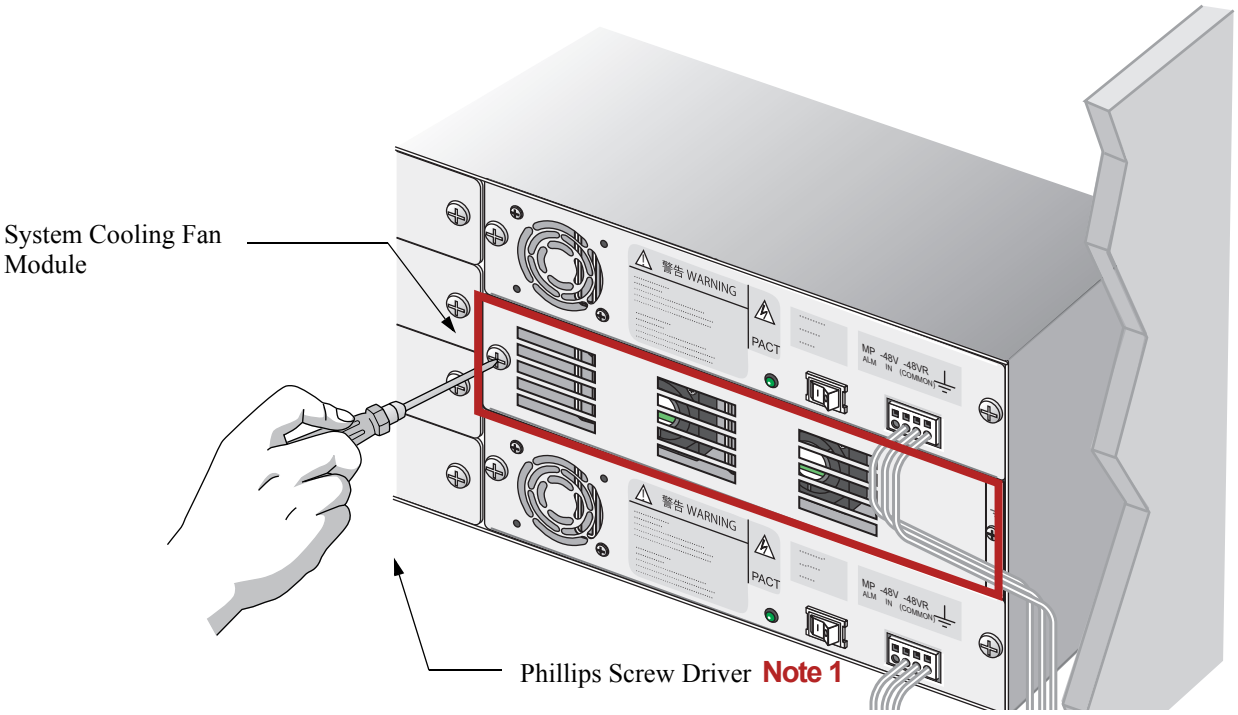


Note: If cooling fan is faulty, temperature in the system may rise, which might cause some serious damage to system operations. For this reason, we recommend you to replace fan at least every five years, whether any failure is found or not.

7.1 Replacement Procedure

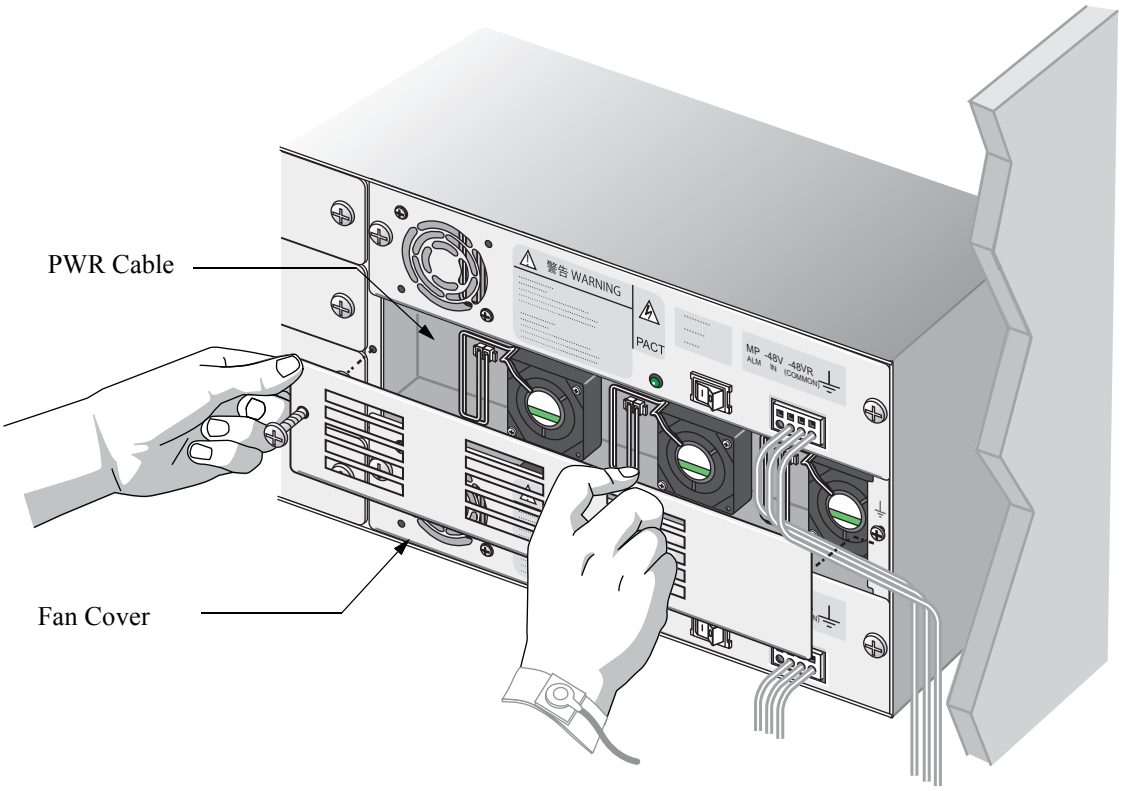
STEP 1 If a fan is faulty, identify the fan by using PCPro. When this is periodical fan replacement, this identification is not necessary.

STEP 2 Loosen the left side screw on the fan module by using a Phillips screw driver.



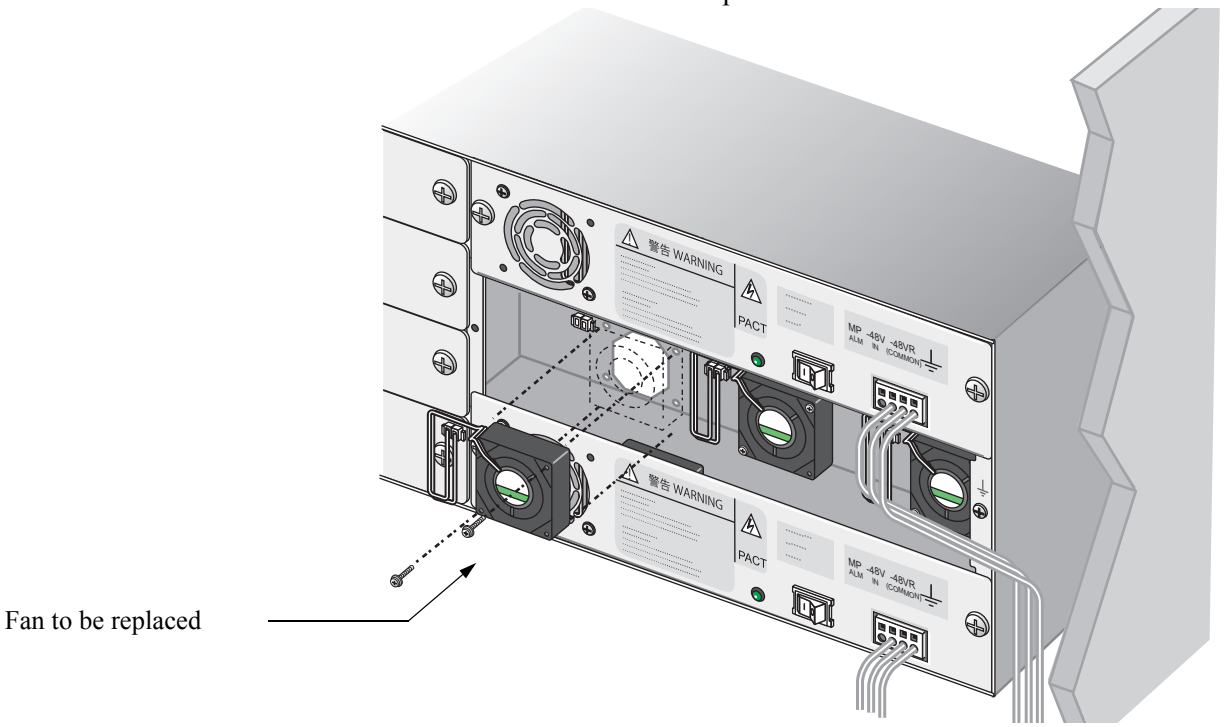
Note 1: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 3 Remove the fan cover.



STEP 4 Disconnect the PWR cable of the fan to be replaced from the connector. When the fan is operating, this will stop the fan.

STEP 5 Remove the two screws from the fan to be replaced.



STEP 6 Fasten the new fan with the two screws.

STEP 7 Connect the PWR cables to the connector. This will starts the fan.

STEP 8 Repeat the steps explained above again for the remaining fans as needed.

Note: When replacing two or three fans while the system is in operation, if you attempt to replace multiple fans at a time, the chassis might be heated up. For this reason, when replacing multiple fans, be sure to replace them one by one.

7.2 Test Procedure after the Replacement

STEP 1 Check to see if the replaced fans are operating normally.

- All fans are operating normally?

STEP 2 If any fan is not operating, check the PWR cable of the fan.

STEP 3 Attach the fan cover.

8. SYSTEM CONTROL PROCEDURES

Although the system is maintenance free, maintenance technicians occasionally may confront a situation in which they have to manually control the system. This section describes system control procedures focusing on the following items.

- How to Change over CPU Card
- How to Control Switching Block
- Manual Changeover of Speech Path System
- Manual Changeover of PLO

8.1 Changeover of CPU/TSW/PLO

8.1.1 General

This section explains the system operations that are necessary for changeover of CPU/TSW/PLO.

Before performing these operations, see the following figures to obtain general understanding on the system configuration:

- Switching Network General Block Diagram (1-IMG)
- Switching Network General Block Diagram (4-IMG with TSW-BOX)
- Switching Network General Block Diagram (4-IMG with TSWR)
- How to Check LEDs (1-IMG)
- How to Check LEDs for 4-IMG with TSW-BOX (ACT: CPU #0, Speech Path #0 and PLO #0)
- How to Check LEDs for 4-IMG with TSWR (ACT: CPU #0, Speech Path #0 and PLO #0)

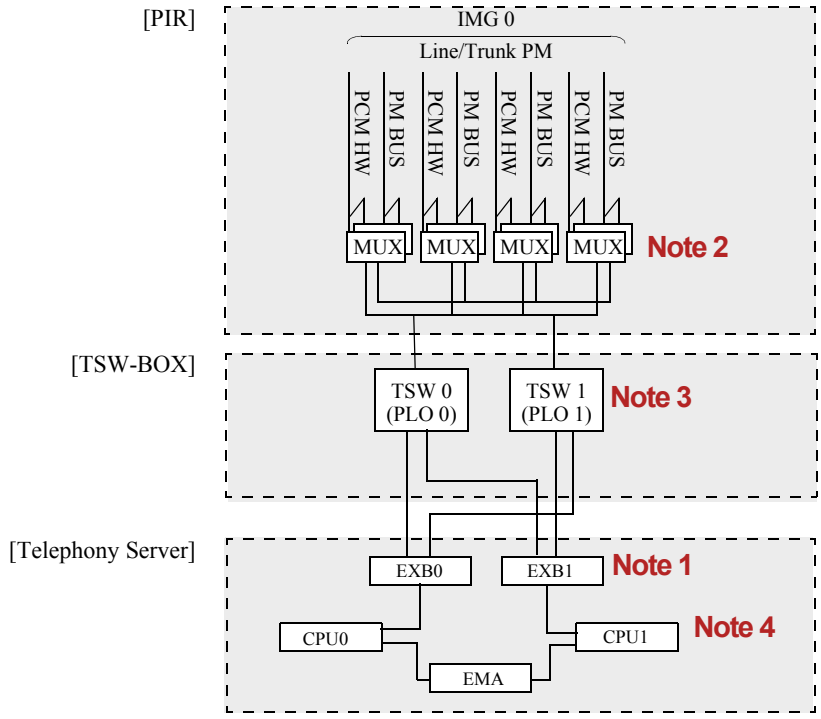
<1-IMG>

CPU Card Changeover: The ACT/STBY of CPU card can be changed by the CMOD command or operating the MBR switch on the CPU card front panel.

Speech Path Changeover: The ACT/STBY of speech path system (TSW) can be changed over with the CMOD command or operating the TSWMBR switch on the active TSW card. When the TSW is changed over, all MUX cards in the system are also changed over.

PLO Changeover: PLO is included in the TSW. To change the ACT/STBY of PLO, operate PLO MBR switch on the PLO active TSW card.

Switching Network General Block Diagram (1-IMG)



TSW: SPZ-SW25-A
MUX: CJ-PC00 for 7U-PIR
MUX: PH-PC36 for 8U-PIR

Note 1: When CPU changes over, EXB will also change over.

Note 2: When TSW changes over, all the speech path including MUX cards also change over.

Note 3: TSW has MBR switch (Make Busy Request). System changeover is available also with this switch.

Note 4: The system can be switched between ACT/STBY modes with the MBR switch on the front of the CPU card in ACT state.

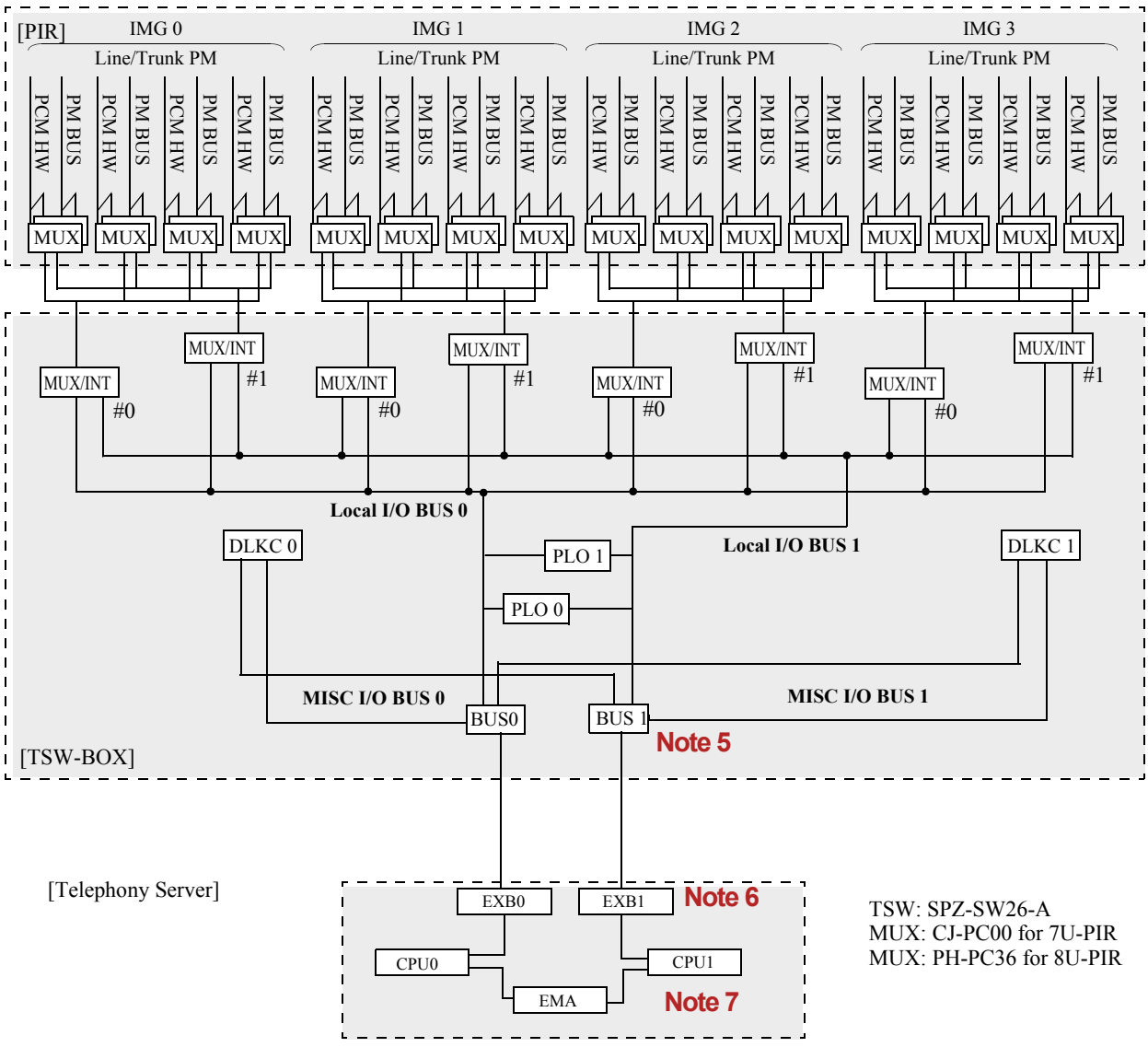
<4-IMG>

CPU Card Changeover: The ACT/STBY of CPU card can be changed by the CMOD command or operating the MBR switch on the CPU card front panel.

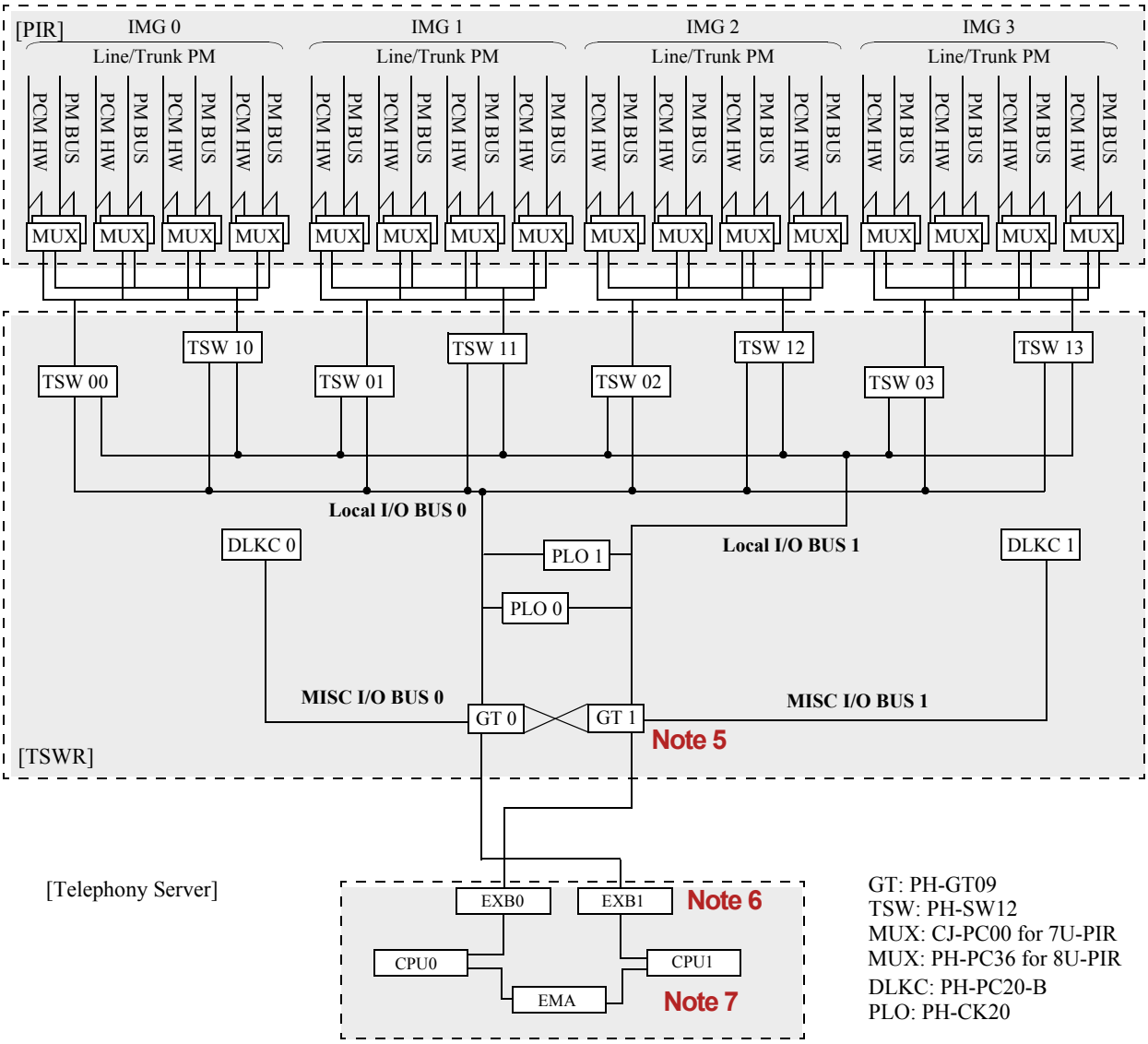
Speech Path Changeover: The ACT/STBY of speech path system (TSW) can be changed over with the CMOD command or operating the TSWMBR switch on the active TSW-BOX/the MBR switch on the active GT card mounted in TSWR. When the speech path is changed over, all TSW, DLKC, MUX cards are also changed over.

PLO Changeover: The ACT/STBY of PLO can be independently changed over with operating the PLOMB switch of the TSW card (for TSW-BOX) or the MB switch of the active PLO card (for TSWR).

Switching Network General Block Diagram (4-IMG with TSW-BOX)



Switching Network General Block Diagram (4-IMG with TSWR)



Note 5: For TSW-BOX: When the TSW ACT/STBY is changed over with the TSWMBR switch, all the speech paths including DLKC/TSW/MUX cards will be changed.
For TSWR: When the TSW ACT/STBY is changed over with the operation of the GT card, all the speech paths including DLKC/TSW/MUX cards will be changed.

Note 6: When CPU changes over, EXB and BUS in TSW-BOX/GT in TSWR will also change over.

Note 7: The system can be switched between ACT/STBY modes with the MBR switch on the front of the CPU card in ACT state.

8.1.2 How to Check LED

To determine whether the system is in normal operation or not, maintenance personnel can check LED lamps. The following shows a sample of LED indications when the system is in normal operation. Note that the sample assumes that the system is operating by CPU #0, TSW #0, and PLO #0.

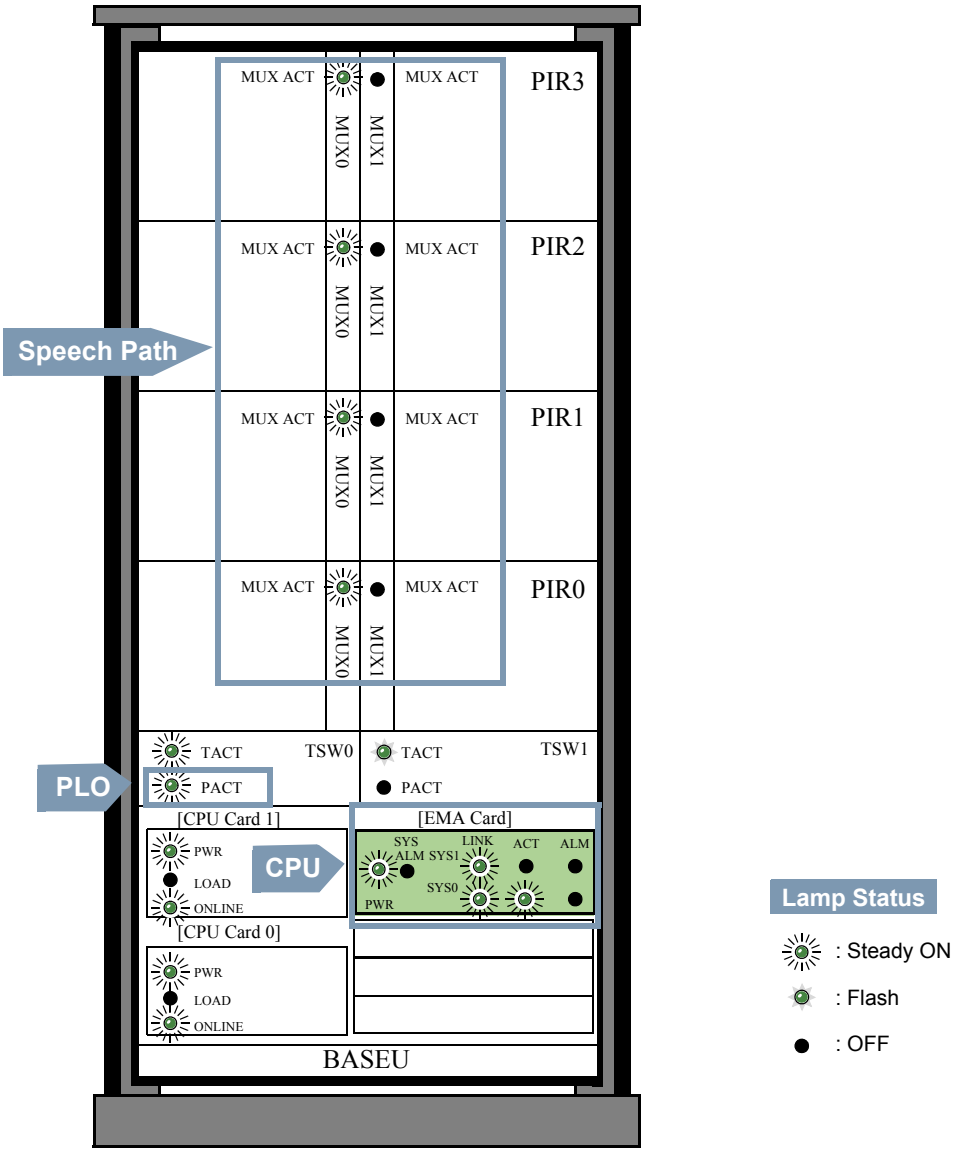
8.1.2.1 LED Check for 1-IMG

How To Judge ACT/STBY of Each Block (1-IMG)

Block	Module	Card	LED Name (Color)	State	Description	Remarks
CPU	Telephony Server	EMA	ACT (Green)	Steady ON	ACT	ACT (SYS 0) is Steady ON: CPU 0 is ACT **Note 1** ACT (SYS 1) is Steady ON: CPU 1 is ACT
				OFF	STBY	
Speech Path	TSW-BOX	TSW	TACT (Green)	Steady ON	ACT	LED indications of TSW card and MUX card always switch over in combination when speech path is provided in dual configuration.
				Flashing	STBY	
	PIR	MUX	MUX ACT (Green)	Steady ON	ACT	
				OFF	STBY	
PLO	TSW-BOX	TSW	PACT (Green)	Steady ON	ACT	TSW card includes PLO function. However, LED indications of TSW ACT and PLO ACT switch over independently.
				OFF	STBY	

Note 1: If both ACT lamps (SYS 0 and SYS 1) light green because of reasons such as ACT-CPU failure, the system whose LINK lamp is lighting green is ACT side.

How to Check LEDs (1-IMG)



Note: LED indications shown above are an example, where system 0 is in ACT system.

8.1.2.2 LED Check for 4-IMG

To perform the ACT/STBY system changeover, check the lamp indicators shown in the figure entitled "How to Check LEDs for 4-IMG with TSW-BOX (ACT: CPU #0, Speech Path #0 and PLO #0)"/"How to Check LEDs for 4-IMG with TSWR (ACT: CPU #0, Speech Path #0 and PLO #0)," and then operate the related switches.

Note: LED indications cited in the figure are only an example. The indicating pattern (ON/Flash/OFF) can differ, depending on each system setting.

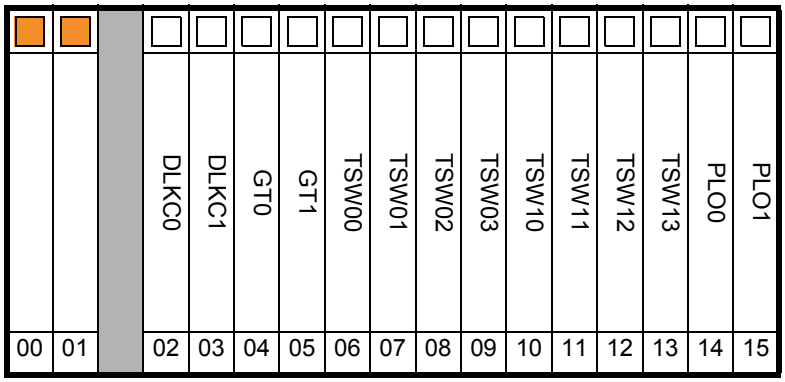
How To Judge ACT/STBY of Each Block (4-IMG)

Block	Module	Card (Slot Number)	LED Name (Color)	State	Description	Remark
CPU	Telephony Server	EMA	ACT lamp (Green)	Steady ON	ACT	ACT (SYS 0) is ON: CPU 0 is ACT **Note 1** ACT (SYS 1) is ON: CPU 1 is ACT
				OFF	STBY	
Speech Path	TWSW-BOX	TSW	TACT (Green)	Steady ON	ACT	LED indications of TSW card and MUX card always switch over in combination when speech path is provided in dual configuration.
				Flashing	STBY	
	TSWR	GT (04/05)	OPE/MB (Green)	Steady ON	ACT	LED indication of GT card always switch over in conjunction with the active CPU.
				OFF	STBY	
		TSW (06-13)	TSW ACT (Green)	Steady ON	ACT	LED indications of TSW, DLKC and MUX cards always switch over in combination when speech path is provided in dual configuration.
				OFF	STBY	
		DLKC (02/03)	OPE/MB (Green)	Steady ON	ACT	
				OFF	STBY	
	PIR	MUX (13/14)	MUX ACT (Green)	Steady ON	ACT	
				OFF	STBY	
PLO	TSW-BOX	TSW	PACT (Green)	Steady ON	ACT	TSW card includes PLO function. However, LED indications of TSW ACT and PLO ACT switch over independently.
				OFF	STBY	
	TSWR	PLO (14/15)	ACT (Green)	Steady ON	ACT	Speech path and PLO switch over independently.
				OFF	STBY	

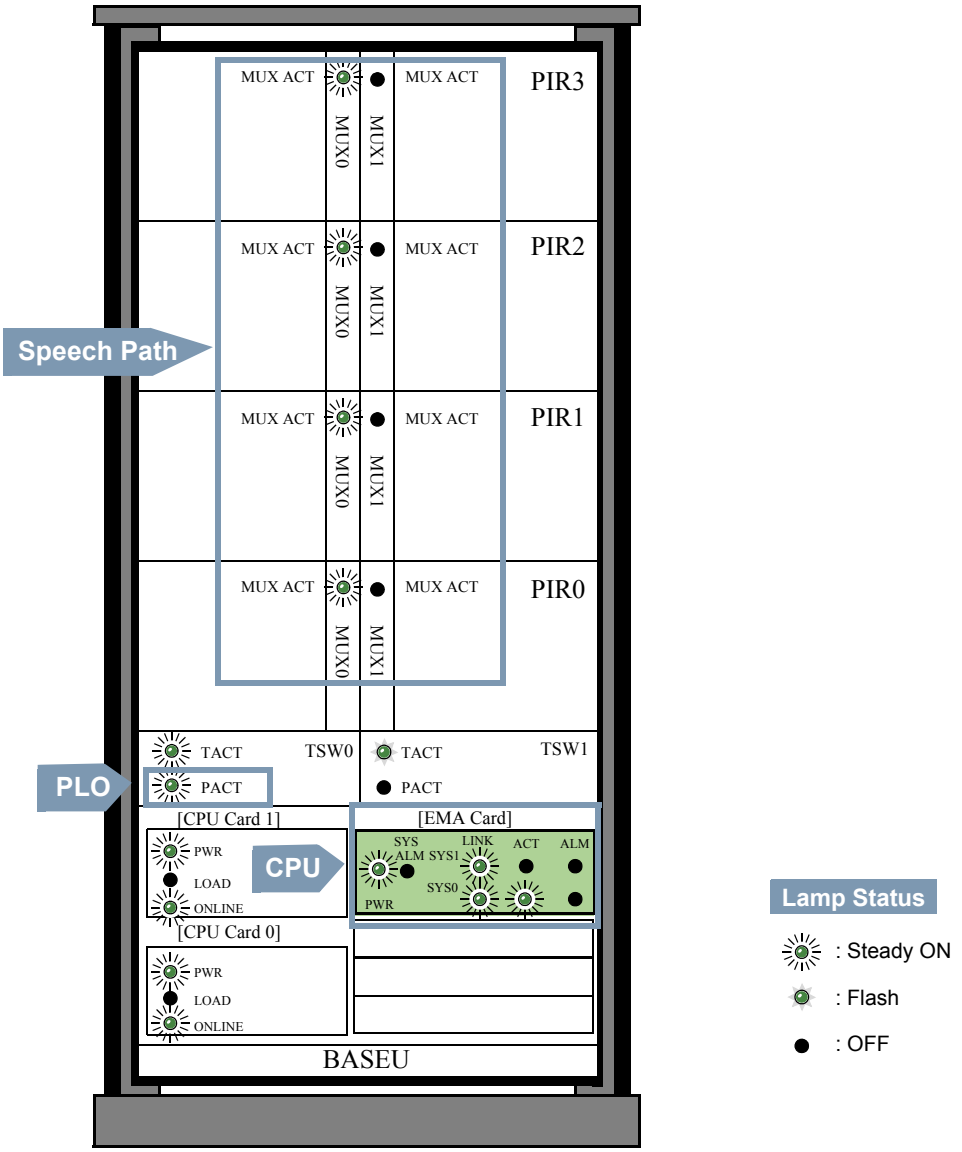
Note 1: If both ACT lamps (SYS 0 and SYS 1) light green because of reasons such as ACT-CPU failure, the system whose LINK lamp is lighting green is ACT side.

As for IMG-4, there are two types of configurations as speech path block: TSW-BOX and TSWR. TSW-BOX accommodates SPZ-SW26-A. TSWR accommodates the following cards.

Accommodating Location of Cards in TSWR

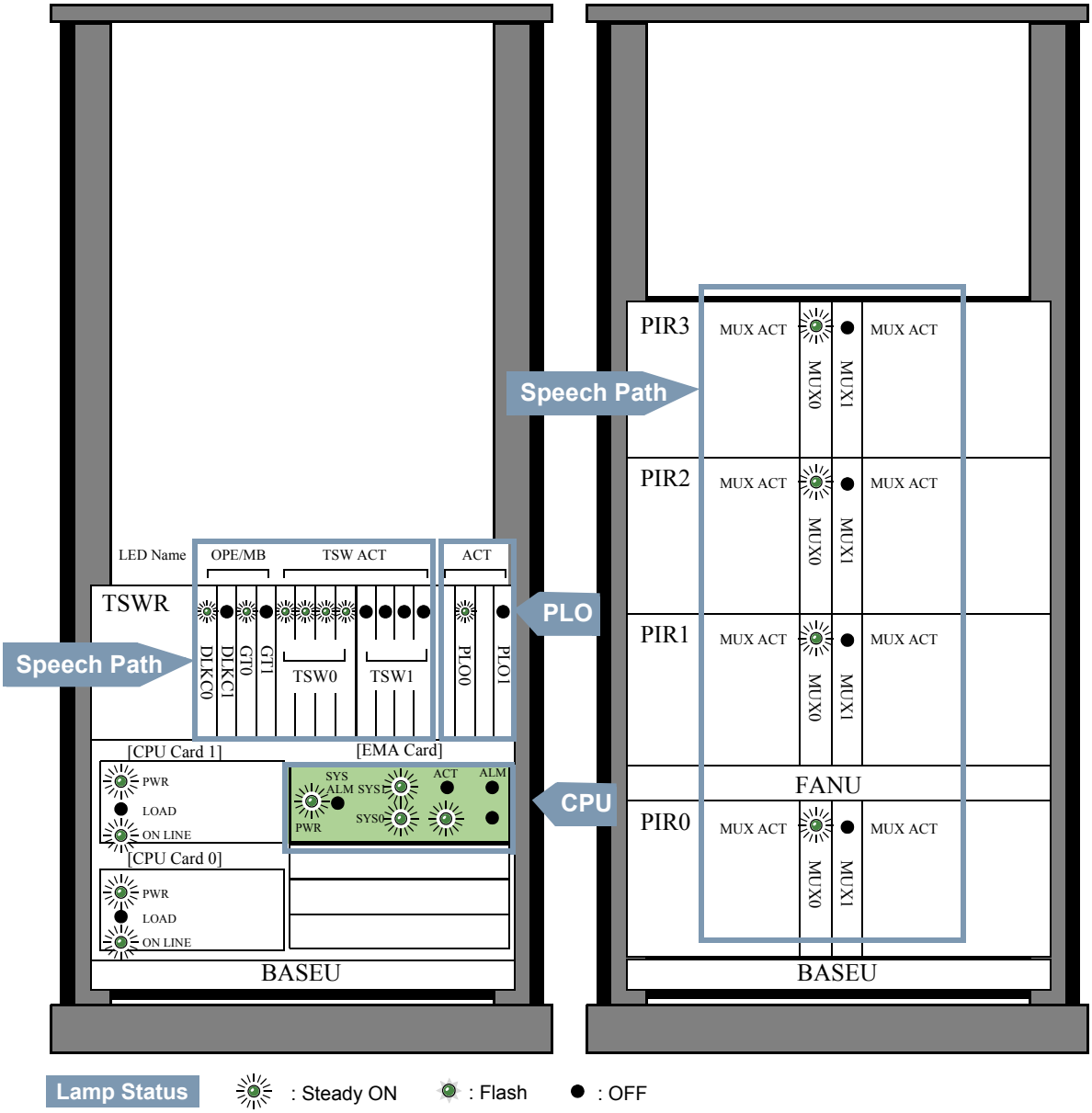


How to Check LEDs for 4-IMG with TSW-BOX (ACT: CPU #0, Speech Path #0 and PLO #0)



Note: LED indications shown above are an example, where system 0 is in ACT system.

How to Check LEDs for 4-IMG with TSWR (ACT: CPU #0, Speech Path #0 and PLO #0)



8.1.3 How to Change over CPU Card



CPU card, when it is provided in a dual configuration, can be switched over by one of the operations shown in the table below.

Note: When the system of CPU is changed over, the ACT/STBY of GT (in TSWR) card is also changed over (4-IMG with TSWR).

Note: You cannot switch the CPU card manually between ACT and STBY modes with the MBR switch on the GT card. The switch is used for the manual changeover of the speech path (TSW, DLKC, and MUX card.) GT card is only available for 4-IMG with TSWR.

	TYPE	OPERATIONS	REMARKS
(a)	Changeover by CMOD **Note 1**	Use the CMOD command.	
(b)	Changeover by switch operation **Note 1**	Set MBR switch (MODE switch - 4) to ON (downward) on the ACT CPU card. After a few seconds, return it to the previous position.	

Note 1: While the changeover of the CPU card is in progress, any call attempt is rejected. Already established calls, however, will not be affected.

(a) CPU Changeover by CMOD Command

See CHAPTER 7 MAINTENANCE COMMANDS for more details.

(b) CPU Changeover by Switch Operation

To change over the ACT/STBY of CPU card, the CMOD command is normally used. However, if the command cannot be used for some reason, do this changeover by switch operation.

WARNING **Improper switch operations may result in a system down. Operate the related switches, applying extreme care.**

[Start]

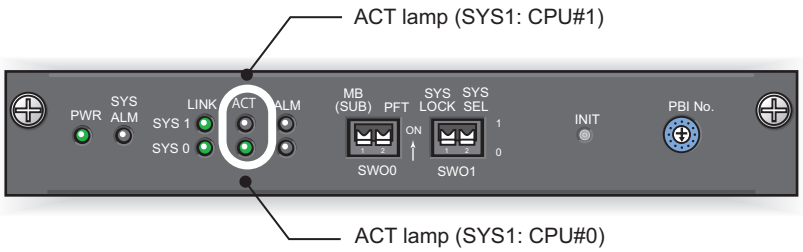
Replacement procedure explained here assumes that the system is operating as follows:

- CPU card (#0) is placed in ACT mode
- CPU card (#1) is placed in STBY mode

Therefore, in the following explanation, replace #1 with #0 as needed when performing this procedure on the actual system.

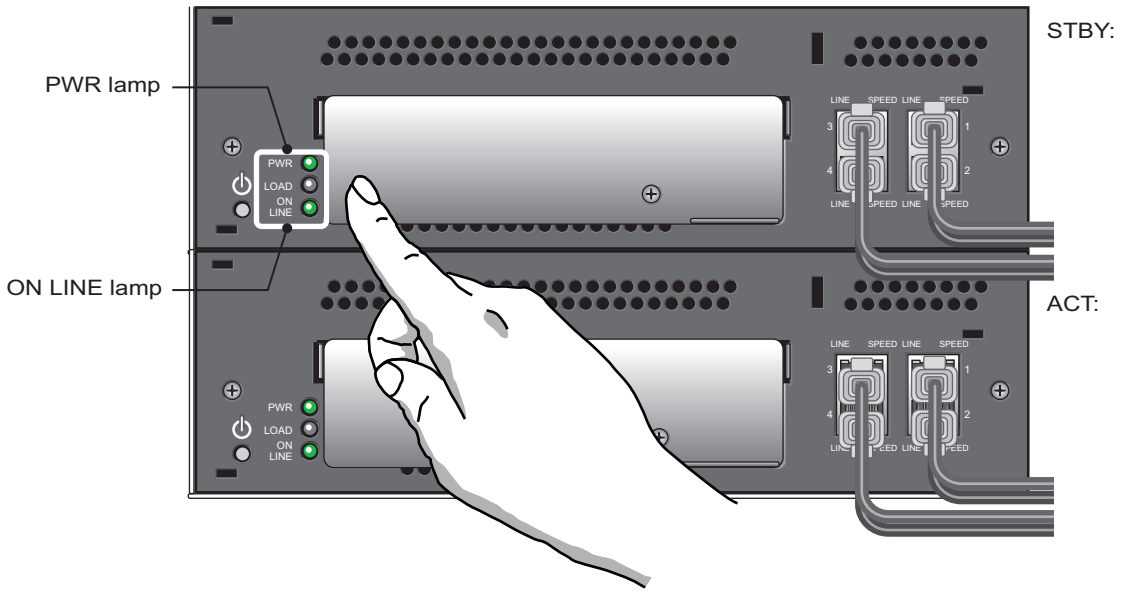
STEP 1 Make sure which CPU card is placed in ACT mode by checking the ACT lamp on the EMA card. When CPU card #0 is active, SYS 0 - ACT lights green on the EMA card.

CPU in ACT/STBY Mode (when #0 is ACT)



STEP 2 Check the standby CPU card (#1 in this example) is operating normally.

- On the CPU card #1, is the PWR lamp steady on green?
- On the CPU card #1, is the ON LINE lamp steady on green?
- On the EMA card, is the ALM lamp for SYS1 off?

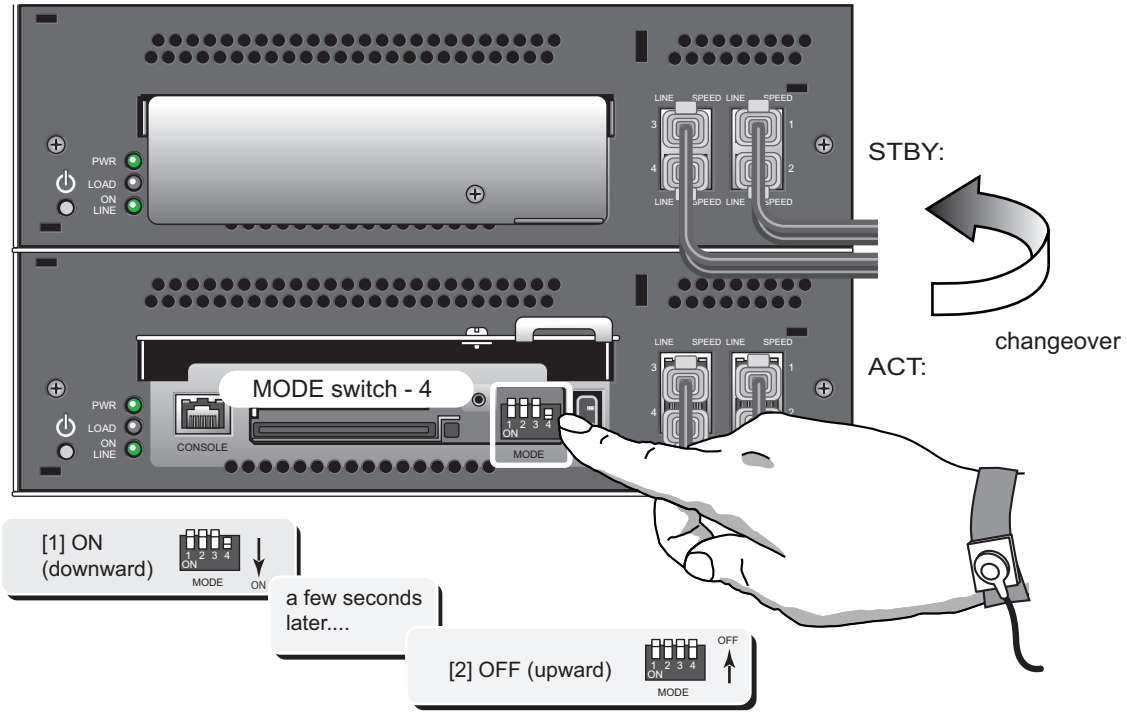


WARNING **The system changeover of CPU can be performed only when the mate CPU is available.**

STEP 3 Set the MBR switch to ON (downward) on the active CPU card. A few seconds later, return the MBR switch to OFF (upward). System changeover starts automatically. The ACT lamp state will change as follows on the CPU card.

- MBR switch operation
- Both ACT lamps flash for a few seconds on the EMA card.
- The ACT lamp of the mate CPU card lights green on the EMA card.

CPU Changeover by MBR Switch

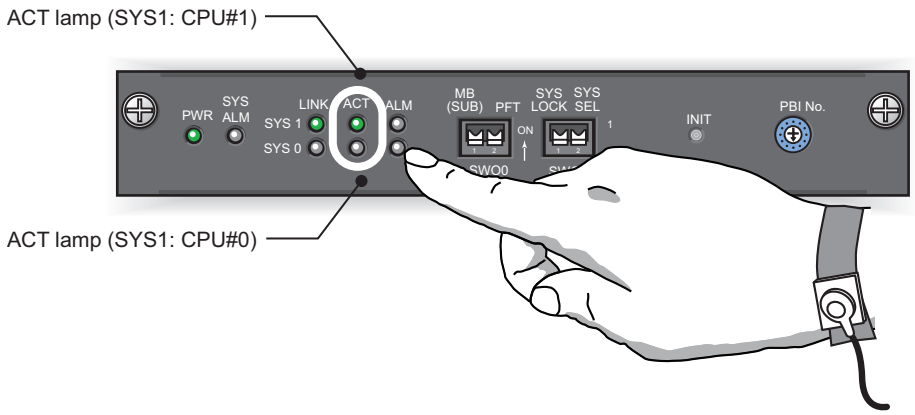


Note: If the MBR (MODE switch - 4) switch remains in the LOWER position, the CPU card stays in make-busy state. Be sure to return the switch to the UPPER position, except in special circumstances. Leaving CPU mode switch 4 in the LOWER position will prevent CPU changeover.

STEP 4 Make sure that changeover is successful by checking the ACT lamp on the EMA card.

- The other ACT lamp should light green (SYS1 ACT lamp in this example)

ACT Lamp Indication on CPU card



STEP 5 Analyze the displayed system messages.

After the above steps are performed, the system generates system messages [7-C] and [7-D]. Confirm that no errors occurred during the CPU changeover process.

8.1.4 How to Control Switching Block



This section explains how to control switching block, which consists of the following cards:

- TSW (1-IMG: SPZ-SW25-A, 4-IMG: SPZ-SW26-A/PH-SW12)
- MUX (CJ-PC00/PH-PC36)
- DLKC (PH-PC20-B for 4-IMG with TSWR only)
- PLO (PH-CK16-D, etc for 4-IMG with TSWR only)

8.1.4.1 Switching Block Control for 1-IMG

TSW card used for 1-IMG system provides TSW and PLO functions. The table below explains how to change the ACT/STBY of TSW. For details on changeover of PLO, see 8.1.6 Manual Changeover of PLO.

Changeover of Switching Block (1-IMG)

TYPE	OPERATIONS	REMARKS
CMOD (recommended)	Use the CMOD command (See CHAPTER 7).	<On the TSW card that was originally placed in ACT mode> - The TACT lamp flashes, and the card switches to STBY mode. <On the TSW card that was originally placed in STBY mode> - The TACT lamp lights up green (steady on), and the card switches to ACT mode.
Switch Operation	1) On the TSW card that is placed in ACT, flip the TSWMBR switch up. 2) Both TACT and MUXACT lamps on the card go off. 3) Flip the TSWMBR switch down. The TACT lamp flashes. For more details. see Manual Changeover of Speech Path System.	<On the TSW card that was originally placed in ACT mode> - The TACT lamp goes off. - When the TSWMBR switch is flipped down, the TACT lamp flashes. <On the TSW card that was originally placed in STBY mode> - TACT lamp lights up green (steady on), and the card switches to ACT mode.

WARNING

For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.

When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

8.1.4.2 Switching Block Control for 4-IMG with TSW-BOX

TSW card used for 4-IMG with TSW-BOX system provides TSW, GT and DLKC functions. The table below explains how to change the ACT/STBY of TSW. For details on changeover of PLO, see 8.1.6 Manual Changeover of PLO.

Changeover of Switching Block (4-IMG with TSW-BOX)

TYPE	OPERATIONS	REMARKS
CMOD (recommended)	Use the CMOD command (See CHAPTER 7).	<On the TSW card that was originally placed in ACT mode> - The TACT lamp flashes, and the card switches to STBY mode. <On the TSW card that was originally placed in STBY mode> - The TACT lamp lights up green (steady on), and the card switches to ACT mode.
Switch Operation	1) On the TSW card that is placed in ACT, flip the TSWMBR switch up. 2) Both TACT and MUXACT lamps on the card go off. 3) Flip the TSWMBR switch down. The TACT lamp flashes. For more details. see Manual Changeover of Speech Path System.	<On the TSW card that was originally placed in ACT mode> - The TACT lamp goes off. - When the TSWMBR switch is flipped down, the TACT lamp flashes. <On the TSW card that was originally placed in STBY mode> - TACT lamp lights up green (steady on), and the card switches to ACT mode.

WARNING

For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.

When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

8.1.4.3 Switching Block Control for 4-IMG with TSWR

TSWR accommodates the following cards: TSW, MUX and DLKC.

Note: When the ACT/STBY of TSW is changed over, all the speech paths (except PLO) will be changed. Make sure that the ACT/STBY of TSW, MUX and DLKC has been changed. (Check the status of the OPE or ACT lamp of each card.)

Changeover of Switching Block (4-IMG with TSWR)

TYPE	OPERATIONS	REMARKS
CMOD (recommended)	Use the CMOD command (See CHAPTER 7).	<On the TSW card that was originally placed in ACT mode> - The TSWACT lamp goes off. - The MUXACT lamp of the MUX card and the OPE lamp of the DLKC card also go off. <On the TSW card that was originally placed in STBY mode> - The TSWACT lamp lights green. - The MUXACT lamp of the MUX card and the OPE lamp of the DLKC card also light green.
Switch Operations	1) On the GT card for active CPU, flip the MBR switch up to the ON position. 2) The TSWACT lamp state changes. 3) On the same card, flip the MBR switch down to the OFF position. For more details. see Manual Changeover of Speech Path System.	<On the TSW card that was originally placed in ACT mode> - The TSWACT lamp goes off. - The MUXACT lamp of the MUX card and the OPE lamp of the DLKC card also go off. <On the TSW card that was originally placed in STBY mode> - The TSWACT lamp lights green. - The MUXACT lamp of the MUX card and the OPE lamp of the DLKC card also light green.

WARNING **For manual TSW changeover with switch operation, be sure to use the MBR switch on the active GT card. Without setting the MBR switch to ON (upper position) on the active GT card, if you flip the MB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.**

8.1.5 Manual Changeover of Speech Path System



This section explains how to manually switch Speech Path System for each model.

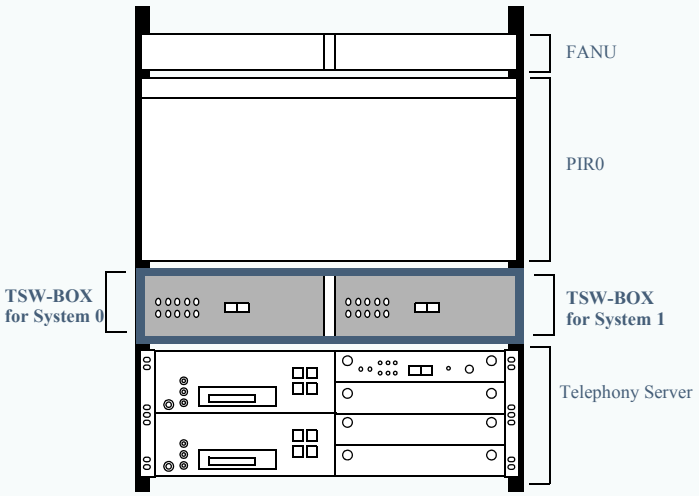
8.1.5.1 Manual Changeover for 1-IMG

In most cases, you can switch Speech Path System by using the CMOD command from PCPro. However, if the command cannot be used for some reason, do this procedure.

WARNING **Improper switch operations may result in a system down. Operate the related switches, applying extreme care.**

- Operation is required on the following cards:

Target Cards for Manual System Changeover of Speech Path (1-IMG)

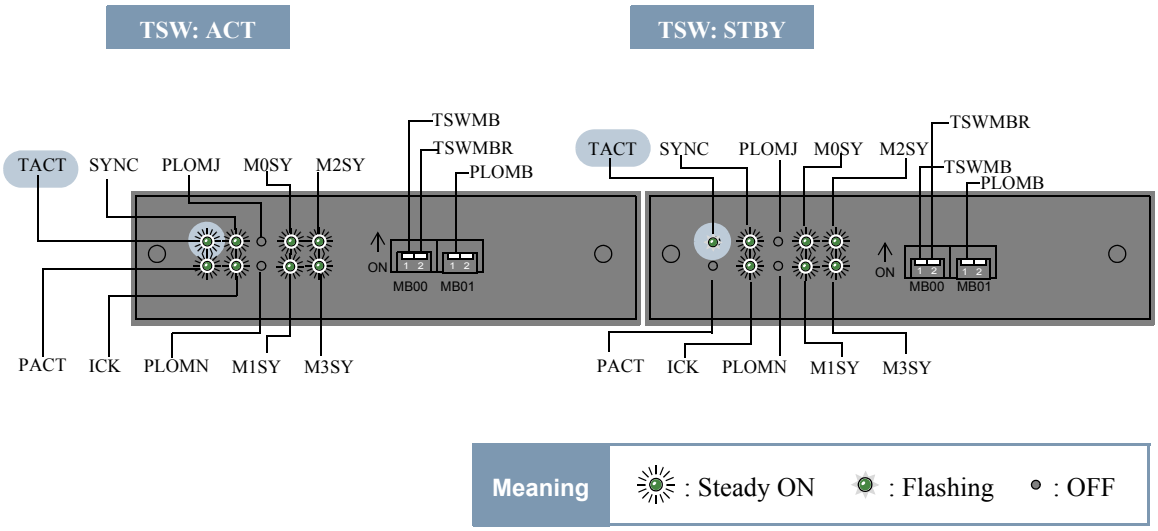
MODULE	CARD	TARGET CARD LOCATION
TSW-BOX	TSW card (SPZ-SW25-A)	

STEP 1 Check which TSW card is currently placed in ACT mode.

When steady on, the green TACT lamp indicates that the TSW (SPZ-SW25-A) card is active (in ACT mode). When flashing, it indicates that the TSW card is standby (in STBY mode).

The figure below shows the lamp status when the TSW card for system 0 (TSW #0) is in ACT mode.

When TSW (SPZ-SW25-A) #0 is in ACT mode (1-IMG)



WARNING **The changeover of TSW can be performed only when the mate TSW is in STBY mode. Do not attempt the changeover, if the mate TSW is in make busy mode.**

STEP 2 On the active TSW card, flip the TSWMBR switch up.

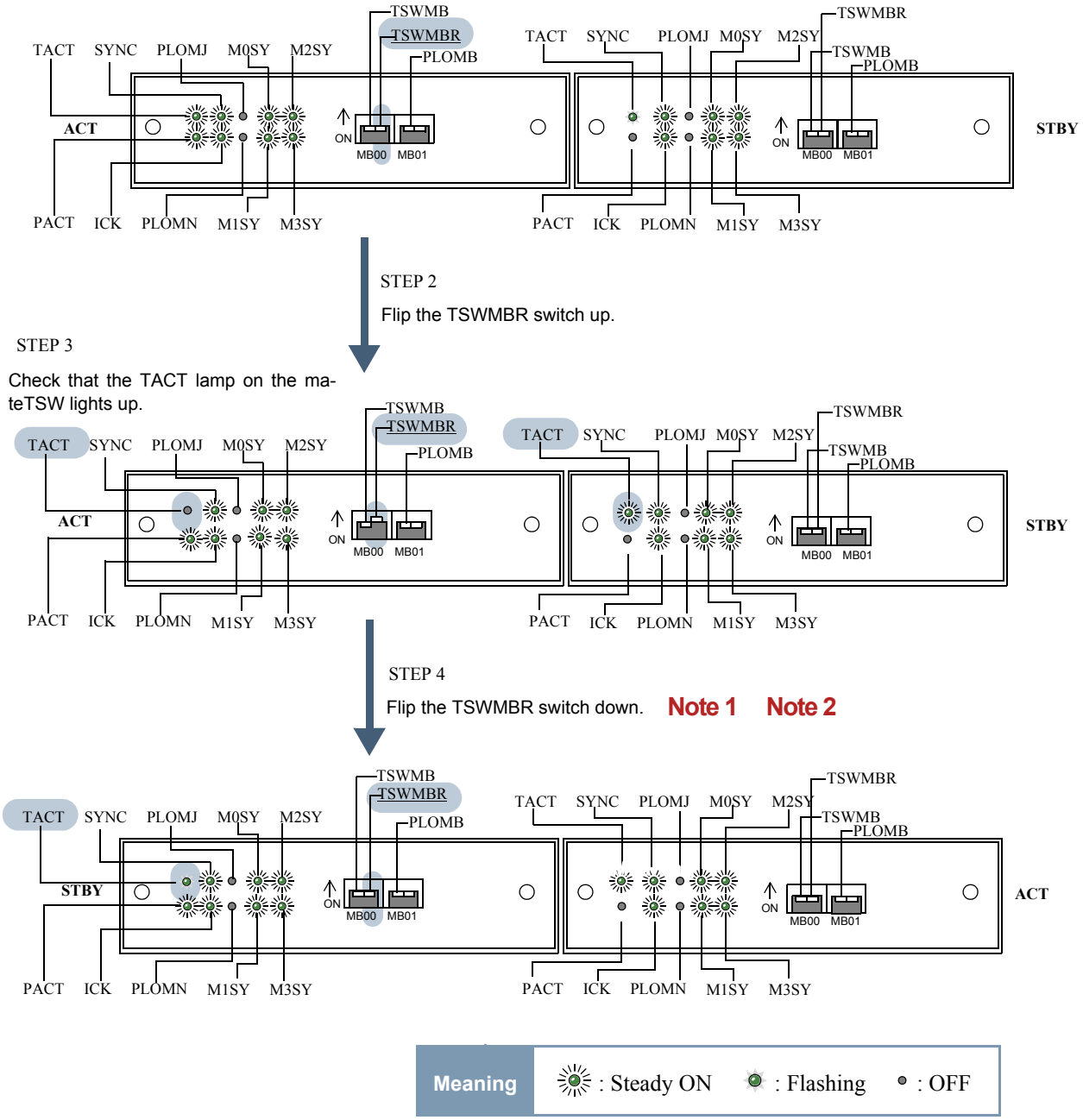
Note: When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

STEP 3 Wait a few seconds, and check that the TACT lamp on the mate TSW card lights up green.

- Previously active TSW : TACT lamp goes off.
- Newly active mate TSW : TACT lamp is steady on green.

STEP 4 On the previously active TSW card, flip the TSWMBR switch down. The TACT lamp flashes green.

TSW Changeover with TSWMBR Switch (TSW #0 to TSW #1)



Note 1: If the TSWMBR switch is left in the UPPER position, the TSW card stays in make-busy state with the TACT lamp off. Be sure to return the switch to the LOWER position, except in special circumstances.

Note 2: PLO can be switched over only by the PLOMB switch. For this reason, TSW changeover does not affect that of PLO.

WARNING	**For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.**

STEP 5 Make test calls to see that the TSW card is operating normally.

- If any problem occurs, switch the Speech Path System back to the original mode (ACT/STBY).

STEP 6 Analyze system messages.

- When TSW ACT/STBY is changed, system messages 7-E, 7-F, and 1-T will be issued.

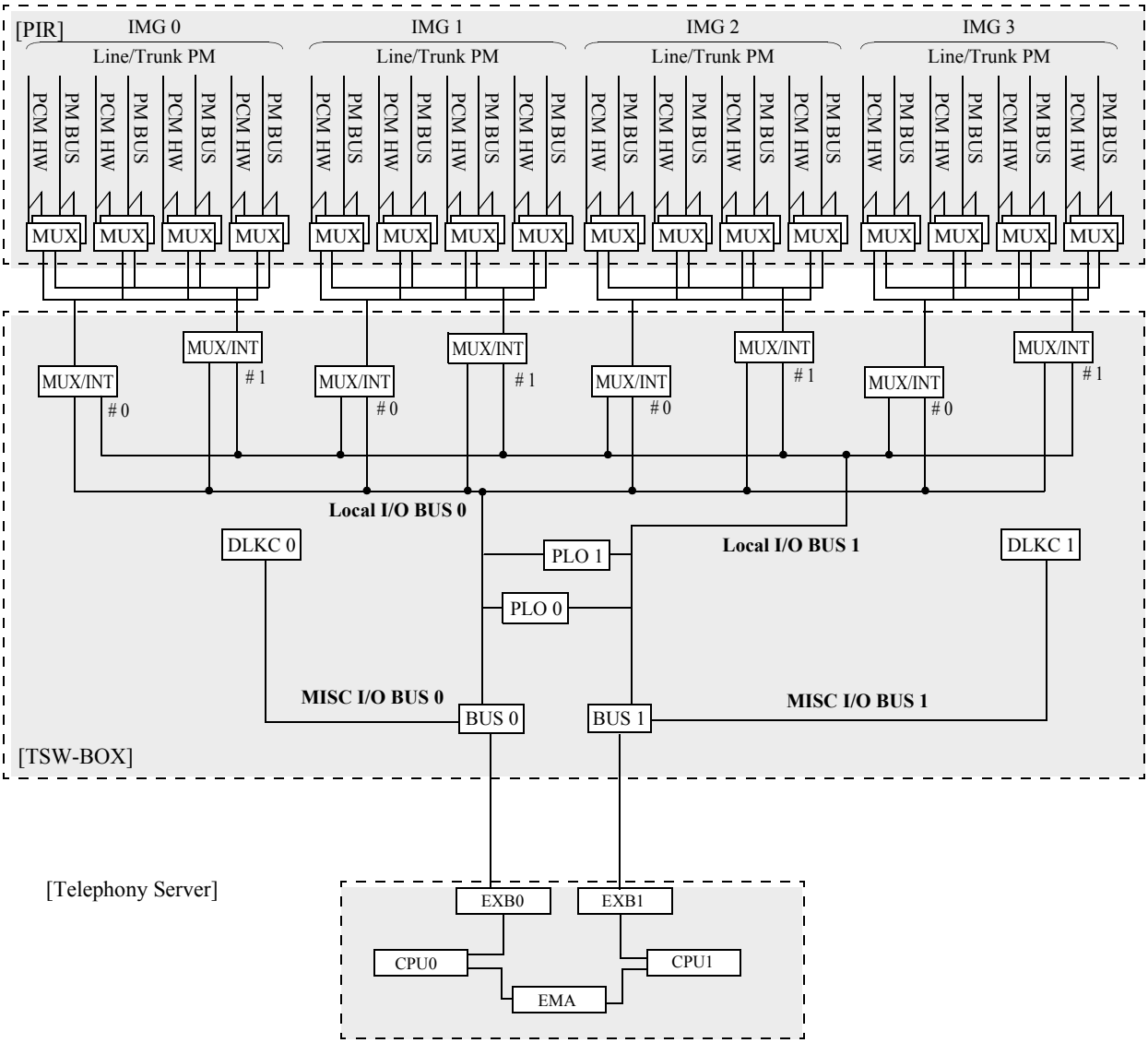
8.1.5.2 Manual Changeover for 4-IMG with TSW-BOX

To changeover the ACT/STBY of Speech Path System, the CMOD command is normally used. However, if the command cannot be used, use the switch operations listed below.

WARNING **Improper switch operations may result in a system down. Operate the related switches, applying extreme care.**

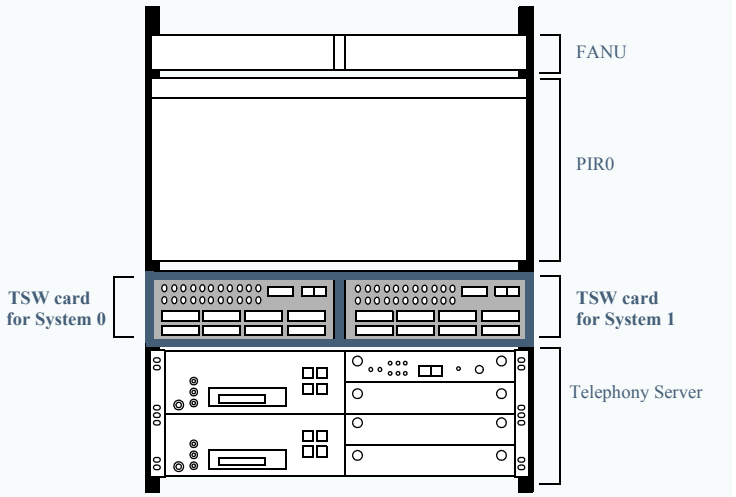
By changing over the ACT/STBY of Speech Path System, all the related systems, such as TSW, DLKC, and MUX, are totally switched over.

System Block Diagram: 4-IMG with TSW-BOX (Switching Network for Speech Path System)



- Operation is required on the following cards:

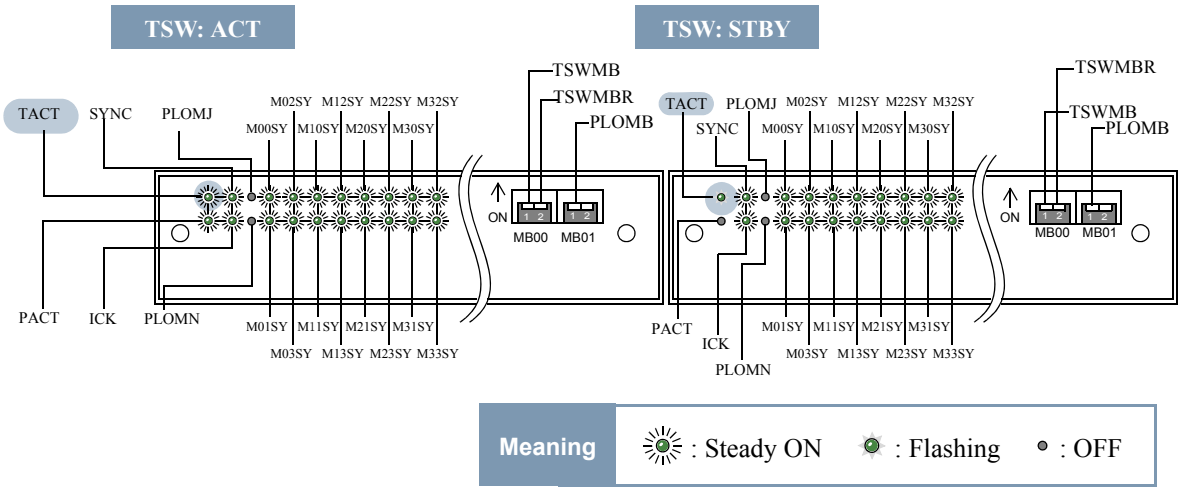
Target Cards for Manual System Changeover of Speech Path (4-IMG with TSW-BOX)

MODULE	CARD	TARGET CARD LOCATION
TSW-BOX	TSW card (SPZ-SW26-A)	

STEP 1 Check which TSW card is currently placed in ACT mode.

The TACT lamp on the TSW card (SPZ-SW26-A) is steady on (green). When the TSW card is in STBY mode, the TACT lamp is flashing (green). The figure below shows the lamp status when the TSW card for system 0 (TSW #0) is in ACT mode.

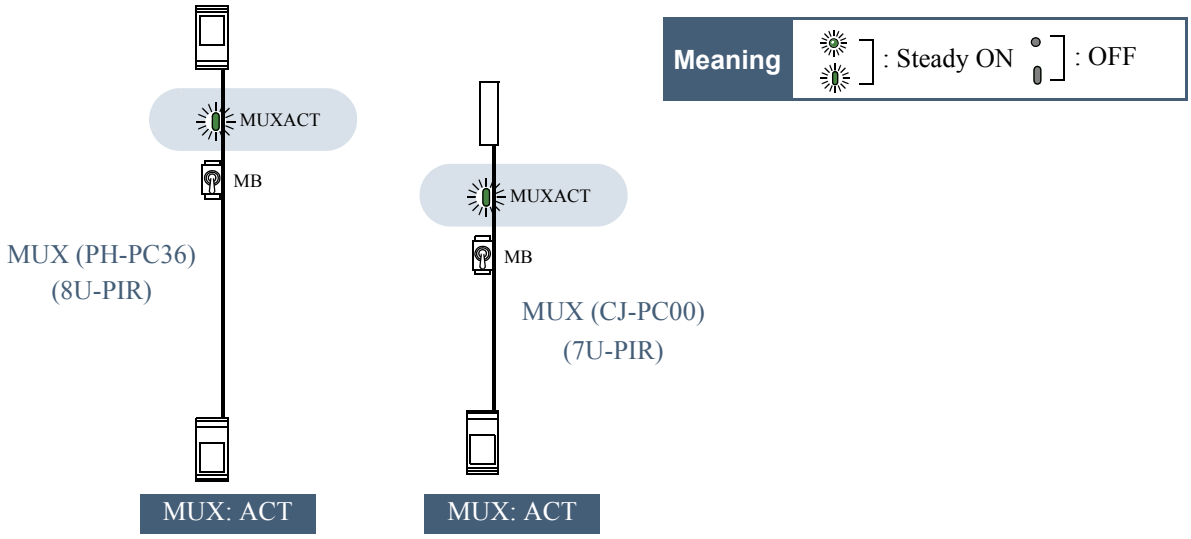
When TSW (SPZ-SW26-A) #0 is in ACT mode (4-IMG with TSW-BOX)



WARNING **The ACT/STBY of Speech Path System can be changed over only when the mate system is in STBY mode. Do not attempt the changeover if the mate Speech Path System is in make busy status.**

STEP 2 Check the following lamp indication for the active speech path.

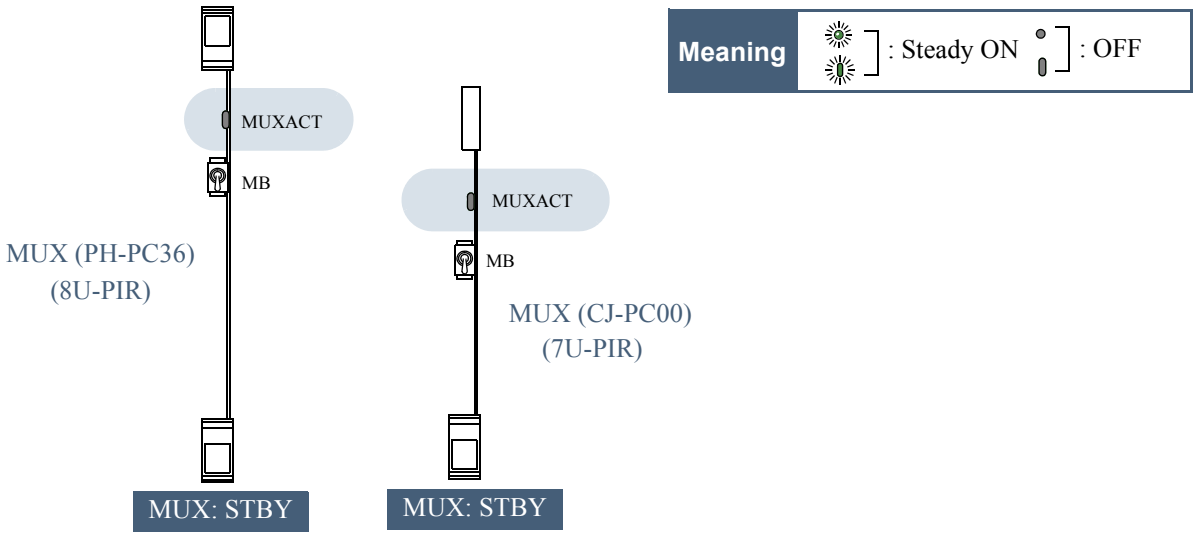
Lamp Indication of MUX card (ACT)



Note: Check all cards that are related to speech path system (ACT MUX cards).

WARNING **The ACT/STBY of Speech Path System can be changed over only when the mate system is in STBY mode. Do not attempt the changeover if the mate Speech Path System is in make busy status.**

Lamp Indication of MUX card (STBY)



Note: Check all cards that are related to speech path system (STBY MUX cards).

WARNING **Improper switch operations may result in a system down. Operate the related switches, applying extreme care.**

STEP 3 On the active TSW card, flip the TSWMBR switch up.

Note: When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

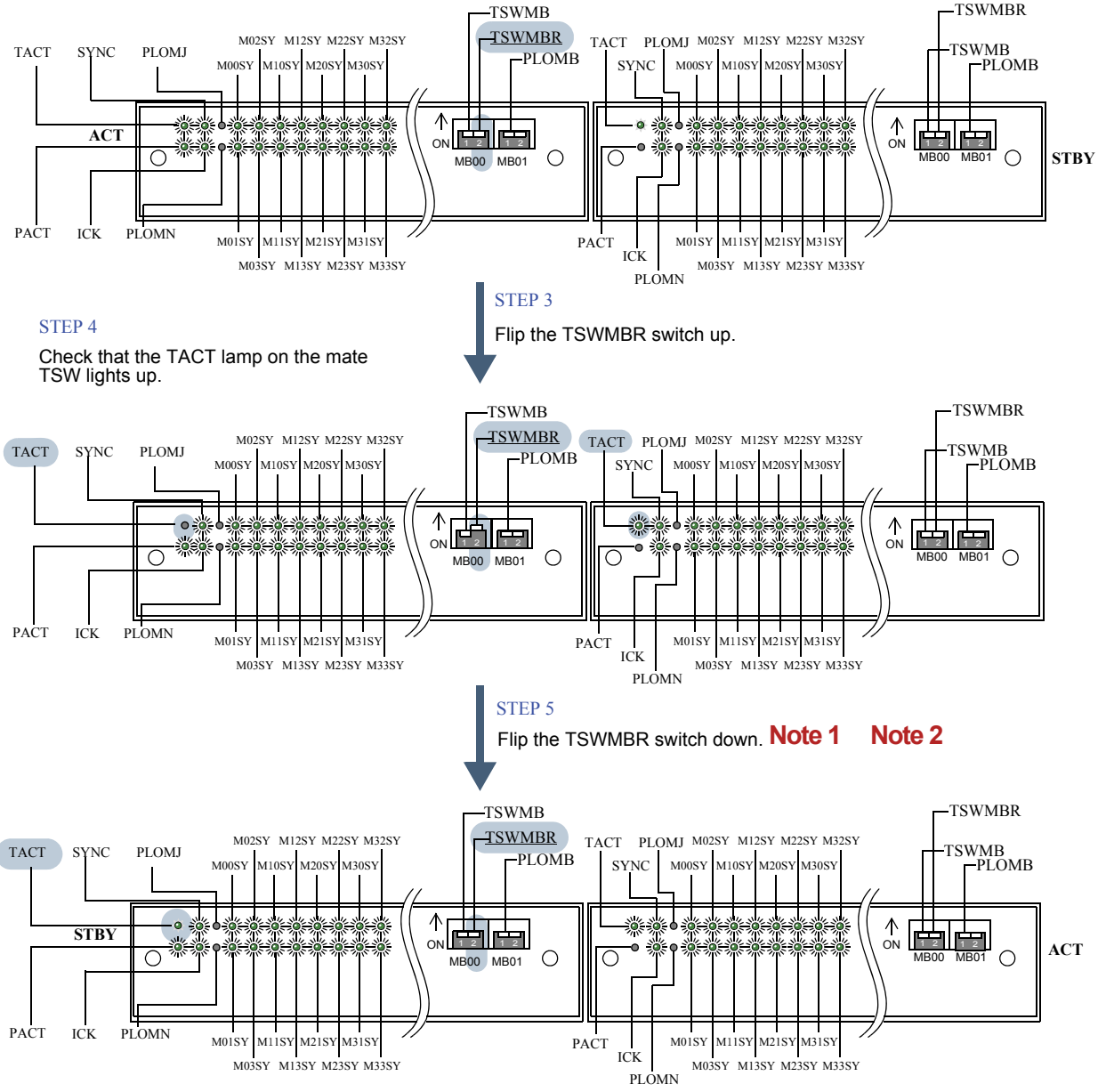
STEP 4 Wait a few seconds, and check that the TACT lamp on the mate TSW card lights up green.

- Previously active TSW : TACT lamp goes off.
- Newly active mate TSW : TACT lamp is steady on green.

STEP 5 On the previously active TSW card, flip the TSWMBR switch down.

- Previously active TSW : TACT lamp flashes green.
- Newly active mate TSW : TACT lamp is steady on green.

TSW Changeover with TSWMBR Switch (TSW #0 to TSW #1): 4-IMG with TSW-BOX



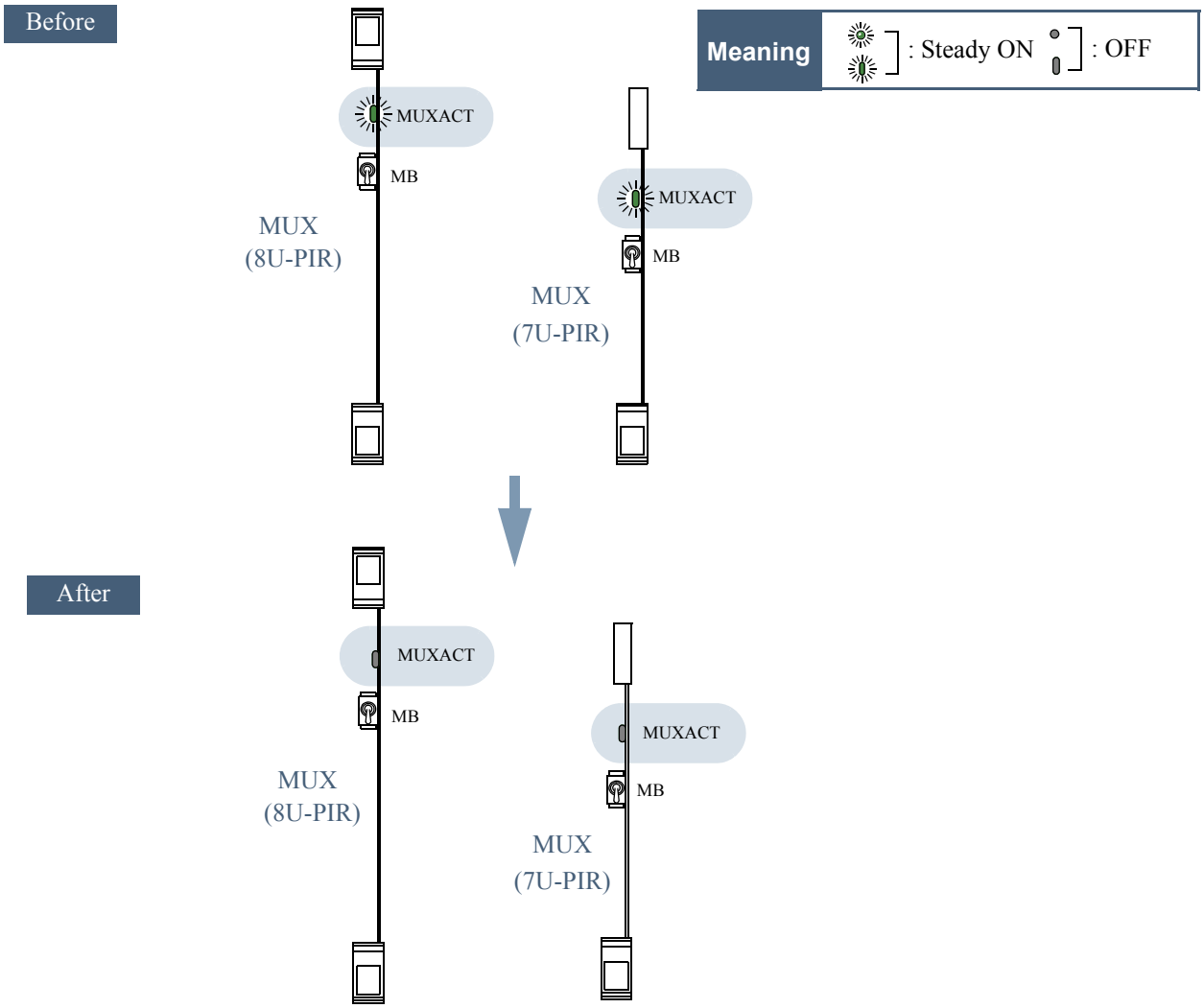
Note 1: If the TSWMBR switch is left in the UPPER position, the TSW card stays in make-busy state with the TACT lamp off. Be sure to return the switch to the LOWER position, except in special circumstances.

Note 2: PLO can be switched over only by the PLOMB switch. For this reason, TSW changeover does not affect that of PLO.

WARNING **For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.**

STEP 6 See the figure below to check the lamp indications

LED Indications Before and After Speech Path System Changeover



STEP 7 Make test calls to see that the TSW card is operating normally.

- If any problem occurs, switch the Speech Path System back to the original mode (ACT/STBY).

STEP 8 Analyze system messages.

- When TSW ACT/STBY is changed, system messages 7-E, 7-F, and 1-T will be generated. 7-E and 7-F display only information about physically mounted IMGs.

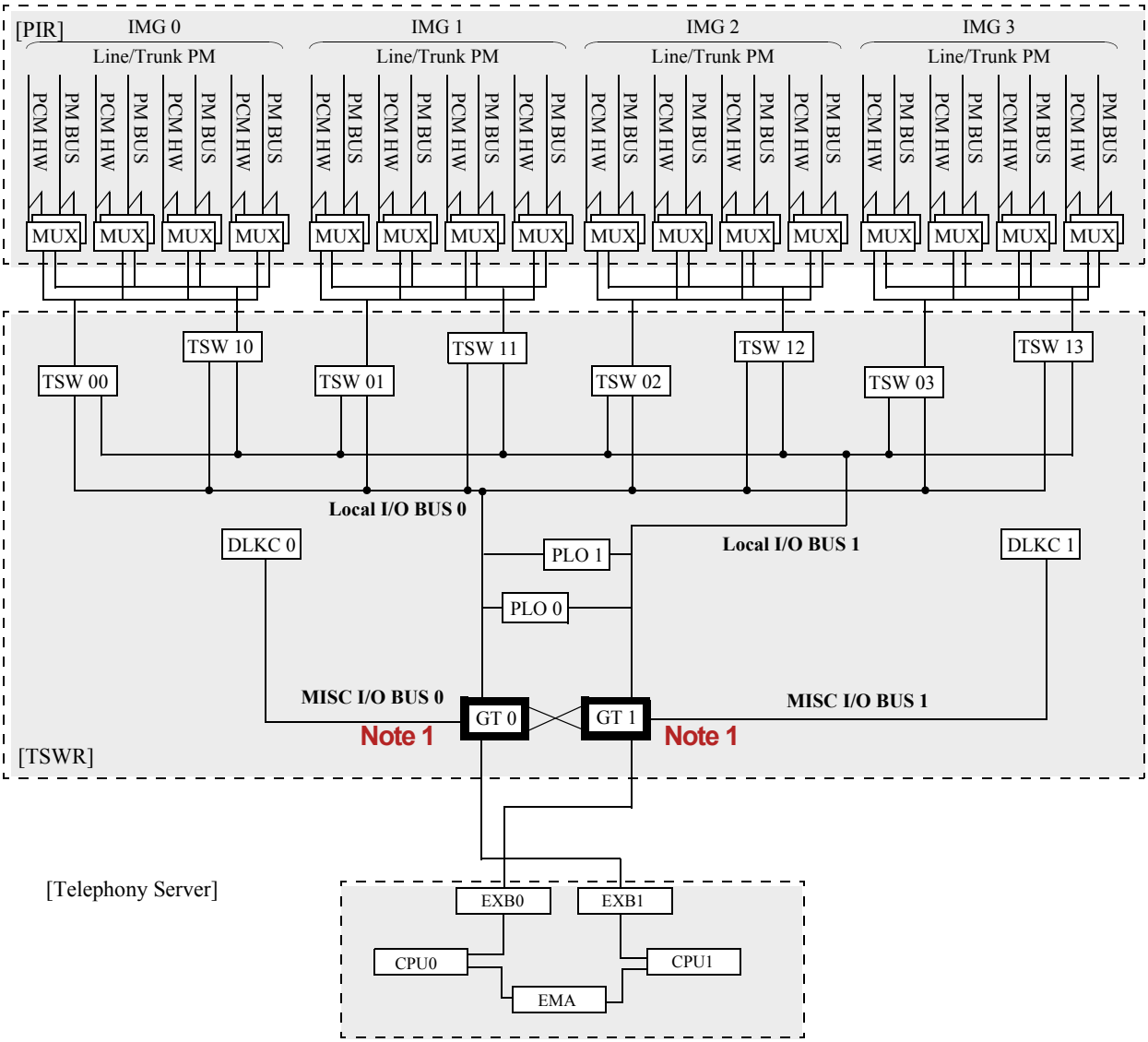
8.1.5.3 Manual Changeover for 4-IMG with TSWR

To changeover the ACT/STBY of Speech Path System, the CMOD command is normally used. However, if the command cannot be used, use the switch operations listed below.

ACT/STBY of the Speech Path System can be changed over via the MBR switch on the GT (PH-GT09) card. Because each GT (GT 0 and GT 1) can control both the Speech Path System 0 and 1, perform the switch operation on the active GT card, not on the card in STBY mode.

By changing over the ACT/STBY of Speech Path System, all the related systems, such as TSW, DLKC, and MUX, are totally switched over.

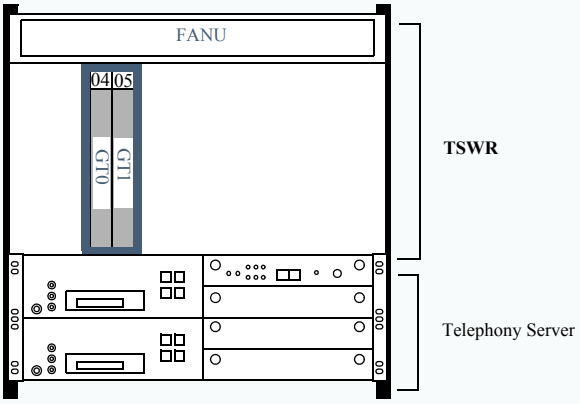
System Block Diagram: 4-IMG with TSWR (Switching Network for Speech Path System)



Note 1: When turning on and off the MBR switch on the GT card, all the speech path (TSW/INT, DLKC, MUX) will also be changed over.

- Operation is required on the following cards:

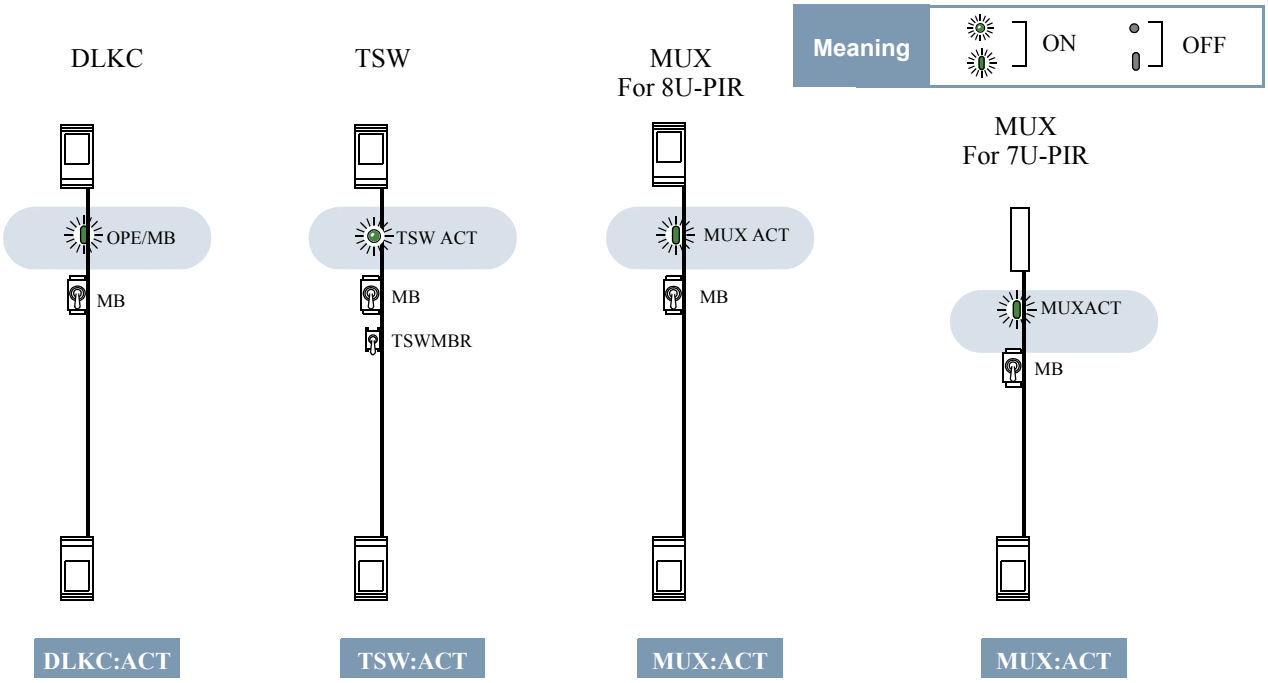
Target Cards for Manual System Changeover of Speech Path (4-IMG)

MODULE	SLOT NUMBER	CARD	TARGET CARD LOCATION
TSWR	04/05	GT (PH-GT09)	

STEP 1 Make sure that speech path system is currently placed in ACT mode.

- The following shows lamp indications on TSW/DLKC/MUX cards that are placed in ACT mode.

Lamp Indication of TSW/DLKC/MUX that are in ACT Mode

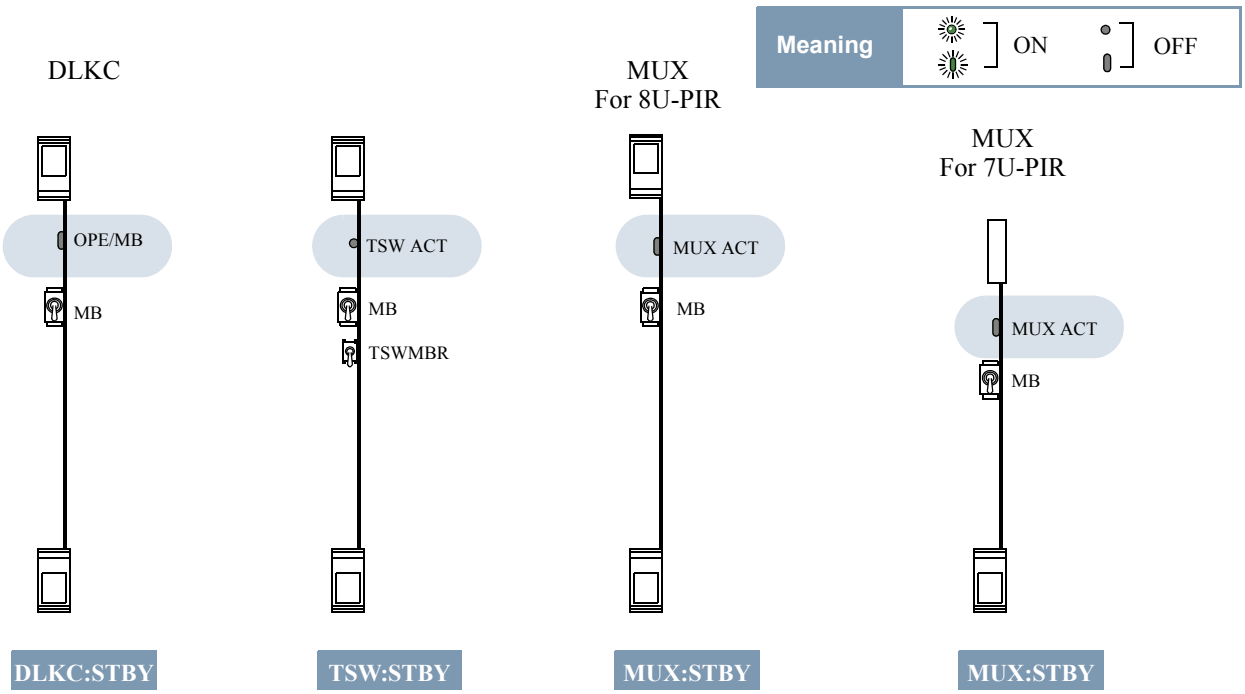


Note: Check all cards that are related to speech path system such as TSW cards and MUX cards.

WARNING **The ACT/STBY of Speech Path System can be changed over only when the mate system is in STBY mode. Do not attempt the changeover if the mate Speech Path System is in make busy mode.**

- The following shows lamp indications on TSW/DLKC/MUX cards that are placed in STBY mode.

Lamp Indication of TSW/DLKC/MUX that are in STBY Mode

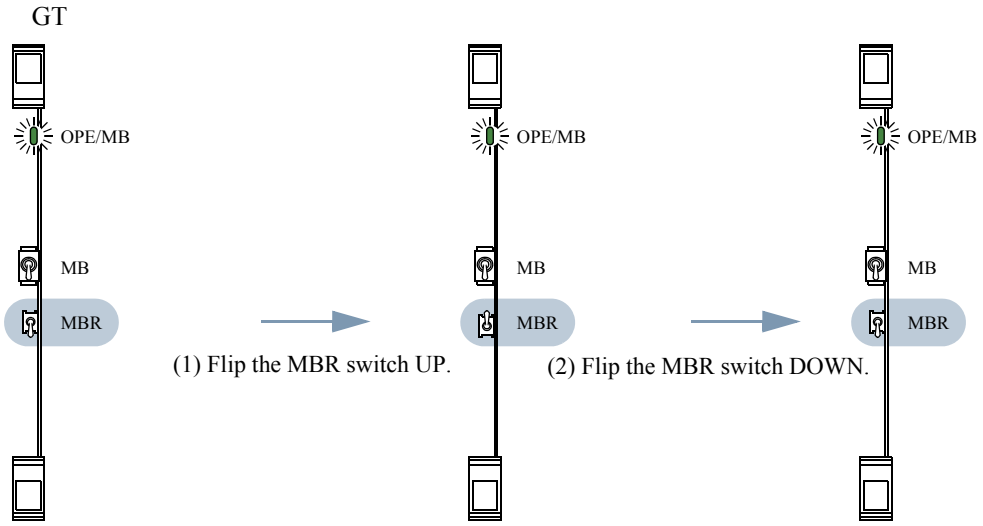


Note: Check all cards that are related to speech path system such as TSW cards and MUX cards.

WARNING **Improper switch operations may result in a system down. Operate the related switches with extreme care.**

STEP 2 Flip the MBR switch on the active GT card. See the figure below.

Speech Path System Changeover via Active GT MBR Switch



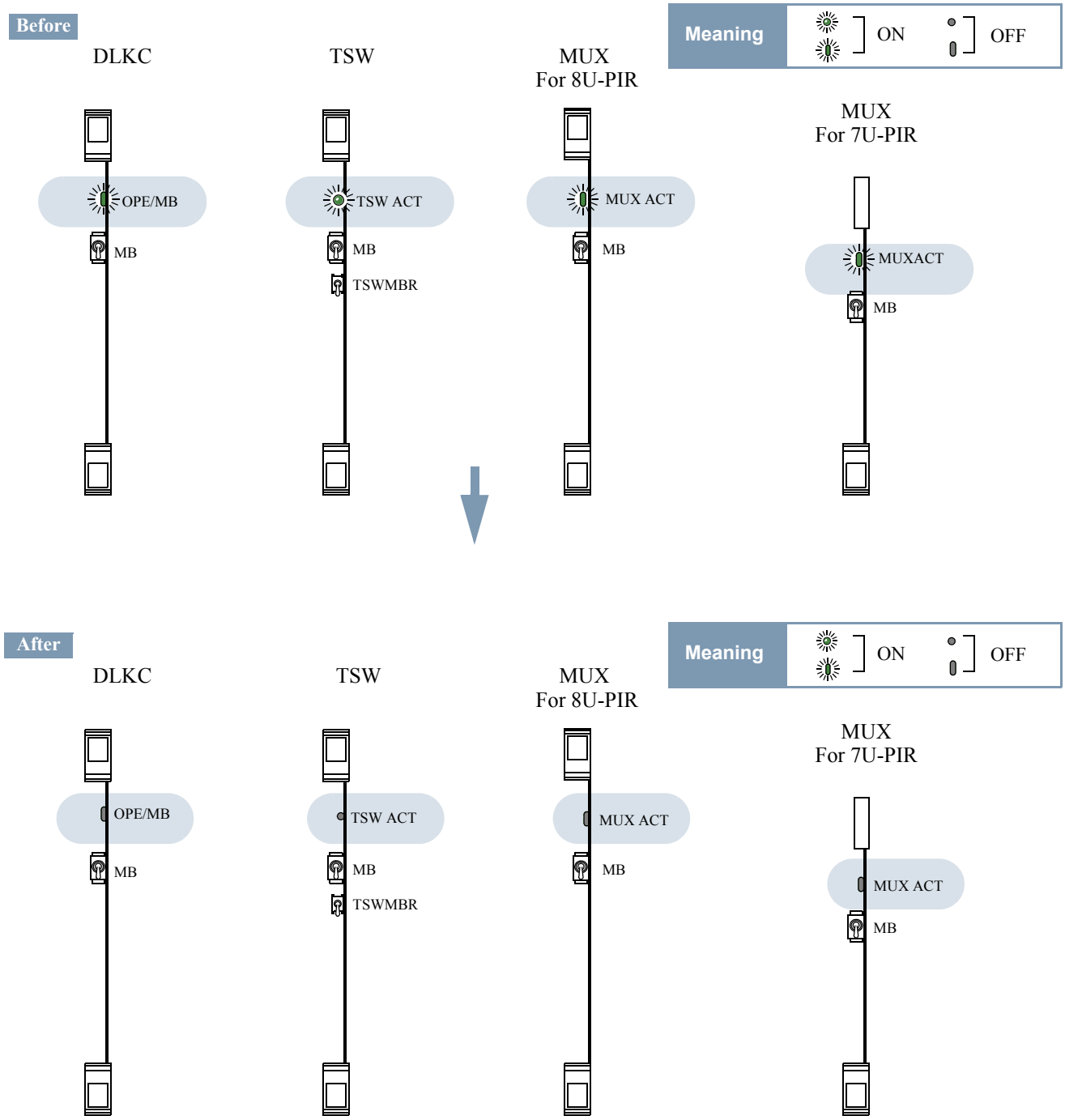
Note: If the MBR or MB switch is set to upward, the GT card is placed in make-busy status. Return the switch to the original position (downward).

WARNING **For manual TSW changeover with switch operation, be sure to use the MBR switch on the active GT card. Without setting the MBR switch to ON (upper position) on the active GT card, if you flip the MB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.**

STEP 3 Confirm the changed lamp indications.

- See the figure below to check the lamp indications.

LED Indications Before and After Speech Path System Changeover



STEP 4 Make test calls to see that the TSW card is operating normally.

- If any problem occurs, switch the Speech Path System back to the original mode (ACT/STBY).

STEP 5 Analyze system messages.

- When TSW ACT/STBY is changed, system messages 7-E, 7-F, and 1-T will be generated. 7-E and 7-F display only information about physically mounted IMGs.

8.1.6 Manual Changeover of PLO

This section explains how to changeover Phase Lock Oscillator (PLO) card, which can be switched over independently of Speech Path System.

8.1.6.1 Changeover of PLO (1-IMG)

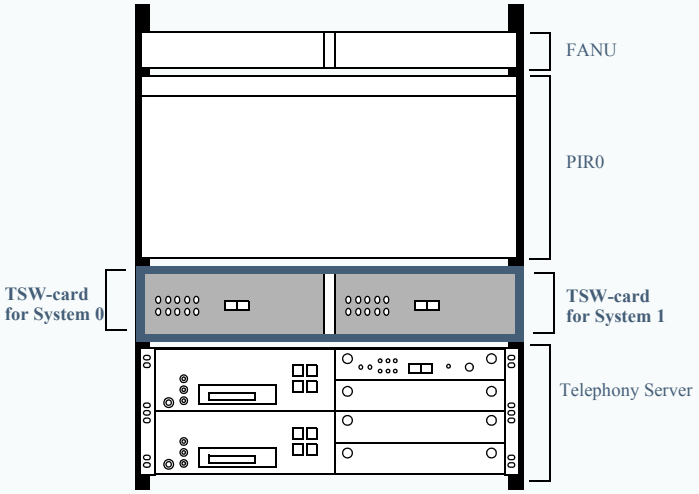
Changeover of PLO (1-IMG)

TYPE	OPERATIONS	REMARKS
Changeover by switch operation	1) On the TSW card with active PLO (in ACT mode), flip the PLOMB switch up. 2) Check the following: - On the TSW card with previously active PLO, the PACT lamp goes off. - On the mate TSW card with newly active PLO, the PACT lamp lights up green. 3) On the TSW card with previously active PLO, flip the PLOMB switch down.	- When PLOMB switch is set to the upper position on the TSW card with active PLO, the PLO is switched to standby and the PACT lamp goes off. - On the other hand, the PLO on the mate TSW card is switched to active and the PACT lamp lights up green.

WARNING **Improper switch operations may result in a system down. Operate the related switches with extreme care.**

WARNING **Voice calls are not be affected by PLO changeover. However, bit errors may occur on data lines.**

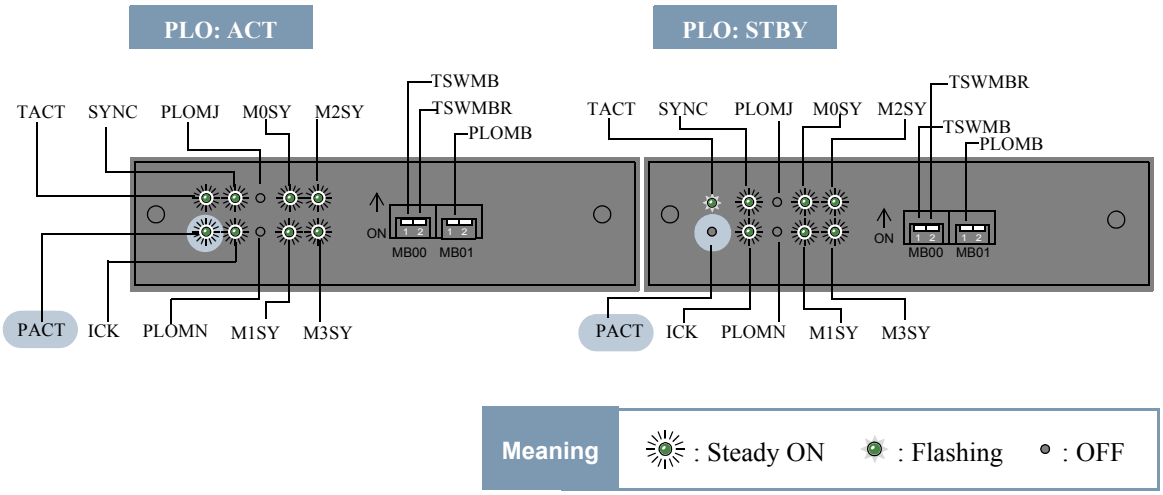
Target Cards for Manual System Changeover of PLO (1-IMG)

MODULE	CARD	TARGET CARD LOCATION
TSW-BOX	TSW card (SPZ-SW25-A)	

STEP 1 Check which PLO card is currently placed in ACT mode.

When the green PACT lamp on a TSW (SPZ-SW25-A) card is on, the PLO card is active (in ACT mode). When the lamp is off, the PLO card is standby (in STBY mode).

When PLO #0 is in ACT mode (1-IMG)

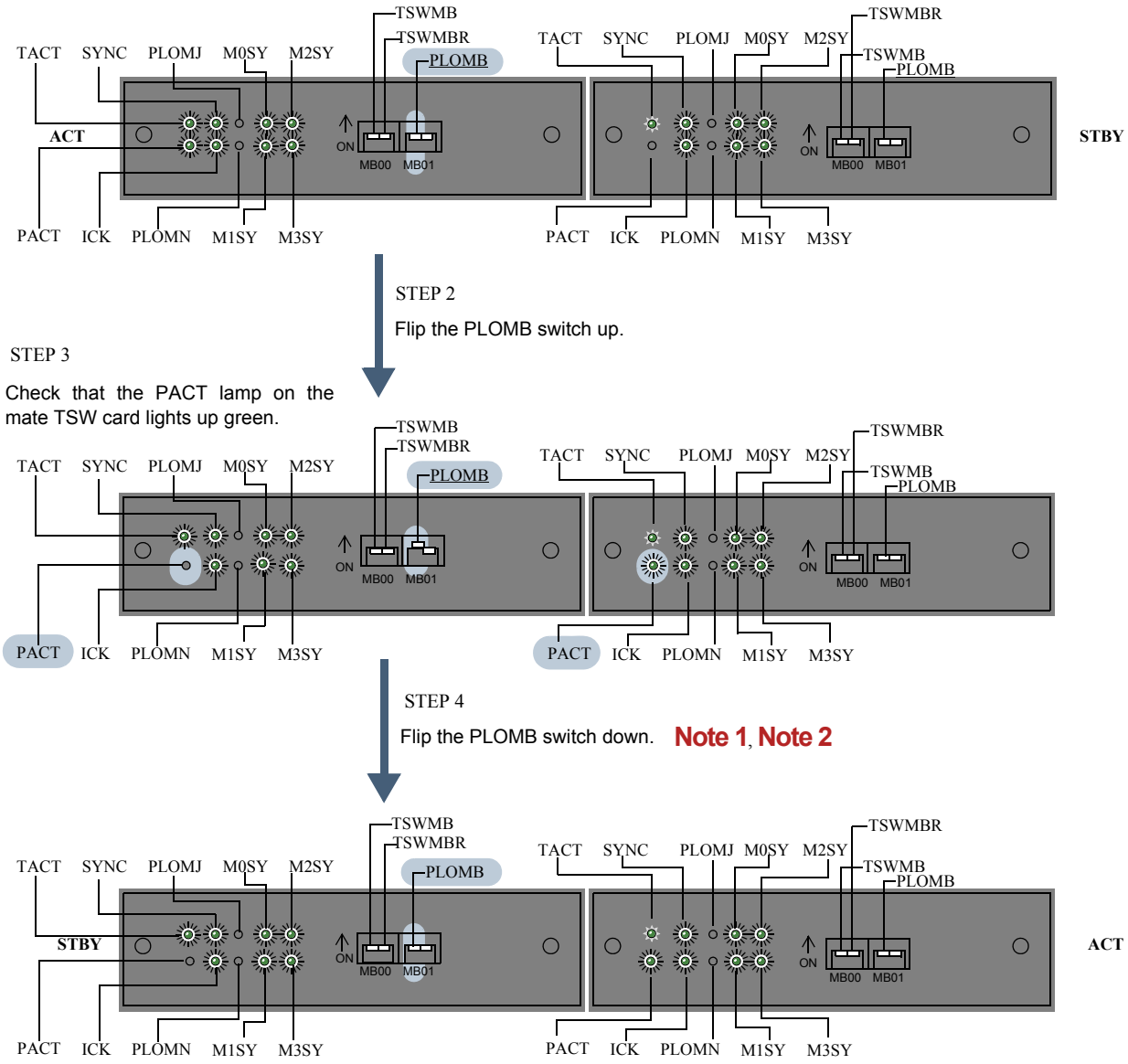


STEP 2 On the TSW card with the active PLO, flip the PLOMB switch up.

STEP 3 Wait a few seconds, and check that the PACT lamp on the mate TSW card lights up green.

- TSW card with the previously active PLO: PACT lamp goes off.
- Mate TSW card with the newly active PLO: PACT lamp lights up green.

STEP 4 On the TSW card with the previously active PLO, flip the PLOMB switch down.



Note 1: Be sure to return the PLOMB switch to the LOWER position, except in special circumstances.

Note 2: PLO changeover does not affect the ACT/STBY of TSW.

STEP 5 Analyze system messages.

When PLO ACT/STBY is changed, system messages 7-U and 7-V will be generated.

8.1.6.2 Changeover of PLO (4-IMG with TSW-BOX)

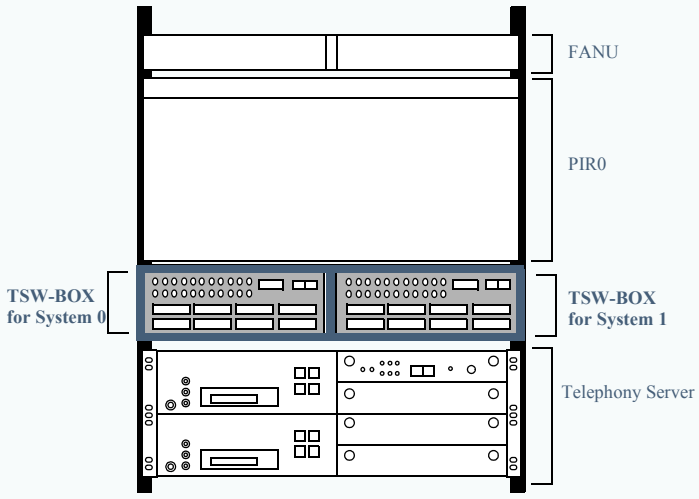
PLO can be switched over independently of Speech Path System.

TYPE	OPERATIONS	REMARKS
Changeover by switch operation	1) On the TSW card with active PLO (in ACT mode), flip the PLOMB switch up. 2) Check the following: - On the TSW card with previously active PLO, the PACT lamp goes off. - On the mate TSW card with newly active PLO, the PACT lamp lights up green. 3) On the TSW card with previously active PLO, flip the PLOMB switch down.	- When PLOMB switch is set to the upper position on the TSW card with active PLO, the PLO is switched to standby and the PACT lamp goes off. - On the other hand, the PLO on the mate TSW card is switched to active and the PACT lamp lights up green.

WARNING **Improper switch operations may result in a system down. Operate the related switches with extreme care.**

WARNING **Voice calls are not be affected by PLO changeover. However, bit errors may occur on data lines.**

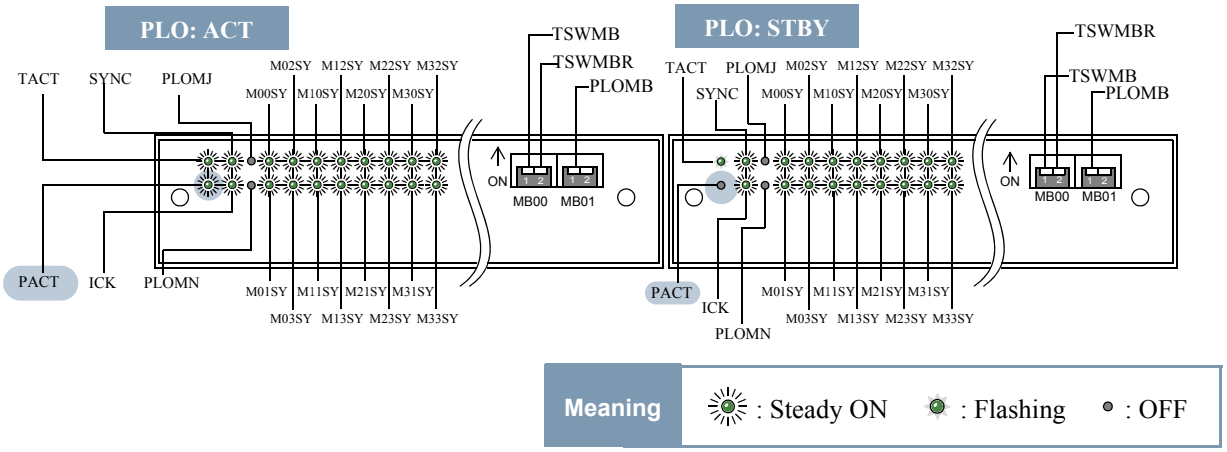
Target Cards for Manual System Changeover of PLO (4-IMG with TSW-BOX)

MODULE	CARD	TARGET CARD LOCATION
TSW-BOX	TSW card (SPZ-SW26-A)	

STEP 1 Check which PLO card is currently placed in ACT mode.

When the green PACT lamp on a TSW (SPZ-SW26-A) card is on, the PLO card is active (in ACT mode). When the lamp is off, the PLO card is standby (in STBY mode).

When PLO #0 is in ACT mode (4-IMG with TSW-BOX)

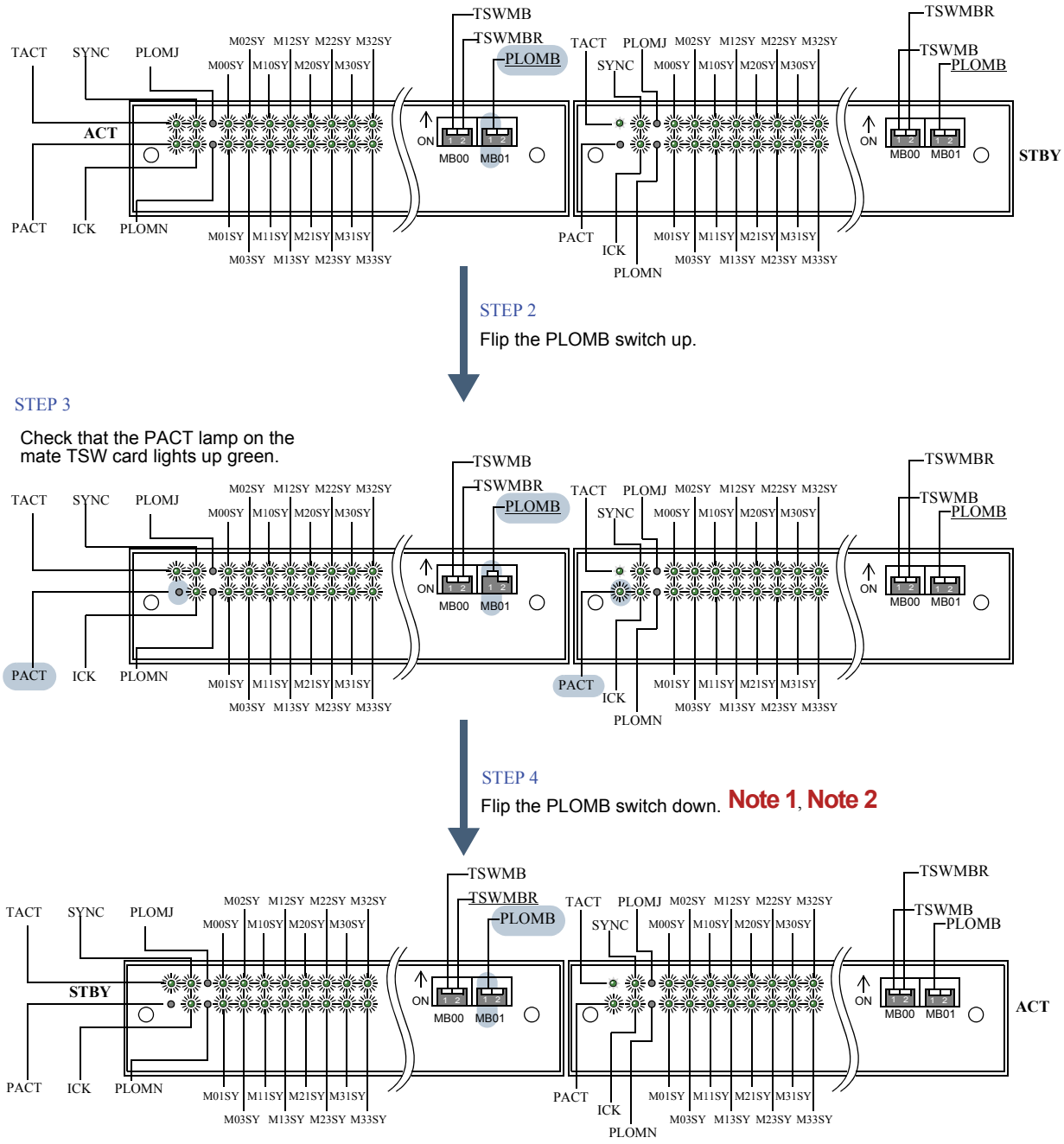


STEP 2 On the TSW card with the active PLO, flip the PLOMB switch up.

STEP 3 Wait a few seconds, and check that the PACT lamp on the mate TSW card lights up green.

- TSW card with the previously active PLO : PACT lamp goes off.
- Mate TSW card with the newly active PLO : PACT lamp lights up green.

STEP 4 On the TSW card with the previously active PLO, flip the PLOMB switch down.



Note 1: Be sure to return the PLOMB switch to the LOWER position, except in special circumstances.

Note 2: PLO changeover does not affect the ACT/STBY of TSW.

STEP 5 Analyze system messages.

- When PLO ACT/STBY is changed, system messages 7-U and 7-V will be generated.

8.1.6.3 Changeover of PLO (4-IMG with TSWR)

PLO can be switched over independently of Speech Path System.

Changeover of Switching Block (4-IMG with TSWR)

TYPE	OPERATIONS	REMARKS
Changeover by switch operation	1) On the active PLO card, flip the MB switch up to the ON position. 2) On the same card, check that the ACT lamp goes off. 3) Flip the MB switch down to the OFF position. **Note 1**	- On the previously active PLO card, the OPE lamp goes off. - On the mate PLO card, the OPE lamp lights up green, and the PLO card is switched to ACT mode.

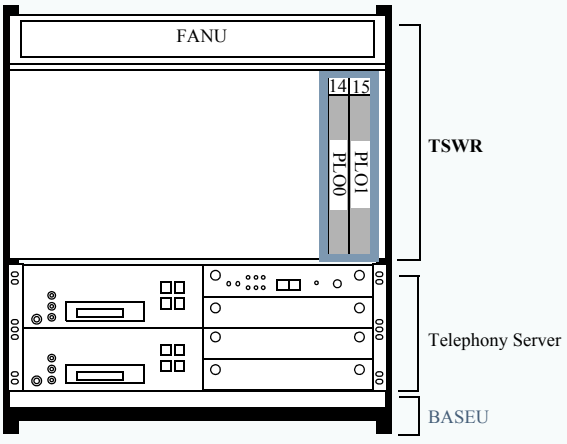
Note 1: When operating MB switch, ten-second interval is required between MB switch ON and OFF.

WARNING **Improper switch operations may result in a system down. Operate the related switches with extreme care.**

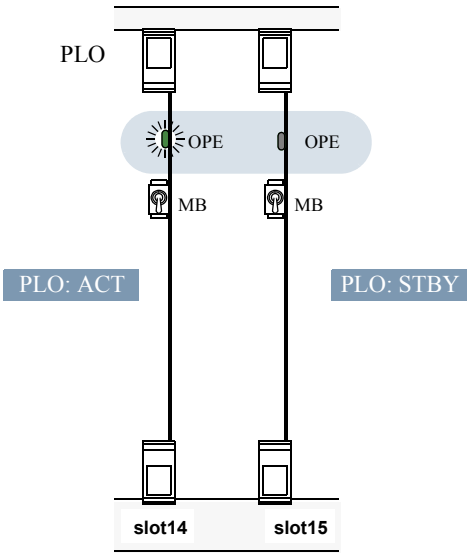
WARNING **Voice calls are not be affected by PLO changeover. However, bit errors may occur on data lines.**

WARNING **The changeover of PLO system can be done only when the mate PLO is in STBY mode. Do not attempt the changeover if the mate PLO is in make busy mode.**

Target Cards for Manual System Changeover of PLO (4-IMG with TSWR)

MODULE	SLOT NUMBER	CARD	TARGET CARD LOCATION
TSWR	14/15	PLO (PH-CK16-D, etc)	

STEP 1 Make sure which PLO is currently placed in ACT mode by checking the OPE lamp.



Meaning	ON	OFF

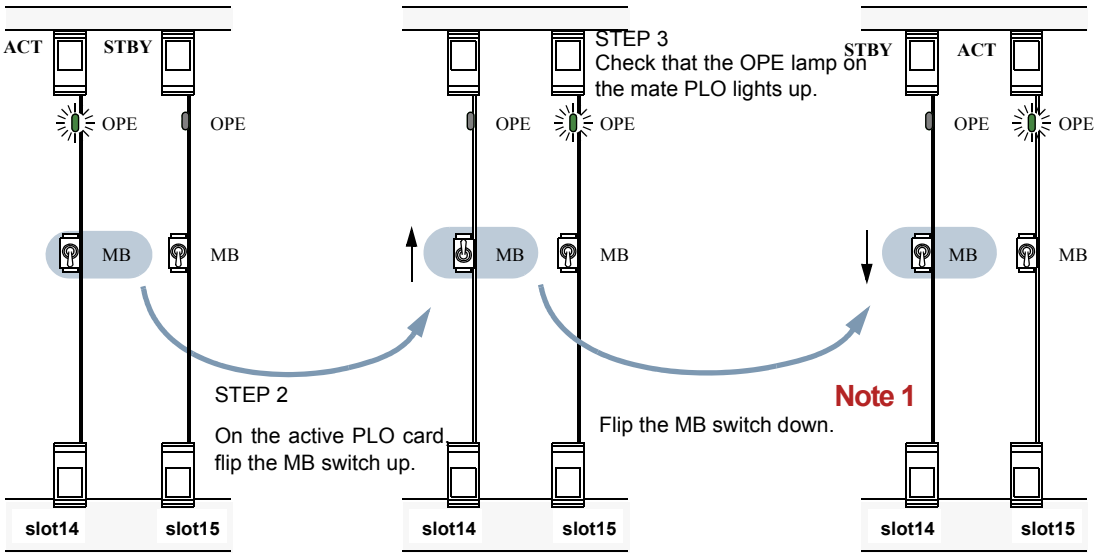
WARNING **The ACT/STBY of Speech Path System can be changed over only when the mate system is in STBY mode. Do not attempt the changeover if the mate Speech Path System is in make busy mode.**

STEP 2 On the active PLO card, flip the MB switch up to the ON position.

STEP 3 Check the following.

- Previously active PLO : OPE lamp goes off
- Newly active mate PLO : OPE lamp lights green.

STEP 4 On the previously active PLO card, flip the MB switch down.



Note: When operating MB switch, ten-second interval is required between MB switch ON and OFF.

Note 1: When the MB switch is in the UPPER position, the PLO card is in make-busy state. Be sure to return the switch to the LOWER position, except in special circumstances.

STEP 5 Analyze the displayed system messages.

- When PLO ACT/STBY is changed, system messages 7-U or 7-V will be generated.

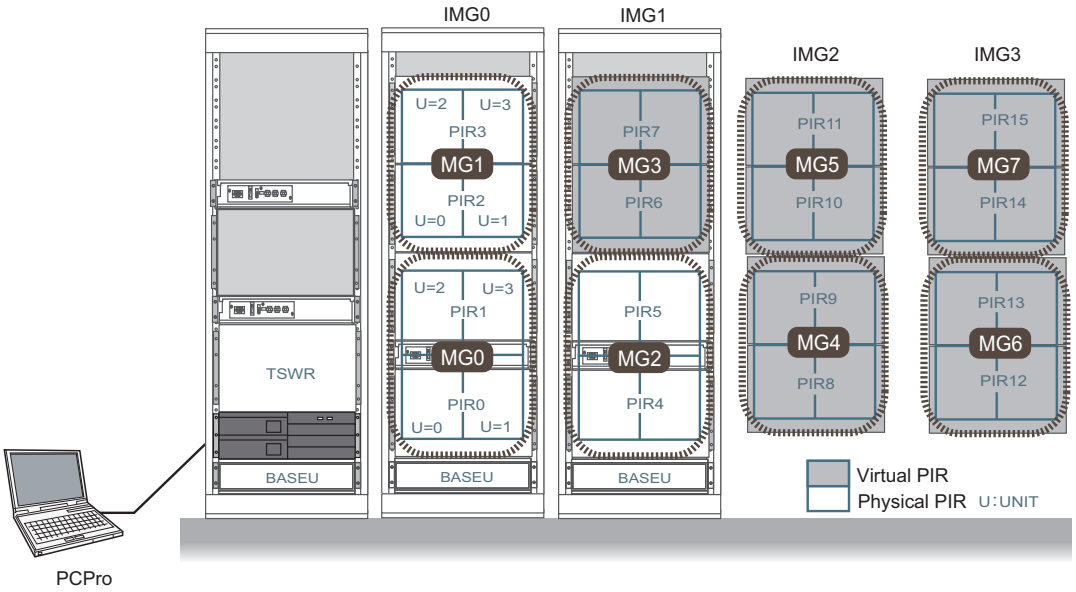
9. SYSTEM INSTALLING STATUS DISPLAY

9.1 Overview

This section explains how to display the mounting status of IMGs and unit information. This feature helps maintenance personnel to install/maintain the system and improves system maintainability. You can confirm the following information:

- Maximum of PIR numbers
- Maximum of MG numbers
- Mounting status of IMGs and unit information
- Information on the cause of errors in installation

Note that the figure below shows a 4-IMG model with TSWR as an example.



9.2 Operating Procedure

This procedure can be done with the DSOS command. For more information on this command, refer to the DSOS in Chapter 7 Maintenance Commands.

9.3 Service Conditions

(1) SR-MGC is supported in this feature.

9.4 Data Assignment

None

10. TRAFFIC MANAGEMENT

To obtain the value of common equipment usage, the system provides traffic measurement feature. It can improve the system efficiency.

10.1 Type of Traffic Measurement

The types of traffic measurements are shown below.

Traffic Measurement Types

TYPE	TYPE OF MEASUREMENT	DESCRIPTION	COLLECTIVE COMMAND
1 Note 1	Terminal Traffic Note 2	Measurement of traffic on a per LENS basis, and measurement of the total traffic on a PIR basis.	DTF101/ DTF101N
2 Note 1	Route Traffic	Measurement of traffic on a per route basis.	DTF102/ DTF102N
3 Note 1 Note 6	Station Peg Count	Measurement of the number of outgoing connections, intra-office calls, outgoing C.O. line calls, TIE line calls, etc. originated by each station.	DTF103/ DTF103N
4 Note 1 Note 6 Note 7	ATT Peg Count	Measurement of the number of each type of call handled at the ATTCON/DESKCON.	DTF104/ DTF104N
5 Note 1	Route Peg Count	Measurement of the number of various types of call connections on a per route basis.	DTF105/ DTF105N
6 Note 6	Service Peg Count	Measurement of the number of times the following services are operated: Call Hold Call Back Executive Right of Way Call Waiting Call Pickup - Group Call Pickup - Direct Call Forwarding - All Calls Call Forwarding - Busy Line Call Forwarding - Don't Answer Speed Calling - System Speed Calling - Station Off-Hook Outgoing Trunk Queuing Outgoing Trunk Queuing Consultation Hold - All Call Call Transfer - All Calls Three-Way Calling	DTF201/ DTF201N
8	UCD Route Peg Count	Measurement of the number of incoming calls, answered calls, and abandoned calls handled at UCD Groups on a per route basis.	DTF301/ DTF301N
9	UCD Group Peg Count	Measurement of the number of incoming calls, answered calls and abandoned calls on a UCD Group basis.	DTF302/ DTF302N
10	UCD Station Peg Count	Measurement of the number of incoming calls, answered calls and abandoned calls for each station on a UCD Group basis.	DTF303/ DTF303N
15 Note 3 Note 4 Note 7	ATT Answering Peg Count	Measurement of the number of answered calls handled by each attendant.	DTF501/ DTF501N
17 Note 8	CS Peg Count	Measurement of the number of access from CS to PS or vice versa.	DTFP
18 Note 9	Connection Route Peg Count	Measurement of the number of various type of call connection on a connection route basis.	DTF601/ DTF601N

Traffic Measurement Types

TYPE	TYPE OF MEASUREMENT	DESCRIPTION	COLLECTIVE COMMAND
19 Note 9	Connection Route Traffic	Measurement of traffic on a connection route basis.	DTF602/ DTF602N
20	IP Service Peg Count	The total number of call origination/termination via FCCS Networking via IP and CCIS Networking via IP, on a Node-to-Node basis. Note 5	DTF701
21	IP Service Traffic	Measurement of IP service-related traffic on a Node-to-Node basis (IP service: FCCS Networking via IP, CCIS Networking via IP). Note 5	DTF702
22	SIP Terminal Peg Count	Measurement of the number of call originations, completed call originations, call terminations, answered calls, unanswered calls, hand over attempt, completed hand over, registration request, succeeded Digest Authentication, failed Digest Authentication, all speech channels in busy state, and failed Keep Alive connection for SP Controlled SIP terminals in entire system and per SIP Server ID.	DTF801

Note 1: These types of traffic measurement can be saved on the HD of the PCPro.

Note 2: Terminal Traffic is not available for LENS of IP terminal and virtual LENS of PS/WLAN Handset.

Note 3: ATT Answering Peg Count is available for the following Attendant Incoming Calls. Note that the Route Class Data (CDN 6: TCL) of the Incoming Route must be 1 (=DDD Line)/ 2 (=FX Line).

(a) Ringdown
(b) LDN Call via ISDN/MFC Line
(c) Call terminated to the Attendant on the ground from ISDN/MFC trunk when Called Number or Sub Address cannot be received.

Note 4: In the case of following Incoming Call from ISDN/MFC line to Attendant Console, these services are not available.

- Call Forwarding-Busy Line/All Calls/Don't Answer to Attendant Console.
- Call Forwarding to Attendant Console by Vacant number.
- Incoming Call to Attendant Console with All Attendant Access from trunk.
- Incoming Call to Attendant Console with Individual Attendant Access.
- Incoming Call to Attendant Console with Remote Access to System.

Note 5: The word "Node" here refers to (1) self-SV9500 and (2) distant SV9500 on the other connected side. When FCCS Networking via IP/CCIS Networking via IP is used, Node stands for the self-SV9500 and distant SV9500.

Note 6: Assign the largest value of Number of Tenants (ASYDN, SYS1, Index 8) in all nodes to activate the traffic measurement order by the ATRFN command. Assign "FF Hex" for MDATA.

Note 7: Assign the largest value of Number of Attendant Consoles (ASYDN, SYS1, Index 9) in all nodes to activate the traffic measurement order by the ATRFN command. Assign “FF Hex” for MDATA.

Note 8: For North America, ZT is observed in the Peg Count.

Note 9: This traffic measurement is also available for connections via IPPAD; however, incoming and outgoing traffic both are counted as outgoing traffic in the result.

10.2 Operating Procedure for PCPro

10.2.1 Procedure for Set-up and Start (Automatic Traffic Collection)

STEP 1 **ASYD/ASYDN**

Assign the following system data if they are not assigned yet:

SYS1, Index 47,

Bit 0 (Unit of Traffic Measurement) = 0/1 (CCS/Erlang)

Bit 7 = 1 (Traffic Measurement Service is in service)

Note: When Terminal Traffic Measurement, Route Traffic Measurement or Connection Route Traffic Measurement is performed.

STEP 2 **ANTI**

Assign Node numbers for self-SV9500 and each connected SV9500.

Note: This step is required only when the Traffic Measurement Type is “IP Service Traffic”.

STEP 3 **ATRF/ATRFN Note 1**

Assign traffic measurement TYPE (**Note 2**), PORT number used, and the output INTERVAL and TIME, etc. For more information, see the ATRF/ATRFN command.

Note 1: When the ATRF/ATRFN command is assigned to obtain the Traffic data automatically, log-in state must be maintained continuously with PCPro.

Note 2: When two or more measurement types are needed such as IP Service Peg Count and IP Service Traffic, repeat the same steps, following the entry of this command.

STEP 4 Terminate all the PCPro commands.

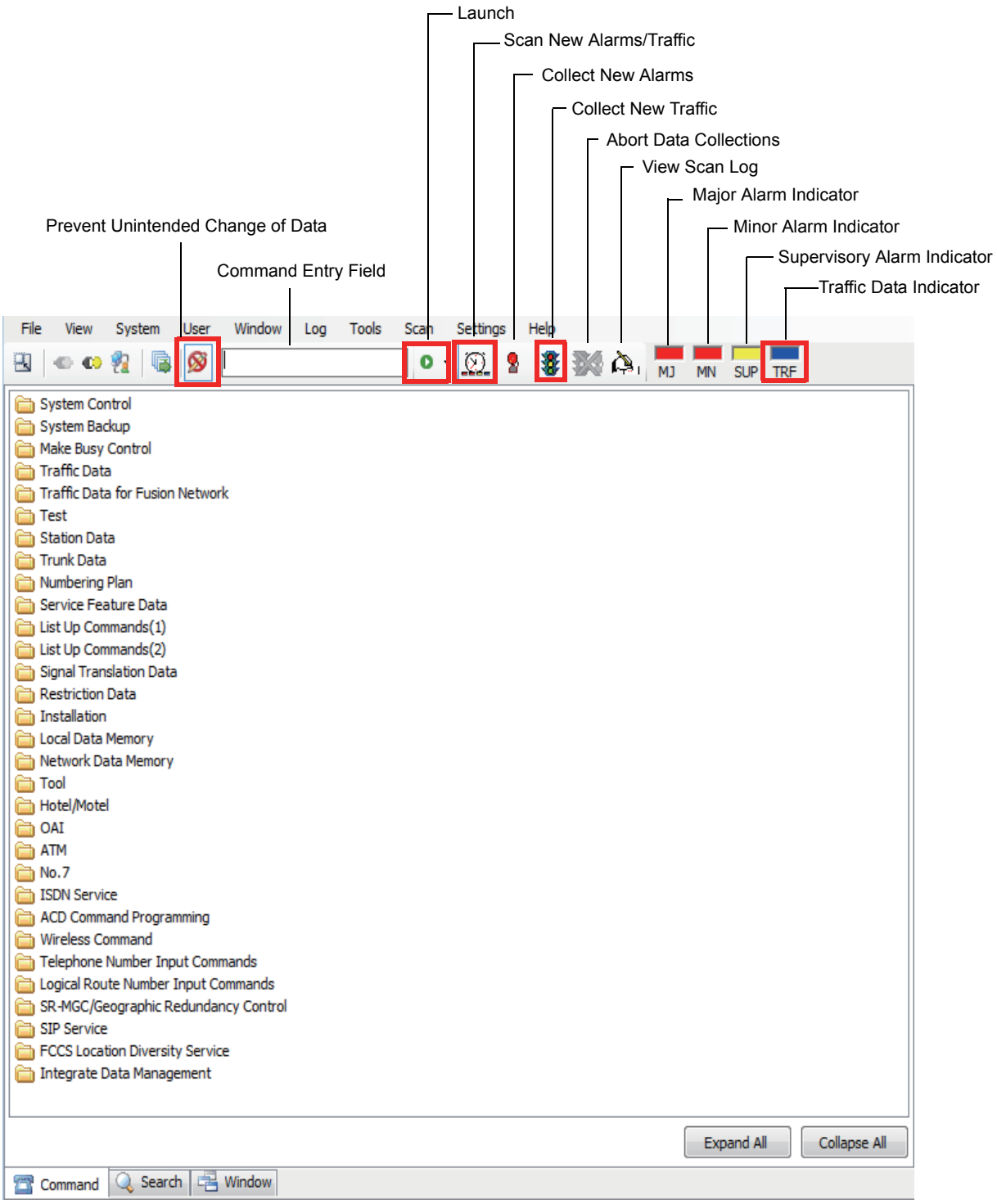
An image of a PCPro Menu is shown in the figure entitled “SV9500 PCPro Menu Display Image (Example).” Terminate all PCPro commands, and make sure no command is currently running via the downward arrow located to the right of **Launch** button.

STEP 5 Set the programmed Traffic Measurement in routine operation.

Click the **Scan New Alarms**/**Traffic** and **Collect New Alarms** buttons on the PCPro Menu (confirm the clicked buttons remain in the pressed state). Then, the Traffic Measurement is activated as programmed.

SV9500 PCPro Menu Display Image (Example)

This Figure shows an example of PCPro menu, which should look similar to the following:



10.2.2 Data Output - Details on DTFD/DTFDN Command

To obtain the collected traffic data, use the DTFxxx/DTFxxxN commands or Automatic Traffic Collection (See the 10.2.1 Procedure for Set-up and Start (Automatic Traffic Collection)). The commands can be activated by your direct log-in operation on PCPro, but in normal cases, the commands are activated automatically at predetermined intervals assigned by the ATRF/ATRFN command.

The newest traffic data can only be obtained by using the DTFD/DTFDN command in the Traffic Measurement Types on page 148 list. The traffic measurement program must be assigned by the ATRF/ATRFN command to obtain all the traffic data activated at predetermined intervals.

Each command corresponds to the Traffic Measurement TYPE assigned by the ATRF/ATRFN command (Refer to the table "Traffic Measurement Types").

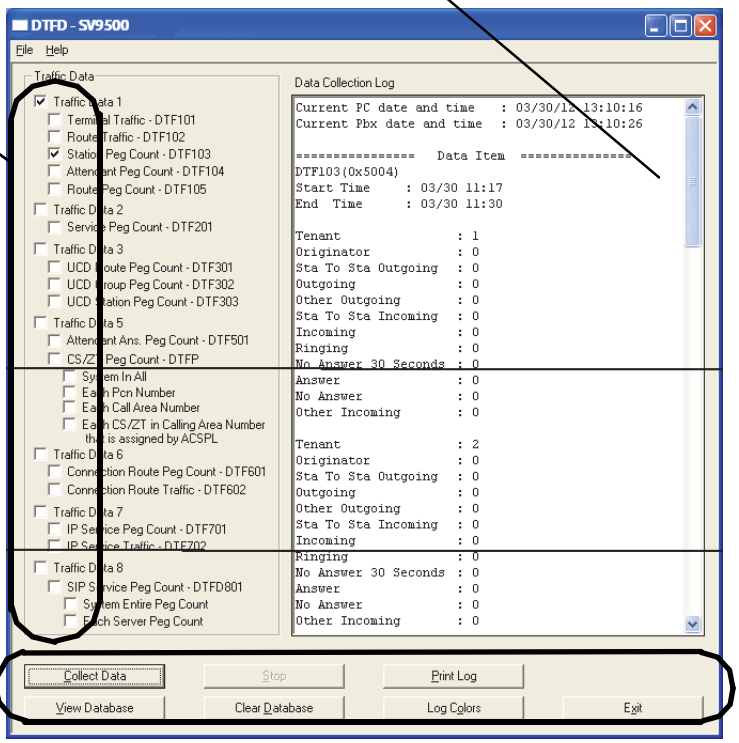
Note: For information on the command display images, see the following figures:
- "DTFD Command Display Image (Example)"
- "Listup Report Window when View Database is Selected (Example)"
- "Export Dialog for Traffic Report Text File Saving"

DTFD Command Display Image (Example)

This Figure shows the DTFD command display image (example). The DTFD/DTFDN command should look similar to this.

Traffic Data
Check box to specify the Traffic Data TYPE.

Data collecting Log
This area displays the current Traffic Measurement data, based on the selected Traffic Data TYPE.



Tool Buttons

- Collect Data

  Used to collect the Traffic report with regard to the selected Traffic Data TYPE. The result test is shown in the Data Collection Log display area.

- Stop

  Used to quit the currently performed Traffic Data collection.

- Print Log

  Used to print out the text data now displayed in the Data Collection Log area

- View Database

  Used to view the whole data (based on the selected Traffic Data TYPE), so far stored in the database. More details are shown in the figure entitled "Listup Report Window when View Database is Selected (Example)."

- Clear Database

  Used to delete (clear) the whole data (based on the selected Traffic Data TYPE), so far stored in the database.

- Log Colors

  Used to designate/change the text font color of the Data Collection Log display area.

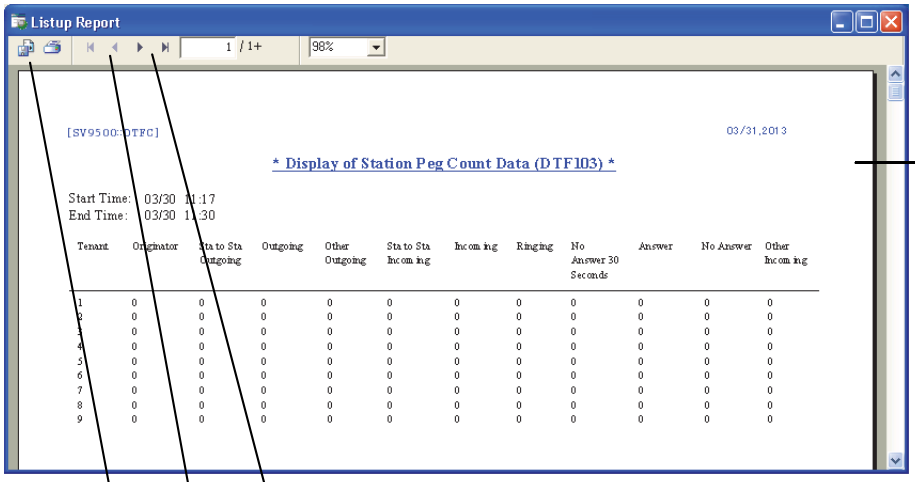
- Exit

  Used exit this command. (Note that the database contents are not cleared by pressing this button.)

Listup Report Window when View Database is Selected (Example)

This Figure shows a sample image of the Listup Report window for the DTFD/DTFDN command. This window appears by taking the following operations, and is used to obtain a sequence of Traffic data, so far collected and stored in the database. The window is also used to save the Traffic data text (now displayed in the window) onto the desired PC directory.

- To activate this window:
1. Designate a specific Traffic Data TYPE out of the DTFD/DTFDN command check boxes. (See the figure entitled “DTFD Command Display Image (Example).”)
2. Press the **View Database** button on the left-bottom part of the DTFD/DTFDN command. (See the figure entitled “DTFD Command Display Image (Example).”)



Display Area

This area displays the details on the Traffic report, specified by the Page (UP)/Page (DOWN) buttons.
Shown here is an example of a certain first page of “Terminal Traffic Data (DTF101).”

Page (UP)

Page (DOWN)

Any Traffic data, now in the database, can easily be found via these buttons. Select UP or DOWN, according to the text display pattern: the newest the first, the oldest the last.
Note 1

Save Text File

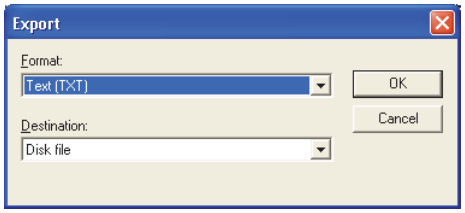
When saving the currently displayed text page, press this button.
Then, a dialog box, as shown in the figure entitled “Export Dialog for Traffic Report Text File Saving,” appears.

Note 1: When this window displays, the first text to appear is the newest file data. This data is derived from a sequence of Traffic reports. The newest text (in the database) appears on the first page, and the most current previous version on the next page.

Export Dialog for Traffic Report Text File Saving

If the **Save Text File** button is selected on the Listup Report window, the dialog box shown below, displays. (see the figure entitled “Listup Report Window when View Database is Selected (Example)” above). If saving the file:

1. Select ***Character-separated values*** on the Format list box.
2. Select ***Disk file*** on the Destination list box.
3. Click **OK**.



After these steps, a new dialog box displays. Enter the saved file name and directory. Complete the data saving by filling out these necessary items.

10.3 Precautions

10.3.1 For prolonged (constant) traffic measurement

When you execute “automatic traffic collection” for a prolonged time with using the PCPro, PCPro may lock up due to the lack of the system resource of the PC depending on the PC or the OS type, and traffic collection may not work properly.
In such occasion, execute the following options.

Note: When PCPro is used for general operations, there is no problem.

(1) If other application has been installed, delete the other application and residence application.

(2) If you started up or used the other command when traffic collection was in operation,

- be sure not to start up or use the other command during the automatic traffic collection.
- if automatic traffic collection is executed for a prolonged time, install dedicated PC for automatic traffic collection aside from the PCPro for the normal maintenance use.

(3) If automatic traffic collection has been run for more than one month, restart the PC once a month.

In case you cannot fix these problems despite the above operations, it is recommended to upgrade the PC model.

10.3.2 When performing traffic measurement on a node basis

When the Traffic Measurement target node is in the FCCS network, to program Traffic Measurement order on a network basis is not available by the ASYD/ATRF/DFTD command. The ASYDL/ATRFN/DFTDN command needs to be used instead of the ASYD/ATRF/DFTD command.

10.3.3 When performing Traffic Measurement via TCP/IP

(1) Each time the system is initialized or data change is requested from the ATRFN command, the Network-level Data (NDM) for the traffic measurement order is replaced/updated.

(2) When the network-level data is once assigned via the ATRFN command, the node-level data for the ATRF command cannot be changed or modified.

(3) When the network-level data is once assigned via the ATRFN command, the already assigned data by the ATRF command is not cleared, but becomes ineffective.

(4) When a data transfer error occurs, the following are performed in order:

→ Traffic measurement is suspended momentarily and system message is displayed (notification of fault)

→ Traffic measurement concerning all the remaining data, except for the fault-involved one, is resumed.

→ Retry is made repeatedly for the transfer of fault-involved data, until the fault has been cleared.

→ If the fault has not been cleared by the time of next measurement routine, the data is discarded and the next traffic measurement routine starts

(5) When the same individual ATT numbers exist on the network, the traffic measurement concerning the ATTCON/DESKCON cannot be performed correctly.

10.3.4 For IP service-related Traffic Measurement

(1) The measurement of Traffic TYPE 20 [IP Service Peg Count] and 21 [IP Service Traffic] can be performed only on a Node-to-Node basis, without consideration of other mediating interface(s).

"Node" refers to:
- self-SV9500 and distant SV9500 (when FCCS Networking via IP/CCIS Networking via IP is used)

(2) Either CCS or Erlang can be selected for Traffic TYPE 21 [IP Service Traffic].

(3) For both Traffic TYPE 20 [IP Service Peg Count] and 21 [IP Service Traffic], it is only available via FCCS/CCIS using the IPTRK card. It is not available with the Peer-to-Peer FCCS and Peer-to-Peer CCIS network.

10.4 Listup Report for Each Traffic Measurement

The following shows listup report for each Traffic Measurement.

(1) Terminal Traffic

The following shows Terminal Traffic Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFA] TRAFFIC MEASUREMENT 10/31, 2013

* Terminal Traffic Data (DTF101) *

Start Time: 10/27 00:01
End Time: 10/27 12:00

Traffic for LENS

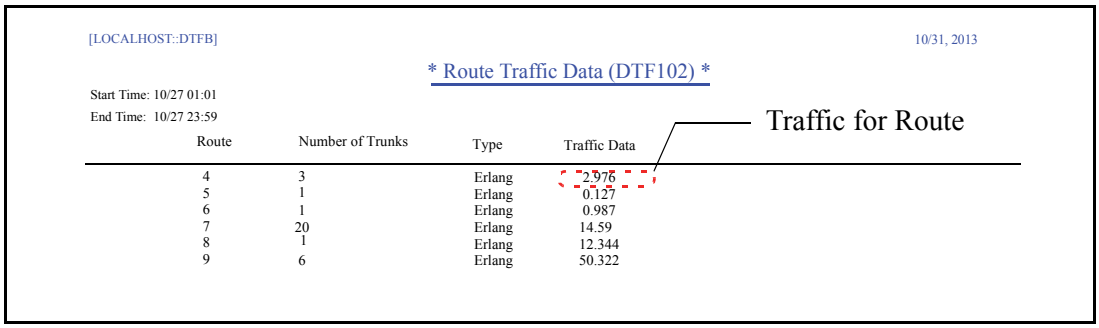
ModuleGroup	Unit	Group	Type	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
0	0	1	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	2	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	3	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	4	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	5	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	6	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	7	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	8	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	9	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012
0	0	10	CCS	09252.000	09215.859	09179.718	0.9143.576	09107.435	09071.294	09035.153	08999.012

- Module Group : Module Group data for LENS
- Unit : Unit data for LENS
- Group : Group data for LENS
- Level 0 - Level 7 : Level data for LENS
- Type : Unit Type of Traffic Measurement

(2) Route Traffic

The following shows Route Traffic Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.



- Route : Route Number
- Number of Trunks : Number of Trunks
- Type : Unit Type of Traffic Measurement
- Traffic Data : Traffic Data measured

(3) Station Peg Count

The following shows Station Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

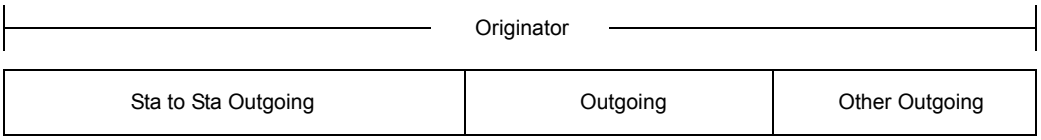
[LOCALHOST::DTFC] TRAFFIC MEASUREMENT 10/31, 2013

* Display of Station Peg Count Data (DTF103) *

Start Time: 10/27 21:30
End Time: 10/27 22:00

Tenant	Originator	Sta to Sta Outgoing	Outgoing	Other Outgoing	Sta to Sta Incoming	Incoming	Ringing	No Answer 30 Seconds	Answer	No Answer	Other Incoming
1	13	9	1	3	6	0	6	0	1	5	0

(a) Outgoing Calls:



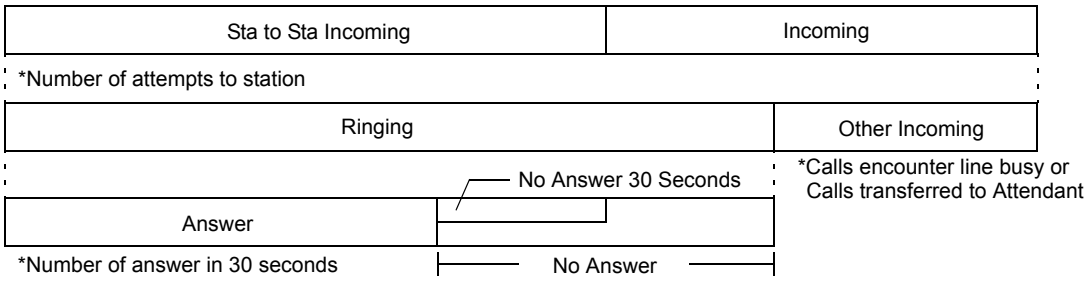
- Originator : The number of times a station went off-hook for call origination.
- Sta to Sta Outgoing : The number of times a station went off-hook and dialed a station number, a dead number or an attendant number.

  Call originations are counted even if they encounter line busy. Also counted when a station placing a call on hold dials a station number, dead number or an attendant number.
  Transferred call to another station when the station is engaged in a call, calling another station via Attendant, call origination by Step Call are not counted here.
- Outgoing : The number of times a station went off-hook and attempted outgoing C.O. lines or tie line calls.

  Call originations through C.O. lines or tie line are counted when a station placing a call on hold dials a station number, dead number or an attendant number.
  Transferred call to another station when the station is engaged in a call, calling another station via Attendant through C.O. lines or tie lines are not counted here.

- Other Outgoing : The number obtained by subtracting the number of "Sta to Sta Outgoing" and the number of "Outgoing" from "Originator".
  Examples counted as "Other Outgoing" calls are:
  -When a call originator lifted the handset but did not dial any digits.
  -When a call originator started dialing but replaced the handset before dialing was completed.

(b) Incoming Calls:



- Sta to Sta Incoming : The number of Station to Station call terminations
- Incoming : The number of station calls attempted by direct dialing (not via Attendant) from C.O. lines or tie lines.
- Ringing : The number of calls terminating to stations included in the sum of "Sta to Sta Incoming" and "Incoming" above.
- No Answer 30 Seconds : The number of calls that are not answered within 30 seconds in the "Ringing". (Calls answered after 30 seconds have past are not counted here.)
- Answer : The number of answered calls in the "Ringing".
- No Answer : The number of calls that are not answered in the "Ringing". (The number obtained by subtracting "Answer" from "Ringing".)
- Other Incoming : The number obtained by subtracting the number of "Ringing" from the sum of "Sta to Sta Incoming" and "Incoming".
  Examples counted as "Other Incoming" calls are:
  -Calls encounter line busy
  -Calls transferred to Attendant

(4) ATT Peg Count

The following shows ATT Peg Count Listup Report and description of symbols in the report. Symbols in this report are name of keys on the ATTCON.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFD] TRAFFIC MEASUREMENT 10/31, 2013

* Display of Attendant Peg Count Data (DTF104) *

Start Time: 10/27 16:33
End Time: 10/27 16:40
FLAG : 1

Tenant 1 * INCOMING *

LDN	ATNDor ADM	RCL	FX	WATS	CCSA	TIE	BUSY	NANS	ICPT	SCBorHP
23	13	1	0	0	0	13	0	0	0	0

TF	DND	GST	HWC	LT	**Total**
0	0	0	0	0	**50**

- Tenant — Tenant No. : Tenant Number
- ATN — ATTCON No. : Attendant Console Number
- LDN — Listed Directory Number (Central Office) : The number of call terminations from C.O. to Attendant.
- ATND — Attendant : The number of call terminations from stations to Attendant.
- ADM — Administration station : The number of call terminations from administration stations to Attendant in the hotel system.
- RCL — Recall : The number of Recalls from stations to Attendant.
- FX — Foreign Exchange : The number of Call terminations from FX Trunks. Available in North America only.
- WATS — Wide Area Telephone Service : The number of call terminations from WATS Trunks. Available in North America only.
- CCSA — Common Channel Switching Arrangement : Call terminations from CCSA Trunks. Available in North America only.
- TIE — Tie Line : Call terminations from tie line to Attendant.
- BUSY — Call Forwarding - Busy Line : Forwarded call terminations to Attendant when originally called station is busy.
- NANS — Call Forwarding - Don't Answer : Forwarded call terminations to Attendant when originally called station does not answer.

- ICPT Call Forwarding - Intercept : Forwarded call terminations to Attendant when originally called station is restricted.
- SCB Special Common Battery : Not used.
- HP House Phone Station : House Phone call terminations to Attendant. This symbol is used in hotel system.
- TF Inter-Position Transfer : Transferred call terminations to Attendant by INTER-POSITION TRANSFER [I-5].
- DND Do Not Disturb : Transferred call terminations to Attendant when calls to originally called station are restricted by DO NOT DISTURB [D-11]. This symbol is used in hotel system.
- GST Guest station : Call terminations from guest stations to Attendant. This symbol is used in hotel system.
- HWC Howler call : Call terminations to Attendant when the off-hook time of guest station is beyond the previously assigned time. This symbol is used in hotel system.
- LT Long Line Telephone Call : Call terminations to Attendant when the duration of call of guest station is beyond the previously assigned time. This symbol is used in hotel system.

(5) Route Peg Count

The following shows Route Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFE] TRAFFIC MEASUREMENT 10/31, 2013

* Display of Route Peg Count Data (DTF105) *

Start Time: 10/27 16:34
End Time: 10/27 16:40

Report Type **Incoming/Outgoing Trunks** **Route 1**

Attempts	Block	Established	Outgoing	Incoming	Register Access	Attendant
23	3	26	19	6	19	6

Station	Tandem	Others	VT(E-CCIS) Establishment [OUT]	VT(E-CCIS) Establishment [IN]
0	0	0	0	0

.

- Report Type (Route Peg Count Type) : 1 = Intra Office Trunks
  2 = Incoming/Outgoing Trunks
- Attempts : The number of times that a trunk selection was attempted.
- Block : The number of times that trunk busy was encountered when accessing a trunk.
- Established : The number of connections to intra-office trunks (excluding connections from the Attendant Console) in the counting target office. The number of connections to incoming/outgoing trunks is not counted. In the case of Incoming/Outgoing Trunks as a report type, therefore, a minus sign (-) is displayed in this field.
- Outgoing : The number of times that outgoing trunks were accessed. The value does not necessarily coincide with the value obtained by subtracting "Block" from "Attempts."
- Incoming : The number of calls terminated through incoming trunks.
- Register Access : The number of actual ORT/IRT register connections. In the case of Bothway C.O. Trunks (CBWT), the number is "0."
  Also when register blocking has occurred, the "Incoming" number and the "Register Access" number do not always coincide.
- Attendant : The number of incoming calls that directly terminate to the Attendant. **Note 1**
- Station : The number of incoming station to station calls (not via the Attendant Console). **Note 1**

- Tandem : The number of incoming calls that directly provide tandem connection (not via the Attendant Console). **Note 1**
- Others : The number obtained by subtracting “Attendant”, “Station” and “Tandem” from “Incoming”. These calls include the following scenarios:
  -Incoming calls terminated but released before the line is connected.
  -Calls to unused numbers or busy lines, etc.
- VT(E-CCIS) Establishment [OUT] : The number of call originations through Virtual Tie Line (E-CCIS).
- VT(E-CCIS) Establishment [IN] : The number of call terminations through Virtual Tie Line (E-CCIS).

Note 1: Whether the call was answered or not is not discerned.

(6) Service Peg Count

The following shows Service Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFF] TRAFFIC MEASUREMENT 10/31, 2013

* Display of Service Peg Count Data (DTF201) *

Start Time: 10/27 16:21
End Time: 10/2716:25

Tenant 1

Call Hold	Call Back	Call Back Cancel	Erow	Call Waiting Originate	Call Waiting Terminate	Call Pick Up	Direct Call Pick Up	CFA Entry
2	3	2	12	0	0	15	2	5
CFA Cancel	CFB Entry	CFB Cancel	CFDA Entry	CFDA Cancel	System Speed Call Access	Individual Speed Call Access	Individual Speed Call Entry	TAS Answer
1	1	0	2	1	12	1	0	0
Off Hook OG Queuing	On Hook Queuing Entry	On Hook Queuing Cancel	Consult Hold	Call Transfer	Add On Conference			
0	0	0	0	0	8			

- Call Hold : The number of times that the line is on hold with dialing access code for CALL HOLD [C-6].
- Call Back : The number of times that CALL BACK [C-1] is set to the station with dialing the access code for CALL BACK.
- Call Back Cancel : The number of times that CALL BACK [C-1] is canceled with dialing the cancellation access code CALL BACK.
- Erow : The number of times that a station bridges into the busy connection with dialing access code for EXECUTIVE RIGHT-OF-WAY [E-1].
- Call Waiting Originate : The number of times that CALL WAITING-ORIGINATING [C-31] is set to the station engaged in connection with dialing the access code.
- Call Waiting Terminate : The number of times that CALL WAITING-TERMINATING [C-12] is automatically set to the station engaged in connection.
- Call Pick Up : The number of times that another station in a group for CALL PICK-UP-GROUP [C-7] answers the call with dialing access code when the terminated station in the group does not answer the call.
- Direct Call Pick Up : The number of times that another station answers the call with dialing access code for CALL PICK UP [C-30] + actually call terminated station number when the terminated station does not answer the call.
- CFA Entry : The number of times that CALL FORWARDING-ALL CALLS [C-5] is set to the station with dialing the entry access code + target station number.

- CFA Cancel : The number of times that CALL FORWARDING-ALL CALLS [C-5] is canceled with dialing the cancellation access code.
- CFB Entry : The number of times that CALL FORWARDING-BUSY LINE [C-2] is set to the station with dialing the entry access code + target station number.
- CFB Cancel : The number of times that CALL FORWARDING-BUSY LINE [C-2] is canceled with dialing the cancellation access code.
- CFDA Entry : The number of times that CALL FORWARDING-DON'T ANSWER [C-3] is set to the station with dialing the entry access code + target station number.
- CFDA Cancel : The number of times that CALL FORWARDING-DON'T ANSWER [C-3] is canceled with dialing the cancellation access code.
- System Speed Call Access : The number of times that the station performs SPEED CALL ACCESS-SYSTEM [S-3] with dialing the access code + Abbreviated Call Code.
- Individual Speed Call Access : The number of times that the station performs SPEED CALL ACCESS-STATION [S-21] with dialing the access code + Abbreviated Call Code.
- Individual Speed Call Entry : The number of times that the Primary Station (or Attendant) in a group for SPEED CALL ACCESS-GROUP [S-23] allocates the outgoing number to each Abbreviated Call Code.
- TAS Answer : The number of times that the station answers incoming external calls with dialing TRUNK ANSWER FROM ANY STATION (TAS) [T-8] access code (or with pressing Feature key/ANSWER key).
- Off Hook OG Queuing : This count service is set when calls from stations providing OFF-HOOK QUEUING [O-7] encounter all outgoing trunks are busy. Count begins with the first call origination since trunks become idle.
- On Hook Queuing Entry : The number of times that OUTGOING TRUNK QUEUING [O-2] is set to a station with dialing entry access code when the station encounter all outgoing trunks are busy.
- On Hook Queuing Cancel : The number of times that OUTGOING TRUNK QUEUING [O-2] setting is canceled with dialing cancellation access code.
- Consult Hold : The number of times a terminated station transfers a call after going on-hook and transferred station answers the call.
- Call Transfer : The number of times a terminated station goes on-hook and transfers a call before transferred station answers the call.
- Add On Conference : The number of times that another party is added to an existing connection (without Attendant assistance) and THREE-PARTY CALLING [T-2] is established.

(7) UCD Route Peg Count

The following shows UCD Route Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFG] TRAFFIC MEASUREMENT 10/31, 2013

* Display of UCD Route Peg Count Data (DTF301) *

Start Time: 10/27 01:01
End Time: 10/27 23:59

Route	UCD Group Number	Incoming Calls	Answered Calls	Abandoned Calls
1	1	134	114	20
1	2	256	231	25
5	1	45	42	3

- Route : UCD Route Number
- UCD Group Number : UCD Group Number
- Incoming Calls : Number of call terminations
- Answered Calls : Number of answered call terminations
- Abandoned Calls : Number of call terminations disconnected before answered

(8) UCD Group Peg Count

The following shows UCD Group Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFH] TRAFFIC MEASUREMENT 10/31, 2013

* UCD Group Peg Count Data (DTF302) *

Start Time: 10/27 21:30
End Time: 10/27 22:00

UCD Group	Incoming Calls	Answered Calls	Abandoned Calls
1	124	120	4
2	221	221	0
3	453	453	0
4	67	62	5
5	13	13	0
6	544	544	0
7	65	64	1

- UCD Group : UCD Group Number
- Incoming Calls : Number of call terminations
- Answered Calls : Number of answered call terminations
- Abandoned Calls : Number of call terminations disconnected before answered

(9) UCD Station Peg Count

The following shows UCD Station Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFI] TRAFFIC MEASUREMENT 10/31, 2013

* UCD Station Peg Count Data (DTF303) *

Start Time: 10/27 21:30
End Time: 10/27 22:00

UCD Group	Tenant	Station	Incoming Calls	Answered Calls	Abandoned Calls
1	1	200	2	2	0
1	1	201	1	1	0
1	1	202	3	3	0
1	1	203	4	4	0
1	1	204	2	2	0
1	1	205	3	3	0
1	1	206	3	3	0
1	1	207	11	11	0
1	1	208	43	43	0
1	1	209	19	19	0
1	1	210	33	33	0

- UCD Group : UCD Group Number
- Tenant : Tenant Number
- Station : Station number
- Incoming Calls : Number of call terminations
- Answered Calls : Number of answered call terminations
- Abandoned Calls : Number of call terminations disconnected before answered

(10) ATT Answering Peg Count

The following shows ATT Answering Peg Count Listup Report and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFJ] TRAFFIC MEASUREMENT 10/31, 2013

* Attendant Answering Peg Count Data (DTF501) *

Start Time: 10/27 01:01
End Time: 10/27 23:59

Attendant Number	Answered within 0 to 10 seconds	Answered within 10 to 30 seconds	Answered within 30 to 60 seconds	Answered calls exceeding 60 seconds
1	0	1	0	0
2	2	0	0	0
3	0	2	1	0
4	1	3	0	0
5	1	3	1	0

- Attendant Number : ATTCON number
- Answered within 0 to 10 seconds : The number of times that Attendant answers a C.O. incoming call within a period of time (0-10 seconds)
- Answered within 10 to 30 seconds : The number of times that Attendant answers a C.O. incoming call within a period of time (10-30 seconds)
- Answered within 30 to 60 seconds : The number of times that Attendant answers a C.O. incoming call within a period of time (30-60 seconds)
- Answered calls exceeding 60 seconds : The number of times that Attendant answers a C.O. incoming call after more than 60 seconds have past

(11) Connection Route Peg Count

The following shows Connection Route Peg Count Listup Reports and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFL] TRAFFIC MEASUREMENT 10/31, 2013

* Display of Connection Route Peg Count Data (DTF601)*

Start Time: 10/27 21:30
End Time: 10/27 22:00

C_RT	Attempts	Block	Outgoing	Incoming	Terminate	Tandem	Others
4	346	23	187	156	134	16	0
9	167	11	78	64	69	8	

- C_RT : Connection Route
- Attempts : The number of times that a trunk selection was attempted.
- Block : The number of times that trunk busy was encountered when accessing a trunk.
- Outgoing : The number of times trunks were accessed. The number does not always coincide with the number obtained by subtracting “Block” from “Attempts”.
- Incoming : The number of call terminations.
- Terminate : The number of connected call terminations.
- Tandem : The number of incoming calls that directly provide tandem connection (not via the Attendant Console)
- Others : The number obtained by subtracting “Terminate” and “Tandem” from “Incoming”. These calls include the following scenarios:
  -Incoming calls terminated but released before the line is connected.
  -Calls to unused numbers

(12) Connection Route Traffic

The following shows Connection Route Traffic Count Listup Reports and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFM] TRAFFIC MEASUREMENT 10/31, 2013

* Connection Route Traffic Data (DTF602) *

Start Time: 10/27 01:01
End Time: 10/27 23:59

C_RT	Number of Trunks	Type	Traffic Data
9	24	Erlang	98.123
12	45	Erlang	19.236

- C_RT : Connection Route
- Number of Trunks : Number of Trunks
- Type : Unit Type of Traffic Measurement
- Traffic Data : Traffic Data measured

(13) IP Service Peg Count

The following shows IP Service Peg Count Listup Reports and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFN] TRAFFIC MEASUREMENT 10/31, 2013

* Display of IP Service Peg Count Data (DTF701)*

Start Time: 10/27 01:01
End Time: 10/27 23:59

NODE 1 FPC 1 PC - NUMBER 10000000000000000000000

Attempts	Block	Outgoing	Outgoing-Incomplete 1	Outgoing-Incomplete 2	Outgoing-Incomplete 3	Outgoing-Incomplete Other
255	65535	287454020	287454020	287454019	287454018	287454017
		Incoming	Incoming-Incomplete 1	Incoming-Incomplete 2	Incoming-Incomplete 3	Incoming-Incomplete Other
		287454021	287454021	287454022	287454023	287454024

(a) Originating Party:

- Attempts : The number of calls attempted
- Block : The number of calls whose origination was blocked
- Outgoing : The number of call originations
- Outgoing -Incomplete 1 : The number of placed call incompletion (due to the dialing of dead number or invalid number) **Note 2**
- Outgoing -Incomplete 2 : The number of placed call incompletion (connected party is busy, or incoming trunk selection NG) **Note 3**
- Outgoing -Incomplete 3 : The number of placed call incompletion (No answer from called party)
- Outgoing -Incomplete Other : The number of placed call incompletion (due to other reason)

(b) Terminating Party:

- Incoming : The number of call terminations
- Incoming -Incomplete 1 : The number of incoming call incompletion (due to the dialing of dead number or invalid number) **Note 2**
- Incoming -Incomplete 2 : The number of incoming call incompletion (called party is busy, or incoming trunk selection NG) **Note 3**
- Incoming -Incomplete 3 : The number of incoming call incompletion (incoming call is restricted by office data) **Note 4**

- Incoming -Incomplete Other : The number of incoming call incompletion (due to other reason)

Note 2: Dead number means lack of dialed number, non-existent station number.

Note 3: Incoming trunk selection NG indicates that incoming trunks are all busy or cannot be used for some reason.

Note 4: The restriction by office data includes incoming call restriction at terminal side and restriction of incoming trunk tandem connection.

(14) IP Service Traffic

The following shows IP Service Traffic and description of symbols in the report.

Note: The traffic data on the following report is an example.

[LOCALHOST::DTFO] TRAFFIC MEASUREMENT 10/31, 2013

* IP Service Traffic Data (DTF702)*

Start Time: 10/27 01:01
End Time: 10/27 23:59

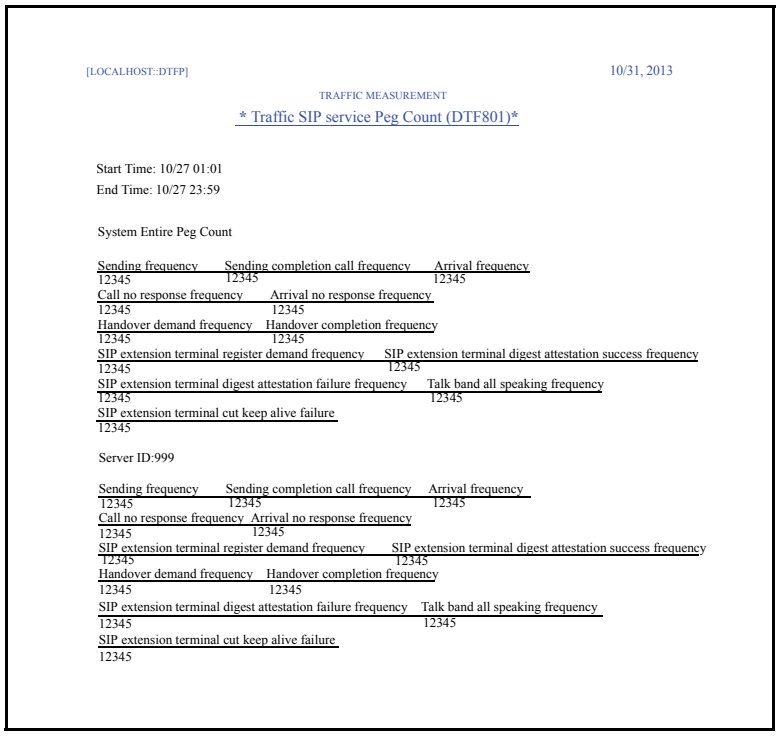
NODE	FPC	PC	NUMBER	Traffic Data
1	-	100	10000000000000000000000	301999997.930
100	253	100	-	03220.900
2	3	-	55555555555555555555555	150994943.985
3	-	18383	99999999999999999999999	1549741.982

- NODE : Node Number Allocate to each system within the network.
- FPC : Fusion Point Code (FPC) for FCCS Networking via IP service.
- PC : Point Code (PC) for CCIS Networking via IP service
- NUMBER : Station or Terminal Number
- Traffic Data : Traffic Data measured

(15) SIP Terminal Peg Count

The following shows description of symbols in the SIP Terminal Peg Count Listup Reports. Following items are measured in two ways. One is Peg Count for SP Controlled SIP terminals in entire system "System Entire Peg Count" and another is SP Controlled SIP terminals per SIP Server ID "Each server peg count (Per SIP server ID)".

Note: The traffic data on the following report is an example.



[LOCALHOST::DTFP] 10/31, 2013

TRAFFIC MEASUREMENT

* Traffic SIP service Peg Count (DTF801)*

Start Time: 10/27 01:01
End Time: 10/27 23:59

System Entire Peg Count

Sending frequency 12345 Sending completion call frequency 12345 Arrival frequency 12345
Call no response frequency 12345 Arrival no response frequency 12345
Handover demand frequency 12345 Handover completion frequency 12345
SIP extension terminal register demand frequency 12345 SIP extension terminal digest attestation success frequency 12345
SIP extension terminal digest attestation failure frequency 12345 Talk band all speaking frequency 12345
SIP extension terminal cut keep alive failure 12345

Server ID:999

Sending frequency 12345 Sending completion call frequency 12345 Arrival frequency 12345
Call no response frequency 12345 Arrival no response frequency 12345
SIP extension terminal register demand frequency 12345 SIP extension terminal digest attestation success frequency 12345
Handover demand frequency 12345 Handover completion frequency 12345
SIP extension terminal digest attestation failure frequency 12345 Talk band all speaking frequency 12345
SIP extension terminal cut keep alive failure 12345

- Sending frequency : Number of times the call is originated from the SP Controlled SIP terminal. Also it includes the number of times of off-hook operations.
- Sending completion call frequency : Number of times the call originated from the SP Controlled SIP terminal is answered by the destination. Also it includes the number of times the call is connected to Announcement Trunk.
- Arrival frequency : Number of times the call is terminated to the SP Controlled SIP terminal (ringer is heard).
- Call response frequency : Number of times the terminating call is answered by the SP Controlled SIP terminal.
- Arrival no response frequency : Number of times the call directed to the SP Controlled SIP terminal ends up unanswered because of the SP Controlled SIP terminal whose power OFF, out of zone or no vacancies of bandwidth. **Note 5**

- Handover demand frequency : Number of times the SP sends the message to request the hand over by WLAN Handset (MH Series) toward TP. **Note 6**
- Handover completion call frequency : Number of times WLAN Handset (MH Series) completes the handover. **Note 6**
- SIP extension terminal register demand frequency : Number of times SP accepts REGISTER. **Note 7**
- SIP extension terminal digest attestation success frequency : Number of times Digest Attestation by the SP Controlled SIP terminal is succeeded and accepted.
- SIP extension terminal digest attestation failure frequency : Number of times Digest Attestation by the SP Controlled SIP terminal is failed and rejected. **Note 8**
- Talk band all speaking frequency : Number of situations that all speech channels in the SP are in busy state is occurred. **Note 9**
- SIP extension terminal cut keep alive failure : Number of times sending and receiving the Keep Alive messages are failed between the SP Controlled SIP terminal and the SP

Note 5: Number of unanswered calls also includes the number of all speech channels in busy state.

Note 6: Handover mentioned here is layer 3 level handover that requires changing IP address.
When the handover is layer 2 level handover, the traffic data is not counted as Handover demand frequency and Handover completion call frequency.

Note 7: In the following cases, the number is not counted as this frequency:
- One acceptance as REGISTER for Digest Attestation success
- When domain assigned to the SP Controlled SIP terminal is different from the domain in the SP domain list

Note 8: When this count is a large value, wrong password may be assigned to either the Telephony Server side or the SP Controlled SIP terminal side. When the Telephony Server side or the SP Controlled SIP terminal side of password is corrected, this situation does not occur. For more information of Telephony Server side password, refer to SP CONTROLLED SIP TERMINAL [S-168] in Data Programming Manual - Business. For the SIP terminal side, refer to the operation manual for each terminal.

Note 9: This is the number of situations recognized as no vacancies in bandwidth at SP. When this count is a large value, additional vacant speech channels are needed. The speech channels are added by the ASSDN/ASSDL command. Up to 1200 speech channels can be provided.

(16) CS/ZT Peg Count

For CS Peg Count, refer to CS PEG COUNT FOR TRAFFIC CONTROL of CHAPTER 4 in Data Programming Manual - Wireless-PHS.

For ZT Peg Count, refer to ZT PEG COUNT FOR TRAFFIC CONTROL of CHAPTER 4 in Data Programming Manual - Wireless-PCS.

11. STATION MESSAGE DETAIL RECORDING SYSTEM (SMDR)

Billing information can be managed by connecting the Telephony Server and an external computer (SMDR equipment).

Note: SMDR equipment and its software must be provided by the user.

The System provides the SMDR equipment with information about calling party, called party and other data as Trunk Arrival/Sending Time **Note 1 Note 2**

Note 1: Trunk Arrival Time is available in EMEA from FP95-111 V1 and available in other countries from FP95-113 V3.

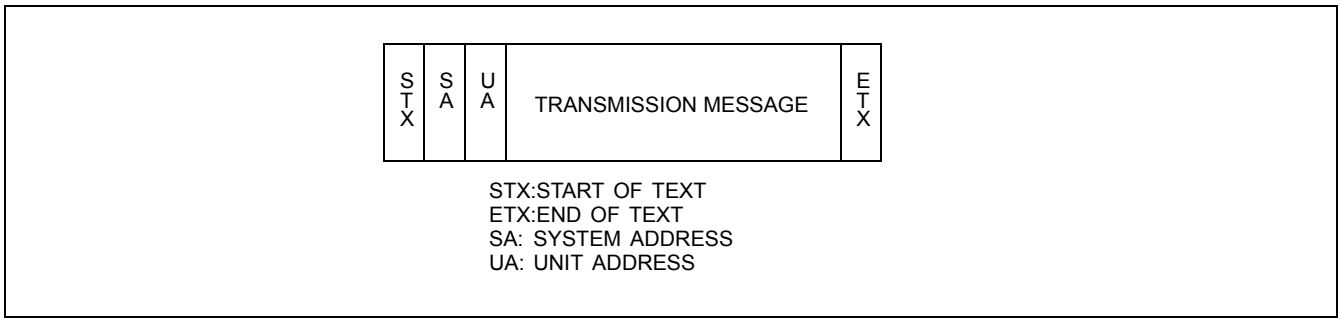
Note 2: Trunk Sending Time is available from FP95-113 V3.

Upon receiving the above information from the System, the SMDR equipment performs editing and management of the information and outputs the resulting information. This section explains the information provided to the SMDR equipment and also explains the method of controlling the interface port between the SMDR equipment and the Telephony Server.

11.1 Transmission Data to SMDR Equipment

(1) Transmission Format

As seen in the figure below, the basic information to be transmitted (transmission message) is a block which begins with Start of Text (STX) and ends with End of Text (ETX). When the call ends, the entire contents of this information are transmitted to the SMDR equipment.



(2) Transmission Message

One transmission message consists of 128 bytes of data (155 bytes in extended format). Each byte represents by ASCII codes the data to be transmitted (Refer to Table below). The contents of the data to be transmitted vary with the kind of call, but the first byte is always transmitted by ASCII code K (4B hex.). The second byte to be transmitted is the data which specifies the kind of call.

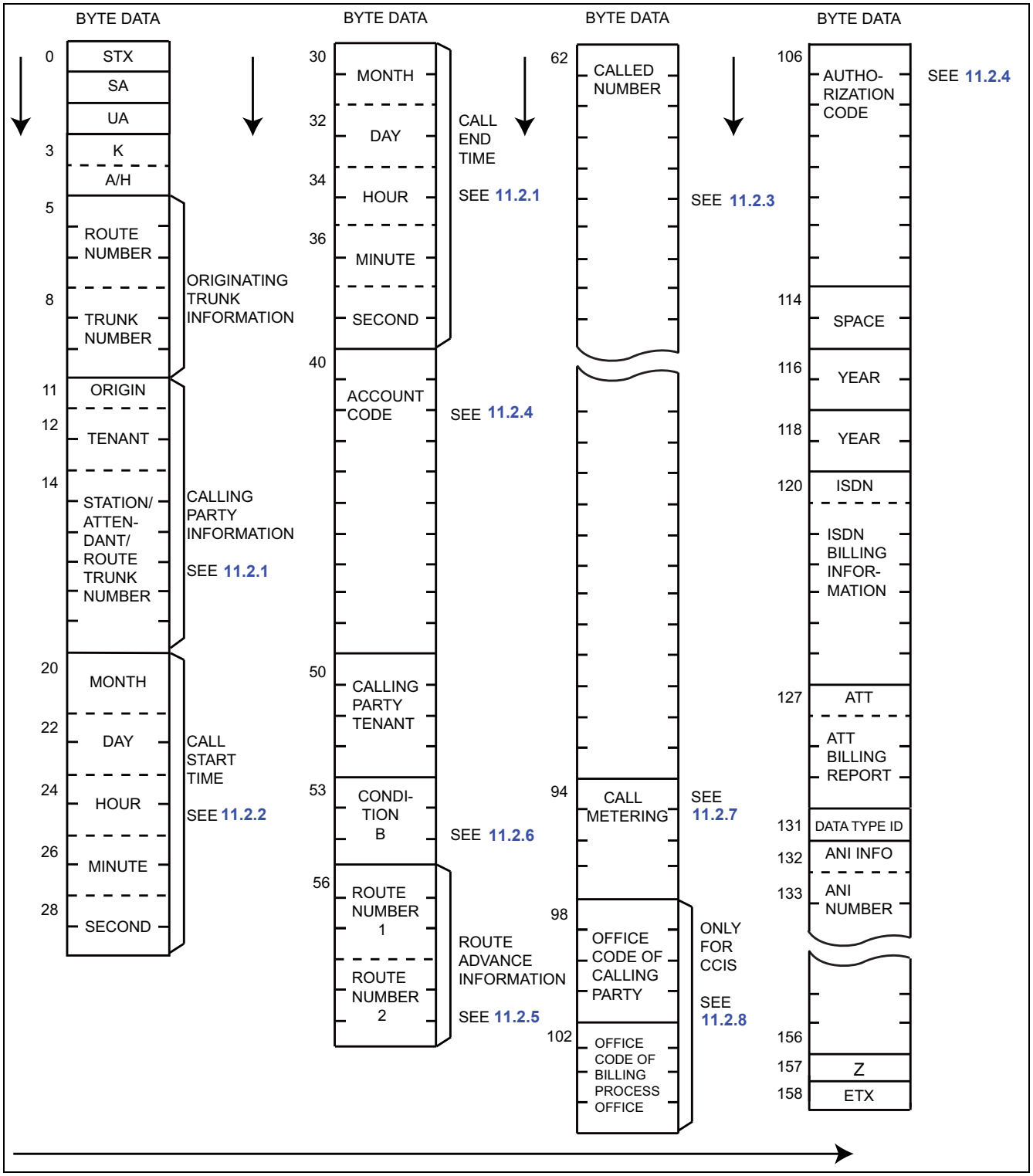
Note: If FCCS service is involved, the transmission message can consist of more than 128 bytes of data.

ASCII Code

CHARACTER	ASCII CODE								REMARKS
	HEX.	BINARY DIGIT							
		Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	
0	30	0	0	1	1	0	0	0	0	Numeric
1	31	0	0	1	1	0	0	0	1	
2	32	0	0	1	1	0	0	1	0	
3	33	0	0	1	1	0	0	1	1	
4	34	0	0	1	1	0	1	0	0	
5	35	0	0	1	1	0	1	0	1	
6	36	0	0	1	1	0	1	1	0	
7	37	0	0	1	1	0	1	1	1	
8	38	0	0	1	1	1	0	0	0	
9	39	0	0	1	1	1	0	0	1	

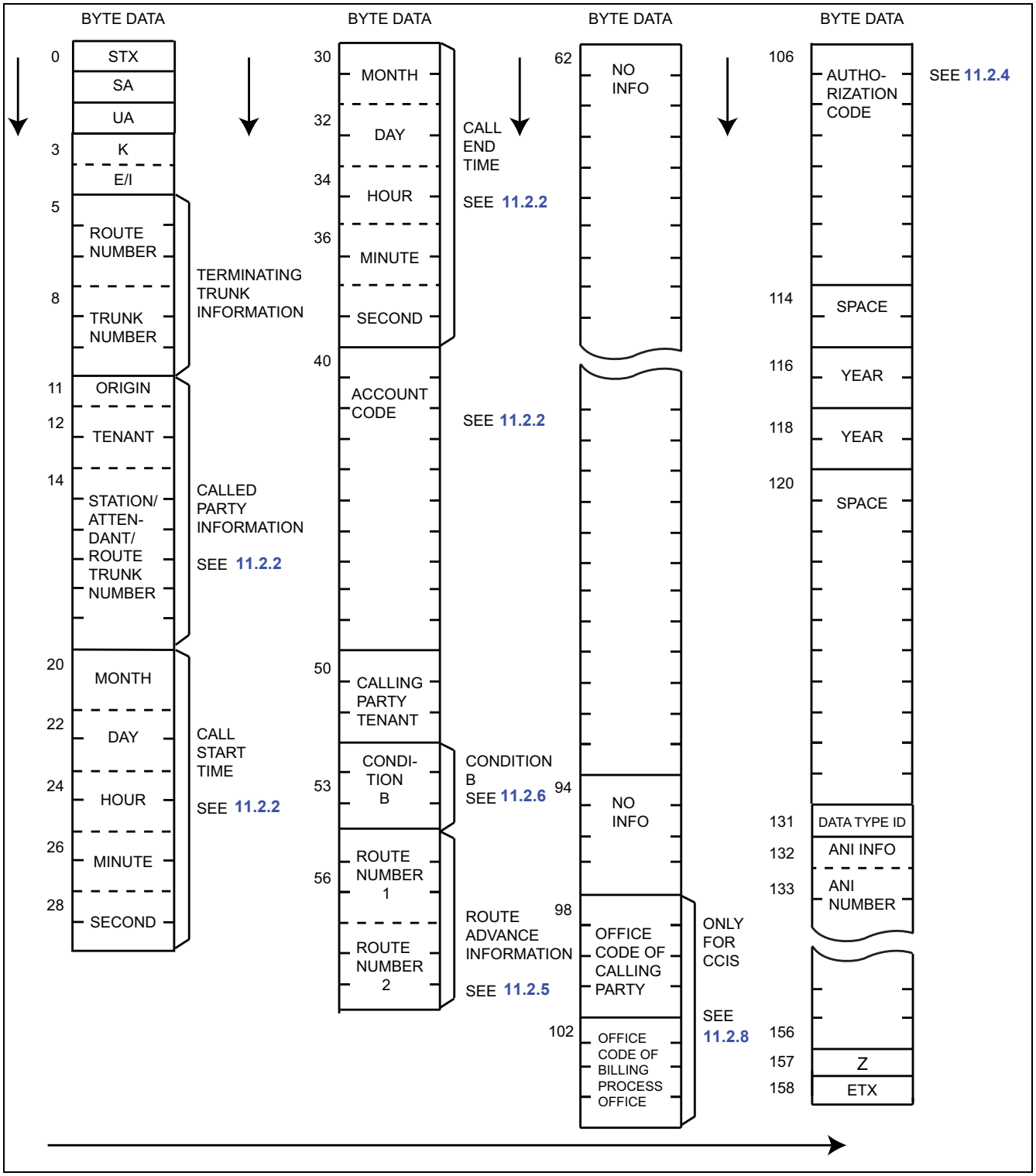
CHARACTER	ASCII CODE									REMARKS
	HEX.	BINARY DIGIT								
		Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	
A	41	0	1	0	0	0	0	0	1	Alphabet
B	42	0	1	0	0	0	0	1	0	
C	43	0	1	0	0	0	0	1	1	
D	44	0	1	0	0	0	1	0	0	
E	45	0	1	0	0	0	1	0	1	
F	46	0	1	0	0	0	1	1	0	
G	47	0	1	0	0	0	1	1	1	
H	48	0	1	0	0	1	0	0	0	
I	49	0	1	0	0	1	0	0	1	
J	4A	0	1	0	0	1	0	1	0	
K	4B	0	1	0	0	1	0	1	1	
L	4C	0	1	0	0	1	1	0	0	
M	4D	0	1	0	0	1	1	0	1	
N	4E	0	1	0	0	1	1	1	0	
O	4F	0	1	0	0	1	1	1	1	
P	50	0	1	0	1	0	0	0	0	
Q	51	0	1	0	1	0	0	0	1	
R	52	0	1	0	1	0	0	1	0	
S	53	0	1	0	1	0	0	1	1	
T	54	0	1	0	1	0	1	0	0	
U	55	0	1	0	1	0	1	0	1	
V	56	0	1	0	1	0	1	1	0	
W	57	0	1	0	1	0	1	1	1	
X	58	0	1	0	1	1	0	0	0	
Y	59	0	1	0	1	1	0	0	1	
Z	5A	0	1	0	1	1	0	1	0	
SPACE	20	0	0	1	0	0	0	0	0	Special Characters
STX	02	0	0	0	0	0	0	1	0	
ETX	03	0	0	0	0	0	0	1	1	
SA	30	0	0	1	1	0	0	0	0	
UA	21	0	0	1	0	1	0	1	1	
*	2A	0	0	1	0	1	0	1	0	
#	23	0	0	1	0	0	0	1	1	
SYN	16	0	0	0	1	0	1	1	0	
ACK	06	0	0	0	0	0	1	1	0	
NAK	15	0	0	0	1	0	1	0	1	
?	3F	0	0	1	1	1	1	1	1	

Message Format for Outgoing Call



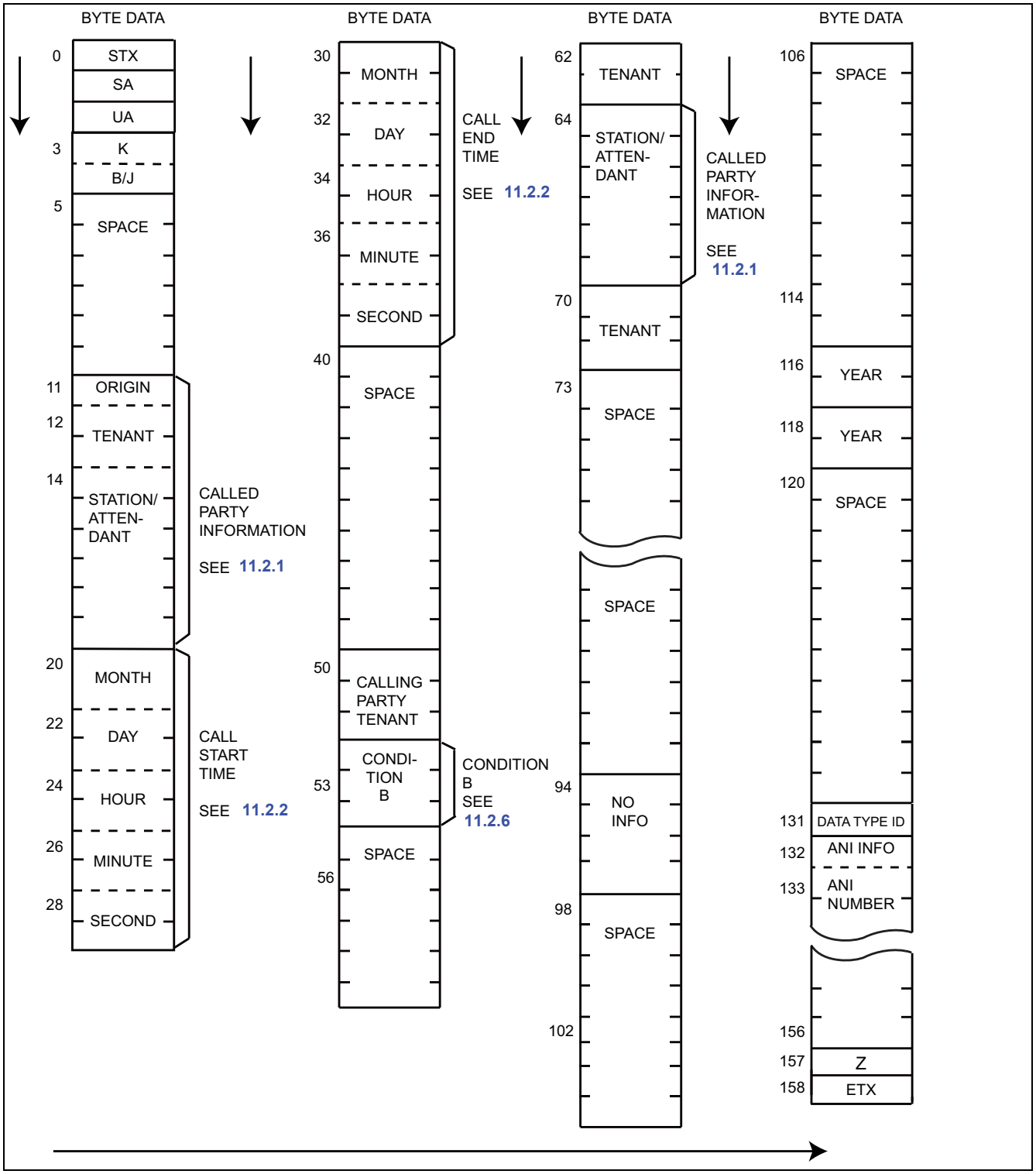
Note: Bytes 131 to 157 are used only in case of extended format.

Message Format for Incoming Call



Note: Bytes 131 to 157 are used only in case of extended format.

Message Format for Station-to-Station Call



Note: Bytes 131 to 157 are used only in case of extended format.

11.2 Details on Transmission Data

11.2.1 Calling Party Information/Called Party Information

- The byte no. 11 indicates the type of the calling (or called) party. Bytes no. 12 to 19 are data pertaining to this calling (or called) party.

  ORIG (Originating Source Identification):
  0 = Calling (or called) Party is a station
  1 = Calling (or called) Party is an Attendant
  2 = Calling (or called) Party is an outside (inside) party

- The contents of bytes no. 14 to 19 to vary with the type of the calling (or called) party.

(1) For a station (ORIG = 0): Data showing station number

BYTE	DATA	EXAMPLE
14	1st DIGIT	4
15	2nd DIGIT	0
16	3rd DIGIT	0
17	4th DIGIT	1
18	5th DIGIT	SPACE
19	6th DIGIT	SPACE

(2) For an Attendant (ORIG = 1): Data showing Attendant Number

BYTE	DATA	EXAMPLE
14	1st DIGIT	1
15	2nd DIGIT	0
16	3rd DIGIT	SPACE
17	4th DIGIT	SPACE
18	5th DIGIT	SPACE
19	6th DIGIT	SPACE

(3) For a trunk (ORIG = 2): Data showing Route Number and Trunk Number

Byte	Data		Example	
14	1st DIGIT	Route Number	0	
15	2nd DIGIT		0	RT No. = 1
16	3rd DIGIT		1	
17	1st DIGIT	Trunk Number	0	
18	2nd DIGIT		5	TR No. = 50
19	3rd DIGIT		0	

11.2.2 Call Start/Call End Time Information

- The data that indicates Call Start Time is as follows:

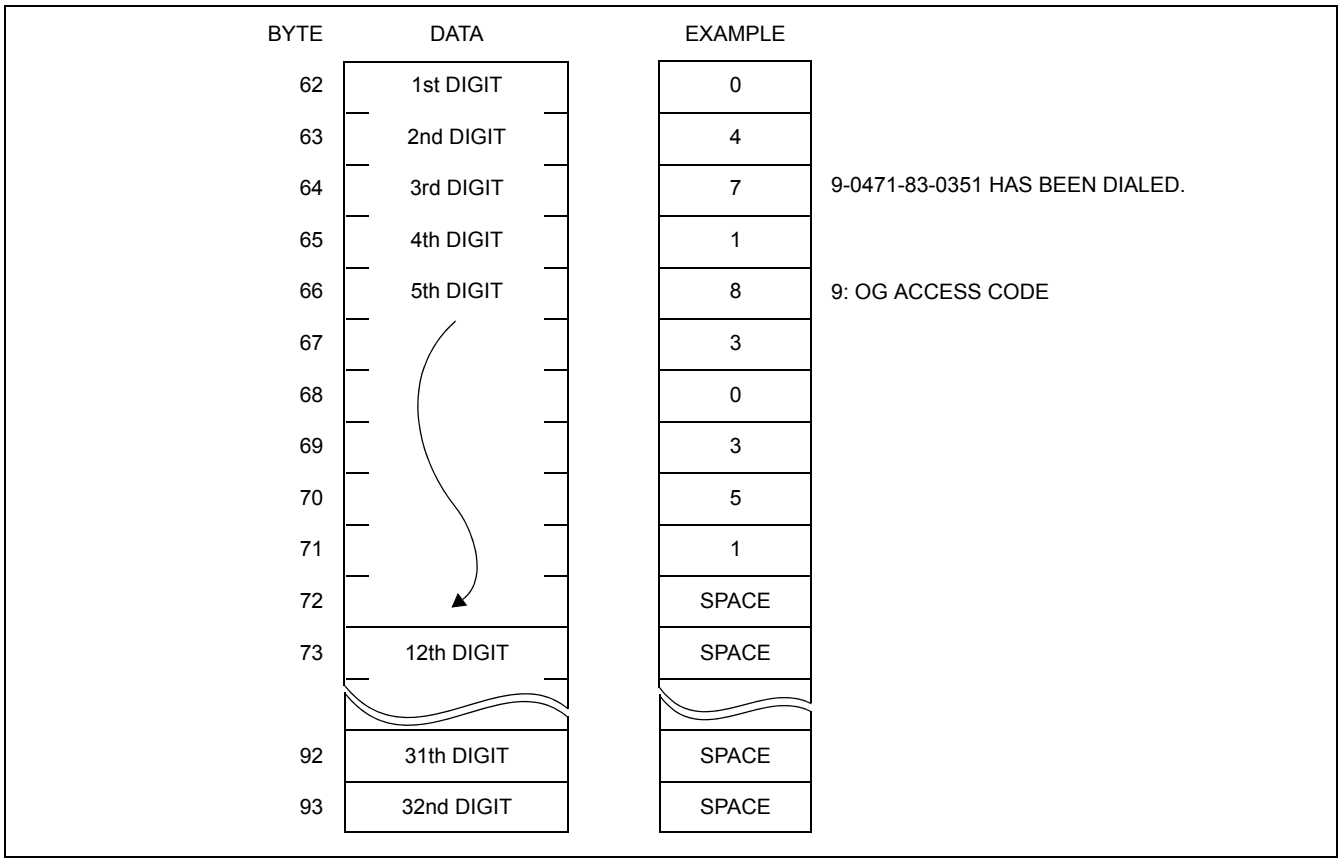
BYTE	DATA	EXAMPLE	
20	MONTH	0	
21	(01-12)	6	
22	DAY	0	
23	(01-31)	1	THIS INFORMATION SHOWS THAT THE CALL STARTED AT 1 O'CLOCK P.M. ON JUNE 1st, 2013.
24	HOUR	1	
25	(00-23)	3	
26	MINUTE	0	
27	(00-59)	0	
28	SECOND	0	
29	(00-59)	0	
116	YEAR	1	YEAR INFORMATION IS SENT OUT ONLY BY THE LAST TWO DIGITS AS IN '13 FOR 2013.
117	(00-99)	3	

- The data that indicates Call End Time is as follows:

BYTE	DATA	EXAMPLE	
30	MONTH	1	
31	(01-12)	0	
32	DAY	2	
33	(01-31)	0	THIS INFORMATION SHOWS THAT THE CALL ENDED AT 9 O'CLOCK 10 MIN. 30 SEC. A.M. ON OCT. 20, 2013.
34	HOUR	0	
35	(00-23)	9	
36	MINUTE	1	
37	(00-59)	0	
38	SECOND	3	
39	(00-59)	0	
118	YEAR	1	YEAR INFORMATION IS SENT OUT ONLY BY THE LAST TWO DIGITS AS IN '13 FOR 2013.
119	(00-99)	3	

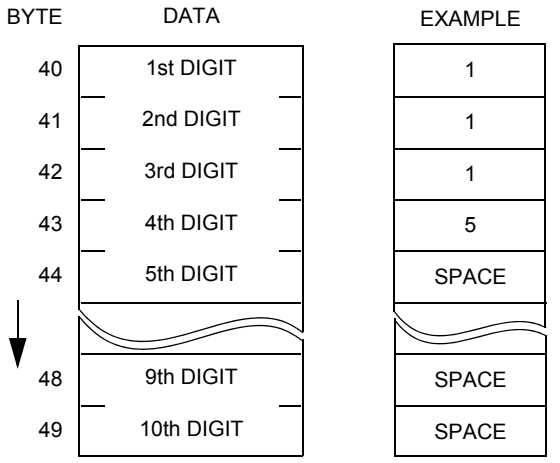
11.2.3 Called Number

- The data that indicates the Called Number is as follows:



11.2.4 Account Code/Authorization Code

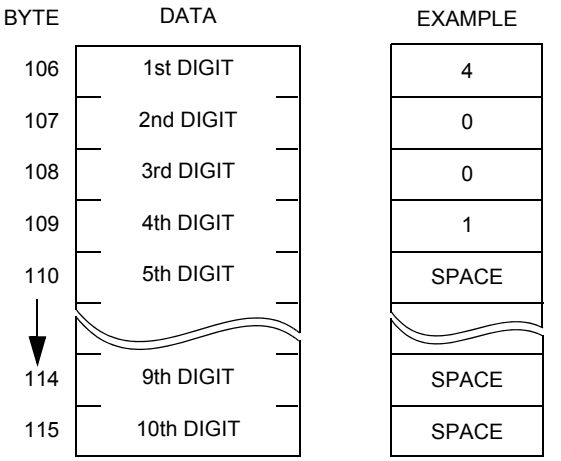
- The data that indicates the Account Code is as follows:



ACCOUNT CODE: 1115 HAS BEEN DIALED.

Note: An Account Code is a numerical code dialed (up to ten digits) by a station user with the capability to enter a cost accounting.

- The data which indicates the Authorization Code is as follows:

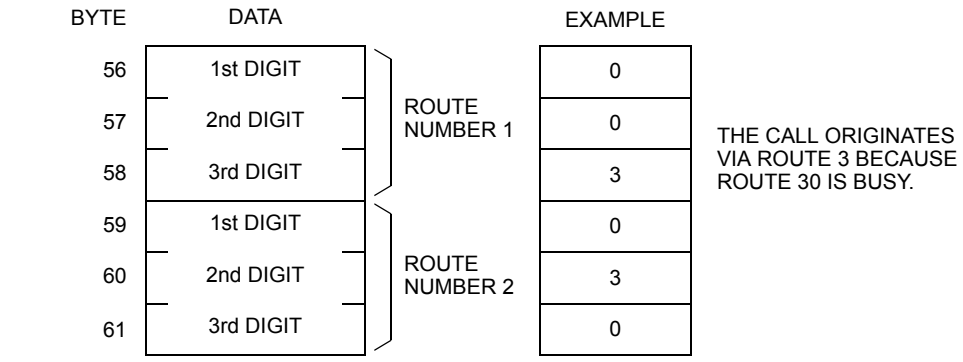


AUTHORIZATION CODE: 4001 HAS BEEN DIALED

Note: An Authorization Code is a numerical code dialed (up to ten digits) by station users that will override the station's class (RSC or SFC) for facilities access restriction.

11.2.5 Route Advance Information

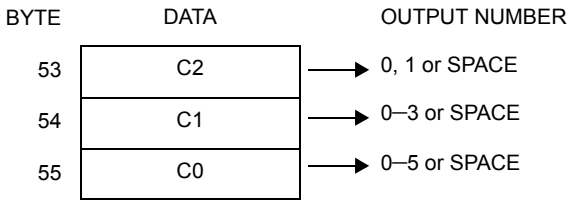
When a call has been originated by route advancing, the following data is transmitted.



ROUTE NUMBER 1: The route that was actually used.
ROUTE NUMBER 2: The route that should have been selected first.

11.2.6 Condition B Information

The Condition B Information indicates the following data:



C2: 0 = Call not transferred
1 = Call transferred

C1: 0 = Normal Call
1 = Call originated by OG trunk queuing
2 = Call originated by dialing with Account Code
3 = Call originated by OG trunk queuing and dialing with Account Code

C0: 0 = Regular Call (Direct Dialing from a station)
1 = Regular Call (Call is made through an ATTCON/DESKCON)
2 = Call through route advance (Direct Dialing from a station)
3 = Call through route advance (Call is made through an ATTCON/DESKCON)
4 = Call through Least Cost Routing (Direct Dialing from a station)
5 = Call through Least Cost Routing (Call is made through an ATTCON/DESKCON)

11.2.7 Call Metering Information

The value of call metering from the Central Office is transmitted via the data from the byte no. 94 to 97.

BYTE	DATA	EXAMPLE	
94	1000	5	WHEN 5200 METERING PULSES ARE RECEIVED FROM C.O.
95	100	2	
96	10	0	
97	1	0	

11.2.8 Office Code of Calling (Called) Party and Billing Process Office

Bytes no. 98 to 101 indicate the Office Code of Calling (Called) Party terminated via CCIS line.

Bytes no. 102 to 104 indicate the Office Code of the office processing centralized billing for CCIS network.

Note: Office Code includes the CCIS line access code

BYTE	DATA		EXAMPLE	
98	1st DIGIT	OFFICE CODE OF CALLING (CALLED) PARTY	8	OFFICE CODE = 812
99	2nd DIGIT		1	
100	3rd DIGIT		2	
101	4th DIGIT		SPACE	
102	1st DIGIT	OFFICE CODE OF BILLING PROCESS OFFICE	8	OFFICE CODE = 813
103	2nd DIGIT		1	
104	3rd DIGIT		3	
105	4th DIGIT		SPACE	

11.2.9 Text Format of Centralized Billing - FCCS

Below is the text format for billing information (FCCS) transmitted to the SMDR equipment.



STX : Start of Text
KK : Outgoing
KM : Extension
ETX: End of Text
KL : Incoming

Note: For details on the Kind of Data, see Table below.

Centralized Billing-FCCS Kind of Data

KIND OF DATA	CONTENTS	KK (OUTGOING)	KL (INCOMING)	KM (STATION)
00	Not Used	-	-	-
01	Outgoing Trunk/Incoming Trunk Information	Provided	Provided	-
02	Calling Party Information (Station Number)	Provided	-	Provided
03	Calling Party Information (Telephone Number)	Conditionally Provided	-	Conditionally Provided
04	Called Party Information (Station Number)	-	Provided	Provided
05	Called Party Information (Telephone Number)	-	Conditionally Provided	Conditionally Provided
06	Call Start/Call End Time	Provided	Provided	Provided
07	Account Code	Conditionally Provided	Conditionally Provided	Conditionally Provided
08	Condition B Information	Provided	Provided	Provided
09	Alternate Routing Information/Incoming Route Number	Provided	Provided	-
10	Dial Code	Provided	Conditionally Provided	-
11	Office Code Information (For CCIS)	Conditionally Provided	Conditionally Provided	-
12	Authorization Code	Conditionally Provided	Conditionally Provided	-
13	Condition C Information + Billing Info/Call Metering Info	Provided	Conditionally Provided	-

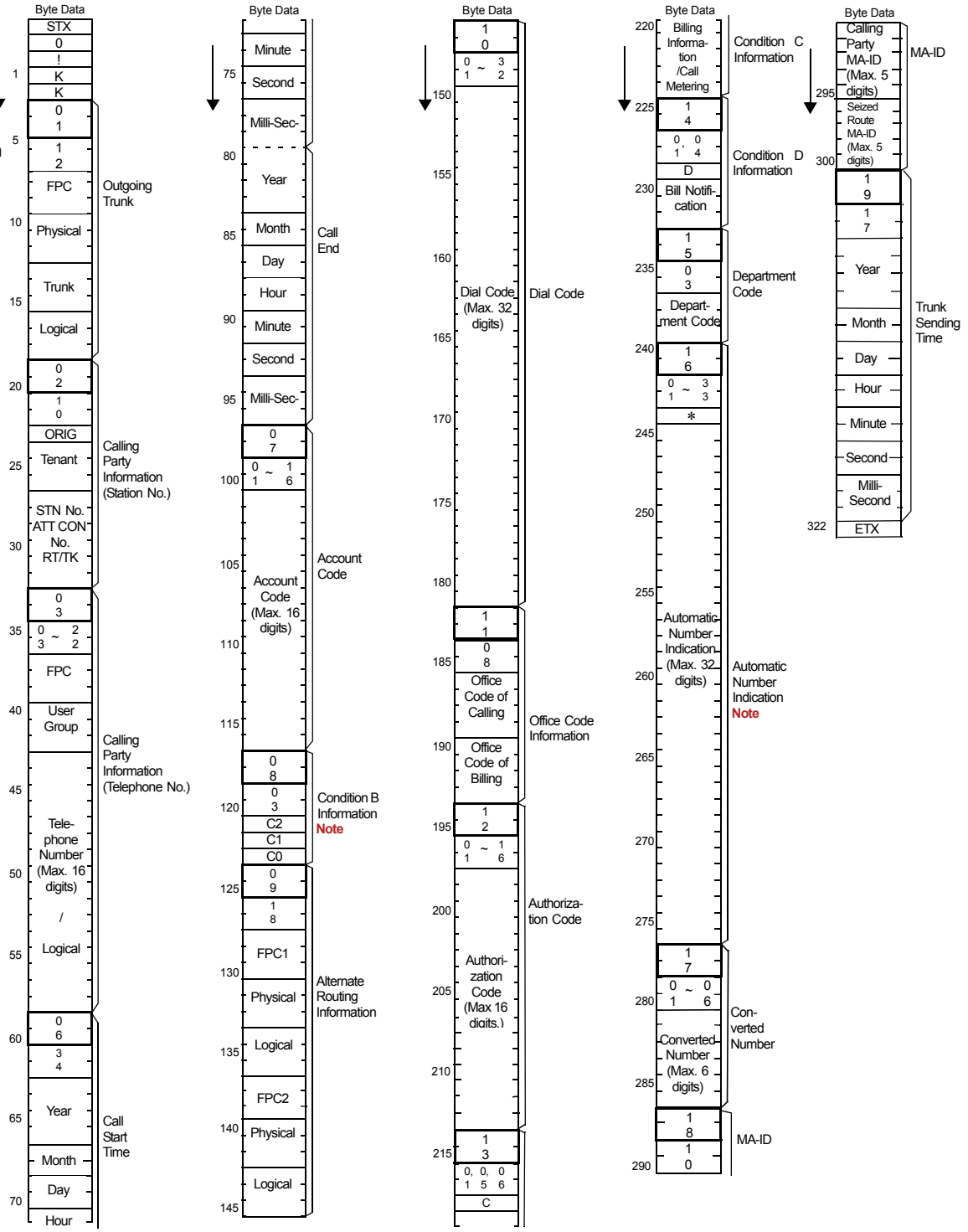
Centralized Billing-CCS Kinds of Data (Continued)

KIND OF DATA	CONTENTS	KK (OUTGOING)	KL (INCOMING)	KM (STATION)
14	Condition D Information + Bill Notification Attendant Console Number	Conditionally Provided	-	-
15	Department Code	Conditionally Provided	-	-
16	Automatic Number Indication	Conditionally Provided	Conditionally Provided	-
17	Converted Number	Conditionally Provided	-	-
18	MA-ID	Conditionally Provided	Conditionally Provided	Conditionally Provided
19	Trunk Arrival/Sending Time	Conditionally Provided	Conditionally Provided	-
20-99	Not Used	-	-	-

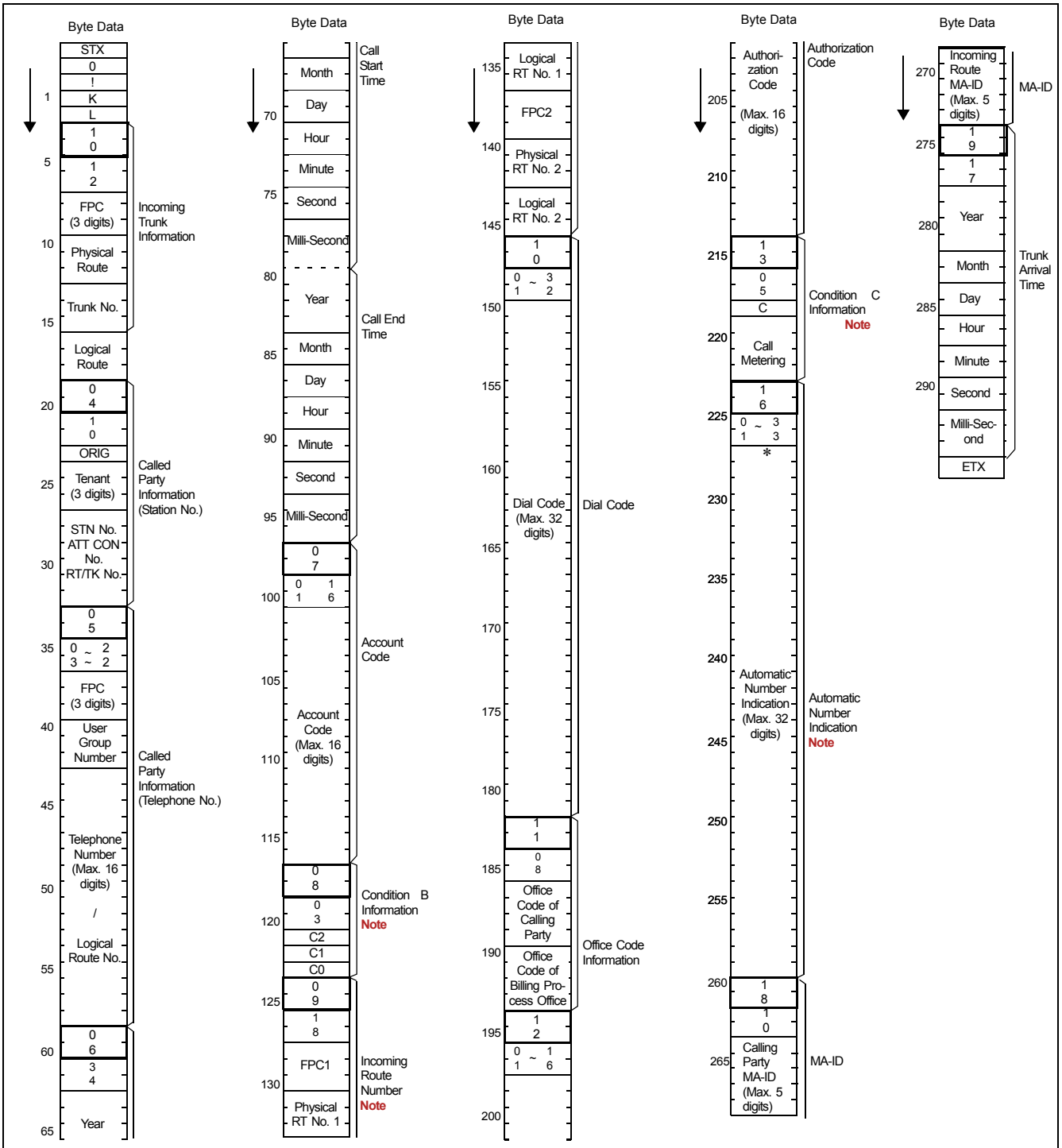
Note: Conditionally Provided : Information is provided when data is effective.
Provided : Information is provided on every call with no exception.
- : Not available.

Message Format for Outgoing Call - FCCS

For more information on the data to which the **Note** marks are attached, see Reference.

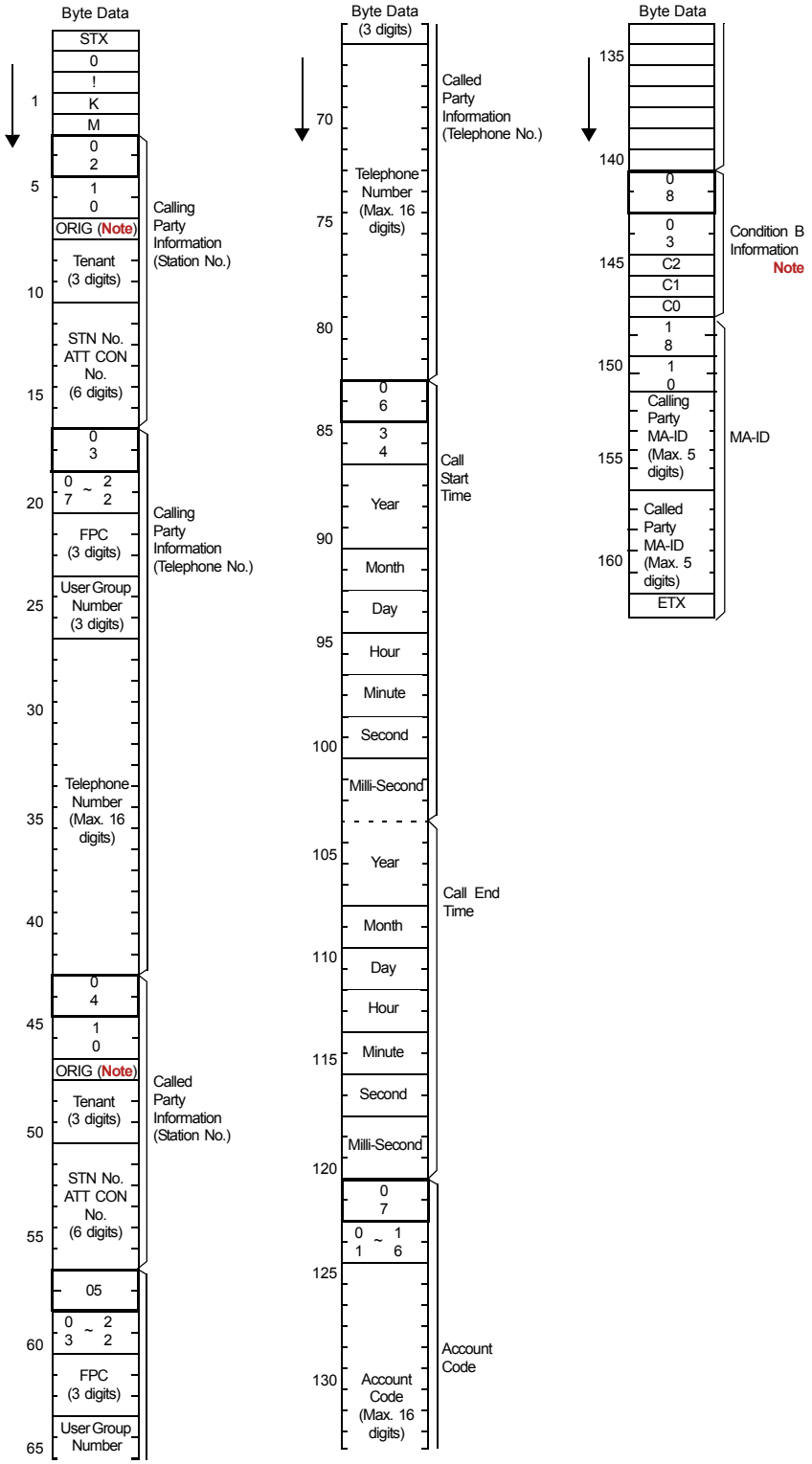


Message Format for Incoming Call - FCCS



For more information on the data to which the **Note** marks are attached, see Reference.

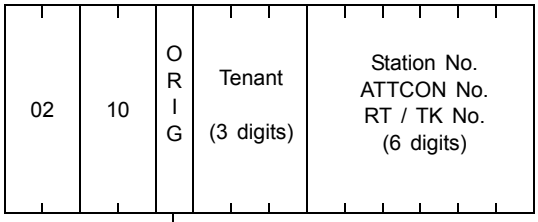
Message Format for Station-to-Station Call - FCCS



For more information on the data to which the **Note** marks are attached, see Reference.

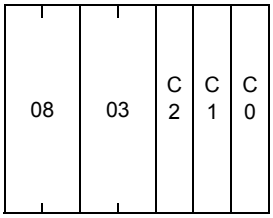
Reference

Data = 02: Calling Party Information (Station Number)



ORIG:Originating Source Identification
ORIG = 0:Transmitted data depicts information on Station
ORIG = 1:Transmitted data depicts information on Attendant Console
ORIG = 2:Transmitted data depicts information on Trunk

Data = 08: Condition B Information

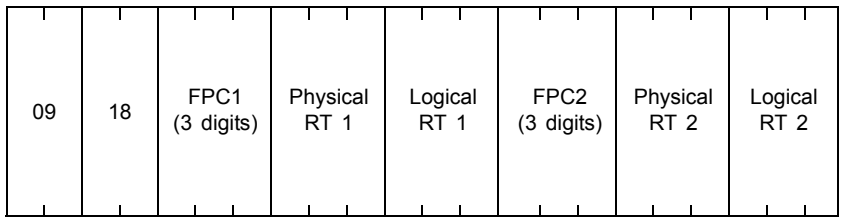


C0 = 0: Call Origination - Direct
1: Call Origination - via ATTCON
2: Call Origination - Direct (Alternate Routing)
3: Call Origination - via ATTCON (Alternate Routing)
4: Call Origination - Direct (LCR Routing)
5: Call Origination - via ATTCON (LCR Routing)
6: Call Origination - Direct (Called No. - first six digits of change code)
7: Call Origination - via ATTCON (Called No. - first six digits of change code)

C1 =0: -
1: Call Origination by OG Queuing
2: Call Origination by dialing with accounted code
3: Call Origination by OG Queuing & dialing with accounted code
4: Call Origination by Call Forwarding Outside
5: -
6: Call Origination by Call Forwarding Outside & dialing with accounted code

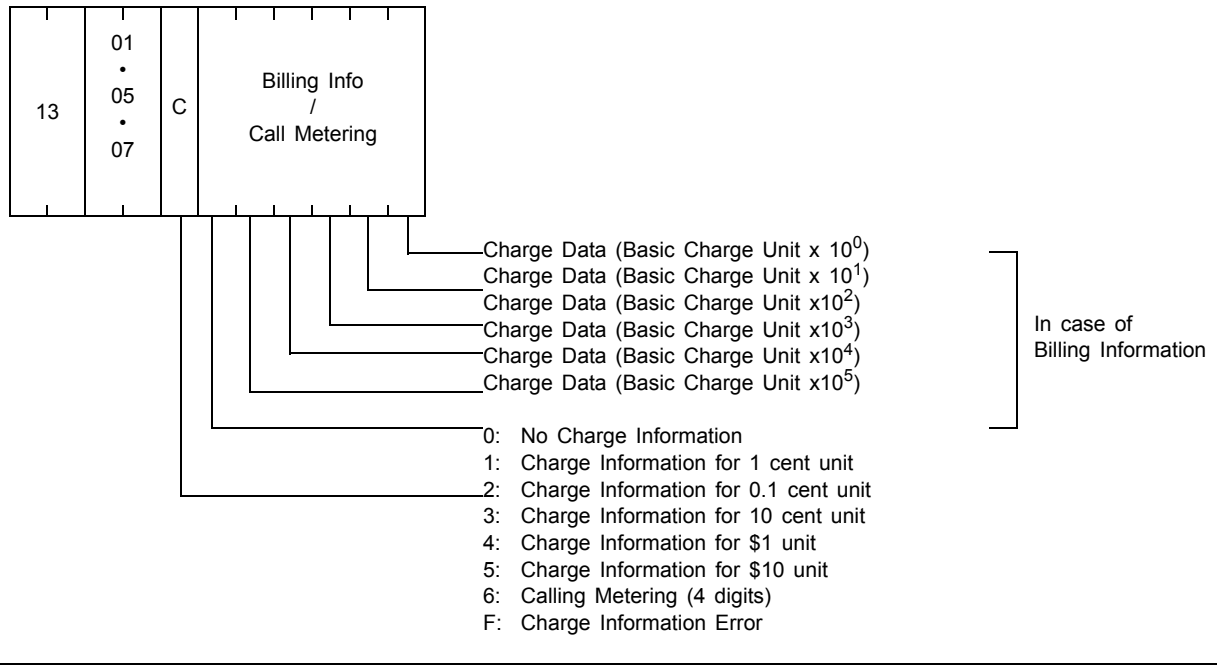
C2 =0: -
1: Call was transferred
2: Billing is continued
3: Call was transferred & billing is continued
4: Call was transferred to last called party
5: Abandoned Call (Incoming/Outgoing)

Data = 09: Alternate Routing Information (KK) / Incoming Route Number (KL)

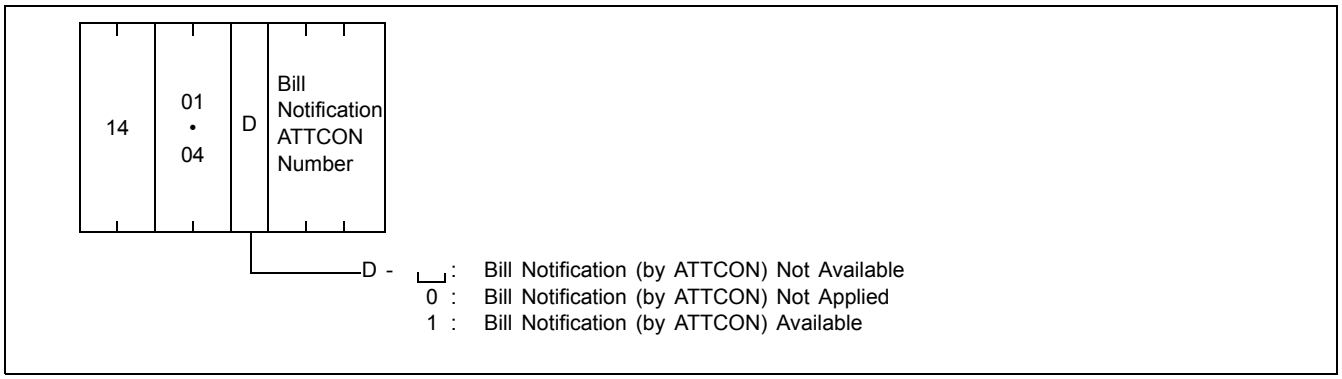


FPC1:FPC actually used
Physical Route 1:Physical route actually used
Logical Route 1:Logical route actually used
FPC2:FPC first selected
Physical Route 2:Physical route first selected
Logical Route 2:Logical route first selected

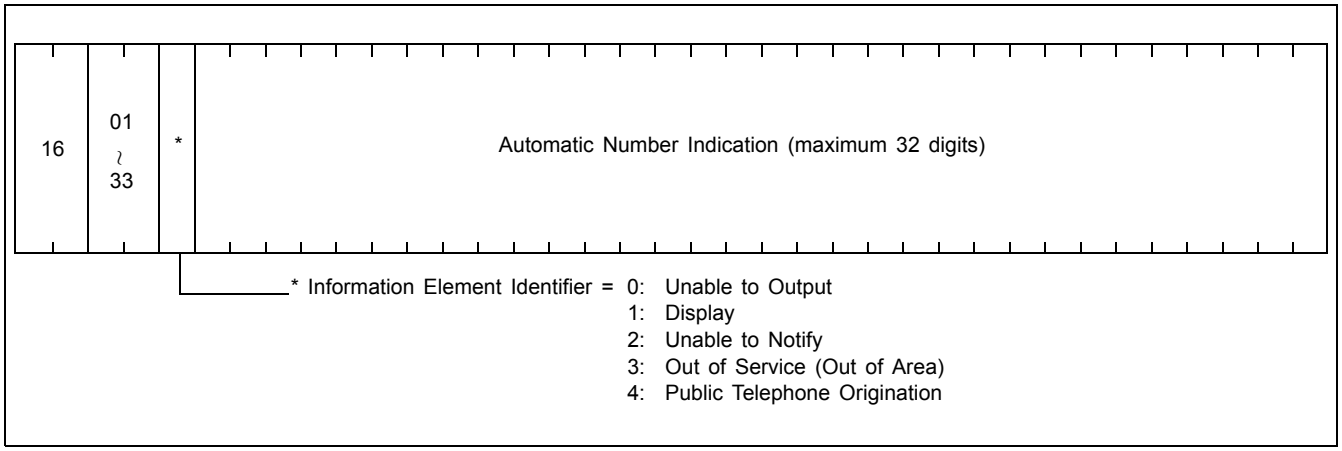
Data = 13: Condition C Information + Billing Info / Call Metering Info.



Data = 14: Condition D Information + Bill Notification ATT CON Number



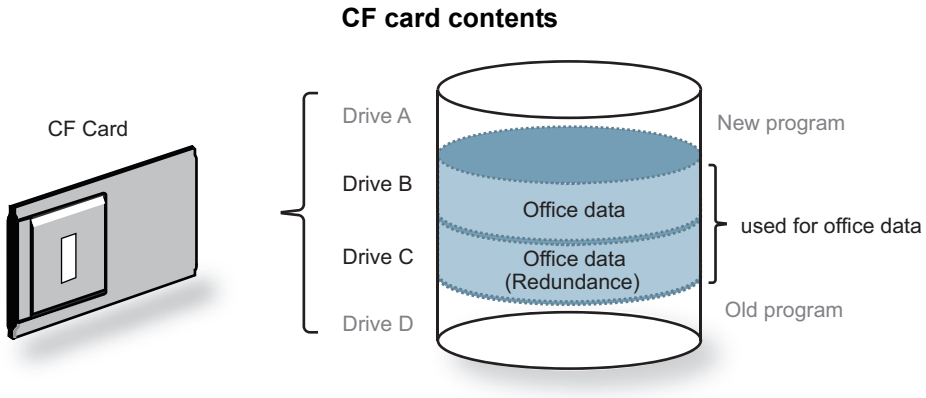
Data = 16: Automatic Number Indication



12. REDUNDANT DATA MEMORY BACKUP FOR OFFICE DATA

12.1 Overview

Original office data and its redundant data can be managed in two different data drives (usually Drive B and C), to deal with failure causing the data loss. In this way, for example, even when office data is lost due to failure occurring while the office data is being updated, the previous office data can be easily loaded because it is already managed in another drive. In FCCS system, this service can be performed to all nodes.



12.2 Redundant Data Memory Backup Procedure

- Office Data Installation

  (1) Before office data update, save the existing office data to CF card from the memory using the MEM_HDD command. Specify a Drive (usually Drive C) as the destination to save.

  (2) After office data update has finished, save the updated office data to CF card from the memory using the MEM_HDD command. Specify a different Drive (usually Drive B) from the Drive where the existing office data is saved as the destination to save.

- Undo Office Data Installation

  (1) Confirm the Drive where the existing office data is saved referring to the date of office data file using the DHDF command.

  (2) Execute “Office Data Load & System Initialize” by the SINZ command. For this operation, specify the Drive (usually Drive C) where the existing office data has been saved. The Drive can be specified by [Option] in the menu bar. In default setting, Drive B is specified.

  (3) Save the office data before update to CF card from the memory using the MEM_HDD command. Specify the Drive (usually Drive B) where originally updated office data has been saved as the destination to save.

12.2.1 Service condition

1. In the routine diagnosis, office data verification and data backup are only applied to the Drive where office data is loaded or saved last time.
2. In FCCS system, redundant Data Memory can be applied to all nodes by logging in Network Control Node (NCN).
3. Office data in Drive B of the CF card will be loaded through the following steps.

    - The system is turned on.
    - “Program & Office Data Load & System Initialize” is executed by the SINZ command.
    - “Restart” is executed by the SINZ command.

12.2.2 Data Assignment

Redundant Data Memory Backup can be done by the steps in **Redundant Data Memory Backup Procedure**.

Note: Office data that is saved from MEM to CF card by using the MEM_HDD command, can be saved in other storage device. Use Telephony Server Maintenance Menu for this backup. See “Office Data Backup” - “Data Transfer between CF Card and PC” for more details.

13. RTP INFORMATION OUTPUT

This feature is used to output log that includes the causes of low voice quality and abnormal status of IP device. Therefore, network administrator will be able to understand its cause and figure out how to solve the problem.

Note: For more information such as available firmware version, please refer to RTP INFORMATION OUTPUT [R-58] in Data Programming Manual - Business.

- Call/Fault Log Function

(a) Call Log Collection

- A history (includes speech time, opponent, IP address, MAC address, and voice quality) per speech is collected and generated.
- If a user claims a problem with voice quality, information related to the claims can be extracted from speech log to confirm and investigate its cause.

<For Call Log Filter feature> **Note 1**

Filtering the call logs on the Telephony Server side, the logs are more specific and help in investigating the cause for claims or fault. The following filters are available:

- Station Filter Setting
  Output the filtered call logs by using specified settings such as station number and its type.
- RTP Warning Tone **Note 2**
  Output the filtered call logs that generated RTP Warning Tone.
- Received RTP Packet Loss **Note 2**
  Output the filtered call logs of RTP Packet Loss with a count that is greater than or equal to the threshold value.

Note 1: Available since FP95-114 V4.

Note 2: These settings are not affected by Station Filter Setting.

(b) Fault Log Collection

- When an event such as autonomous reset occurs on terminals, the system outputs reset reason and its time. If it was caused due to packet fault, sending/receiving times, and retransmitted times will be collected for cause investigation.
- If a user claims a problem with voice quality, information related to the claims can be extracted from speech log to confirm and investigate its cause.

- RTP Warning Tone

  Playback and Cancel of RTP packet communication error tone (hereinafter also called “RTP warning tone”).

  (a) RTP Warning Tone Playback
  When the RTP packet loss reaches the predetermined threshold and the terminal cannot play back a voice due to delay of the network or packet loss during the conversation, RTP Warning Tone is generated to indicate poor voice quality.

  (b) RTP Warning Tone Cancel
  RTP Warning Tone can be canceled by assigning the system data. No warning tone is heard in case of RTP packet communication error when it is canceled.

RTP Packet Loss Alarm

RTP Packet Loss Check Period		1 second
RTP Alarm Conditions	Received RTP Packet Loss Threshold	20% of expected packets
	Reported Packet Loss Interval	3 seconds or more
	Time Between Warning Tone Beeps	10 seconds
Alarm Tone	Alarm Sound Pattern	5 short beeps per second
	Tone Duration	120 ms
	Tone Pause	100 ms

- DTMF Control

  Playback and Cancel of DTMF tone sending to the destination party.

  - This function can choose whether to send or cancel the DTMF tone sent to the destination terminal during the conversation. More comfortable speech is available by canceling the DTMF tone to be heard when the dial pad of opposite party is pressed. DTMF signal tone can be canceled on a system basis.

13.1 How to Display Log

To operate the Call/Fault Log output:

For SNMP Manager, see SNMP [S-148] in Data Programming Manual - Business.

For PCPro, see the EVLOG command in this manual.

To display the Call/Fault Log as system message on PCPro:

To display the log as system message on PCPro, set ASYDL, SYS1, Index 996, Bit 2=1. For more detailed information about the system messages, refer to SYSTEM MESSAGES in Chapter 3 of this manual.

For Terminal Claim Notification:

See TERMINAL CLAIM HANDLING [T-65] in Data Programming Manual - Business.

13.1.1 Use of Collected Information

The following information is displayed on SNMP Manager.

- Speech Log Information

```
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
```

The following is an example.

```
CALL STATISTICS 00012060,00012061,0,2004051813121700,
2004051813141800,0000001F,0000000A,00000000,0A29CF64,0060B9C3
9B2C,0001
```

A: Self-EN (Self Equipment): 0x00012060 [FPC=1, Module Group(MG)=8, Unit(U)=0, Group(G)=12, Level(L)=0]

Accommodation Location for each equipment is obtained as shown below:

```
CALL STATISTICS 00012060,.....
```

	b7	b6	b5	b4	b3	b2	b1	b0
0x60	GROUP					LEVEL		
0x20	0	Module Group				UNIT		
0x01	FPC							
0x00	NOP							

Convert the value indicated in hexadecimal to binary.

	b7	b6	b5	b4	b3	b2	b1	b0
0x60	0	1	1	0	0	0	0	0
0x20	0	0	1	0	0	0	0	0
0x01	0	0	0	0	0	0	0	1
0x00	0	0	0	0	0	0	0	0

Read the value in decimal on a category basis.

0x60	Group = 12					LV = 0		
0x20	0	MG = 8				U = 0		
0x01	FPC = 1							
0x00	NOP = 0							

Thus, Module Group = 8, Unit = 0, Group = 12, Level = 0 are obtained in this instance.

B: Mate-EN: 0x00012061 [FPC=1, Module Group(MG)=8, Unit(U)=0, Group(G)=12, Level(L)=1]

C: Warning Tone (0: No warning tone/1: warning tone generated) **Note 1**
0x0 = No warning tone

D: Speech Start Time
0x2004051813121700 = 2004/5/18 13:12 17.00 (Year/Month/Day Hour:Minute Second)

E: Speech End Time
0x2004051813141800 = 2004/5/18 13:14 18.00 (Year/Month/Day Hour:Minute Second)

F: RTP Send Count
The value is indicated in hexadecimal.
0x0000001F = 31 packets

G: RTP Receive Count
This he value is indicated in hexadecimal.
0x0000000A = 10 packets

H: RTP Receive Loss Count **Note 1**
The value is indicated in hexadecimal.
0x00000000 = 0 packet

I: IP Address
Convert the value to decimal on a byte basis to obtain IP Address.
0x0A29CF64 = 10.41.207.100

J: MAC Address
Convert the value to decimal on a byte basis to obtain MAC Address.
0x0060B9C39B2C = 0.96.185.195.155.44

K: LOC-ID
0x0001 = 1

Note 1: For the terminals that output “0” even though the warning tone is generated, see the table of IP Equipment For Call Log Filter in RTP INFORMATION OUTPUT [R-58] in Data Programming Manual - Business.

Note: For each answered call two Call Statistics messages are generated.

Examples of Log

Example 1

```
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
```

Take statistics of RTP sent/received (F, G, H) on a Self-EN (A) basis.
Also, see (C) if warning tone occurs or not.

Example 2

```
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
```

Take statistics of users (A) on a warning tone (C) basis.
Also, take statistics between areas (I and K).

Example 3

```
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
CALL STATISTICS A, B, C, D, E, F, G, H, I, J, K
```

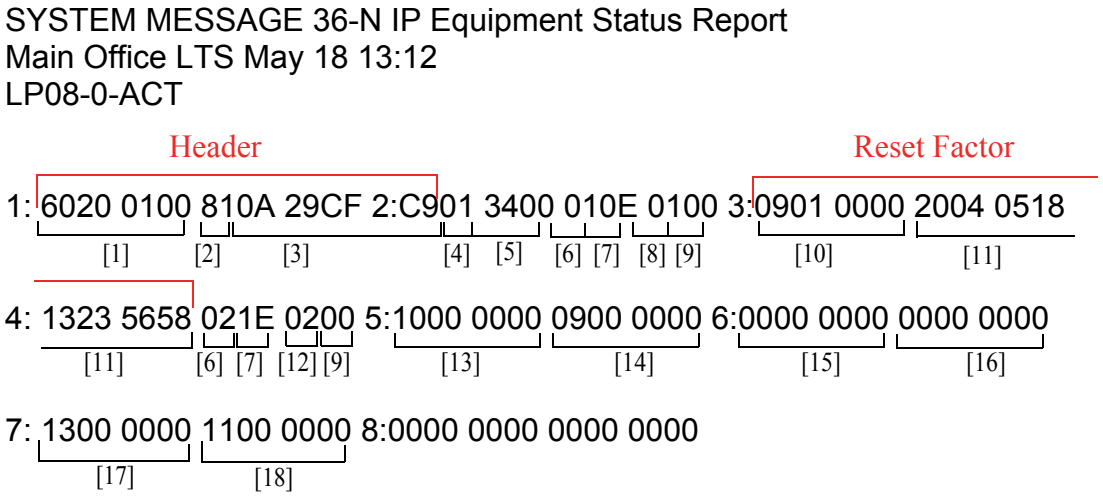
Take statistics of period (D, E) on a warning tone (C) basis.
Also take statistics between areas (I and K).

- Fault Log Information

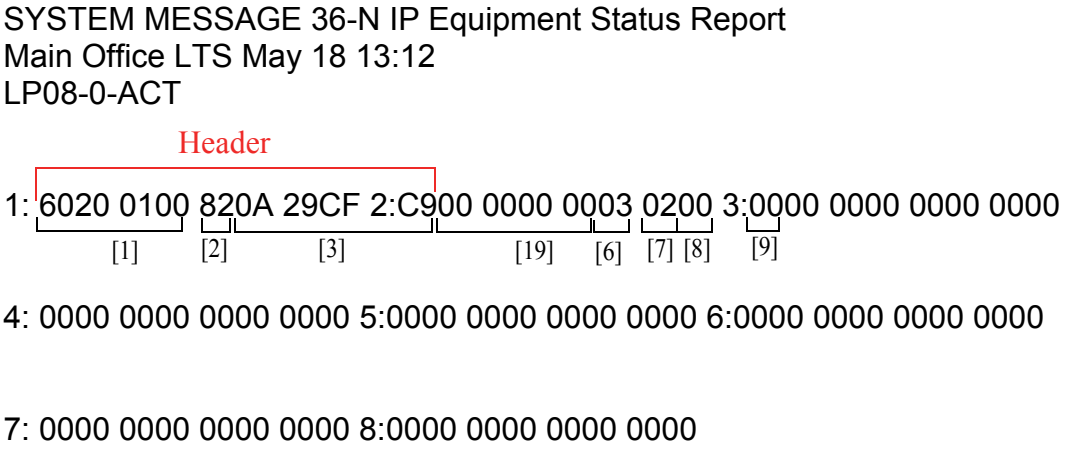
The fault log is read out as follows:

Note: This is an example when the system outputs 36-N. Note that the format is variable.

The following is an example.



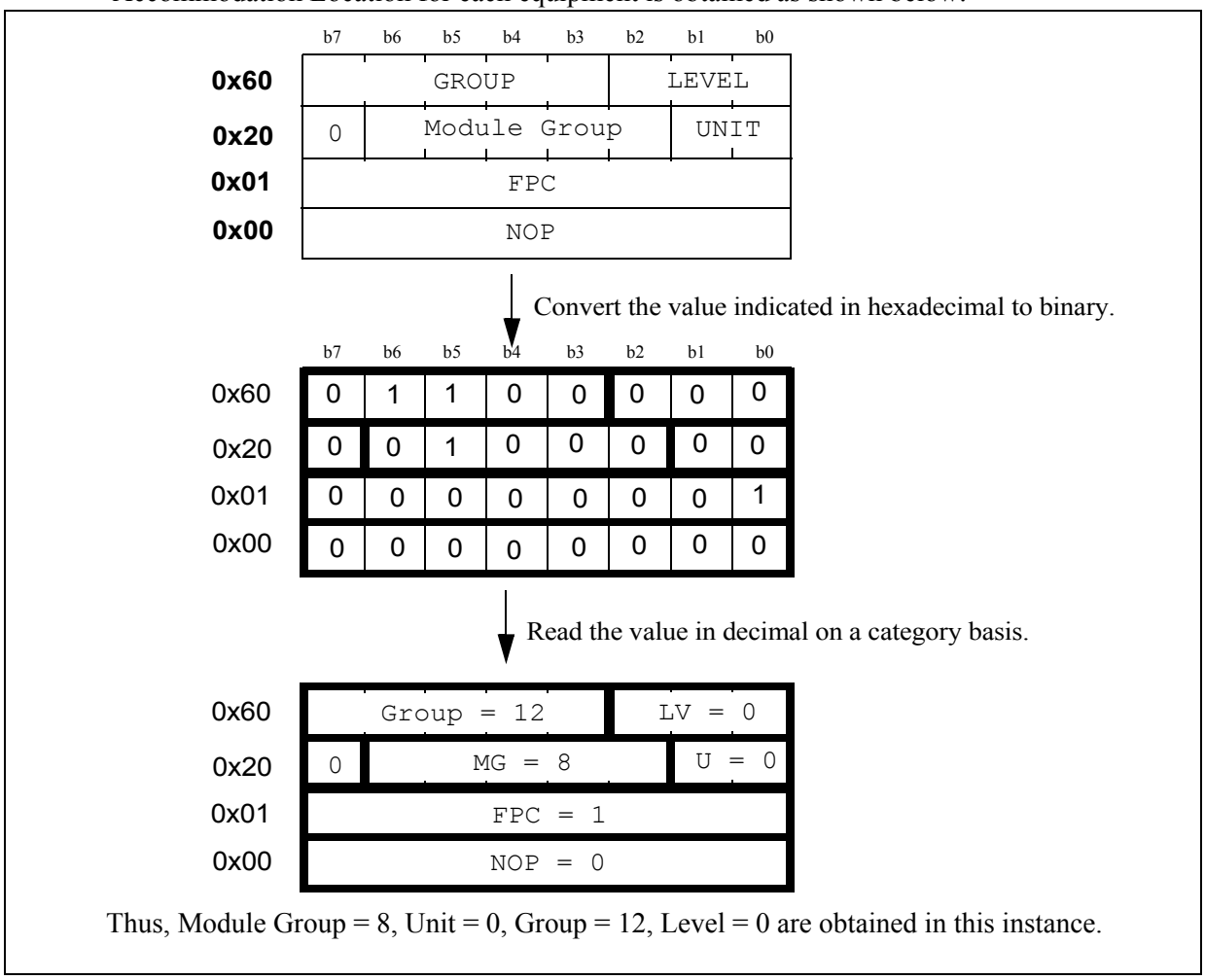
Make sure [1] (EN) and [2] (Sequence Number), the sequence numbers on the same EN are continuous data related to the EN. Fault logs by the same terminal are divided into packets and output, therefore, it is required to analyze the data by grouping the same header.



Note: System message for DtermIP (SIP)/Softphone (SIP) is as follows.

```
SYSTEM MESSAGE 36-N IP Equipment Status Report
Main Office LTS May 18 13:12
LP08-0-ACT
                Header
1: 6020 0100 820A 29CF 2:C900 0000 0003 0200 3:0000 0000 0000 0000
     [1]    [2]  [3]          [19]      [20]      [21]      [6] [7] [8]
4: 0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000
   [9]
7: 0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1]: Accommodation Location (Line Equipment Numbers)
Accommodation Location for each equipment is obtained as shown below:



Thus, Module Group = 8, Unit = 0, Group = 12, Level = 0 are obtained in this instance.

[2]: Sequence Number and Fault Log Output Kind
Sequence Number (Bit 0-6) = 0x01 (Sequence Number1)/0x02 (Sequence Number2)
Fault Log Output Kind (Bit 7): 0/1 = Period/at the moment after registry

[3]: IP Address
Convert the value to decimal on a byte basis to obtain IP Address.
0x0A29CFC9 =10.41.207.201

[4]: Fault Log: 0x01
This data and the following data ([5] to [19]) are variable.

[5]: Data Length: (0034HEX) Variable

[6]: Data Kind
0x01/0x02/0x03 = Reset Factor/Control PKT Send/Receive Information/Registry NG Factor

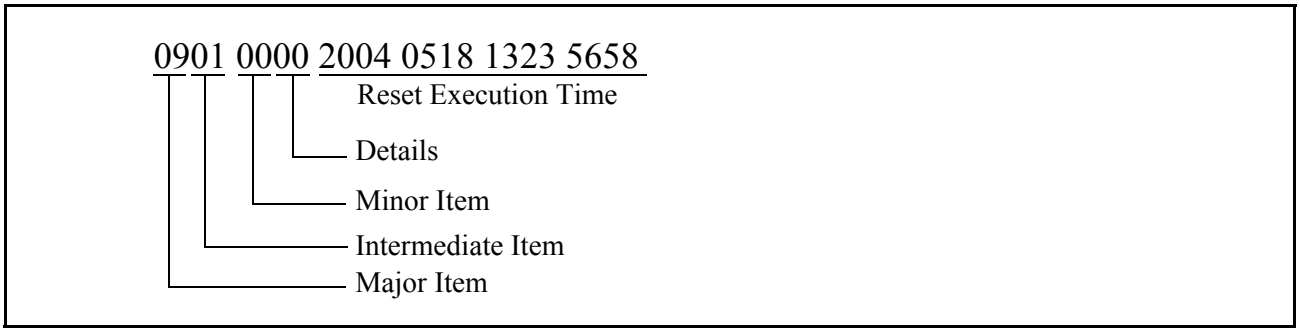
[7]: Data Length
0x0E/0x1E/0x2E = Reset Factor/Control PKT Send/Receive Information/Registry NG Factor

[8]: The Number of Fault Logs
0x01 - 0x08

[9]: NOP: 0x00

[10]: Reset Factor
Major Item (0x09: Configuration Mode End)
Intermediate Item (0x01)
Minor Item (0x00)
Details (0x00)

[11]: Reset Execution Time: 2004/5/18 13:23 56.58 (Year/Month/Day Hour:Minute Second)
Reset Factor and Reset Execution Time are as follows:



Detailed Information of Reset Factors

Major Item (Hex)	Factors		Sub Factors	
			DtermIP (Proprietary Protocol)	DtermIP (SIP)/Softphone (SIP)
00	Not used		-	-
01	Autonomous Reset	before registration/ before DRS01 (Initial Setting Request)	During "DHCP Connecting...." indication, the terminal was placed in configuration mode and Save or cancel was performed.	Failure before registration such as failure while acquiring DHCP address, DHCP server connection timeout
02		during registration/before DRS 03 (Signaling Path Set Response)	During "DRS Connecting...." indication, the terminal was placed in configuration mode and Save or cancel was performed.	Failure during registration such as response wait timeover, receiving abnormal response
03		after registration/ during initialization	-	Failure immediately after registration completion such as 200 OK Receive timeout for initial SUBSCRIBE and no reception of initial SUBSCRIBE from the server
04		during call process	Reset occurred because of timeout while waiting to receive TIR PAW.	Not used
05		during partial initialization	-	Not used
06		diagnosis command not received/Keep-alive NG	Reset occurred after "Network Busy"	Response wait timeover for SUBSCRIBE or NOTIFY/SUBSCRIBE is expired.
07	Software Reset Request		Reset was requested by the system/ Reset occurred after receiving All Clear PAW direction.	Reset was requested by the server.
08	DHCP lease is expired		Reset occurred after DHCP Lease Expiration.	DHCP Lease Expiration or NACK Reception
09	Configuration mode is ended (DtermIP only)		After placing in Configuration Mode from clock indication, save or cancel was performed in the mode.	Configuration menu is ended.
0A	Reset Request by PROTIMIS (DtermIP only)		Terminal reset was requested by PCPro commands such as AKYD, ADKS or MBST.	Not used
0B -	Not used		-	-

[12]: Protocol
0x01/0x02/0x03 = iLP-PM/PROTIMS/SIP

[13]: Total Number of Transmitted Control PKTs
0x10000000 = 10 times

[14]: Number of Retransmitted Control PKTs
0x09000000 = 9 times

[15]: Number of Failed Control PKTs
0x00000000 = None

[16]: Total Number of Received Control PKTs
0x00000000 = None

[17]: Number of Received Abnormal PKTs
0x13000000 = 19 times

[18]: Number of Failed Control PKTs
0x11000000 = 17 times

[19]: Number of Failed Control PKTs
0x00000000 = None

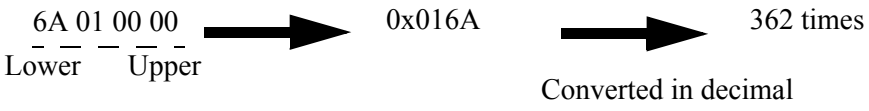
[20]: Number of Retransmission (three times) **Note 2**

[21]: Number of Retransmission (four times or more) **Note 2**

Note 2: Available for DtermIP (SIP)/Softphone (SIP) only.

The following shows how to count the numbers and the meaning of each protocol.

This example is applied for all the parameters.

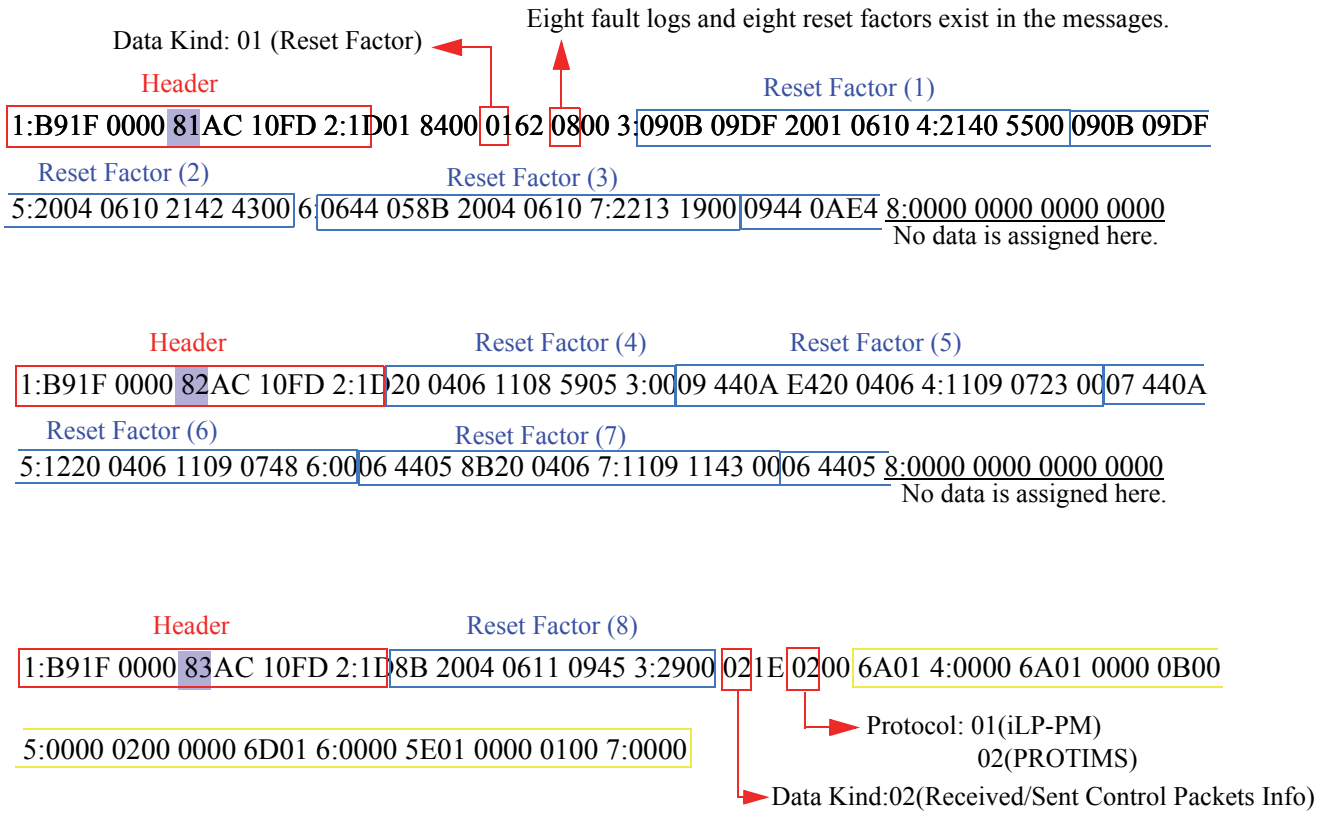


Send/Receive Control Packet Counter on each Protocol

Sent/ Received Control Packets Information	iLP-PM (0x01)	PROTIMS (0x02)	DtermIP (SIP)/ Softphone (SIP) (0x04)
[13]	Total Number of Transmitted Control PKTs	Total Number of Transmitted Packets	Number of Transmitted Requests
[14]	Number of Retransmitted Control PKTs	Number of Transmitted ACK Packets	Number of Received Requests
[15]	Number of Failed Control PKTs	Number of Retransmitted Packets	Number of Transmitted Response (Normal)
[16]	Total Number of Received NG Control PKTs	Number of Three Times Retry	Number of Transmitted Response (Error)
[17]	Total Number of Received Abnormal PKTs	Total Number of Received Packets	Number of Received Illegal Messages
[18]	Number of Abnormal Sequences	ACK Packets	Number of Retransmission (once)
[19]	Number of Duplicated Sequences	Total Number of Abnormal Packets received	Number of Retransmission (twice)
[20]	-	-	Number of Retransmission (three times)
[21]	-	-	Number of Retransmission (four times or more)

Example of System Message Output

The following is an example when fault logs are output eight times. One data can be made by connecting three related messages in the example. This shows the appropriate parts extracted from the system messages.



- Information Displayed on SNMP Manager

  36-N IP Equipment Status Report A B C D E F G H I J

  A: CPU Number

  B: Output Time

  C: Self-EN

  D: Output Time

  F: Reset Factor

  G: Reset Execution Time

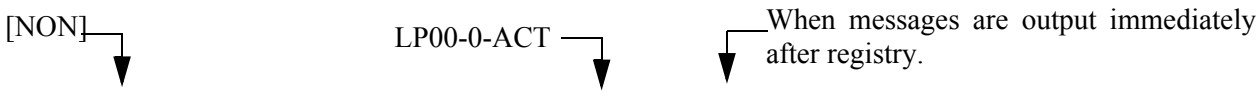
  H: RTCP Send Time

  I: RTCP Receive Time

  J: RTCP NG Time

Examples of Log

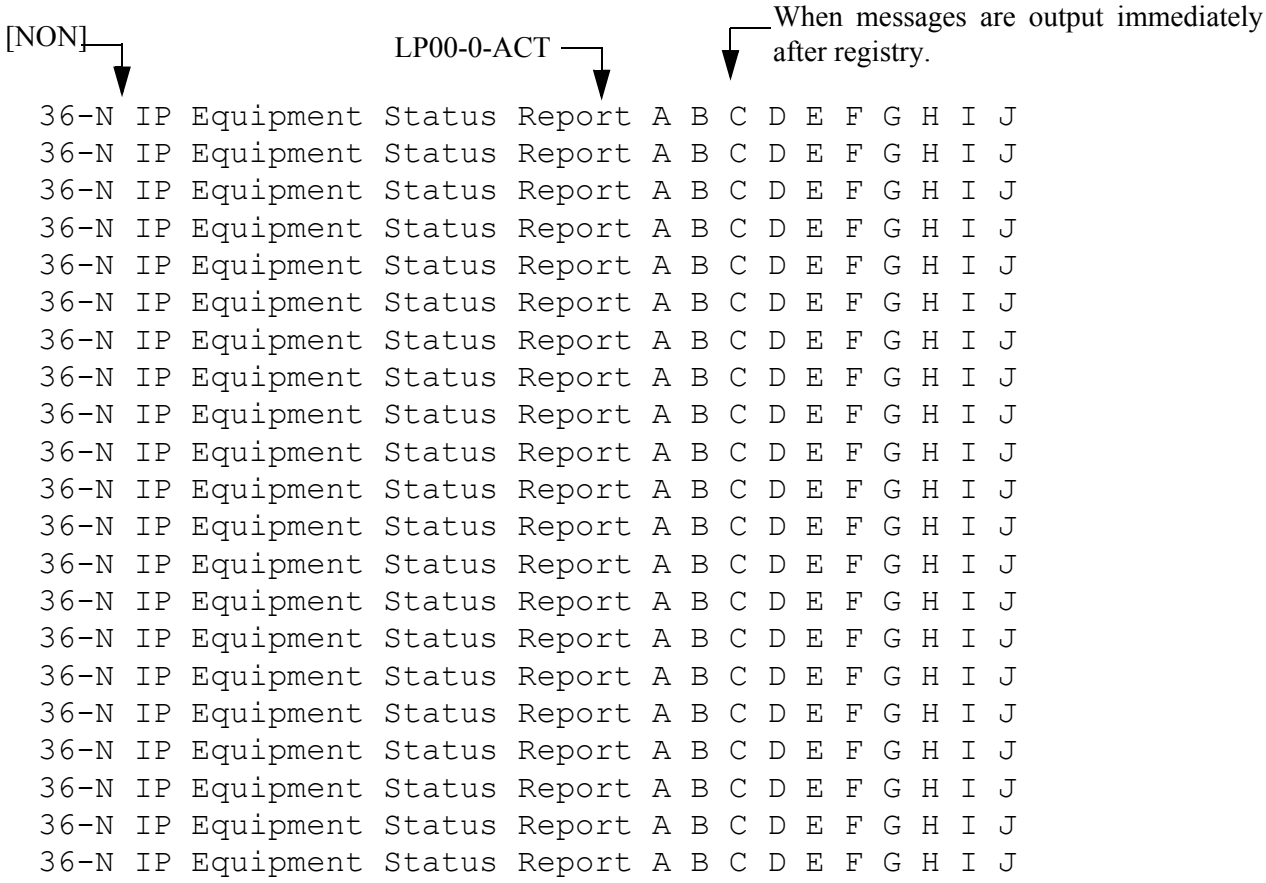
Example 1




```
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
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36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
36-N IP Equipment Status Report A B C D E F G H I J
```

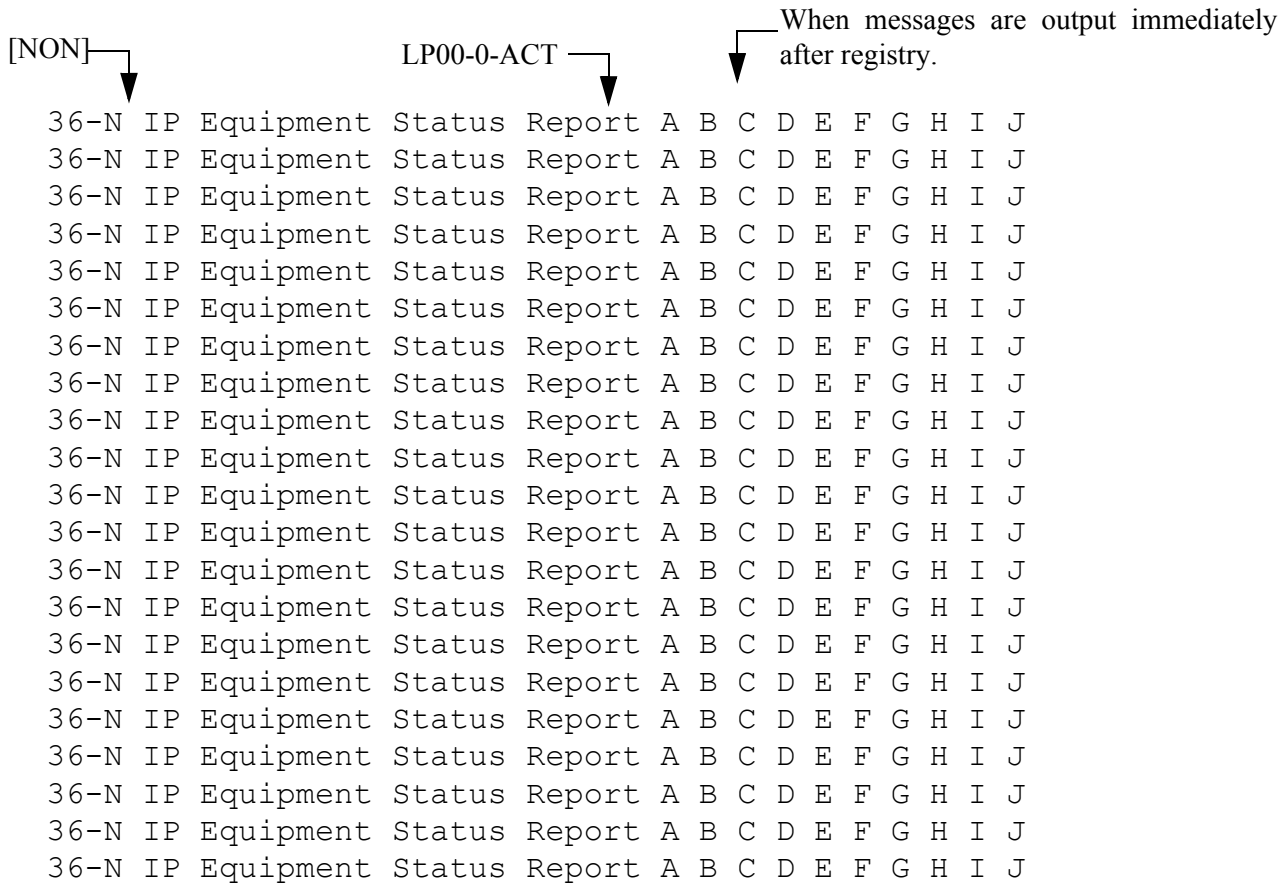
Take statistics of area (E) on the basis of reset factor (F) and reset execution time (G).

Example 2



Take statistics of users (C) on the basis of reset factor of a terminal (F).
Also take statistics of status of RTCP sent/received (H, I, J).

Example 3



Take statistics of network status including packet retransmission rate and retransmission NG rate (H, I, J), on the basis of terminal user and area (C, D, E).

13.1.2 Examples of Using Logs

<Trouble 1 - When All of the DtermIP are logged out - >

(1) Brief

All the DtermIP are not available for a short time.

(2) Cause

Because DHCP server had sent back NACK, DtermIP has performed autonomous reset.

(3) If Fault Log Collection Function is used

From logs occurred when re-registration has been completed, it can be analyzed that all of the DtermIPs have performed autonomous reset around the same time because the valid term for IP addresses provided by DHCP server had expired. (This includes terminals that received NACK indicating 50% of the valid term has passed.)

→ **Use fault logs to solve the problem.**

<Trouble 2 - No tone/One-way Speech - >

(1) Brief

When DtermIP originates call via MC-MG (COT), sometimes no tone is heard.

(2) Cause

While peer-to-peer connection was being handled, timeout of H.245 sequence occurred due to packet delay/loss.

(3) Using Fault Log Collection Function

Logs are output when errors occur in established peer-to-peer connection. From these logs, it can be determined that connection handling is abnormal.

(4) Using Call Log Collection Function

From logs caused for peer-to-peer disconnection, RTP arrival status on end points can be recognized.

→ **Use fault and call logs to solve the problem.**

<Trouble 3 - Network Busy - >

(1) Brief

Network Busy is often displayed on LCD of DtermIP.

(2) Cause

Packets are discarded on network devices.

(3) When Fault Log Collection Function is used

By confirming retransmission times/retransmission failed times from collected logs, it can be determined that the problem could be caused on network and SV9500/PHD sides.

From memory in a system, it can be determined that the retransmission failed.

By seeing retransmitted NG occurred on two-way, it can be determined that the fault could have occurred on the network.

→ **Figure out how to solve the problem in consideration of other type of logs.**

<Trouble 4 - Noise, Voice Cut Off - >

(1) Brief

Noise and Voice Cut Off on speech occurred between IP terminals.

(2) Examination Method

The cause of network fault can be analyzed by using Call Log Collection Function and seeing its logs including information of opponent, speech start time, speech end time, RTP arrival status when noise or no tone is caused during speech, status of discarded packets, enable/disable of warning tone, and information on end points.

→ **Use call logs to solve the problem.**

<Trouble 5 - Sudden Reset/Sudden Login - >

(1) Brief

IP terminal has suddenly reset itself.

(2) Examination Method

Confirm the reset factor/generation time by using Fault Log Collection Function.

→ **Use fault logs to solve the problem.**

<Trouble 6 - Buttons cannot be activated - >

(1) Brief

The buttons of DtermIP cannot be activated sometimes.

(2) Examination Method

By specifying objects for Call Log Collection and shortening the period, confirm the number of times for retransmitting and discarding packets (retransmission failed) per unit time.

→ **Use fault logs to solve the problem.**

<Trouble 7 - MG-PRI has been reset suddenly (Installation Fault) - >

(1) Brief

Buttons of DtermIP cannot be activated sometimes.

(2) Cause

It is because an IP address of IP-BS replaced is overlapped.

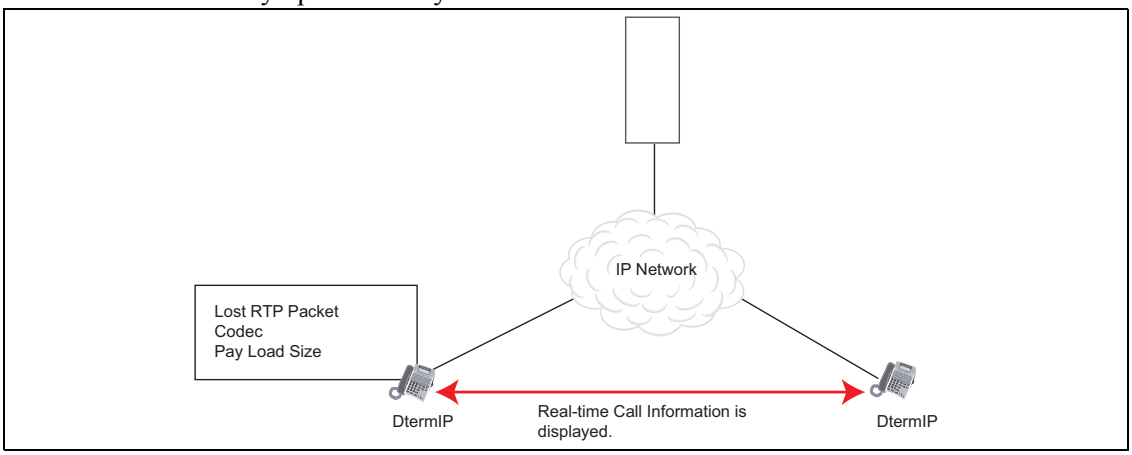
(3) When Fault Log Collection Function is used

Check IP addresses from logs collected after re-registration, and then make sure any of the equipment installed in the network does not have the same IP addresses.

→ **Use fault logs to solve the problem.**

14. DTERM IP CALL INFORMATION DISPLAY

During conversation, real-time Call Information (Codec, Payload Size, Lost Packet, etc.) can be displayed in LCD on DtermIP by pressing the Call Information Display key assigned as a FKY or a Soft key. The Call Information is automatically updated every five seconds.



14.1 Operation

For operations on the terminal side, refer to Operating Procedure of [T-65] on Data Programming Manual - Business.

14.2 Examples of Using Logs for Solution

<Example 1 - Packet Loss - >

(1) Brief

Call is disconnected.

(2) Cause

Due to unmatched duplex link between switches or network load, RTP packets are discarded in the network.

(3) Checking the Call Information Display helps to find the cause.

When the decreasing number displayed for 1.Lost Packet in Call Information Display is checked, it is noticed that RTP packets are discarded while the DtermIP is trying to receive RTP packets.

<Example 2 - Checking Configuration Contents - >

(1) Brief

Codec/Payload Size can be checked.

(2) Checking Codec/Payload Size by using Call Information Display.

Using Call Information Display, which displays Codec/Payload Size, makes it easy to check Codec/Payload Size.

15. IP DEVICE PC PORT REMOTE CONTROL

15.1 Overview

This feature allows the maintenance personnel to disconnect/connect the PC port of the IP stations from/to the network using PCPro. For example, the maintenance personnel can quickly disconnect the PC (that is connected to the PC port of IP station) from the network when virus is detected on the network.

15.2 Operating Procedure

See "CPCP command" in Chapter 6.

15.3 Service Conditions

(1) This feature is available for the following terminals:

IP Enabled Dterm (Dterm Series i):	Ver. 3.06 or later
DtermIP (Proprietary Protocol):	Ver. 3.08 or later
DtermIP (SIP):	Ver. 3.0.0.0 or later
DT700 Series:	Available since first version
DT830/DT830G Series:	Ver. 3.0.0.0 or later

(2) This feature can be executed while the terminals registered to the System.

(3) In the FCCS network, execute this feature on a node basis.

(4) The status of the PC port can be saved on a station number basis.

(5) The following shows the service conditions only for DtermIP (Proprietary Protocol).

(a) PC Port setting is canceled if the DtermIPs (Proprietary Protocol) register to the System again after the terminal reset. Therefore, DtermIPs (Proprietary Protocol) needs to be placed in "PC Port shut-down" status after each registration.

(b) This feature is not available for DtermIPs which have not yet registered to the System. It is required to execute this feature after completing the registration.

(c) If this feature data (CPCP command) is set on the terminals in logout status, the set data does not take effect even after the terminals log in to the System. In this case, the CPCP command data setting is required after the registration.

(d) To use this feature (CPCP command control), the following configuration setting on the terminal is required.

- Select "Automatic" from the User Menu → Ether Port Setting → PC Port Settings → Port Available (PC).

  When "Automatic" is selected:

  If the software reset is executed, the status of the PC port can be maintained.
  If the hardware reset is executed after turning off the terminal, the status of PC port is also reset (PC port will be connected to the network).

Note: When "Automatic" is not selected, the status of the PC port follows the configuration setting.

Note: After the registration:
If the terminal which does not support this feature is instructed to disconnect its PC port by the system, a mismatch between the CPCP command setting and the status of the PC port may occur.

Before the registration:
If the terminal which does not support this feature is instructed to disconnect its PC port by the system, the CPCP command setting does not take effect.

(e) To disconnect the PC port by the CPCP command, "Automatic" needs to be set on the configuration setting on the terminal. (**Note 1**, **Note 2**) The table below shows the status of PC port depending on the configuration setting on the terminal and office data setting on the CPCP command.

Configuration Setting on Terminal	CPCP Command Setting	Status of PC Port
Automatic	Connection	PC port is connected.
	Disconnection	PC port is disconnected.
	No data setting	PC port is connected.
OFF	Connection	PC port is disconnected.
	Disconnection	PC port is disconnected.
	No data setting	PC port is disconnected.

Note 1: The default is "Automatic".

Note 2: If the terminal with "Automatic" is connected to the system which does not support this feature, the PC port is connected.

Note: Not supported on the DtermIP INASET320C/G.

(6) The following shows the service conditions only for SIP Multiple Line terminal.

(a) The data setting (CPCP command) for the terminals in logout status is also available. The set data takes effect after the terminals log in to the System.

(b) To use this feature (CPCP command control), the following configuration setting on the terminal is required.

- Select “Automatic” from the User Menu → Advanced Settings → PC Port Settings → Port Available (PC).

Note: When “Automatic” is not selected, the status of the PC port follows the configuration setting.

(7) If an error occurs during data readout with this command, assign the data of the terminals and write it again (the error message appears while the data is being written). Then, perform reregistration of the terminals. When the registration is complete, the data will be reflected.

To reregister the terminal, either of the following operations is required:

- Terminal reregistration (also can be done through the make-busy and idle operation)
- SP-PHD initialization

Note: To initialize SP-PHD, either of the following operations is required:
- System initialization
- Internal PHE module initialization with the ADPM command

16. LICENSE REGISTRATION INFORMATION DISPLAY

16.1 Overview

License registration information, including the number of license, the number of registered IP terminals, and the number of consumed license, are displayed in this feature. By reading out the license registration information, maintenance personnel can analyze the terminal configuration for terminal types and can analyze the current terminal registration state. This function helps the maintenance personnel to administrate terminal licenses with efficiency.
This feature is used to see the remaining number of license depending on the system capacity and the number of currently operating terminals when necessary to add new terminals in the network.

The following license information is output in this feature:

- License registration: The number of licenses user has purchased. Licenses registered in the system is displayed for each terminal type. Each IP terminal becomes available by applying this license.
- IP Terminal registration: The number of IP terminals currently registered in the system. The number of registered terminals is displayed on terminal group basis.
- License consumption: The number of terminals registered in the office data and in operation; login stations and MC/MG devices completing startup procedure, is displayed.

16.2 Operating Procedure

Activate the DPTR command on PCPro and select **Details of Client Licenses** from the **Read Type** drop down list. For more information, see DPTR command in Chapter 7.

16.3 Service Conditions

(1) Terminals with no license are not displayed by this command, even when the terminal data is assigned in office data.

(2) This feature is independent of the connected line's condition, like in FCCS connection.

16.4 Data Assignment

None.

17. FTP SERVER SUPPORT (LAN1)

When the Telephony Server is used as an FTP server, the following file transfer services are supported between a remote PC and CF cards.

- IP Terminal Program Upload/Download

  During “Terminal for Download” operation by the ATDL command, new firmware supposed to be downloaded to IP stations can be uploaded to the Telephony Server using the FTP server process. Then IP stations can download the firmware from the Telephony Server as FTP clients. For more information, refer to IP Device Firmware Remote Download [I-47] in Data Programming Manual - Business

- Firmware Download to IP stations using “Firmware Auto Update Tool”

  DT800/DT700 Series can download new firmware from the Telephony Server using “Firmware Auto Update Tool.”

17.1 Operating Procedure

IP Terminal Program Upload/Download

STEP 1 Start up a remote PC which FTP client software is installed in. Then log in to FTP server.

Enter Telephony Server’s IP address (**Note 1**) after the FTP command using FTP client software.

Note 1: Enter the IP address of LAN1 ACT side CPU/STBY side CPU by the ATDL command.
- For the single CPU, enter the ACT side CPU IP address.
- for the dual CPU, enter each IP address (#0, #1) of ACT side CPU/STBY side CPU by the ATDL command

Example) Log in to the Telephony Server (10.41.207.224) via FTP. **Note 2**

Note 2: The files are transferred to/from the directory in which a connection is made via FTP. For examples, in the following case, the directory “C:\temp” is used to transfer files to/from FTP server (Telephony Server).

```
C:\temp>ftp 10.41.207.224
```

STEP 2 Enter login name and password to log in to the Telephony Server.

Example) XXXX is entered as a login name.

Note: The following message appears when log in to the Telephony Server is succeeded.

```
230 User XXXX logged in.
```

STEP 3 Type the command “bin” to prepare to transfer the files in binary.

```
ftp>bin
```

STEP 4 Type the command “put” to upload a program file to FTP server (Telephony Server).

Example) Transfer “itlisipe.tgz” from the remote PC to the directory of Telephony Server.

```
ftp>put itlisipe.tgz
```

STEP 5 Make sure that the file has been written in the specified directory using “ls” or “dir” command.

```
ftp>dir
```

STEP 6 Exit the FTP server.

To exit the FTP server, use “bye” or “quit” command.

```
ftp>bye
```

Firmware Download to IP stations by “Firmware Auto Update Tool”

STEP 1 Activate the FTP server process according to “FTP Server Startup Assignment.”

Note: “Maintenance User Account Assignment” setting is not required.

STEP 2 Execute further operations referring to the “Firmware Auto Update Tool for DT800/DT700 Series” section in Peripheral Equipment Description.

17.2 Service Conditions

- The table below provides command information related to FTP control and the directory tree in FTP server (Telephony Server).

Command List Related FTP

COMMAND	MEANING	DESCRIPTION
bin	Switch type to binary mode.	This command must be entered before transferring the files.
cd	Change the directory.	
ftp	Make the FTP connection.	
delete	Delete the files.	
get	Copy the files into a remote terminal.	

Command List Related FTP (Continued)

COMMAND	MEANING	DESCRIPTION
put	Writes the files into FTP server (Telephony Server).	
pwd	Shows the full path.	
ls/dir	Shows the files in the directory.	"ls" shows a list of files and sub directories. "dir" shows a list of files in detail.
quit/bye	Exits the FTP server.	
rename	Changes the file name.	

- Directories in the CF card differ in each maintenance user account assigned by the ADTM command. If files are written using the maintenance user account "A" for example, these files cannot be browsed using the maintenance user account "B."

- When the Telephony Server is logged in using login name of the maintenance user account, the following directories and files exist in default state. However, do not use these directories and files.

  Directory:

  bin
  lib

  File:
  ..bash_logout
  ..bash_logout.rpmorig
  ..bash_profile
  ..bash_profile.rpmorig
  ..bashrc
  ..bashrc.rpmor

- When the system is Dual Configuration, the maintenance user account can be used for both of #1 and #0 CPU CF cards. When writing the same files to both #1 and #0 CPU CF cards, IP address for each CPU CF card needs to be entered because files are operated on CPU CF card bases via FTP server.

- When the maintenance user account is deleted, all of the written files and created directories using the account are also deleted.

- A maximum of 20 FTP clients can access simultaneously.

- Change the transfer method from ASCII (default) to binary form by using "bin" command.

- A maximum of three maintenance user accounts can be created.

- When migrating from existing IPX/SV7000 to SV9500, be sure to assign the following system data used for FTP server activation feature of IPX/SV7000. FTP server which had been used in IPX/SV7000 cannot be used in SV9500.
  ASYDL, SYS1, Index 965, Bit 1 = 0 (FTP server activation disabled)

17.3 Data Assignment

FTP Server Startup Assignment

STEP 1 Select LAN1 for **Select LAN Interface.**

STEP 2 On **Options** tab, select "Activation setting of Internal server" in function list of LAN1 field, and then click the **Execute** button.

STEP 3 On **Activation setting of Internal server** window, check the checkbox of "FTP Server" in Internal Server list of LAN1 field to ON. Then click the **Set** button.

Maintenance User Account Assignment

STEP 1 Select LAN1 for **Select LAN Interface.**

STEP 2 On **Options** tab, select "Maintenance User Account Settings" in function list of LAN1 field, and then click the **Execute** button.

STEP 3 On **Maintenance User Account Settings** window, click the **Add** button.

STEP 4 **Maintenance User Account Settings** sub-window appears. Enter the following parameters, and then click the **OK** button.

- Login Name: 4~12 characters, "-", "_"

- Password: 4~12 characters, "-", "_"

- FTP: Check to allow.

Note: Refer to ADTM: Assignment of Data for TCP/IP Module in Command Manual for available characters to enter the Login Name and Password.

Note: Level is Low and it is fixed.

STEP 5 On **Maintenance User Account Settings** window, click the **Set** button.

FTP Server Cancellation

STEP 1 Select LAN1 for **Select LAN Interface.**

STEP 2 On **Options** tab, select "Activation setting of Internal server" in function list of LAN1 field, and then click the **Execute** button.

STEP 3 On **Activation setting of Internal server** window, check the checkbox of "FTP Server" in Internal Server list of LAN1 field to OFF. Then click the **Set** button.

Maintenance User Account Deletion

STEP 1 Select LAN1 for **Select LAN Interface.**

STEP 2 On **Options** tab, select "Maintenance User Account Settings" in function list of LAN1 field. Then operate the following procedure.

<To inactivate FTP server on the maintenance user account>

Select the maintenance user account to inactivate FTP server, and click the **Edit** button. Check the checkbox of "FTP" to OFF, and then click the **Set** button.

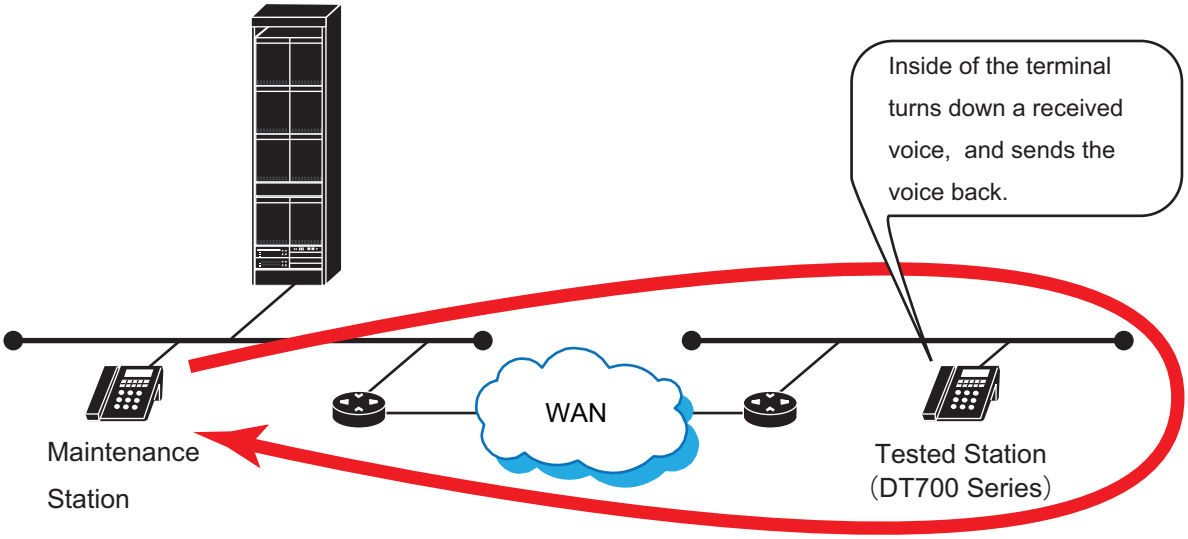
<To delete the maintenance user account>

Select the maintenance user account to delete, and click the **Delete** button. Then click the **Set** button.

18. VOICE LOOPBACK

18.1 Overview

This feature enables a maintenance station to verify normality of a behavior through a test station, DT800/DT700 Series, by hearing a loop back of its own voice.



18.2 Operating Procedure

STEP 1 Assign the loopback test data from PCPro.

STEP 2 The maintenance station rings.

STEP 3 Lift the handset on the maintenance station.

STEP 4 Verify the maintenance station's own voice hearing.

STEP 5 Replace the handset.

18.3 Service Conditions

<Important Notices>

(1) Be sure to register a maintenance station and test stations in the same system.

(2) Only one group can be tested per system.

(3) The maintenance personnel can verify test results by the TLBK command indication.

(4) Using CSV file enables the maintenance personnel to specify two or more test stations and output test results. Refer to TLBK: Test of Loop Back Connection for IP Terminal in Chapter 7 for more information.

<Interactions with Other Features>

(1) Billing, CS Report [C-149] and Peg Count [P-7] do not apply to calls originated by this feature.

(2) Performing a test is available even if a test station which sets the following features in service:

- Call Forwarding - All Calls [C-5]
- Call Forwarding - Don't Answer [C-3]
- Uniform Call Distribution (UCD) [U-1]

<Hardware/Software>

This feature is available in the following IP stations:

Test Station **Note 1**	Maintenance Station
DT830/DT700 Series (FW 3.0.0.0 or later) **Note 2**	DtermIP (Proprietary Protocol) DtermIP INASET DT700 Series DT800 Series
DT700 Series (DT750/DT730/DT710) (FW 5.0.0.0 or later) DT730G (FW 1.0.0.0 or later) DT830G (FW 3.0.0.0 or later)	Softphone (DtermSP30/Soft Client SP350)

Note 1: Note the following conditions:
- This feature cannot be used in a system which sets VoIP Encryption [V-27] in service.
- Payload type and size are fixed to C.711 40 ms. AIVCL/AIVCN data setting will be invalid.
- Call log cannot be output.

Note 2: Except for DT730G.

<Interactions with Networks>

None

<Conditions Specific to This Feature>

(1) The followings are conditions while performing a test.

- When the third party originates a call to a maintenance station or a test station during a test, the call will be restricted.
- All of key operations are inhibited except for origination from a maintenance station or a test station.
- When a test station performs origination operation, the test will not completed normally.

(2) This table shows behaviors of a maintenance station and a test station and the TLBK command indication while performing a test.

Note: Refer to TLBK: Test of Loop Back Connection for IP Terminal in Chapter 7 for more information of command indication.

While Maintenance Station is Ringing

Maintenance Station/Test Station		TLBK Command Indication	
Operation	Behavior	Test Result	Test Failure Factor
Maintenance station answers within thirty seconds.	Loopback connection is established.	-	-
Maintenance station does not answer within thirty seconds.	A test ends automatically. • Maintenance station: Stops ringing • Test station: Becomes idle	NG (Test Failure)	Maintenance station off-hook timeout
Test station lifts a handset.	A test ends automatically. • Maintenance station: Stops Ringing • Test station: Receives ROT	NG (Test Failure)	Test break (Test station's duty)

While Stations are Engaged in a Loopback Connection

Maintenance Station/Test Station		TLBK Command Indication	
Operation	Behavior	Test Result	Test Failure Factor
Maintenance station replaces the handset within three minutes.	A test ends automatically. • Maintenance station: Becomes idle • Test station: Becomes idle	OK	-
Stations keep a loopback connection for three minutes.	A test ends automatically. • Maintenance station: Receives ROT • Test station: Becomes idle	OK	-
Test station lifts a handset.	A test ends automatically. • Maintenance station: Receives ROT • Test station: Receives ROT	OK	-

<Other Conditions>

None

18.4 Data Assignment

TLBK - Test of Loop Back Connection for IP Terminal

Specify the maintenance station and the test station.

Kind of Station (Kind of Station)

STN:	Station Number
TELN (LDM):	Telephone Number (LDM)
TELN (NDM):	Telephone Number (NDM)

Maintenance Station/Test Station

- Designation when Kind of Station = STN is set

TN:	Tenant Number [1-63]
STN:	Station Number [Maximum 5 digits]

- Designation when Kind of Station = TELN (LDM) or TELN (NDM) is set

UGN:	User Group Number [1-255]
TELN:	Telephone Number [Maximum 16 digits]

Test Range

Single
Plural

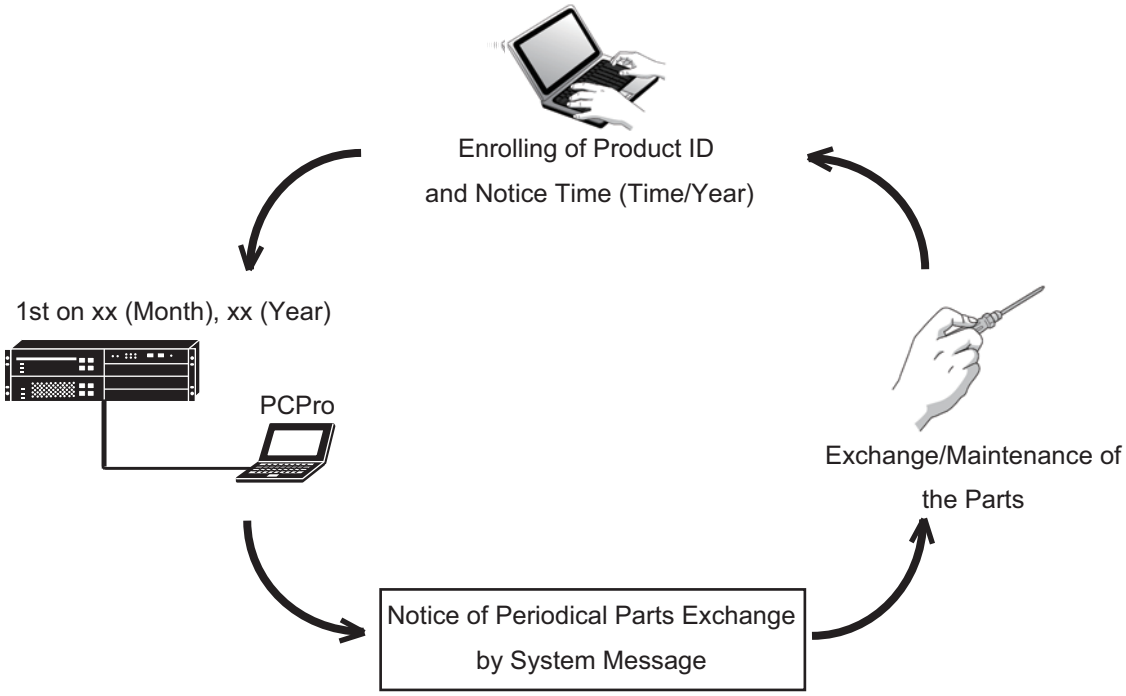
CSV File Read **Note 1**

Note 1: This button appears when “Test Range = Plural” is set.

19. PREVENTATIVE MAINTENANCE NOTIFICATION

19.1 Overview

This feature notifies the date of the periodical parts which should be replaced in the system message.



19.2 Operating Procedure

None.

19.3 Service Conditions

<Important Notices>

(1) Notification year/date must not be same time of Day Light Savings (Start/End).

Note: When notification time is enrolled as a same time of Day Light Savings (Start), the time that the message is output by the DFTD command becomes the time which is changed by Day Light Savings (Start).

Note: When notification time is enrolled as a same time of Day Light Savings (End), the notification is output twice in the month.

(2) This feature is available in LDM only.

<Interactions with Other Features>

(1) When Centralized System Management Report - CCIS [C-57] is used, the notification information which is output in Local Node is also transferred to Center Node.

(2) Multiple Time Zone [M-114] is not applied in this feature.

<Hardware/Software>

(1) SR-MGC does not support this feature.

<Interactions with Networks>

None.

<Conditions Specific to This Feature>

(1) System message [36-Y] is notified at 1 o'clock on 1st of every month. When there is not an exchange part which the notification time passes, system message is not output.

(2) When there is the part whose notification time passes, the notification is done month by month. For stopping the notification, change the information of the periodical parts by the APENL command after the replacement of the part.

(3) When the System is not turned on, system message is output on 1st of the next month.

(4) The backup of Office Data which is assigned by the APENL command is available by Data Memory of Data Type Selection in the MEM_HDD command. For more information, refer to "MEM_HDD" of CHAPTER 7 of this manual.

<Other Conditions>

None.

19.4 Data Assignment

STEP 1 **APENL** - Assignment of Periodical Exchange Device Notice for LDM and the year/month of the exchange parts.

P-ID: Product ID [1-255]

P-Name: Product Name [Maximum 32 character]

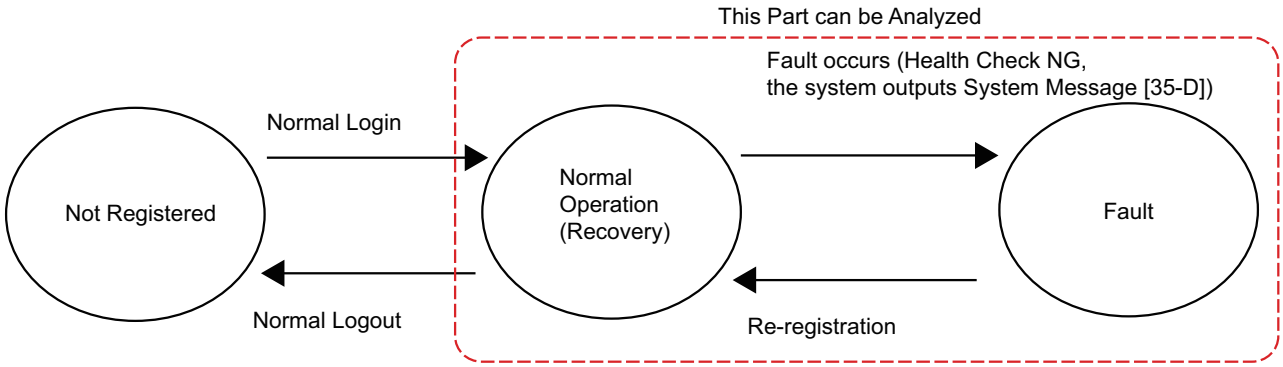
Notice Time: Month/Year [01/2000-12/9999]

20. IP STATION FAULT MANAGEMENT

This feature allows the system to notify maintenance personnel of the detailed information when the status changes from normal to fault of the IP station by the following faults occurrences, and the status changes from fault to normal when the following faults are recovered. The notified information enables maintenance personnel to analyze the scale and the progress of the fault status.

Fault	Description
Health Check Error	Health Check Error system message [33-S/35-K] is output.
Fault of PHD	When a failure occurs in SP-PHD, system message [35-D] is output. • Network failure between TP and SP • SP-PHD process down • MPH process down
Re-registration Warning	When IP station performs re-registration before the system detects a fault • IP station performs auto reset by detecting network/SP-PHD failure • IP station power OFF/ON (powered HUB for example) • IP station reboot by pressing “Hold + Transfer + * + #” • Executing the ATDL command

The following figure shows the range to be analyzed (red part) by this feature when IP station failure occurs.



The system notifies maintenance personnel of an IP station fault in the following ways.

- System message [35-K]
- IPDM command

20.1 Operating Procedure

Operate by using the IPDM command.

20.2 Service Conditions

<Common>

(1) This feature supports IP stations (IP Terminal, SIP Multiline Terminal and Softphone). IP equipment (MG, MC) is not supported.

(2) When users forcibly shut down the Softphone application, system message [35-K] may be output or fault/warning event may be detected by the IPDM command because the Softphone logout processing is not executed normally.

<Conditions for System Message [35-K]>

(1) Assign "1" to ASYDL, SYS1, Index 999, Bit 2 to enable a system message [35-K] output.

(2) No message is output to notify the IP station recovery. Check the status whether the IP station is recovered by using the IPDM command.

(3) If a fault/warning event has been notified by system message [35-K], existing system message [33-S] is not output.

Note: For IP equipment (MG, MC) except for IP stations, 33-S is output in a conventional manner.

<Conditions for IPDM Command>

(1) The target for collecting information by this command is only the information in the Telephony Server to which PCPro logs in. If maintenance personnel specify Telephone Numbers in the different Telephony Server, a message appears to notify maintenance personnel that information cannot be read.

(2) "Fault" is stored as the fault history in the system. At the same time, the system outputs system message for IP station Health Check error [33-S/35-K] and system message for SP Failure [35-D] concurrently.

(3) When IP station operating mode is Login Mode, "Warning" is used to notify that an IP station performs re-registration before the system detects an IP station fault (in the status that the system recognizes that the IP station logs in normally). It is useful to detect an automatic reboot by the IP station which has not been detected a Health Check NG. "Warning" appears even when the IP station is intentionally rebooted (**Note 1**). In this case, maintenance personnel can analyze causes by using this command in combination with the Fault Log Collection Function in RTP Information Output [R-58] (**Note 2**).
When an IP station performs re-registration, the following will be notified as "STATUS" information of "Display Filter Setting" according to IP station operating modes. (**Note 3**)

IP Station Operating Mode	Terminal Authentication		Information to be Notified
	System	Terminal	
Login Mode **Note 5**	Invalid	Valid/Invalid	Re-registration warning
	Valid	Valid/Invalid (other than SIP terminal)	
		Invalid (SIP terminal)	Login (Normal)
MAC Authentication Mode **Note 5**	Invalid	Valid/Invalid	Logout (Normal) **Note 4**
	Valid	Valid/Invalid (other than SIP terminal)	
		Invalid (SIP terminal)	Login (Normal)

Note 1: The following are example operations when the IP station is intentionally rebooted.
- by pressing "Hold + Transfer + * + #"
- by executing a command accompanied with reboot in the IP station (ATDL command)

Note 2: For more information, refer to RTP Information Output in Chapter 2 in this manual and RTP Information Output [R-58] in Data Programming Manual - Business.

Note 3: IPDM command reads the status at the time of executing the command. The command may read "Login (Normal)/Error" depending on the timing for reading data by the IPDM command and re-registration.

Note 4: When IP station operating mode is MAC Authentication Mode, "Logout (Normal)" appears for a moment. Then it turns to "Login (Normal)."

Note 5: For IP station operating modes, refer to DtermIP [D-159] in Data Programming Manual - Business.

(4) Up to 10,000 fault events can be stored as the fault history in the system. When the number of fault events exceeds 10,000, older events are deleted.

(5) All of 10,000 events in the fault history are deleted when the system initialization is executed.

(6) Survivable Remote MGC [S-141] and Remote Node over IP are not supported.

(7) For more information on the IPDM command, refer to IPDM command in Chapter 7 Maintenance Command.

20.3 Programming

To activate system message [35-K] output, assign the following data.

STEP 1 ASYDL
SYS1
Index 999, Bit 2=1 (System message [35-K] output is in service)

21. ADDING/UPDATING LICENSE FILE

21.1 Preparation

Access the License Management Server (LMS) to download a license file (svi.zip) and obtain Activation Code.

Note: Be sure to note the following conditions.
- A new Registration Activation code is necessary when the license is upgraded.
- The SVI file is downloaded in a zip format. Do not unzip the SVI file since this file is used as is.
- You can rename the saved SVI file, but do not change the extension of the file.

21.2 Upload License File to Telephony Server

The following steps show the procedure to upload a license file (SVI file) to Telephony Server via Telephony Server Maintenance Menu.

Note: Be sure to note the following conditions.
- For the dual configuration system, upload the same SVI file to both of ACT side and STBY side.
- To upload an SVI file to SV9500 Appliance Model for the first time, refer to “Initial Startup” in Appliance Model Installation Manual.
- To upload an SVI file to SV9500 Prepackaged Server Model for the first time, refer to “Initial Startup Procedure” in Prepackaged Server Model Installation and Operation Manual.
- In the following cases, after uploading the license file, system initialization is required:
  - Add a new Client Option License (First activation of Client Option License).
  - Add optional licenses.

STEP 1 Start Internet Explorer.

STEP 2 Type “http://xxx.xxx.xxx.xxx:9801/” into the address bar to access Telephony Server Maintenance Menu. **Telephony Server Maintenance Menu Login screen** appears. After the login, **Telephony Server Maintenance Menu screen** appears.

Note: Be sure to note the following conditions.
- “xxx.xxx.xxx.xxx” represents the IP address of the destination SV9500.
  - For the dual CPU, enter the LAN1 IP address of System 0 or System 1.
  - For the single CPU or SV9500 Prepackaged Server Model, enter the LAN1 IP address (ACT).
- The default for both user name and password is “admin”. We recommend that you change the user name and the password from the Advanced Menu.

STEP 3 Click the **Upload** button for **License** on **Telephony Server Maintenance Menu** screen. The **License Upload** dialog box appears in the lower right position of the screen.

STEP 4 Click the **Browse** button in the dialog box and specify the SVI file.

STEP 5 Select **Work** and then click the **Upload** button in the dialog box. When the uploading is complete, the message "Operation successfully completed." will be displayed. Click the **OK** button.

21.3 Activate Uploaded License File

To enable the uploaded license file (SVI file), follow the steps below.

Note: Procedure differs depending on the license software type.

License Conditions	How to Operate
To register the following additional licenses: • Client License • Extra Client Option License	With the AACT command, the license files (SVI file) are loaded only into active side. When the system is in dual-configuration Appliance Model, load the license files (SVI files) with the CFCS command to the standby side after the state where PCPro is restricted from connecting is cleared. **Note:** When the system is in dual-configuration Appliance Model, the SVI file needs to be loaded to the CF in both system 0 and system 1.
To register the following new licenses from scratch or remove all of the following licenses from the system: • Client License • Extra Client Option License • Option License	Use either of the following methods: • Execute **Program & Office Data Load & System Initialize** option of the SINZ command. • Load the SVI file with the AACT command then perform the **Non-load initialization** with the SINZ command.

21.4 Operation Check

STEP 1 By using the following commands, check that the license file (SVI file) is updated.

- Check the software key code with the AACT command.

- Check the date of the license file update with the DISS command.

STEP 2 Referring to "Installation Test" in Appliance Model Installation Manual, check that important features are working properly.

21.5 Work after License Install

Register the activation code to the Telephony Server with the AACT command.

STEP 1 In the AACT command window, select the **Register Activation Code** radio button and press the **Get** button. The **Activation Code** field is displayed.

STEP 2 Enter the Activation Code you have received from the LMS server, into the **Activation Code** field and press **Set** button.

Note: Be sure to note the following conditions.

- When using SV9500 Prepackaged Server Model, register the activation code after you set the IP address of LAN1 (ACT) (only for IPv4 addresses). If you change the IP address of LAN1 (ACT) after your Certify Status is “Certify OK”, it will change to “Certify NG (HKC)”. In that case, see the appendix of Prepackaged Server Model Installation and Operation Manual.
- If the activation code is later found to be incorrect, you need to run the AACT command again and enter the correct code.

STEP 3 Verify you receive the Certify OK confirmation message.

22. DISPLAY OF IP MODULE OPERATION STATUS

22.1 Overview

This feature displays the operating status (Running/Stop) of TCP/IP modules, Protocol Handlers (PH), and SIP Server collectively by the DMOS command in order to support prompt recovery and preventive maintenance.

22.2 Operating Procedure

None.

22.3 Service Conditions

<Important Notices>

(1) Targeted systems are SV9500 and SR-MGC.

<Interactions with Other Features>

None.

<Hardware/Software>

None.

<Interactions with Networks>

None.

<Conditions Specific to This Feature>

(1) To update the read-out data, click the **GET** button again.

(2) Periodic Health Check is conducted between the internal PHE and MPH. If MPH does not respond within a certain period of time, “Health Check NG” is detected. [SP Control] of [PH Module Status] displays “Running” until the registration information is deleted.

<Other Conditions>

None.

22.4 Data Assignment

None.

23. CONTROL OF TERMINAL REGISTRATION

23.1 Overview

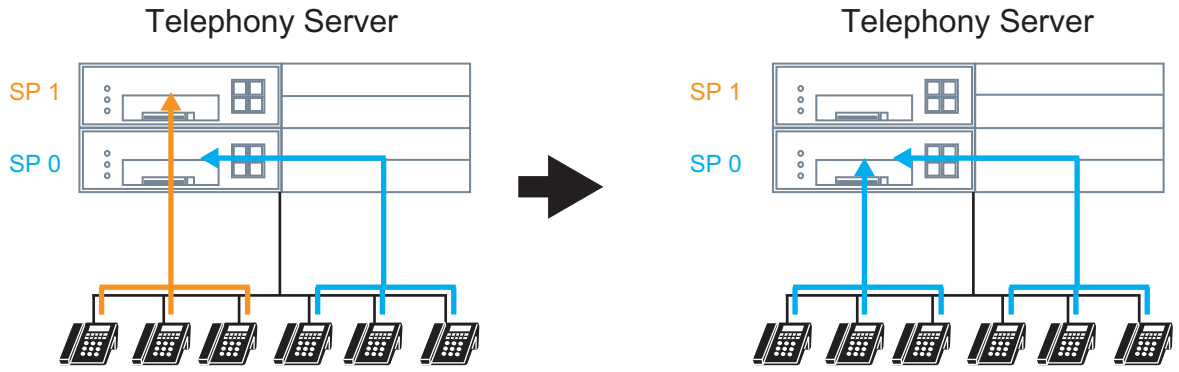
This feature allows the system to reset terminals registered to its SP-PHD with the CTSP command, moving the member terminals from one side of the system (System 0 or System 1) to the other.

Note: Hereinafter, Signaling Processors (SP) belonging to the Telephony Servers (System 0 and System 1) are referred to as SP 0 and SP 1, respectively.

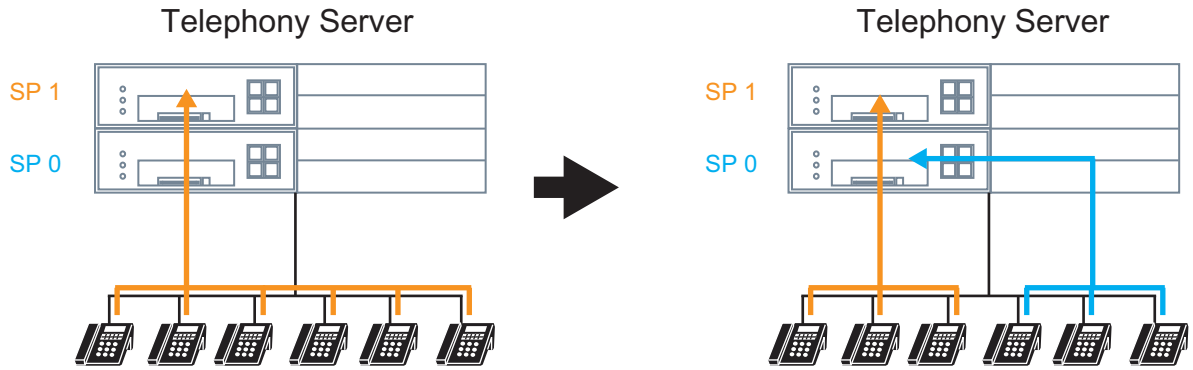
Note: For more information on the CTSP command, refer to "CTSP: Control of Terminal Registration" in Chapter 7 of this manual.

The following types of connection switchover are available:

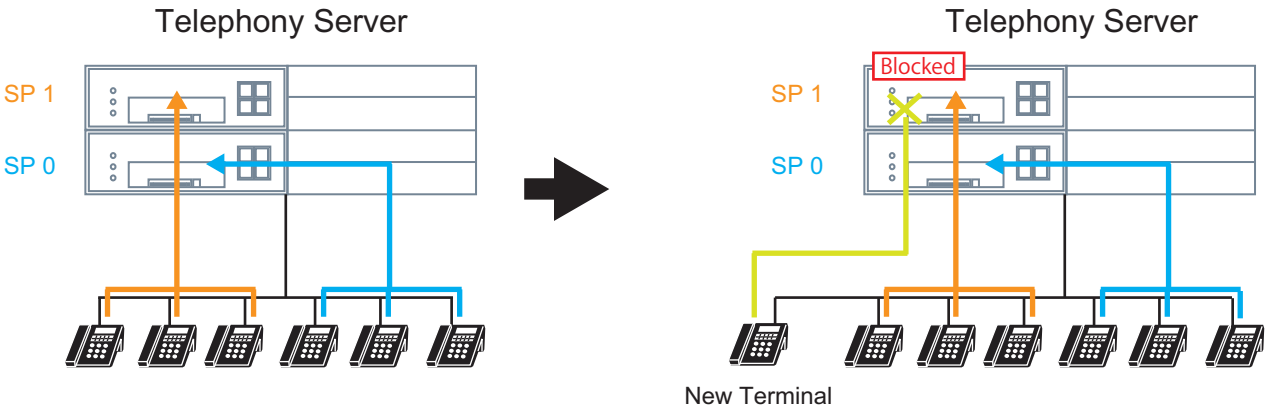
(a) Moves the terminals distributed between SP-PHDs (SP 0 or SP 1) so that all the terminals are registered to one SP-PHD.



(b) Distributes the terminals registered to one SP-PHD (SP0 or SP1) evenly between the SP-PHDs so as to achieve load balance.



(c) Denies new terminal registration to SP-PHD (SP 0 or SP 1).

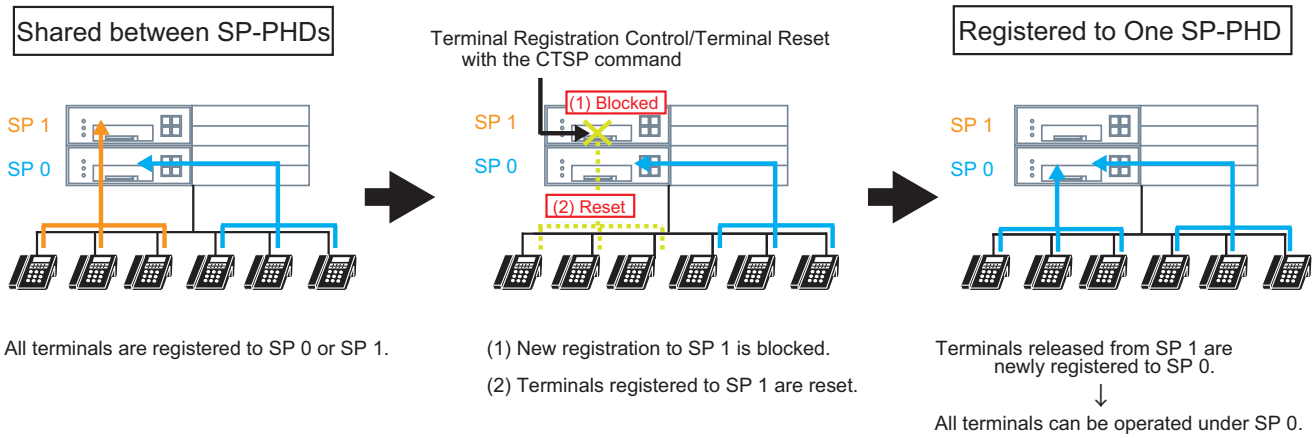


23.2 Operating Procedure

The following examples are provided to explain the operating procedures for connection switchover of member terminals that are registered to SP-PHDs (SP 0 or SP 1).

- To move the terminals distributed between SP-PHDs (SP 1 and SP 0) so that all the terminals are registered to one SP-PHD (SP 0).
- To distribute all the terminals registered to one SP-PHD (SP 1) between SP-PHDs (SP 0 and SP 1)
- To deny new terminal registration to SP-PHD (SP 1)

(a) To move the terminals distributed between SP-PHDs (SP 1 and SP 0) so that all the terminals are registered to one SP-PHD (SP 0).



Terminals registered to SP 1 can be moved to SP 0 with the CTSP command, which resets all the member terminals of SP 1 and registers them to SP 0.

While terminal reset is being performed, the number of member terminals of the SP 1 shown in the [PHD] field of [MPH-ID Registration Terminal Information] is periodically updated, allowing the user to check the progress of the connection switchover.

STEP 1 Access the CTSP command, and click the **Get** button.

STEP 2 Assign the following values to the parameters:

Change Type: All Release

MPH-ID: MPH-ID of SP 1

PH Select: Normal or Force **Note 1**

Note 1: Choosing Normal resets only the member terminals in idle state; Force resets all member terminals, regardless of whether they are in operation or idle.

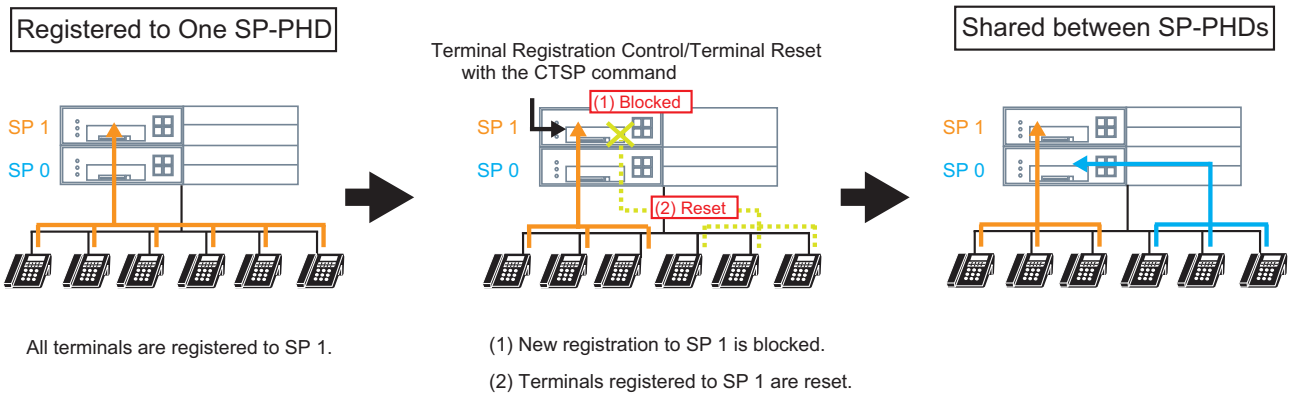
STEP 3 Click the **Execute** button. The **Processing is being executed** dialog box appears.

STEP 4 Confirm that all the terminals are registered to SP 0 by checking the [PHD] field of [MPH-ID Registration Terminal Information].

STEP 5 Click the **Stop** button on the **Processing is being executed** dialog box.

Note: Clicking the **Stop** button stops sending terminal reset requests and permits registration to SP 1. This may cause some of the terminals to re-register to SP 1. Be sure to click the **Stop** button after confirming that the connection switchover is complete.

(b) To distribute all the terminals registered to one SP-PHD (SP 1) between SP-PHDs (SP 0 and SP 1)



Terminals registered to SP 1 can be moved to SP 0 with the CTSP command, which resets half of the member terminals of SP 1 using a random choice, and then registers them to SP 0.

While the terminal reset is being performed, the number of member terminals shown in the [PHD] field is periodically updated, allowing the user to check the progress of the connection switchover.

STEP 1 Access the CTSP command, and click the **Get** button.

STEP 2 Assign the following values to the parameters:

Change Type: Separate Release

MPH-ID: MPH-ID of SP 1

PH Select: Normal or Force **Note 1**

Note 1: Choosing Normal resets only the member terminals in idle state; Force resets all member terminals, regardless of whether they are in operation or idle.

STEP 3 Click the **Execute** button. The **Processing is being executed** dialog box appears.

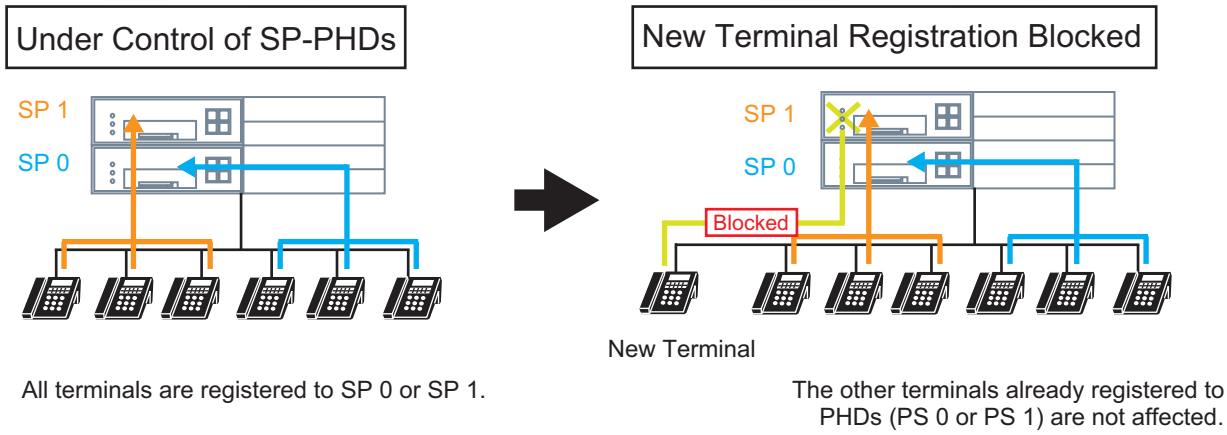
STEP 4 By checking the **PHD** field of **MPH-ID Registration Terminal Information**, confirm that half of the terminals have been registered to SP 0 (they have been divided equally between SP 0 and SP 1).

STEP 5 Click the **Stop** button on the **Processing is being executed** dialog box.

Note: Be sure to keep the CTSP command active until the operation in step 5 is complete.

Note: Clicking the **Stop** button stops sending terminal reset requests and permits registration to SP 1. This may cause some of the terminals to re-register to SP 1. Be sure to click the **Stop** button after confirming that the terminals are shared equally between SP 0 and SP 1.

(c) To deny new terminal registration to SP-PHD (SP 1)



New terminal registration to SP 1 can be blocked with the CTSP command.

Note: Be sure to keep the CTSP command active throughout the time period required to block new registration.

STEP 1 Access the CTSP command, and click the **Get** button.

STEP 2 Assign the following values to the parameters:

Change Type: Separate Release or All Release **Note 1**

MPH-ID: MPH-ID of SP 1

PH Select: Registration Restriction

Note 1: When **Registration Restriction** is chosen, no terminal reset is performed. In this case, setting of **Change Type** has no effect on the operation.

STEP 3 Click the **Execute** button. The **Processing is being executed** dialog box appears.

STEP 4 Click the **Stop** button on the **Processing is being executed** dialog box.

Note: Clicking the **Stop** button permits registration to SP-PHD (SP 1), allowing terminals to be newly registered to SP 1.

23.3 Service Conditions

<Important Notices>

(1) This feature only works on a Telephony Server with dual (redundant) configuration in which both SPs are operating normally. If either SP is down due to a problem, this feature cannot be used.

<Interactions with Other Features>

(1) When this feature is used in an ACD system, the ACDP Automatic Logoff needs to be enabled with the ASYDL/ASYDN command (SYS1, Index 874 bit 3=1). Otherwise, ACD terminals are not logged off even after being reset, to which incoming calls are still distributed. Thus calls routed to the terminals during re-registration will remain unanswered.

<Hardware/Software>

(1) In this feature, up to a total of 4000 terminals can be controlled by SP-PHDs (SP 0/SP 1).

(2) This feature is only valid for terminals being controlled by SP-PHDs, such as IP terminals and SIP Multiple Line terminals.

(3) This feature cannot control terminal registration/reset by terminal type.

<Interactions with Networks>

None.

<Conditions Specific to This Feature>

None.

<Other Conditions>

None.

23.4 Data Assignment

ASYDL/ASYDN - Assignment of System Data (LDM/NDM)

Enable the ACDP Automatic Logoff feature by assigning the following values:

SYS1

Index 874, Bit 3=1 (ACDP Automatic Logoff is in service.)

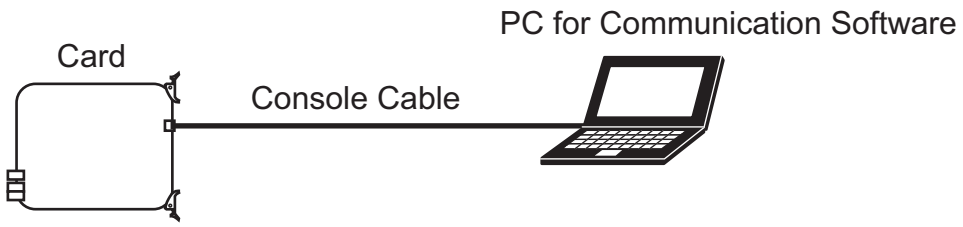
Note: The data assignment above is required when this feature is used in an ACD system.

24. FIRMWARE DOWNLOAD (CH CARDS OTHER THAN IPPAD/DAT)

24.1 Overview

Firmware for the control of the cards accommodated in 7U-PIR becomes available only after being downloaded and installed on the target card. The downloading requires VT-100 compliant communication software and Console Cable (RJ-45 to RS-232C serial cable (optional accessory)) to connect the card to your PC through the serial connector located on the front of the card.

Note: For Windows computers, HyperTerminal was bundled with Windows 95 to Windows XP. This section explains the procedure for setting data by using HyperTerminal as an example. For Windows Vista or later operating systems, prepare VT-100 compliant terminal software yourself.



For details on the IPPAD card, see "FIRMWARE DOWNLOAD (IPPAD)."

24.2 Operating Procedure

None

24.3 Service Conditions

<Important Notices>

(1) Switching of the MB switch is required.

(2) Note the following when a firmware download is executed with a serial console:

If the extension of a download file shows ".bin" on the display requesting a download file transfer, ensure that the transfer settings of communication software are set to "Binary" before executing the transfer. Otherwise an error will occur.

(3) If a firmware download fails in the middle of the process, make sure to download again. A card will not start unless downloading is completed.

<Interactions with Other Features>

None

<Hardware/Software>

(1) Conditions for VT-100 compliant communication software are listed below:

Speed	38400 bps
Data length	8 bit
Parity bit	None
Stop bit	2 bit
Flow control	None

<Interactions with Networks>

None

<Conditions Specific to This Feature>

(1) Transfer a download-list file first, then transfer a download file according to this list file.

(2) Download status can be checked with the lamp status of the card in real time.

X: Steady ON S: Flashing (SLOW) F: Flashing (FAST) -: Off C: Line Controlled

Download Status	Lamp Status	
	OPE	LOAD Note 1
BOOT program starting	-	X
Displaying BOOT menu	-	-
Executing download/Download data transfer waiting	-	S
Transferring download file data/Writing firmware program	-	X
Received data check error/writing failure	-	F
Main program initialization starting	-	X
Operation Status	X	C

Note 1: "DOPE" lamp is used for CCT/DTI/PRT cards.

<Other Conditions>

None

24.4 Data Assignment

STEP 1 Connect Console Cable to the serial connector located on the front of the card.

STEP 2 Start up a maintenance program using VT-100 compliant communication software such as Hyper Terminal.

STEP 3 Set the MB switch to off to start the card.

```
BOOT Program Start.
```

STEP 4 Press the ESC key within 3 seconds after setting the MB switch to OFF. Select **1: Download start**.

```
BOOT Program Start..

Please select boot menu.
  1 : Download start
  q : Quit boot menu
>1

Selected boot menu is 1. OK? (y/n):y

Please transfer a download list file.
READY

Serial transfer start.
******************************

Serial transfer end.

Receive data checking...
Receive data OK.

Please transfer a "SP****.hex" file.
  READY



Serial transfer start.
******************************
Serial transfer end.

Receive data checking...
Receive data OK.
```

'.' is added to the end of the message every second.

Enter '1' to start downloading when the BOOT menu appears.

Enter 'y' when a confirmation message appears.

Transfer a download-list file using the communication software while 'READY' is displayed.

Job execution status is displayed.

A download-file transfer will be requested according to the download-list file. Transfer the requested download file using the communication software while 'READY' is displayed.

Job execution status is displayed.

```
Flash ROM write start.
Flash ROM write end.


Please wait...
Please transfer a "PB_TONE_DATA.bin" file.


READY




Serial transfer start.
********************************
Serial transfer end.
Download end.



Please select boot menu.
  1 : Download start
  q : Quit boot menu
>q
Firmware Program Start.
```

The next download file is requested. Transfer a download-list file using the communication software while 'READY' is displayed.

Note: If the extension of the requested file is ".bin", make sure to change the transfer settings of the communication software to "Binary".

Job execution status is displayed.

A message appears when all files listed in the download-list file have been downloaded, or when the ESC key is pressed to cancel the download.

Enter 'q' to quit the BOOT menu.

The main program starts.

STEP 5 Unplug the Console Cable and set the MB switch to ON.

25. FIRMWARE DOWNLOAD (IPPAD)

25.1 Overview

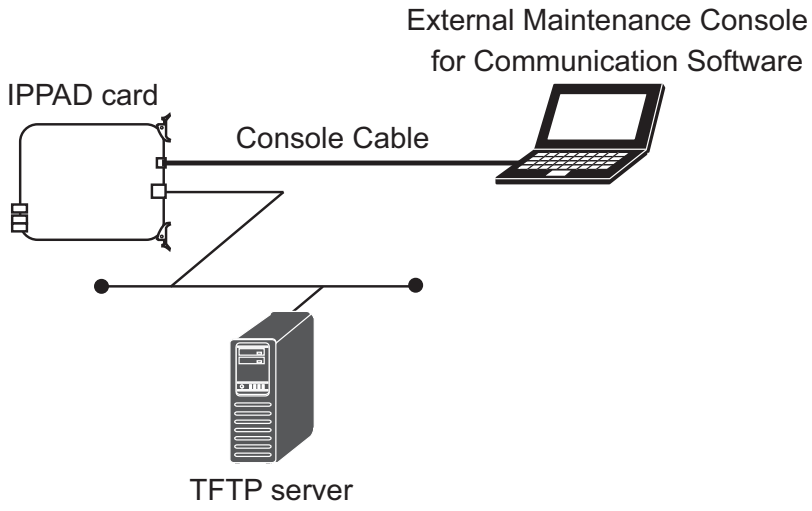
Firmware to control IPPAD card accommodated in 7U-PIR is available after downloading and installing the files on the target card.

Download requires Console Cable (RJ-45 to RS-232C serial cable (optional accessory)) connecting an external maintenance terminal (PC) to IPPAD card. The download files are obtained from the TFTP server through VT-100 compliant communication software such as Hyper Terminal running on a serial console.

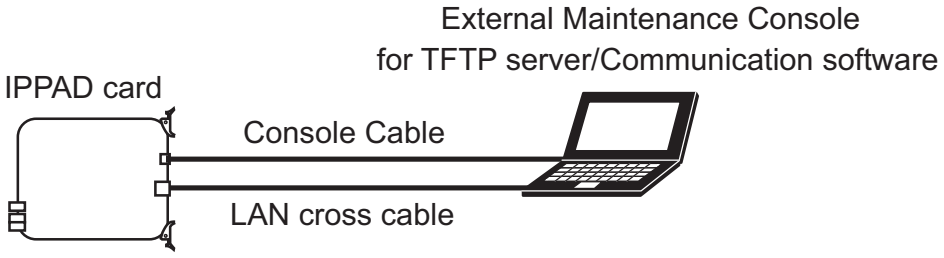
Note: For Windows computers, HyperTerminal was bundled with Windows 95 to Windows XP. This section explains the procedure for setting data by using HyperTerminal as an example. For Windows Vista or later operating systems, prepare VT-100 compliant terminal software.

To connect IPPAD card and an external maintenance terminal, you can use either of the following methods:

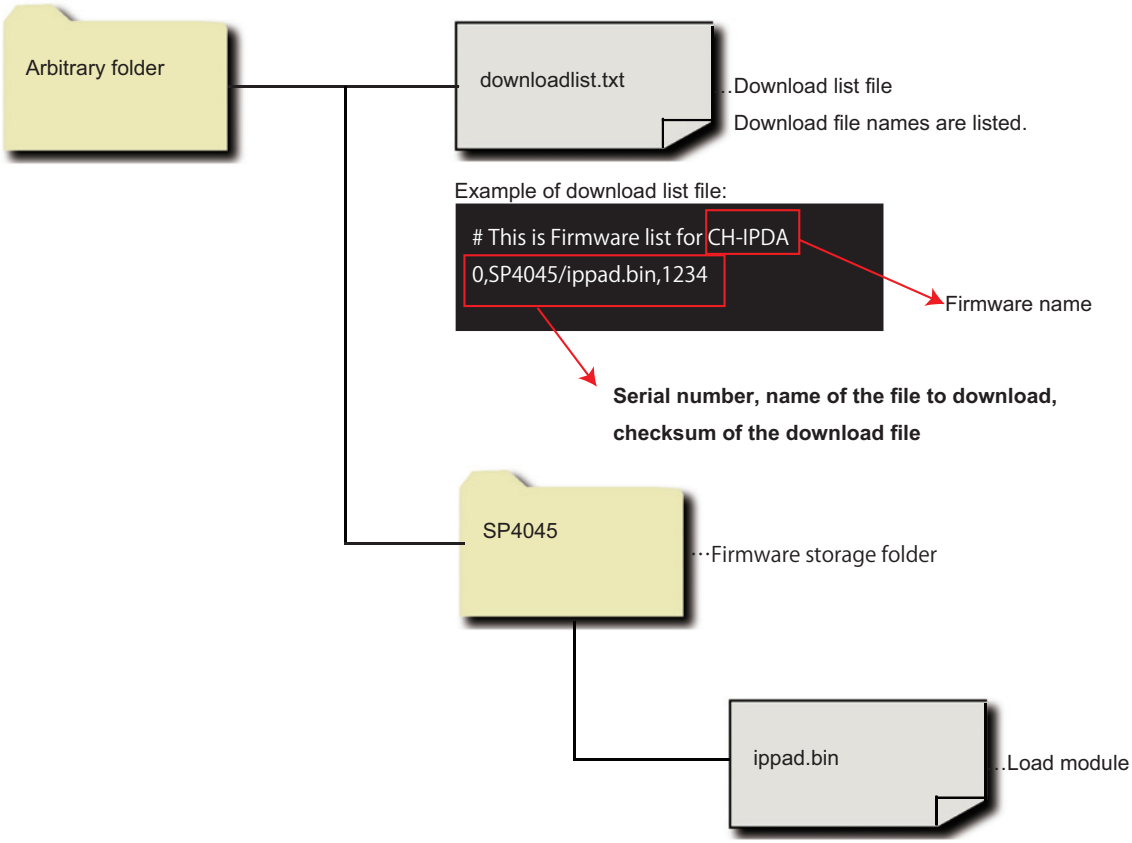
(a) Connect the ETHERNET connector located on the front of the IPPAD card and the TFTP server in the same network.



(b) Use both an external maintenance terminal (PC) and the TFTP server.



Below is a configuration diagram of download list file and load module file to be stored on the TFTP server. SP-4045 is used as an example.



25.2 Operating Procedure

None

25.3 Service Conditions

<Important Notices>

(1) If a serial console is available for use, downloading is possible while either the OPE lamp is steady ON or OFF.

Note: If downloading is executed while a channel status is busy with the OPE lamp steady ON, it may affect a call processing or a state of active call.

<Interactions with Other Features>

None

<Hardware/Software>

(1) Conditions for VT-100 compliant communication software are listed below:

Speed	38400 bps
Data length	8 bit
Parity bit	None
Stop bit	2 bit
Flow control	None

<Interactions with Networks>

Assign the same network address to TFTP server as the IPPAD card.

<Conditions Specific to This Feature>

(1) Transfer a download-list file first, then transfer a download file according to this list file.

(2) Download status can be checked with the lamp status of a card in real time

- Office data of the IPPAD card is not registered.

X: Steady ON S: Flashing (SLOW) F: Flashing (FAST) -: Off C: Line Controlled

Download Status	Lamp Status	
	OPE	LOAD
Download command is executed. Maintenance personnel is entering necessary information for TFTP.	-	S
Download command is halted by the direction of a maintenance personnel	-	-
Transferring download data/ Verification of reception data checksum in process	-	X
Transferring download data failed/Reception data checksum error	-	F
Waiting for a permission to write a firmware program after a download data transfer is completed.	-	S

X: Steady ON S: Flashing (SLOW) F: Flashing (FAST) -: Off C: Line Controlled

Download Status	Lamp Status	
	OPE	LOAD
Download command is halted by the direction of a maintenance personnel after a download transfer is completed.	-	-
Firmware program write is in process (write to SPI-Flash ROM in process)	-	X
Firmware program write failed (write to SPI-FlashROM fails)	-	F
Firmware program write is completed successfully (write to SPI-FlashROM succeeds)	-	-

- Office data of the IPPAD card is registered

X: Steady ON S: Flashing (SLOW) F: Flashing (FAST) -: Off C: Line Controlled

Download Status	Lamp Status	
	OPE	LOAD
Download command is executed.	X	C
A maintenance personnel is entering necessary information for TFTP.	X	S
Download command is halted by the direction of a maintenance personnel.	X	-
Transferring download data/Verification of reception data checksum in process	X	X
Transferring download data failed/Reception data checksum error	X	F
Waiting for a permission to write a firmware program after a download data transfer is completed.	X	S
Download command is halted by the direction of a maintenance personnel after a download transfer is completed.	X	-
Firmware program write is in process (SPI-Flash ROM write in process)	X	X
Firmware program write failed (SPI-FlashROM)	X	F
Firmware program write is completed successfully (write to SPI-FlashROM succeeds).	X	-
Initialization starts (with the MB switch or execute the reboot command)	-	-/X
Operation status	X	C

<Other Conditions>

None

25.4 Data Assignment

STEP 1 If the OPE lamp is steady ON, use parameters “C_RT” and “C_TK” of the MBCT/MBCTC commands to specify Line Equipment Numbers (LENS) to set the MB=1 (Make-busy setting).

Note: Confirm that the Busy lamp is flashing (FAST) before executing the download command after Make-busy settings have been configured.

STEP 2 Store the download list file and load module file in an arbitrary folder on TFTP server.

STEP 3 Start up the software of TFTP server. Specify the destination path of the arbitrary folder which stores the download list file and load module file.

STEP 4 Connect Console Cable to the serial connector located on the front of the card, and start up VT-100 compliant communication software such as Hyper Terminal.

STEP 5 Execute the download command with a serial console.

```
>download

--- Main Program Download mode ---

<< Current Version >>
-------------------------+-------------
Firmware Information     | Issue
-------------------------+-------------
 SP-4045 IPDA PROG-A     | 01.00.00.00
 SP-4046 IPDBOOT PROG-A  | 01.00.00.00
    -------------------------+-------------

<< Current Status >>
|---+-----+-----+-----+-----+-----+-----+-----+-----+
|   |    0|    1|    2|    3|    4|    5|    6|    7|
|---+-----+-----+-----+-----+-----+-----+-----+-----+
| 0 |  I  | MB  | MB  | MB  | MB  | MB  | MB  | MB  |
| 1 | MB  | MB  | MB  | MB  | MB  | MB  | MB  | MB  |
| 2 | MB  | MB  | MB  | MB  | MB  | MB  | MB  | MB  |
| 3 | MB  | MB  | MB  | MB  | MB  | MB  | MB  | MB  |
|---+-----+-----+-----+-----+-----+-----+-----+-----+
```

Enter “download” on configuration mode.

Firmware version prior to downloading is displayed.

A message is displayed only when the channel status is idle or busy.

Note: If downloading is executed while a channel status is busy with the OPE lamp steady ON, it may affect a call processing and a status of active call.

```
Idle/Busy status exit
Do you want to continue procession ? [y(yes} / n(no) ]
: y

--- Own IP address ---

Current own IP address: 10.41.1.11
Change own IP address ? [Y/y](Change) / [N/n](Current)
/ [Q/q](Quit) ] : n

--- TFTP server IP address set ---

Current TFTP server IP address: 10.41.1.250
Change own IP address ? [Y/y](Change) / [N/n](Current)
/ [Q/q](Quit) ] : n

Change IP address complete.

New own IP address         : 10.41.1.11
New TFTP server IP address : 10.41.1.250

Are these IP address correct ? [Y/y](Correct) / [N/
n](Modify) / [Q/q](Quit) ] : y

--- Program download ---

List file is 'downloadlist.txt'.
>>> List file download.
Download start...
Download was completed.

Main program file is 'SP4045/ippad.bin'.
>>> Main program file download.
Download start...
Download was completed.
```

Enter "y" to continue downloading, "n" to cancel.

IP address of IPPAD is displayed. Enter "y" to change the IP address, "n" to not change. To quit downloading, enter "q".

IP address of TFTP server is displayed. Enter "y" to change the IP address, "n" to not change. To quit downloading, enter "q".

IP addresses of IPPAD and TFTP server are displayed.

If displayed IP addresses are correct, enter "y".
If not correct, enter "n" to change. To quit downloading, enter "q".

Downloading starts.

Transfer the download list file. If the transfer is successful, "Download was completed" is displayed.

Transfer the load module file. If the transfer is successful, "Download was completed" is displayed.

```
Checksum check...
>>> Checksum OK!


<< Current Version >>
-------------------------+-------------
Firmware Information     | Issue
-------------------------+-------------

SP-4045 IPDA PROG-A      | 01.00.00.00
SP-4046 IPDBOOT PROG-A   | 01.00.00.00
-------------------------+-------------


<< Next Version >>
-------------------------+-------------
Firmware Information     | Issue
-------------------------+-------------
 SP-4045 IPDA PROG-A     | 02.00.00.00
 SP-4046 IPDBOOT PROG-A  | 01.00.00.00
-------------------------+-------------


Do you want to save Download data ? [Y/y](Continues) /
[Q/q](Quit) ] : y


--- Flash ROM save start ---


Erase start........
Erase OK!
Blankcheck start.....
Blankcheck OK!
Write start......
Write OK!
Verify check.....
Verify OK!
Program write OK!
```

If the load module checksum is same as the one listed on the download list file, “Checksum OK!” is displayed.

Firmware version numbers before downloading are displayed.

Downloaded firmware version numbers are displayed.

Enter “y” to save the downloaded load module file to SERIAL FLASH ROM.
Enter “q” to not save.

Saving to SERIAL FLASH ROM starts.
Execution status is displayed.

A dot “.” is added to the end of a message at a time as processing proceeds.

```
>>> Program download completed.




+-------------------------------------------------
----------------------------|
| IPPAD card must be reinitialized (MB key UP-DOWN or
by using "reboot"command).   |
+-------------------------------------------------
----------------------------|
>
```

If all load module files listed on the download list file are saved, a following message is displayed; "IPPAD card must be reinitialized (MB switch UP-DOWN or by using "reboot" command)".

To restart the card, use the MB switch (SW00) or enter the "reboot" command on configuration mode.

STEP 6 If downloading is successful, switch the MB switch to OFF-ON-OFF or execute the reboot command with a serial console to restart the card.

STEP 7 If MB=1(Make-busy setting) has been set in Step1, release MB=1 by setting MB=0 to the specified LENS with the MBCT or MBCT command.

25.5 Error Code

The table below shows error codes, error descriptions and procedures to follow in such cases.

Error Code	Error Description	Procedure
0x4b0007	IPPAD card and the TFTP server are not connected.	Connect the IPPAD card and the TFTP server correctly.
	IPPAD card and the TFTP server have different segments of IP address.	Assign the same segment to the IPPAD card and the TFTP server.
	IP address of the TFTP server does not exist.	Set the IP address of the TFTP server correctly.
	TFTP server is not in operation status.	Set the TFTP server to operation status.
0x4b0008	Requested file to download is not on the TFTP server.	Check the name of the download file and the TFTP server settings.
	Directory setting of requested download file has not been configured correctly	

Follow the procedures below if error codes not listed above are displayed in the event of a download failure.

Error Code	Error Description	Procedure
Checksum unmatched! Check sum of Filename is 12345. Not 66666.	Checksum error	Confirm the checksum of the download list file on the TFTP server.
Erase NG!	SPI-FlashROM erase error	Redownload. If the same error persists after redownloading, restart the card and download again.
Blankcheck NG! (malloc ng)	Securing buffer for SPI-FlashROM blankcheck fails	
Blankcheck NG!	SPI-FlashROM blankcheck error	
Write NG! (Busy)	SPI-FlashROM write time-out	Redownload approx. 1 minute later when SPI-FlashROM is not busy. If the same error persists, restart the card and download again.
Write NG!	SPI-FlashROM write error	Redownload. If the same error persists after redownloading, restart the card and download again.
Verify NG! (malloc ng)	Securing buffer for SPI-FlashROM verifying	
Verify NG!	SPI-FlashROM verify error	

26. FIRMWARE DOWNLOAD (DAT)

26.1 Overview

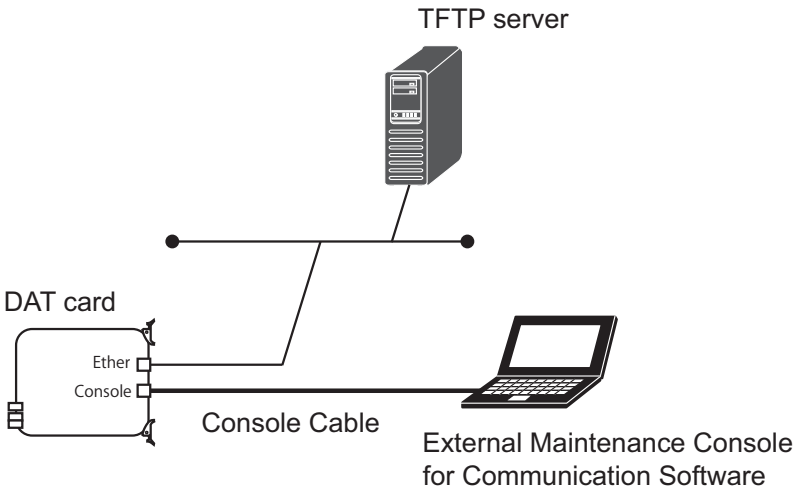
Firmware to control a DAT card accommodated in 7U-PIR is available after downloading and installing the files on the card.

Download requires a Console Cable (RJ-45 to RS-232C serial cable (optional accessory)) connecting an external maintenance terminal (PC) to DAT card. The download files are obtained from the TFTP server through VT-100 compliant communication software such as Hyper Terminal running on a serial console.

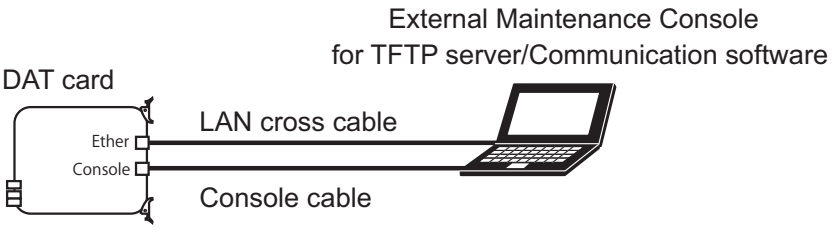
Note: For Windows computers, HyperTerminal was bundled with Windows 95 to Windows XP. This section explains the procedure for setting data by using HyperTerminal as an example. For Windows Vista or later operating systems, prepare VT-100 compliant terminal software yourself.

To connect a DAT card and an external maintenance terminal, you can use either of the following methods:

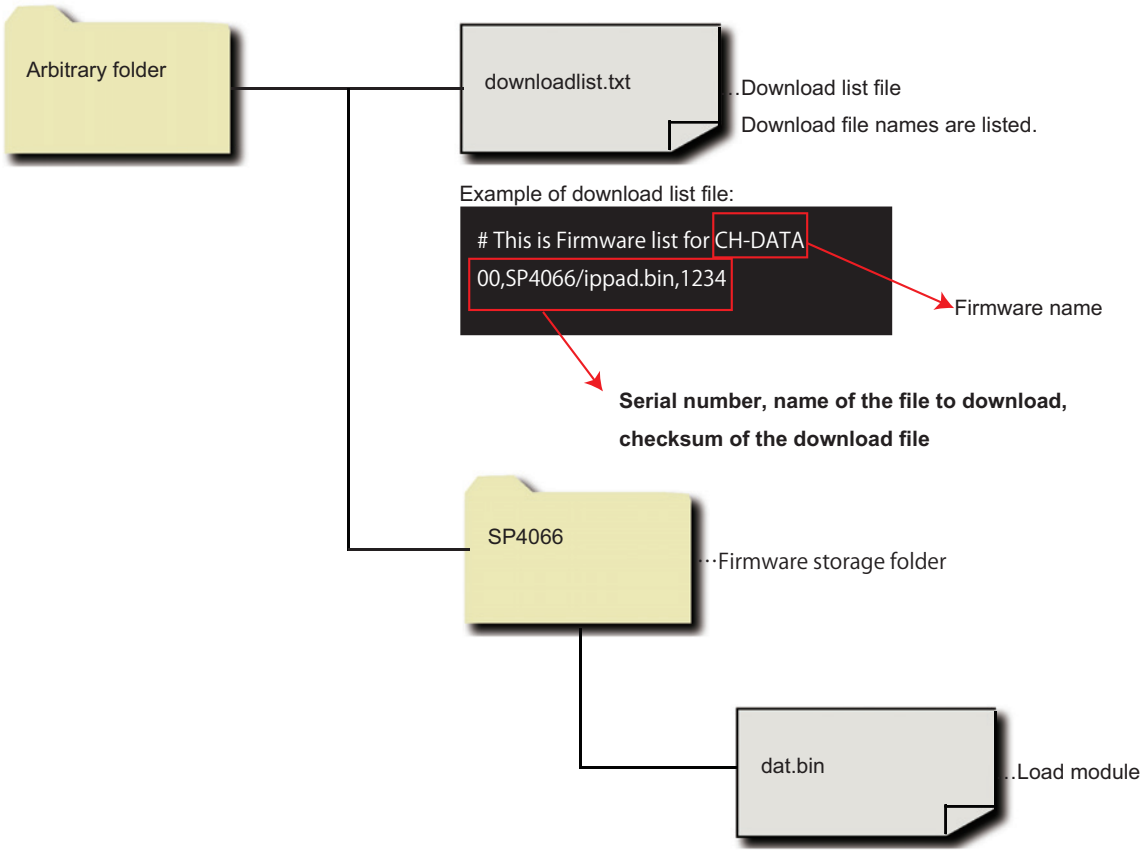
(a) Connect the ETHERNET connector located on the front of the DAT card and a TFTP server in the same network.



(b) Use one device (PC) as both an external maintenance terminal and a TFTP server.



Below is a configuration diagram of the download list file and the load module file to be stored on the TFTP server. SP-4066 is used as an example.



26.2 Operating Procedure

None

26.3 Service Conditions

<Important Notices>

(1) If a serial console is available for use, downloading is possible while either the OPE lamp is steady ON or OFF.

Note: If downloading is executed while a channel status is busy with the OPE lamp steady ON, it may affect a call processing or the state of an active call.

(2) Downloading while playing or recording can affect the system operations. Set all the circuits to make busy before starting the download.

Note: A channel used as External Music-On-Hold cannot be set to make busy. To avoid any effect to the system operations when downloading, set in advance the card to not use External Music-On-Hold.

(3) When using the download command, the IP address can be momentarily changed. In that case, even if it is not possible to use Ether with the software switches, downloading is possible. Also, if the switch settings for IP address, subnet mask or default gateway are momentarily changed, it is not possible to access to the IP address set with the software switches, but since the session is not disconnected, after the downloading is finished, the connection will be possible again.

(4) Downloading firmware for a DAT card is only supported in a physical LAN. This download is not possible over a VLAN. If your system uses a VLAN configured with software switches, temporarily use an IP address of a physical LAN in the download command.

<Interactions with Other Features>

None

<Hardware/Software>

(1) Conditions for VT-100 compliant communication software are listed below:

Speed	38400 bps
Data length	8 bit
Parity bit	None
Stop bit	2 bit
Flow control	None

<Interactions with Networks>

Assign the same network address to the TFTP server and the DAT card.

<Conditions Specific to This Feature>

(1) Transfer a download-list file first, then transfer a download file according to this list file.

(2) Download status can be checked with the lamp status of the card in real time

LOAD Lamp State	DESCRIPTION
Light	Program downloading • Downloaded program is being transfered • Checksum is being performed • SPI-Flash ROM is being written

LOAD Lamp State	DESCRIPTION
Flash (60 IPM)	Waiting for the program download
Flash (120 IPM)	The program download is failed • There is no TFTP file • There is no downloading file • There is a checksum error • A reason other than above (writing failed, etc) The program was interrupted because of an order of the user
OFF	The program download is completed

<Other Conditions>

None

26.4 Data Assignment

STEP 1 If the OPE lamp is steady ON, use parameters “RT” and “TK” of the MBTK or MBTC commands to specify Line Equipment Numbers (LENS) to set the MB=1 (Make-busy setting).

Note: Confirm that the Busy lamp is flashing (FAST) before executing the download command after Make-busy settings have been configured.

Note: A channel used as External Music-On-Hold cannot be set to make busy. To avoid any effect to the system operations when downloading, set in advance the card to not use External Music-On-Hold.

STEP 2 Store the download list file and load module file in a folder of your choice on the TFTP server.

STEP 3 Start up the software of the TFTP server. Specify the destination path of the folder of your choice which stores the download list file and load module file.

STEP 4 Connect a Console Cable to the serial connector located on the front of the card, and start up VT-100 compliant communication software such as Hyper Terminal.

STEP 5 Execute the download command with a serial console.

```
>download

2014/09/01 23:22:33

--- Main Program Download mode ---

<< Current Version >>
-------------------------+-------------
Firmware Information     | Issue
-------------------------+-------------
 SP-4066 DATA PROG-A     | 01.00.00.00
 SP-4046 IPDBOOT PROG-A  | 03.00.00.00
-------------------------+-------------

<< Current Status >>
|---+-----+-----+-----+-----+-----+-----+-----+-----+
|   |    0|    1|    2|    3|    4|    5|    6|    7|
|---+-----+-----+-----+-----+-----+-----+-----+-----+
| 0 |  MB |  MB |  MB |  MB |  MB |  MB |  MB |  I  |
|---+-----+-----+-----+-----+-----+-----+-----+-----+



Idle/Busy status exit
Do you want to continue procession ? [y(yes) / n(no) ]
: y



--- << Current Setting >> ---

Current own IP address         : 192.168.10.1
Current own Subnet mask        : 255.255.0.0
Current Default gateway address: 192.168.10.254
Current TFTP server IP address : 192.168.10.250
```

Enter “download” on configuration mode.

Current time is displayed.

Firmware version prior to downloading is displayed.

A message with the contents of the [show status] command is displayed only when the channel status is idle or busy.

Note: If downloading is executed while a channel status is busy with the OPE lamp steady ON, it may affect the recording or playing.

Enter “y” to continue downloading, “n” to cancel.

Current IP address, subnet mask, default gateway and TFTP server IP address are displayed.

```
--- Own IP address ---

Current own IP address: 192.168.10.1
Change own IP address ? [Y/y](Change) / [N/n](Current)
/ [Q/q](Quit) ] : n


--- Own Subnet mask ---

Current own Subnet mask: 255.255.255.0
Change own Subnet mask ? [Y/y](Change) / [N/
n](Current) / [Q/q](Quit) ] : n


--- Default gateway IP address set ---

Current Default gateway IP address: 192.168.10.254
Change Default gateway IP address ? [Y/y](Change) /
[N/n](Current) / [Q/q](Quit) ] : n


--- TFTP server IP address set ---

Current TFTP server IP address: 192.168.10.250
Change TFTP server IP address ? [Y/y](Change) / [N/
n](Current) / [Q/q](Quit) ] : y


If you want to return to the previous step, Please
input "Q".
Input new IP address: 192.168.10.100
Change IP address complete.

--- << Result Setting >> ---

New own IP address              : 192.168.10.1
New own Subnet mask             : 255.255.255.0
New Default gateway IP address  : 192.168.10.254
New TFTP server IP address      : 192.168.10.100
```

IP address of DAT is displayed. Enter "y" to change the IP address or "n" to not change. To quit downloading, enter "q".

Subnet mask is displayed. Enter "y" to change the mask or "n" to not change. To quit downloading, enter "q".

IP address of default gateway is displayed. Enter "y" to change the IP address or "n" to not change. To quit downloading, enter "q".

IP address of TFTP server is displayed. Enter "y" to change the IP address or "n" to not change. To quit downloading, enter "q".

New IP address, subnet mask, default gateway and TFTP server IP address are displayed.

Note: Even if there is not any change the data is displayed.

```
Are these IP address correct ? [Y/y](Correct) / [N/
n](Modify) / [Q/q](Quit) ] : y




--- Program download ---

List file is 'downloadlist.txt'.
>>> List file download.
Download start...

Download was completed.


Main program file is 'SP4066/dat.bin'.
>>> Main program file download.
Download start...

Download was completed.


>>> Checksum create.
Checksum check...

Checksum OK!


<< Current Version >>
-------------------------+-------------
Firmware Information     | Issue
-------------------------+-------------
 SP-4066 DATA PROG-A     | 01.00.00.00
 SP-4046 IPDBOOT PROG-A  | 03.00.00.00
-------------------------+-------------


<< Next Version >>
-------------------------+-------------
Firmware Information     | Issue
-------------------------+-------------
 SP-4066 DATA PROG-A     | 02.00.00.00
 SP-4046 IPDBOOT PROG-A  | 03.00.00.00
-------------------------+-------------
```

If the displayed data is correct, enter "y".
If not correct, enter "n" to change. To quit downloading, enter "q".

Transfer the list file.
If the transfer is successful, "Download was completed" is displayed.

Transfer the file.
If the transfer is successful, "Download was completed" is displayed.

If the load module checksum is the same as the one listed on the download list file, "Checksum OK!" is displayed.

Firmware version numbers before downloading are displayed.

Downloaded firmware version numbers are displayed.

```
Do you want to save Download data ? [Y/y](Continues) /
[Q/q](Quit) ] : y



**********************************************
FlashROM access start. Don't turn off the power!
**********************************************

--- Flash ROM save start ---

Erase start
  0        20        40        60        80        100[%]
  +---------+---------+---------+---------+---------+-----+
  ..........................................................
Erase OK!

Blank check start
  0        20        40        60        80        100[%]
  +---------+---------+---------+---------+---------+-----+
  ..........................................................
Blank check OK!

Write start
  0        20        40        60        80        100[%]
  +---------+---------+---------+---------+---------+-----+
  ..........................................................
Write OK!

Verify check
  0        20        40        60        80        100[%]
  +---------+---------+---------+---------+---------+-----+
  ..........................................................
Verify OK!
Checksum OK!
Program write OK!

>>> Program download completed.
```

Enter "y" to save the downloaded load module file to SERIAL FLASH ROM.
Enter "q" to quit.

Saving to SERIAL FLASH ROM starts.

Execution status is displayed.

A dot "." is added to the end of a message as the execution proceeds.

If the download is successfully completed, the message "Program download completed" is displayed.

```
****************************************
FlashROM access end.
****************************************



+---------------------------------------------+
| DAT card must be reinitialized              |
|(MB key UP-DOWN or by using "reboot" command).  |
+---------------------------------------------+

>
```

If all load module files listed on the download list file are saved, the following message is displayed; "DAT card must be reinitialized (MB switch UP-DOWN or by using "reboot" command)".
To restart the card, use the MB switch (SW00) or enter the "reboot" command on configuration mode.

STEP 6 If the downloading is successful, switch the MB switch to OFF-ON-OFF or execute the reboot command with a serial console to restart the card.

STEP 7 If MB=1(Make-busy setting) has been set in Step1, after rebooting the card, while the OPE lamp is lit, release MB=1 by setting MB=0 to the specified LENS with the "RT" and "TK" parameters of the MBTK or MBTC command.

26.5 Error Code

The table below shows error codes, error descriptions and procedures to follow in such cases.

Error Code	Error Description	Procedure
0x4b0007	The DAT card and the TFTP server are not connected.	Connect the DAT card and the TFTP server correctly.
	The DAT card and the TFTP server IP address segments are different.	Assign the same segment to the DAT card and the TFTP server.
	The IP address of the TFTP server does not exist.	Set the IP address of the TFTP server correctly.
	The TFTP server is not in operation status.	Set the TFTP server to operation status.
0x4b0008	Requested file to download is not on the TFTP server.	Check the name of the download file and the TFTP server settings.
	Directory setting of requested download file has not been configured correctly	

Follow the procedures below if error codes not listed above are displayed in the event of a download failure.

Error Code	Error Description	Procedure
Checksum unmatched! Check sum of Filename is 12345. Not 66666.	Checksum error	Confirm the checksum of the download list file on the TFTP server.
Erase NG!	SPI-FlashROM erase error	Redownload. If the same error persists after redownloading, restart the card and download again.
Blankcheck NG! (malloc ng)	Securing buffer for SPI-FlashROM blankcheck fails	
Blankcheck NG!	SPI-FlashROM blankcheck error	
Write NG! (Busy)	SPI-FlashROM write time-out	Redownload approx. 1 minute later when SPI-FlashROM is not busy. If the same error persists, restart the card and download again.
Write NG!	SPI-FlashROM write error	Redownload. If the same error persists after redownloading, restart the card and download again.
Verify NG! (malloc ng)	Securing buffer for SPI-FlashROM verifying	
Verify NG!	SPI-FlashROM verify error	

27. IP EQUIPMENT STATUS DISPLAY

27.1 Overview

With several commands of PCPro, a list of the registration status of IP equipment accommodated in the system can be displayed and used for different operative situations such as adding new IP equipment or checking when a trouble happens.

With the commands below, the registration status of IP equipment can be checked. Choose the most appropriate according to the concrete use.

- IPAN
  Select the IP equipment that you want to list and the registration status list of the selected IP equipment can be displayed. For details, see the IPAN section in Maintenance Commands chapter.

- DISD
  The registration status for a designated piece of IP equipment can be displayed. Also, a reset of the IP equipment can be performed with this command. For details, see the DISD section in Maintenance Commands chapter.

- DRAI
  The registration status of each channel per IP equipment can be listed. Because the DRAI command displays the idle channels per equipment, that makes it more efficiently to register new channels compared with the IPAN command. However, there are some types of IP equipment not supported. For details, see the DRAI section in Maintenance Commands chapter. Also, for UG50 data displaying, see the “UG50 Data Listing” section in Startup chapter of Peripheral Equipment Description (UG50).

Note: The DRAI command is available from FP95-114 V4 Issue 2.0.

27.2 Operating Procedure

None

27.3 Service Conditions

- IPAN
  For details, see the IPAN section in Maintenance Commands chapter.

- DISD
  For details, see the DISD section in Maintenance Commands chapter.

- DRAI
  For details, see the DRAI section in Maintenance Commands chapter.

27.4 Data Assignment

None

28. PREFERENCE SETTING - MULTI-LINE TELEPHONE WITH PCPRO

28.1 Overview

This feature adds another method for setting preferences on Desktop terminals other than using a combination of the Feature key and some other keys such as the digit keys, the Answer key, and the Originate key on each terminal. Previously, preferences on a Desktop terminal only could be set terminal by terminal, but with this feature, the settings can also be changed/deleted effectively from Telephony Server.

Note: This feature is available since FP95-114 V4 Issue 2.0.

Note: For details, see PREFERENCE SETTING - MULTI-LINE TELEPHONE WITH PCPRO [P-90] of Data Programming Manual -Business.

CHAPTER 3
SYSTEM MESSAGES

1. OBSERVATION METHOD OF SYSTEM MESSAGE

System messages display during routine diagnosis, system operation status controlling, and fault occurrence. Figure below shows an example of a system message.

System Message Example

```
(1) → SYSTEM MESSAGE 3-E SUP LOCK UP FAILURE (TEMPORARY)
(2) →    NEC TOKYO          JUL 24 09:35
(3) →    LP00-0-ACT
(4) → 1:1102 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
      4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
      7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

Meaning:

(1) : SYSTEM MESSAGE 3-E SUP LOCK-UP FAILURE (TEMPORARY)

- LOCK-UP FAILURE (TEMPORARY): Meaning of the message
- SUP: Alarm Level (Indicated by Alarm Lamp) **Note 1**
- 3-E: System Message Number

Note 1: There are four kinds of alarm information indicated by alarm lamps: MN, MJ, SUP, and No Indication.

(2) : Office Name, Date and Time

(3) : LP00-0-ACT

- ACT: ACT/STBY indication for dual systems
- 0: System 0/1 indication for dual systems
- LP00: Faulty processor/Related processor

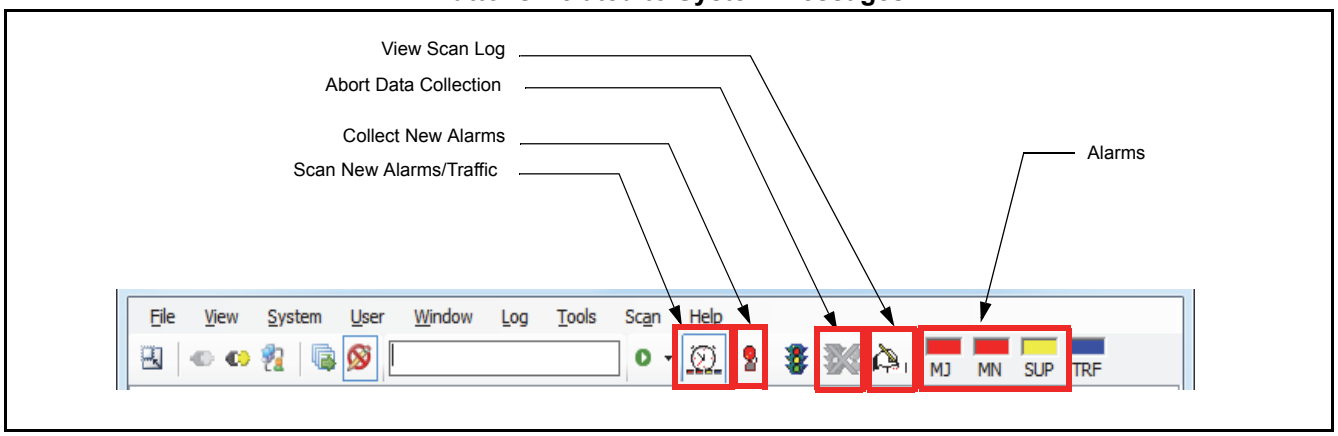
(4) : Message detail data (notation by hexadecimal numbers)

2. COLLECTION OF SYSTEM MESSAGES

This section explains how to collect the System Messages by the PCPro.

The figure below shows icons that are related to system message collection.

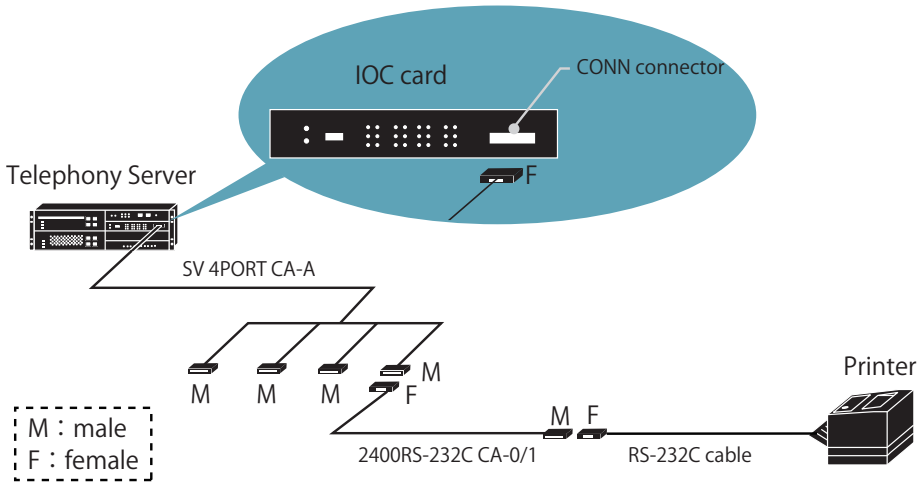
Buttons Related to System Messages



2.1 Automatic Printout to System Message Dedicated Printer

- How to connect the printer

The following shows the connection diagram when connecting the printer directly to the IOC card.



- How to configure the printer settings

(1) Turn on the printer.

(2) Assign the following office data.

STEP 1 ASYD (System Data)

SYS1, Index 38: Dedicated Printer Accommodation Designation
Assign "1" to each bit corresponding to the Port Number of the IOC card.

Bit 0 = Port 0 Bit 1 = Port 1
Bit 2 = Port 2 Bit 3 = Port 3
Bit 4 = Port 4 Bit 5 = Port 5
Bit 6 = Port 6 Bit 7 = Port 7

IO Equipment No.	Port Number	Available/Not Available
0	0	PCPro (When connecting to IOC port) **Note 1**
0	1	Available
0	2	Available
0	3	Available
1	4	Available
1	5	Available
1	6	Available
1	7	Available

Note 1: Normally, Bit 0 is used for PCPro.

SYS1, Index 39: System Message Automatic Output Designation for Dedicated Printer
Assign "1" to each bit corresponding to the Port Number of the IOC card.

Bit 0 = Port 0 Bit 1 = Port 1
Bit 2 = Port 2 Bit 3 = Port 3
Bit 4 = Port 4 Bit 5 = Port 5
Bit 6 = Port 6 Bit 7 = Port 7

IO Equipment No.	Port Number	Available/Not Available
0	0	PCPro (When connecting to IOC port) **Note 2**
0	1	Available
0	2	Available
0	3	Available
1	4	Available
1	5	Available
1	6	Available
1	7	Available

Note 2: Normally, Bit 0 is used for PCPro.

SYS1, Index 86
Bit 4=1 (System Message Automatic Output to Dedicated Printer is in service)
Bit 7: 0 (System Message Simplified Contents)/1(System Message Detailed Contents)
Always assign "1."

STEP 2 AIOC (Assignment of IOC Port Data)
Assign the I/O port attribution data.

TERMINAL=1 (Printer/MCI)

(3) Automatic Output to Dedicated Printer function is enabled (if a message is register, it will be output to the printer).

Note: To temporarily suspend Automatic Output to Dedicated Printer function, set Make-busy information for the printer port by using MBSM command.
Port NO.: Enter the port number of the printer (1-7).
MB=1 (Make Busy)

2.2 Automatic Output to the PCPro

System Messages can be output by Fault Scanning function.

2.3 Output by DFTD command

System Messages can be output by DFTD command.

(a) To Activate Fault Scanning

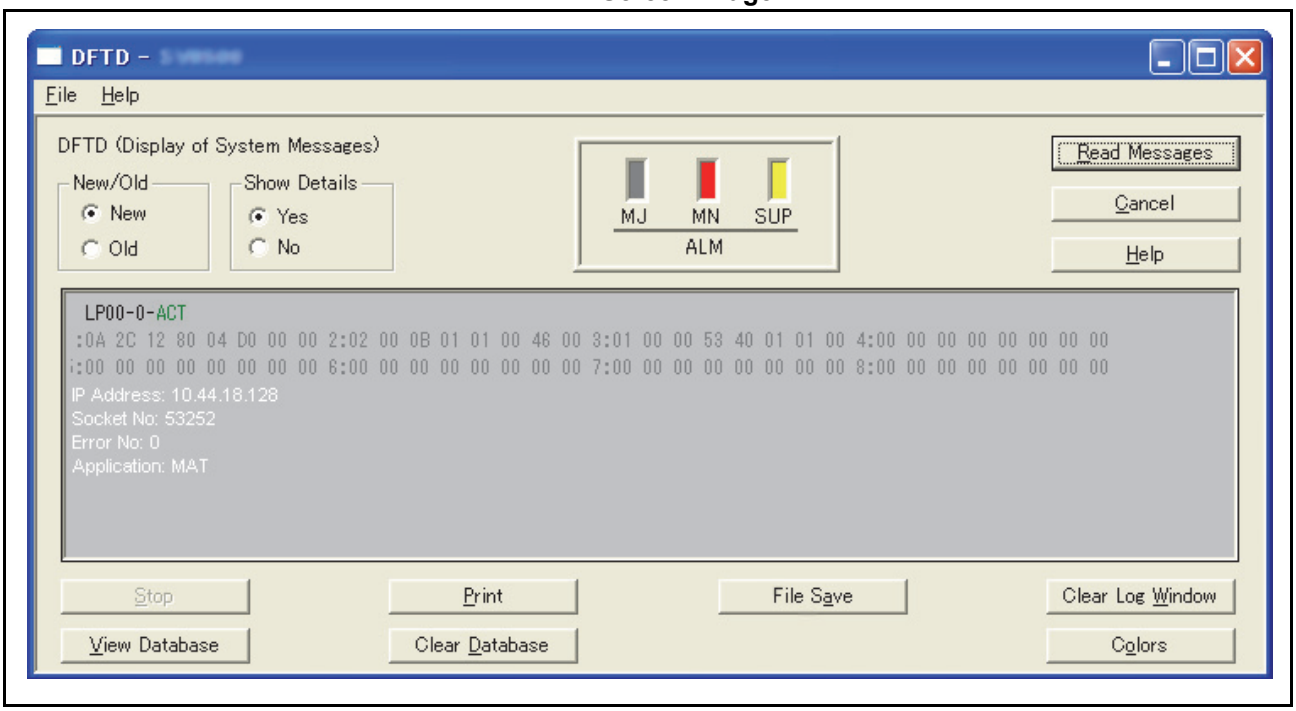
STEP 1 To enable *System Message Scan* service, assign "1" to SYMSCAN parameter on AIOC command for IOC Port Number = 0.

STEP 2 Close all commands.

STEP 3 Click "Scan New Alarms/Traffic" and "Collect New Alarms" buttons to place these buttons into pressed position (ON).

When the Fault Scanning is effective, PCPro can scan the System status by polling every 20 seconds. If the System has faults, DFTD command is automatically activated and System Messages are output.

DFTD Screen Image



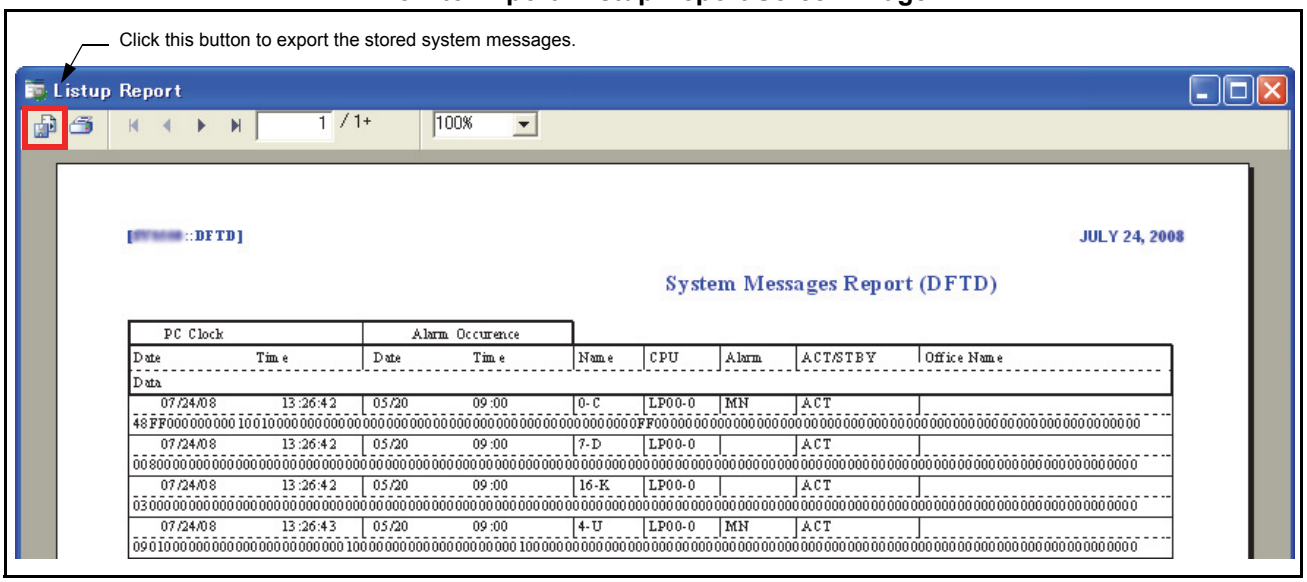
The following explains each button on DFTD command:

Read Messages:	Display all the System Messages which are currently occurring. These messages are stored in the database in the PC.
Cancel:	Close the DFTD command. (The data in the database is not cleared.)
Stop:	Abort the readout of the System Message(s).
Print:	Print out the System Message(s) displayed on the screen.
File Save:	Save the System Message(s) displayed on the screen into the file.
Clear Log Window:	Clear the System Message(s) displayed on the screen.
View Database:	Display all the System Messages stored in the database.
Clear Database:	Clear all the System Messages stored in the database.
Colors:	Set the colors of the background, lamps and letters on the screen.

(b) To Export (Save) System Message into Text File

STEP 1 After reading out the System Messages by DFTD, click "View Database" button to display a listup report similar to the following.

How to Export: Listup Report Screen Image



STEP 2 On the Listup Report window, click  button to export the System Messages in a text file.

STEP 3 The following dialog appears. Select "Text (TXT)" in "Format" list box and "Disk file" in "Destination" list box respectively.

STEP 4 Press "OK" button.

How to Export: File Format and Destination for Export



STEP 5 Save the data by specifying an appropriate file name and directory in which the file to be saved.

3. SYSTEM MESSAGES

This section explains how to read and analyze system messages displayed during routine diagnosis, system operation status controlling, and occurrence of a fault within the system. The following table provides a list of system messages.

Note: A power unit for 7U-PIR is specified as a PWR card in the explanation of system messages.

Note: Since TSW card (SPZ-SW26-A) for 4-IMG system includes GT functions, system messages regarding GT, such as 4-C and 4-D, are not provided in 4-IMG system using TSW-BOX.

Note: TSW card (SPZ-SW26-A) for 4-IMG system has functions equivalent to GT, PLO and DLKC cards. Therefore, when a 4-IMG system uses TSW-BOX (not TSWR), “PLO card” or “DLKC card” shall be replaced with “PLO functions of TSW card” or “DLKC functions of TSW card”.

System Messages List

MESSAGE NO.	SYSTEM MESSAGE
0-C	Reset Interrupt
0-D	CPU Clock Down
0-E	C-Level Infinite Loop
0-F	Memory Failure
0-H	B-Level Infinite Loop (Temporary)
0-I	Mate CPU Failure
0-J	Abnormal Interrupt
1-A	Both TSW Failure (Permanent)
1-B	TSW Failure (Permanent)
1-C	Both TSW Write Failure
1-D	TSW Write Failure
1-E	Both TSW Clock Failure
1-F	TSW Clock Failure
1-O	Both PLO Failure
1-P	PLO Failure
1-S	Module Group Down Failure
1-T	TSW ACT Change Report
1-U	DLKC Data Transfer Failure (Permanent) (4-IMG only)
1-V	DLKC Data Transfer Failure (Temporary) (4-IMG only)
1-W	PLO Restore
3-B	C-Level Infinite Loop (Permanent) **Note 1**
3-C	C-Level Infinite Loop (Temporary) **Note 1**
3-D	Lock-Up Failure (Permanent) **Note 1**

System Messages List (Continued)

MESSAGE NO.	SYSTEM MESSAGE
3-E	Lock-Up Failure (Temporary) Note 1
3-F	-48V Over Current
3-G	Ground Failure
3-H	Digital Line Warning
3-I	Digital Line Failure
3-J	Digital Line Restore
3-K	Line Fault
3-L	Line Fault Release
4-C	Both TSW Ready Failure
4-D	TSW Ready Failure
4-Q	DLKC Ready Failure (4-IMG only)
4-R	IO Ready Failure for UAP Note 2, Note 3
4-S	MUX Ready Failure
4-T	Both MUX Ready Failure
4-U	PCI Card Failure
4-V	PCI Card Failure Recovered
4-W	TSW Ready Failure Restore
4-Y	EMA/EXB/IOC Communication Failure Notification
5-Q	ACD-MIS LOCK UP Note 2
6-A	System Failure (For Telephony Server)
6-A	System Failure (for SR-MGC(E))
6-B	RGU & Howler Failure
6-C	Line Load Control Start
6-D	Line Load Control Stop
6-H	Bad Call Notification Note 2
6-I	STA-Test Connection Data
6-J	Emergency Call
6-L	Emergency Control Start
6-M	Emergency Control Stop
6-N	Abnormal Call Duration Data
6-O	SMDR Output Buffer Overflow Alarm
6-P	SMDR Output Buffer Overflow Release

System Messages List (Continued)

MESSAGE NO.	SYSTEM MESSAGE
7-A	System Initialize With Data Load
7-B	System Initialize
7-C	CPU MBR Key Turn ON
7-D	CPU MBR Key Turn OFF
7-E	TSW MBR Key Turn ON
7-F	TSW MBR Key Turn OFF
7-G	TSW PLO Key Turn ON
7-H	TSW PLO Key Turn OFF
7-K	PM MB Key Turn ON
7-L	PM MB Key Turn OFF
7-M	NCU MB Key Turn ON
7-N	NCU MB Key Turn OFF
7-O	Cyclic Diagnosis Normal
7-P	Cyclic Diagnosis Information (Error Detected)
7-Q	PFT Key ON
7-R	PFT Key OFF
7-U	PLO MB Key Turn ON (4-IMG only)
7-V	PLO MB Key Turn OFF (4-IMG only)
10-A	System Activation Report (SUP)
10-B	System Activation Report (MN)
10-C	System Activation Report (MJ)
10-D	IP License Excess Notice (SUP)
10-E	CPU Operation Mode Error Notification
10-F	MGC - SR-MGC Network Failure
10-G	MGC - SR-MGC Network Restore
10-L	SR-MGC State Notification
10-M	Remote Node State Notification
10-Q	CPU Change Notification
10-T	Geographic Redundancy - MGC Network Failure
10-U	Geographic Redundancy - MGC Network Restore
10-V	Geographic Redundancy - MGC State Notification
11-A	Timed Forced Disconnect Trunk

System Messages List (Continued)

MESSAGE NO.	SYSTEM MESSAGE
12-E	Connection Failure between CCN and RN (Temporary)
12-F	Connection Failure between CCN and RN (Permanent)
12-G	Connection Recovery between CCN and RN
13-A	CCH Clock Failure
13-B	CCH C-Level Infinite Loop Failure (Permanent)
13-C	CCH C-Level Infinite Loop Failure (Temporary)
13-D	CCH Lock-Up Failure (Permanent)
13-E	CCH Lock-Up Failure (Temporary)
13-F	CCH B-Level Infinite Loop Failure (Permanent)
13-G	CCH B-Level Infinite Loop Failure (Temporary)
13-H	CCS Link Failure (Permanent) Note 1
13-I	CCS Link Failure (Temporary) Note 1
13-J	Restoration From CCS Link Failure Note 1
13-K	CCH Reset Interrupt Failure
13-N	Digital Line Warning
13-O	Digital Line Failure
13-P	Digital Line Restore
13-Q	DRU Battery Operation
13-R	DRU Line Operation
13-Z	Power Failure
15-A	VPS Failure (Temporary)
15-B	VPS Failure (Permanent)
15-C	VPS Restore
16-A	Inside Trunk All Busy
16-B	Virtual Tie Line Set Report
16-C	Virtual Tie Line Cancel Report
16-E	Virtual Tie Line Set Time Out
16-F	Sender Start Time Out
16-K	I/O Port Line OFF
16-L	I/O Port Line Restore
16-M	Hard Clock Failure
16-N	Hard Clock Restore

System Messages List (Continued)

MESSAGE NO.	SYSTEM MESSAGE
16-T	IOC Failure (Temporary)
16-U	IOC Failure (Permanent)
16-X	Station Exchanged Report
17-A	CCH MBR Key Turn ON
17-B	CCH MBR Key Turn OFF
17-C	CCH MB Key Turn ON
17-D	CCH MB Key Turn OFF
17-H	Day/Night Change Information
17-O	IOC MB Key Turn ON
17-P	IOC MB Key Turn OFF
17-Q	IOC MBR Key Turn ON
17-R	IOC MBR Key Turn OFF
23-P	DCH Back-Up Automatic Change Start/End
23-Q	DCH Back-Up Manual Change Start/End
23-S	FCH Failure Note 1
23-T	FCH Failure Recovered Note 1
23-U	FCH Status Notice Note 1
23-W	FCH Advancing Start Note 1
23-X	FCH Advancing End Note 1
23-Y	MUX Clock Failure
23-Z	Both MUX Clock Failure
25-A	CS Fault Notification Note 4
25-B	CS Fault Recovery Notification Note 4
25-C	CS Routine Diagnosis NG Notification Note 4
25-D	CS/Bch Status Adjustment Normal Notification Note 4
25-E	CS/Bch Status Adjustment Abnormal Notification Note 4
25-F	CS Start NG Notification Note 4
25-G	CS Operation Start Notification Note 4
25-H	CS Operation Stop Notification Note 4
25-I	CS Routine Diagnosis Time Out Notification Note 4
25-J	ZT Operation Start Note 5
25-K	ZT Set Up NG Note 5

System Messages List (Continued)

MESSAGE NO.	SYSTEM MESSAGE
25-L	ZT Fault Note 5
25-M	ZT Fault Recovery Note 5
25-N	ZT Carrier Fault Note 5
26-M	Toll Fraud Report
26-N	MAT Log
26-R	Call Trace
26-V	LAN Interface Error Report Note 2, Note 3
26-W	LAN Interface Release Report
26-Y	Standalone Mode Set Notification Note 2, Note 3
26-Z	Standalone Mode Release Notification Note 2, Note 3
31-A	Line/Trunk PKG Warning
31-B	Line/Trunk PKG Failure
33-A	MUX Clock Restore
33-F	PKG Download Failure Notification
33-G	MUX PKG PCM Parity Error Report
33-H	MUX PKG PCM Parity Error Recovery Report
33-L	OPTMUX Line Failure
33-M	OPTMUX Line Failure Restore
33-N	DCS Alarm
33-O	DCS Alarm Restore
33-P	OPTMUX MBR Key Turn ON
33-Q	OPTMUX MBR Key Turn OFF
33-R	IP PKG Warning
33-S	IP PKG Failure
33-T	IP PKG Restore
35-C	SP Warning Notification
35-D	SP Failure
35-E	SP Failure Recovery
35-F	SP Process Information
35-G	SP Process Warning
35-I	IP Equipment Health Check Error Report
35-K	IP Equipment Health Check Error Report

System Messages List (Continued)

MESSAGE NO.	SYSTEM MESSAGE
35-L	IP Equipment Network Failure Warning (Media Gateway)
35-M	IP Equipment Network Restore (Media Gateway)
35-N	IP Equipment Information Report (Media Gateway)
36-A	Office Data Copy Status Notification
36-E	Registration Security Alert
36-F	Fusion Health Check Report (Temporary/Permanent) Note 1
36-G	Bandwidth Warning
36-H	Bandwidth Warning Recovery
36-I	Bandwidth Fault
36-J	Bandwidth Fault Recovery
36-K	Fusion Health Check Report (Recovery) Note 1
36-M	BLF Clear Notification
36-N	IP Equipment Status Report
36-O	System Message Overflow Notification
36-P	IP Terminal Auto Assignment Report
36-T	Fusion Health Check Report (Permanent) Note 1
36-Y	Preventative Maintenance Notification
36-Z	Connected Equipment Failure Note 6

Note 1: Refer to Data Programming Manual - FCCS.

Note 2: Refer to Data Programming Manual - ACD.

Note 3: Refer to Data Programming Manual - OAI.

Note 4: Refer to Data Programming Manual - Wireless-PHS.

Note 5: Refer to Data Programming Manual - Wireless-PCS.

Note 6: Available since FP95-114 V4 and the firmware version SP-3891 CA-VS32 PROG-A Issue 13.

0-C:Reset Interrupt

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

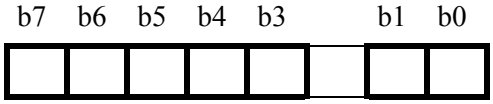
This message is displayed when the processor is reset due to a failure in the system.

```
1:XXXX XX00 XXXX XX00 2:XXXX 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]          [4]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

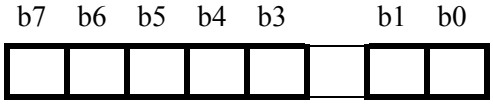
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Self-CPU Restart Information



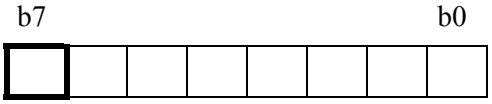
b0: 0/1 = -/Monitor Restart
b1: 0/1 = -/Phase 2 Executed (LP only)
b3: 0/1 = -/Initialization **Note 1**
b4: 0/1 = -/Data Copy Restart executed (for Dual-CPU system only) **Note 1**
b5: 0/1 = -/MB Control
b6: 0/1 = Program Load not executed/executed

[2] Mate-CPU Restart Information
(FF H: not mounted)



b0: 0/1 = -/Monitor Restart
b1: 0/1 = -/Phase 2 Executed (LP only)
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart executed (for Dual-CPU system only)
b5: 0/1 = -/MB Control
b6: 0/1 = Program Load not executed/executed
b7: 0/1 = ACT/STBY (active system indication after restart)

[3] Related-call Release Result

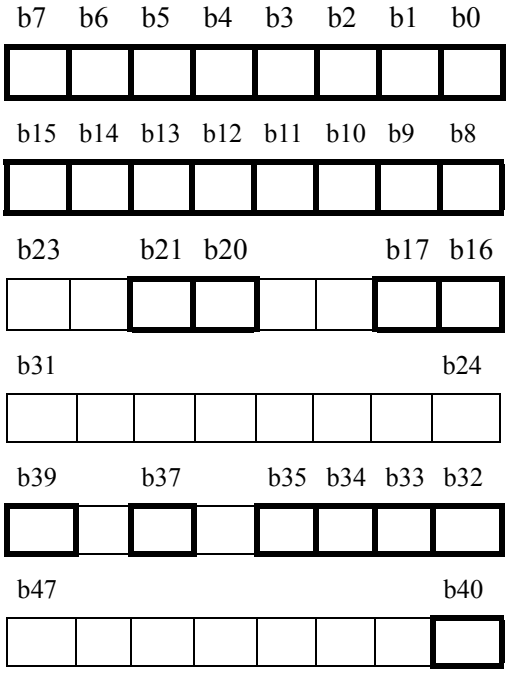


b7: 0/1 = Call Release Processing after restart ->Normal End/Abnormal End

Reference: See Section 5.6.2, Control System Fault - Fault Occurs Intermittently on ACT side, for the repair procedure.

Note 1: When a memory retained reset executed by ACDP Quick Initialization feature ends successfully, b3=1 and b4=1 will be issued. When this memory retained reset ends in failure, b3=1 and b4=0 will be issued instead.

[4] Data Load Result after restart processing



b0: Office Data Load Status
0/1 = Normal End/Abnormal End
b1: Call Forwarding Data Load Status
0/1 = Normal End/Abnormal End
b2: SPD Data Load Status
0/1 = Normal End/Abnormal End
b3: RCF Data Load Status
0/1 = Normal End/Abnormal End
b4: NDD Data Load Status
0/1 = Normal End/Abnormal End
b5: Network DM Data Load Status
0/1 = Normal End/Abnormal End
b6: Local DM Load Status
0/1 = Normal End/Abnormal End
b7: DM Load Status
0/1 = -/DM Non Load **Note 2**
b8: User Assign Soft Key Data Load Status
0/1 = Normal End/Abnormal End
b9: Sub-Station Transfer Data Load Status
0/1 = Normal End/Abnormal End
b10: ACD Station Transfer Data Load Status
0/1 = Normal End/Abnormal End
b11: Call Block data Load Status
0/1 = Normal End/Abnormal End
b12: ICB Data Load Status
0/1 = Normal End/Abnormal End
b13: Expansion Speed Dial Data Load Status
0/1 = Normal End/Abnormal End
b14: Call Forwarding-Logout Data Load Status
0/1 = Normal End/Abnormal End
b15: SPD Data Load Status for DtermIP
0/1 = Normal End/Abnormal End
b16: Drive 0 (B) Load Status
0/1 = -/Drive Number 1 Load
b17: Drive 2 (C) Load Status
0/1 = -/Drive Number 2 Load
b20: Drive 0 (A) Load Status
0/1 = -/Drive Number 0 Load
b21: Drive 3 (D) Load Status
0/1 = -/Drive Number 3 Load
b32: H.323 Call Forwarding Data Load Status
0/1 = Normal End/Abnormal End
b33: MA-ID Data Load Status
0/1 = Normal End/Abnormal End
b34: SR-MGC Data Load Status
0/1 = Normal End/Abnormal End
b35: SIP Extension Call Forwarding Data Load Status
0/1 = Normal End/Abnormal End **Note 3**
b37: SPD Name Data Load Status
0/1 = Normal End/Abnormal End
b38: SPD Name Data Load Status
0/1 = Normal End/Abnormal End
b39: Day/Night Data Load Status
0/1 = Normal End/Abnormal End
b40: Local Phone book Data Load Status

Note 2: When a Non-Load Initialization is restarted with ACDP Quick Initialization feature, each Data Load Status given in [4] Data Load Result after restart processing will be issued with “Normal End”. Check the results in “b7: DM Load Status 0/1 = -/DM Non Load” to determine whether the data was loaded successfully or not.

Note 3: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

0-D:CPU Clock Down

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

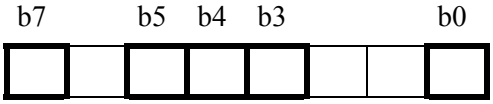
This message is displayed when a fault has occurred to the clock oscillator in the CPU.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

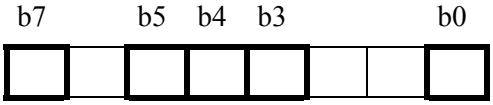
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Self-CPU Restart Information



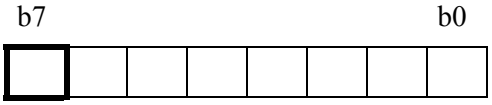
b0: 0/1=-/Monitor Restart
b3: 0/1=-/Initialization
b4: 0/1=Data Copy restart (for Dual-CPU system only)
b5: 0/1=-/MB control
b7: 0/1=ACT/STBY (active system indication after restart)

[2] Male-CPU Restart Information
(FF H: not mounted)



b0: 0/1=-/Monitor Restart
b3: 0/1=-/Initialization
b4: 0/1=-/Data Copy restart (for Dual-CPU system only)
b5: 0/1=-/MB control
b7: 0/1=ACT/STBY (active system indication after restart)

[3] Related Call Information



b7: 0/1=Released/Not released

Reference: See Section 5.6.2, Control System Fault - Fault Occurs Intermittently on ACT side, for the repair procedure.

0-E: C-Level Infinite Loop

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

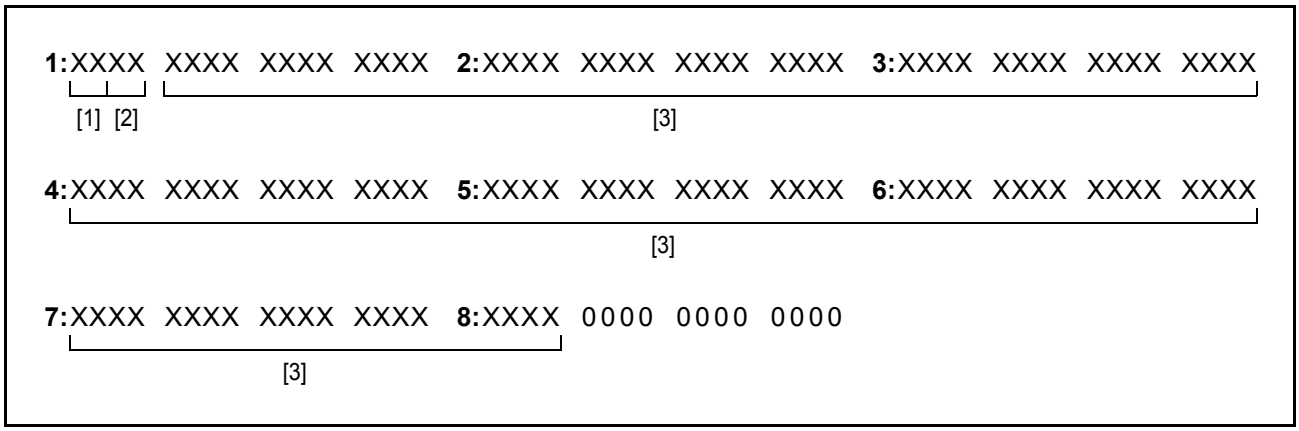
C-Level infinite loop is a state where a clock-level program, running under clock interrupt disable state, is in an infinite loop. This message is displayed when the correct operation of the processor cannot be confirmed.

EVENT COUNT	ACTIONS
1-7	Monitor Restart **Note 1**
8	Monitor Restart (Single Configuration System) **Note 1** CPU System Changeover (Dual Configuration System)
9-15	Monitor Restart **Note 1**
16	Phase 1 Restart (for basic two-way connections (STN-STN, STN-TRK, TRK-TRK))
17-23	Monitor Restart **Note 1**
24	Non-Load Restart
25-31	Monitor Restart **Note 1**
32	Program Load Restart

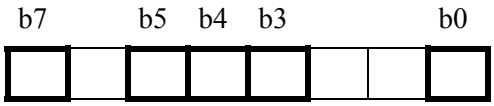
Note: Each CPU (System 0/System 1) manages its event count.

Note: The event count is cleared daily at 00:00.

Note 1: Monitor Restart suspends the current processing, allowing the system to restart its operation from the Monitor Program. The system abandons the processing of not-yet-established call connections and maintains the connections that have already been established. For details, see “Monitor Restart (Phase 0)” in Chapter 1.

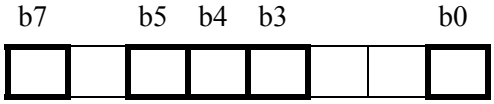


[1] Self-CPU Restart Information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB Control
b7: 0/1 = ACT/STBY (active system indication after restart)

[2] Mate-CPU Restart Information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB Control
b7: 0/1 = ACT/STBY (active system indication after restart)

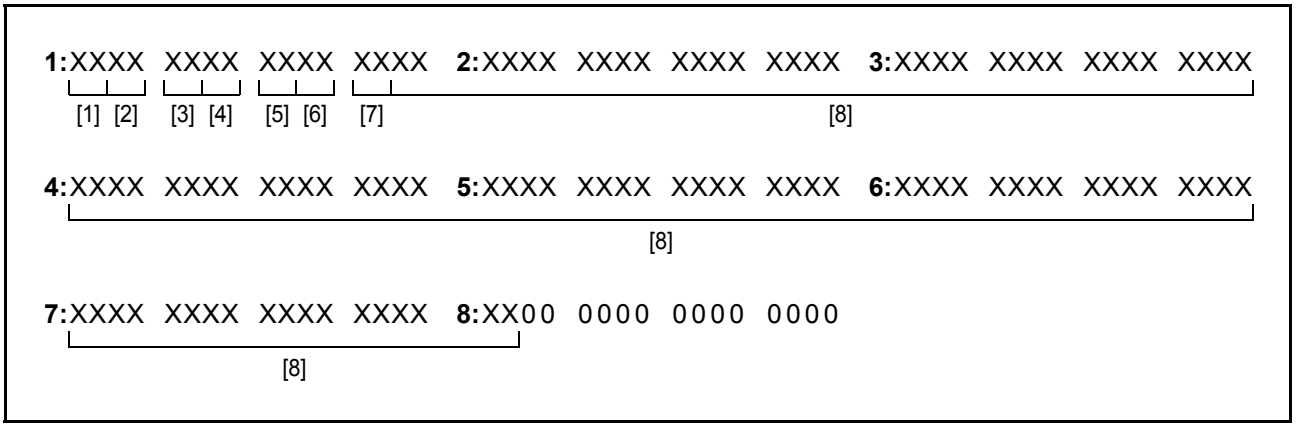
[3] Data Analyzed by NEC Engineers

0-F: Memory Failure

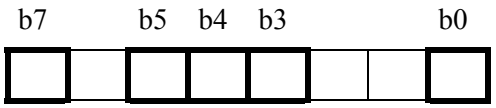
Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a CPU memory read/write error occurs. When the error is detected, Monitor Restart (**Note 1**) is automatically performed.

Note 1: Monitor Restart suspends the current processing, allowing the system to restart its operation from the Monitor Program. The system abandons the processing of not-yet-established call connections and maintains the connections that have already been established. For details, see “Monitor Restart (Phase 0)” in Chapter 1.

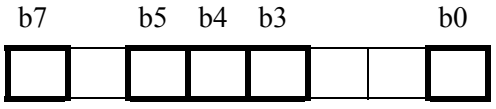


[1] Self-CPU restart information



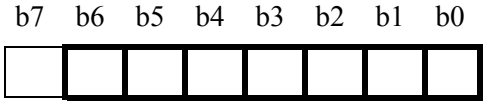
b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB Control
b7: 0/1 = ACT/STBY (active system indication after restart)

[2] Mate-CPU Restart Information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB Control
b7: 0/1 = ACT/STBY (active system indication after restart)

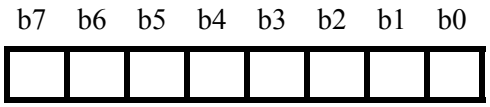
[3] NMI Factor



b0: 0/1 = -/Reset by Power On
b1: 0/1 = -/Watchdog Timer timeout
b2: 0/1 = ISGAT is mounted/ISGAT is not mounted
b3: 0/1 = -/OSC clock interrupt on ISGAT
b4: 0/1 = -/IO parity Alarm
b5: 0/1 = -/IO ready Alarm
b6: 0/1 = -/External NMI

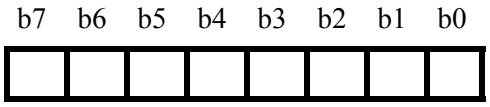
Reference: See Control System Fault - Fault Occurs Intermittently on ACT side, for the repair procedure.

[4] System Controlling Port B



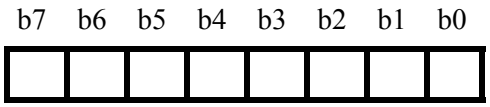
b0: 0/1 = Timer 2 Gate ON/OFF
b1: 0/1 = Speaker Gate ON/OFF
b2: 0/1 = Parity Check Enable/MASK
b3: 0/1 = Channel Check Enable/MASK
b4: 0/1 = -/RAM Refresh Pulse Output State
b5: 0/1 = -/Timer 2 Output State
b6: 0/1 = -/Channel Check error Detected
b7: 0/1 = -/Parity error Detected

[5] CPU Alarm



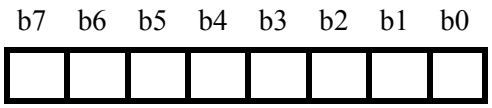
b0: 0/1 = -/ACT-side Processor CLK Alarm
b1: 0/1 = -/ACT-side Processor COP Alarm
b2: 0/1 = -/ACT-side Processor MEM Alarm
b3: 0/1 = -/ACT-side Processor Emergency Timer Overflow
b4: 0/1 = -/STBY-side Processor CLK Alarm
b5: 0/1 = -/STBY-side Processor COP Alarm
b6: 0/1 = -/STBY-side Processor MEM Alarm
b7: 0/1 = -/STBY-side Processor Emergency Timer Overflow

[6] CPU Changeover Factors



b0: 0/1 = -/CLK Alarm
b1: 0/1 = -/Emergency Timer Overflow
b2: 0/1 = -/SOFT EMA
b3: 0/1 = -/SOFT changeover
b4: 0/1 = -/Emergency Counter Overflow
b5: 0/1 = STBY/ACT
b6: 0/1 = Dual/Single
b7: 0/1 = CPU 0/CPU 1

[7] System ALM



b0: 0/1 = -/Main Power Alarm
b1: 0/1 = -/Power Alarm
b2: 0/1 = -/FUSE Alarm
b3: 0/1 = -/TEMP MJ Alarm
b4: 0/1 = -/TEMP MN Alarm
b5: 0/1 = -/Parity Alarm
b6: 0/1 = Card is not mounted/mounted
b7: 0/1 = -/EMA CLK Alarm

[8] Data Analyzed by NEC Engineers

0-H:B-Level Infinite Loop (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when, in the CPU program processing, the counter value to check the normality of the processing has become abnormal.

EVENT COUNT	ACTIONS
1-7	Monitor Restart **Note 1**
8	Monitor Restart (Single Configuration System) **Note 1** CPU System Changeover (Dual Configuration System)
9-15	Monitor Restart **Note 1**
16	Phase 1 Restart (for basic two-way connections (STN-STN, STN-TRK, TRK-TRK))
17-23	Monitor Restart **Note 1**
24	Non-Load Restart
25-31	Monitor Restart **Note 1**
32	Program Load Restart

Note: Each CPU (System 0/System 1) manages its event count.

Note: The event count is cleared daily at 00:00.

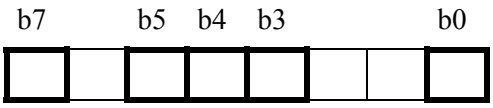
Note 1: Monitor Restart suspends the current processing, allowing the system to restart its operation from the Monitor Program. The system abandons the processing of not-yet-established call connections and maintains the connections that have already been established. For details, see “Monitor Restart (Phase 0)” in Chapter 1.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

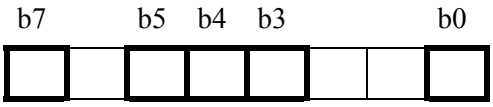
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Self-CPU Restart Information



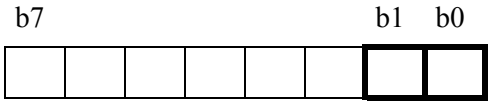
b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

[2] Mate-CPU Restart Information
(FF H: not mounted)



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

[3]



b0: 0/1 = -/B-Level Infinite Loop
b1: 0/1 = -/Task Timer Timeout

0-I: Mate CPU Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a fault, such as the Clock down or C-Level infinite loop error, has occurred.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Mate-CPU Restart Information



b0: 0/1 = -/CPU clock down
b1: 0/1 = -/C-Level infinite loop
b2: 0/1 = -/Memory error, Parity alarm
b3: 0/1 = -/Emergency Timer Overflow

Reference: See Control System Fault - Fault Occurs Intermittently on ACT side, Control System Fault - STBY Side is Faulty for the repair procedure.

0-J: Abnormal Interrupt

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message is displayed when Central Processing Unit (CPU) has been abnormally interrupted in the process. If the system receives this event, the system automatically executes the following actions depending the event count.

EVENT COUNT	ACTIONS
1-7	Monitor Restart **Note 1**
8	Monitor Restart (Single Configuration System) **Note 1** CPU System Changeover (Dual Configuration System)
9-15	Monitor Restart **Note 1**
16	Phase 1 Restart (for basic two-way connections (STN-STN, STN-TRK, TRK-TRK))
17-23	Monitor Restart **Note 1**
24	Non-Load Restart
25-31	Monitor Restart **Note 1**
32	Program Load Restart

Note: Each CPU (System 0/System 1) manages its event count.

Note: The event count is cleared daily at 00:00.

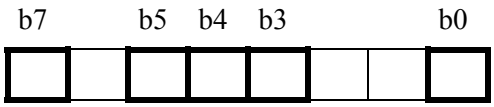
Note 1: Monitor Restart suspends the current processing, allowing the system to restart its operation from the Monitor Program. The system abandons the processing of not-yet-established call connections and maintains the connections that have already been established. For details, see “Monitor Restart (Phase 0)” in Chapter 1.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

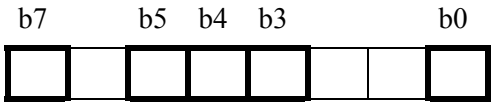
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Self-CPU Restart Information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

[2] Mate-CPU Restart Information
(FF H: not mounted)



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

1-A:Both TSW Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

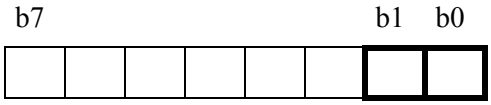
This message is displayed when link information cannot be written into the switch memory of the TSW in both systems.

```
1:XXXX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

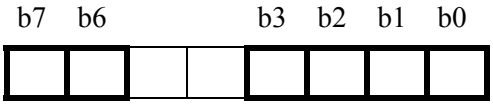
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW system in which a fault is detected



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

[2] Status at the time of fault detection



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW at the time of fault detection
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

b3	b2: Kind of Switch
0	1 = PSW (Primary Switch)
1	0 = SSW (Secondary Switch)
1	1 = TSW (Tertiary Switch)

b6: Speech Path in ACT status
0/1 = System 0/System 1
b7: Basic Clock in ACT status
0/1 = System 0/System 1

[3] Data Analyzed by NEC Engineers

Reference: See Speech Path System Fault - When Dial Tone (DT) Cannot be Heard, for the repair procedure.

1-B:TSW Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

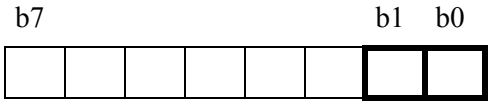
This message is displayed when link information cannot be written into the switch memory of the TSW card in one of the dual systems.

```
1:XXXX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

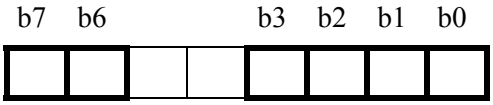
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW system in which a fault is detected



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

[2] Status at the time of fault detection



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW at the time of fault detection
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

b3	b2: Kind of Switch
0	1 = PSW (Primary Switch)
1	0 = SSW (Secondary Switch)
1	1 = TSW (Tertiary Switch)

b6: Speech Path in ACT status
0/1 = System 0/System 1
b7: Basic Clock in ACT status
0/1 = System 0/System 1

[3] Data Analyzed by NEC Engineers

Reference: See Chapter 5 Section 5.5.4, Speech Path System Fault - STBY Side Has Become Fault for the repair procedure.

1-C:Both TSW Write Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	2		

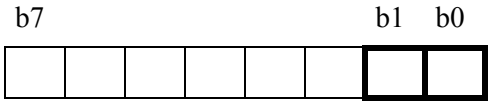
This message is displayed when the link information cannot be written into the switch memory of the TSW in both systems.

```
1:XXXX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

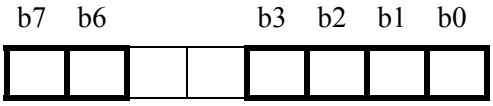
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW system in which a fault is detected



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

[2] Status at the time of fault detection



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW at the time of fault detection
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

b3	b2: Kind of Switch
0	1 = PSW (Primary Switch)
1	0 = SSW (Secondary Switch)
1	1 = TSW (Tertiary Switch)

b6: Speech Path in ACT status
0/1 = System 0/System 1
b7: Basic Clock in ACT status
0/1 = System 0/System 1

[3] Data Analyzed by NEC Engineers

Reference: See Chapter 5 Section 5.5.2, Speech Path System Fault - Fault Related to Speech, Section 5.6.2, Control System Fault - Fault Occurs Intermittently on ACT side for the repair procedure.

1-D:TSW Write Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	2		

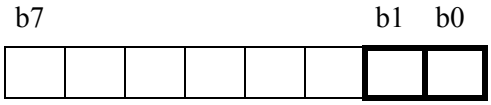
This message is displayed when the link information cannot be written into the switch memory of the TSW card in one of the dual systems.

```
1:XXXX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

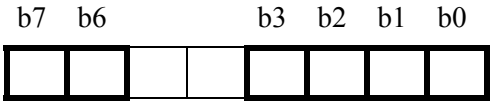
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW system in which a fault is detected



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

[2] Status at the time of fault detection



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW at the time of fault detection
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM

b3	b2: Kind of Switch
0	1 = PSW (Primary Switch)
1	0 = SSW (Secondary Switch)
1	1 = TSW (Tertiary Switch)

b6: Speech Path in ACT status
0/1 = System 0/System 1
b7: Basic Clock in ACT status
0/1 = System 0/System 1

[3] Data Analyzed by NEC Engineers

Reference: See Chapter 5 Section 5.5.2, Speech Path System Fault - Fault Related to Speech, Section 5.5.4, Speech Path System Fault - STBY Side Has Become Fault, Section 5.6.2, Control System Fault - Fault Occurs Intermittently on ACT side for the repair procedure.

1-E: Both TSW Clock Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

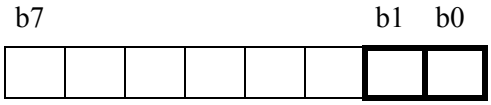
This message is displayed when the system detects a clock failure, such as TSW internal clock down or Frame Head down, in both systems.

```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

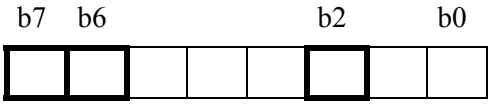
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW card in which a fault is detected



b0: 0/1 = -/TSW System 0
b1: 0/1 = -/TSW System 1

[2] Clock status of TSW 0



b2: 0/1 = -/DTG output down
b6: 0/1 = -/External 32 ch Clock (PLO) System 0 down
b7: 0/1 = -/External 32 ch Clock (PLO) System 1 down

[3] Clock status of TSW 1

Note: Refer to the meaning of [2]

Reference: See Chapter 5 Section 5.5.3, Speech Path System Fault - When Dial Tone (DT) Cannot be Heard for the repair procedure.

1-F: TSW Clock Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

This message is displayed when the system detects a clock failure, such as TSW internal clock down or Frame Head down, in one of the dual systems.

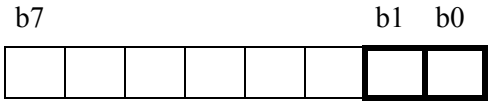
```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

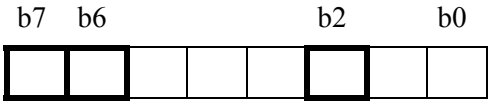
[1] TSW card in which a fault is detected

b0: 0/1 = -/TSW 0
b1: 0/1 = -/TSW System 1



[2] Clock status of TSW 0

b2: 0/1 = -/DTG output down
b6: 0/1 = -/External 32 ch Clock (PLO) System 0 down
b7: 0/1 = -/External 32 ch Clock (PLO) System 1 down



[3] Clock status of TSW 1

Note: Refer to the meaning of [2].

Reference: See Chapter 5 Section 5.5.4, Speech Path System Fault - STBY Side Has Become Fault, for the repair procedure.

1-O:Both PLO Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MJ	3		

This message is displayed when the system detects a fault, such as input clock all down or output clock down in the PLO cards, at both sides. **Note 1**

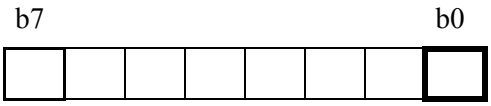
```
1:XXXX XXXX XX00 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

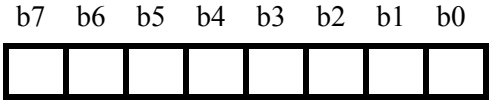
Note 1: For 1-IMG, PLO is included in the TSW card.

[1] Detected PLO number



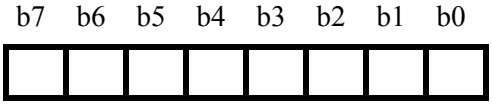
b0: 0/1 = PLO 0/PLO 1

[2] Valid Information bit for Scan Data 1



b0-b7: Bit position corresponding to the detected information in Scan Data 1 ([4]) is flagged "1".

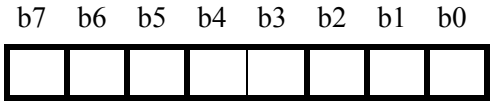
[3] Valid Information bit for Scan Data 2



b0-b7: Bit position corresponding to the detected information in Scan Data 2 ([5]) is flagged "1".

Reference: See Chapter 5 Section 3.3.3, PLO Card Replacement Procedure, for the card replacement procedure.

[4] Scan Data 1: Current Status of PLO card

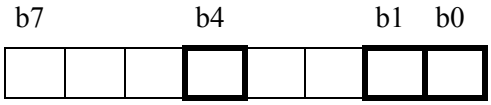


b0: Clock status at time of detection
0/1 = STBY/ACT
b1: Card status at time of detection
0/1 = PLO synchronizing/PLO self running or drift abnormal
b2: 0/1 = -/Input clock down
b3, b4: Current Route of Input clock

b4	b3	DCS INPUT ROUTE	ROUTE OF INPUT CLOCK
0	0	0	0
0	1	1	1
1	0	-	2
1	1	-	3

b5: 0/1 = -/PLO input all down
b6: 0/1 = -/PLO output down
b7: 0/1 = -/Drifting

[5] Scan Data 2: Current Status of PLO card



b0: 0/1 = -/Five milliseconds Burst Clock down
b1: 0/1 = -/Frame Synchronization from SYNC card is down
b4: 0/1 = -/Internal OSC clock down

1-P: PLO Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

This message is displayed when the system detects all the failures concerned with input clock down or output clock down in the PLO card at the ACT side. (**Note 1**) When this message is indicated, the PLO card changeover executes. **Note 2**

Note 1: For 1-IMG, PLO is included in the TSW card.

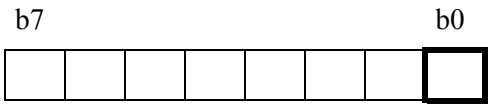
Note 2: The PLO card 0 automatically changes over to 1. The changeover of 1 to 0 is not automatic.

```
1:XXXX XXXX XX00 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

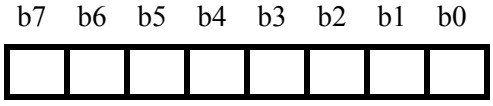

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Self-CPU Restart Information



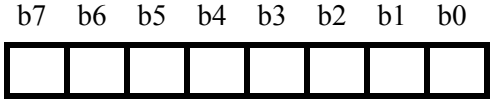
b0: 0/1 = PLO 0/PLO 1

[2] Valid Information bit for Scan Data 1



b0-b7: Bit position corresponding to the detected information in Scan Data 1 ([4]) is flagged "1".

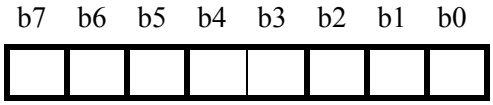
[3] Valid Information bit for Scan Data 2



b0-b7: Bit position corresponding to the detected information in Scan Data 2 ([5]) is flagged "1".

Reference: See Chapter 5 Section 3.3.3, PLO Card Replacement Procedure for the card replacement procedure.

[4] Scan Data 1: Status of PLO card

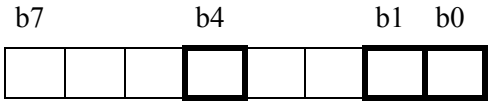


b0: Clock status at time of detection
0/1 = STBY/ACT
b1: Card at time of detection
0/1 = PLO synchronizing/PLO self running or drifting
b2: 0/1 = -/Input clock down
b3, b4: Current Route of Input clock

b4	b3	DCS INPUT ROUTE	ROUTE OF INPUT CLOCK
0	0	0	0
0	1	1	1
1	0	-	2
1	1	-	3

b5: 0/1 = -/PLO input all down
b6: 0/1 = -/PLO output down
b7: 0/1 = -/Drifting

[5] Scan Data: Status of PLO card



b0: 0/1 = -/Five millisecond Burst Clock down
b1: 0/1 = -/Frame Synchronization from SYNC card is down
b4: 0/1 = -/Internal OSC clock down

1-S: Module Group Down Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MJ	3		

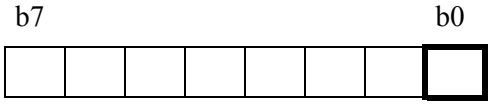
This message is displayed when a fault of the speech path system has occurred in a specific Module Group. The specific Module Group is placed into make-busy state.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

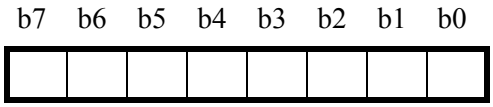
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] MG number of fault detection



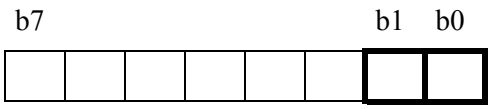
b0: 0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of failure



b0-b7: 00H/01H = -/ACT side TSW fault

[3] Speech Path/Clock System



b0: ACT side speech path
0/1 = System 0/System 1
b1: ACT side clock
0/1 = System 0/System 1

Reference: See Chapter 5 Section 1., REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX): 1-IMG or Section 3.3.1, TSW Card Replacement Procedure: 4-IMG for the card replacement procedure.

1-T: TSW ACT Change Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	2		

This message is displayed when the changeover of the TSW system is executed.

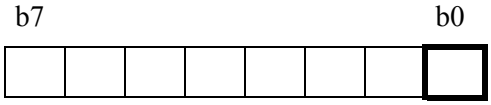
```
1:XXXX 0000 XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 XXXX XXXX
  [1] [2]     [3] [4]  [5] [6]                          [7] [8] [9] [10]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] ACT side Speech Path (TSW) after changeover

b0: 0/1 = System 0/System 1



[2] Reason for changeover

b7	b6	b5	b4	b3	b2	b1	b0

b7-b4	b3-b0	CARD	CONTENTS
0	1	TSW	I/O Alarm
	2		32ch Clock down, FH down
	3		24ch Clock down, FH down
	6		TSW SW Memory write failure
	9		I/O Alarm release
	10		32ch Clock down recovered, FH down recovered
	11		24ch Clock down recovered, FH down recovered
	13		TSW MBR key OFF
	15		TSW ACT/STBY changeover by CMOD command
6	1	MUX	MUX card Ready failure
	2		MUX card Clock failure

[3]-[6]Status of ACT-side TSW card

b7	b6	b5	b4	b3	b2	b1	b0

	b7-b4	b3-b0
[3]	MG 00	MG 01
[4]	MG 02	MG 03
[5]	MG 04	MG 05
[6]	MG 06	MG 07

b0-b3, b4-b7: The status of TSW card in each MG (00-07)
0000 = Normal
0001 = Abnormal (Impossible to make links)

[7]-[10]Status of STBY-side TSW card

b7	b6	b5	b4	b3	b2	b1	b0

	b7-b4	b3-b0
[7]	MG 00	MG 01
[8]	MG 02	MG 03
[9]	MG 04	MG 05
[10]	MG 06	MG 07

b0-b3, b4-b7: The status of TSW card in each MG (00-07)
0000 = Normal
0001 = Abnormal (Impossible to make links)

1-U:DLKC Data Transfer Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

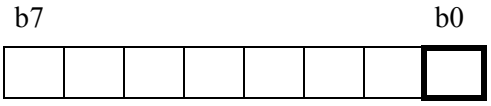
This message is displayed when DLKC data transfer failure (temporary), shown in System Message [1-V], occurs more than 16 times an hour. At this time, the faulty DLKC card is down and its switching network automatically changes over.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

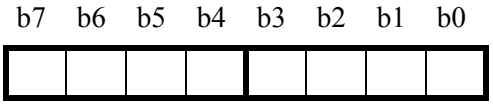
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] System status of faulty DLKC card



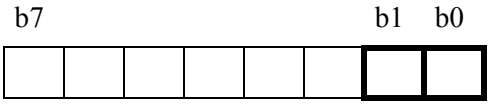
b0: 0/1 = System 0/ System 1

[2] Error Code



01H: Firmware fault
02H: Data transfer time out to DLKC
03H: No answer time out (at DLKC)
04H: Data parity error

[3] Details on Switching Network



b0: Status of Speech Path System (including DLKC)
0/1 = System 0 is ACT/System 1 is ACT
b1: Status of basic clock
0/1 = System 0 is ACT/System 1 is ACT

1-V: DLKC Data Transfer Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

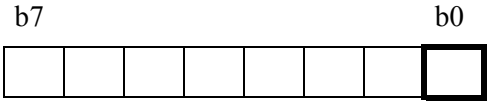
This message is displayed when a data sending error or no answer error occurs at the time of data transfer from CPU to DLKC card.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

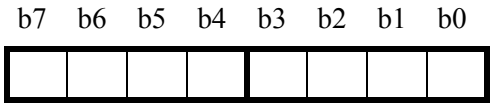
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] System status of faulty DLKC card



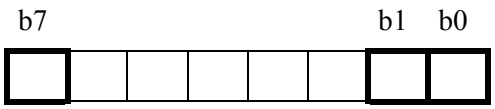
b0: 0/1 = System 0/System 1

[2] Error Code



01H: Firmware fault
02H: Data transfer time out to DLKC
03H: No answer time out (at DLKC)
04H: Data parity error

[3] Details on Switching Network



b0: Status of Speech Path System (including DLKC)
0/1 = System 0 is ACT/System 1 is ACT
b1: Status of basic clock
0/1 = System 0 is ACT/System 1 is ACT
b7: Information on Reset of STBY DLKC **Note 1**
0/1 = - /STBY DLKC card was reset

Note 1: This data is displayed when the STBY DLKC card is detected as faulty.

1-W:PLO Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

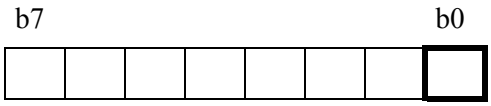
This message is displayed when a failure such as internal clock down occurred to PLO is restored.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

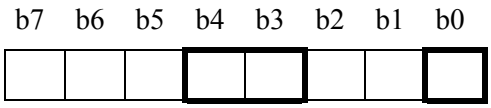

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Restoration of PLO fault



b0: 0/1 = PLO System 0/PLO System 1

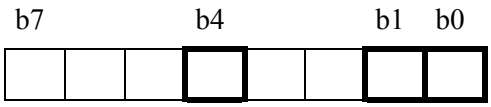
[2] Current Status of PLO card



b0: 0/1 = Clock is in STBY side/ACT side
b3, b4: Current Route of Input clock (see the table below)

b4	b3	CONNECTED WITH PRIMARY OSCILLATOR (M-OSC)	CONNECTED WITH EXTERNAL CLOCK
0	0	M-OSC 0	Route 0
0	1	M-OSC 1	Route 1
1	0	–	Route 2
1	1	–	Route 3

[3] Current Status of PLO card



b0: 0/1 = -/Five millisecond clock down
b1: 0/1 = -/Frame Synchronization from SYNC card is down
b4: 0/1 = -/Internal OSC clock down

3-B:C-Level Infinite Loop (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

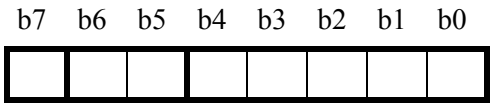
This message is displayed when a C-Level program abnormal state is detected as permanent. When the Port Microprocessor (PM) on an LC/TRK card detects the abnormal state, the PM places the card into make-busy status. If the failure occurs more than 15 times an hour, the system judges the failure as permanent and issues this system message.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty Card Mounting Location



b0-b4: Group
b5-b6: Unit (0-3)
b7: Module Group (0/1)

3-C:C-Level Infinite Loop (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when C-Level program is detected as abnormal by the Port Microprocessor (PM) mounted on an LC/TRK card. If the failure occurs less than 15 times/hour, and a B-monitor/Initial restart executes as the result, the failure is judged as temporary and this message is created.

```
1:XX0X 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

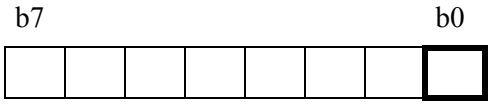

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty Card Mounting Location



b0-b4: Group
b5-b6: Unit (0-3)
b7: Module Group (0/1)

[2] PM Restart Type



b0: 0/1 = B-monitor/Initial Restart **Note 1**

Note 1: B-monitor Restart: Ports whose link has already been established remain connected. Ports processing a call-origination may be released.

Initial Restart: All ports on the card are forcibly released to be placed in idle state.

3-D:Lock-Up Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

At the periodic interval, the CPU sends diagnosis data to the Port Microprocessor (PM) on LC/TRK cards in order to monitor the PM. If the CPU cannot receive the return data within a predetermined period of time, the system displays this data. When the failure is detected more than 15 times per hour, the failure is judged as permanent.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty Card Location

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group
b5-b6: Unit (0-3)
b7: Module Group
0/1 = Even-numbered MG/Odd-numbered MG

Reference: See Chapter 5 Section 5.6.2, Control System Fault - Fault Occurs Intermittently on ACT side for the repair procedure.

3-E: Lock-Up Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

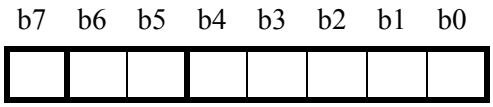
At the periodic interval, the CPU sends diagnosis data to the Port Microprocessor (PM) on LC/TRK cards in order to monitor the PM. If the CPU cannot receive the return data within a predetermined period of time, the system displays this data. When the failure is detected less than 15 times per hour, the failure is judged as temporary.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

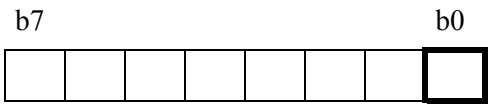

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty Card Location



b0-b4: Group
b5-b6: Unit (0-3)
b7: Module Group
0/1 = Even-numbered MG/Odd-numbered MG

[2] PM Restart Type



b0: 0/1 = B-monitor/Initial Restart

3-F: -48V Over Current

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when over current of the operating power (-48 VDC) is supplied from the ATI/ELC Card to the Attendant Console/Desktop terminal. When this fault occurs, the related card is placed into make-busy state and stops supplying power.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty PM

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group
b5, b6: Unit
b7: 0/1 = Even-numbered MG/Odd-numbered MG

3-G:Ground Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when a wire of the line between the LC card and the telephone set is short-circuited with ground.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of Faulty Card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b2: Circuit (0-7)
b3-b7: Card (0-31)

[2] Location of Faulty Card

b7	b6	b5	b4	b3	b2	b1	b0

b0, b1: Unit (0-3)
b2-b7: MG (0-1)

Note: This message is displayed when the specific LC card providing the above function is used.

3-H: Digital Line Warning

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message is displayed when the DTI card detects an abnormal state of a digital line, but this failure has no influence on the speech path. When the status worsens, the system issues [3-I] Digital Line Failure message.

```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of PM (LENS) with a fault

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group
b5, b6: Unit
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of fault

b7	b6	b5	b4	b3	b2	b1	b0

01H = Frame alignment loss occurs three times a day
02H = Bit error rate is over 10^{-6}
03H = Slip occurs twice a day
04H = Multi-frame alignment loss occurs three times a day
08H = Fault-detection on the CCIS Bch

[3] Time Slot number of fault (This data is valid only when the kind of fault is 08H.)

b7			b4	b3	b2	b1	b0

b0-b4: Time slot number in which the digital line failure occurred (1-16, 17-31)

3-I: Digital Line Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed after [3-H] Digital Line Warning lasts in the DTI card over the particular time. This failure may cause a speech path fault to the DTI card.

```
1:XXXX 0000 XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
 [1] [2]          [3] [4]  [3] [4] [3] [4] [3] [4]  [3] [4] [3] [4] [3] [4] [3] [4]

4:XXXX XXXX 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
 [3] [4] [3] [4]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty PM

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group
b5, b6: Unit
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of fault

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4:
01H = Frame alignment loss occurs 100 times a day
03H = Slip occurs 50 times a day
04H = Multi-frame alignment loss occurs 110 times a day
06H = Frame alignment loss lasts for two to three seconds
07H = Bit error rate is over 10^{-4}
09H = Warning signal (Remote Alarm) from the opposite office has been received for one second continuously.
0BH = Multi-frame alignment loss lasts for two to three seconds
0FH = Digital Line is not restored
11H = AIS signals are received continuously for one second.

[3] Location of Faulty Card (This data is valid when [2] is 0FH)

b7	b6	b5	b4	b3			b0

b3-b7: Group number

[4] Location of Faulty Card (This data is valid when [2] is 0FH)

b0, b1: Unit number
b2-b7: MG number

b7	b6	b5	b4	b3	b2	b1	b0

3-J: Digital Line Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when a digital line fault is restored.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty line

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/odd-numbered MG

3-K:Line Fault

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message indicates that A wire and B wire of the line between the LC card and telephone set is short-circuiting with each other.

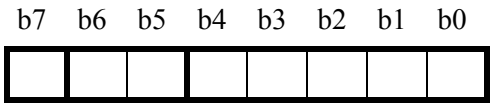
Note: This message is available in Australia only.

```
1:XX0X 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

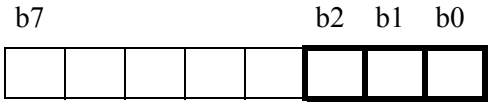
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty line (G, U, MG No.)



b0-b4: Group number
b5, b6: Unit (0-3)
b7: Module Group
0/1 = Even-numbered MG/Odd-numbered MG

[2] Location of faulty line (level number)



b0-b2: Level Number (0-7)

3-L: Line Fault Release

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message indicates that A wire and B wire of the line between the LC card and telephone set, which once short-circuited (cf. 3-K "Line Fault" *(Page 240)*), have become normal.)

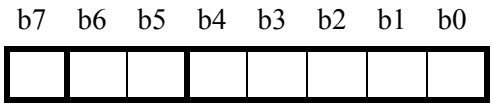
Note: This message is available in Australia only.

```
1:XX0X 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

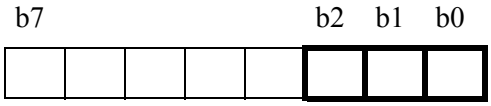
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of the faulty line (G, U, MG No.)



b0-b4: Group number
b5, b6: Unit (0-3)
b7: Module Group
0/1 = Even-numbered MG/Odd-numbered MG

[2] Location of the faulty line (level number)



b0-b2: Level Number (0-7)

4-C:Both TSW Ready Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

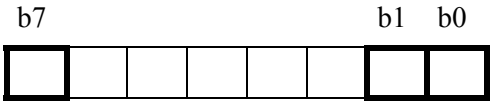
This message is displayed when a Ready Failure occurs in both systems as a result of the TSW card having a failure or the card is not mounted properly.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW system in which a fault is detected



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM
b7: Faulty Card Type
0/1 = TSW/GT

Note: When Ready Failure occurs in both systems, the [4-C] message is separately issued twice: “0” is displayed in one message, and “1” in the other message.

Reference: See Chapter 5 Section 5.5.3, Speech Path System Fault - When Dial Tone (DT) Cannot be Heard for the repair procedure.

4-D:TSW Ready Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

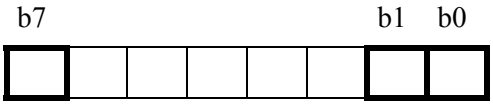
This message is displayed when a Ready Failure occurs in one of the dual systems because the TSW card fails or the card is not mounted properly.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] TSW system in which a fault is detected



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM
b7: Faulty Card Type
0/1 = TSW/GT

Reference: See Chapter 5 Section 5.5.4, Speech Path System Fault - STBY Side Has Become Fault or the repair procedure.

4-Q:DLKC Ready Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

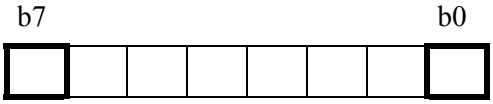
This message is displayed when I/O Ready Failure occurs on a DLKC card.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Details on faulty DLKC card



b0: 0/1 = System 0/System 1
b7: 0/1 = ACT/STBY

4-S: MUX Ready Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

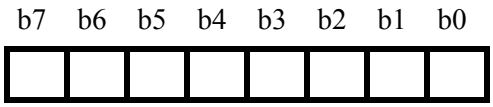
This message is displayed when the MUX (PH-PC36) card has a Ready Failure in one of the dual systems. When the card is not ready for service because of the failure or because the card is not mounted properly, the system creates this message.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

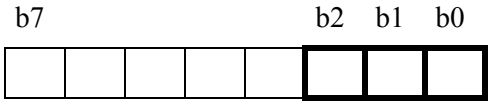

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Unit and MG number for MUX card with ready fault



b0: 0/1 = -/MUX ready fault in even-numbered MG, Unit 0
b1: 0/1 = -/MUX ready fault in even-numbered MG, Unit 1
b2: 0/1 = -/MUX ready fault in even-numbered MG, Unit 2
b3: 0/1 = -/MUX ready fault in even-numbered MG, Unit 3
b4: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 0
b5: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 1
b6: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 2
b7: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 3

[2] MG and system number for faulty MUX card



b0: MG number for faulty MUX card
0/1 = Even number/Odd number
b1: 0/1 = Ready failure in MUX System 0/Ready failure in MUX System 1
b2: ACT or STBY status of faulty MUX.
0/1 = ACT/STBY

Reference: See Chapter 5 Section 5.4.5, Unit Fault - ACT-Side MUX Card is Faulty and System Has Changed Over for the repair procedure.

4-T: Both MUX Ready Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

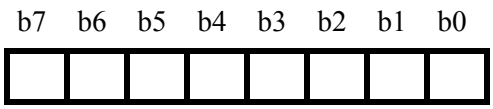
This message is displayed when the MUX card has a Ready Failure in both of the dual systems. When the card is not ready for service because of the failure or because the card is not mounted properly, the system creates this system message.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

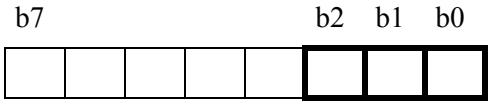

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Unit and MG number for MUX card with the ready fault



b0: 0/1 = -/MUX ready fault in even-numbered MG, Unit 0
b1: 0/1 = -/MUX ready fault in even-numbered MG, Unit 1
b2: 0/1 = -/MUX ready fault in even-numbered MG, Unit 2
b3: 0/1 = -/MUX ready fault in even-numbered MG, Unit 3
b4: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 0
b5: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 1
b6: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 2
b7: 0/1 = -/MUX ready fault in odd-numbered MG, Unit 3

[2] MG and system number for faulty MUX card



b0: MG number for faulty MUX card
0/1 = Even number/Odd number
b1: 0/1 = Ready failure in MUX System 0/Ready failure in MUX System 1 **Note 1**
b2: ACT or STBY status of the faulty MUX **Note 1, Note 2**
0/1 = ACT/STBY

Note 1: Though this message indicates the Ready Failure in both systems, the information displayed here only relates to the ACT-side MUX status. (Two messages are not displayed separately.)

Note 2: Fixed as 0 (=ACT).

Reference: See Section 5.4.5, Unit Fault - ACT-Side MUX Card is Faulty and System Has Changed Over for the repair procedure.

4-U:PCI Card Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

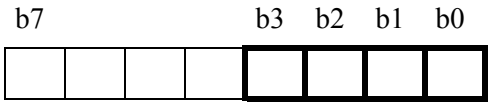
This message is displayed when a PCI card failure occurs.

```
1:0X0X XX0X XX0X XX00  2:000X XX00 000X XX0X  3:XX00 0000 0000 0000
  [1] [2] [3] [4] [5] [6] [7]     [8] [9]   [10] [11][12]  [13]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

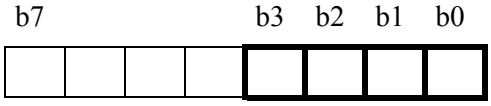
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Detection of LAN connector fault



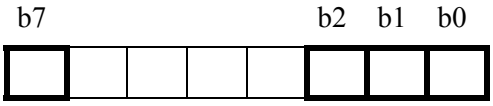
b0: 0/1 = -/Fault occurrence to LAN3 connector
b1: 0/1 = -/Fault occurrence to LAN2 connector
b2: 0/1 = -/Fault occurrence to LAN1 connector
b3: 0/1 = -/Fault occurrence to LAN4 connector

[2] LAN3 connector fault status:
F-Bus Link fault



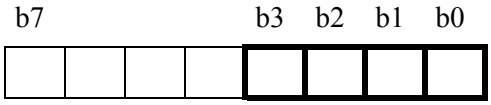
b0: 0/1 = -/Link fault **Note 1**
b1: 0/1 = -/Late Collision fault
b2: 0/1 = -/Parallel fault
b3: 0/1 = -/Transmission Speed fault

[3] LAN3 connector fault status:
F-Bus Link fault



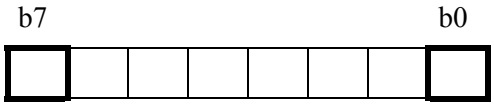
b0: 0/1 = -/Carrier loss
b1: 0/1 = -/SQE test error
b2: 0/1 = -/Jabber error
b7: 0/1 = -/Initial fault

[4] LAN3 connector fault status:
P-Bus Link fault



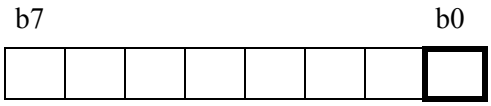
b0: 0/1 = -/Link fault
b1: 0/1 = -/Late Collision fault
b2: 0/1 = -/Parallel fault
b3: 0/1 = -/Transmission Speed fault

[5] LAN3 connector fault status:
P-Bus Link fault



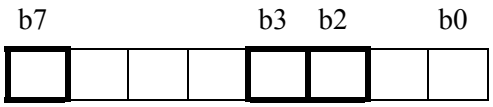
b0: 0/1 = -/Carrier loss
b7: 0/1 = -/Initial fault

[6] LAN2 connector fault status:
slot1 External Ether card



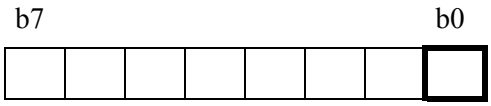
b0: 0/1 = -/Link fault **Note 1**

[7] LAN2 connector fault status:
slot1 External Ether card



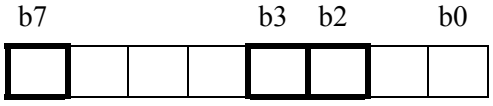
b2: 0/1 = -/Jabber error
b3: 0/1 = -/Sending error
b7: 0/1 = -/Initial error

[8] LAN1 connector fault status



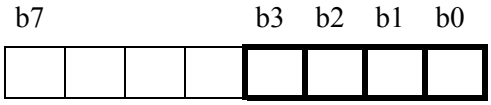
b0: 0/1 = -/Link fault **Note 1**

[9] LAN1 connector fault status



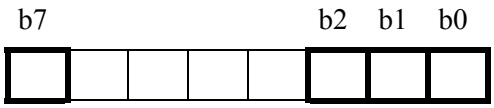
b2: 0/1 = -/Jabber error
b3: 0/1 = -/Sending error
b7: 0/1 = -/Initial error

[10] LAN4 connector fault status:
F-Bus Link fault



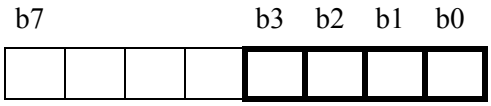
b0: 0/1 = -/Link fault **Note 1**
b1: 0/1 = -/Late Collision fault
b2: 0/1 = -/Parallel fault
b3: 0/1 = -/Transmission Speed fault

[11] LAN4 connector fault status:
F-Bus Link fault



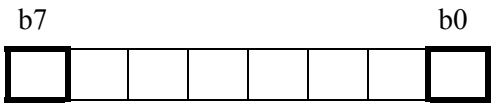
b0: 0/1 = -/Carrier loss
b1: 0/1 = -/SQE test error
b2: 0/1 = -/Jabber error
b7: 0/1 = -/Initial fault

[12] LAN4 connector fault status:
P-Bus Link fault



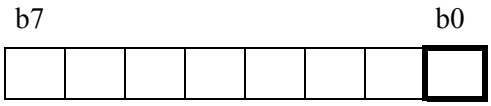
b0: 0/1 = -/Link fault **Note 1**
b1: 0/1 = -/Late Collision fault
b2: 0/1 = -/Parallel fault
b3: 0/1 = -/Transmission Speed fault

[13] LAN4 connector fault status:
P-Bus Link fault



b0: 0/1 = -/Carrier loss
b7: 0/1 = -/Initial fault

[14]System type of fault detection



b0: 1 =: SV9500

Note 1: Physical link failure includes the following:
- LAN cable disconnection
- LAN cable electrical short out
- LAN cable type, straight-through or crossover, mixing up

4-V: PCI Card Failure Recovered

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

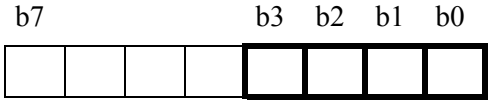
This message is displayed when the PCI card, which was detected as faulty, is recovered.

```
1:0X0X 0X0X 0X00 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5]

4:0X00 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
  [6]

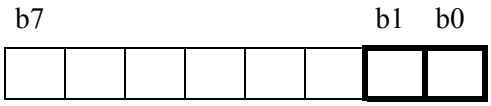
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Detection of LAN connector fault release



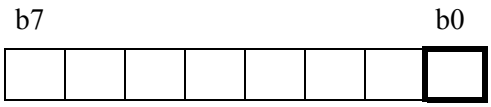
b0: 0/1 = -/LAN3 connector fault release
b1: 0/1 = -/LAN2 connector fault release
b2: 0/1 = -/LAN1 connector fault release
b3: 0/1 = -/LAN4 connector fault release

[2] LAN3 connector fault release status



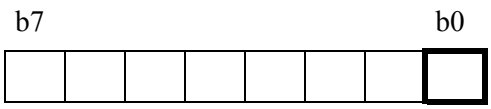
b0: 0/1 = -/F-BUS Link release
b1: 0/1 = -/P-BUS Link release

[3] LAN3 connector fault release status



b0: 0/1 = -/External Ether Link fault release

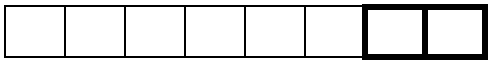
[4] LAN1 connector fault release status



b0: 0/1 = -/External Ether Link fault release

[5] LAN4 connector fault release status

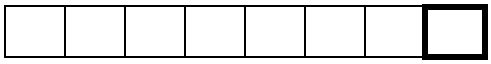
b7 b1 b0



b0: 0/1 = -/F-BUS Link release
b1: 0/1 = -/P-BUS Link release

[6] System type of fault detection

b7 b0



b0: 1 = SV9500

4-W:TSW Ready Failure Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

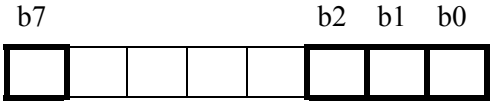
This message is displayed when TSW Ready failure is restored.

```
1:XXXX 0XX0 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3] [4]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

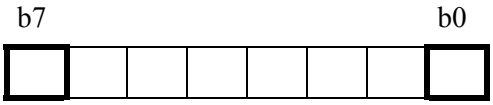
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Information on TSW Ready failure restoration



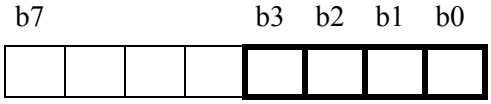
b0: 0/1 = -/Failure restoration in TSW system 0
b1: 0/1 = -/Failure restoration in TSW system 1
b2: 0/1 = Failure restoration in TSW on even-numbered MG/
Failure restoration in TSW on odd-numbered MG
b7: 0/1 = TSW in normal state after restart/
TSW in abnormal state after restart

[2] Self CPU status after restart



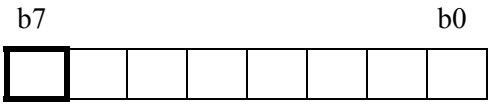
b0: 0/1 = -/Monitor restart
b7: 0/1 = ACT/STBY

[3] Failure information



b0–b3: Type of failure (HEX)
- 00= -
- 01= DLKC/PLO initialize failure
- 02= TSW ACT changeover failure
- 03= GT card abnormal
- 04= GT card abnormal (MB control abnormal)
- 05= TSW ACT changeover failure
- 06= GT card abnormal
- 07= GT card abnormal (MB control abnormal)
- 08= TSW ACT changeover failure
- 09= During fault processing
- 0A= During fault processing
- 0B= TSW ACT changeover failure

[4] Related call release result



b7: 0/1 = Released/Not released

4-Y: EMA/EXB/IOC Communication Failure Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

This message is displayed when a communication failure is detected on the EMA MAIN card, the EXB card, or the IOC card.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Kind of Fault

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Kind of Fault
01H = Link Down

[2] Kind of Card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Kind of Fault
00H = EMA MAIN card
01H = EXB card
02H = IOC card #0
03H = IOC card #1

6-A:System Failure (For Telephony Server)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3	(FIXED)NON	(FIXED)3

This message is displayed when any of the following faults are detected:

- Power failure
- FAN failure
- Fuse blowing
- In-Frame abnormal temperature

```
1:XX00 XXXX 0000 XX00 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]   [2] [3]   [4]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Probable cause for failure

b7	b6	b5	b4	b3	b2	b1	b0
	■		■	■	■	■	■

b0: Input power (-48V) down/abnormal detected
b1: PWR Supply abnormal detected **Note 1**
b2: PWR Supply Fuse Blown detected
b3: Abnormal temperature MJ (70ºC [158ºF])
b4: Abnormal temperature MN (60ºC [140ºF])
b5: (0 is fixed.)
b6: FAN failure detected **Note 2**

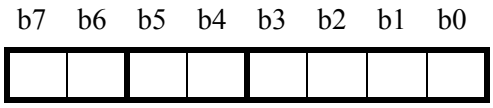
Note 1: When abnormal PWR Supply is detected, the alarm lamps light as the following, according to the nature of its failure.

(1) When either one of the systems of PWR cards in the IMG is faulty, MN lamp turns on.
(2) When either one of each system of PWR, GT, and PLO cards in the TSWR is faulty, MN lamp turns on.
(3) When either one of the pair of PWR cards in the MISCR is faulty, MJ lamp turns on.
(4) When both system of PWR cards within the same IMG are faulty, MJ lamp turns on.
(5) When both system of PWR cards in the TSWR are faulty, MJ lamp turns on.
(6) When both system of GT cards in the TSWR are faulty, MJ lamp turns on.
(7) When both system of PLO cards in the TSWR are faulty, MJ lamp turns on.
(8) When both system of PWR cards in the MISCR are faulty, MJ lamp turns on.

Note 2: When FAN failure is detected, the alarm lamps light as the following, according to the nature of its failure.

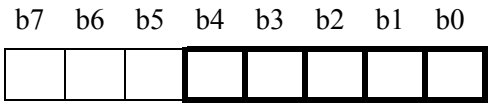
(1) When FAN failure is detected in any of the IMG, TSWR, or MISCR, MN lamp turns on.
(2) When either one of the three CPU FANs is faulty, MN lamp turns on.
(3) When two or all of the three CPU FANs are faulty, MJ lamp turns on.

[2] Frame in which a fault is detected



b0-b3: Frame (0 Only)
0/1 = CPU is mounted/Not mounted
b4, b5: Frame Group number
b6, b7: Kind of frame
00 = IMG
01 = CPU
02 = TSWR
03 = MISCR

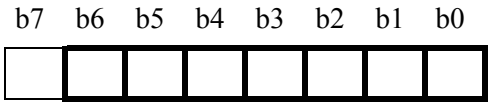
[3] Factor of failure



b0: 0/1 = -/OBP Alarm 0 side
b1: 0/1 = -/OBP Alarm 1 side
b2: 0/1 = -/OBP Alarm MISC side
b3: 0/1 = -/Power Alarm 0 side
b4: 0/1 = -/Power Alarm 1 side

Reference: See Chapter 5 Section 5.8, Power Supply Fault of 8U-PIR, for the repair procedure.

[4] Factor of failure



b0: 0/1 = -/OBP Alarm GT 0 system
b1: 0/1 = -/OBP Alarm GT 1 system
b2: 0/1 = -/OBP Alarm PLO 0 system
b3: 0/1 = -/OBP Alarm PLO 1 system
b4: 0/1 = -/FAN 0 side failure
b5: 0/1 = -/FAN 1 side failure
b6: 0/1 = -/FAN 2 side failure

6-A:System Failure (for SR-MGC(E))

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3	(FIXED)NON	(FIXED)3

This message is displayed when an SR-MGC(E) detects any of the following faults:

- Cooling FAN1/Cooling FAN2 failure
- PWR alarm

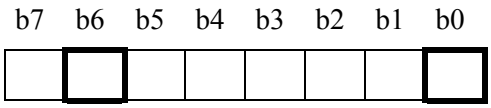
Note: The following shows a system message output from an SR-MGC(E), of which the system (MGC) is not notified.

```
1:XX00 XXXX 0000 XX00 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]  [2] [3]   [4]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] System alarm

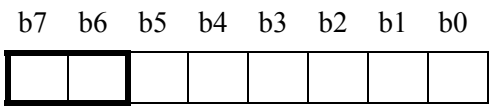


b0: 0/1 = -/Input power (-48V) down/abnormal detected
b6: 0/1 = -/FAN failure detected

Note: An SR-MGC(E) does not have any lamp indicating MJ and MN alarms; but PCPro provides the alarms. Each of MJ and MN alarm represents the following.

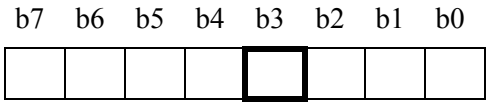
- MJ: represents detecting failure on both of two FANs.
  represents PWR alarm.
- MN: represents detecting failure on either of two FANs.

[2] Frame in which a fault is detected



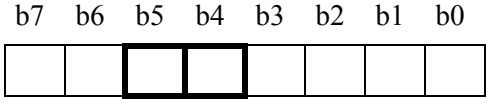
b6, b7: Kind of frame
01 = SR-MGC(E) (fixed)

[3] Factor of failure



b3: 0/1 = -/Power Alarm

[4] Factor of failure



b4: 0/1 = -/Cooling FAN1 failure detected
b5: 0/1 = -/Cooling FAN2 failure detected

6-B:RGU & Howler Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	2		

This message is displayed when a fault in either the ringer or analog howler tone occurs in the PWR card.

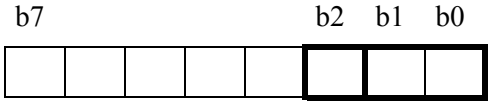
```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

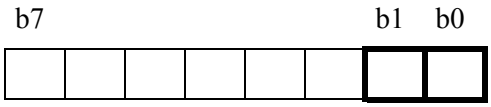
[1] Unit and MG number of fault detection

b0, b1: Unit (0-3)
b2: 0/1 = Even-numbered MG/Odd-numbered MG



[2] Kind of fault

b0: 0/1 = -/RGU (Ringing Unit) Fault
b1: 0/1 = -/Analog Howler Fault



6-C:Line Load Control Start

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	2		

This message is displayed when the CPU usage (occupancy) rate exceeds the value assigned to ASYD, SYS1, Index 56, and the call origination from the pre-selected group of stations is restricted (i.e., Line Load Control is set). This system message is always indicated as 0.

```
1:0000 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

6-D:Line Load Control Stop

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	2		

This message is displayed when the CPU usage (occupancy) rate becomes lower than the value assigned to ASYD, SYS1, Index 57, and Line Load Control is canceled. This system message is always indicated as 0.

```
1:0000 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

6-H:Bad Call Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message display indicates the result of Bad Call Notification.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:0000 0000 0000 0000
  [1] [2] [3] [4] [5] [6] [7] [8]   [9]  [10]  [11]  [12]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

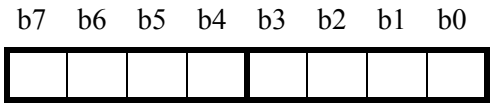
[1]



b0-b3: Station number digit with the fault. [This data is always indicated as "0" when type of connection is 2 (ACD Trunk).]
b4-b7: Type of connection
0 = Station connection
1 = Trunk connection
2 = ACD Trunk connection

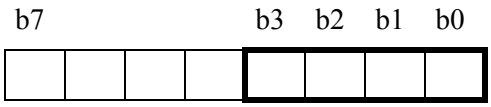
When type of connection is Station connection

[2]-[4]Station number (see table.)



	b4-b7	b0-b3
[2]	DC0	DC1
[3]	DC2	DC3
[4]	DC4	DC5

[5] The called station number



b0-b3: Number of digits for called station number

[6]-[8]Called station number
(See table.)

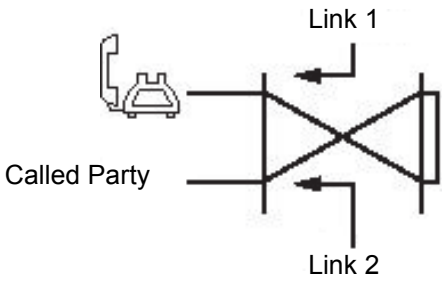
b7	b6	b5	b4	b3	b2	b1	b0

	b4-b7	b0-b3
[6]	DC0	DC1
[7]	DC2	DC3
[8]	DC4	DC5

[9] Time Slot Number of Link 1 **Note 1**

[11] Time Slot Number of Link 2 **Note 1**

Note 1: The following diagram shows the connection between Link 1 and Link 2.



When type of connection is Trunk connection

[2]-[4]Station number (See table.)

b7 b6 b5 b4 b3 b2 b1 b0

	b4-b7	b0-b3
[2]	DC0	DC1
[3]	DC2	DC3
[4]	DC4	DC5

[5] Remote Route number

b7 b6 b5 b4 b3 b2 b1 b0

b0-b5: Route (1-63)
b6: OP
0/1 = Data in OPRT is invalid/valid
b7: AC
0/1 = Internal trunk/External trunk

[6] Remote Route number

b7 b3 b2 b1 b0

b0-b3: OPRT Route (Over 64)

[7] Called Trunk number

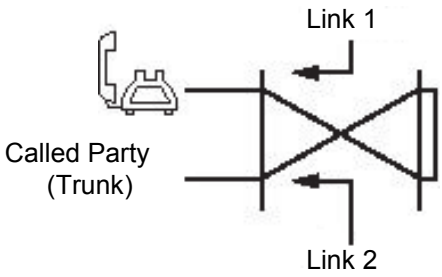
b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: Trunk number

[9] Time Slot Number of Link 1 **Note 2**

[11] Time Slot Number of Link 2 **Note 2**

Note 2: The following diagram shows the connection between Link 1 and Link 2.



When type of connection is ACD Trunk connection

For details, see “Message Detail Data of System Message ‘6-H’” of the chapter “SYSTEM MAINTENANCE” in Data Programming Manual - ACD.

6-I: STA-Test Connection Data

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed to indicate the result of a designated connection test (Individual Trunk Access) from a station.

```
1:XXXX XXXX XXXX XXXX 2:XXXX 00XX XXXX XXXX 3:XXXX XXXX XXXX XXXX
  [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [12] [12] [12] [12] [12] [12]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Test Item (b0-b3 is valid only for Outgoing trunk test)

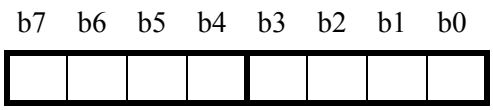
b7	b6	b5	b4	b3	b2	b1	b0

b0-b2: Kind of Signal
- 2 = Second Dial Tone
- 6 = Sender (Delay Dial Start)
- 7 = Sender (Wink Start)

b3: 0/1 = Data is invalid/valid

b4-b7: Test item
- 1 = Outgoing Trunk Test
- 2 = ORT/IRT Test
- 3 = Sender Test
- 4 = Digital Conference
- 5 = Tone Test
- 6 = Ringing Signal test
- 0 = Test NG

[2]



b0-b3: Number of digits of the testing station number
b4-b7: Error Numbers (See table.)

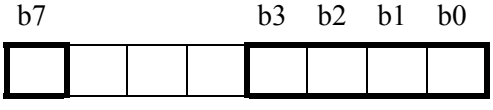
Error Numbers and Their Meanings

ERROR NO.	MEANING
0	---
1	The testing station is restricted from activating the service.
2	Route Number error of the designated trunk
3	Trunk Number error of the designated trunk
4	Trunk busy
5	Sender busy
6	SMDR failure
7	Call origination restriction
8	Register busy
9	Trunk number error - when the trunk has been designated by SHF.
A	Trunk busy - when the trunk has been designated by SHF.
B	Inter-digit timer expiration
C	Register or sender is defective with respect to DP, DP/PB
D	Register of sender is faulty with respect to PB
E	Tone fault
F	Test Processing error

[3]-[5]Station number of testing station (See table.)

	b4-b7	b0-b3
[3]	DC0	DC1
[4]	DC2	DC3
[5]	DC4	DC5

[6] Tenant number



b0-b3: Tenant (1-15)
b7: OP
0/1 = Data in OPTN ([7]) is invalid/valid

[7] OPTN data

b7 b3 b2 b1 b0

b0-b3: Tenant (Over 15)

[8] Tested Route number

b7 b6 b5 b4 b3 b2 b1 b0

b0-b5: Route (1-63) **Note 1**
b6: OP
0/1 = Data in OPRT([9]) is invalid/valid
b7: AC
0/1 = Internal trunk/External trunk

Note 1: When Logical Routes are assigned, Logical Route Numbers are displayed here.

[9] OPRT data

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: Route(≧ 64) **Note 2**

Note 2: When Logical Routes are assigned, Logical Route Numbers are displayed here.

[10] (This data is not for Ringing Signal Test)

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: Trunk number for Outgoing trunk test, ORT/IRT Test, Sender Test and Digital Conference test
Tone Slot number for Tone Test

0 = DT	1 = SPDT
2 = RBT	3 = CRBT, CWT
4 = BT	5 = RBT
6 = SST, WT	7 = SDT
8 = TRG	9 = SDTT
10 = CWRBT	14 = MSC

[11] Digit of Dialed Number (for test)

b7 b4 b3 b2 b1 b0

b0-b4: Dialed number digit sent by the test Trunk/Sender
or
Dialed Number digit received by the test Register

[12] Dialed Number (for test)

b7	b6	b5	b4	b3	b2	b1	b0

(a) Dialed Number sent by the test Trunk/Sender

b4-b7	b0-b3	b4-b7	b0-b3
DC0	DC1	DC12	DC13
DC2	DC3	DC14	DC15
DC4	DC5	DC16	DC17
DC6	DC7	DC18	DC19
DC8	DC9	DC20	DC21
DC10	DC11		

(b) Dial Number received by the test Register

b4-b7	b0-b3
DC0	DC1
DC2	DC3
DC4	DC5
DC6	DC7
DC8	DC9
DC10	DC11

6-J: Emergency Call

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a call terminates to the Emergency Telephone.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX 0000 0000  3:0000 0000 0000 0000
  [1] [2] [3] [4] [5] [6] [7] [8]  [9] [10] [11][12]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1]-[6] Called Station (Emergency Telephone) number (ASCII Code)

b7	b6	b5	b4	b3	b2	b1	b0

[1] DC0 (1st digit)
[2] DC1 (2nd digit)
[3] DC2 (3rd digit)
[4] DC3 (4th digit)
[5] DC4 (5th digit)
[6] DC5 (6th digit)

[7]-[12] Calling Station number (ASCII Code)

b7	b6	b5	b4	b3	b2	b1	b0

[7] DC0 (1st digit)
[8] DC1 (2nd digit)
[9] DC2 (3rd digit)
[10]DC3 (4th digit)
[11] DC4 (5th digit)
[12] DC5 (6th digit)

6-L: Emergency Control Start

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the LCR-Attendant Manual Override is set at the Attendant Desk Console.

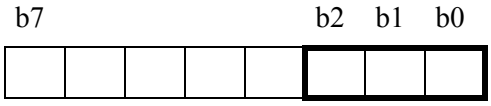
```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Route Selection Time Pattern number assigned at Attendant Desk Console

b0-b2: Pattern (1-7)



Note: Route Selection Time Pattern 0-7 corresponds to TDPTN 0-7 in the AOPR command.

6-M:Emergency Control Stop

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

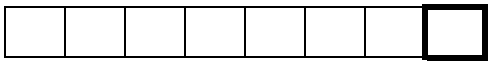
This message is displayed when the LCR-Attendant Manual Override is canceled at the Attendant Desk Console.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Suspension of Emergency Control



b0: Fixed 0.
0 = Outgoing call restriction is released by Attendant Desk Console

6-N: Abnormal Call Duration Data

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when the system detects abnormal duration in the connection between the calling and called party. When the calling and called party establish a connection and continue for an extremely short or long period of time [predetermined by the ASYD command (SYS1, Index 45, 46)], this message is created.

```
1:XXXX XXXX XXXX XX00  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XX00
  [1] [2]  [2] [3]  [3] [3]  [3]    [4] [5]  [5] [5]  [5] [5]  [5] [5]    [5] [5]  [5] [5]  [5] [5]  [5]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Calling party information



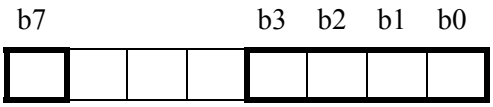
b0-b3: Type of Calling party
0 = Station
1 = Attendant console
2 = Trunk
b7: 0/1 = Short/Long Time

[2] Tenant number of Calling/Called party (HEX)

[3] Calling party Information

When calling party is Station

Calling station number (See table.)



b4-b7	b0-b3
DC0	DC1
DC2	DC3
DC4	DC5

When calling party is ATTCON/DESKCON

Attendant/Desk console number
(See table.)

b7	b6	b5	b4	b3	b2	b1	b0

b4- b7	b0-b3
DC0	DC1

When calling party is Trunk

Route and Trunk number (See table.)

	b0-b7
(a)	Route (HEX) **Note 1**
(b)	Route (HEX) **Note 1**
(c)	Trunk (HEX)
(d)	Trunk (HEX)

Note 1: The data format and meaning of its bits are shown below.

Route (a)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b5: Route (1-63)
b6: OP
0/1 = Data in OPRT is invalid/valid
b7: AC
0/1 = Internal trunk/External trunk

Route (b)

b7				b3	b2	b1	b0

b0-b3: OPRT
Route (Over 64)

[4] Called party information

b7				b3	b2	b1	b0

b0-b3:
00 = Station-to-Station call
01 = Outgoing call to outside
02 = Incoming call from outside

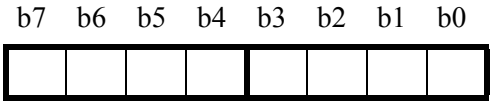
[5] Called Party Information

Station to Station Call

(a) Type of called party

00 = Station

01 = Attendant Console



b4-b7	b0-b3
(a)	
Tenant	
Tenant	
DC0	DC1
DC2	DC3
DC4	DC5

OG Call to outside (IC Call from outside)

b4-b7	b0-b3
Route (HEX)	
Route (HEX)	
Trunk (HEX)	
Trunk (HEX)	
DC0	DC1
DC2	DC3
DC4	DC5
DC6	DC7
DC8	DC9
DC10	DC11
DC12	DC13
DC14	DC15
DC16	DC17
DC18	DC19

b0-b7
Route (HEX)
Route (HEX)
Trunk (HEX)
Trunk (HEX)

6-O:SMDR Output Buffer Overflow Alarm

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed in the following cases:

- When the SMDR output buffer usage rate exceeds a value specified with ASYD, SYS1, Index 249, or
- SMDR data output error is detected.

```
1:XXXX XXXX 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3] [4]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Detail Information

b7	b6	b5	b4	b3	b2	b1	b0

b0-b3: FS
b4-b7: FE

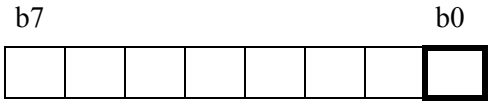
This system message varies depending on the data.

	FS	FE	MEANING
(a)	0	0	SMDR output buffer usage rate exceeds a value assigned to ASYD, SYS1, Index 249.
(b)	1	0	Severity level of Buffer Overflow Alarm
(c)	2	0	Data output is impossible due to SMDR device failure.
(d)	3	0	Line fault, IOC fault, SMDR device failure

(a) FS = 0, FE = 0

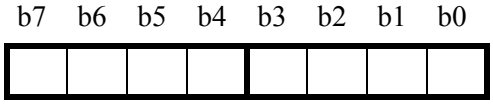
[2] Availability of Buffer Usage Rate information

b0: 0/1 = Buffer Usage Rate data assigned to ASYD, SYS1, Index 249, 250 is available/unavailable



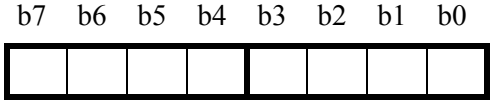
[3] Buffer Usage Rate Assigned with ASYD, SYS1, Index 249

b0-b3: Units
b4-b7: Tens



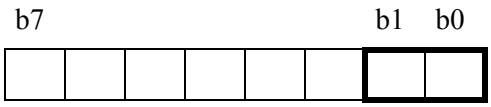
[4] Buffer Usage Rate Assigned with ASYD, SYS1, Index 250

b0-b3: Units
b4-b7: Tens



(b) FS = 1, FE = 0

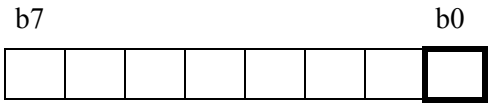
[2] Severity Level of Buffer Overflow Alarm



b0, b1: Severity level of Buffer Overflow Alarm

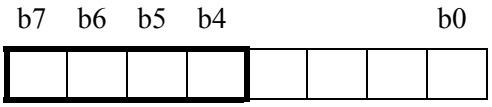
b0	b1	
0	0	: NON
0	1	: SUP
1	0	: MN
1	1	: MJ

[3] Overflow Rate



b0: 0/1 = -/100% Overflow

[4] Overflow Rate



b4-b7: 1-9 = 10%-90% Overflow

(c) FS = 2, FE = 0

[2] SMDR Group number

b7 b3 b2 b1 b0



b0-b3: The SMDR Group number of the device where a failure has occurred

[3] Port number

b7 b6 b5 b4 b3 b2 b1 b0



b0-b7: The port number of SMDR Group where a failure has occurred (0-7)

(d) FS = 3, FE = 0

[2] SMDR Group number

b7 b3 b2 b1 b0



b0-b3: The SMDR Group number of the device where a failure has occurred

6-P: SMDR Output Buffer Overflow Release

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message appears to inform users that SMDR Output Buffer Overflow Alarm state (System Message [6-O]) no longer exists. The alarm state is cleared when:

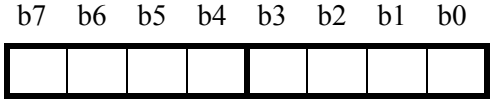
- SMDR output buffer usage rate drops from heights exceeding a value specified with ASYD, SYS1, Index 249 to less than a value specified with ASYD, SYS1, Index 250.
- SMDR data output error is corrected and normal operation resumes.

```
1:XXXX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Detail Information



b0-b3: FS
b4-b7: FE

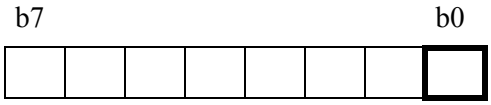
This system message varies depending on the data.

	FS	FE	MEANING
(a)	0	0	SMDR output buffer usage rate drops from heights exceeding the Overflow Alarm levels (System Message [6-O]) to less than a value specified with ASYD, SYS1, Index 250.
(b)	2	0	SMDR data output error (System Message [6-O]) is corrected and normal operation resumes.

(a) FS = 0, FE = 0

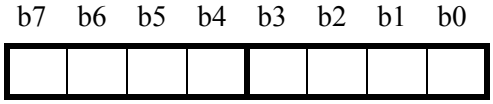
[2] Availability of Buffer Usage Rate information

b0: 0/1 = Buffer Usage Rate data assigned to ASYD, SYS1, Index 249, 250 is available/unavailable



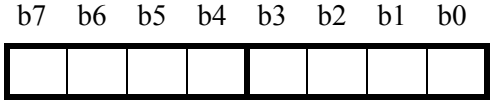
[3] Buffer Usage Rate Assigned with ASYD, SYS1, Index 249

b0-b3: Units
b4-b7: Tens



[4] Buffer Usage Rate Assigned with ASYD, SYS1, Index 250

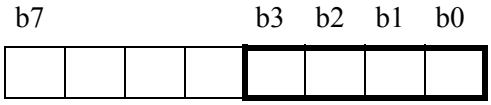
b0-b3: Units
b4-b7: Tens



(b) FS = 2, FE = 0

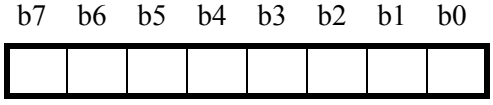
[2] SMDR Group number

b0-b3: The SMDR Group number of the device which has recovered from a failure



[3] Port number

b0-b7: The port number of SMDR Group which has recovered from a failure (0-7)



[4] Not used

7-A:System Initialize With Data Load

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

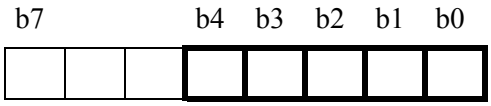
This message is displayed after the office data is loaded and system initialization has executed.

```
1:XXXX XXXX XXXX XXXX  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
 [1]                   [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Initial Information



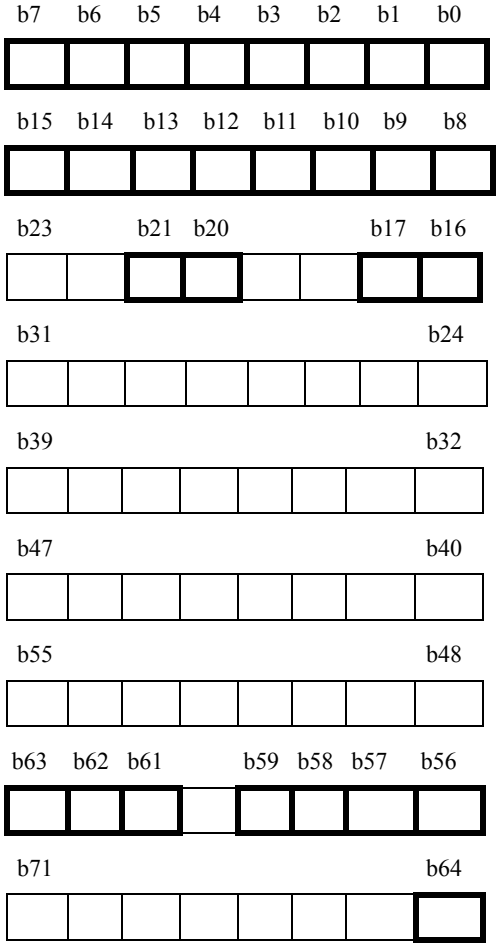
b0: 0/1 = IPL/PWR ON
b1: 0/1 = Load Key OFF/ON
b2: 0/1 = IPL KEY/PCPro INITIAL
b3: 0/1 = Program load/Non Program load
b4: 0/1 = -/Phase 1 Restart **Note 1**

Note 1: Phase1 Restart is executed when initializing the system without disrupting the following two-way connections that have already been established:

- Basic two-way connections (STN-STN, STN-TRK, TRK-TRK)
- Fixed connections
- Two-way connections established on a FCCS link

For more information, see Chapter 2 INITIALIZATION PROCEDURE OF THE SYSTEM.

[2] Load Status



b0: Office Data Load Status
0/1 = Load OK/NG

b1: Call Forwarding Data Load Status
0/1 = Load OK/NG

b2: SPD Data Load Status
0/1 = Load OK/NG

b3: RCF Data Load Status
0/1 = Load OK/NG

b4: Name Display Data Load Status
0/1 = Load OK/NG

b5: Network DM Load Status
0/1 = Load OK/NG

b6: Local DM Load Status
0/1 = Load OK/NG

b7: DM Load Status
0/1 = DM Load/Non Load

b8: User Assign Soft Key Data Load Status
0/1 = Load OK/NG

b9: Sub Station Transfer Data Load Status
0/1 = Load OK/NG

b10: ACD Office Data Load Status
0/1 = Load OK/NG

b11: Call Block Data Load Status
0/1 = Load OK/NG

b12: ICB Data Load Status
0/1 = Load OK/NG

b13: Expansion Speed Dial Data Load Status
0/1 = Load OK/NG

b14: Call Forwarding-Logout Data Load Status
0/1 = Load OK/NG

b15: SPD Data Load Status for DtermIP
0/1 = Load OK/NG

b16: Drive 0 (B) Load Status
0/1 = -/Drive Number 1 Load

b17: Drive 2 (C) Load Status
0/1 = -/Drive Number 2 Load

b20: Drive 0 (A) Load Status
0/1 = -/Drive Number 0 Load

b21: Drive 3 (D) Load Status
0/1 = -/Drive Number 3 Load

b56: H.323 Call Forwarding Data Load Status
0/1 = Load OK/NG

b57: MA-ID Data
0/1 = Load OK/NG

b58: SR-MGC Data Load Status
0/1 = Load OK/NG

b59: SIP Extension Call Forwarding Data Load Status **Note 2**
0/1 = Load OK/NG

b61: SPD Name Data Load Status
0/1 = Load OK/NG

b62: Mobility Access Data Load Status
0/1 = Load OK/NG

b63: Day/Night Data Load Status
0/1 = Load OK/NG

b64: Local Phone book Data Load Status
0/1 = Load OK/NG

Note 2: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

7-B:System Initialize

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

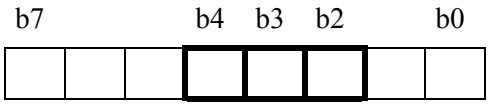
This message is displayed when system initialization is activated.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1]



b2: 0/1 = IPL KEY/PCPro INITIAL
b3: 0/1 = Program Load/Non Load
b4: 0/1 = -/Phase1 Restart **Note 1**

Note 1: Phase 1 Restart is executed when initializing the system without disrupting the following two-way connections that have already been established:

- Basic two-way connections (STN-STN, STN-TRK, TRK-TRK)
- Fixed connections
- Two-way connections established on a FCCS link

For more information, see Chapter 2 INITIALIZATION PROCEDURE OF THE SYSTEM.

7-C:CPU MBR Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

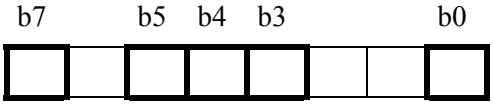
This message is displayed when the MBR switch on the Telephony Server is turned ON at the time of system changeover or speech path changeover.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

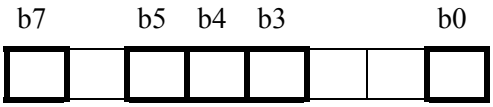
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Self-CPU Restart information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

[2] Mate-CPU Restart information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

[3] Data Analyzed by NEC Engineers

7-D:CPU MBR Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

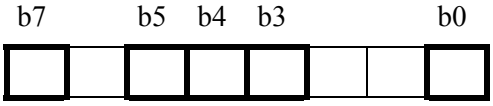
This message is displayed when the MBR switch on the Telephony Server is turned OFF at the time of system changeover or speech path changeover.

```
1:XXXX 0000 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

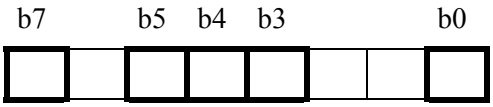
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Self-CPU Restart information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

[2] Mate-CPU Restart information



b0: 0/1 = -/Monitor Restart
b3: 0/1 = -/Initialization
b4: 0/1 = -/Data Copy Restart (for Dual-CPU system only)
b5: 0/1 = -/MB control
b7: 0/1 = ACT/STBY (active system indication after restart)

7-E: TSW MBR Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

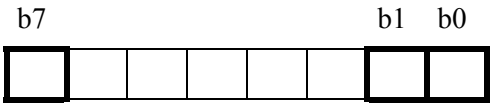
This message is displayed when the MBR switch on the TSW card is turned ON at CPU changeover or speech path changeover.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] System status of TSW card



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM
b7: Kind of change detection card
0/1 = TSW/GT

7-F: TSW MBR Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

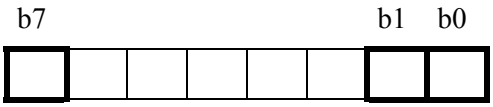
This message is displayed when the MBR switch on the TSW card is turned OFF at CPU changeover or speech path changeover.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] System status of TSW card



b0: 0/1 = TSW 0/TSW 1
b1: Distinction of TSW
0 = TSW connected with MUX or mounted in ISWM
1 = TSW connected with TSW of ISWM
b7: Kind of change detection card
0/1 = TSW/GT

7-G:TSW PLO Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

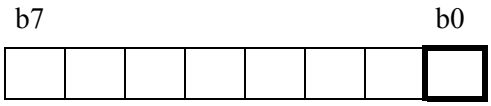
This message is displayed when the PLO MBR switch on TSW is turned ON (UP).

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Information on PLO MBR operation b0: 0/1=System 0/System 1



7-H:TSW PLO Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

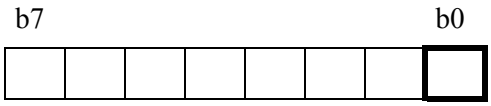
This message is displayed when the PLO MBR switch on TSW is turned OFF (DOWN).

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Information on PLO MBR operation b0: 0/1=System 0/System 1



7-K:PM MB Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MB switch on the line/trunk card is turned ON while extracting or inserting a card or at PM initialization. The message is also issued in the event of a failure of a card.

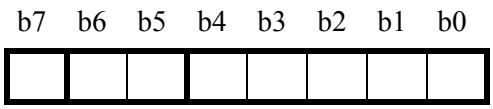
Note: If the message is displayed, check the conditions of the cards.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty Line/Trunk card



b0-b4: Card (0-31)
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

7-L: PM MB Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MB switch on the line/trunk card is turned OFF while extracting or inserting a card or at PM initialization.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty Line/Trunk card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Card (0-31)
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

7-M:NCU MB Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

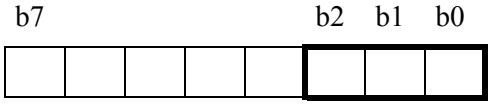
This message is displayed when the MB switch on the PFT card is turned ON while extracting or inserting a card, or at PM initialization.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

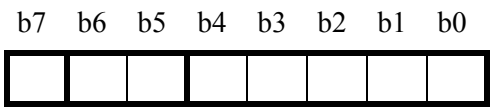
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty PFT card number



b0-b2: Card (0-7)

[2] Location of faulty PFT card



b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

7-N:NCU MB Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

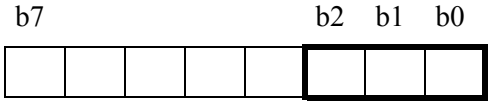
This message is displayed when the MB switch on the PFT card is turned OFF while extracting or inserting a card, or at PM initialization.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

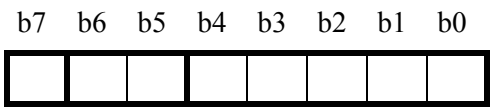
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty PFT card number



b0-b2: Card (0-7)

[2] Location of faulty PFT card



b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

7-O:Cyclic Diagnosis Normal

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

At a specific time cycle, the system allows a routine diagnosis on its hardware and software to determine if they are operating properly. This message indicates that the system has been checked by the routine diagnosis program and the result of the diagnosis is normal.

```
1:XXXX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]          Note 1

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Performed Diagnosis Item

b7	b6	b5	b4	b3	b2	b1	b0

[00H] Routine Diagnosis Start
[20H] Data Memory Verification Normal End
[22H] Data Memory Verification Normal End (Between Central Control Node and Remote Node)
[30H] TSW ACT/STBY Changeover Normal End
[40H] CPU ACT/STBY Changeover Normal End
[50H] No Trunk Ineffective Hold
[51H] Accommodated Location of PS - No Trunk Ineffective Hold
Note 2
[70H] Call Forwarding Memory Clear Normal End
[A0H] Periodic Back-up Normal End

Note 1: The data in this area will be diverse, according to the diagnosis specified in [1]. For details on each item data, see the following pages.

Note 2: This is output when a PS line is accommodated on a programmable Line/Feature key of a Desktop terminal as Sub Line.

[00H] Routine Diagnosis Start

```
1:00XX XXXX XXXX XX00  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5] [6]  [7]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Performed Diagnosis Item

[00H] Routine Diagnosis Start

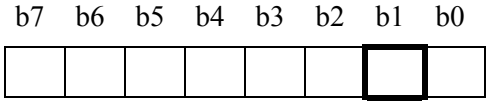
[2] Pending Diagnosis Menu (SYS1, Index 89)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY Changeover
b3: 0/1=-/CPU ACT/STBY Changeover **Note 3**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Clear Service

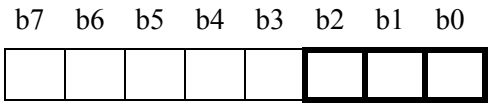
Note 3: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Pending Diagnosis Menu (SYS1, Index 90)



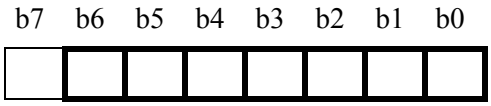
b1: 0/1=-/Periodic Back-up

[4] Automatic Transferring Memory Cancellation (SYS1, Index 232)



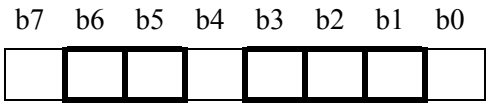
b0: 0/1=-/Automatic Call Forwarding Cancellation
b1: 0/1=-/Automatic Call Forwarding Busy Cancellation
b2: 0/1=-/Automatic Call Forwarding-Don't Answer Cancellation

[5] Periodic Backup (Index 304)



b0: 0/1 = -/Individual Speed Calling Data
b1: 0/1 = -/Call Forwarding Data
b2: 0/1 = -/Remote Call Forwarding Data
b3: 0/1 = -/Name Display Data
b4: 0/1 = -/User Assign Soft Key Data
b5: 0/1 = -/Number Sharing Data
b6: 0/1 = -/Call Block Data

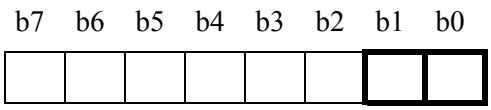
[6] Periodic Backup (Index 305)



b1: 0/1 = -/Call Forwarding-Logout Data
b2: 0/1 = -/SPD Data Load Status for DtermIP
b3: 0/1 = -/DM/LDM/NDM Data
b5: 0/1 = -/MA-ID Data
b6: 0/1 = -/SIP Extension Call Forwarding Data **Note 4**

Note 4: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

[7] Periodic Backup (Index 306)



b0: 0/1 = -/Local Phone book Data
b1: 0/1 = -/ACD DM Data (for the countries except North America)

[20H] Data Memory Verification Normal End

```
1:20XX XXXX 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3] [4]

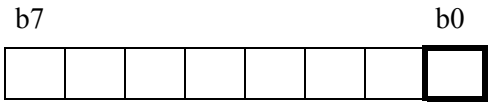
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Routine Diagnosis

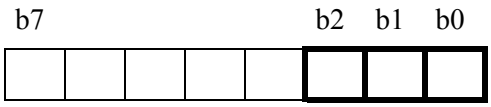
[20H] Data Memory Verification Normal End

[2] Verification of HD (Flash Card)



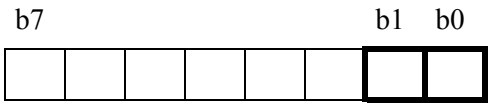
b0: 0/1 = -/Active CPU Flash Card is abnormal

[3] Verification of Data Memory



b0: 0/1 = -/Data Memory
b1: 0/1 = -/Local Data Memory
b2: 0/1 = -/Network Data Memory

[4] Verification of Office Data



b0: 0/1 = -/Verified against Drive1
b1: 0/1 = -/Verified against Drive2

[22H] Data Memory Verification Normal End (Between Central Control Node and Remote Node)
(For UMGi/RNIP system)

```
1:22XX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]

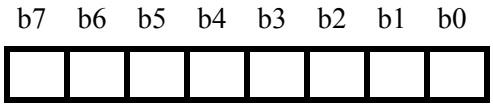
4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Routine Diagnosis

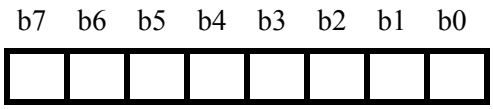
[22H] Data Memory Verification Normal End (Between Central Control Node and Remote Node)

[2] DM Verification Result



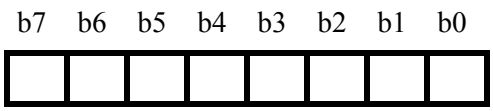
b0 – b7:DM verification result
80H = DM verification OK

[3] LDM Verification Result



b0 - b7:LDM verification result
80H = LDM verification OK

[4] NDM Verification Result



b0 - b7:NDM verification result
80H = NDM verification OK

Note: This message is output when all the data memories are verified normally.

Note: When NDM is not used, NDM verification result shows NDM verification OK (80H) unconditionally.

[30H] TSW ACT/STBY Changeover Normal

```
1:30XX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

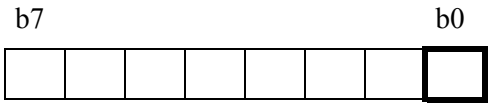
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Routine Diagnosis

[30H] TSW ACT/STBY Changeover Normal End

[2] Active TSW system after changeover

b0: 0/1 = TSW 0 is ACT/TSW 1 is ACT



[40H] CPU ACT/STBY Changeover Normal End

```
1:40XX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

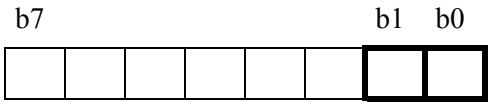
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Routine Diagnosis

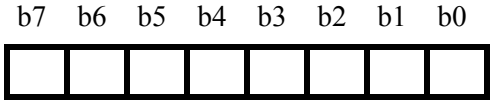
[40H] CPU ACT/STBY Changeover Normal End

[2] Active CPU system



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] "ACT" CPU after the changeover (Indicated in Logical PBI Number) (For UMGi/RNIP system)



PBI Number:
30H-6FH = LP

[50H] No Trunk Ineffective Hold

```
1:50XX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

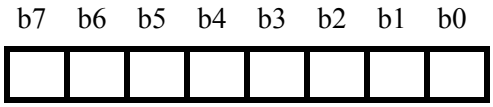
4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Routine Diagnosis

[50H] No Trunk Ineffective Hold

[2] MG and Unit number of Trunk Ineffective Hold



b0: Unit 0, Even-numbered MG
1 = No Trunk Ineffective Hold

b1: Unit 1, Even-numbered MG
1 = No Trunk Ineffective Hold

b2: Unit 2, Even-numbered MG
1 = No Trunk Ineffective Hold

b3: Unit 3, Even-numbered MG
1 = No Trunk Ineffective Hold

b4: Unit 0, Odd-numbered MG
1 = No Trunk Ineffective Hold

b5: Unit 1, Odd-numbered MG
1 = No Trunk Ineffective Hold

b6: Unit 2, Odd-numbered MG
1 = No Trunk Ineffective Hold

b7: Unit 3, Odd-numbered MG
1 = No Trunk Ineffective Hold

[51H] Accommodated Location of PS - No Trunk Ineffective Hold

```
1:5100 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Routine Diagnosis

[51H] Accommodated Location of PS - No Trunk Ineffective Hold

[70H] Call Forwarding Memory Clear Normal End

```
1:7000 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Routine Diagnosis

[70H] Call Forwarding Memory Clear Normal End

[A0H] Periodic Backup Normal End

```
1:A0XX XXXX 0000 XXXX 2:0000 0000 0000 00XX 3:00XX 0000 0000 0000
  [1] [2]  [3]       [4]                    [3]    [4]

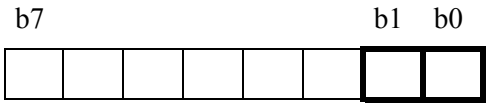
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Routine Diagnosis

[A0H] Periodic Backup Normal End

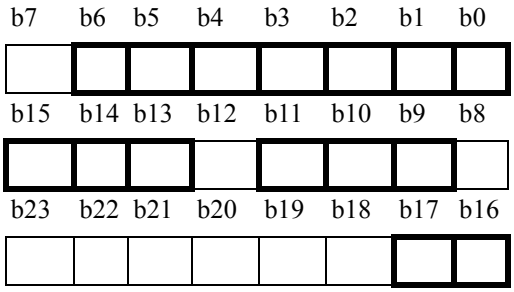
[2] Information on Periodic Backup Normal End



b0: 0/1 = ACT Backup Data: Normal End/-
b1: 0/1 = STBY Backup Data: Normal End/-

Note: In the Single System Configuration, the backup result of the STBY side is always shown as "Normal End."

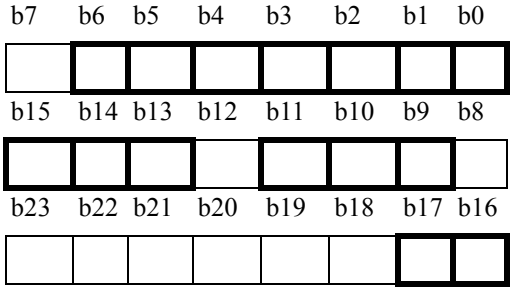
[3] Backup Data to ACT side



b0: 0/1 = -/Individual Speed Calling Data
b1: 0/1 = -/Call Forwarding Data
b2: 0/1 = -/Remote Call Forwarding Data File
b3: 0/1 = -/Name Display Data
b4: 0/1 = -/User Assign Soft Key Data
b5: 0/1 = -/Number Sharing Data
b6: 0/1 = -/Call Block Data
b9: 0/1 = -/Call Forwarding-Logout Data
b10: 0/1 = -/SPD Data for DtermIP
b11: 0/1 = -/DM/LDM/NDM Data
b13: 0/1 = -/MA-ID
b14: 0/1 = -/SIP Extension Call Forwarding Data **Note 5**
b15: 0/1 = -/Mobility Access Data
b16: 0/1 = -/Local Phone book Data
b17: 0/1 = -/ACD DM Data (for the countries except North America)

Note 5: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

[4] Backup Data to STBY side



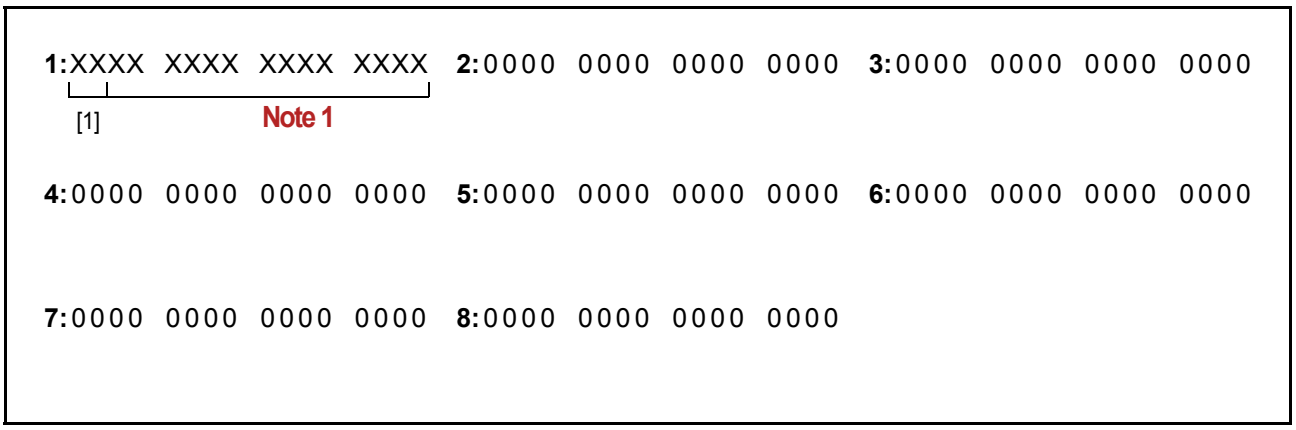
Note 6: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

b0: 0/1 = -/Individual Speed Calling Data
b1: 0/1 = -/Call Forwarding Data
b2: 0/1 = -/Remote Call Forwarding Data File
b3: 0/1 = -/Name Display Data
b4: 0/1 = -/User Assign Soft Key Data
b5: 0/1 = -/Number Sharing Data
b6: 0/1 = -/Call Block Data
b9: 0/1 = -/Call Forwarding-Logout Data
b10: 0/1 = -/SPD Data for DtermIP
b11: 0/1 = -/DM/LDM/NDM Data
b13: 0/1 = -/MA-ID
b14: 0/1 = -/SIP Extension Call Forwarding Data **Note 6**
b15: 0/1 = -/Mobility Access Data
b16: 0/1 = -/Local Phone book Data
b17: 0/1 = -/ACD DM Data (for the countries except North America)

7-P: Cyclic Diagnosis Information (Error Detected)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

At a specific time cycle, the system allows a routine diagnosis on its hardware and software to determine if they are operating properly. This message indicates that the system has been checked by the routine diagnosis program and the result of the diagnosis is not normal.



[1] Detected Error Item

b7	b6	b5	b4	b3	b2	b1	b0

[20H] Data Memory Verification Discrepancy
[21H] Data Memory Verification Impossible (Flash Card Fault)
[22H] Data Memory Verification Impossible (Between Central Control Node and Remote Node)
[2FH] Data Memory Verification Stop
[30H] TSW ACT/STBY Changeover Failure
[31H] TSW ACT/STBY Changeover Failure (MUX Fault)
[3FH] TSW ACT/STBY Changeover Stop
[41H] CPU ACT/STBY Changeover Failure (Single CPU System)
[42H] CPU ACT/STBY Changeover Failure (DM Verification NG)
[43H] CPU ACT/STBY Changeover Failure (PCI Fault)
[44H] CPU ACT/STBY Changeover Failure (Changeover NG or CPU RAM Copy NG)
[45H] CPU ACT/STBY Changeover Failure (EMA MB)
[46H] CPU ACT/STBY Changeover Failure (EMA FIFO NG)
[47H] CPU ACT/STBY Changeover Failure (GATE Fault)
[48H] CPU ACT/STBY Changeover Failure (CPU Abnormal State)
[49H] CPU ACT/STBY Changeover Failure (Transfer Error)
[4AH] CPU ACT/STBY Changeover Failure (No Answer Error)
[4FH] CPU ACT/STBY Changeover Stop
[50H] Trunk Ineffective Hold Detected
[51H] Trunk Ineffective Hold Detected and Released
[52H] Trunk Ineffective Hold Detected Impossible
[53H] Accommodated Location of PS - Trunk Ineffective Hold Detected **Note 2**
[54H] Accommodated Location of PS - Trunk Ineffective Hold Detected and Released **Note 2**
[5FH] Trunk Ineffective Hold Detection Stop
[70H] Call Forwarding Memory Clear NG
[7FH] Call Forwarding Memory Clear Stop
[A0H] Periodic Backup Abnormal End
[AFH] Periodic Backup Stop

Note 1: The data in this area will be diverse, according to the diagnosis specified in [1]. For details on each item data, see the following pages.

Note 2: This is output when a PS line is accommodated on a programmable Line/Feature key of a Desktop terminal as Sub Line.

[20H] Data Memory Verification Discrepancy

```
1:20XX XXXX XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:0000 0000 0000 0000
  [1] [2]  [3] [4]              [5]

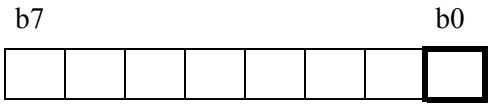
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

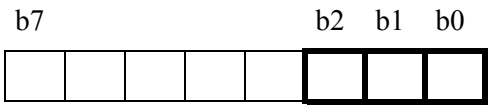
[20H] Data Memory Verification Discrepancy

[2] Verification of Flash Card



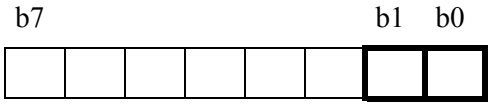
b0: 0/1 = -/Active CPU Flash Card is abnormal

[3] Verification of Data Memory



b0: 0/1 = -/Present Data Memory (DM)
b1: 0/1 = -/Local Data Memory (LDM)
b2: 0/1 = -/Network Data Memory (NDM)

[4] Verification of Office Data



b0: 0/1 = -/Verified against Drive1
b1: 0/1 = -/Verified against Drive2

[5] Data Analyzed by NEC Engineers

[21H] Data Memory Verification Impossible (Flash Card Fault)

```
                                  DM          LDM         NDM
1:21XX XX00 XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:0000 0000 0000 0000
  [1] [2]  [3]  [4] [5] [6] [7]  [4] [5] [6] [7] [4] [5] [6] [7]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

Note: On the above diagram, the output location of [4]-[7] is different depending on which information to look for; that of DM, LDM, or NDM.

[1] Error detection by Routine Diagnosis

[21H] Data Memory Verification Impossible (Flash Card Fault)

[2] Flash Card Impossible Verification

b7 b0

b0: 0/1 = -/Active CPU Flash Card is abnormal

[3] Verification of Data Memory

b7 b2 b1 b0

b0: 0/1 = -/Data Memory (DM)
b1: 0/1 = -/Local Data Memory (LDM)
b2: 0/1 = -/Network Data Memory (NDM)

[4] Error Type

b7 b6 b5 b4 b3 b2 b1 b0

00H: HFC Processing NG
01H: HFC Not Connected
02H: HFC Busy
03H: HFC Fault (Fault processing/Not equipment etc.)
04H: Transfer NG
05H: Response Timeout

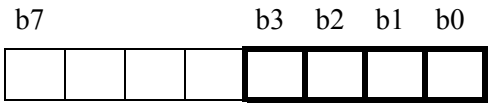
[5] Single Code

b7 b6 b5 b4 b3 b2 b1 b0

51H: Data Transfer starts
53H: File Transfer starts
55H: Data Load

[6] Data Analyzed by NEC Engineers

[7] Error Drive



b0: 0/1 = -/Drive 0 (A)
b1: 0/1 = -/Drive 1 (B)
b2: 0/1 = -/Drive 2 (C)
b3: 0/1 = -/Drive 3 (D)

Note: When [4] (Error Type) is 00H, [5] Signal Code, [6] and [7] Error Drive are valid.

[22H] Data Memory Verification Impossible (Between Central Control Node and Remote Node)
(For UMGi/RNIP system)

```
1:22XX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2] [3] [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[22H] Data Memory Verification Impossible (Flash Card Fault)

[2] DM Verification Result

b7	b6	b5	b4	b3	b2	b1	b0

01H: DM Verification NG
02H: DM Checksum transfer NG
80H: DM Verification OK

[3] LDM Verification Result

b7	b6	b5	b4	b3	b2	b1	b0

01H: LDM Verification NG
02H: LDM Checksum transfer NG
80H: LDM Verification OK

[4] NDM Verification Result

b7	b6	b5	b4	b3	b2	b1	b0

01H: NDM Verification NG
02H: NDM Checksum transfer NG
80H: NDM Verification OK

Note: When NDM is not used, NDM verification result indicates NDM Verification OK(80H) unconditionally.

[2FH] Data Memory Verification Stop

```
1:2FXX XXXX 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]  [2]  [3]

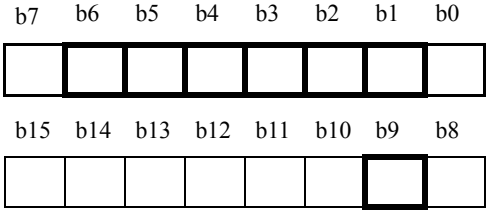
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Detected Error Item

[2FH] Data Memory Verification Stop

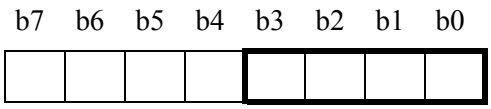
[2] Suspended Item (refer to ASYD SYS1 Indexes 89 and 90)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY changeover
b3: 0/1=-/CPU ACT/STBY changeover **Note 3**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Automatic Cancellation
b9: 0/1=-/Periodical Backup

Note 3: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Cause for Suspension



b3 b2 b1 b0
0 0 0 1 = CPU changeover

[30H] TSW ACT/STBY Changeover Failure

```
1:30XX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]  [3] [4]  [5] [6]  [7] [8]   [9] [10] [11][12] [13][14] [15][16]  [17][18] [19][20] [21][22] [23][24]

4:XXXX XXXX XXXX XXXX  5:XXXX 0000 0000 0000  6:0000 0000 0000 0000
  [25][26] [27][28] [29][30] [31][32]   [33][34]

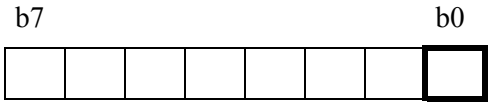
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Detected Error Item

[30H] TSW ACT/STBY Changeover Failure

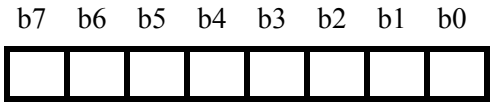
[2] Active TSW number

b0: 0/1=TSW ACT 0/ACT 1



[3]-[6]MUX card (ACT-side) linkage condition

As shown in the following table, each bit represents the Unit number allocated for each MUX card in position. When "1" is set, the corresponding MUX card (status: ACT) has a functional failure or is not mounted in the proper location.



	b7	b6	b5	b4	b3	b2	b1	b0
[3]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 1				MG 0			
[4]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 3				MG 2			
[5]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 5				MG 4			
[6]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 7				MG 6			

0: -
1: MUX connection error (functional fault/not mounted)

[7]-[10]MUX card (STBY) linkage condition

As shown in the following table, each bit represents the Unit number allocated for each MUX card in position. When "1" is set, the corresponding MUX card (status: STBY) has a functional failure or is not mounted in the proper location.

b7	b6	b5	b4	b3	b2	b1	b0

	b7	b6	b5	b4	b3	b2	b1	b0
[7]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 1				MG 0			
[8]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 3				MG 2			
[9]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 5				MG 4			
[10]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 7				MG 6			

0: -
1: MUX connection error (functional fault/not mounted)

[3]-[34] MUX card (ACT/STBY-side) linkage condition (For UMGi/RNIP system)

As shown in the following table, each bit represents the Unit number allocated for each MUX card in position. When "1" is set, the corresponding MUX card (status: ACT) has a functional failure or is not mounted in the proper location.

b7	b6	b5	b4	b3	b2	b1	b0

ACT	STBY	b7 b6 b5 b4 b3 b2 b1 b0
[3]	[4]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG1 — MG0
[5]	[6]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG3 — MG2
[7]	[8]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG5 — MG4
[9]	[10]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG7 — MG6
[11]	[12]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG9 — MG8
[13]	[14]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG11 — MG10
[15]	[16]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG13 — MG12
[17]	[18]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG15 — MG14

ACT	STBY	b7 b6 b5 b4 b3 b2 b1 b0
[19]	[20]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG17 — MG16
[21]	[22]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG19 — MG18
[23]	[24]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG21 — MG20
[25]	[26]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG23 — MG22
[27]	[28]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG25 — MG24
[29]	[30]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG27 — MG26
[31]	[32]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG29 — MG28
[33]	[34]	U=3 U=2 U=1 U=0 U=3 U=2 U=1 U=0 — MG31 — MG30

[31H] TSW ACT/STBY Changeover Failure (MUX Fault)

```
1:31XX XXXX XXXX XXXX  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5] [6]  [7] [8]   [9] [10]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

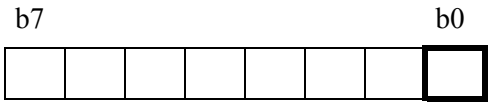
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Detected Error Item

[31H] TSW ACT/STBY Changeover Failure (MUX Fault)

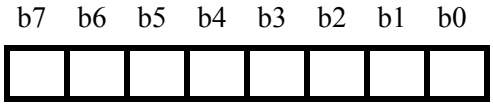
[2] Active TSW number

b0: 0/1=TSW ACT 0/ACT 1



[3]-[6]MUX card (ACT-side) linkage condition

As shown in the following table, each bit represents the Unit number allocated for each MUX card in position. When "1" is set, the corresponding MUX card (status: ACT) has a functional failure or is not mounted in the proper location.



	b7	b6	b5	b4	b3	b2	b1	b0
[3]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 1				MG 0			
[4]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 3				MG 2			
[5]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 5				MG 4			
[6]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 7				MG 6			

0: -
1: MUX connection error (functional fault/not mounted)

[7]-[10]MUX card (STBY) linkage condition

b7	b6	b5	b4	b3	b2	b1	b0

As shown in the following table, each bit represents the Unit number allocated for each MUX card in position. When "1" is set, the corresponding MUX card (status: STBY) has a functional failure or is not mounted in the proper location.

	b7	b6	b5	b4	b3	b2	b1	b0
[7]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 1				MG 0			
[8]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 3				MG 2			
[9]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 5				MG 4			
[10]	Unit 3	Unit 2	Unit 1	Unit 0	Unit 3	Unit 2	Unit 1	Unit 0
	MG 7				MG 6			

0: -
1: MUX connection error (functional fault/not mounted)

[3FH] TSW ACT/STBY Changeover Stop

```
1:3FXX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]

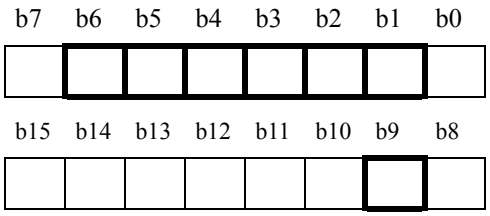
4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Detected Error Item

[3FH] TSW ACT/STBY Changeover stopped

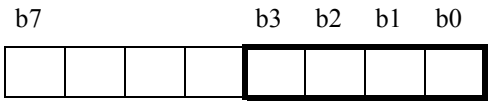
[2] Suspended Item (refer to ASYD SYS1 Indexes 89 and 90)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY changeover
b3: 0/1=-/CPU ACT/STBY changeover **Note 4**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Automatic Cancellation
b9: 0/1=-/Periodical Backup

Note 4: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Cause for Suspension



b3 b2 b1 b0
0 0 0 1 = CPU changeover

[41H] CPU ACT/STBY Changeover Failure (Single System)

```
1:41XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]     [4]

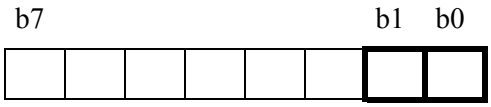
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

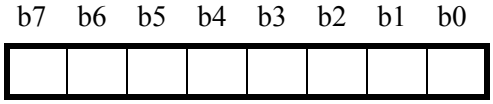
[41H] CPU ACT/STBY Changeover Failure (Single System)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[42H] CPU ACT/STBY Changeover Failure (DM Verification NG or PM Verification NG)

```
1:42XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]     [4]

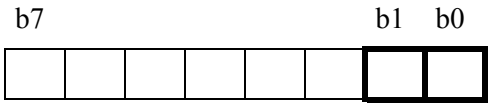
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

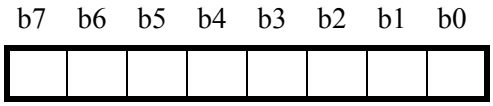
[42H] CPU ACT/STBY Changeover Failure (DM or PM Verification NG)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[43H] CPU ACT/STBY Changeover Failure (PCI Fault)

```
1:43XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]   [4]

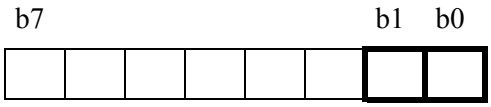
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

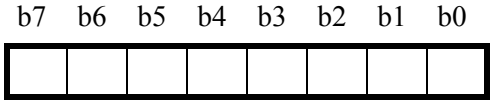
[43H] CPU ACT/STBY Changeover Failure (PCI Fault)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[44H] CPU ACT/STBY Changeover Failure (Changeover NG or CPU RAM Copy NG)

```
1:44XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]     [4]

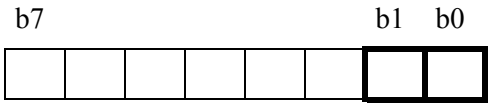
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

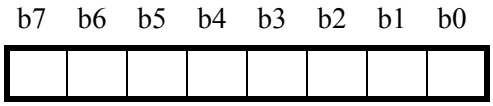
[44H] CPU ACT/STBY Changeover Failure
Changeover NG or CPU RAM Copy NG)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[45H] CPU ACT/STBY Changeover Failure (EMA MB)

```
1:45XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]     [4]

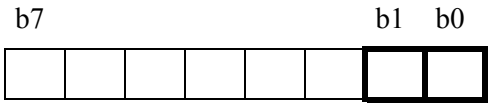
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

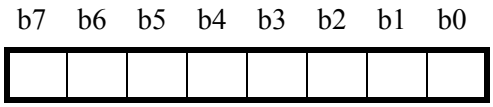
[45H] CPU ACT/STBY Changeover Failure (EMA MB)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] ACT system after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[46H] CPU ACT/STBY Changeover Failure (EMA FIFO NG)

```
1:46XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]     [4]

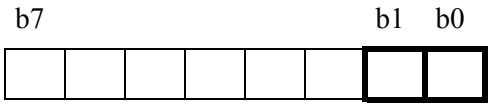
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

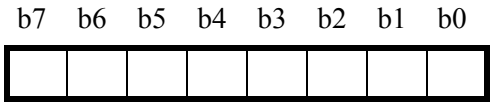
[46H] CPU ACT/STBY Changeover Failure (EMA FIFO)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[47H] CPU ACT/STBY Changeover Failure (GATE Failure)

```
1:47XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]      [4]

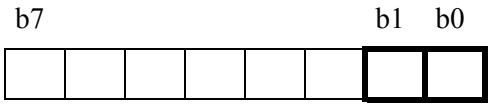
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

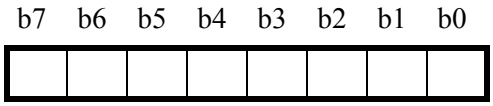
[47H] CPU ACT/STBY Changeover Failure (GATE Failure)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[48H] CPU ACT/STBY Changeover Failure (CPU Abnormal State)

```
1:48XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]   [4]

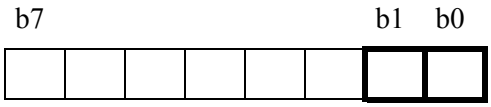
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

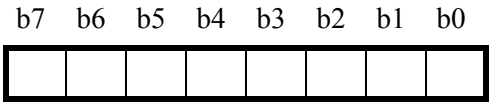
[48H] CPU ACT/STBY Changeover Failure (CPU Abnormal State)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[49H] CPU ACT/STBY Changeover Failure (Transfer Error)

```
1:49XX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]   [4]

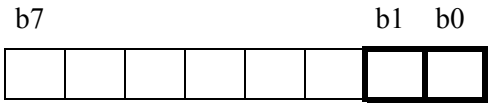
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

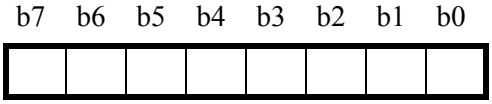
[49H] CPU ACT/STBY Changeover Failure (Transfer Error)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[4AH] CPU ACT/STBY Changeover Failure (No Answer Error)

```
1:4AXX XX00 XXXX XXXX 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]   [4]

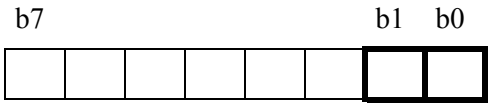
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

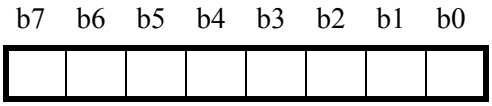
[4AH] CPU ACT/STBY Changeover Failure
(No Answer Error from other processor when changeover is requested)

[2] ACT system after changeover



b0: CPU
0/1 = ACT 0/ACT 1
b1: TSW
0/1 = ACT 0/ACT 1

[3] PBI Number of ACT-CPU after changeover (For UMGi/RNIP system)



PBI Number
30H-6FH=LP

[4] Data Analyzed by NEC Engineers

[4FH] CPU ACT/STBY Changeover Stop

```
1:4FXX XXXX 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]  [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[4FH] CPU ACT/STBY Changeover Stop

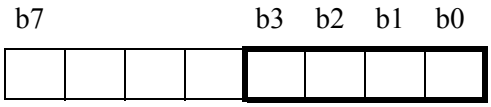
[2] Suspended Item (refer to ASYD SYS1 Indexs 89 and 90)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY changeover
b3: 0/1=-/SP ACT/STBY changeover **Note 5**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Automatic Cancellation
b9: 0/1=-/Periodical Backup

Note 5: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Cause for Suspension



b3 b2 b1 b0:
0 0 0 1 = CPU changeover

[50H] Trunk Ineffective Hold Detected

```
1:50XX 00XX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]     [3]          [3]                    [3]

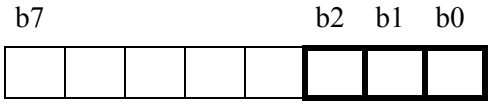
4:XXXX XXXX XXXX XXXX  5:XXXX XX00 0000 0000  6:0000 0000 0000 0000
          [3]               [3]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[50H] Trunk Ineffective Hold Detected

[2] LENS of Trunk Ineffective Hold (MG, U)



b1	b0
0	0 = Unit 0
0	1 = Unit 1
1	0 = Unit 2
1	1 = Unit 3

b2: 0/1 = Even-number/Odd-number Module

[3] LENS of Ineffective Hold Trunk (G, LV)

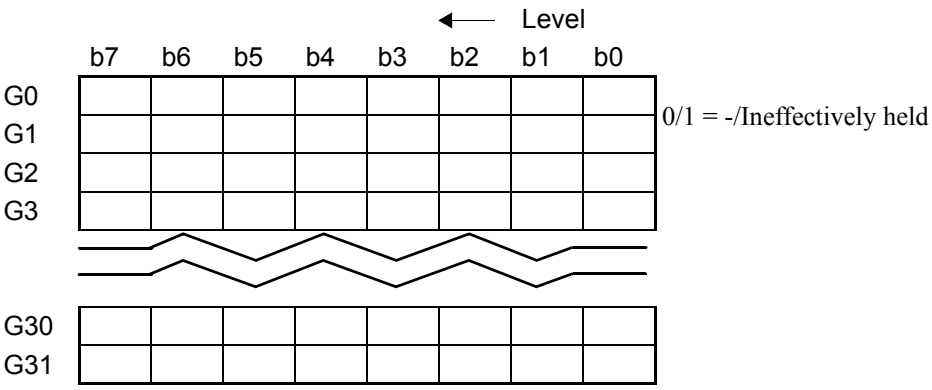
Group number

```
1:500X 00XX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
Group                  [5][6] [7][8] [9][10] [11][12] [13][14] [15][16] [17][18] [19][20]
number →  [1]  [1][2]  [3][4]

4:XXXX XXXX XXXX XXXX  5:XXXX XX00 0000 0000  6:0000 0000 0000 0000
[21][22] [23][24] [25][26] [27][28]  [29][30] [31]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

<Level>


Level
b7 b6 b5 b4 b3 b2 b1 b0
G0
G1
G2
G3
G30
G31
0/1 = -/Ineffectively held

[51H] Trunk Ineffective Hold Detected and Released

```
1:51XX 00XX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]     [3]            [3]                   [3]

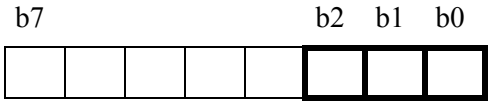
4:XXXX XXXX XXXX XXXX  5:XXXX XX00 0000 0000  6:0000 0000 0000 0000
          [3]               [3]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[51H] Trunk Ineffective Hold Detected and Released

[2] LENS of Trunk Ineffective Hold Detected and Released (MG, U)



b1	b0
0	0 = Unit 0
0	1 = Unit 1
1	0 = Unit 2
1	1 = Unit 3

b2: 0/1 = Even-number/Odd-number Module

[3] LENS of Ineffective Hold Trunk (G, LV)

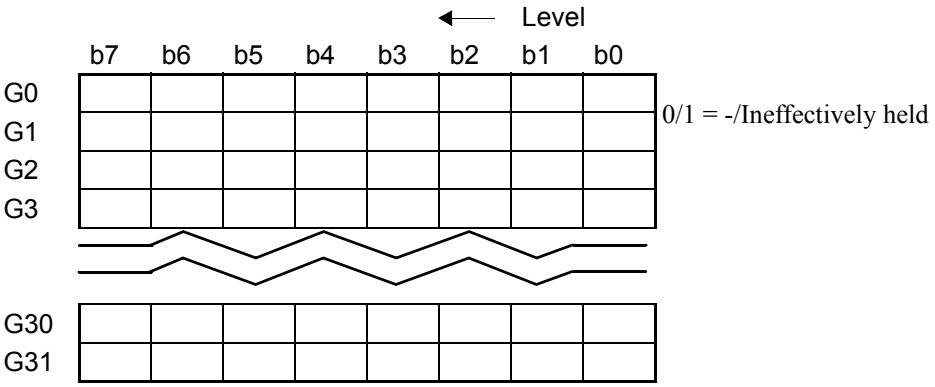
Group number

```
1:500X 00XX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
Group                  [5] [6] [7] [8] [9] [10] [11][12]  [13][14] [15][16] [17][18] [19][20]
number →  [1]  [1] [2]  [3] [4]

4:XXXX XXXX XXXX XXXX  5:XXXX XX00 0000 0000  6:0000 0000 0000 0000
[21][22] [23][24] [25][26] [27][28]  [29][30] [31]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

<Level>


Level
b7 b6 b5 b4 b3 b2 b1 b0
G0
G1
G2
G3
G30
G31
0/1 = -/Ineffectively held

[52H] Trunk Ineffective Hold Detected Impossible

```
1:52XX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

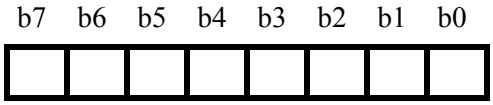
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

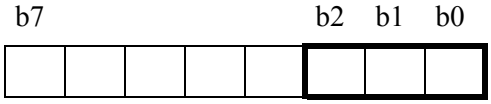
[52H] Trunk Ineffective Hold Detected Impossible

[2] CPU detected Trunk Ineffective Hold Impossible (indicated in Logical PBI Number) (For UMGi/ RNIP system)

PBI Number
30H-6FH = LP



[3] Cause for suspended detection of Trunk Ineffective Hold



01H: The CPU to detect is abnormal
02H: Data transfer error
03H: No Answer error
04H: Data transfer error by PS - Trunk Ineffective Hold

[53H] Accommodated Location of PS - Trunk Ineffective Hold Detected

```
1:5300 0000 XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]          [2]             [3]                  [3]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX 0000  6:0000 0000 0000 0000
          [3]                  [3]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[53H] Accommodated Location of PS - Trunk Ineffective Hold Detected

[2] Number of Trunk Ineffective Hold by PS

DATA (HEX)	NUMBER OF TRUNK INEFFECTIVE HOLD
0000 (000 **HEX**)	-
0100 (001 **HEX**)	1
0200 (002 **HEX**)	2
…	…
FE07 (7FE **HEX**)	2046
FF07 (7FF **HEX**)	2047
0008 (800 **HEX**)	2048 (maximum)

[3] Accommodated location of PS in Trunk Ineffective Hold

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
1: 5300	0000	XXXX	XXXX	**2:** XXXX	XXXX	XXXX	XXXX	**3:** XXXX	XXXX	XXXX	XXXX
	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]

	10th	11th	12th	13th	14th	15th	16th				
4: XXXX	XXXX	XXXX	XXXX	**5:** XXXX	XXXX	XXXX	0000	**6:** 0000	0000	0000	0000
	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]				

7: 0000	0000	0000	0000	**8:** 0000	0000	0000	0000	

[a] LENS of Trunk Ineffective Hold Detected (G, LV)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b2: LV (0-7)
b3-b7: G (0-31)

[b] LENS of Trunk Ineffective Hold Detected (MG, U)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b1: U (0-3)
b2-b7: MG (0-31)

[54H] Accommodated Location of PS - Trunk Ineffective Hold Detected and Released

```
1:5400 0000 XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]          [2]            [3]                   [3]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX 0000  6:0000 0000 0000 0000
          [3]                  [3]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[54H] Accommodated Location of PS - Trunk Ineffective Hold Detected and Released

[2] Number of Trunk Ineffective Hold by PS

DATA (HEX)	NUMBER OF TRUNK INEFFECTIVE HOLD
0000 (000 **HEX**)	-
0100 (001 **HEX**)	1
0200 (002 **HEX**)	2
…	…
FE07 (7FE **HEX**)	2046
FF07 (7FF **HEX**)	2047
0008 (800 **HEX**)	2048 (maximum)

[3] Accommodated location of PS in Trunk Ineffective Hold

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
1: 5300	0000	XXXX	XXXX	**2:** XXXX	XXXX	XXXX	XXXX	**3:** XXXX	XXXX	XXXX	XXXX
	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]

	10th	11th	12th	13th	14th	15th	16th		
4: XXXX	XXXX	XXXX	XXXX	**5:** XXXX	XXXX	XXXX	0000	**6:** 0000	0000	0000	0000
[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]	[a] [b]					

7: 0000	0000	0000	0000	**8:** 0000	0000	0000	0000

[a] LENS of Trunk Ineffective Hold Detected (G, LV)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b2: LV (0-7)
b3-b7: G (0-31)

[b] LENS of Trunk Ineffective Hold Detected (MG, U)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b1: U (0-3)
b2-b7: MG (0-31)

[5FH] Trunk Ineffective Hold Detection is stopped

```
1:5FXX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]   [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[5FH] Trunk Ineffective Hold Detection is stopped

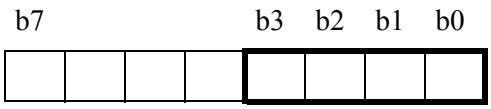
[2] Suspended Item (refer to ASYD SYS1 Indexs 89 and 90)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY changeover
b3: 0/1=-/CPU ACT/STBY changeover **Note 6**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Automatic Cancellation
b9: 0/1=-/Periodical Backup

Note 6: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Cause for Suspension



b3 b2 b1 b0
0 0 0 1 = CPU changeover

[70H] Call Forwarding Memory Clear NG

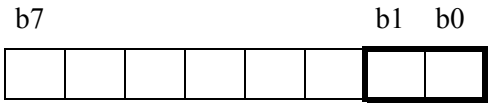
```
1:7000 XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]  [2]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis [70H] Call Forwarding Memory Clear NG

[2] Cause for which Transfer Memory was stopped



b1	b0
0	1 = CPU is abnormal
1	0 = Data Transfer error

[7FH] Call Forwarding Memory Clear Stop

```
1:7FXX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]   [3]

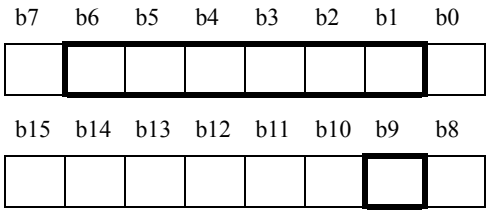
4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[7FH] Call Forwarding Memory Clear is stopped

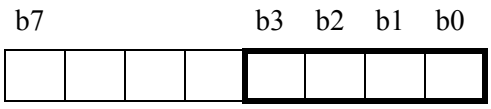
[2] Suspended Item (refer to ASYD SYS1 Indexs 89 and 90)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY changeover
b3: 0/1=-/CPU ACT/STBY changeover **Note 7**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Automatic Cancellation
b9: 0/1=-/Periodical Backup

Note 7: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Cause for Suspension



b3 b2 b1 b0
0 0 0 1 = CPU changeover

[A0H] Periodic Backup Abnormal End

```
1:A0XX XXXX XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:00XX 00XX XXXX 0000
  [1] [2]  [3]  [4] [5]  [6]  [7] [8]   [9]    [3]   [6]   [10]

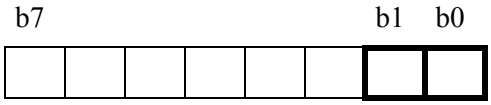
4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[A0H] Periodic Backup Abnormal End

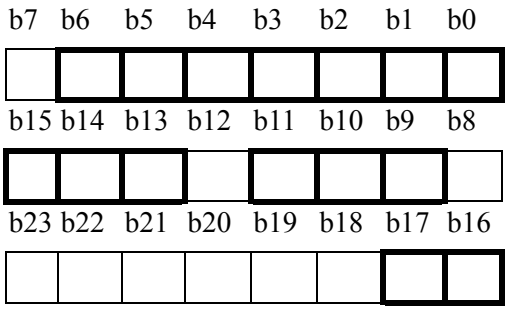
[2] Information of Periodic Backup Abnormal End



b0: 0/1 = ACT Backup Data: Normal End/Abnormal End
b1: 0/1 = STBY Backup Data: Normal End/Abnormal End

Note: In the Single System Configuration, the backup result of the STBY side is always shown as "Normal End."

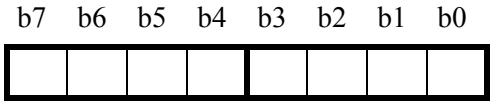
[3] Backup Data to ACT side



b0: 0/1 = -/Individual Speed Calling Data
b1: 0/1 = -/Call Forwarding Data
b2: 0/1 = -/Remote Call Forwarding Data File
b3: 0/1 = -/Name Display Data
b4: 0/1 = -/User Assign Soft Key Data
b5: 0/1 = -/Number Sharing Data
b6: 0/1 = -/Call Block Data
b9: 0/1 = -/Call Forwarding-Logout Data
b10: 0/1 = -/SPD Data for DtermIP
b11: 0/1 = -/DM/LDM/NDM Data
b13: 0/1 = -/MA-ID
b14: 0/1 = -/SIP Extension Call Forwarding Data **Note 8**
b15: 0/1 = -/Mobility Access Data
b16: 0/1 = -/Local Phone book Data
b17: 0/1 = -/ACD DM Data (for the countries except North America)

Note 8: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

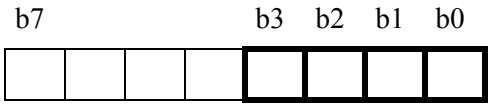
[4] Error Code of ACT side of Flash Card



Parameter
- 21H:
- 40H-47H:
- 53H:
- 57H:
- 59H-5BH:
- 80H-84H:

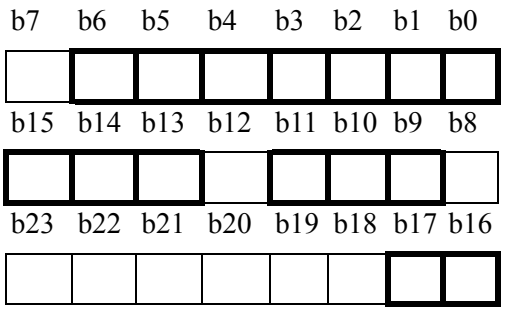
Flash Card Fault
- A0H:
- A2H-A6H:
- BDH:
- C0H: Failed installation
- 01H: Flash Card being used by another program
- 02H: Flash Card not equipped

[5] Error Status of ACT side of Flash Card



Error occurs;
- b0: 0/1 = -/At the time data transfer started
- b1: 0/1 = -/At the time data saved
- b2: 0/1 = -/At the time data transfer ended
- b3: 0/1 = -/At the time file transfer started

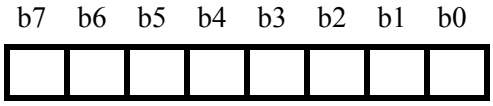
[6] Backup data to STBY side



- b0: 0/1 = -/Individual Speed Calling Data
- b1: 0/1 = -/Call Forwarding Data
- b2: 0/1 = -/Remote Call Forwarding Data File
- b3: 0/1 = -/Name Display Data
- b4: 0/1 = -/User Assign Soft Key Data
- b5: 0/1 = -/Number Sharing Data
- b6: 0/1 = -/Call Block Data
- b9: 0/1 = -/Call Forwarding-Logout Data Load Status
- b10: 0/1 = -/SPD Data Load Status for DtermIP
- b11: 0/1 = -/DM/LDM/NDM Data
- b13: 0/1 = -/MA-ID
- b14: 0/1 = -/SIP Extension Call Forwarding Data **Note 9**
- b15: 0/1 = -/Mobility Access Data
- b16: 0/1 = -/Local Phone book Data
- b17: 0/1 = -/ACD DM Data (for the countries except North America)

Note 9: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

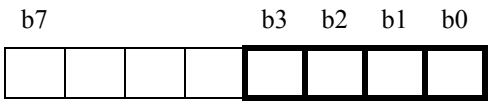
[7] Error Code of STBY side of Flash Card



Parameter
- 21H:
- 40H-47H:
- 53H:
- 57H:
- 59H-5BH:
- 80H-84H:

Flash Card Fault
- A0H:
- A2H-A6H:
- BDH:
- C0H: Failed installation
- 01H: Flash Card being used by another program
- 02H: Flash Card not equipped

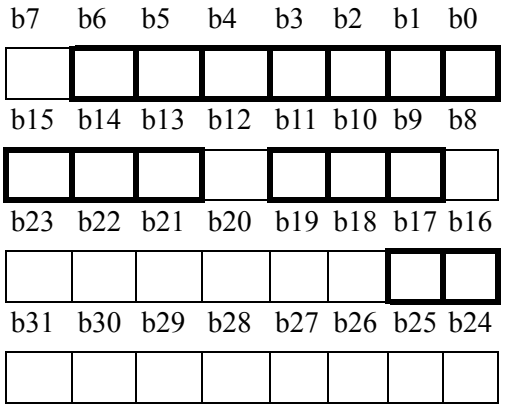
[8] Error Status of STBY side of Flash Card



Error occurs;
- b0: 0/1 = -/At the time data transfer started
- b1: 0/1 = -/At the time data saved
- b2: 0/1 = -/At the time data transfer ended
- b3: 0/1 = -/At the time file transfer started

[9] Technical Information for Analysis

[10]Error Information of ACT-STBY Memory Copy Before Periodic Backup (Analysis Data for NEC engineers)



- b0: 0/1 = -/Individual Speed Calling Data Copy Error
- b1: 0/1 = -/Call Forwarding Data Copy Error
- b2: 0/1 = -/Remote Call Forwarding Data File Copy Error
- b3: 0/1 = -/Name Display Data Copy Error
- b4: 0/1 = -/User Assign Soft Key Data Copy Error
- b5: 0/1 = -/Number Sharing Data Copy Error
- b6: 0/1 = -/Call Block Data Copy Error
- b9: 0/1 = -/Copy Error of Call Forwarding-Logout Data Load Status
- b10: 0/1 = -/Copy Error of SPD Data Load Status for DtermIP
- b11: 0/1 = -/DM/LDM/NDM Data Copy Error
- b13: 0/1 = -/MA-ID Data Copy Error
- b14: 0/1 = -/SIP Extension Call Forwarding Data Copy Error **Note 10**
- b15: 0/1 = -/Mobility Access Data Copy Error
- b16: 0/1 = -/Local Phone book Data Copy Error
- b17: 0/1 = -/ACD DM Data Copy Error (for the countries except North America)

Note 10: SIP Extension mentioned here refers to an SP Controlled SIP terminal.

[AFH] Periodic Backup Stop

```
1:AFXX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error detection by Routine Diagnosis

[AFH] Periodic Backup Stop

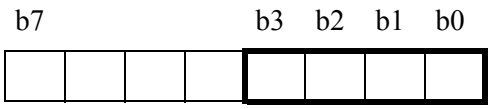
[2] Suspended Item (refer to ASYD SYS1 Indexs 89 and 90)



b1: 0/1=-/Data Memory Verification
b2: 0/1=-/TSW ACT/STBY changeover
b3: 0/1=-/CPU ACT/STBY changeover **Note 11**
b4: 0/1=-/Trunk Ineffective Hold Check
b5: 0/1=-/Trunk Ineffective Hold Detection
b6: 0/1=-/Call Forwarding Memory Automatic Cancellation
b9: 0/1=-/Periodical Backup

Note 11: In the UMGi system, this bit is used for ACT/STBY changeover of CPU in Appliance Model (CCN/RN).

[3] Cause for Suspension



b3 b2 b1 b0
0 0 0 1 = CPU changeover

7-Q:PFT Key ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when PFT key (2 in SW00 on EMA card) is set to ON (upward).

```
1:0000 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

7-R:PFT Key OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when PFT key (2 in SW00 on EMA card) is set to OFF (downward).

1:0000 0000 0000 0000 **2:**0000 0000 0000 0000 **3:**0000 0000 0000 0000

4:0000 0000 0000 0000 **5:**0000 0000 0000 0000 **6:**0000 0000 0000 0000

7:0000 0000 0000 0000 **8:**0000 0000 0000 0000

7-U:PLO MB Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MB switch on the PLO card is turned on while extracting or inserting a card.

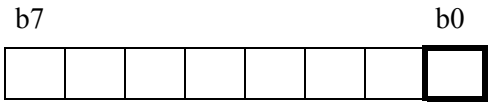
```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty PLO card number

b0: 0/1 = PLO System 0/PLO System 1



7-V: PLO MB Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

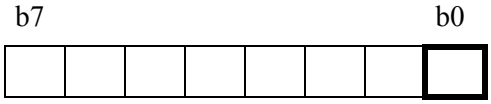
This message is displayed when the MB switch on the PLO card is turned off while extracting or inserting a card.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

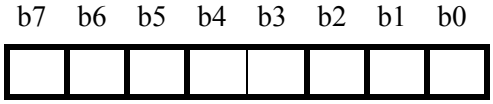
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Faulty PLO card number



b0: 0/1 = PLO System 0/PLO System 1

[2] Status of PLO card at the time of failure detection (Scan Data 1)

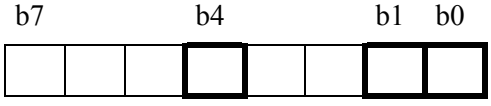


b0: 0/1 = Clock STBY/ACT
b1: 0/1 = PLO Synchronizing/PLO self-running or drifting
b2: 0/1 = -/Input clock down
b3, b4: Route of Input clock (see table)
b5: 0/1 = -/PLO input all down

b4	b3	CONNECTIED WITH PRIMARY OSCILLATOR (M-OSC)	CONNECTED WITH EXTERNAL CLOCK
0	0	M-OSC 0	Route 0
0	1	M-OSC 1	Route 1
1	0	-	Route 2
1	1	-	Route 3

b6: 0/1 = -/PLO output down
b7: 0/1 = -/Drifting

[3] Status of PLO card at the time of failure detection (Scan Data 2)



b0: 0/1 = -/n × five millisecond clock down
b1: 0/1 = -/Frame Synchronization down from SYNC card
b4: 0/1 = -/Internal OSC clock down

10-A:System Activation Report (SUP)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed once a day when Activation Code has not been registered (Certificate Result is NG) for more than 29 days and less than 45 days.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]    [3]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX

7:XXXX XXXX XXXX 0000  8:0000 0000 0000 0000
```

[1] Trial Period [30-44 days]

b7	b6	b5	b4	b3	b2	b1	b0

Value	Days
1E:	30 days passed
1F:	31 days passed
20:	32 days passed
21:	33 days passed
22:	34 days passed
23:	35 days passed
:	:
:	:
2C	44 days passed

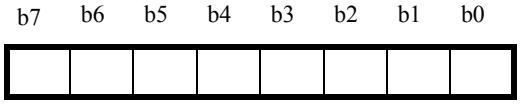
[2] System Certificate Result

b7						b1	b0

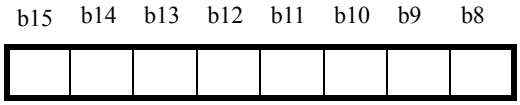
b0: 1 = Activation Code Certificate Result NG
b1: 1 = Hardware Key Code Certificate Result NG

[3] Certificate Failure System **Note 1**

Systems where Hardware Key Code Certificate Failures occur



b0-b7: PBI of Certificate Failure System (1st)



b8-b15: PBI of Certificate Failure System (2nd)

Note 1: In the [3] field, 02 or 03 is displayed. In the Certificate Failure System field, SP-0 or SP-1 is displayed.

- 02: SP-0 (System 0)
- 03: SP-1 (System 1)

10-B:System Activation Report (MN)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	1		

This message is displayed once a day when Activation Code has not been registered (Certificate Result is NG) for more than 44 days and less than 60 days.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]    [3]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX

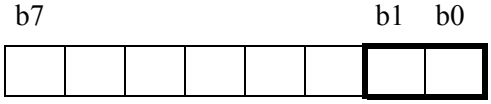
7:XXXX XXXX XXXX 0000  8:0000 0000 0000 0000
```

[1] Trial Period [45-59 days]



Value	Days
2D:	45 days passed
2E:	46 days passed
2F:	47 days passed
30:	48 days passed
31:	49 days passed
32:	50 days passed
:	:
:	:
3B	59 days passed

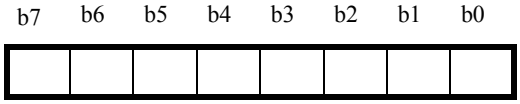
[2] System Certificate Result



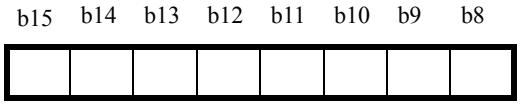
b0: 1 = Activation Code Certificate Result NG
b1: 1 = Hardware Key Code Certificate Result NG

[3] Certificate Failure System **Note 1**

Systems where Hardware Key Code Certificate Failures occur



b0-b7: PBI of Certificate Failure System (1st)



b8-b15: PBI of Certificate Failure System (2nd)

Note 1: In the [3] field, 02 or 03 is displayed. In the Certificate Failure System field, SP-0 or SP-1 is displayed.

- 02: SP-0 (System 0)
- 03: SP-1 (System 1)

10-C:System Activation Report (MJ)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MJ	1		

This message is displayed once a day when Activation Code has not been registered (Certificate Result is NG) for 60 days or more, the system and the license do not match or the hardware is used improperly.

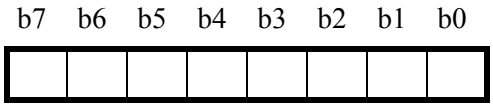
```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]    [3]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX

7:XXXX XXXX XXXX 0000  8:0000 0000 0000 0000
```

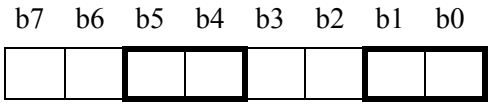
[1] Trial Period [maximum 127 days]

Note: The following are conditions for this parameter:
- More than 127 days is not counted.
- This parameter is valid when the values for b4 and b5 in [2] System Certificate Result are "0."



Value	Days
3C:	60 days passed
3D:	61 days passed
3E:	62 days passed
3F:	63 days passed
40:	64 days passed
41:	65 days passed
:	:
:	:
7F	127 or more days passed

[2] System Certificate Result

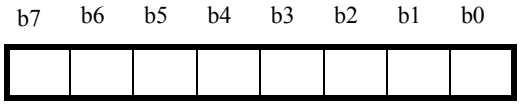


b0: 1 = Activation Code Certificate Result NG
b1: 1 = Hardware Key Code Certificate Result NG
b4: 1 = The system and the license do not match
b5: 1 = Hardware misuse **Note 1**

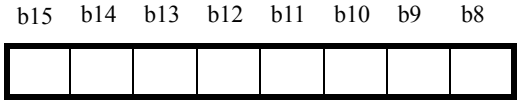
Note 1: Available from FP95-112 V2.

[3] Certificate Failure System **Note 2**

Systems where Hardware Key Code Certificate Failures occur



b0-b7: PBI of Certificate Failure System (1st)



b8-b15: PBI of Certificate Failure System (2nd)

Note 2: In the [3] field, 02 or 03 is displayed. In the Certificate Failure System field, SP-0 or SP-1 is displayed.

- 02: SP-0 (System 0)
- 03: SP-1 (System 1)

10-D:IP License Excess Notice (SUP)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed if the number of IP terminals exceeds the number of registered IP Licenses. One message can display the information of 13 ports that encountered IP address acquisition NG.

```
1:XXXX XXXX XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:XXXX XXXX XXXX XXXX
     [1]  [2]       [3]       [4]       [5]       [6]       [7]

4:XXXX XXXX XXXX XXXX 5:XXXX XXXX XXXX XXXX 6:XXXX XXXX XXXX XXXX
     [7]  [8]       [9]       [10]      [11]      [12]      [13]

7:XXXX XXXX XXXX 0000 8:0000 0000 0000 0000
     [13] [14]
```

[1] IP License Excess Counter

b7	b6	b5	b4	b3	b2	b1	b0
b15	b14	b13	b12	b11	b10	b9	b8

b0-b15:Total Number of IP License Acquisition NG ports (0-65535)

[2]-[14]IP License Acquisition Information

- IP Address Acquisition Information NG Time Information

b7	b6	b5	b4	b3	b2	b1	b0
b15	b14	b13	b12	b11	b10	b9	b8

b0-b3: 0-9 (one's digit of Hour), b4-b7: 0-2 (ten's digit of Hour)

b0-b3: 0-9 (one's digit of Minute), b4-b7: 0-5 (ten's digit of Minute)

- IP Address Acquisition NG LENS Information

b7	b6	b5	b4	b3	b2	b1	b0
b15	b14	b13	b12	b11	b10	b9	b8

b0-b2: Level 0-7
b3-b7: Group Number 0-31
b8-b9: Unit Number 0-3
b10-14: MG Number 0-7
b15: Not Used

10-E:CPU Operation Mode Error Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is issued when Abnormal Reset Process is activated on the program.

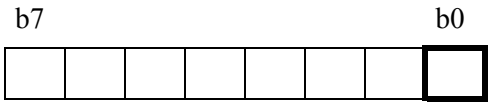
```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Kind of Notification

01 (Hex) = IP QUE Initialization



[2] Data Analyzed by NEC Engineers

10-F:MGC - SR-MGC Network Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when connection failure is detected between the Telephony Server and Survivable Remote MGC (SR-MGC).

Note: Conditions of this message are as follows:

- This message is displayed when System Message output for Communication Failure is enabled (when ASYDL SYS1, Index 852 Bit 4=1 is assigned).
  For FNC=05H/06H, this message is displayed even if System Message output for Communication Failure is disabled.
  For FNC=81H, this message is displayed even if System Message output for Communication Failure is disabled after SR-MGC initial startup (not execute the Office Data Copy).
- For Survivable Remote Node, this message is output by the SR-MGC side.
- This message is also displayed in the Survivable Remote Node. In this case, analyze the message replacing “SR-MGC” with “Survivable Remote Node”.
- When this message is displayed on MGC with Geographic Redundancy, analyze the message replacing “SR-MGC Number” with “MGC Number”.

```
1:XX00 0000 0000 0000  2:XX00 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

b7	b6	b5	b4	b3	b2	b1	b0

[01H]: Health Check Failure
[02H]: Office Data Copy Failure **Note 1**
[03H]: Switch generation in SR-MGC, due to SP Failure Detection
[05H]: Office Data Copy Failure (High-Speed) **Note 1**
[06H]: Unable to execute Office Data Copy
[07H]: Program Copy or Program Switch Failure
[09H]: Switch generation in SR-MGC, due to Health Check Failure Detection in CCN-RN **Note 2**
[0AH]: Switch generation in SR-MGC, due to SP Failure Detection in RN **Note 2**
[81H]: Health Check failure (SR-MGC)

Note 1: Office Data Copy methods are divided into two methods: regular method and high-speed method.

Note 2: This function is available from FP95-112 V2.

[01H] Health Check Failure

```
1: 0 1 XX XXXX XXXX XXXX  2: XXXX XXXX XXXX XXXX  3: XXXX XXXX XXXX XXXX
   [1] [2]      [3]       [4]  [5]

4: XXXX XXXX XXXX XXXX  5: XXXX XXXX XXXX XXXX  6: XXXX XXXX XXXX XXXX

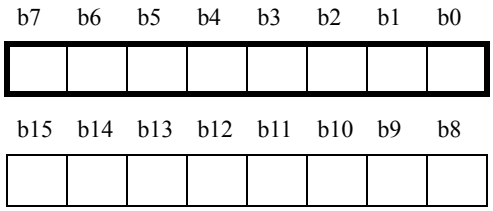
7: XXXX XXXX XXXX 0000  8: 0000 0000 0000 0000
```

[1] Function

[01H] Health Check Failure

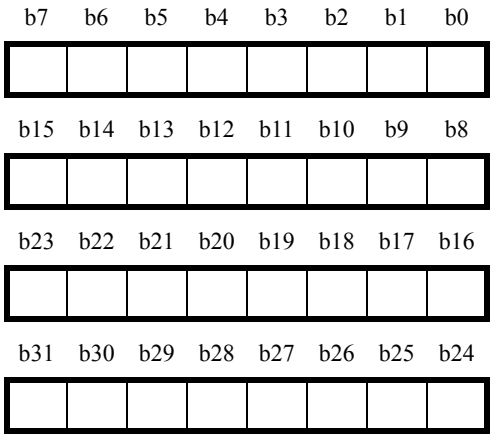
[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs



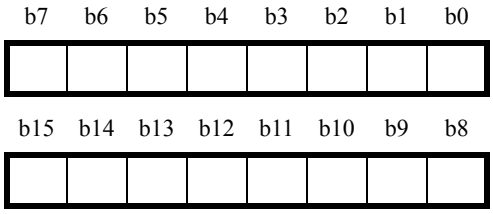
[3] SR-MGC IP Address

b0-b31: IP Address of the failure detected SR-MGC



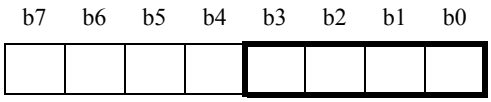
[4] Destination Port Number

b0-b15: Destination port number of the failure detected SR-MGC



[5] MGC Kind

b0-b3: MGC Kind
00H: SR-MGC
03H: Survivable Remote Node



Note: Available from FP95-112 V2.

[02H] Office Data Copy Failure

```
1:02XX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[02H] Office Data Copy Failure

[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs



[3] Error detail

b7	b6	b5	b4	b3	b2	b1	b0

01H: Detected Health Check NG in MGC side
02H: HFC Check NG
03H: Copy NG to C Drive
04H: File Collation NG
05H: SR-MGC Data Save NG
06H: Copy NG from C Drive to B Drive
07H: Copy NG from B Drive to C Drive
08H: HFC Check NG after Copy NG between Drive
09H: Recovery NG of B Drive
0AH: Load NG after Copy
0BH: Checksum NG
0CH: Address Information NG
0DH: Number of Blocks NG
0EH: Response NG from MGC
0FH: Size of File NG
10H: Detected Network NG in SR-MGC side
11H: Login NG to MGC
12H: Disagreement of Office Data Copy State with MGC side
13H: Copy interruption
14H: Office Data Copy Timeout is detected.
15H: Variable Definition NG is detected.
16H: Directory Creation NG/Reference NG is detected.
17H: File Creation NG is detected.
18H: FTP Server Connection is failed (Remote Information Collection).
19H: FTP Server Operation is failed (Remote Information Collection).
1AH: Download List Creation is failed.
1BH: Temporary File Deletion NG is detected.
1CH: Download List does not exist.
1DH: FTP Server Connection is failed (batch download).
1EH: FTP Server Operation is failed (batch download).
1FH: Download (1st) File Size is illegal.
20H: Download (1st) Office Data does not exist.
21H: Office Data Binary Compare NG is detected.
22H: Office Data File Size Discrepancy is detected.
23H: FTP Server Connection is failed (individual downnload).
24H: FTP Server Operation is failed (individual download).
25H: Download (2nd) File Size is illegal.
26H: Download (2nd) Office Data does not exist.
27H: Office Data File Update NG is detected.
28H: CF Access NG is detected.

[03H] Switch generation in SR-MGC, due to SP Failure Detection

```
1:03XX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[03H] Switch generation in SR-MGC, due to SP Failure Detection

[2] SP Failure Detection Mode

00H: SP Failure Detection of All SP-PHx **Note 3**

b7	b6	b5	b4	b3	b2	b1	b0

Note 3: SP-PHx refers to SP-PHD and SP-PHI.

[05H] Office Data Copy Failure (High-Speed)

```
1:05XX XXXX XX00 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]  [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

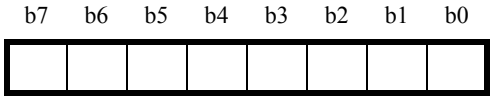
[05H] Office Data Copy Failure (High-Speed)

[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs

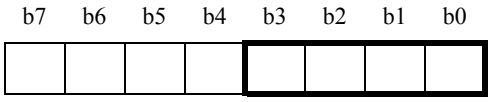


[3] Error detail



01H: Detected Health Check NG in MGC side
02H: HFC Check NG
05H: SR-MGC Data Save NG
0CH: Address Information NG
0EH: Response NG from MGC
10H: Detected Network NG in SR-MGC side
12H: Disagreement of Office Data Copy State with MGC side
13H: Copy interruption
14H: Office Data Copy Timeout is detected.
40H: Illegal packet format.
41H: Script status read failed.
42H: Illegal input parameter.
43H: Illegal account or password.
44H: Illegal server IP address.
45H: Rsync failed.
46H: Illegal disk drive.
47H: No space left on disk.
48H: No checksum files.
49H: Copied file Unmatch.
4AH: Checksum Unmatch.
4BH: Sequence timer timeout.
4CH: Illegal version.
59H: ACT Copy Success, STBY Copy Failure

[4] MGC Kind



b0-b3: MGC Kind
00H: SR-MGC
03H: Survivable Remote Node

Note: Available from FP95-112 V2.

[06H] Unable to execute Office Data Copy

```
1:06XX XXXX XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]  [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

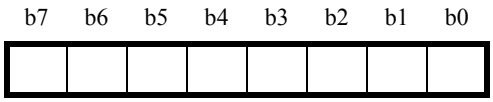
[06H] Unable to execute Office Data Copy

[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs



[3] Factor



01H: Manual Switchback is not carried out (SR-MGC is operating)
11H: Target MGC is operating
12H: Target MGC is already executing Office Data Copy
13H: Discrepancy in Office Data Copy Condition (Geographic Redundancy)

Error Code	Error Detail	Troubleshooting
01H	Manual Switchback is not carried out (SR-MGC is operating)	When this error is output, perform the switchback operation manually with the Change Operating tab of the CMNT command.
11H	Target MGC is operating	When this error is output, perform the switchover operation manually with the Change Operating tab of the CMNT command.
12H	Target MGC is already executing Office Data Copy	When this error is output, restart the MGC Office Data Copy after currently executing.

Error Code	Error Detail	Troubleshooting
13H	Discrepancy in Office Data Copy Condition (Geographic Redundancy)	When this error is output, confirm the MGC Office Data Copy method. The following system data needs to be set: ASYDL, SYS1, Index 847, Bit 6 = 0 (Auto [selects high-speed method if it is available; if not, selects regular method])

[4] MGC Kind

b7	b6	b5	b4	b3	b2	b1	b0

b0-b3: MGC Kind
00H: SR-MGC
03H: Survivable Remote Node

Note: Available from FP95-112 V2.

[07H] Program Copy or Program Switch Failure

```
1:07XX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

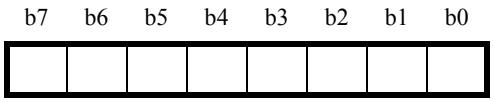
[07H] Program Copy or Program Switch Failure

[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs



[3] Error detail



01H: Detected Health Check NG in MGC side
0CH: Address Information NG
0EH: Response NG from MGC
10H: Detected Network NG in SR-MGC side
13H: Copy interruption
40H: Illegal packet format.
41H: Script status read failed.
43H: Illegal account or password.
48H: No checksum files.
4AH: Checksum Unmatch.
4DH: Incorrect Directory Path or File Name.
4EH: Copy not Completed in a Time.
4FH: Incorrect setting of FTP connection.
50H: Failed to connect with the FTP server.
51H: Temporary refusal of the FTP server.
52H: Can not perform the requested action on the FTP server.
53H: Unexpected errors (program copy).
54H: Program file error.
55H: License (SVI) file error.
56H: Failed to switch program.
57H: Unexpected errors (program switch).
58H: Program file type error.

[09H] Switch generation in SR-MGC, due to Health Check Failure Detection in CCN-RN

Note: Available from FP95-112 V2.

```
1:09XX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[09H] Switch generation in SR-MGC, due to Health Check Failure Detection in CCN-RN

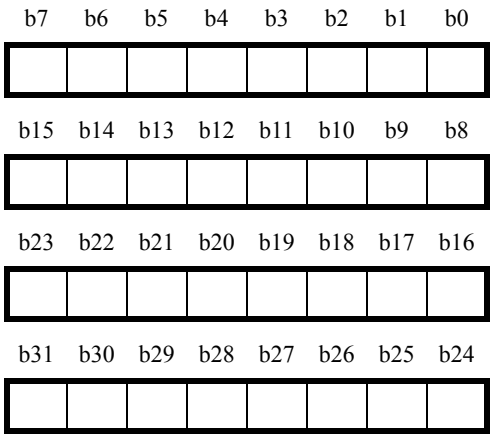
[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs



[3] SR-MGC IP Address

b0-b31: SR-MGC IP Address of the failure detected SR-MGC



[0AH] Switch generation in SR-MGC, due to SP Failure Detection in RN

Note: Available from FP95-112 V2

```
1:0AXX XXXX XXXX XXXX  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]   [3]    [4]
4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

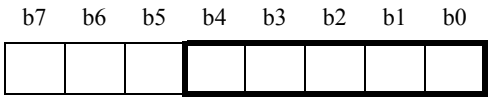
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[0AH] Switch generation in SR-MGC, due to SP Failure Detection in RN

[2] SP Failure Detection Mode

00H: SP Failure Detection of All SP-PHx **Note 4**



Note 4: SP-PHx refers to SP-PHD and SP-PHI.

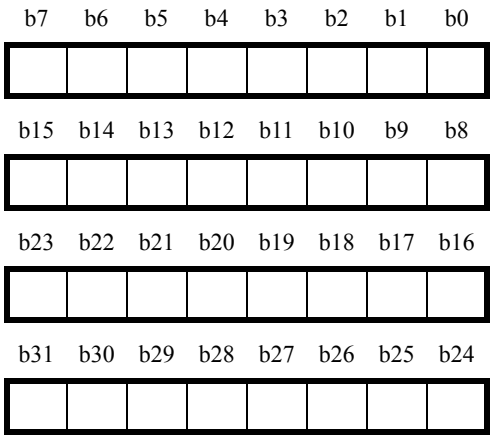
[3] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure occurs



[4] SR-MGC IP Address

b0-b31: SR-MGC IP Address of the failure detected SR-MGC



[81H] Health Check Failure Detection

```
1:81XX XXXX XXXX XX00  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]      [3]      [4]

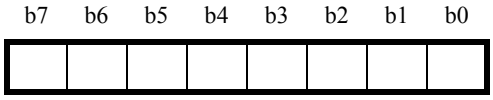
4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[81H] Unable to control SR-MGC

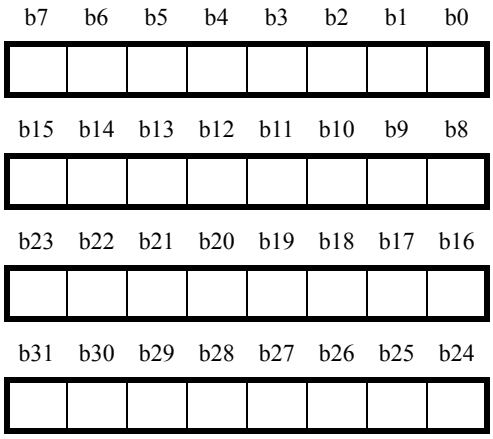
[2] Trouble detection type



00H: -
01H: Health Check Packet reception time-out
02H: ping failure
03H: Health Check Sending and receiving completion Packet reception time-out
04H: Unable to execute Office Data Copy
05H: Primary Node Health Check Packet reception time-out
06H: Recovery Node Health Check Packet reception time-out
07H: Primary Node Health Check Sending and receiving completion Packet reception time-out
08H: Recovery Node Health Check Sending and receiving completion Packet reception time-out

[3] MGC IP Address

b0-b31: MGC IP Address



[4] Ping Error Code (Not displayed)

10-G:MGC - SR-MGC Network Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when the communication between Telephony Server and Survivable Remote MGC (SR-MGC) recovers.

Note: Conditions of this message are as follows:

- This message is displayed when System Message output for Communication Failure is enabled (when ASYDL SYS1, Index 852 Bit 4=1 is assigned).
  For FNC=81H, this message is displayed even if System Message output for Communication Failure is disabled after SR-MGC initial startup (not execute the Office Data Copy).
- For Survivable Remote Node, this message is output by the SR-MGC side.
- This message is also displayed in the Survivable Remote Node. In this case, analyze the message replacing “SR-MGC” with “Survivable Remote Node”.
- When this message is displayed on MGC with Geographic Redundancy, analyze the message replacing “SR-MGC Number” with “MGC Number”.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

b7	b6	b5	b4	b3	b2	b1	b0

[01H]: Health Check Recovery
[03H]: SP Restore Detection
[09H]: Health Check Restore Detection in CCN - RN **Note 1**
[0AH]: SP Restore Detection in RN **Note 1**
[81H]: Recovered from Health Check failure (SR-MGC)

Note 1: This function is available from FP95-112 V2.

[01H] Health Check Recovery

```
1:01XX XXXX XXXX XXXX 2:XXXX 0000 0000 0000 3:0000 0000 0000 0000
  [1]  [2]      [3]       [4]  [5]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Function

[01H] Health Check Recovery

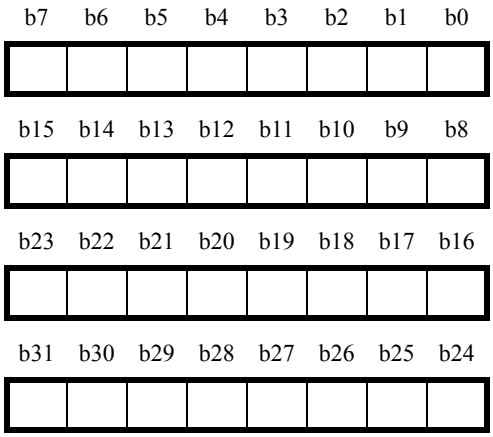
[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure recovers



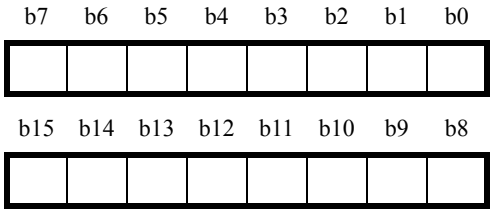
[3] SR-MGC IP Address

b0-b31: SR-MGC IP Address



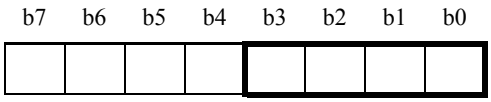
[4] Destination Port Number

b0-b15: Destination port number of the failure detected SR-MGC



[5] MGC Kind

b0-b3: MGC Kind
00H: SR-MGC
03H: Survivable Remote Node



Note: Available from FP95-112 V2.

[03H] SP Restore Detection

```
1:03XX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[03H] SP Restore Detection

[2] SP Failure Detection Mode

00H: SP Failure Detection of All SP-PHx **Note 2**

b7	b6	b5	b4	b3	b2	b1	b0

Note 2: SP-PHx refers to SP-PHD and SP-PHI.

[09H] Health Check Restore Detection in CCN - RN

Note: Available from FP95-112 V2.

```
1:09XX XXXX XXXX XX00  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[09H] Health Check Restore Detection in CCN - RN

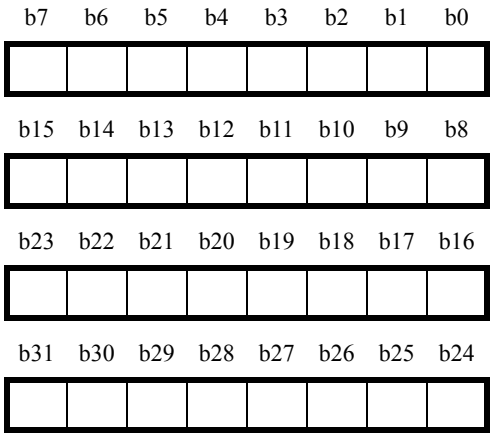
[2] SR-MGC Number (0-255)

b0-b7: SR-MGC number which the failure recovers



[3] SR-MGC IP Address

b0-b31: SR-MGC IP Address



[0AH] SP Restore Detection

Note: Available from FP95-112 V2.

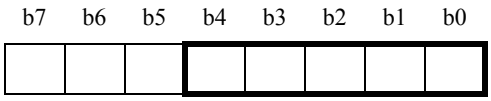
```
1:0AXX XXXX XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]   [3]    [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function — [0AH] SP Restore Detection in RN

[2] SP Failure Detection Mode — 00H: SP Failure Detection of All SP-PHx **Note 3**

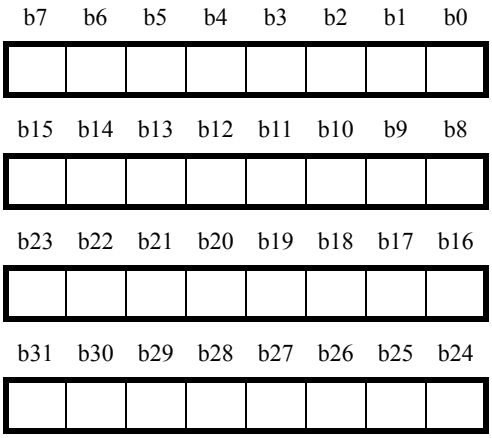


Note 3: SP-PHx refers to SP-PHD and SP-PHI.

[3] SR-MGC Number (0-255) — b0-b7: SR-MGC number which the failure recovers



[4] SR-MGC IP Address — b0-b31: SR-MGC IP Address



[81H] Recovered from Health Check failure (SR-MGC)

```
1:81XX XXXX XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]      [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[81H] Recovered from Health Check failure (SR-MGC)

[2] Recovery Detection Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-6:
Recovery detection type 2
01H = Health Check Packet reception success
02H = ping Success
03H = Health Check Sending and receiving completion Packet reception success
05H = Primary Node Health Check Packet reception success
06H = Recovery Node Health Check Packet reception success
07H = Primary Node Health Check Sending and receiving completion Packet reception success
08H = Recovery Node Health Check Sending and receiving completion Packet reception success
b7:
Recovery detection type 1
0 = Health check restoration after SR-MGC starts
1 = Health check restoration after trouble is detected

[3] MGC IP Address

b7	b6	b5	b4	b3	b2	b1	b0

b15	b14	b13	b12	b11	b10	b9	b8

b23	b22	b21	b20	b19	b18	b17	b16

b31	b30	b29	b28	b27	b26	b25	b24

b0-b31: IP address of MGC which recovered from Health Check communication failure

10-L:SR-MGC State Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when the state of SR-MGC is changed to Operating Mode or Standby Mode.

Note: This message is also displayed in the Survivable Remote Node. In this case, analyze the message replacing “SR-MGC” with “Survivable Remote Node”.

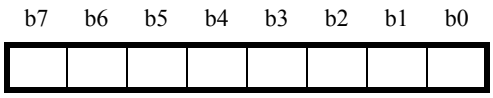
```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function (SR-MGC State Change Notification)

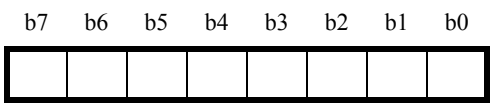
01H = SR-MGC act state shift notification
02H = SR-MGC standby state shift notification



When [1] = 01 (SR-MGC act state shift notification)

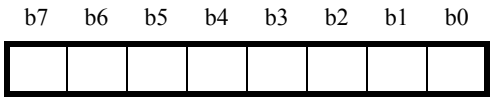
[2] SR-MGC state shift kind

01H = SR-MGC act state shift notification
02H = Shift by NW Recovery detection
03H = Shift by CMNT command switch demand



When [1] = 02 (SR-MGC standby state shift notification)

[2] SR-MGC state shift kind



01H = SR-MGC act state shift notification
02H = Shift by NW Recovery detection
03H = Shift by CMNT command switch demand

10-M:Remote Node State Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON			

This message is displayed when RN transits to normal operation from survival operation or when RN transits to survival operation from normal operation. When RN transited to normal operation, this message is output to the CCN side. When RN transited to survival operation, this message is output to the RN side.

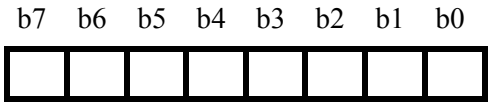
Note: This system message is used for the UMGi/RNIP system.

```
1:XXXX XXXX XX00 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2] [3] [4]  [5]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

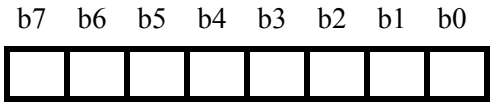
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Message Kind



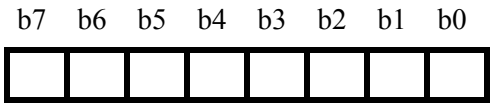
b0- b7:Message Kind
01= System Initial
02 = Normal Mode Shift Result

[2] Message Detail



b0 - b7:Message Detail
When Kind = 1
Type 1 = Non Load Initial
Type 2 = Data Load Initial
When Kind = 2
Type 1 = Normal Mode
Type 2 = Survival Mode

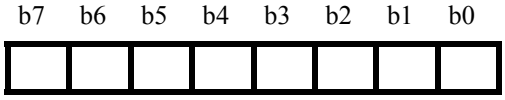
[3] Trigger



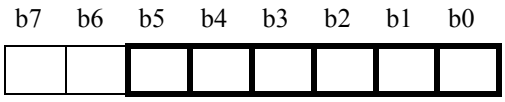
b0 - b7:Shift mode trigger
00: Manual trigger
01: Automatic trigger

[4] Error Code

Data analyzed by NEC engineers



[5] Data Memory Forwarding Result



b0 – b1:DM Forwarding Result
b0=0, b1=0: -
b0=0, b1=1: OK
b0=1, b1=0: NG

b2 – b3:LDM Forwarding Result
b2=0, b3=0: -
b2=0, b3=1: OK
b2=1, b3=0: NG

b4 – b5:NDM Forwarding Result
b4=0, b5=0: -
b4=0, b5=1: OK
b4=1, b5=0: NG

10-Q:CPU Change Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the process of CPU changeover is started, completed successfully or abandoned.

Note: Whether this system message is issued or not can be selected by a system data setting (ASYDL, SYS1, Index 1347, Bits 2-3).

```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX
                                 [4]

7:XXXX 0000 0000 0000  8:0000 0000 0000 0000
  [4]
```

[1] CPU Change Status

b7	b6	b5	b4	b3	b2	b1	b0

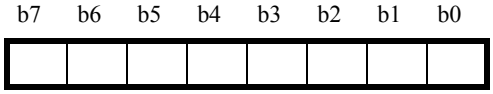
01H = Complete
02H = Start
03H = Abandon
04H = Failure

[2] CPU Change Factor

b7	b6	b5	b4	b3	b2	b1	b0

01H = MAT(CMOD)
02H = PCI ALM
03H = SOFT ALM
04H = HARD CHANGE
05H = CYCLIC DIAGNOSIS
06H = PM ALM
07H = MBR KEY
08H = TSW RDY ALM
09H = SMMB RDY ALM
0AH = GT RDY ALM
0BH = CPU HEALTH CHECK NG

[3] CPU Change Abandon Factor



01H = CPU STATUS NG
02H = SINGLE SYSTEM
03H = EMA NG
04H = GATE NG
05H = STBY PCI NG
06H = HOT-STBY MODE NG
07H = STBY MEMORY CLEAR COMMUNICATION T.O
08H = STBY MEMORY CLEAR NG

[4] Data Analyzed by NEC Engineers

10-T:Geographic Redundancy - MGC Network Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when connection failure is detected between the Primary Node and Geo Redundant Node.

Note: This message is displayed when System Message of Health Check is enabled (when ASY-DL, SYS1, Index 1354, Bit 5=1 is assigned).
For FNC=05H/06H, this message is displayed even if System Message of Health Check is disabled.

Note: This system message is available from FP95-112 V2.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX


7:XXXX XXXX XXXX XXXX  8:XXXX XXXX XXXX XXXX
```

[1] Function

b7	b6	b5	b4	b3	b2	b1	b0

[01H]: Health Check Failure
[03H]: SP Failure Detection
[05H]: Office Data Copy Failure
[06H]: Unable to execute Office Data Copy

[01H] Health Check Failure

```
1: 0 1 XX  XXXX XXXX  XXXX   2: XXXX XXXX XXXX XXXX   3: XXXX XXXX XXXX XXXX
     [1] [2]     [3]      [4]

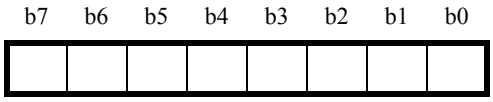
4: XXXX XXXX XXXX XXXX   5: XXXX XXXX XXXX XXXX   6: XXXX XXXX XXXX XXXX

7: XXXX XXXX XXXX XXXX   8: XXXX XXXX XXXX XXXX
```

[1] Function

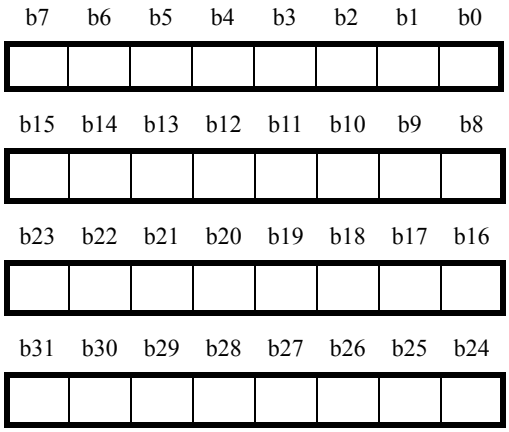
[01H] Health Check Failure

[2] Trouble detection type



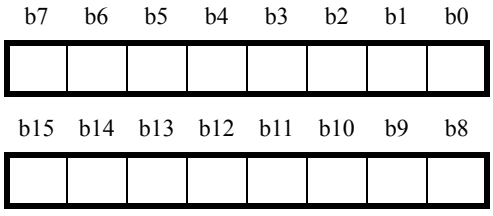
01H: Health Check Packet reception time-out
03H: Health Check Sending and receiving completion Packet reception time-out

[3] Destination IP Address



b0-b31: Destination IP Address of the failure detected MGC

[4] Destination Port Number



b0-b15: Destination port number of the failure detected MGC

[03H] SP Failure Detection

```
1: 0 3 XX XXXX XXXX XXXX  2: XXXX XXXX XXXX XXXX  3: XXXX XXXX XXXX XXXX
     [1] [2]

4: XXXX XXXX XXXX XXXX  5: XXXX XXXX XXXX XXXX  6: XXXX XXXX XXXX XXXX

7: XXXX XXXX XXXX XXXX  8: XXXX XXXX XXXX XXXX
```

[1] Function

[03H] SP Failure Detection

[2] SP Failure Detection Mode

00H: SP Failure Detection of All SP-PHx **Note 1**

b7	b6	b5	b4	b3	b2	b1	b0

Note 1: SP-PHx refers to SP-PHD and SP-PHI.

[05H] Office Data Copy Failure

```
1:05XX XXXX XXXX XXXX  2:XXXX XXXX 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]  [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[05H] Office Data Copy Failure

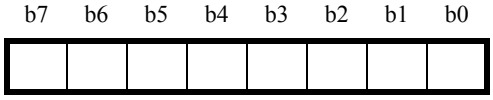
[2] MGC Number (0-255)

b0-b7: MGC number which the failure occurs

b7	b6	b5	b4	b3	b2	b1	b0

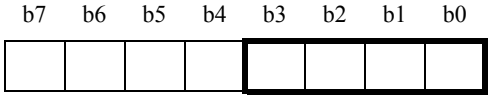
b15	b14	b13	b12	b11	b10	b9	b8

[3] Error detail



01H: Detected Health Check NG in MGC side
02H: HFC Check NG
05H: SR-MGC Data Save NG
0CH: Address Information NG
0EH: Response NG from MGC
10H: Detected Network NG in SR-MGC side
12H: Disagreement of Office Data Copy State with MGC side
13H: Copy interruption
14H: Office Data Copy Timeout is detected.
15H: Variable Definition NG is detected.
40H: Illegal packet format.
41H: Script status read failed.
42H: Illegal input parameter.
43H: Illegal account or password.
44H: Illegal server IP address.
45H: Rsync failed.
46H: Illegal disk drive.
47H: No space left on disk.
48H: No checksum files.
49H: Copied file Unmatch.
4AH: Checksum Unmatch.
4BH: Sequence timer timeout.
4CH: Illegal version.
59H: ACT Copy Success, STBY Copy Failure

[4] MGC Kind



b0-b3: MGC Kind
01H: Primary Node
02H: Geo Redundant Node

[06H] Unable to execute Office Data Copy

```
1:06XX XXXX XXXX XXXX  2:XXXX XXXX 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]  [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Function

[06H] Unable to execute Office Data Copy

[2] MGC Number (0-255)

b0-b7: MGC number which the failure occurs

b7	b6	b5	b4	b3	b2	b1	b0

b15	b14	b13	b12	b11	b10	b9	b8

[3] Factor

b7	b6	b5	b4	b3	b2	b1	b0

01H: Manual Switchback is not carried out (SR-MGC is operating)
11H: Target MGC is operating
12H: Target MGC is already executing Office Data Copy
13H: Discrepancy in Office Data Copy Condition (Geographic Redundancy)

Error Code	Error Detail	Troubleshooting
01H	Manual Switchback is not carried out (SR-MGC is operating)	When this error is output, perform the switchback operation manually with the Change Operating tab of the CMNT command.
11H	Target MGC is operating	When this error is output, perform the switchover operation manually with the Change Operating tab of the CMNT command.
12H	Target MGC is already executing Office Data Copy	When this error is output, restart the MGC Office Data Copy after currently executing.

Error Code	Error Detail	Troubleshooting
13H	Discrepancy in Office Data Copy Condition (Geographic Redundancy)	When this error is output, confirm the MGC Office Data Copy method. The following system data needs to be set: ASYDL, SYS1, Index 847, Bit 6 = 0 (Auto [selects high-speed method if it is available; if not, selects regular method])

[4] MGC Kind

b7	b6	b5	b4	b3	b2	b1	b0

b0-b3: MGC Kind
01H: Primary Node
02H: Geo Redundant Node

10-U:Geographic Redundancy - MGC Network Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is displayed when the communication between Primary Node and Geo Redundant Node recovers.

Note: This message is displayed when System Message of Health Check is enabled (when ASY-DL, SYS1, Index 1354, Bit 5=1 is assigned).

Note: This system message is available from FP95-112 V2.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX


7:XXXX XXXX XXXX XXXX  8:XXXX XXXX XXXX XXXX
```

[1] Function

b7	b6	b5	b4	b3	b2	b1	b0

[01H]: Health Check Recovery
[03H]: SP Restore Detection

[01H] Health Check Recovery

```
1:01XX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
   [1] [2]      [3]       [4]

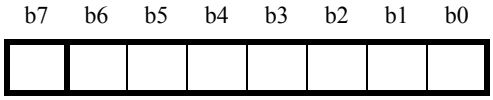
4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX

7:XXXX XXXX XXXX XXXX  8:XXXX XXXX XXXX XXXX
```

[1] Function

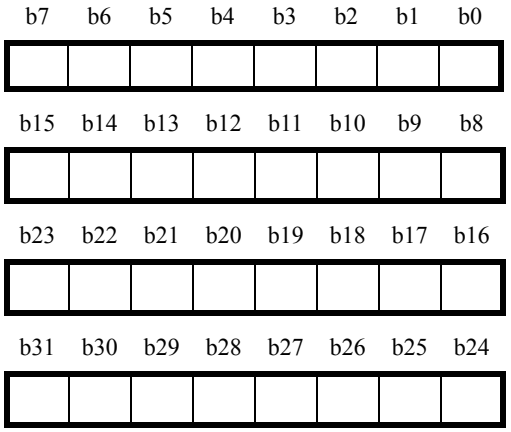
[01H] Health Check Recovery

[2] Recovery Detection Type



b0-6:
Recovery detection type 2
01H = Health Check Packet reception success
03H = Health Check Sending and receiving completion Packet reception success
b7:
Recovery detection type 1
0 = Health check restoration after MGC starts
1 = Health check restoration after trouble is detected

[3] Destination IP Address



b0-b31: Destination IP Address of recovered MGC

[4] Destination Port Number



b0-b15: Destination port number of recovered MGC

[03H] SP Restore Detection

```
1:03XX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX

7:XXXX XXXX XXXX XXXX  8:XXXX XXXX XXXX XXXX
```

[1] Function

[03H] SP Restore Detection

[2] SP Failure Detection Mode

00H: SP Failure Detection of All SP-PHx **Note 1**

b7	b6	b5	b4	b3	b2	b1	b0

Note 1: SP-PHx refers to SP-PHD and SP-PHI.

10-V:Geographic Redundancy - MGC State Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

This message is displayed when the state of MGC is changed to Operating Mode or Standby Mode.

Note: This system message is available from FP95-112 V2.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX


7:XXXX XXXX XXXX XXXX  8:XXXX XXXX XXXX XXXX
```

[1] Function

b7	b6	b5	b4	b3	b2	b1	b0

01H = MGC operating state shift notification
02H = MGC standby state shift notification

When [1] = 01 (MGC operating state shift notification)

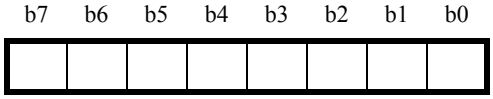
[2] State shift kind

b7	b6	b5	b4	b3	b2	b1	b0

01H = Shift at start-up
02H = Shift by NW trouble detection
03H = Shift by CMNT command switch demand

When [1] = 02 (MGC standby state shift notification)

[2] State shift kind



01H = Shift at start-up
02H = Shift by NW Recovery detection
03H = Shift by CMNT command switch demand
06H = Shift by SP failure detection
07H = Shift by LP Number mismatch in Remote Node over IP/UMGi System
08H = Shift by Node Kind mismatch in Remote Node over IP/UMGi System

11-A:Timed Forced Disconnect Trunk

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

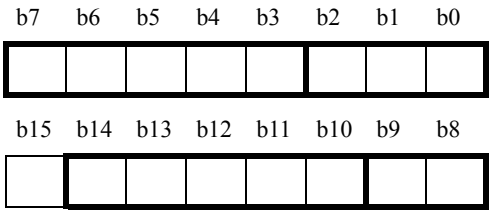
When a trunk is disconnected from a station by Timed Forced Disconnect Trunk [T-63], this message is displayed the LENS of disconnected trunk and the LENS of station or connected party.

```
1:XXXX 0000 XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]       [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

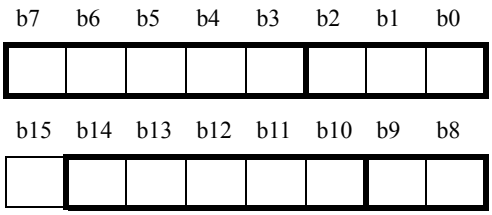
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] LENS of trunk disconnected



b0-b2: Level Number
b3-b7: Group Number
b8-b9: Unit Number
b10-b14: MG Number
b15: Not used

[2] LENS of station or connected party



b0-b2: Level Number
b3-b7: Group Number
b8-b9: Unit Number
b10-b14: MG Number
b15: Not used

12-E:Connection Failure between CCN and RN (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP			

This message is displayed when ACK packets for Health Check between CCN and RN is not transmitted for four seconds. This message indicates temporary communication fault.

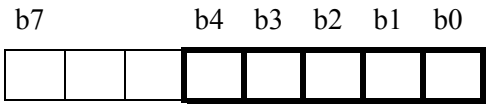
Note: Conditions are as follows:
- This system message is used for the UMGi/RNIP system.
- In the following case, this message will be output and the loss of calls may occur:
  When a TSW card failure due to the TSW card's out of order or being unmounted in a PIR/TSWR is restored, the TSW card will be initialized by Monitor Restart. The initialization will take about five seconds; therefore, congestion will occur in communication to the RN/TSWR mounting the TSW card during this period.

```
1:XXXX XXXX XXXX XXXX 2:XXXX XX00 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]         [4]          [5]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

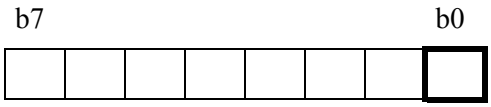
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Health Check Kind



b0: 0/1 = -/Health Check from CCN to RN
b1: 0/1 = -/Health Check from RN to CCN
b2: 0/1 = -/Health Check from RN to RN
b3: 0/1 = -/Health Check from ACT Side to STBY Side (CCN)
b4: 0/1 = -/Health Check from ACT Side to STBY Side (RN)

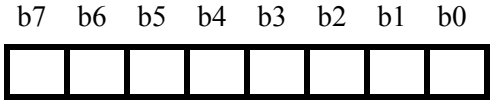
[2] Status of PBI failed



b0: 0/1 = ACT/STBY

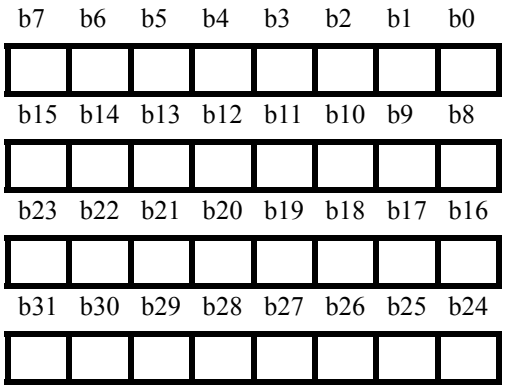
[3] Destination PBI Number

PBI number which the system is failed to operate. [0x30 - 0x68]



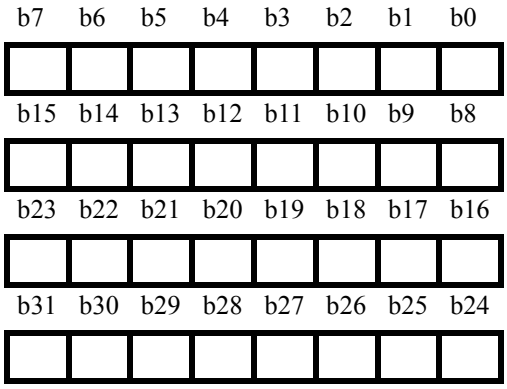
[4] IP address of system failed

IP address of system which is failed (with big-endian format)



[5] IP address of Self-CPU

IP address of Self-CPU system (with big-endian format)



12-F:Connection Failure between CCN and RN (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN			

This message is displayed when ACK packets for Health Check between CCN and RN is not transmitted for 30 seconds (default), which can be determined by ASYDL, SYS1, Index 1222, Bit 4 to 7. The RN enters survival operation when this message is output.

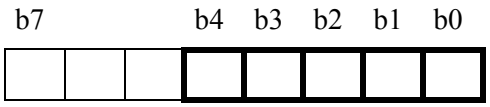
Note: This system message is used for the UMGi/RNIP system.

```
1:XXXX XXXX XXXX XXXX 2:XXXX XX00 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]          [4]           [5]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

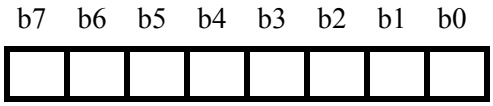
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Health Check Kind



b0: 0/1 = -/Health Check from CCN to RN
b1: 0/1 = -/Health Check from RN to CCN
b2: 0/1 = -/Health Check from RN to RN
b3: 0/1 = -/Health Check from ACT Side to STBY Side (CCN)
b4: 0/1 = -/Health Check from ACT Side to STBY Side (RN)

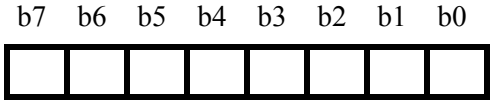
[2] Status of PBI failed



b0: 0/1 = ACT/STBY
b1-7: Kind of failure
01: Communication abnormal is detected
02: Health Check is suspended for changing status to Survival Mode

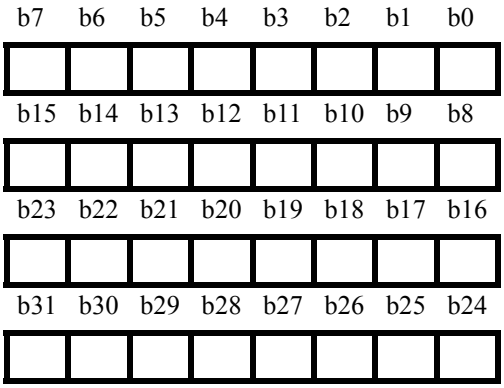
[3] Destination PBI Number

PBI number which the system is failed to operate. [0x30 – 0x68]



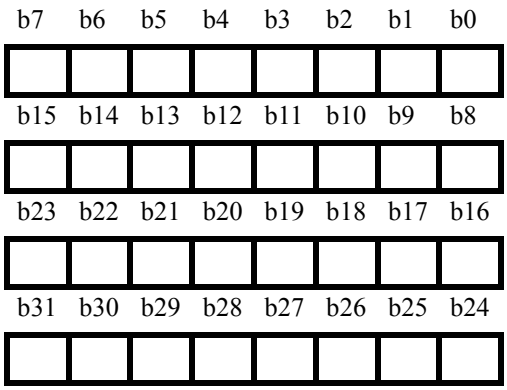
[4] IP address of system failed

IP address of system which is failed (with big-endian format)



[5] IP address of Self-CPU

IP address of Self-CPU system (with big-endian format)



12-G:Connection Recovery between CCN and RN

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON			

This message is displayed when ACK packets for Health Check between CCN and RN has been performed successfully after connection failure.

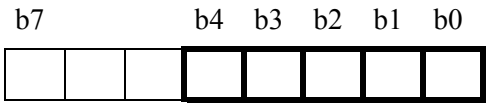
Note: This system message is used for the UMGi/RNIP system.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5]          [6]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

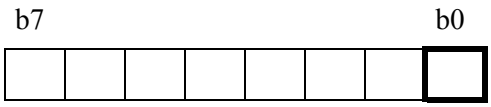
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Health Check Kind



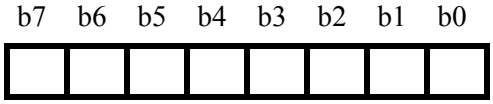
b0: 0/1 = -/Health Check from CCN to RN
b1: 0/1 = -/Health Check from RN to CCN
b2: 0/1 = -/Health Check from RN to RN
b3: 0/1 = -/Health Check from ACT Side to STBY Side (CCN)
b4: 0/1 = -/Health Check from ACT Side to STBY Side (RN)

[2] Status of PBI recovered



b0: 0/1 = ACT/STBY

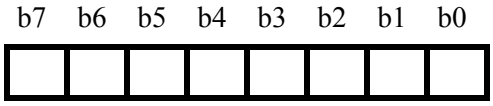
[3] Destination PBI Number



PBI number which the system is recovered. [0x30 – 0x68]

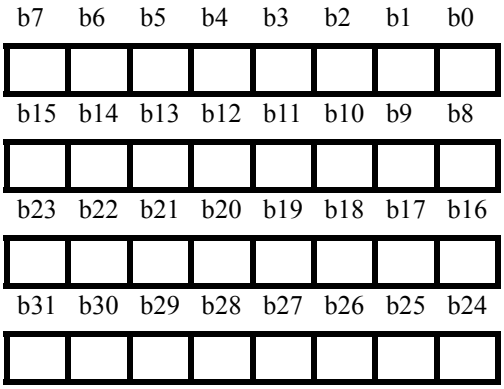
[4] Changing status setting (Normal mode to Survival mode)

01: Automatic Changeover
02: Manual Changeover



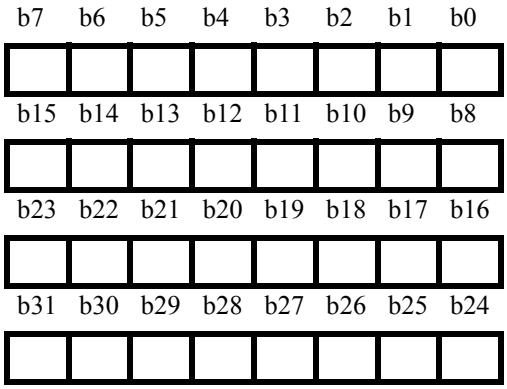
[5] IP address of system recovered

IP address of system which is recovered (with big-endian format)



[6] IP address of Self-CPU

IP address of Self-CPU system (with big-endian format)



13-A:CCH Clock Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a clock down failure occurs in the CCH/DCH card. When this message is indicated, the related CCH/DCH card is placed into make-busy status.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-B:CCH C-Level Infinite Loop Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when C-Level infinite loop of the Port Microprocessor (PM) in the CCH/DCH card has occurred.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-C:CCH C-Level Infinite Loop Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when C-Level infinite loop of the Port Microprocessor (PM) in the CCH/DCH card has occurred.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-D:CCH Lock-Up Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a Port Microprocessor (PM) of the CCH/DCH card did not send an answer to the CPU.

```
1:XX00 0000 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000


7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-E:CCH Lock-Up Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when a Port Microprocessor (PM) of the CCH/DCH card did not send an answer to the CPU.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-F:CCH B-Level Infinite Loop Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when B-Level infinite loop of the Port Microprocessor (PM) in the CCH/DCH card has occurred.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-G:CCH B-Level Infinite Loop Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when B-Level infinite loop of the Port Microprocessor (PM) in the CCH/DCH card has occurred.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-H:CCS Link Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a failure has continuously occurred to a common channel signaling link and the link has been placed into make-busy state.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000


7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

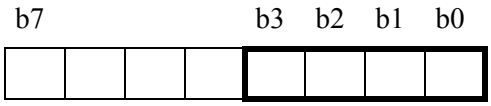
[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[2] Data Analyzed by NEC Engineers

[3] Probable cause for failure



b0-b3: See the table below.

- PRT card

FLT ID	CCITT ERROR	FACTOR
00	A	S (F = 1) frame or Layer 2 DISC is received.
01	B	DM (F = 1) response is received.
02	C	UA (F = 1) response is received.
03	D	UA (F = 0) response is received.
04	E	DM (F = 0) response is received.
05	F	SABME command is received.
06	G	N200 Timeout (Link is set)
07	H	N200 Timeout (Link is disconnected)
08	I	N200 Timeout (Link failure is restored to normal)
09	J	N (R) frame error is received.
0A	K	FRMR frame is received (Link is re-setup).
0B	L	Undefined frame is received.
0C	M	-
0D	N	Improper long frame is received.
0E	O	I frame with I field which exceeds N201 is received.
0F	-	-
10	-	Layer 1 down (for ILC)
40	-	FRMR frame is received. (Link is not re-setup)

- CCT card

FLT ID	FACTOR
00	ERTI Timeout (consecutive synchronization loss tolerance)
01	T1 Timeout (waiting for a verification of counter office)
02	T2 Timeout (waiting for a startup of counter office)
03	T3 Timeout (waiting for an end of initial setting)
04	Excessive proving errors
05	NRECTM Timeout
06	SIN is received
07	SIE is received
08	SIO is received
09	SIOS is received
0A	Abnormal BSN is received
0B	Abnormal FIB is received
0C	T6 Timeout (counter office congestion monitoring)
0D	T7 Timeout (answer delay)
0E	Excessive SU errors
0F	TOP Timeout

13-I:CCS Link Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is displayed when a failure has occurred to a common channel signaling link and the link has been placed into make-busy state.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000


7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

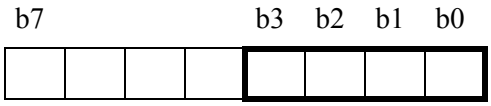
[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[2] Data Analyzed by NEC Engineers

[3] Probable cause for the failure



b0-b3: See the table below.

- PRT card

FLT ID	CCITT ERROR CODE	FACTOR
00	A	S (F = 1) frame or Layer 2 DISC is received.
01	B	DM (F = 1) response is received.
02	C	UA (F = 1) response is received.
03	D	UA (F = 0) response is received.
04	E	DM (F = 0) response is received.
05	F	SABME command is received.
06	G	N200 Timeout (Link is set)
07	H	N200 Timeout (Link is disconnected)
08	I	N200 Timeout (Link failure is restored to normal)
09	J	N (R) frame error is received.
0A	K	FRMR frame is received (Link is re-setup).
0B	L	Undefined frame is received.
0C	M	-
0D	N	Improper long frame is received.
0E	O	I-frame with I-field that exceeds N201 is received.
0F	-	-
10	-	Layer 1 down (for ILC)
40	-	FRMR frame is received. (Link is not re-setup)

- CCT card

FLT ID	FACTOR
00	ERTI Timeout (consecutive synchronization loss tolerance)
01	T1 Timeout (waiting for a verification of counter office)
02	T2 Timeout (waiting for a startup of counter office)
03	T3 Timeout (waiting for an end of initial setting)
04	Excessive proving errors
05	NRECTM Timeout
06	SIN is received
07	SIE is received
08	SIO is received
09	SIOS is received
0A	Abnormal BSN is received
0B	Abnormal FIB is received
0C	T6 Timeout (counter office congestion monitoring)
0D	T7 Timeout (answer delay)
0E	Excessive SU errors
0F	TOP Timeout

13-J:Restoration From CCS Link Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the faults pertaining to CCIS/ISDN Link are restored to normal.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[2] CKT No. of faulty circuit

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: CKT (0-3)

13-K:CCH Reset Interrupt Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when a fault occurred to the Port Microprocessor (PM) within the CCH/DCH card and the restart processing is executed.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of faulty CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-N:Digital Line Warning

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when a digital line failure occurs.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

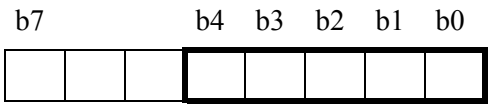

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location



b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of Fault



b0-b4: Kind of Fault (HEX)
00 = -
01 = Frame alignment loss PCM down
02 = Bit error rate is over 10^{-6}
03 = Slip is detected
04 = -
05 = Dch down
06 = Multi-frame alignment loss
07 = -
10 = -
11 = Frame alignment loss PCM down (frequently)
12 = Bit error rate is over 10^{-4}
13 = Slip is detected (frequently)
14 = Opposite office alarm is detected
15 = -
16 = Multi-frame alignment loss (frequently)
17 = Frame alignment loss PCM down (continuously)
18 = Multi-frame alignment loss (continuously)

13-O:Digital Line Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

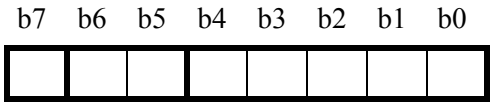
This message is displayed when a digital line failure occurs.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

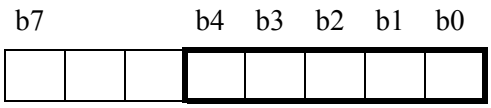

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location



b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of Fault



b0-b4: Kind of Fault (HEX)
00 = -
01 = Frame alignment loss PCM down
02 = Bit error rate is over 10^{-4}
03 = Slip is detected
04 = Opposite office alarm (AIS) is detected
05 = -
06 = Multi-frame alignment loss
07 = Frame alignment loss PCM down (continuously)
08 = Multi-frame alignment loss (continuously)

13-P:Digital Line Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when a digital line failure is restored to normal.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

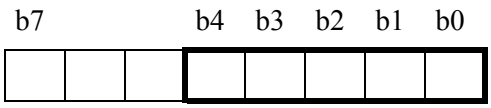
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location



b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of Fault



b0-b4: Kind of Fault (HEX)
00 = -
01 = Frame alignment loss PCM down
02 = Bit error rate is over 10^{-4}
03 = -
04 = Opposite office alarm (AIS) is detected
05 = Dch restores to normal
06 = Multi-frame alignment loss

13-Q:DRU Battery Operation

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when the battery is operated in the DRU system.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  └┘
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

13-R:DRU Line Operation

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when the main power of the DRU system is restored to normal.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

13-Z:Power Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

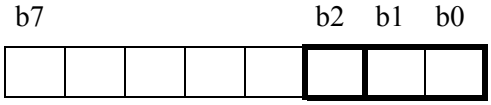
This message is displayed when a PWR card failure is detected.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

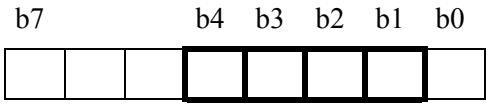
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] MG No. and Unit number of fault detection



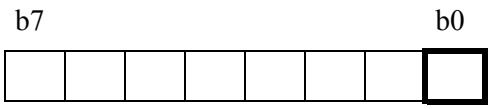
b0, b1: Unit (0-3)
b2: MG number
0/1 = Even-numbered MG/Odd-numbered MG

[2] Kind of Power



b1: 0/1 = -/-5V Power Failure
b2: 0/1 = -/+12V Power Failure
b3: 0/1 = -/+5V Power Failure
b4: 0/1 = -/-48V Power Failure

[3] Location of Faulty Card



b0: 0/1 = Group 24 (0 side) / Group 25 (1 side)

Reference: See Chapter 5 Section 3.7, Replacement Procedure for 7U-PIR Power Unit or Section 3.8, Replacement Procedure for 8U-PIR Power (AC-DC) Unit for the card replacement procedure.

15-A:VPS Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when a VPS failure is detected.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Probable cause for failure

b7 b6 b5 b4 b3 b2 b1 b0



b0-b7: 0 = -
1 = Sector error
FF = Other than above

[2] LENS of VPS with the failure

b7 b6 b5 b4 b3 b2 b1 b0



b0-b2: Level
b3-b7: Group

[3] LENS of VPS with the failure

b7 b6 b5 b4 b3 b2 b1 b0



b0, b1: Unit number
b2-b7: MG number

15-B:VPS Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	2		

This message is displayed when a VPS failure is detected.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Probable cause for failure

b7 b6 b5 b4 b3 b2 b1 b0



b0-b7: 0 = -
1 = Sector error
FF = Other than above

[2] LENS of VPS with the failure

b7 b6 b5 b4 b3 b2 b1 b0



b0-b2: Level
b3-b7: Group

[3] LENS of VPS with the failure

b7 b6 b5 b4 b3 b2 b1 b0



b0, b1: Unit number
b2-b7: MG number

15-C:VPS Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	2		

This message is displayed when a VPS failure is restored to normal.

```
1:XXXX 0000 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000


7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] LENS of VPS with the failure

b7 b6 b5 b4 b3 b2 b1 b0

b0-b2: Level
b3-b7: Group

[2] LENS of VPS with the failure

b7 b6 b5 b4 b3 b2 b1 b0

b0, b1: Unit number
b2-b7: MG number

16-A:Inside Trunk All Busy

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when Intra-Office Trunks (ATI, RST, etc.) have all become busy.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Intra-Office trunks that have become all busy

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Intra-Office trunks that have become all busy (01-1F)
(See table on the following page)

ROUTE NO.	DATA (HEX)	TRUNK NAME	ROUTE NO.	DATA (HEX)	TRUNK NAME
901	01	Attendant Console	925	19	MODEM Pooling Trunk
902	02	Originating Register Trunk	926	1A	MODEM Pooling Trunk
903	03	Incoming Register Trunk	927	1B	Not used
904	04	MF Receiver	928	1C	Not used
905	05	Sender Trunk DP/PB	929	1D	Data Signaling Trunk-Option
906	06	PB Receiver for Automated Attendant Service	930	1E	Not used
907	07	AMP	931	1F	Not used
908	08	Not used	932	20	Not used
909	09	Three-Way Conference Trunk	933	21	CRT
910	0A	Not used	934	22	Not used
911	0B	Not used	935	23	Not used
912	0B	Not used	936	24	Not used
913	0D	Three-Way Conference Trunk for ATTCON/DESKCON	937	25	Caller ID Modem Sender Trunk
914	0E	Not used	938	26	DLMX
915	0F	Night ATTCON/DESKCON	939	27	Continuity Check Sender Trunk
916	10	MFC Register	940	28	Call Waiting Caller ID Register Trunk
917	11	MFC Sender	941	29	Not used
918	12	Not used	942	2A	Not used
919	13	DLINT (for Hotel): MODEM (for Business)	943	2B	Not used
920	14	MODEM Pooling Trunk	944	2C	Not used
921	15	MODEM Pooling Trunk	945	2D	Not used
922	16	MODEM Pooling Trunk	946	2E	Not used
923	17	MODEM Pooling Trunk	947	2F	Not used
924	18	MODEM Pooling Trunk			

16-B:Virtual Tie Line Set Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

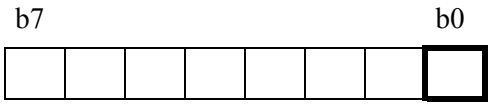
This message is displayed when virtual tie line setup has completed.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

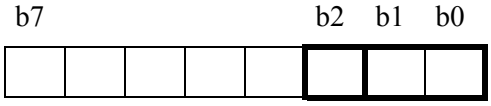

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Counter



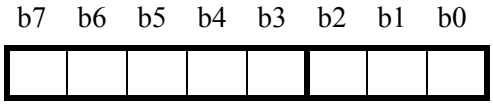
b0: 00=-
01=Re-setup

[2] Virtual TIE line call header accommodated location



b0,b1: Unit number
b2: Module Group number

[3] Virtual TIE line call header accommodated location



b0-b2: Level
b3-b7: Group number

16-C:Virtual Tie Line Cancel Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when virtual TIE line cancel has completed.

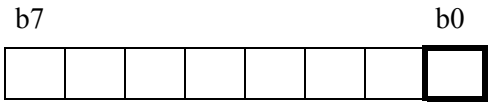
```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000


7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

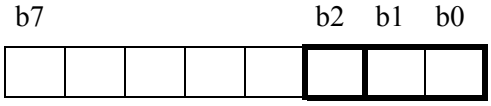
[1] Counter

b0: 0/1=-/Re-setup



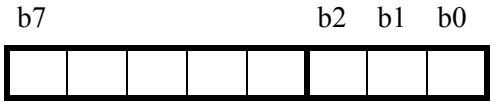
[2] Virtual TIE line call header accommodated location

b0,b1: Unit number
b2: Module Group number



[3] Virtual TIE line call header accommodated location

b0-b2: Level
b3-b7: Group number



16-E:Virtual Tie Line Set Time Out

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when virtual TIE line setup has failed due to a fault in the network of the terminating office concerned.

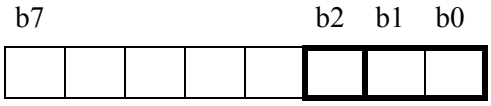
```
1:00XX XX8X XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
    [1]  [2] [3]  [4] [5]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

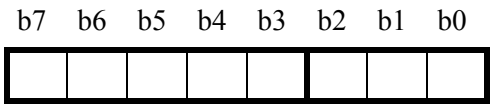
[1] Virtual TIE line call header accommodated location

b0,b1: Unit number
b2: Module Group number

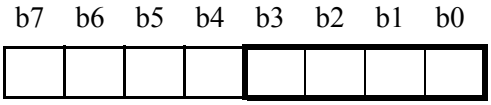


[2] Virtual TIE line call header accommodated location

b0-b2: Level
b3-b7: Group number



[3] Virtual TIE line call header accommodated location

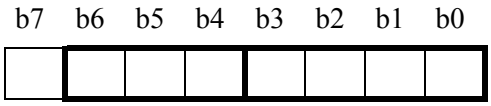


b3-b7: Call Source

DATA	CALL SOURCE
0	User
1	Private network to which the user is directly connected. (self side)
2	National network to which the user is directly connected. (self side)
3	TIE line network
4	National network to which the opposite party is directly connected. (Opposite party's side)
5	Private network to which the opposite party is directly connected. (Opposite party's side)
7	International network
A	Network from Interworking
Other	Spare

b4-b7: "8" is always indicated.

[4] Fault Cause



b0-b3: Reason Kind
b4-b6: Class
0=No Answer
Other than 0=Refer to the following table

	CLASS	REASON KIND VALUE	DATA	REASON KIND
Reason Kind Value X Class X 8765 4321(bit) -000 xxxx -001 Normal Event Class	000	0001	1	Dead Number
	000	0010	2	No route to the designated transit network
	000	0011	3	No route to the opposite Party
	000	0110	6	Use of channel not allowed
	000	0111	7	Call terminated to a setup channel
	001	0000	16	Normal disconnection
	001	0001	17	Called user busy
	001	0010	18	No response from called user
	001	0011	19	Called party being rung/no answer
	001	0101	21	Communication denied
	001	0110	22	Opposite party's terminal number changed
	001	1010	26	Disconnection and release of the user not selected
	001	1011	27	Opposite party's terminal out of order
	001	1100	28	Invalid number format (incomplete number)
	001	1101	29	Facility denied
	001	1110	30	Answer to status inquiry
	001	1111	31	Other normal class

	CLASS	REASON KIND VALUE	DATA	REASON KIND
010 xxxx Classes not allowed use of resources	010 010 010 010 010 010 010	0010 0110 1001 1010 1011 1100 1111	34 38 41 42 43 44 47	No usable channel/line Network failure Temporary failure Switching system congested Access information discarded Use of requested line/channel not allowed Class not allowed use of other resources
Reason Kind Class Value X X 8765 4321(bit) 011 xxxx Classes not allowed use of services	011 011 011 011 011	0001 0010 1001 1010 1111	49 50 57 58 63	 Use of QoS restricted Requested facility not contracted Bearer capability restricted Bearer capability restricted at present Class not allowed to use other services or options
100 xxxx Classes not provided with services	100 100 100 100 100	0001 0010 0101 0110 1111	65 66 69 70 79	Unprovided bearer capability designated Unprovided channel kind designated Unprovided facility requested Restricted digital information bearer capability Class unprovided with other services or options
101 xxxx Invalid message class	101 101 101 101 101 101 101 101 101	0001 0010 0011 0100 0101 0110 1000 1011 1111	81 82 83 84 85 86 88 91 95	Invalid call number used Invalid channel number used Designated transit call ID number unused Transit call ID number being used No transit call Designated transit call disconnected and released Terminal attributes unmatch Invalid transit network selected Other invalid message class
110 xxxx Procedure error (ex: unrecognized message) class	110 110 110 110 110 110 110 110	0000 0001 0010 0011 0100 0101 0110 1111	96 97 98 99 100 101 102 111	Mandatory information elements inadequate Message kind undefined or unprovided Call status and message unmatching or message kind undefined Information element undefined Content of information element invalid Call status and message unmatching Recovery due to timer over Class of other procedure errors
111 xxxx Interworking class	111	111	127	Other interworking class
Others	Reserved			

[5] Diagnosis Information (indicated in hexadecimal)

16-F:Sender Start Time Out

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message indicates that an outgoing call (by connection acknowledge system) has not received an acknowledgment signal from the opposite office. As a result, the attempted outgoing call is routed to Reorder Tone (ROT) connection.

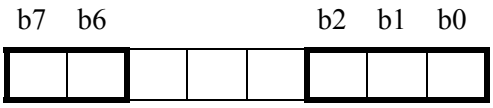
```
1:XXXX XXXX XX0X XX0X  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2] [3] [4] [5] [6] [7] [8]   [9]  [10]  [11]  [12]     [12]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

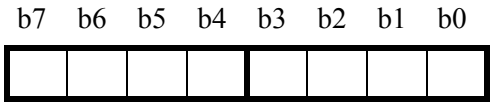
In Case of Station OG/ATT OG/ATT Tandem Connection

[1] Type of connection and station number digits



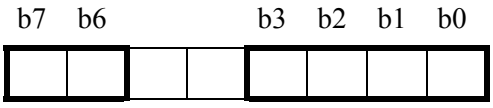
b0-b2: Digits of station number (origination)
b6-b7: 0H=Station OG connection
4H=ATT OG connection
CH=ATT Tandem connection

[2]-[4]Calling station number (see table)



	b4-b7	b0-b3
[2]	DC0	DC1
[3]	DC2	DC3
[4]	DC4	DC5

[5] Tenant number of calling station (HEX)



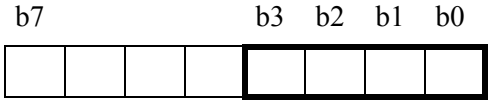
b7: OP data (0/1)
When OPTN data of [6] is valid, “1” is displayed.

b0-b3: Tenant number of calling station
- b7=0 Tenant number is not greater than 15.
- b7=1 Tenant number is greater than 15.

Note: Refer to “[6] OPTN data.”

[6] OPTN data

b0-b3: OPTN data **Note 1**



Note 1: This data is displayed when the Tenant number of the calling station is larger than 15, and b7 of [5] is displayed as "1" (otherwise, "0" is displayed at any time). While the four-bit data of [5] is self-sufficient in verifying Tenant 1-15, this OPTN data provides a supportive role to cover Tenant number ranging from 16 to 255. Use the following method to analyze the data:

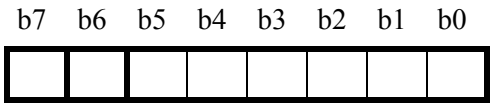
Tenant number of Calling Station (1-15) = 0 0 0 0 | Tenant No.

OPTN data (0: fixed) b0 - b3 of [5]

Tenant number of Calling Station (16-255) = OPTN data | Tenant No.

OPTN data (variable) b0 - b3 of [5]

[7] OG route number (HEX)

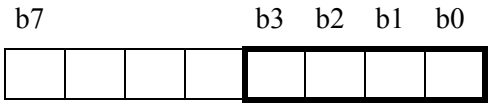


b7: AC data
0/1=Internal trunk/External trunk
b6: OP data (0/1)
When OPRT data of [8] is valid, "1" is displayed.
b0-b5: OG route number
- b6=0 Route number is not greater than 63.
- b6=1 Route number is greater than 63.

Note: Refer to "[8] OPRT data."

[8] OPRT data

b0-b3: OPRT data **Note 2**



Note 2: This data is displayed when the OG Route number is larger than 63, and b6 of [7] is displayed as "1" (otherwise, "0" is displayed at any time). While the six-bit data of [7] is self-sufficient in verifying the Route 1-63, this OPRT data provides a supportive role to cover Route number larger than 63. Use the following method to analyze the data:

OG Route (1-63) = 0 0 0 0 | OG Route No.

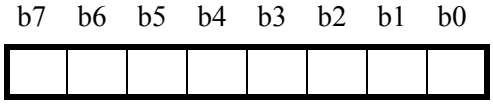
OPTN data (0:fixed) b0 - b5 of [7]

OG Route (64 or larger) = OPTN data | OG Route No.

OPTN data (variable) b0 - b5 of [7]

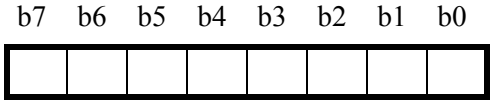
[9] Trunk number of OG trunk

b0-b7: Trunk number of OG trunk



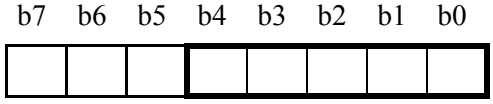
[10]Trunk number of OG sender

b0-b7: Trunk number of sender

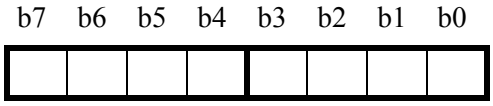


[11]Number of digits dialed by caller

b0-b4: Number of digits dialed by caller



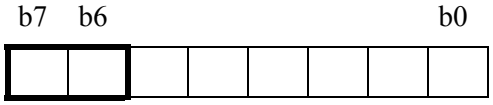
[12]Number dialed by caller (See table)



b4-b7	b0-b3
DC0	DC1
DC2	DC3
DC4	DC5
DC6	DC7
DC8	DC9
DC10	DC11
DC12	DC13
DC14	DC15
DC16	DC17
DC18	DC19
DC20	DC21

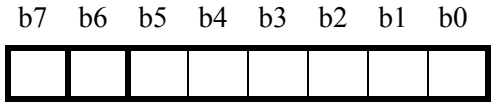
In Case of Tandem Connection

[1] Type of connection



b7 b6
1 0 = Tandem connection

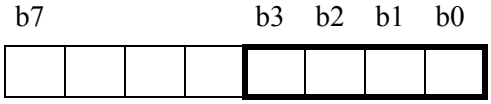
[2] IC route number (HEX)



b7: AC data
0/1=Internal trunk/External trunk
b6: OP data (0/1)
When OPRT data of [3] is valid, "1" is displayed.
b0-b5: IC route number
- b6=0 Route number is not greater than 63.
- b6=1 Route number is greater than 63.

Note: Refer to "[3] OPRT data."

[3] OPRT data



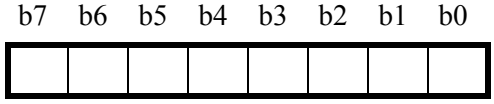
b0-b3: OPRT data **Note 3**

Note 3: This data is displayed when the IC Route number is larger than 63, and b6 of [2] is displayed as "1" (otherwise, "1" is displayed at any time). While the six-bit data of [2] is self-sufficient in verifying the Route 1-63, this OPRT data provides a supportive role to cover Route number larger than 63. Use the following method to analyze the data:

IC Route (1-63) = | 0 | 0 | 0 | 0 | IC Route No. |
OPRT data (0:fixed) b0 - b5 of [2]

IC Route (64 or larger) = | OPRT data | IC Route No. |
OPRT data (variable) b0 - b5 of [2]

[4], [5]Trunk number of IC trunk



b0-b7: Trunk number of IC trunk

[6] Not used

[7] OG route number (HEX)

b7	b6	b5	b4	b3	b2	b1	b0

b7: AC data
0/1=Internal trunk/External trunk
b6: OP data (0/1)
When OPRT data of [8] is valid, "1" is displayed,
b0-b5: OG route number
- b6=0 Route number is not greater than 63.
- b6=1 Route number is greater than 63.

Note: Refer to "[8] OPRT data."

[8] OPRT data

b7				b3	b2	b1	b0

b0-b3: OPRT data **Note 4**

Note 4: This data is displayed when the OG Route number is larger than 63, and b6 of [7]is displayed as "1" (otherwise, "0" is displayed at any time). While the six bit data of [7] is self-sufficient in verifying Route 1-63, this OPRT data provides a supportive role to cover Route number larger than 63. Use the following method to analyze the data:

OG Route (1-63) = | 0 | 0 | 0 | 0 | OG Route No. |
OPRT data (0: fixed) b0 - b5 of [7]

OG Route (64 or larger) = | OPRT data | OG Route No. |
OPRT data (variable) b0 - b5 of [7]

[9] Trunk number of OG trunk

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Trunk number of OG trunk

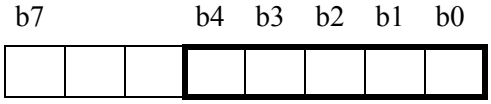
[10] Trunk number of sender

b7	b6	b5	b4	b3	b2	b1	b0

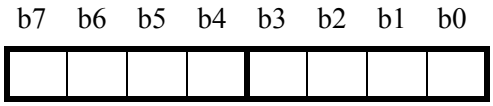
b0-b7: Trunk number of sender

[11] Number of digits dialed by caller

b0-b4: Number of digits dialed by caller



[12] Number dialed by caller (See table)



b4-b7	b0-b3
DC0	DC1
DC2	DC3
DC4	DC5
DC6	DC7
DC8	DC9
DC10	DC11
DC12	DC13
DC14	DC15
DC16	DC17
DC18	DC19
DC20	DC21

16-K:I/O Port Line OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

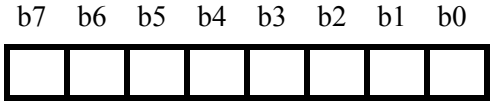
This message is displayed when the DR signal of the RS-232C, connected to the port designated by the system data, remains off for 30 consecutive seconds while the system is in service (immediately after startup in the case of system start-up).

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty Port number



0/1 = -/Link Down

b0:	Port 0	IOC 0	b4:	Port 4	IOC 1
b1:	Port 1		b5:	Port 5	
b2:	Port 2		b6:	Port 6	
b3:	Port 3		b7:	Port 7	

16-L:I/O Port Line Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

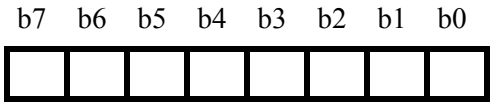
This message is displayed when [16-K] I/O Port Line Down Failure is restored to normal.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Faulty Port number



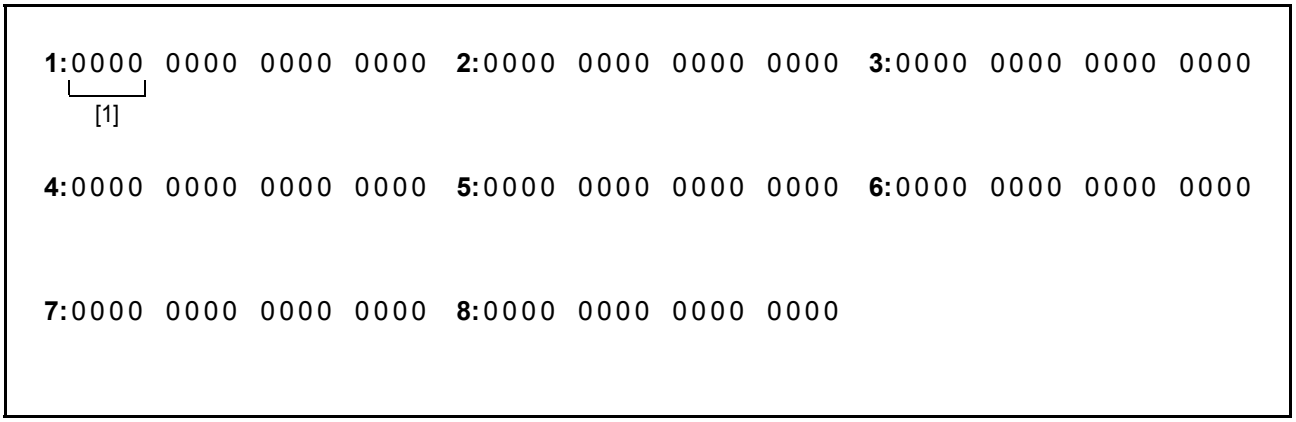
0/1 = -/Link Down

b0:	Port 0	IOC 0	b4:	Port 4	IOC 1
b1:	Port 1		b5:	Port 5	
b2:	Port 2		b6:	Port 6	
b3:	Port 3		b7:	Port 7	

16-M:Hard Clock Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

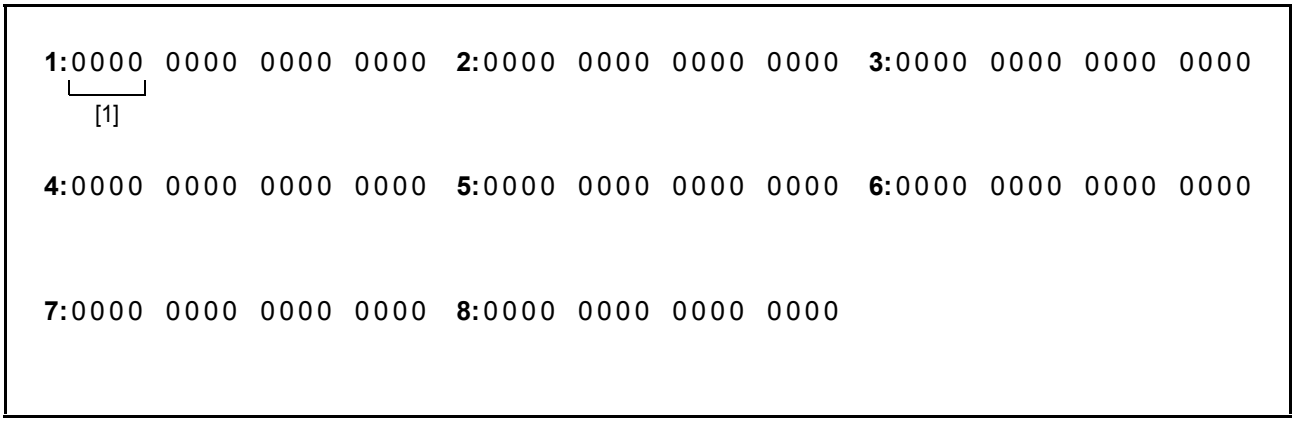
This message is displayed when the timer circuit in the system becomes faulty and stops functioning and a 64 Hz clock alarm is output.



16-N:Hard Clock Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when [16-K] 64 Hz Clock Down Detected is restored to normal.



[1] Message Detail Data

This system message is always indicated as 0000.

16-T:IOC Failure (Temporary)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message is displayed when the IOC card fails.

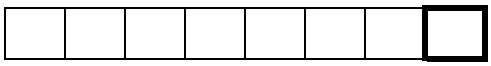
```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] IOC card number

b7 b6 b5 b4 b3 b2 b1 b0



b0: 0/1 = 0/1

[2] Cause for fault

b7 b4 b3 b2 b1 b0



b0: 0/1 = -/COP Alarm
b1: 0/1 = -/CLK Alarm
b2: 0/1 = -/MEM bus CLK Alarm
b3: 0/1 = -/Abnormal Interruption
b4: 0/1 = -/Infinite Loop Detected

16-U:IOC Failure (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

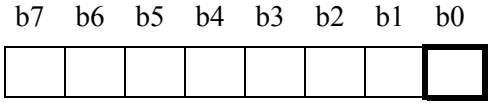
This message is displayed when the IOC card failure, observed in the message [16-T], is detected more than eight times a day.

```
1:XXXX 0000 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

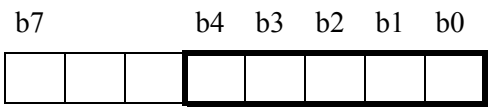
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] IOC card number



b0: 0/1 = 0/1

[2] Cause for fault



b0: 0/1 = -/COP Alarm
b1: 0/1 = -/CLK Alarm
b2: 0/1 = -/MEM bus CLK Alarm
b3: 0/1 = -/Abnormal Interruption
b4: 0/1 = -/Infinite Loop Detected

16-X:Station Exchanged Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when the user uses Follow Phone (SWAP) service.

```
1:XXXX XXXX XXXX XX00  2:XXXX XXXX XXXX 00XX  3:XXXX 0000 0000 0000
  [1] [2] [3] [4] [5] [6] [7]  [8] [9] [10][11] [12][13] [14]  [14]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Error code

b0-b7: See table

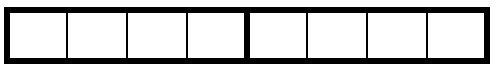
b7	b6	b5	b4	b3	b2	b1	b0

ERROR CODE (HEX)	FAILURE
00	Normal End
01	MG mismatch
02	Called party is not the station
03	TEC of Calling or Called station is abnormal
04	TEC unmatch
05	Hunting group unmatch
06	Call Pick Up group unmatch
07	Calling or Called station is Night station
08	Call Pick Up Expand group unmatch
09	-
10	Calling or Called Dterm has Data Line
11	Calling or Called Dterm has OAI function key
12	Calling or Called station is Agent/Supervisor (ACD)
13-15	-

ERROR CODE (HEX)	FAILURE
16	Called station is busy
17	MW has been set to Calling or Called station
18	Call Back/OG queuing has been set to Calling or Called station
19	Call Forwarding - All Calls has been set to Calling or Called station
20	Call Forwarding - Busy Line has been set to Calling or Called station
21	Call Forwarding - Don't Answer has been set to Calling or Called station
22-31	-
32	Under processing of Data Memory Back Up
33	• Collision of swap service • Under swapping of One Touch Memory • Memory overflow (maximum four stations)
34	Data Memory read error
35	Data Memory swap failure
36	OAI Terminal Information swap failure (CM Data)
37	OAI Terminal Information swap failure (LP Data)
38	SST Time out

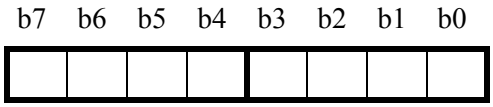
[2] Tenant number of calling station

b0-b3: Tenant (1-15)
b4-b7: Tenant (over 15)



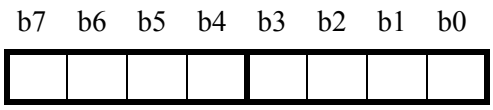
[3] Accommodated location of calling station after Follow Phone service

b0-b2: Level
b3-b7: Group (0-22)



[4] Accommodated location of calling station after Follow Phone service

b0, b1: Unit (0-3)
b2-b7: MG number



[5]-[7] Station number of calling station

b7 b6 b5 b4 b3 b2 b1 b0

	b4-b7	**b0-b3**
[5]	DC0	DC1
[6]	DC2	DC3
[7]	DC4	DC5

[8] Tenant number of called station

b0-b3: Tenant (1-15)
b4-b7: Tenant (over 15)

b7 b6 b5 b4 b3 b2 b1 b0

[9] Accommodated location of called station

b0-b2: Level
b3-b7: Group

b7 b6 b5 b4 b3 b2 b1 b0

[10] Accommodated location of called station

b0, b1: Unit (0-3)
b2-b7: MG number

b7 b6 b5 b4 b3 b2 b1 b0

[11]-[13] Station number of called station

b7 b6 b5 b4 b3 b2 b1 b0

	b4-b7	**b0-b3**
[11]	DC0	DC1
[12]	DC2	DC3
[13]	DC4	DC5

[14] Data Analyzed by NEC Engineers

17-A:CCH MBR Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MBR switch on the CCH/DCH card is turned ON.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

[2] CKT number

b7						b1	b0

b0, b1: CKT (0-3)

17-B:CCH MBR Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

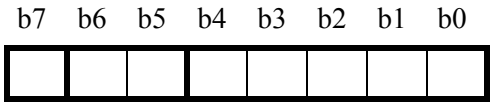
This message is displayed when the MBR switch on the CCH/DCH card is turned OFF.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

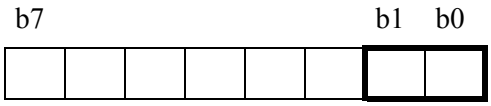

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of CCH/DCH card



b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

[2] CKT number



b0, b1: CKT (0-3)

17-C:CCH MB Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MB switch on the CCH/DCH card is turned ON while extracting or inserting a card or at PM initialization, etc.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of CCH/DCH card



b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

17-D:CCH MB Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MB switch on the CCH/DCH card is turned OFF while extracting or inserting a card or at PM initialization, etc.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of CCH/DCH card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: MG number
0/1 = Even-numbered MG/Odd-numbered MG

17-H:Day/Night Change Information

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when the NIGHT switch on the ATTCON/DESKCON is operated or when the DAY/NIGHT change is executed.

```
1:XXXX XXXX XXXX XX00  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2] [3] [4]  [5]   [6]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Tenant number

b7	b6	b5	b4	b3	b2	b1	b0

b0-b3: Tenant (1-15)
b4-b7: Tenant (over 15)

[2] Changing Method

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
1=Night Key on ATTCON/DESKCON
2=External Key
3=ADNM Command (for North America only)
4=Dterm **Note 1**
5=OAI RCF (for North America only)

Note 1: In the case of Changing Method 4 (Dterm), "xxxx xxxx" will indicate the EN of the Dterm performing Day/Night change.

[3] Day/Night Mode Specification

b7 b6 b5 b4 b3 b2 b1 b0

b0-b3: Mode after changing
b4-7: Mode before changing

b0	b1	b2	b3	MEANING
b4	b5	b6	b7	
0	0	0	0	Day Mode
0	0	0	1	Night Mode 1
0	0	1	0	Night Mode 2 *available only for Japan*
0	0	1	1	Night Mode 3 (DIT-Night Connection Fixed) **Note 2**

Note 2: This data is programmed as initial data.

[4] External Switch Status

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7:
01=Not used
02=Day/Night Change
03=Not used

[5] Location of Desktop Terminal

* Displayed when [2] Changing Method is 04H.

b7 b6 b5 b4 b3 b2 b1 b0

b7 b6 b5 b4 b3 b2 b1 b0

b0-b2: Level number
b3-b7: Group number
b0, b1: Unit number
b2-b7: MG number

[6] FPC Number of Desktop Terminal

* Displayed when [2] Changing Method is 04H.

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: FPC number

17-O:IOC MB Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when IOC card is removed from the module while the MBR is set to OFF.

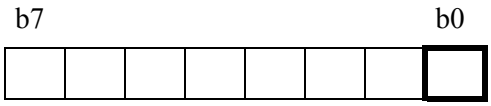
```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Card number

b0: 0/1 = IOC 0/IOC 1



17-P:IOC MB Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when IOC card is inserted into the module while the MBR is set to OFF.

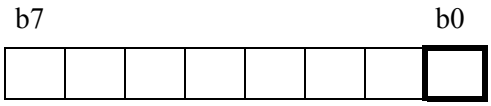
```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Card number

b0: 0/1 = IOC 0/IOC 1



17-Q:IOC MBR Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the MBR switch on the IOC card is turned ON.

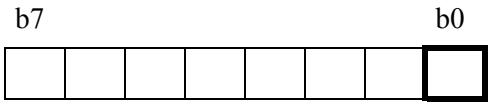
```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Card number

b0: 0/1 = IOC 0/IOC 1



17-R:IOC MBR Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message displayed when the MBR switch on the IOC card is turned OFF.

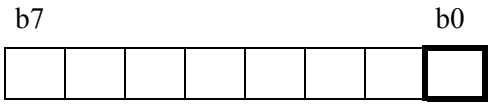
```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Card number

b0: 0/1 = IOC 0/IOC 1



23-P:DCH Back-Up Automatic Change Start/End

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is displayed when the Primary Dch fails, and the Dch Back-Up function is operated automatically.

```
1:XXXX XXXX XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5] [6]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Condition of Dch

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
1 = Back-up Start
2 = Back-up End
3 = Back-up Failed

[2] Location of Dch (Primary)

b7	b6	b5	b4	b3	b2	b1	b0

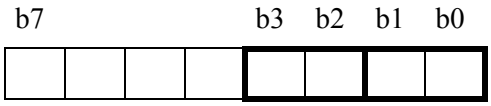
b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[3] Location of Dch (Back-up)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

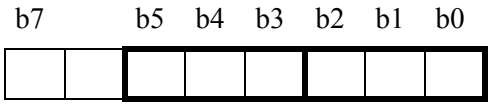
[4] Changeover Information



b0, b1:
- 00 = Change from Primary Dch to Dch for Back-up
- 01 = Change from Dch for Back-up to Primary Dch
- 10 = Place Primary Dch to ACT status
- 11 = Place Dch for Back-up to ACT status

b2, b3:
- 00 = Change signal is received
- 01 = Change signal is sent

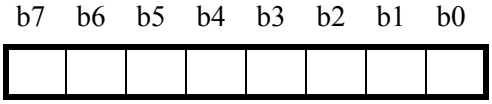
[5] Status of the Primary/Back-up Dch



b0-b2: Status of Primary Dch
- 0 = In Service
- 1 = Standby
- 2 = Out of Service
- 3 = Make-Busy
- 4 = Changing status from STBY to In Service
- 5 = Manual Out of Service

b3-b5: Status of Primary Dch
- 0 = In Service
- 1 = Standby
- 2 = Out of Service
- 3 = Make-Busy
- 4 = Changing status from STBY to In Service
- 5 = Manual Out of Service

[6] EVENT number



b0-b7: EVENT number

23-Q:DCH Back-Up Manual Change Start/End

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is displayed when the Primary Dch fails, and the Dch Back-Up function is operated manually.

```
1:XXXX XXXX XXXX 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3] [4]  [5] [6]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Condition of Dch

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
1 = Back-up Start
2 = Back-up End
3 = Back-up Failed

[2] Location of Dch (Primary)

b7	b6	b5	b4	b3	b2	b1	b0

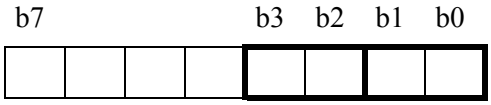
b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

[3] Location of Dch (Back-up)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group number
b5, b6: Unit (0-3)
b7: 0/1 = Even-numbered MG/Odd-numbered MG

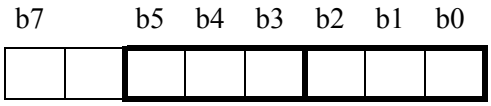
[4] Detailed information on changing Dch



b0, b1:
- 00 = Change from Primary Dch to Dch for Back-up
- 01 = Change from the Dch for Back-up to Primary Dch
- 10 = Place Primary Dch to ACT status
- 11 = Place Dch for Back-up to ACT status

b2, b3: Way of changing
- 00 = Changed by the MAT
- 01 = Changed by the MB switch of the card
- 02 = Changed by placing Dch to Make-Busy
- 03 = Unknown

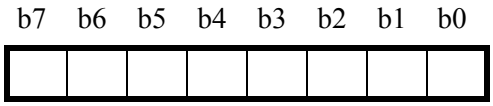
[5] Status of Primary/Back-up Dch



b0-b2: Status of Primary Dch
- 0 = In Service
- 1 = Standby
- 2 = Out of Service
- 3 = Make Busy
- 4 = Changing status from STBY to In Service
- 5 = Manual Out of Service

b3-b5: Status of Back-up Dch
- 0 = In Service
- 1 = Standby
- 2 = Out of Service
- 3 = Make Busy
- 4 = Changing status from STBY to In Service
- 5 = Manual Out of Service

[6] EVENT number



b0-b7: EVENT number

23-Y:MUX Clock Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

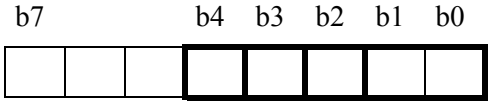
This message is displayed when the MUX card has a clock failure in one of the dual systems.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

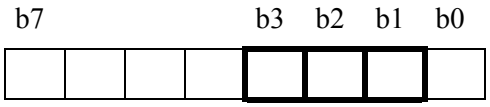

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Unit, MG, system number for MUX card with a clock failure



b0-b1: Unit number where a clock failure occurred
b2: MG number where a clock failure occurred
b3: 0/1 = Clock failure in MUX System 0/
Clock failure in MUX System 1
b4: 0/1 = Faulty MUX is in ACT/
Faulty MUX is in STBY

[2] Scan Data



Scan Data:Clock alarm information on the faulty MUX card
b1: 0/1 = -/FH failure for 2M PCM Highway
b2: 0/1 = -/CLK failure for 2M PCM Highway
b3: 0/1 = -/4M CLK failure for PM

Reference: See Chapter 5 Section 5.4.5, Unit Fault - ACT-Side MUX Card is Faulty and System Has Changed Over for the repair procedure.

23-Z:Both MUX Clock Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

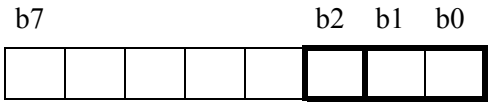
This message is displayed when the MUX card has a clock failure in both of the dual systems.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

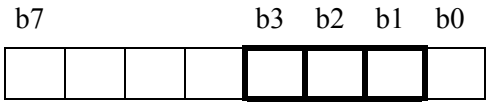
7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] MUX card location



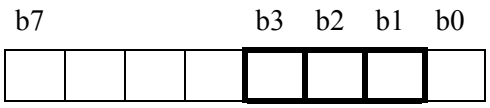
b0-b1: Unit number
b2: MG number

[2] Scan Data 1



Scan Data 1:Details on clock alarm information (ACT mode)
b1: 0/1 = -/FH failure for 2M PCM Highway
b2: 0/1 = -/CLK failure for 2M PCM Highway
b3: 0/1 = -/4M CLK failure for PM

[3] Scan Data 2



Scan Data 2:Details on clock alarm information (STBY mode)
b1: 0/1 = -/FH failure for 2M PCM Highway
b2: 0/1 = -/CLK failure for 2M PCM Highway
b3: 0/1 = -/4M CLK failure for PM

Reference: See Chapter 5 Section 2.1.4, Replacement Procedure for MUX (Multiplexer) Card (7U-PIR) or Section 2.2.4, Replacement Procedure for MUX (Multiplexer) Card (8U-PIR) for the card replacement procedure.

26-M:Toll Fraud Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

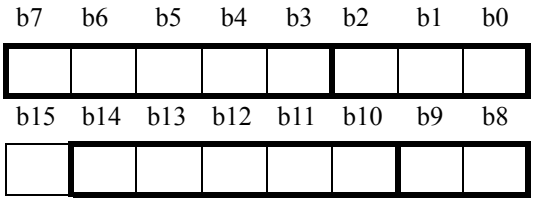
When a wrong code is received from a station/trunk, detailed information on the unauthorized user is issued by this message.

```
1:XXXX 0X0X 0XXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]   [2] [3]  [4]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:0000 0000 0000 0000

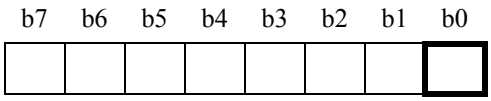
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] LENS of fraud call



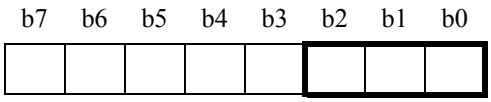
b0-b2: Level No. (0-7)
b3-b7: Group No. (0-31)
b8-b9: Unit No. (0-3)
b10-b14: MG No. (0-31)

[2] Detected cause



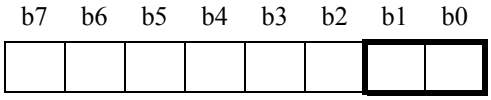
b0: 0 = Unassigned number
1 = Number of digits shortage (Time Out)

[3] Information for an unauthorized user



b0-b2: Information for an unauthorized user
[00H] Internal station
[01H] Internal trunk
[02H] Not used
[03H] Station in CCIS network
[04H] Trunk in CCIS network
[05H] ATT in CCIS network
[06H] ISDN

[4] Detection for a fraud call



b0-b1: 0 = Detection of entering an authorization code before the number to be called.
1 = Detection of entering an authorization code after the number dialed.
2 = Detection by Remote Access To PBX
3 = Not used

[00H] Internal station

```
1:XXXX 0X00 0X00 0000  2:XX0X XXXX XXXX 0000  3:XXXX XXXX XX00 0000
  [1]   [2] [3] [4]      [5] [6]    [7]          [8]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] LENS of fraud call

See [1] LENS of fraud call.

[2] Detected cause

See [2] Detected cause.

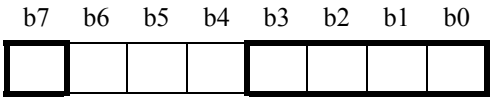
[3] Information for an unauthorized user

[00H] = Internal station

[4] Detection for a fraud call

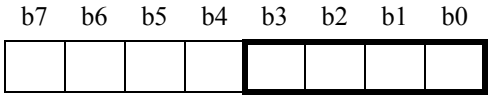
See [4] Detection for a fraud call.

[5] Tenant number of calling station



b0-b3: Tenant number of calling station
b7: OP data (0/1)
0: Tenant number is not greater than 15.
1: Tenant number is greater than 15.
When OPTN data of [6] OPTN data is valid, “1” is displayed.

[6] OPTN data



b0-b3: OPTN data **Note 1**

Note 1: This data is displayed when the Tenant number of the calling station is larger than 15, and Bit 7 of [5] Tenant number of calling station is displayed as "1" (otherwise, "0" is displayed at any time). While the four-bit data of [5] Tenant number of calling station is self-sufficient in verifying Tenant 1-15, this OPTN data provides a supportive role to cover Tenant number ranging from 16 to 255. Use the following method to analyze the data:

Tenant number of Calling Station (1-15) = | 0 | 0 | 0 | 0 | Tenant No. |

OPTN data (0: fixed) — b0 - b3 of [5] Tenant number of calling station

Tenant number of Calling Station (16-255) = | OPTN data | Tenant No. |

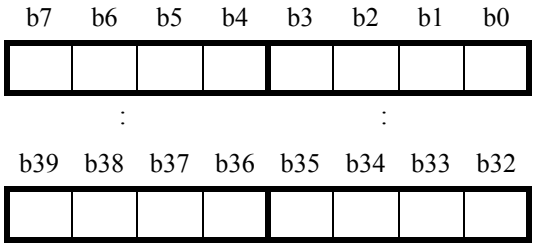
OPTN data (variable) — b0 - b3 of [5] Tenant number of calling station

[7] Calling station number (see table)



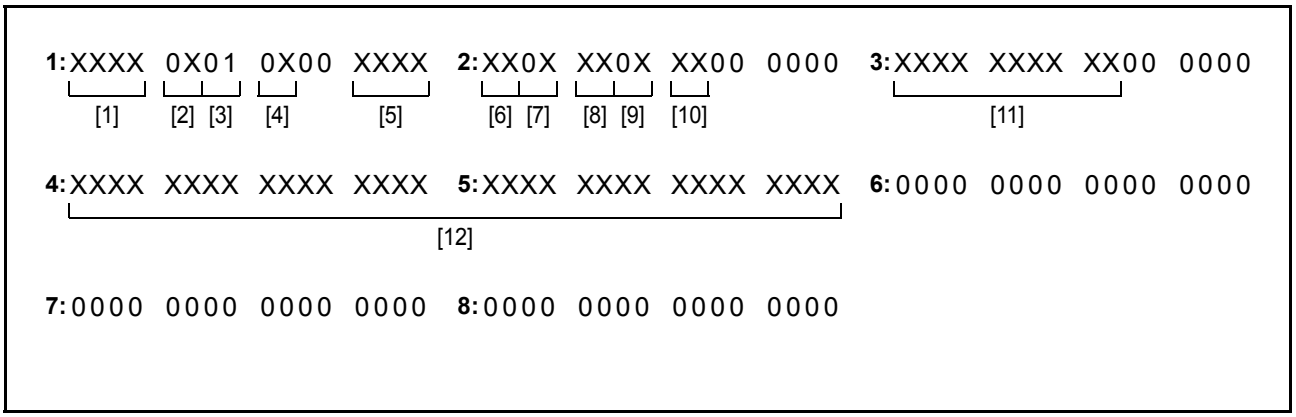
Higher 4 Bits (b4-b7 ~ b28-b31)	Lower 4 Bits (b0-b3 ~ b24-b27)
DC1	DC0
DC3	DC2
DC5	DC4
DC7	DC6

[8] Fraud ID number (see table)



Higher 4 Bits (b4-b7 ~ b36-b39)	Lower 4 Bits (b0-b3 ~ b32-b35)
id1	id0
id3	id2
id5	id4
id7	id6
id9	id8

[01H] Internal trunk



[1] LENS of fraud call

See [1] LENS of fraud call.

[2] Detected cause

See [2] Detected cause.

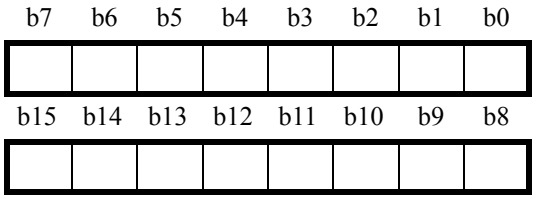
[3] Information for an unauthorized user

[01H] = Internal trunk

[4] Detection for a fraud call

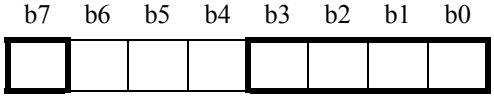
See [4] Detection for a fraud call.

[5] Point code



b0-b15: Point code

[6] Tenant number of incoming trunk



b0-b3: Tenant number of incoming trunk
b7: OP data (0/1)
0: Tenant number is not greater than 15.
1: Tenant number is greater than 15.
When OPTN data of [7] OPTN data is valid, “1” is displayed.

[7] OPTN data

b7	b6	b5	b4	b3	b2	b1	b0

b0-b3: OPTN data **Note 2**

Note 2: This data is displayed when the Tenant number of incoming trunk is larger than 15, and Bit 7 of [6] Tenant number of incoming trunk is displayed as "1" (otherwise, "0" is displayed at any time). While the four-bit data of [6] Tenant number of incoming trunk is self-sufficient in verifying Tenant 1-15, this OPTN data provides a supportive role to cover Tenant number ranging from 16 to 255. Use the following method to analyze the data:

Tenant number of incoming trunk (1-15) = | 0 | 0 | 0 | 0 | Tenant No. |

OPTN data (0: fixed) — b0 - b3 of [6] Tenant number of incoming trunk

Tenant number of incoming trunk (16-255) = | OPTN data | Tenant No. |

OPTN data (variable) — b0 - b3 of [6] Tenant number of incoming trunk

[8] Incoming route number

b7	b6	b5	b4	b3	b2	b1	b0

b0-b5: Incoming route number
b6: OP data (0/1)
0: Route number is not greater than 63.
1: Route number is greater than 63.
When OPRT data of [9] OPRT data is valid, "1" is displayed.
b7: AC data
0/1=Internal trunk/External trunk

[9] OPRT data

b7	b6	b5	b4	b3	b2	b1	b0

b0-b3: OPRT data **Note 3**

Note 3: This data is displayed when the incoming route number is larger than 63, and b6 of [8] Incoming route number is displayed as "1" (otherwise, "0" is displayed at any time). While the six-bit data of [8] Incoming route number is self-sufficient in verifying the route 1-63, this OPRT data provides a supportive role to cover route number larger than 63. Use the following method to analyze the data:

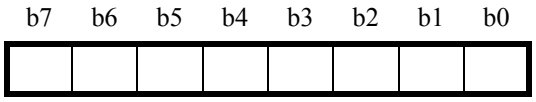
Incoming Route (1-63) = | 0 | 0 | 0 | 0 | Incoming Route No. |

OPRT data (0:fixed) — b0 - b5 of [8] Incoming route number

Incoming Route (64 or larger) = | OPRT data | Incoming Route No. |

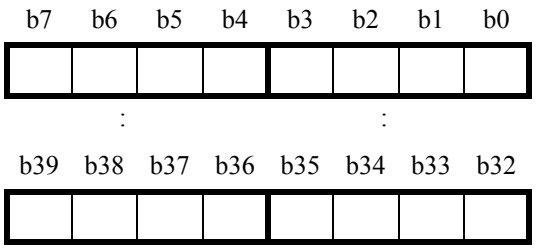
OPRT data (variable) — b0 - b5 of [8] Incoming route number

[10] Trunk number of incoming trunk



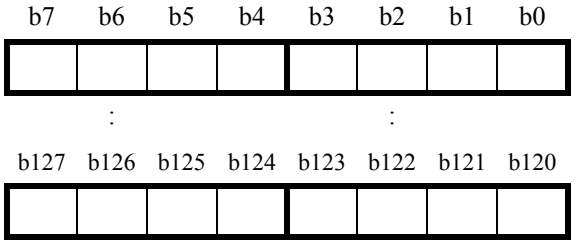
b0-b7: Trunk number of incoming trunk

[11] Fraud ID number (see table)



Higher 4 Bits (b4-b7 ~ b36-b39)	Lower 4 Bits (b0-b3 ~ b32-b35)
id1	id0
id3	id2
id5	id4
id7	id6
id9	id8

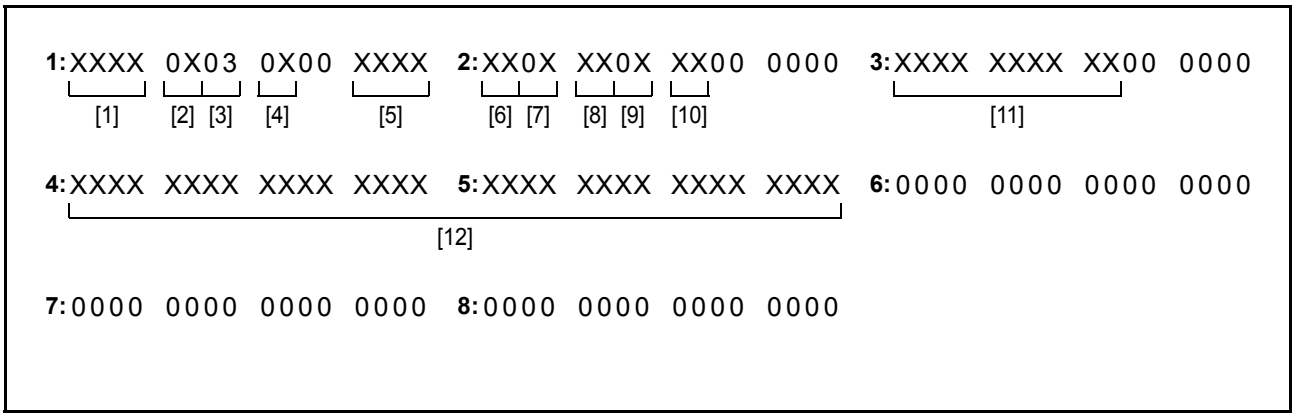
[12] Detailed information



Calling number (Maximum 32 digits)

Higher 4 Bits (b4-b7 ~ b124-b127)	Lower 4 Bits (b0-b3 ~ b120-b123)
dc1	dc0
dc3	dc2
:	:
dc29	dc28
dc31	dc30

[03H] Station in CCIS network



[1] LENS of fraud call

See [1] LENS of fraud call.

[2] Detected cause

See [2] Detected cause.

[3] Information for an unauthorized user [03H] = Station in CCIS network

[4] Detection for a fraud call

See [4] Detection for a fraud call.

[5] Point code

See [5] Point code in [01H] Internal trunk.

[6] Tenant number of calling station

See [6] Tenant number of incoming trunk in [01H] Internal trunk.

[7] OPTN data

See [7] OPTN data in [01H] Internal trunk.

[8] Incoming route number

See [8] Incoming route number in [01H] Internal trunk.

[9] OPRT data

See [9] OPRT data in [01H] Internal trunk.

[10] Trunk number of incoming trunk

See [10] Trunk number of incoming trunk in [01H] Internal trunk.

[11] Fraud ID number

See [11] Fraud ID number (see table) in [01H] Internal trunk.

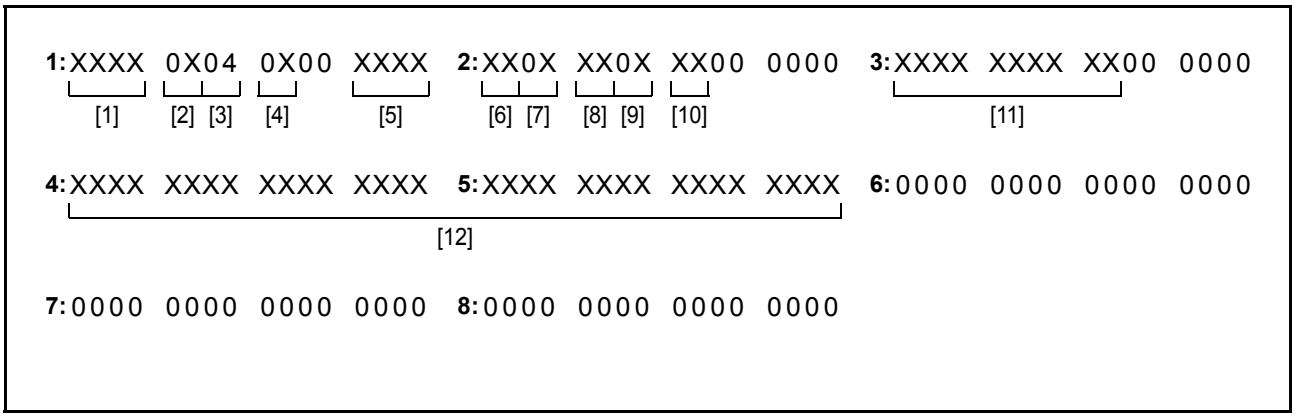
[12] Detailed information



Station number

Higher 4 Bits (b4-b7 ~ b124-b127)	Lower 4 Bits (b0-b3 ~ b120-b123)
dc1	dc0
dc3	dc2
:	:
dc29	dc28
dc31	dc30

[04H] Trunk in CCIS network



[1] LENS of fraud call

See [1] LENS of fraud call.

[2] Detected cause

See [2] Detected cause.

[3] Information for an unauthorized user [04H] = Trunk in CCIS network

[4] Detection for a fraud call

See [4] Detection for a fraud call.

[5] Point code

See [5] Point code in [01H] Internal trunk.

[6] Tenant number of calling station

See [6] Tenant number of incoming trunk in [01H] Internal trunk.

[7] OPTN data

See [7] OPTN data in [01H] Internal trunk.

[8] Incoming route number

See [8] Incoming route number in [01H] Internal trunk.

[9] OPRT data

See [9] OPRT data in [01H] Internal trunk.

[10] Trunk number of incoming trunk

See [10] Trunk number of incoming trunk in [01H] Internal trunk.

[11] Fraud ID number

See [11] Fraud ID number (see table) in [01H] Internal trunk.

[12] Detailed information



This number depends on the kind of trunk which receives a call before tandem connection.

Higher 4 Bits (b4-b7 ~ b124-b127)	Lower 4 Bits (b0-b3 ~ b120-b123)
dc1	dc0
dc3	dc2
:	:
dc29	dc28
dc31	dc30

Note: Up to eight digits of a caller ID is displayed in the following condition.
Example: An incoming call from ISDN or trunks which enable Caller ID notification is received via CCIS network.

[05H] ATT in CCIS network

```
1:XXXX 0X05 0X00 XXXX  2:XX0X XX0X XX00 0000  3:XXXX XXXX XX00 0000
  [1]   [2] [3]  [4]     [5]   [6] [7]  [8] [9]  [10]          [11]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] LENS of fraud call

See [1] LENS of fraud call.

[2] Detected cause

See [2] Detected cause.

[3] Information for an unauthorized user [05H] = ATT in CCIS network

[4] Detection for a fraud call

See [4] Detection for a fraud call.

[5] Point code

See [5] Point code in [01H] Internal trunk.

[6] Tenant number of calling station

See [6] Tenant number of incoming trunk in [01H] Internal trunk.

[7] OPTN data

See [7] OPTN data in [01H] Internal trunk.

[8] Incoming route number

See [8] Incoming route number in [01H] Internal trunk.

[9] OPRT data

See [9] OPRT data in [01H] Internal trunk.

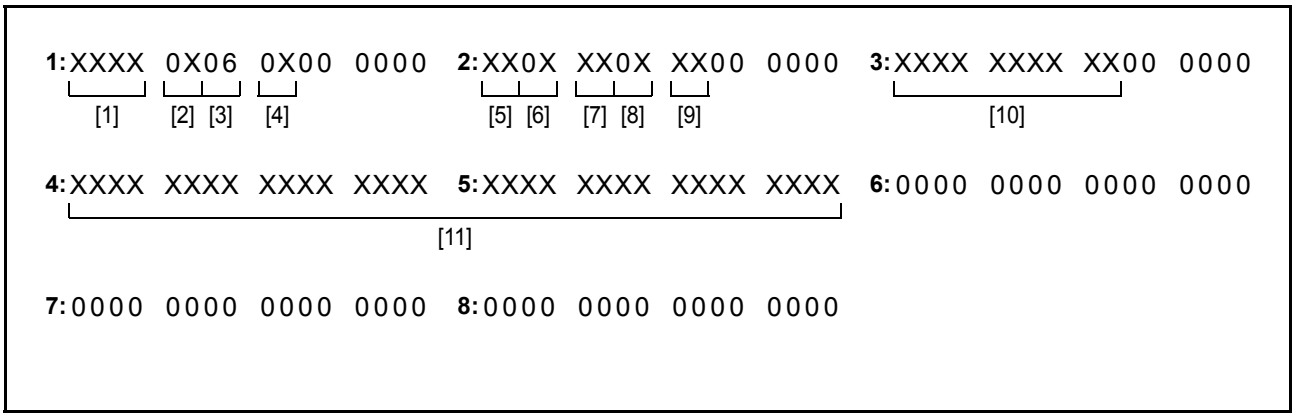
[10] Trunk number of incoming trunk

See [10] Trunk number of incoming trunk in [01H] Internal trunk.

[11] Fraud ID number

See [11] Fraud ID number (see table) in [01H] Internal trunk.

[06H] ISDN



[1] LENS of fraud call

See [1] LENS of fraud call.

[2] Detected cause

See [2] Detected cause.

[3] Information for an unauthorized user [06H] = ISDN

[4] Detection for a fraud call

See [4] Detection for a fraud call.

[5] Tenant number of calling station

See [6] Tenant number of incoming trunk in [01H] Internal trunk.

[6] OPTN data

See [7] OPTN data in [01H] Internal trunk.

[7] Incoming route number

See [8] Incoming route number in [01H] Internal trunk.

[8] OPRT data

See [9] OPRT data in [01H] Internal trunk.

[9] Trunk number of incoming trunk

See [10] Trunk number of incoming trunk in [01H] Internal trunk.

[10] Fraud ID number

See [11] Fraud ID number (see table) in [01H] Internal trunk.

[11] Detailed information



Calling number (Maximum 24 digits)

Higher 4 Bits (b4-b7 ~ b124-b127)	Lower 4 Bits (b0-b3 ~ b120-b123)
dc1	dc0
dc3	dc2
:	:
dc29	dc28
dc31	dc30

26-N:MAT Log

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

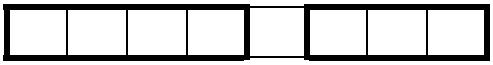
This message is displayed when the PCPro is log-in or log-out.

```
1:XX00 XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
 [1]        [2]                 [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Port number of the PCPro logged in/out



b0-b2: I/O Port number
000 = Port 0 001 = Port 1
010 = Port 2 011 = Port 3
100 = Port 4 101 = Port 5
110 = Port 6 111 = Port 7
b4-b7: 0000 = Login
0001 = Logout
0010 = Command is startup
0011 = Command END

[2] Command Name

b0-b7: Command name

[3] User Name

b0-b7: User name entered by the MAT

26-R:Call Trace

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	2		

This message is issued when a call, originated via a station/trunk, is judged as malicious, and then, the details on the call are traced with the called party pressing an access code or the Call Trace key.

When a call is originated from a station

```
1:XXXX XXXX XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:XXXX XXXX XXXX XXXX
  [1]  [2]  [3]  [4]  [5]  [6]  [7]  [8]  [9]

4:XXXX XXXX XXXX XXXX 5:XXXX XX00 0000 0000 6:0000 0000 0000 0000
    [10]      [11]

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

- Information on Called Party (Informer)

[1] Fusion Point Code (FPC) (HEX) **Note 1**

b7 b6 b5 b4 b3 b2 b1 b0

	b4 - b7	b0 - b3
[1]	DC0	DC1
	DC2	DC3

[2] Tenant number (HEX) **Note 1**

b7 b6 b5 b4 b3 b2 b1 b0

	b4 - b7	b0 - b3
[2]	DC0	DC1
	DC2	DC3

[3] Physical station number (HEX) **Note 1**

b7 b6 b5 b4 b3 b2 b1 b0

	b4 - b7	b0 - b3
[3]	DC0	DC1
	DC2	DC3
	DC4	DC5

[4] User Group Number (UGN) (HEX) **Note 1**

b7 b6 b5 b4 b3 b2 b1 b0

	b4 - b7	b0 - b3
[4]	DC0	DC1
	DC2	DC3

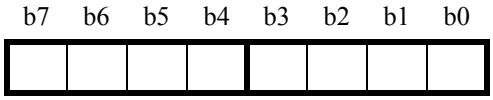
[5] Telephone number (HEX) **Note 1**

b7 b6 b5 b4 b3 b2 b1 b0

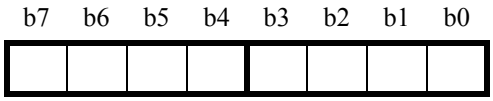
	b4 - b7	b0 - b3	b4 - b7	b0 - b3
[5]	DC0	DC1	DC8	DC9
	DC2	DC3	DC10	DC11
	DC4	DC5	DC12	DC13
	DC6	DC7	DC14	DC15

• Information on Malicious call

[6] Kind of Call (HEX)10H=Call from a station

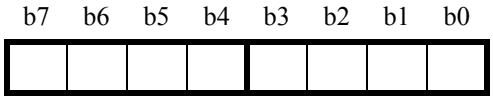


[7] Fusion Point Code (FPC) (HEX) **Note 1**, **Note 3**



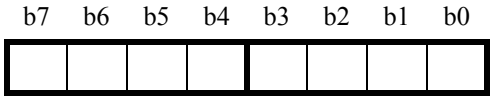
	b4 - b7	b0 - b3
[7]	DC0	DC1
	DC2	DC3

[8] Tenant number (HEX) **Note 1**, **Note 3**



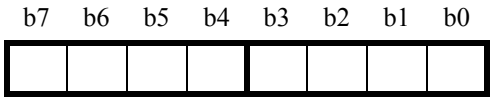
	b4 - b7	b0 - b3
[8]	DC0	DC1
	DC2	DC3

[9] Physical station number (HEX) **Note 1**



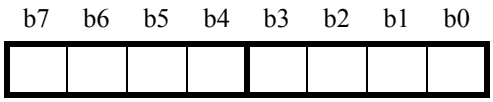
	b4 - b7	b0 - b3
[9]	DC0	DC1
	DC2	DC3
	DC4	DC5

[10]User Group Number (UGN) (HEX) **Note 2**, **Note 3**



	b4 - b7	b0 - b3
[10]	DC0	DC1
	DC2	DC3

[11]Telephone number (HEX) **Note 1**, **Note 3**



	b4 - b7	b0 - b3	b4 - b7	b0 - b3
[11]	DC0	DC1	DC8	DC9
	DC2	DC3	DC10	DC11
	DC4	DC5	DC12	DC13
	DC6	DC7	DC14	DC15

Note 1: Each number/code is output in hexadecimal. Detailed meanings are as follows:

Output Data (HEX)		Actual Meaning
1~9	→	1~9
A	→	0
B	→	*
C	→	#
0	→	blank

For example:
"1A0" is output for indicating the FPC "10", and "1A3" for the FPC "103".
"1A" is output for indicating the Tenant Number "10".

Note 2: This message is output only when the caller's User Group Number is "1".

Note 3: When no Telephone Number is allocated to the connected party's number in Station-to-Station calls, FPC, User Group Number, Tenant Number, and Telephone Number data here is output as "0".

When a call is originated from a trunk

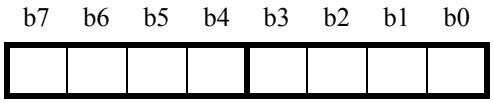
```
1:XXXX XXXX XXXX XXXX 2:XXXX XXXX XXXX XX00 3:XXXX 0000 0000 0000
  [1]  [2]  [3]  [4]            [5]           [6]

4:XXXX XXXX XXXX XXXX 5:XXXX 0000 0000 0000 6:0000 0000 0000 0000
            [7]

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

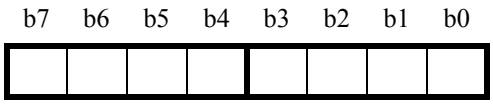
- Information on Called Party (Informer)

[1] Fusion Point Code (FPC) (HEX) **Note 4**



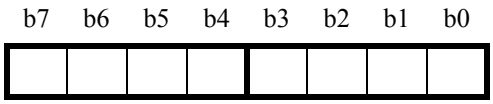
	b4 - b7	b0 - b3
[1]	DC0	DC1
	DC2	DC3

[2] Tenant number (HEX) **Note 4**



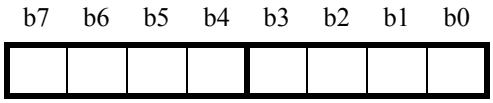
	b4 - b7	b0 - b3
[2]	DC0	DC1
	DC2	DC3

[3] Physical station number (HEX) **Note 4**



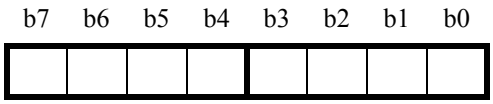
	b4 - b7	b0 - b3
[3]	DC0	DC1
	DC2	DC3
	DC4	DC5

[4] User Group Number (UGN) (HEX) **Note 4**



	b4 - b7	b0 - b3
[4]	DC0	DC1
	DC2	DC3

[5] Telephone number (HEX) **Note 4**



	b4 - b7	b0 - b3
[5]	DC0	DC1
	DC2	DC3
	DC4	DC5
	DC6	DC7
	DC8	DC9
	DC10	DC11
	DC12	DC13
	DC14	DC15

• Information on Malicious Call

[6] Kind of Call (HEX)20H=Call from a trunk

b7	b6	b5	b4	b3	b2	b1	b0

[7] Calling number of Trunk Call (Caller ID) (HEX) **Note 4**, **Note 5**

b7	b6	b5	b4	b3	b2	b1	b0

	b4 - b7	b0 - b3
[7]	DC0	DC1
	DC2	DC3
	DC4	DC5
	DC6	DC7
	DC8	DC9
	DC10	DC11
	DC12	DC13
	DC14	DC15
	DC16	DC17
	DC18	DC19
	DC20	DC21
	DC22	DC23
	DC24	DC25
	DC26	DC27
	DC28	DC29
	DC30	DC31

Note 4: Each number/code is output in hexadecimal.
Detailed meanings are as follows:

Output Data (HEX)		Actual Meaning
1~9	→	1~9
A	→	0
B	→	*
C	→	#
0	→	blank

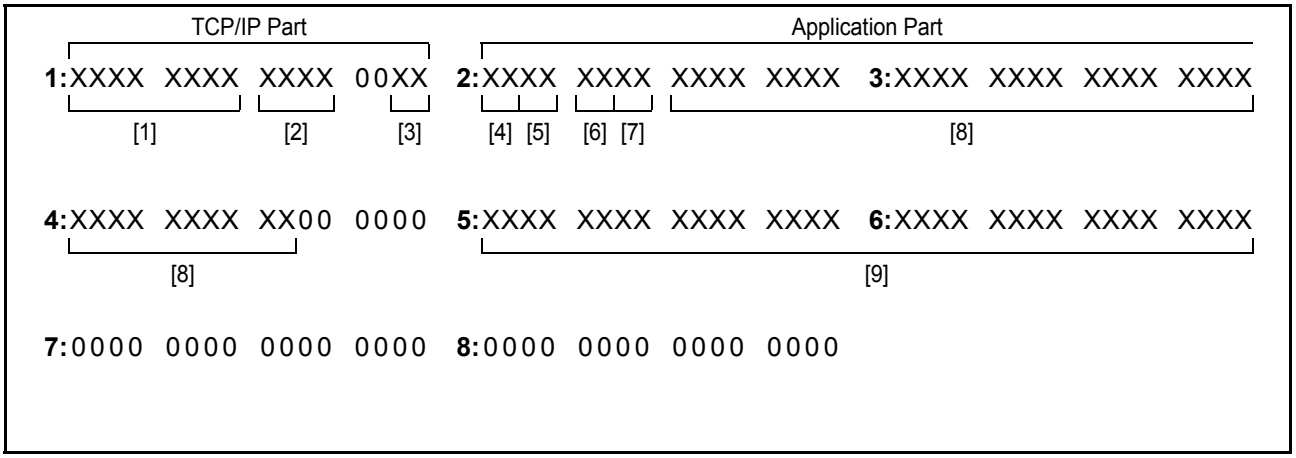
For example:
"1A0" is output for indicating the FPC "10",
and "1A3" for the FPC "103".
"1A" is output for indicating the Tenant Number "10".

Note 5: If the number of the trunk call (Caller-ID) cannot be identified, the data here is output as "0".

26-V:LAN Interface Error Report

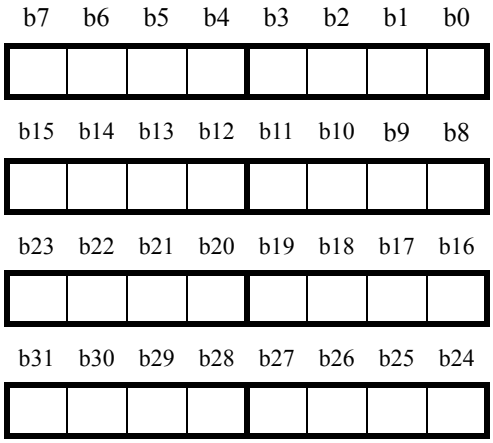
Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is issued when the connection error related to external LAN Interface equipment occurs in the system.

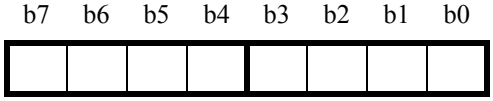


[1] IPv4 Address for external equipment in which error has been detected. (HEX)

b0-b31: IPv4 Address (HEX)



[2] Socket number (Used Socket number) (HEX) -Socket Number used by application, in which error has been detected.



[3] Error Code (TCP/IP Error Code) (HEX) See the following table.

b7 b6 b5 b4 b3 b2 b1 b0



Error Code

OUTPUT DATA (HEX (DEC))	DEFINITION
01 (01)	Not operational
16 (22)	User parameter error
25 (37)	Operation already in progress
31 (49)	Cannot assign requested address
32 (50)	Network is down
37 (55)	Buffer space error
41 (65)	No route for requested host

[4] Application Type

b7 b6 b5 b4 b3 b2 b1 b0



b0-b7: (HEX)
01=SUPER SERVER
02=MAT
03=SMDR
04=MCI
05=OAI
06=PMS
07=MIS
08=NMS
09=CS Report

** NMS: Network Management System*

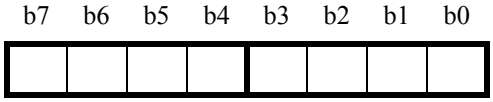
[5] LAN Interface Application Type

LAN Interface Application Type			
When [4]=03 (SMDR) or 04 (MCI)	When [4]=05 (OAI) or 07(MIS)	When [4]=06 (PMS)	When [4]=02 (MAT) or 08 (NMS)
Device Number (HEX) of error detected external LAN device **Note 1**	Error-detected OAI Logical Port Number (HEX) b0-b7: OAI Logical Port Number (HEX)	Device Number (HEX)	Device Number (HEX) of error detected external LAN device **Note 2**

Note 1: When the device number is not defined, “FF” will be displayed.

Note 2: When the device number is not defined, “00” will be displayed.

[6] Kind of Error



LAN Interface Application Type			
When [4]=03 (SMDR) or 04 (MCI)	When [4]=05 (OAI) or 07(MIS)	When [4]=06 (PMS)	When [4]=02 (MAT) or 08 (NMS)
b0-b7: (HEX) 01 =SEND Execution error 02 =RECEIVE Execution error 03, 0D =Exceeds SEND Executions Limit 04 = Exceeds RECEIVE Execution Limit 05 =System data is not assigned 06 =Time Over 07 =Parity error 08 =Connection error 09 =Connection Port Capacity Over 0A =Detection of B-Level Infinite Loop 0B =Disconnection by Remote Control **Note 3** 0C =Same Device No. is used 0F, 10=TCP/IP Internal Process error	b0-b7: (HEX) 01 =SEND Execution error 02 =RECEIVE Execution error 03 =TCP/IP Connection error 04 = Connection error due to TCP/IP part abnormal (such as B-Level Infinite Loop) 05 =Impossible to Connection Establishment (Exceeds Usage Limit) 05 =Impossible to Connection Establishment (Service is disabled)	b0-b7: (HEX) 01 =SEND Execution error 02 =RECEIVE Execution error 05 =System Data is not assigned	b0-b7: (HEX) 01 =SEND Execution error 02 =RECEIVE Execution error 06 =Time Over 07 =Parity error 08 =Connection error 09 =Connection Over 0A =B-Level Infinite Loop 0B =Disconnection by Remote Control 0F, 10=TCP/IP Internal Process error

Note 3: When [4]=03 (SMDR), “0B” is not output. 0B is an error notification that is output when receiving a message requesting disconnection of an interface without receiving the disconnection message due to LAN cable disconnection, etc.

[7] Details on Detected Error

When [4]=03 (SMDR) or 04 (MCI)

b7 b6 b5 b4 b3 b2 b1 b0

<When [6]=01 or 02>
b0-b7: Cause of Error (output by 1 byte)
<When [6]=05>
b0-b7:
01=LAN Output Service is not set
02=Device Number is not set
<When [6]=07>
b0-b7:
00=Notification of no parity setting
01=Notification of even-numbered parity setting
02=Notification of odd-numbered parity setting
<When [6]=08>
b0-b7: Cause of Error (output by 1 byte)

When [4]=02 (MAT) or 08 (NMS)

b7 b6 b5 b4 b3 b2 b1 b0

<When [6]=01 or 02>
b0-b7: 01 (HEX)
<When [6]=06>
b0-b7: 01 (HEX)
<When [6]=08>
b0-b7: 01 (HEX)
<When [6]=09 or 0A>
b0-b7: 00 (HEX)
<When [6]=0B>
b0-b7: 00 (HEX)

[8] Data Analyzed by NEC Engineer

When [6]=01/02/06/08/0A/0B, MAT input information is displayed (17 bytes).

[9] The IPv6 Address of an external LAN interface where an error is detected (HEX)

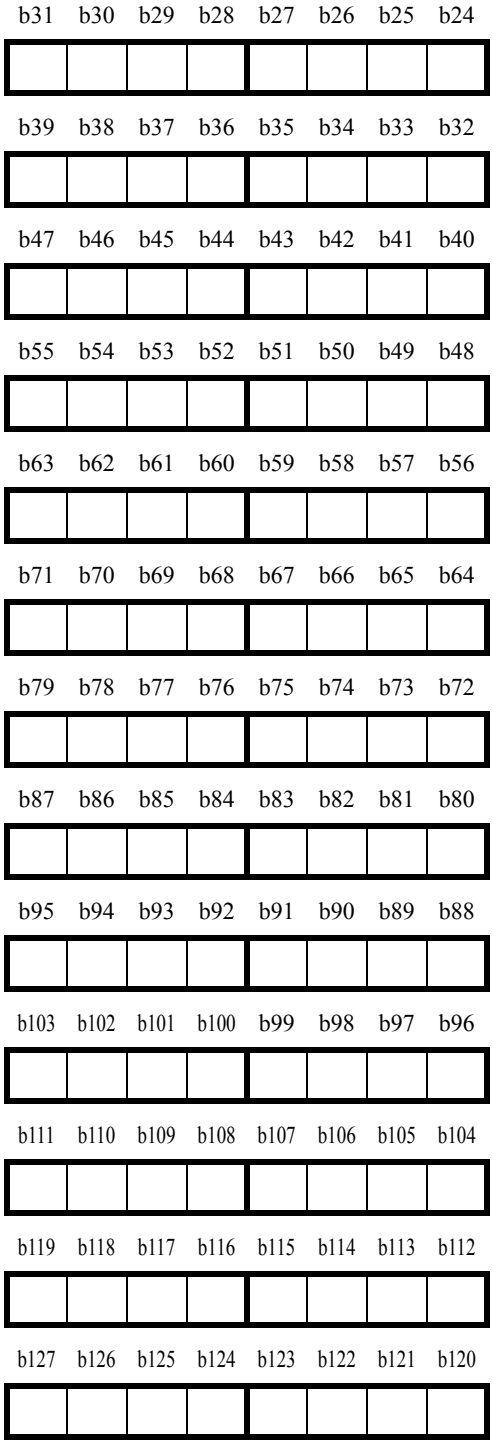
b0-b127: IPv6 Address (HEX)

Note: This is only displayed when Application Type is 02 (MAT).

b7 b6 b5 b4 b3 b2 b1 b0

b15 b14 b13 b12 b11 b10 b9 b8

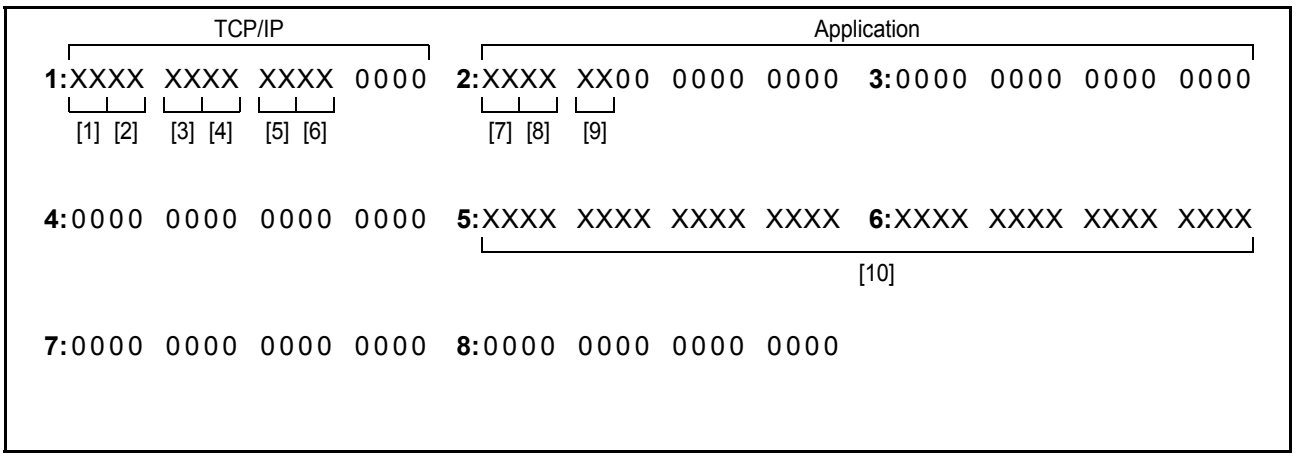
b23 b22 b21 b20 b19 b18 b17 b16


b31 b30 b29 b28 b27 b26 b25 b24
b39 b38 b37 b36 b35 b34 b33 b32
b47 b46 b45 b44 b43 b42 b41 b40
b55 b54 b53 b52 b51 b50 b49 b48
b63 b62 b61 b60 b59 b58 b57 b56
b71 b70 b69 b68 b67 b66 b65 b64
b79 b78 b77 b76 b75 b74 b73 b72
b87 b86 b85 b84 b83 b82 b81 b80
b95 b94 b93 b92 b91 b90 b89 b88
b103 b102 b101 b100 b99 b98 b97 b96
b111 b110 b109 b108 b107 b106 b105 b104
b119 b118 b117 b116 b115 b114 b113 b112
b127 b126 b125 b124 b123 b122 b121 b120

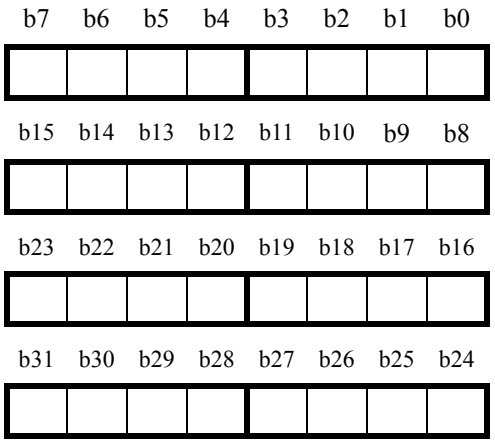
26-W:LAN Interface Release Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the LAN Interface Connection Failure, detected in System Message [26-V], recovers. The message is displayed when the LAN Interface Connection Failure is restored. The first data is normally sent/received by the recovered application equipment.

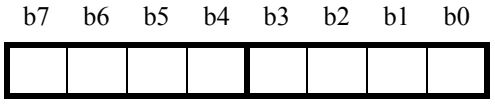


[1]-[4] IPv4 Address for external equipment in which error has been detected. (HEX)



b0-b31: IPv4 Address (HEX)

[5], [6]Socket number (Used Socket number) (HEX) - Socket Number used by application whose failure has been received.



[7] Application Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: (HEX)
01=SUPER SERVER
02=MAT
03=SMDR
04=MCI
05=OAI
06=PMS
07=MIS
08=NMS
09=CS Report

When [7] = 03 (SMDR) / 04 (MCI)

[8] Device number of recovered Client PC

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: (HEX)
Device number of recovered Client PC for external LAN Interface.

[9] Recovery Information

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: (HEX)
01=Recovered
02-FF=Not defined

When [7] = 06 (PMS)

[8] Device number of recovered Client PC

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: (HEX)
Device number of recovered Client PC.

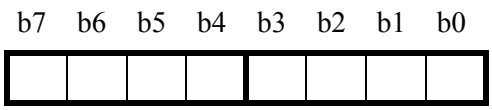
When [7] = 09 (CS REPORT)

[8] Device number of recovered Client PC

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: (HEX)
Device Number of recovered Client PC for external LAN interface.

[9] Recovery Information



b0-b7: (HEX)
01=Recovered
02-0F=Not defined
10=Process Stop is recovered
11=Process Activation Error is recovered
12=DB related error when receiving call data recovery
13=DB related error when compiling recovery reports
14=DB related error when editing recovery reports
15=DB Capacity Alarm is recovered
16=Restore Error of HD is recovered

31-A:Line/Trunk PKG Warning

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	1		

This message displays the alarm information of a card when the rewrite cycles is approaching the guaranteed maximum limit, a memory saving error and so on. In case of the rewrite cycles is approaching the guaranteed maximum limit, a replacement of the card is required soon.

```
1:XX00 0000 0000 0000  2:XX00 0000 0000 0000  3:0000 0000 0000 0000
  [1]                    [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Mounting Location Alarm detected

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Alarm Information

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Details on alarm information
E0H = Rewrite cycles of Program Area became 20 times to the limit
E1H = Rewrite cycles of Data Area became 20 times to the limit
E2H = Rewrite cycles of Universal Area 1 became 20 times to the limit
E3H = Rewrite cycles of Universal Area 2 became 20 times to the limit
F0H = Preservation of switch data went wrong
F1H = Switch data is not still saved

31-B:Line/Trunk PKG Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	2		

This message displays the alarm information of a card when the rewrite cycles exceeds the guaranteed maximum limit, a device control error and so on. Replace the card with a new one immediately.

```
1:XX00 0000 0000 0000  2:XX00 0000 0000 0000  3:0000 0000 0000 0000
  [1]                    [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Mounting Location Fault detected

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Details on fault information
00H-DFH = PKG-specific failure
E0H = Rewrite cycles of Program Area exceeded limit
E1H = Rewrite cycles of Data Area exceeded limit
E2H = Rewrite cycles of Universal Area 1 exceeded limit
E3H = Rewrite cycles of Universal Area 2 exceeded limit

33-A:MUX Clock Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

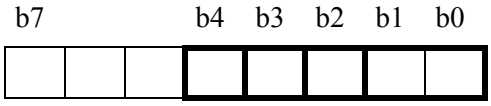
This message is displayed when the MUX card, whose clock function was detected as faulty, is recovered.

```
1:XXXX 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

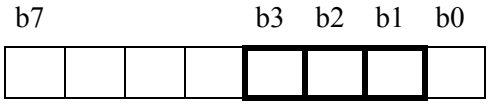

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Unit, MG number for MUX card, which recovered from a clock failure



b0-b1: Unit number for the recovered MUX card
b2: MG number for the recovered MUX card
b3: 0/1 = Fault recovery in the MUX System 0/ Fault recovery in MUX System 1
b4: 0/1 = Faulty MUX is in ACT/ Faulty MUX is in STBY

[2] RLS Data



RLS Data:Clock alarm information on the recovered MUX card
b1: 0/1 = -/FH failure for 2M PCM Highway
b2: 0/1 = -/CLK failure for 2M PCM Highway
b3: 0/1 = -/4M CLK failure for PM

33-F:PKG Download Failure Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

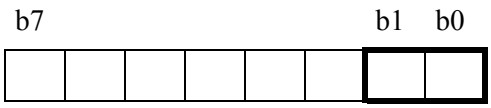
This message is shown when failure in downloading from the system to the card, or from the card to the terminal, is detected.

```
1:XXXX XXXX 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]  [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

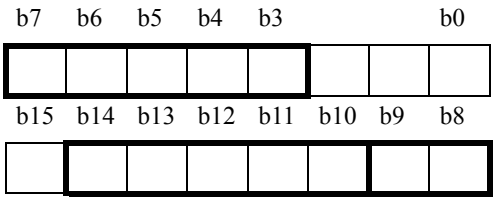
[1] Kind of Fault



b0: 01H = ELCN-PKG Menu download failure for DT300
b1: 02H = Menu download failure between ELCN-PKG and terminal
b2-b7: Not used

[2] Mounting Location Fault detected

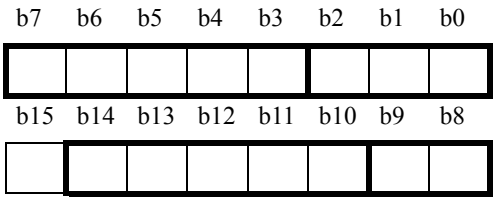
When [1] is 01H (ELCN-PKG Menu download failure for DT300)



b0-b15: Mounting location of ELC card which detected fault

b0-b2: Not used
b3-b7: Group No.
b8-b9: Unit No.
b10-b14: MG No.
b15: Not used

When [1] is 02H (Menu download failure between ELCN-PKG and terminal)

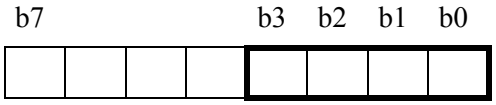


b0-b15: Mounting location of terminal which detected fault

b0-b2: Level No.
b3-b7: Group No.
b8-b9: Unit No.
b10-b14: MG No.
b15: Not used

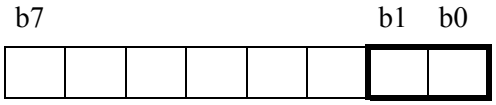
[3] Details of Fault

When [1] is 01H (ELCN-PKG Menu download failure for DT300)



b0: Download failure of Menu for First language
b1: Download failure of Menu for Second language
b2: Download failure of Shortcut Menu for First language
b3: Download failure of Shortcut Menu for Second language
b4-b7: Not used

When [1] is 02H (Menu download failure between ELCN-PKG and terminal)



b0: Download failure of Menu
b1: Download failure of Shortcut Menu
b2-b7: Not used

33-G:MUX PKG PCM Parity Error Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

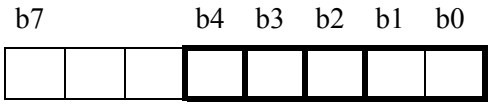
This message is displayed when PCM parity error occurs on MUX card.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] MUX in which a fault occurs



b0-b1: Unit Number
b2: MG Number
b3: MUX System
0/1= System 0/System 1
b4: MUX Status
0/1= ACT/STBY

33-H:MUX PKG PCM Parity Error Recovery Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

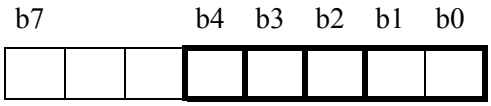
This message is displayed when PCM parity error on MUX card has been recovered.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] MUX in which a fault occurs



b0-b1: Unit Number
b2: MG Number
b3: MUX System
0/1= System 0/System 1
b4: MUX Status
0/1= ACT/STBY

33-L:OPTMUX Line Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN			

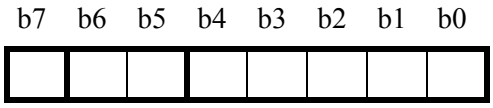
This message is issued when abnormality is detected to cables connecting OPTMUX and ROPTMUX.

```
1:XXXX 0000 0000 0000  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] OPTMUX Mounting Location



b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information



b0: 0/1 = –/Input Down
b1: 0/1 = –/Out of Synchronization
b2: 0/1 = –/MCLK Down
b6: 0/1 = Faulty OPTMUX is ROPTMUX/OPTMUX
b7: 0/1 = Faulty OPTMUX system is ACT system/STBY system (Fixed to 0)

33-M:OPTMUX Line Failure Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NONE			

This message is issued when 33-L fault is restored.

```
1:XXXX 0000 0000 0000  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] OPTMUX Mounting Location

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information

b7	b6	b5	b4	b3	b2	b1	b0
0							

b6: 0/1 = Faulty OPTMUX is ROPTMUX/OPTMUX
b7: 0/1 = Faulty OPTMUX system is ACT system/STBY system
(Fixed to 0)

33-N:DCS Alarm

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NONE			

This message is issued when a fault occurs in the DCS System.

```
1:XXXX 0000 0000 0000  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] OPTMUX (Telephony Server) Mounting Location

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information

b7	b6	b5	b4	b3	b2	b1	b0

b0: 0/1 = -/PWR failure
b1: 0/1 = -/FUSE failure
b3: 0/1 = -/FAN (TEMP MN)
b7: 0/1 = ACT/STBY (Faulty OPTMUX system information: Fixed to 0)

33-O:DCS Alarm Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NONE			

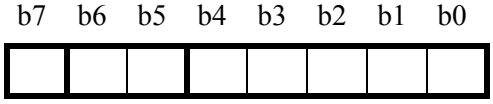
This message is issued when 33-N fault is restored.

```
1:XXXX 0000 0000 0000  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

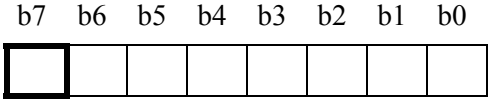
7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] OPTMUX (Telephony Server) Mounting Location



b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information



b7: 0/1 = ACT/STBY (Faulty OPTMUX system information: Fixed to 0)

33-P:OPTMUX MBR Key Turn ON

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NONE			

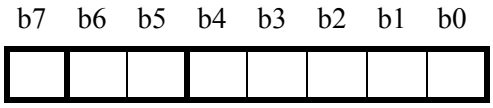
This message is issued when the MBR switch on the OPTMUX card has been turned ON.

```
1:XXXX 0000 0000 0000  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

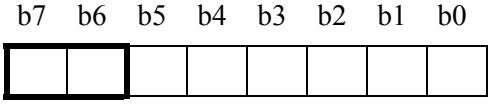

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] OPTMUX Mounting Location



b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information



b6: 0/1 = ROPTMUX/OPTMUX (fixed to 0)
b7: 0/1 = ACT/STBY (Faulty OPTMUX system information: Fixed to 0)

33-Q:OPTMUX MBR Key Turn OFF

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NONE			

This message is issued when the MBR switch on the OPTMUX card has been turned OFF.

```
1:XXXX 0000 0000 0000  2:XXXX 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

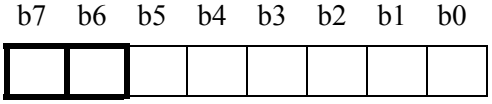

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] OPTMUX Mounting Location



b0-b4: Group No.
b5, b6: Unit No. (0-3)
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] Fault Information



b6: 0/1 = ROPTMUX/OPTMUX (fixed to 0)
b7: 0/1 = ACT/STBY (Faulty OPTMUX system information: Fixed to 0)

33-R:IP PKG Warning

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message is issued as a warning for the IP-related network configuration (IPTRK/PHC/PHL/IPPAD), such as heavy load imposed on the IP network.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]  [3] [4]  [5] [6]  [7] [8]   [9] [10] [11][12] [13][14] [15][16]  [17][18] [19][20] [21][22] [23][24]

4:XXXX XXXX 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
  [25][26] [27][28]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location of fault-detected card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group (G) No.
b5, b6: Unit (U) No.
b7: Module Group (MG) No.
0/1 = Even-numbered MG/Odd-numbered MG

[2] Circuit Number

b7	b6	b5	b4	b3	b2	b1	b0

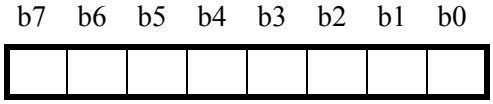
b0-b2: Circuit No.
FFH: IPELC PKG Fault

[3] Fault Kind (FNC)

b7	b6	b5	b4	b3	b2	b1	b0

01H: Internal Ether Error
02H: External Ether Error
03H: Application Error
04H: IPELC/IPLC Fault (Fault related to LAN)
05H: Sequence Error
06H: PKG Inside Error
07H: MG Error
08H: Telephony Server (PHI) Error
09H: Telephony Server (PHF) Error

[4] Fault Information (INF)



When [3] = 01 or 02 Hex.:
- 01H: Hardware Error
- 02H: Ether Error
- 03H: IP Error
- 04H: TCP Error

When [3] = 03 Hex.:
- 01H: RTP/RTCP Error

When [3] = 04 Hex.:
- 01H: Hardware Error (Removal of LAN cables, Initialization Fault, etc.)
- 02H: Ether Error (Fault related to Ether Drivers)
- 03H: IP Error (Warning related to IP Packets)
- 04H: RTP/RTCP Warning (Warning related to RTP Packets)
- 05H: PM Error (Fault related to ELC)
- 06H: NC Error (Fault related to IP Functions)
- 07H: PCM Error (Fault related to PCM)
- 08H: VCT Error (Fault related to VC)

When [3] = 05 Hex.:
- 01H: iLP-PM Command Error
- 02H: Registry Error
- 03H: Health Check Error
- 04H: Communication Error

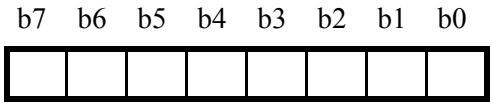
When [3] = 06 Hex.:
- 01H: Internal fault of PHL(PHE)/IPPAD is detected.

When [3] = 07 HEX:
- 05H: TCP Fault
- 06H: RTP Warning (Voice)
- 07H: Processor Error

When [3] = 08 HEX:
- 01H: TCP Link Fault Warning

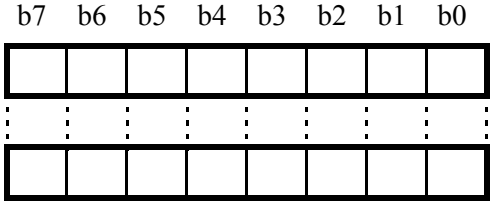
When [3] = 09 HEX:
- 02H: Internal PHF fault
  Socket related processing error
- 03H: Data transmission error
  Data send/receive error

[5] Details on Fault Information (FLT)



This data can be analyzed by seeing combination of the data.
See the tables on the following pages:

[6]-[28]Additional Information



These data vary depending on the combination of the data.
See the tables on the following pages:

The following provides the fault information by using the combination of data (FNC, INF, and FLT).

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
01	01	01	None	LAN cable not connected	-	x	x
		02		Failed to initialize Ether Controller	-	x	-
		03		Failed to reset Ether Controller	-	x	-
		04		Failed after 16 attempts to transmit, due to collisions	x	-	-
		05		Lost carrier during transmission	x	-	-
		06		Collision has occurred after the slot time of the channel has elapsed	x	-	-
		07		CRC error on the incoming frame	x	-	-
		08		Received Descriptor is not available	x	-	-
		09		Received Buffer error	x	-	-
		0A		Transmit Buffer error	x	-	-
		0B		Exceeds allowed transmission limit	x	-	-
		0C		FIFO overflow	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
02	01	01	None	LAN cable not connected	-	x	x
		02		Failed to initialize Ether Controller	-	x	-
		03		Failed to reset Ether Controller	-	x	-
		04		Failed after 16 attempts to transmit, due to collisions	x	-	-
		05		Lost carrier during transmission	x	-	-
		06		Collision has occurred after the slot time of the channel has elapsed	x	-	-
		07		CRC error on the incoming frame	x	-	-
		08		Received Descriptor is not available	x	-	-
		09		Received Buffer error	x	-	-
		0A		Transmit Buffer error	x	-	-
		0B		Exceeds allowed transmission limit	x	-	-
		0C		FIFO overflow	x	-	-
	02	01		Transmit Timer time out	x	-	-
		02		Receives over-length message	x	-	-
		03		Transmit Buffer overflow	x	-	-
	03	01	[6]-[9] : Destination IP Address [10], [11]: Faulty Port No. (Origination) [12], [13]: Faulty Port No. (Destination)	Time-to-live expired on packet	x	-	-
		02		Bad header checksum in packet	x	-	-
		03		Received bad format packet	x	-	-
		04		Failed to frame received packets	x	-	-
		05		Cannot fragment packet	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
02	04	01	[6] : Port Kind **01**: For FCCS Signaling **02**: For Speech Path Control **03**: For CCIS Signaling [7] : Connection Type **01**: Client **02**: Server [8]-[11] : Destination IP Address [12], [13]: Faulty Port No. (Origination) [14], [15]: Faulty Port No. (Destination) [16]: Trouble Information **00**: Not Confirmed **01**: Originating Side **02**: Destination Side [17]: Trouble Element (04 Hex. fixed)	No response to keep alive packet	x	-	x
		02		Level 4 error	x	-	-
		04		Exceeds allowed connection maximum	x	-	-
03	01	01		SR packets not received	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
03	01	02	[6] : Faulty Voice Channel [7] : CODEC (H1H2) When IPPAD is installed, "H2" is not used, and some bytes ([9]-) are different from those of others. **Note 1** H1: Speech Compression Mode **00**: Not Used **01**: G.729a (8 kbps) **02**: G.723.1 (5.3 kbps) **03**: G.723.1 (6.3 kbps) **04**: G.711μ-Law (64 kbps) **05**: G.711A-Law (64 kbps) **06-0F**: Not Used H2: Packet Configuration Mode **00**: Original Payload **01**: Standard Payload **02**: Standard Payload + Payload for DTMF relay **03-0F**: Not Used [8] : Voice Sending Interval **00**: Not Used **01**: 10ms **02**: 20ms **03**: 30ms **04**: 40ms [9], [10] : Destination Port [11]-[14] : Destination IP Address [15], [16]: Originating Port [17]-[20] : Originating IP Address [21]-[24] : Send Synchronization Source [25]-[28] : Receive Synchronization Source **Note:** "[21]-[28]" are for Synchronization source identifier. Random Values are output. **Note 1:** When IPPAD is installed, some parameters are as follows: [9]-[12] : Destination LENS [13]-[16] : Destination IP Address [17], [18]: Destination Location ID	Lost packets a lot	x	-	-
		03		Over jitter-interval	x	-	-
		04		Jitter buffer overflow	x	-	-
		05		Received unknown pay-load in RTP packet	x	-	-
		06		Pay-load length too long	x	-	-
		07		Received SDES of another CNAME	x	-	-
		08		Received RTCP length too long	x	-	-
		09		Received RTCP length too short	x	-	-
		0A		Received BYE packet	x	-	-
		81		Not received RR packet	x	-	-
		82		Transmission packet is late	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
04	01	01	[6] : Function Code **00**: Warning **01**: Fault **02**: Recovery [9]-[28] : Dynamic Data **Note:** For more information, see "Detailed Information of Fault".	LAN cable not connected	-	x	-
		02		Ether controller initialization not possible	-	x	-
		09		Receive Buffer Error	x	-	-
	05	03		Communication restart from PM to NC (CPU)	-	x	x
		08		Failed to register PAW due to queue overflow	x	-	-
		10		Timer	-	x	x
		12		Failed to download DSP program	-	x	-
		13		Memory Fault	-	x	x
	06	40		Initial settings (including DSP)	-	x	-
		43		Communication restart from PM to NC (CPU)	-	x	x
		4A		Communication not possible from PM to NC (CPU)	-	x	-
		58		Ethernet Driver	x	-	-
	07	80		Initial Setting (PCMCNT-0)	-	x	-
		90		Initial Setting (PCMCNT-1)	-	x	-
	08	C0		Initializing setting (Sub PKG#0)	-	x	x
		C1		Detect WDT overflow on OS VC-0 (Sub PKG#0)	x	-	-
		D0		Initializing setting (Sub PKG#1)	-	x	x
		D1		Detect WDT overflow on OS VC-1 (Sub PKG#1)	x	-	-
		E0		Initializing setting (Sub PKG#2)	-	x	x
		E1		Detect WDT overflow on OS VC-2 (Sub PKG#2)	x	-	-
		F0		Initializing setting (Sub PKG#3)	-	x	x
		F1		Detect WDT overflow on OS VC-3 (Sub PKG#3)	x	-	-
	09	01		Network failure	-	x	x
		02		PHL Make Busy in advance (based on package Health Check)	-	x	x
		03		MGC changeover notification	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
05	01	01	[6] : Sequence Number [7] : PM Type **Note 2** [8] : PM Extension Type **Note 2** [9] : Contents of Command	Failed to send IP related data setting command	x	-	-
		02		Failed to receive IP related data setting command	x	-	-
		03		Response timeout of IP related data setting command	x	-	-
		04		Failed to send NTP information command	x	-	-
		05		Failed to receive NTP information command	x	-	-
		06		Response timeout of NTP information command	x	-	-
		07		Failed to send Media control information command	x	-	-
		08		Failed to receive Media control information command	x	-	-
		09		Response timeout of Media control information command	x	-	-
		0A		Failed to send SW/H.245 information command	x	-	-
		0B		Failed to receive SW/H.245 information command	x	-	-
		0C		Response timeout of SW/H.245 information command	x	-	-
		0D		Failed to send HC executing data command	x	-	-
		0E		Failed to receive HC data setting response command	x	-	-
		0F		Response timeout of HC data setting response command	x	-	-
		10		Failed to send HC executing data deletion command	x	-	-
		11		Response timeout of HC executing data deletion command	x	-	-
		12		Failed to send VLAN setting command	x	-	-
		13		Failed to receive VLAN setting command	x	-	-
		14		Failed to send VLAN/EN deletion command	x	-	-
		15		Failed to receive VLAN/EN deletion command	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
05	01	16	[6] : Sequence Number [7] : PM Type Note 2 [8] : PM Extension Type Note 2 [9] : Contents of Command	Response timeout of VLAN/EN deletion command	x	-	-
		17		Command for PH restart with initial settings: 01h output	x	-	-
		18		Command for PH restart with initial settings: 02h output	x	-	-
		19		PM reset output	x	-	-
		1A		Failed to send HC status read request command	x	-	-
		1B		Response timeout of HC status read request command	x	-	-
		1C		Failed to send ToS setting request command	x	-	-
		1D		Failed to send ToS data read response command	x	-	-
		1E		Response timeout of ToS data read response command	x	-	-
		1F		Default Gateway reset command sending failed	x	-	-
		20		Default Gateway reset command reception failed	x	-	-
		21		Default Gateway reset command reception time out	x	-	-
	02	01		Failed to send initial setting command	x	-	-
		02		Failed to receive path setting completion command	x	-	-
		03		Response timeout of path setting completion command	x	-	-
		04		Failed to send EN-IP address setting command	x	-	-
		05		Failed to receive EN-IP address setting completion command	x	-	-
		06		Response timeout of EN-IP address setting completion command	x	-	-
		07		Failed to send EN-IP address setting deletion command	x	-	-
		08		Response timeout of EN-IP Address deletion completion command	x	-	-
		09		Failed to send key-assigned table setting command	x	-	-
		0A		Failed to receive key-assigned table setting response command	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
05	02	0B		Response timeout of key-assigned table setting command	x	-	-
		0C		Failed to send initializing part command	x	-	-
		0D		DL-ESTABLISH-REQUEST command sending failed	x	-	-
		0E		DL-ESTABLISH-CONFIRM command reception time out	x	-	-
		0F		9C,10H (Path information setting process result notification) command waiting time-out **Note:**Available since FP95-113 V3	x	-	-
	03	01	[6] : Error Number [7] : PM Type **Note 2** [8] : PM Extension Type **Note 2** [9] : MAC Address (Max.8 addresses) **Note 3**	Failed to perform Health Check **Note:**The system automatically resets the appropriate terminal for the recovery purpose. [33-S] When ASYDL, System Data 1, Index 999 Bit 2=1 (System Message 35-K is in service) is set, this information will not be output by this message even if IP station failure occurs. Instead of this information, System Message 35-K will be output.	-	x	-
	04	01		Detect a communication port error on the Telephony Server	x	-	-
		02		Failed to communicate between the Telephony Server and IP terminals **Note:**The system automatically resets the appropriate terminal for the recovery purpose.	x	-	-
06	01	01	[6] : Alarm Database Number **01**: Table which SH1 monitors **02**: Table which SH2 monitors [7] : Message Number (Max.10)	Detect the fault of PHL/IPPAD	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
07	05	01	[6] : Port Kind **01**: H.245 **02**: Signaling (MG and IP terminal) **03**: Speech Channel Control [7] : Connection Type **00**: Client **01**: Server [8]-[11] : Connecting IP Address [12], [13]: Self Port Number [14], [15]: Counter Port Number [16]: Fault Location **00**: Undefined **01**: Self Side **02**: Counter Side	Failed to receive keep-alive packets	x	-	-
		03		Disconnected connection due to timeout	x	-	-
		04		Error due to overload of connection number	x	-	-
	06	02	[6] : Detected Fault Channel [7] : Voice Compression **00**: Not Used **01**: G.729a (8k) **02**: G.723.1 (5.3k) **03**: G.723.1 (6.3k) **04**: G.711 (μ-Law) **05**: G.711 (A-Law) [8] : Packet Kind **01**: 10ms **02**: 20ms **03**: 30ms **04**: 40ms **06**: 60ms [9], [10] : Counter Port Number [11]-[14] : Counter IP Address [15], [16]: Self Port Number [17]-[20] : Self IP Address [21]-[24] : Sending SSRC [25]-[28] : Receiving SSRC	Large number of packet loss occurs. (Loss rate of arriving packets kept 10 % for 15 seconds, or more than 10 % of all the packets received for 5 seconds kept exceeding a maximum of jitter-buffer for 15 seconds.)	x	-	-
		04		Jitter-buffer overflow This message is output only one time per session.	x	-	-
		05		Payload type is abnormal. Undefined payload of RTP packet is received.	x	-	-
		06		Payload over 200 ms is received.	x	-	-
		08		RTCP packet over standard packet length (772 bytes) is received.	x	-	-
		09		RTCP packet below standard packet length (772 bytes) is received.	x	-	-
		0A		Forcefully-disconnection flag (BYE packet) was received.	x	-	-
		82		Packet transmission is delayed.	x	-	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
07	07	00	[6]-[26] : Detailed Fault Information	Media Gateway permanent fault	x	-	-
		01		SH4 (NC) temporary fault	x	-	-
		02		SH1 (TC) temporary fault	x	-	-
		03		SH1 (VC) temporary fault	x	-	-
		04		78K4(DC) temporary fault	x	-	-
		05		FAN1 Failure (CPU Cooling Fan 1 functional abnormality detected)	x	-	-
		06		FAN2 Failure (CPU Cooling Fan 2 functional abnormality detected)	x	-	-
		07		PWR failure (Power Alarm detected)	x	-	-
08	00	00	[6]-[9] : Accommodated Location [10], [11]: MG-ID [12] : MG-Type [13]-[16] : IP Address [17], [18]: Port Number	TCP Link Restored	-	-	x
	01	01		Detect Temporary TCP Link Fault (light grade)	x	-	-
	02	00		Detect Temporary TCP Link Fault (severe grade)	-	x	-

Definition of Fault Information

FNC ([3])	INF ([4])	FLT ([5])	Data of [6]-[28]	Description	33-R	33-S	33-T
09	01	01	PHF operation start	Not Applicable	-	-	x
		02	Recovered from the network fault		-	-	x
		03	Recovered by re-routing		-	-	x
	02	01	Socket option error	Initialize PHF module	x	-	-
		02	FCCS port fault		-	x	-
		03	UDP packet sending error		x	-	-
		04	Communication failure (major)	Peer-to-Peer FCCS network has been disconnected because of frequent packet loss. Contact the network administrator and have the cause investigated.	-	x	-
	03	01	Restart sequence start	Not Applicable	x	-	-
		02	Line fault		-	x	-
		03	Continuous sending timed out		x	-	-
		04	Continuous sending occurred		x	-	-
		05	Alternate Routing	The office data has been assigned wrongly, or network failure is occurring. If system message ([33-S] IP PKG Failure) has been output as well, contact the network administrator. If only this message has been output, check again the office data related to FCCS.	-	x	-
		06	Communication failure (minor)	Packet loss is occurring. Check whether the same system message has been output at the opposite node. If this message has been output continuously, contact the network administrator and have the cause investigated.	x	-	-
		07	PHF Communication Status Report	This message is for engineer only.	x	-	-

Note 2: Combination of [7] and [8] shows the following cards.

[7] (PM Type)	[8] (PM Extension Type)	**Card**
0F	11	PHA (4 card-width occupied)
0F	12	PHA (2 card-width occupied)
4F	11	PHD (4 card-width occupied)
4F	12	PHD (2 card-width occupied)
4F	14	SP-PHD (SP built-in)
1F	11	IPPAD
AF	11	PHE (4 card-width occupied)
AF	12	PHE (2 card-width occupied)
AF	13	Internal PHE (2 card-width occupied)
1F	13	Internal PHI
1F	14	SP-PHI (SP built-in)

Note 3: Virtual MAC address will be displayed in the case of IPG Digital/IPG Analog/ UG50.

The following provides the troubleshooting for “Definition of Fault Information”. If the appropriate solution is not in the list, contact NEC engineers.

Troubleshooting For Fault Information

FNC ([3])	INF ([4])	FLT ([5])	SOLUTION
02	01	01	This message is output when the LAN cable link on the front panel of the card (PHA/PHD/IPPAD) indicates link-down. The cause could be considered that LAN cable between HUB and the card is abnormal. Make sure the cables, if necessary, replace the appropriate one with the new one.
	02	03	This message is output when outgoing buffer from the Telephony Server to IP terminals is overflowed. Make sure the IP terminals’ status, whether network congestion or packet delay occurs.
	04	01	This message is output when a communication port on the counter PHC is abnormal. Make sure the network status and the network configuration. If the error keeps occurring, reset the TCP/IP module.
		04	This message is output when the PHC connection number exceeds the maximum number (64). Make sure the number and adjust it if it does.
03	01	02	This message is output when the real-time protocol (RTP) packet loss occurs beyond allowed time or period. The cause could be considered as some of the network problems such as hardware fault and LAN fault. However, it might be temporary problem due to the traffic congestion. If the error keeps occurring occasionally, ask the network administrator.
04	ALL	ALL	Refer to Detailed Fault Information and The Troubleshooting.
05	01/02	ALL	This message is output when the fault occurs in the system initialization or the registration process abnormality of IP station number. The cause could be considered as some of the network problem such as hardware fault and LAN fault. Check the card. If the card works properly, the fault might be temporary. If the card does not work properly, replace it with a new one. If the error keeps occurring after the replacement, contact NEC engineers.
	03	01	This message is output when the connection cannot establish between PHA/PHE and MC, the Telephony Server and IP terminals. The cause could be considered that related equipment (such as LAN, MC, MG, or PHA/PHE) is abnormal. Make sure that the MC/MG with the MAC address shown on the message is available to use. If it is listed as available, keep watching it. Otherwise, contact NEC engineers. Specify the cause location of the fault as follows: If the Health Check error occurs in PHA/PHE accommodating all the MCs, the error might occur in the system, PHA/PHE or PHA/PHE-side network. If the Health Check error occurs in specified MC, the error might occur on the speech path connecting the MC.
	04	01	This message [33-R/S] is output when the Telephony Server communication port is abnormal. If the message keeps occurring, reset the TCP/IP module.

Troubleshooting For Fault Information

FNC ([3])	INF ([4])	FLT ([5])	SOLUTION
05	04	02	This message is output when the connection cannot establish between the Telephony Server and IP terminals. The cause could be considered that related equipment are abnormal. Make sure that the MG with the MAC address shown on the message is available to use. If it is listed as available, keep watching it. Otherwise, contact NEC engineers.
07	06	02	If this message is frequently output, review the network and make sure the LAN configuration, or ask maintenance personnel.
	07	01	If this message is frequently output, replace the appropriate MG. Replace the appropriate fan if a fault is found.
		02	
		03	
		04	
		05	
		06	
		07	
08	08/102	ALL	If this message is frequently output, review the network and make sure the LAN configuration, or ask maintenance personnel.
09	01	01	[6]-[9] : Socket number acquired
		02	[6] : Recovery Detail 01 : Recovered from socket fault 02 : Recovered from data transmission error
		03	[6] : FPC number of adjacent nodes which has recovered [7]-[10] : IP Address of adjacent nodes which has recovered

Troubleshooting For Fault Information

FNC ([3])	INF ([4])	FLT ([5])	SOLUTION
09	02	01	[6]-[9] : Cause of socket option setting error (Error number notified by the TCP/IP module) [10]-[13] : Socket number with error (Socket number will be indicated as "0" when failed to generate the socket number)
		02	[6] : Cause of error cause : 01 (Socket generating error) : 02 (Bind error) : 03 (Call Back setting error) [7]-[10] : Cause of socket option setting error (Error number notified by the TCP/IP module) [11]-[14] : Socket number with error (Socket number will be indicated as "0" when failed to generate the socket number)
		03	[6]-[9] : Cause of socket option setting error (Error number notified by the TCP/IP module) [10]-[13] : Socket number with error (Socket number will be indicated as "0" when failed to generate the socket number) [14] : Destination FPC number [15]-[18] : Destination IP Address [19] : Destination PBI number [20], [21] : UDP Sending packet ID (Indicated as "0" when it is not re-send)

Troubleshooting For Fault Information

FNC ([3])	INF ([4])	FLT ([5])	SOLUTION
09	03	01	[6] : Destination FPC number [7] : Cause of start 1/2 = Send process/Receive process [8], [9] : Send/Received packet ID when phenomenon occurred [10], [11] : ID of packet estimated to be received when phenomenon occurred (Only when Cause of start = "2")
		02	[6] : Destination FPC number [7]-[10] : Destination IP Address
		03 or 04	[6] : Destination FPC number [7]-[10] : Destination IP Address [11], [12] : Packet ID when phenomenon occurred
		05	[6] : Cause 01 Health Check error 02 PHF status error 03 Office data is not registered. [7] : Destination FPC number designated by the dominant module [8] : FPC number with send error [9]-[12] : IP Address with send error
		06	[6] : Destination FPC number [7] : Loss rate of transmitted packets [8]-[11] : Total number of transmitted packets of each FPC [12]-[15] : Number of lost transmitted packets of each FPC [16] : Loss rate of received packets [17]-[20] : Total number of received packets of each FPC [21]-[24] : Number of lost received packets of each FPC

The following provides detailed fault information and the solution by using the combination of data (INF, FLT, and Detailed Info). The information is provided when FNC ([3]) indicates 04.

Detailed Fault Information and The Troubleshooting

INF ([4])	FLT ([5])	Detailed Info		Description	Solution
		[7]	[8]		
05	03	20	0E	Failed to communicate between DPMs	Reset IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one.
				Restart to communicate between DPMs	
	08	12	0C	Buffer Overflow	None
	10	01	01	Detect NC (CPU) WDT	Reset IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one.
		02	01	Detect PCMCONT-0 (DSP) WDT	
		03	01	Detect PCMCONT-1 (DSP) WDT	
		08	01	Detect VC0 (CPU) WDT	Reset IPELC (IPLC). If the fault occurs again, replace the VC0 PKG with a new one.
				Recovery VC0 (CPU)	
		08	04	Failed to initialize VC0 (CPU) device	
		09	01	Detect VC1 (CPU) WDT (Sub PKG#1)	Reset IPELC (IPLC). If the fault occurs again, replace the VC1 PKG with a new one.
				Recovery VC1 (CPU)	
		09	04	Failed to initialize VC1 (CPU) device	
		0A	01	Detect VC2 (CPU) WDT (Sub PKG#2)	Reset IPELC (IPLC). If the fault occurs again, replace the VC2 PKG with a new one.
				Recovery VC2 (CPU)	
		0A	04	Failed to initialize VC2 (CPU) device	
		0B	01	Detect VC3 (CPU) WDT (Sub PKG#3)	Reset IPELC (IPLC). If the fault occurs again, replace the VC3 PKG with a new one.
				Recovery VC3 (CPU)	
		0B	04	Failed to initialize VC3 (CPU) device	
	12	00	80	Failed to download programs	Reset IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one.
	13	42	02	Memory Fault	
				Memory Fault Recovery	
06	40	80	13	Failed to reserve OS resource	Reset IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one.
	43	20	0E	Failed to communicate between DPMs	
	4A	80	16	Failed to set LAN related data	Reset IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one.

Detailed Fault Information and The Troubleshooting (continued)

INF ([4])	FLT ([5])	Detailed Info [7]	Detailed Info [8]	Description	Solution
06	4A	80	23	Failed to negotiate with terminals	(1) When the fault occurs in all the terminals accommodated in IPELC (IPLC), reset the IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one. (2) When the fault occurs in some terminals accommodated in IPELC (IPLC), reset the IPELC (IPLC). If the fault occurs again, replace the terminals with new ones.
	58	43	10	Failed to receive packets	None
		43	11	Failed to send packets	None
07	80	02	04	Failed to initialize PCMCONT-0 device	Reset IPELC (IPLC). If the fault occurs again, replace the IPELC (IPLC) with a new one.
	90	03	04	Failed to initialize PCMCONT-1 device	
08	C0	0C	04	Failed to initialize VC0 device (Sub PKG#0)	Reset IPELC (IPLC). If the fault occurs again, replace the VCT0 PKG with a new one.
				Complete to initialize VC0 device (Sub PKG#0)	
	C1	0C	01	Detect VC0 (DSP) WDT (Sub PKG#0)	None
	D0	0D	04	Failed to initialize VC1 device (Sub PKG#1)	Reset IPELC (IPLC). If the fault occurs again, replace the VCT1 PKG with a new one.
				Complete to initialize VC1 device (Sub PKG#1)	
	D1	0D	01	Detect VC1 (DSP) WDT (Sub PKG#1)	None
	E0	0E	04	Failed to initialize VC2 device (Sub PKG#2)	Reset IPELC (IPLC). If the fault occurs again, replace the VCT2 PKG with a new one.
				Complete to initialize VC2 device (Sub PKG#2)	
	E1	0E	01	Detect VC2 (DSP) WDT (Sub PKG#2)	None
	F0	0F	04	Failed to initialize VC3 device	Reset IPELC (IPLC). If the fault occurs again, replace the VCT3 PKG with a new one.
				Complete to initialize VC3 device	
	F1	0F	01	Detect VC3 (DSP) WDT (Sub PKG#3)	None

33-S:IP PKG Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is issued when the system detects a failure on the IPTRK/PHC/PHL/IPPAD cards that affects normal speech path state.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]  [3] [4]  [5] [6]  [7] [8]  [9] [10] [11][12] [13][14] [15][16]  [17][18] [19][20] [21][22] [23][24]

4:XXXX XXXX 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
  [25][26] [27][28]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location of fault-detected card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group (G) No.
b5, b6: Unit (U) No.
b7: Module Group (MG) No.
0/1 = Even-numbered MG/Odd-numbered MG

[2] Circuit Number

b7	b6	b5	b4	b3	b2	b1	b0

b0-b2: Circuit No.

[3] Fault Kind

b7	b6	b5	b4	b3	b2	b1	b0

01H: Internal Ether Error
02H: External Ether Error
03H: Application Error
04H: IPELC/IPLC Fault (Fault related to LAN)
05H: Sequence Error
07H: MG Error
08H: Telephony Server (PHI) Error
09H: Telephony Server (PHF) Error

[4] Fault Information

b7	b6	b5	b4	b3	b2	b1	b0

When [3] = 01 or 02 Hex.:
- 01H: Hardware Error
- 02H: Ether Error
- 03H: IP Error
- 04H: TCP Error

When [3] = 03 Hex.:
- 01H: RTP/RTCP Error

When [3] = 04 Hex.:
- 01H: Hardware Error (Removal of LAN cables, Initialization Fault, etc.)
- 02H: Ether Error (Fault related to Ether Drivers)
- 03H: IP Error (Warning related to IP Packets)
- 04H: RTP/RTCP Warning (Warning related to RTP Packets)
- 05H: PM Error (Fault related to ELC)
- 06H: NC Error (Fault related to IP Functions)
- 07H: PCM Error (Fault related to PCM)
- 08H: VCT Error (Fault related to VC)

When [3] = 05 Hex.:
- 01H: iLP-PM Command Error
- 02H: Registry Error
- 03H: Health Check Error

When [3] = 06 Hex.:
- 01H: Internal fault of PHL(PHE)/IPPAD is detected.

When [3] = 07 HEX:
- 05H: TCP Fault
- 06H: RTP Warning (Voice)
- 07H: Processor Error

When [3] = 08 HEX:
- 02H:TCP Link Fault

When [3] = 09 HEX:
- 02H: Internal PHF fault
  Socket related processing error
- 03H: Data transmission error
  Data send/receive error

[5] Details on Fault Information
See the tables of [33-R].

[6]-[28]Additional Information
See the tables of [33-R].

33-T:IP PKG Restore

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is issued when IPTRK/PHC/PHL/IPPAD cards' failure recovers.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2]  [3] [4]  [5] [6]  [7] [8]  [9] [10] [11][12] [13][14] [15][16] [17][18] [19][20] [21][22] [23][24]

4:XXXX XXXX 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
  [25][26] [27][28]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Accommodated location of fault detected card

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group (G) No.
b5, b6:Unit (U) No.
b7:Module Group (MG) No.
0/1 = Even-numbered MG/Odd-numbered MG

[2] Circuit Number

b7	b6	b5	b4	b3	b2	b1	b0

b0-b2:Circuit No.

[3] Fault Kind

b7	b6	b5	b4	b3	b2	b1	b0

01H:Internal Ether Error
02H:External Ether Error
03H:Application Error
04H:IPELC/IPLC Fault (Fault related to LAN)
05H:Sequence Error
07H:MG Error
08H:Telephony Server (PHI) Error
09H:Telephony Server (PHF) Error

[4] Fault Information

b7	b6	b5	b4	b3	b2	b1	b0

When [3] = 01 or 02 Hex.:
01H:Hardware Error
02H:Ether Error
03H:IP Error
04H:TCP Error
When [3] = 03 Hex.:
01H:RTP/RTCP Error
When [3] = 04 Hex.:
IP related fault occurs in LAN
01H=Hardware Error
02H=Ether Error
03H=IP Error
04H=RTP/RTCP Warning
05H=PM Error
06H=NC Error
07H=PCM Error
08H=VCT Error
When [3] = 05 Hex.:
01H=iLP-PM Command Error
02H=Registry Error
03H=Health Check Error
When [3] = 07 HEX:
05H:TCP Fault
06H:RTP Warning (Voice)
07H:Processor Error
When [3] = 08 HEX:
00H:TCP Link Recovery
When [3] = 09 HEX:
02H: Internal PHF fault
Socket related processing error
03H: Data transmission error
Data send/receive error

[5] Details on Fault Information
See the tables of [33-R].

[6]-[28]Additional Information
See the tables of [33-R].

35-C:SP Warning Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message is displayed when temporary failure occurs on SP.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Accommodated location of fault-detected SP or the PH under the control of SP

b7 b6 b5 b4 b3 b2 b1 b0



b0-b4: Group (G) No.
b5, b6: Unit (U) No.
b7: Module Group (MG) No.
0/1 = Even-numbered MG/Odd-numbered MG

[2] Type of failure (FNC)

b7 b6 b5 b4 b3 b2 b1 b0



01H: Health check error

[3] Failure information (INF)

b7 b6 b5 b4 b3 b2 b1 b0



When [2] = 01 Hex:
01H: MPH failure
02H: PH failure

35-D:SP Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MN	3		

This message is displayed when any failure has influence on carrying on calls occur on SP.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Accommodated location of fault-detected SP or the PH under the control of SP

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group (G) No.
b5, b6: Unit (U) No.
b7: Module Group (MG) No.
0/1 = Even-numbered MG/Odd-numbered MG

[2] Type of failure (FNC)

b7	b6	b5	b4	b3	b2	b1	b0

01H: Health check error

[3] Failure information (INF)

b7	b6	b5	b4	b3	b2	b1	b0

When [2] = 01 Hex:
01H: MPH fault
02H: PH fault
03H: IP-DTG fault
04H: SIP Transport Layer (TCP) fault

35-E:SP Failure Recovery

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is displayed when any failure has influence on carrying on calls recovered.

```
1:XXXX XX00 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] Accommodated location of fault-detected SP or the PH under the control of SP

b7 b6 b5 b4 b3 b2 b1 b0



b0-b4: Group (G) No.
b5, b6: Unit (U) No.
b7: Module Group (MG) No.
0/1 = Even-numbered MG/Odd-numbered MG

[2] Type of failure (FNC)

b7 b6 b5 b4 b3 b2 b1 b0



01H: Health check error

[3] Failure information (INF)

b7 b6 b5 b4 b3 b2 b1 b0



When [2] = 01 Hex:
01H: MPH fault
02H: PH fault
03H: IP-DTG fault
04H: SIPTransport Layer (TCP) fault

35-F:SP Process Information

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message displays the event information related to WLAN Handset/Standard SIP process. **Note 1**

```
1:XXXX XXXX XXXX XXXX 2:XXXX 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]      [4]      [5]  [6]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

Note 1: WLAN Handset/Standard SIP process controls the following terminals in SP:
WLAN Handset (MH Series)/SP Controlled Standard SIP Voice terminal/SP Controlled Standard SIP Video terminal

[1] Kind of process (KIND)

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: 01H = WLAN Handset/Standard SIP process

[2] Kind of information (FNC) **Note 2**

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: 01H = Service Start.
02H = Reset Indication from MAT.
03H = ACT Change Indication from MAT.

[3] SIP server ID of WLAN Handset/ Standard SIP Process (ID) **Note 2**

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: SIP server ID (1-127)
When FNC is 01H: SIP server ID of SP whose operation is started.
When FNC is 02H: SIP server ID of SP to reset
When FNC is 03H: SIP server ID of SP that is active when changeover direction is received.

[4] IP address of WLAN Handset/Standard SIP process (IP) **Note 2**

IP address ** ** ** **
[1] [2] [3] [4]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [1]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [2]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [3]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [4]

When FNC is 01H: IP address of SP whose operation is started.
When FNC is 02H: IP address of SP to reset
When FNC is 03H: IP address of SP that is active when changeover direction is received.

[5] Number of speech channels for WLAN Handset/Standard SIP process (CH NO) **Note 2**

b7 b6 b5 b4 b3 b2 b1 b0
b15 b14 b13 b12 b11 b10 b9 b8

b0-b15: Number of speech channels for WLAN Handset/Standard SIP process (0-1200)

When FNC is 01H: Number of speech channels for SP whose operation is started.
When FNC is 02H: Number of speech channels for SP to reset
When FNC is 03H: Number of speech channels for SP that is active when changeover direction is received.

[6] Status of WLAN Handset/Standard SIP process (ST) **Note 2**

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: 00H = No status
01H = Single (When SIP Wireless Terminal Backup is not executed.)
02H = Active
03H = Standby

When FNC is 01H: Status of SP whose operation is started.
When FNC is 02H: Status of SP to reset.
When FNC is 03H: Fixed to active.

Note 2: Available when "KIND = 01H".

- Terms for outputting System Message

Each operation related to WLAN Handset/Standard SIP process and system message that is output when an event occurs is as follows.

Note: Several messages may be output for one event.

Terms for outputting System Message

SIP Wireless Terminal Backup	Operation/Event	System Message
Not executed	Operation is started.	• 35-F (Information), FNC=01H (Service Start.), ST=01H (Single)
	Operation is stopped.	• 35-I (Stop), FNC=01H (Service Stop), ST=01H (Single) **Note:** It takes about five minutes to output the message after operation is stopped.
	Reset operation from PCPro.	• 35-F (Information), FNC=02H (Reset Indication from PCPro), ST=01H (Single) • 35-F (Information), FNC=01H (Service Start.), ST=01H (Single)
Executed (Active/Standby)	Operation is started.	• 35-F (Information), FNC=01H (Service Start.), ST=02H (Active) • 35-F (Information), FNC=01H (Service Start.), ST=03H (Standby)
	Operation of both SP are stopped.	• 35-G (Warning), FNC=01H (Service Stop.), ST=03H (Standby) • 35-I (Stop), FNC=02H (SIP Wireless Terminal Backup Service Stop.) **Note:** It takes about five minutes to output the message after operation is stopped. **Note:** If single operation is stopped, “35-I (MJ), FNC=02H (SIP Wireless Terminal Back-up Service Stop.)” is not output.

Terms for outputting System Message

SIP Wireless Terminal Backup	Operation/Event	System Message
Executed (Active/Standby)	Reset operation from PCPro (Active side)	• 35-F (Information), FNC=02H (Reset Indication from PCPro.), ST=02H (Active) • 35-G(Warning), FNC=02H (ACT Change.), ST=02H (Active) • 35-F(Information), FNC=01H (Service Start.), ST=03H (Standby)
	Reset operation from PCPro (Standby side)	• 35-F(Information), FNC=02H (Reset Indication from PCPro.), ST=02H (Active) • 35-F(Information), FNC=01H (Service Start.), ST=03H (Standby)
	Changeover by a failure	• 35-G(Warning), FNC=02H (ACT Change.), ST=02H (Active) • 35-F(Information), FNC=01H (Service Start.), ST=03H (Standby)
	Changeover operation from PCPro	• 35-F(Information), FNC=03H (ACT Change Indication from PCPro.), ST=02H (Active) • 35-G(Warning), FNC=02H (ACT Change.), ST=02H (Active) • 35-F(Information), FNC=01H (Service Start.), ST=03H (Standby)
	Mismatch in redundant setting between SP and office data	• 35-G(Warning), FNC=03H (SIP Wireless Terminal Backup Service Configuration Failure.)

Note: When office data for WLAN Handset/Standard SIP process is registered by ASSDN/ASSDL command although WLAN Handset (MH Series)/SP Controlled Standard SIP Terminal is not accommodated, “35-F: FNC=01H (Service Start.)” is output when SP is activated and “35-I: FNC=01H (Service Stop.)” is output when SP is stopped.

Note: ASSDN/ASSDL data is usually registered although WLAN Handset (MH Series)/SP Controlled Standard SIP Terminal is not accommodated.

Note: It takes about five minutes (Time to detect KeepAliveTimeOut) to output “35-G: FNC=01H (Service Stop.)”, “35-I: FNC=01H (Service Stop.)” or “35-I: FNC=02H (SIP Wireless Terminal Backup Service Stop.)” after WLAN Handset/Standard SIP process stopped the operation.

Note: If WLAN Handset/Standard SIP process is restarted before TP side detects KeepAliveTimeOut, only “35-F: FNC=01H (Service Start.)” is output without outputting “35-G: FNC=01H (Service Stop.)“, “35-I: FNC=01H (Service Stop.)” or “35-I: FNC=02H (SIP Wireless Terminal Backup Service Stop.)“

35-G:SP Process Warning

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message displays the warning information related to WLAN Handset/Standard SIP process. **Note 1**

```
1:XXXX XXXX XXXX XXXX 2:XXXX 0000 0000 0000 3:0000 0000 0000 0000
  [1] [2] [3]       [4]       [5]  [6]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

Note: Refer to "35-F" for "Terms for outputting system message" and "Note".

Note 1: WLAN Handset/Standard SIP process controls the following terminals in SP:
WLAN Handset (MH Series)/SP Controlled Standard SIP Voice terminal/SP Controlled Standard SIP Video terminal

[1] Kind of process (KIND)

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: 01H = WLAN Handset/Standard SIP process

[2] Kind of warning (FNC) **Note 2**

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: 01H = Service Stop.
02H = ACT Change.
03H = SIP Wireless Terminal Backup Service Configuration Failure.

[3] SIP server ID of WLAN Handset/ Standard SIP process (ID) **Note 2**

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: SIP server ID (1-127)
When FNC is 01H: SIP server ID of SP whose operation is stopped.
When FNC is 02H: SIP server ID of SP that is changed active by changeover.
When FNC is 03H: SIP server ID of SP that is detected mismatch in redundant setting for SIP Wireless Terminal Backup.

[4] IP address of WLAN Handset/Standard SIP process (IP) **Note 2**

IP address ** ** ** **
[1] [2] [3] [4]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [1]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [2]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [3]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [4]

When FNC is 01H: IP address of SP whose operation is stopped.
When FNC is 02H: IP address of SP that is changed active by changeover.
When FNC is 03H: IP address of SP that is detected mismatch in redundant setting for SIP Wireless Terminal Backup.

[5] Number of speech channels for WLAN Handset/Standard SIP process (CH NO) **Note 2**

b7 b6 b5 b4 b3 b2 b1 b0

b7 b6 b5 b4 b3 b2 b1 b0

b0-b15: Number of speech channels for WLAN Handset/Standard SIP process (0-1200)

When FNC is 01H: Fixed to 0.
When FNC is 02H: Number of speech channels for SP that is changed active by changeover.
When FNC is 03H: Fixed to 0.

[6] Status of WLAN Handset/Standard SIP process (ST) **Note 2**

b7 b6 b5 b4 b3 b2 b1 b0

b0-b7: 00H = No status
01H = Single (When SIP Wireless Terminal Backup is not executed.)
02H = Active
03H = Standby

When FNC is 01H: Final status of SP whose operation is stopped.
When FNC is 02H: Fixed to active.
When FNC is 03H: Fixed to 00H.

Note 2: Available when "KIND = 01H".

- Factors for outputting system message

System message that disturbs WLAN Handset (MH Series)/SP Controlled Standard SIP Terminal operation is indicated as follows.

Factors for outputting system message

System Message	Outputting factors/Countermeasure
FNC=01H (Service Stop.) **Note:** Output only when SIP Wireless Terminal Backup is executed.	**(Normal outputting factor)** • When single SP is powered off. **(Abnormal outputting factor)** • When single SP process is stopped or when hardware failure occurred. **(Countermeasure for abnormal outputting)** • Check the network equipment, connection and configuration. • If failure occurs continuously despite the network is normal, contact with field support.
FNC=02H (ACT Change.) **Note:** Output only when SIP Wireless Terminal Backup is executed.	**(Normal outputting factor)** • When changeover is executed from PCPro. • When active SP is powered off or rebooted. **(Abnormal outputting factor)** • When changeover is executed by network failure. • When active SP process is stopped or when hardware failure occurred. **(Countermeasure for abnormal outputting)** • Check the network equipment, connection and configuration. • If an failure occurs continuously despite the network is normal, contact with field support.

Factors for outputting system message

System Message	Outputting factors/Countermeasure
FNC=03H (SIP Wireless Terminal Backup Service Configuration Failure.) **Note:** Output only when SIP Wireless Terminal Backup is executed.	**(Abnormal outputting factor)** • When redundant SIP server ID is different between the config data on SP side and the *ASSDN/ASSDL* data. **(Countermeasure for abnormal outputting)** • Make redundant the SIP server ID of config data on SP side and the office data.

35-I:SP Process Stop

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MJ	3		

This message displays the major failure information related to WLAN Handset/Standard SIP process. **Note 1**

```
1:XXXX XXXX XXXX XX00  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]    [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

Note: Refer to "35-F" for "Terms for outputting system message" and "Note".

Note 1: WLAN Handset/Standard SIP process controls the following terminals in SP:
WLAN Handset (MH Series)/SP Controlled Standard SIP Voice terminal/SP Controlled Standard SIP Video terminal

[1] Kind of process (KIND) **Note 2**

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: 01H = WLAN Handset/Standard SIP process

[2] Kind of warning (FNC) **Note 2**

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: 01H = Service Stop. (When SIP Wireless Terminal Backup is not executed.)
02H = SIP Wireless Terminal Backup Service Stop.

[3] SIP server ID of WLAN Handset/ Standard SIP process (ID) **Note 2**

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: SIP server ID (1-127)
When FNC is 01H: SIP server ID of SP whose operation is stopped.
When FNC is 02H: SIP server ID of SP that is stopped later than other SP of two SP executing SIP Wireless Terminal Backup.

[4] IP address of WLAN Handset/Standard SIP process (IP) **Note 2**

IP address ** ** ** **
[1] [2] [3] [4]

b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [1]



b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [2]



b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [3]



b7 b6 b5 b4 b3 b2 b1 b0 b0-b7: IP address [4]



When FNC is 01H: IP address of SP whose operation is stopped.
When FNC is 02H: IP address of SP that is stopped later than other SP of two SP executing SIP Wireless Terminal Backup.

Note 2: Available when “KIND = 01H“.

- Factors for outputting system message

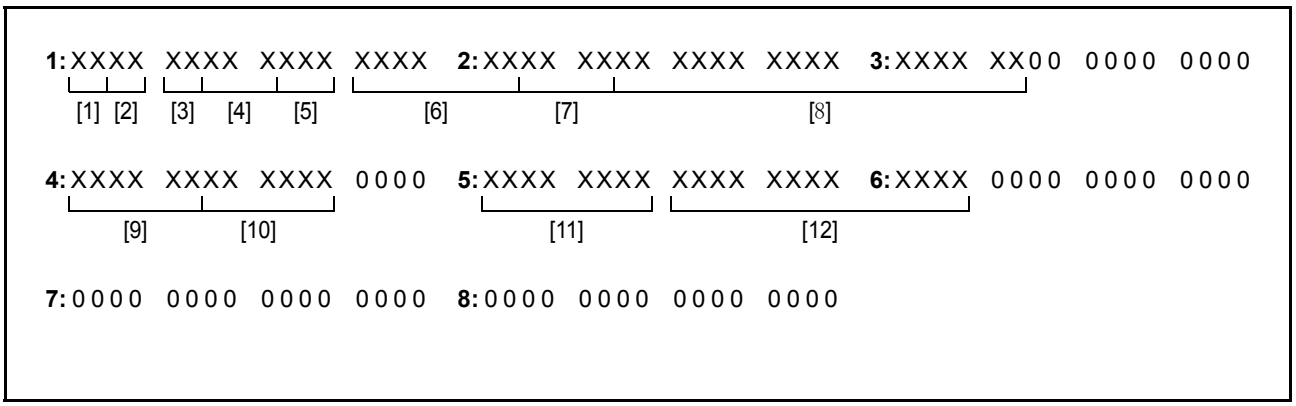
System message that disturbs WLAN Handset (MH Series)/SP Controlled Standard SIP Terminal operation is indicated as follows.

System Message	Outputting factors/Countermeasure
FNC=01H (Service Stop.) **Note:** Output only when SIP Wireless Terminal Backup is not executed.	**(Normal outputting factor)** • When SP is powered off. **(Abnormal outputting factor)** • When SP process is stopped or When hardware failure occurred. **(Countermeasure for abnormal outputting)** • Check the network equipment, connection and configuration. • If failure occurs continuously despite the network is normal, contact with field support.
FNC=02H (SIP Wireless Terminal Backup Service Stop.) **Note:** Output only when SIP Wireless Terminal Backup is executed.	**(Normal outputting factor)** • When both SP are powered off. **(Abnormal outputting factor)** • When both SP process is stopped or when hardware failure occurred. **(Countermeasure for abnormal outputting)** • Check the network equipment, connection and configuration. • If failure occurs continuously despite the network is normal, contact with field support.

35-K:IP Equipment Health Check Error Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is issued when the system detects a failure in IP stations. The IP station information is displayed on the message. This message becomes active when ASYDL, SYS1, Index 999, Bit 2 = 1 is assigned.



[1] Functionality

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
01H: Terminal
09H: SIP

[2] Equipment

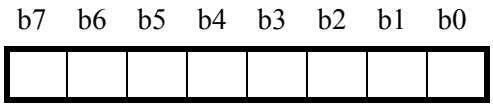
b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: This data is determined by the combination of [1] and [2] data as shown below.

[1] Functionality (Hex.)	[2] Equipment (Hex.)	Description
01	01	DtermIP: IP terminal
	02	SoftPhone (SP20): DtermSP30 (proprietary protocol mode) for ACD
	03	SmartPhone: DtermIP INASET
	05	SoftPhone (SP30): DtermSP30 (Proprietary Protocol mode)
	07	IPG Digital: IPG for Digital Terminal **Note 1**
	08	UG50-DLC
09	01	SIP Multi-Function Telephone: SIP Multiple Line terminal
	02	SIP Multi-Function Telephone: SIP Multiple Line terminal
	03	SIP Soft-Phone: DtermSP30 (SIP mode)
	04	SIP Soft-Phone: DtermSP30 (SIP mode)
	06	SIP Soft-Phone: DtermSP30 (proprietary protocol mode) for ACD
	07	SIP Soft-Phone: Soft Client SP350
	08	SIP Soft-Phone: Soft Client SP350 for ACD

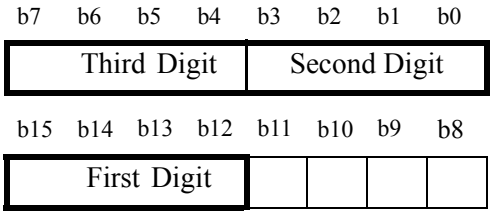
Note 1: Available in North America and Australia.

[3] Kind of Fault



b0-b7:
01H: Health Check Error

[4] Fusion Point Code (FPC) (0-253 in decimal)

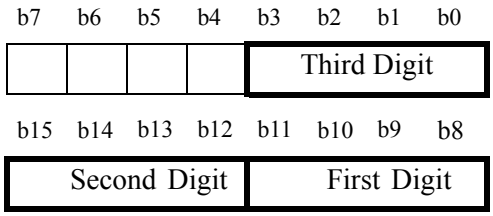


b0-b3: The second digit of FPC
b4-b7: The third digit of FPC
b8-b11: Used by TN
b12-b15: The first digit of FPC

Note: FPC is displayed in right-aligned.

Note: When FPC is not used all digits are displayed with “0.”

[5] Tenant Number (TN) (Up to 3 digits in decimal)

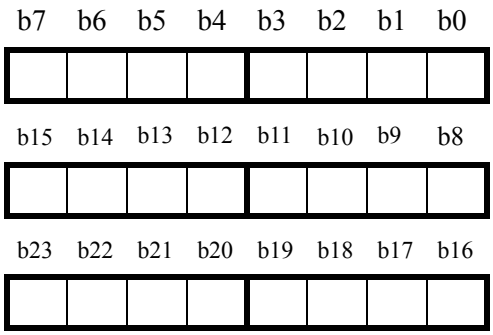


b0-b3: The third digit of TN
b4-b7: Used by FPC
b8-b11: The first digit of TN
b12-b15: The second digit of TN

Note: The tenant number is displayed in right-aligned.

Note: When the tenant number is not used all digits are displayed with “0.”

[6] Station Number (STN) (Up to 6 digits)



[Example]

- Station number is “210” (3 digits), “21 A0 00” is displayed.
- Station number is “423*0” (5 digits), “42 3B A0” is displayed.

Note: Station number is displayed in left-aligned.

Note: When station number is not used, all digits are displayed with “0.”

Note: Station number is expressed in the following way.
- 1-9: Number
- A: 0
- B: *
- C: #
- D, E, and F: Not used

[7] User Group Number (UGN) (1-255 in decimal)

b0-b3: The second digit of UGN
b4-b7: The third digit of UGN
b8-b11: Not used
b12-b15: The first digit of UGN

b7	b6	b5	b4	b3	b2	b1	b0
Third Digit				Second Digit			
b15	b14	b13	b12	b11	b10	b9	b8
First Digit							

Note: FPC is displayed in right-aligned.

Note: When FPC is not used all digits are displayed with “0.”

[8] Telephone Number (TELN) (Up to 16 digits)

b7	b6	b5	b4	b3	b2	b1	b0
b15	b14	b13	b12	b11	b10	b9	b8
b23	b22	b21	b20	b19	b18	b17	b16
b31	b30	b29	b28	b27	b26	b25	b24
b39	b38	b37	b36	b35	b34	b33	b32
b47	b46	b45	b44	b43	b42	b41	b40
b55	b54	b53	b52	b51	b50	b49	b48
b63	b62	b61	b60	b59	b58	b57	b56

[Example]

When Telephone Number is “76#543210”, “76 C5 43 21 A0 00 00 00” is displayed.

Note: Telephone Number is displayed in left-aligned.

Note: When Telephone Number is not used all digits are displayed with “0.”

Note: Station number is expressed in the following way.
- 1-9: Number
- A: 0
- B: *
- C: #
- D, E, and F: Not used

[9] Term LENS (6 digits, LENS)

b7	b6	b5	b4	b3	b2	b1	b0
Second digit of MG				First digit of MG			
b15	b14	b13	b12	b11	b10	b9	b8
Unit				Second digit of Group			
b23	b22	b21	b20	b19	b18	b17	b16
First digit of Group				Level			

b0-b3: The first digit of MG Number for IP station
b4-b7: The second digit of MG Number for IP station
b8-b11: The second digit of Group Number for IP station
b12-b15: Unit Number for IP station
b16-b19: Level Number for IP station
b20-b23: The first digit of Group Number for IP station

[Example]

When LENS is “012167”, “01 21 67” is displayed.

[10] PH LENS (6 digits, LENS)

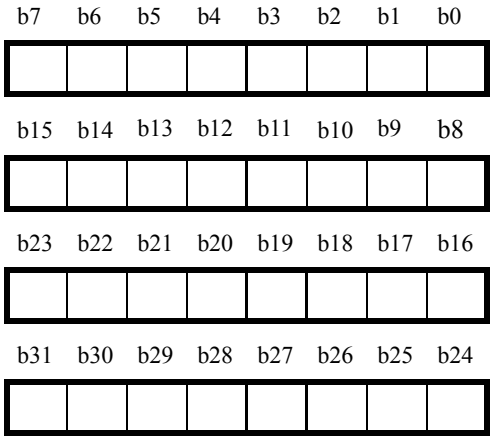
b7	b6	b5	b4	b3	b2	b1	b0
Second digit of MG				First digit of MG			
b15	b14	b13	b12	b11	b10	b9	b8
Unit				Second digit of Group			
b23	b22	b21	b20	b19	b18	b17	b16
First digit of Group				Level			

b0-b3: The first digit of MG Number of PH to which IP station register
b4-b7: The second digit of MG Number of PH to which IP station register
b8-b11: The second digit of Group Number of PH to which IP station register
b12-b15: Unit Number of PH to which IP station register
b16-b19: Level Number of PH to which IP station register
b20-b23: The first digit of Group Number of PH to which IP station register

[Example]

When LENS is “021200”, “02 12 00” is displayed.

[11] IP Address (4 bytes)

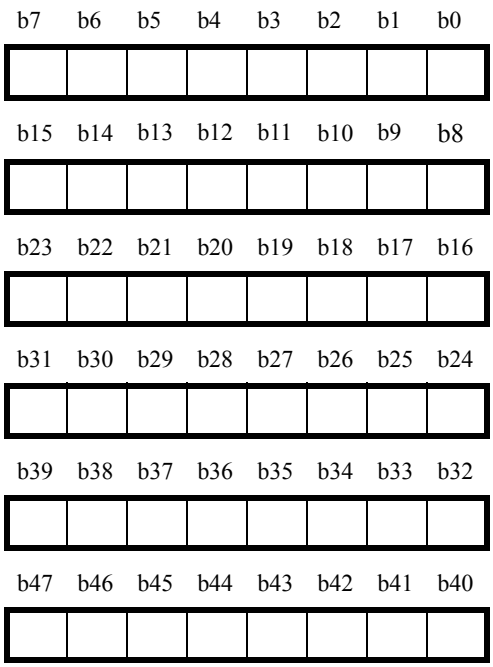


b0-b7: The first digit from the left (Hex.)
b8-b15: The second digit from the left (Hex.)
b16-b23: The third digit from the left (Hex.)
b24-b31: The fourth digit from the left (Hex.)

[Example]

When IP address is “192.168.1.12”, “C0 A8 01 0C” is displayed.

[12] MAC Address (6 bytes)



b0-b7: The first digit from the left (Hex.)
b8-b15: The second digit from the left (Hex.)
b16-b23: The third digit from the left (Hex.)
b24-b31: The fourth digit from the left (Hex.)
b32-b39: The fifth digit from the left (Hex.)
b40-b47: The sixth digit from the left (Hex.)

[Example]

When MAC address is “11-22-33-4C-5D-66”, “11 22 33 4C 5D 66” is displayed.

Note: Virtual MAC address will be displayed in the case of IPG Digital or UG50-DLC.

35-L:IP Equipment Network Failure Warning (Media Gateway)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message is issued when the system detects a failure between the MG-SIP equipment and the counter gateway communications.

```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

Note: This message is available since FP95-113 V3.

[1] Location of Virtual Signal Channel

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
0EH: SIP-MG

[3] Kind of Fault

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
01H: Path Failure of SIP-MG

[01H] Kind of Fault: 01H (Path Failure of SIP-MG)

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2] [3]  [4]  [5]  [6]   [7]   [4]  [5]   [6]  [7]   [4]  [5]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XX00  6:0000 0000 0000 0000
  [5] [6]   [7]   [4]    [5]  [6]   [7]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of Virtual Signal Channel

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
0EH: SIP-MG

[3] Kind of Fault

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
01H: Path Failure of SIP-MG

[4] RT

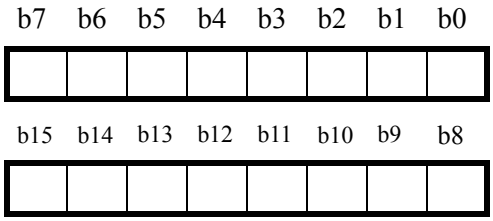
b7	b6	b5	b4	b3	b2	b1	b0

b15	b14	b13	b12	b11	b10	b9	b8

b0-b7: The route (RT) number (1-255) (**Note 1**) where the fault happened

Note 1: Little-endian order.

[5] LGRT

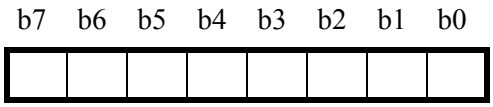


b0-b15: The logical route (LGRT) number (1-899) (**Note 2**, **Note 3**) where the fault happened

Note 2: Little-endian order.

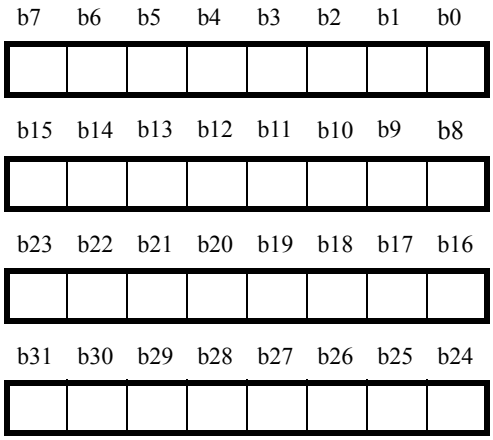
Note 3: If there is no logical route assigned the value is 0 and the command screen displays "-".

[6] Path ID



b0-b7: The path number (1-255) where the fault happened

[7] IP Address of Remote Gateway
(IP Address of Counter Gateway)



b0-b7: The first digit from the left (Hex.)
b8-b15: The second digit from the left (Hex.)
b16-b23: The third digit from the left (Hex.)
b24-b31: The fourth digit from the left (Hex.)

[Example]

- IP address 192.168.1.12 will be translated to "C0 A8 01 0C".

Note: Data from [4] to [7] is displayed in one set with a maximum of four sets displayed. Each set is active as long as the value for [4] RT number is not 0.

35-M:IP Equipment Network Restore (Media Gateway)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is issued when the system detects that the communication between the MG-SIP equipment and the counter gateway is restored.

```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

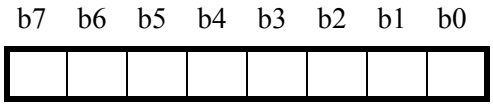
Note: This message is available since FP95-113 V3.

[1] Location of Virtual Signal Channel



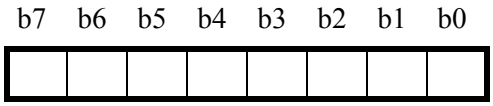
b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type



b0-b7:
0EH: SIP-MG

[3] Kind of Fault



b0-b7:
01H: Path Failure of SIP-MG

[01H] Kind of Fault: 01H (Path Failure of SIP-MG)

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2] [3]  [4]  [5]  [6]   [7]    [4]  [5]   [6]  [7]    [4] [5]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XX00  6:0000 0000 0000 0000
  [5] [6]   [7]   [4]    [5]  [6]   [7]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of Virtual Signal Channel

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
0EH: SIP-MG

[3] Kind of Fault

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
01H: Path Failure of SIP-MG

[4] RT

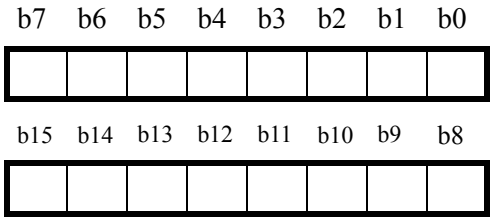
b7	b6	b5	b4	b3	b2	b1	b0

b15	b14	b13	b12	b11	b10	b9	b8

b0-b7: The route (RT) number (1-255) (**Note 1**) that is recovered

Note 1: Little-endian order.

[5] LGRT

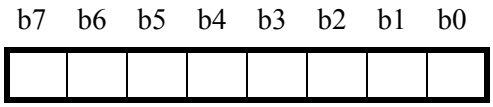


b0-b15: The logical route (LGRT) number (1-899) (**Note 2**, **Note 3**) that is recovered

Note 2: Little-endian order.

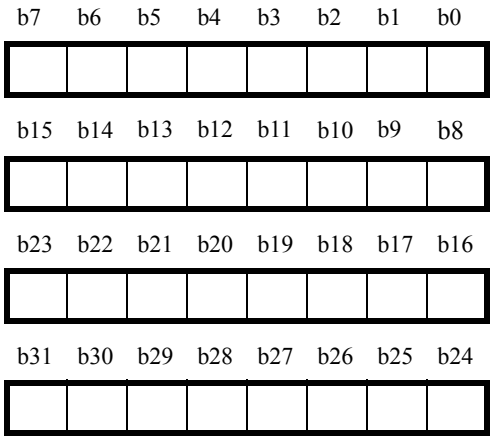
Note 3: If there is no logical route assigned the value is 0 and the command screen displays "-".

[6] Path ID



b0-b7: The path number (1-255) that is recovered

[7] IP Address of Remote Gateway
(IP Address of Counter Gateway)



b0-b7: The first digit from the left (Hex.)
b8-b15: The second digit from the left (Hex.)
b16-b23: The third digit from the left (Hex.)
b24-b31: The fourth digit from the left (Hex.)

[Example]

- IP address 192.168.1.12 will be translated to "C0 A8 01 0C".

Note: Data from [4] to [7] is displayed in one set with a maximum of four sets displayed. Each set is active as long as the value for [4] RT number is not 0.

35-N:IP Equipment Information Report (Media Gateway)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	1		

This message is issued when the system detects a mismatch in the path data of the Telephony Server and the MG-SIP.

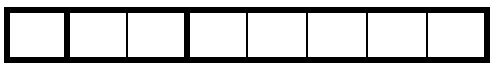
```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

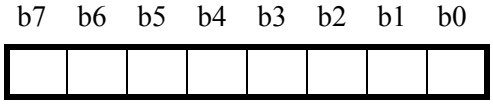
Note: This message is available since FP95-113 V3.

[1] Location of Virtual Signal Channel



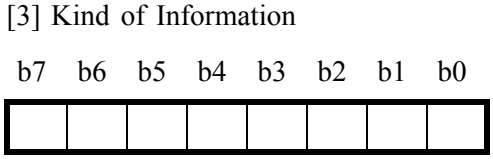
b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type



b0-b7:
0EH: SIP-MG

[3] Kind of Information



b0-b7:
01H: Mismatch in SIP-MG Path Information Registration Status (Device)
02H: Mismatch in SIP-MG Path Information Registration Status (Path)

[01H] Mismatch in SIP-MG Path Information Registration Status (Device)

```
1:XXXX XX00 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1] [2]  [3]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of Virtual Signal Channel

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
0EH: SIP-MG

[3] Kind of Information

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
01H: Mismatch in SIP-MG Path Information Registration Status (Device)

[02H] Mismatch in SIP-MG Path Information Registration Status (Path)

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2] [3] [4] [5] [6] [7] [8]  [9] [10] [11][12] [13][14] [15][16]  [17][18] [19][20] [21][22] [23][24]

4:XXXX XXXX XXXX XXXX  5:XXXX XX00 0000 0000  6:0000 0000 0000 0000
  [25][26] [27][28] [29][30] [31][32]  [33][34] [35]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Location of Virtual Signal Channel

b7	b6	b5	b4	b3	b2	b1	b0

b0-b4: Group No.
b5, b6: Unit No.
b7: MG No. (0/1 = Even-numbered MG/Odd-numbered MG)

[2] MG Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
0EH: SIP-MG

[3] Kind of Information

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7:
02H: Mismatch in SIP-MG Path Information Registration Status (Path)

[4] - [35] Path ID

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: Path number where the registration data mismatch is detected (1-255)

Note: A maximum of 32 units are displayed. The message is activated if path number value is any other than 0.

36-A:Office Data Copy Status Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

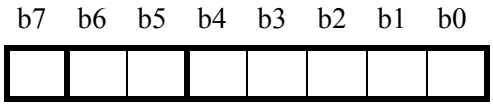
This message is displayed when the Office Data transfer is completed or started.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]                                  [2]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XX00 0000 0000
                                  [2]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Office Data Copy Type

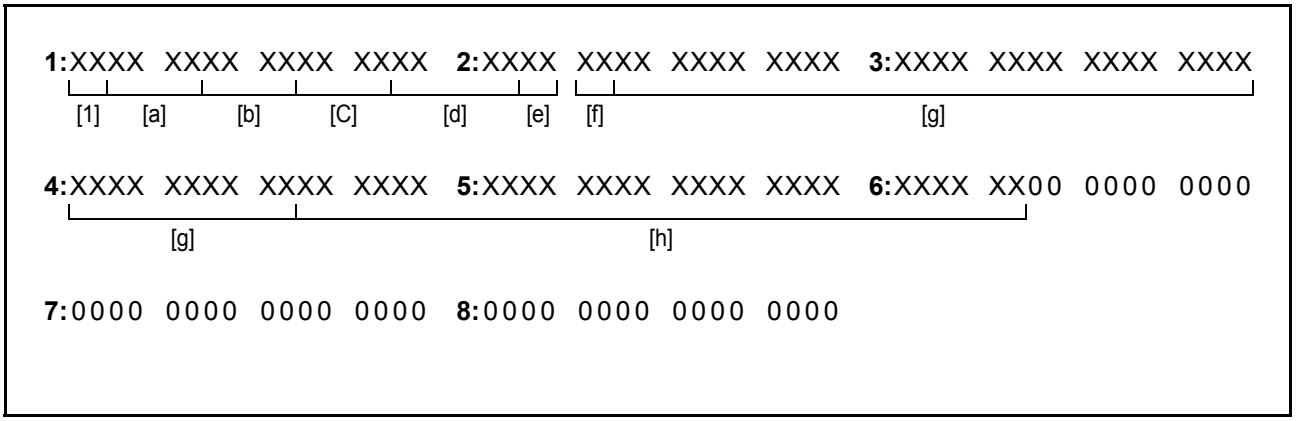


b0-b7:
10: Copy of the Office Data is started (DM-LDM)
20: Copy of the Office Data is finished (DM-LDM)
30: Copy of the Office Data is started (NDM)
40: Copy of the Office Data is finished (NDM)
50: Copy of the Office Data for Fusion Network is started
60: Copy of the Office Data for Fusion Network is finished

[2] Detailed information

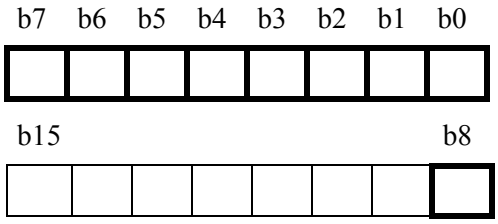
These data depend upon the kind of Office Data Copy [10, 20, 30, 40, 50, or 60]. For the detail, see the following pages.

The detail for the Data information [2]
[When the kind of Office Data Copy is 10/20/30/40]



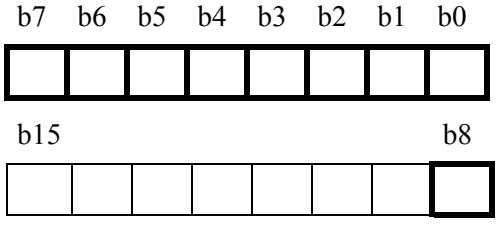
[1]: This data indicates 10, 20, 30, or 40.

[a] Broadcast Destination LP [System 0] (indicates in Logical PBI number)



b0: PBI No.30 (No.0 CPU system on LP00)
b1: PBI No.38
b2: PBI No.40 (No.0 CPU system on LP08)
b3: PBI No.48
b4: PBI No.50 (No.0 CPU system on LP16)
b5: PBI No.58
b6: PBI No.60 (No.0 CPU system on LP24)
b7: PBI No.68
b8: PBI No.02 (No.0 CPU system on SP) **Note 1**

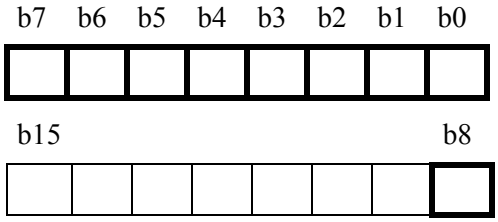
[b] Broadcast Destination LP [System 1] (indicated in Logical PBI number)



b0: PBI No.31 (No.1 CPU system on LP00)
b1: PBI No.39
b2: PBI No.41 (No.1 CPU system on LP08)
b3: PBI No.49
b4: PBI No.51 (No.1 CPU system on LP16)
b5: PBI No.59
b6: PBI No.61 (No.1 CPU system on LP24)
b7: PBI No.69
b8: PBI No.03 (No.1 CPU system on SP) **Note 1**

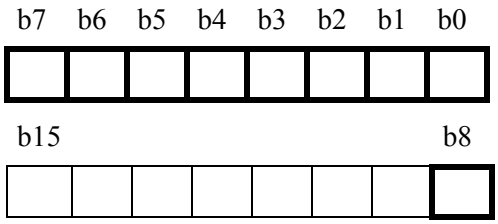
Note 1: This bit is applied only for STBY CPU.

[c] Broadcast Completed LP [System 0]
(indicated in Logical PBI number)



b0: PBI No.30 (No.0 CPU system on LP00)
b1: PBI No.38
b2: PBI No.40 (No.0 CPU system on LP08)
b3: PBI No.48
b4: PBI No.50 (No.0 CPU system on LP16)
b5: PBI No.58
b6: PBI No.60 (No.0 CPU system on LP24)
b7: PBI No.68
b8: PBI No.02 (No.0 CPU system on SP) **Note 2**

[d] Broadcast Completed LP [System 1]
(indicated in Logical PBI number)



b0: PBI No.31 (No.1 CPU system on LP00)
b1: PBI No.39
b2: PBI No.41 (No.1 CPU system on LP08)
b3: PBI No.49
b4: PBI No.51 (No.1 CPU system on LP16)
b5: PBI No.59
b6: PBI No.61 (No.1 CPU system on LP24)
b7: PBI No.69
b8: PBI No.03 (No.0 CPU system on SP) **Note 2**

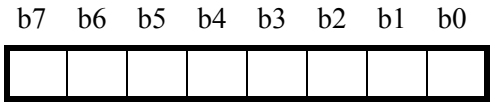
Note 2: This bit is applied only for STBY CPU.

[e] Capacity of Broadcast Data Memory (DM)/Network Data Memory (NDM)

Kind of Office Data Copy:
When the Office Data Copy [1] is 10/20 indicates Data Memory (DM),
when the Office Data Copy [1] is 30/40 indicates Network Data Memory (NDM).

When the Office Data Copy [1] = 10/20 (Data Memory Capacity)

[1] Data Memory Capacity

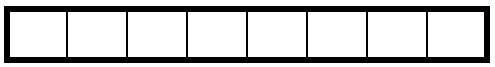


b0-b7: Data Memory Capacity (displays attributes specified by ASYD, SYS1, Index 30)
03H: 2M
07H: 3M
0FH: 4M
1FH: 5M
3FH: 6M
7FH: 7M
FFH: 8M

When the Office Data Copy [1] = 30/40 (Network Data Memory Capacity)

[1] Network Data Memory Capacity

b7 b6 b5 b4 b3 b2 b1 b0



b0-b7: Network Data Memory Capacity (displays attributes specified by ASYDL/ASYDN, SYS1, Index 514)
01H: 2M
03H: 4M
07H: 6M
0FH: 8M
1FH: 10M
3FH: 12M
7FH: 14M
FFH: 16M

[f] Capacity of Broadcast Destination Local Data Memory (LDM)/Network Data Memory (NDM)

Kind of Office Data Copy:
When the Office Data Copy [1] is 10/20 indicates Local Data Memory (LDM),
when the Office Data Copy [1] is 30/40 indicates Network Data Memory (NDM).

When the Office Data Copy [1] = 10/20 (Local Data Memory Capacity)

[1] Local Data Memory Capacity

b7 b6 b5 b4 b3 b2 b1 b0

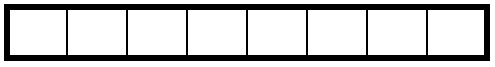


b0-b5: Local Data Memory Capacity (displays attributes specified by ASYDL/ASYDN, SYS1, Index 513)
01H: 2M
03H: 4M
07H: 6M
0FH: 8M
1FH: 10M
3FH: 12M

When the Office Data Copy [1] = 30/40 (Network Data Memory Capacity)

[1] Network Data Memory Capacity

b7 b6 b5 b4 b3 b2 b1 b0



b0-b7: Network Data Memory Capacity (displays attributes specified by ASYDL/ASYDN, SYS1, Index 957)
01H: 2M
03H: 4M
07H: 6M
0FH: 8M
1FH: 10M
3FH: 12M
7FH: 14M
FFH: 16M

[g] The number of packet for Broadcast to DM/NDM Area

[h] The number of packet for Broadcast to LDM Area

The detail for the Data information [2]
[When the kind of Office Data Copy is 50/60]

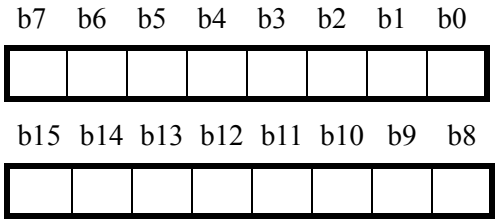
```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1]  [a]                                    [b]

4:XXXX XXXX XXXX XXXX  5:XXXX XX00 0000 0000  6:XXXX XX00 0000 0000
                  [b]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1]: This data indicates 50 or 60.

[a] Capacity of Broadcast Network Data Memory (NDM)

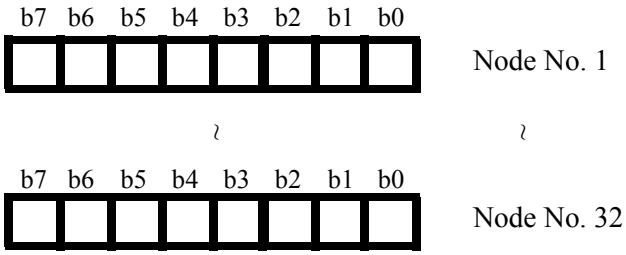


b0-7: Network Data Memory Capacity (displays attributes specified by ASYDL/ASYDN, SYS1, Index 514)
01H: 2M
03H: 4M
07H: 6M
0FH: 8M
1FH: 10M
3FH: 12M
7FH: 14M
FFH: 16M

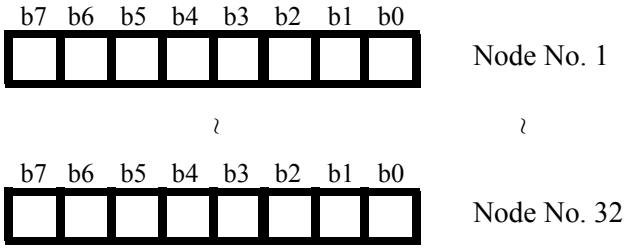
b8-b15: Network Data Memory Capacity (displays attributes specified by ASYDL/ASYDN, SYS1, Index 957)
01H: 2M
03H: 4M
07H: 6M
0FH: 8M
1FH: 10M
3FH: 12M
7FH: 14M
FFH: 16M

[b] The information of the Broadcast Destination Office (FPC No.)

When the Office Data Copy is started ([1] = 50) FPC numbers of destination office are displayed.



When the Office Data Copy is finished or failed ([1] = 60), FPC numbers of destination office are displayed.



36-E:Registration Security Alert

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	2		

This message is displayed when IP terminal user failed to enter the correct password when logging in. **Note 1**

```
1:XX00 XXXX XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:XXXX XXXX 0000 0000
  [1]  [2][3] [4][5] [6][7]  [8][9] [10][11] [12][13] [14][15] [16][17] [18][19]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

Note 1: For SIP Multiple Line terminal, this system message is not output even though a wrong password is entered in the terminal.

[1] Number of password failure

b0-b7: Number of password failure.

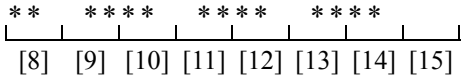
b7	b6	b5	b4	b3	b2	b1	b0

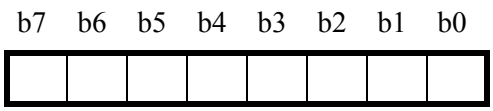
[2]-[7]MAC Address of IP Terminal

Note: Virtual MAC address will be displayed in the case of IPG Digital or UG50-DLC.

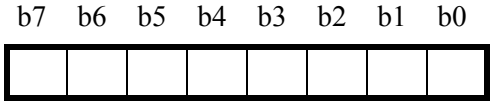
[8]-[15]Last failed LOGIN number

Last failed LOGIN number:

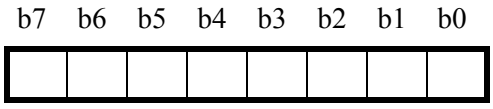




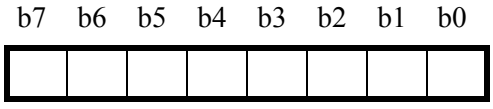
b0-b3: Failed LOGIN number DC0 [8]
b4-b7: Failed LOGIN number [9]



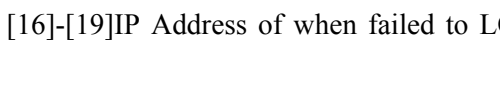
b0-b3: Failed LOGIN number DC0 [10]
b4-b7: Failed LOGIN number [11]



b0-b3: Failed LOGIN number DC0 [12]
b4-b7: Failed LOGIN number [13]



b0-b3: Failed LOGIN number DC0 [14]
b4-b7: Failed LOGIN number [15]



[16]-[19]IP Address of when failed to LOGIN

36-F:Fusion Health Check Report (Temporary/Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		-

[36-F] Fusion Health Check Report (Temporary/Permanent) is output when the timeout of Fusion Health Check is detected.

This message is of two types: Temporary and Permanent.

The temporary failure message is displayed when the timeout of Fusion Health Check is detected. **Note 1**
The permanent failure message is displayed when the timeout of Fusion Health Check has been detected ten consecutive times.

Fusion Health Check is executed by assigning the system data [ASYDL/ASYDN: SYS1, Index 530].
Also, the system message [36-F/36-K/36-T] is output when the timeout of Fusion Health Check is detected, by assigning the system data [ASYDL/ASYDN: SYS1, Index 534]. Refer to Command Manual for the detail.

Note 1: By default, the message is defined to be output at the first timeout; this output timing can be changed by the system data [ASYDL/ASYDN:SYS1, Index 656, Bits 0-3].

Note: While [36-F] Fusion Health Check Report (Temporary/Permanent) has been output for the temporary timeout of Fusion Health Check, if Release Alarm is executed, the Error Counter will be cleared. Therefore, if the timeout of Fusion Health Check is detected after Release Alarm is executed, the [36-F] Fusion Health Check Report (Temporary/Permanent) will be output for the temporary timeout of Fusion Health Check. Also, if Release Alarm is executed when the timeout of Fusion Health Check is detected, [36-K] Fusion Health Check Report (Recovery) will not be output.

Note: [36-T] Fusion Health Check Report (Permanent) can be output instead of [36-F] Fusion Health Check Report (Temporary/Permanent) for the permanent timeout of Fusion Health Check when the system data [ASYDL/ASYDN: SYS1, Index 655, Bits 0-2 = 1] is assigned, which can be specified on an FCCS type basis as shown on the table below.

FCCS Type	Target Device	Remark
Peer-to-Peer	External LAN → External LAN	Except for Ether Link Disconnection

Note: When [36-F] Fusion Health Check Report (Temporary/Permanent) or [36-T] Fusion Health Check Report (Permanent) is output, if there is no alternate route, a call cannot be made to the node where a failure is occurring until [36-K] Fusion Health Check Report (Recovery) is output. However, a call can be made within the same node or node where a failure is not occurring.

Note: When [36-F] Fusion Health Check Report (Temporary/Permanent) or [36-T] Fusion Health Check Report (Permanent) is output, [36-K] Fusion Health Check Report (Recovery) is output when released.

```
1:XXXX XXXX XXXX XX00  2:XXXX XXXX XX00 0000  3:0000 0000 0000 0000
  [1] [2] [3] [4]  [5]   [6]   [7]    [8]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Message Type

b7	b6	b5	b4	b3	b2	b1	b0

01H=FCCS Link Failure (Temporary)
02H=FCCS Link Failure (Permanent)

[2] Health Check Type

b7	b6	b5	b4	b3	b2	b1	b0

01H=Health check to FCH
02H=Health check to other node without FCH in LANI-A
03H=Health check to other node without FCH in LANI-B
04H=Health check to Peer-to-Peer Fusion LANI-A
05H=Health check to Peer-to-Peer Fusion LANI-B

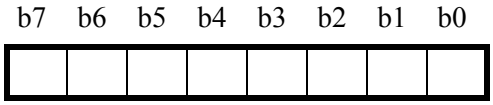
[3] Health Check Interface

b7	b6	b5	b4	b3	b2	b1	b0

01H=LANI-A
02H=LANI-B
03H=Peer-to-Peer Fusion LANI-A
04H=Peer-to-Peer Fusion LANI-B

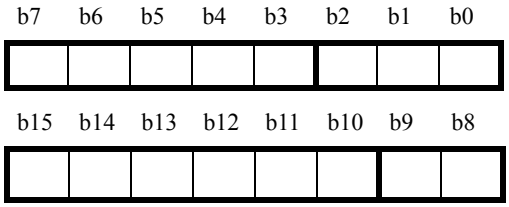
When [2] = 01H (Health Check to FCH)

[4] FCH Number



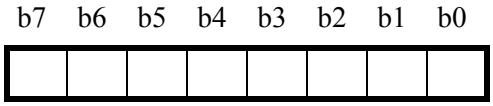
00H=Health check between nodes without FCH
01H-FFH: FCH number (1-255)

[5] Accommodated Location of FCH Card



b0-b2: Level Number
b3-b7: Group Number (0-23)
b8-b9: Unit Number (0-3)
b10-b15: Module Group Number (0-31)
(00=Health check between nodes without FCH)

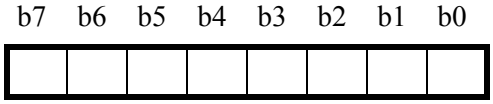
[6] FPC of the node accommodated FCH Card



00H=Health check between nodes without FCH
01H-FDH: FPC (1-253)

When [2] = 02H (Health Check to Other Node without FCH in LANI-A)
03H (Health Check to Other Node without FCH in LANI-B)
04H (Health Check of Peer-to-Peer Fusion LANI-A)
05H (Health Check of Peer-to-Peer Fusion LANI-B)

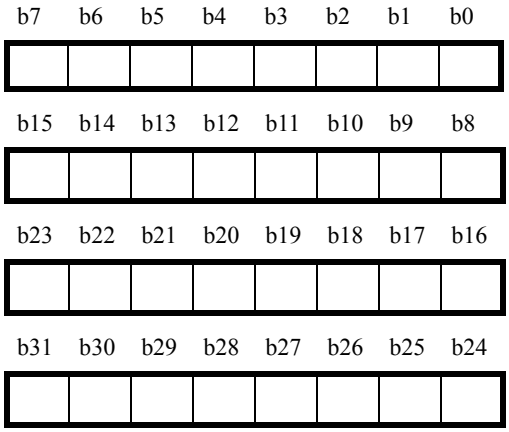
[7] Destination FPC



00H=Health check to FCH
01H-FDH: Destination FPC (1-253)

When [2] = 04H (Health Check of Peer-to-Peer Fusion LANI-A)

[8] Destination IP Address



b0-b31: Destination IP Address of Fusion Health Check failure detection (00=Except Health Check of Peer-to-Peer Fusion LANI-A)

Note: Available from FP95-112 V2.

36-G:Bandwidth Warning

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when used bandwidth exceeds the warning value defined between location IDs. Once this message is displayed, the message has not been output until its recovery. Output of this message can be controlled by using the office data settings (ABNDL). For more details refer to Command Manual.

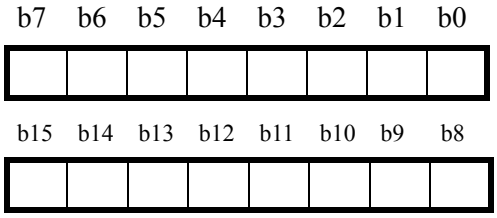
```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX 0000 0000  3:0000 0000 0000 0000
   [1]  [2]    [3]        [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] A Location ID

b0-b15 = A Location ID that exceeded the warning value



[2] B Location ID

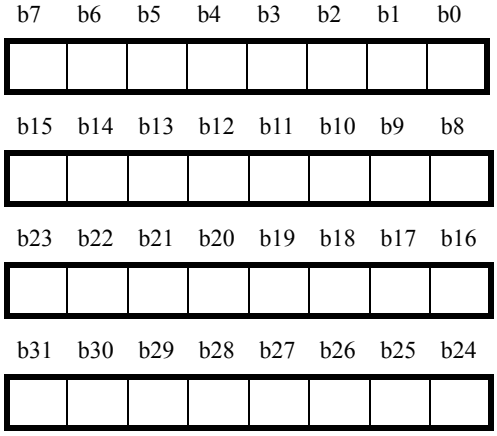
b0-b15 = B Location ID that exceeded the warning value



Note: Location IDs are set to A LOC-ID and B LOC-ID in ascending order. (A LOC-ID < B LOC-ID)

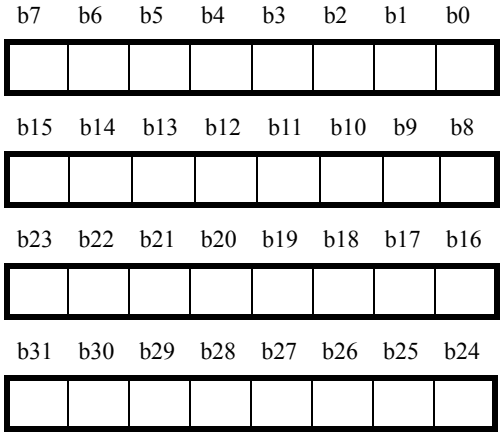
[3] Accommodated location of terminal

b0-b31 = Accommodated Equipment Number of terminal that exceeded the warning value



[4] Accommodated location of terminal

b0-b31: Accommodated Equipment Number of terminal that exceeded the warning value



Note: If bandwidth for call via IPPAD exceeds the warning value, the accommodated location (LENS) of IPPAD is outputted.

Note: For FCCS over IP:
Terminal in self-office: Accommodated location (LENS) of the terminal is outputted.
Terminal in a different office: Fusion Point Code (FPC) of the destination office is outputted to bit 8 - bit 15.

36-H:Bandwidth Warning Recovery

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when used bandwidth drops to below the warning value after the bandwidth warning. Output of this message can be controlled by using the office data settings (ABNDL). For more details refer to Command Manual.

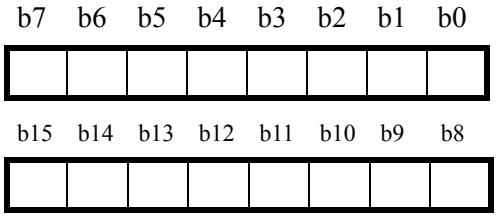
```
1:XXXX XXXX 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
  [1]  [2]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

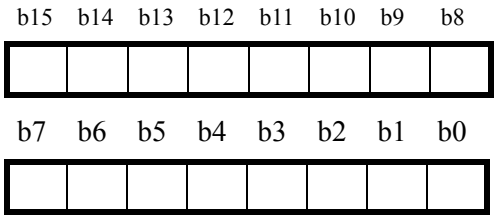
[1] A Location ID

b0-b15 = A Location ID that recovered from the bandwidth warning



[2] B Location ID

b0-b15 = B Location ID that recovered from the bandwidth warning



36-I:Bandwidth Fault

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		

This message is displayed when the bandwidth restriction has been performed in the case of bandwidth resource shortage. Output of this message can be controlled by using the office data settings (ABNDL). For more details refer to Command Manual.

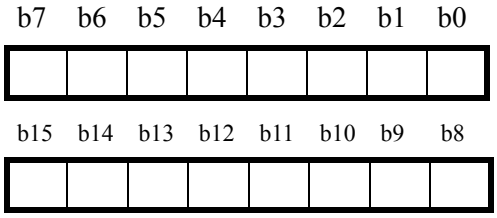
```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX 0000 0000  3:0000 0000 0000 0000
   [1]  [2]    [3]        [4]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] A Location ID

b0-b15 = A Location ID that performed the bandwidth restriction



[2] B Location ID

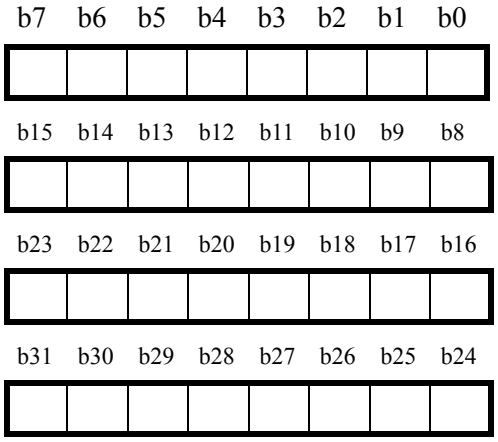
b0-b15 = B Location ID that performed the bandwidth restriction



Note: Location IDs are set to A LOC-ID and B LOC-ID in ascending order. (A LOC-ID < B LOC-ID)

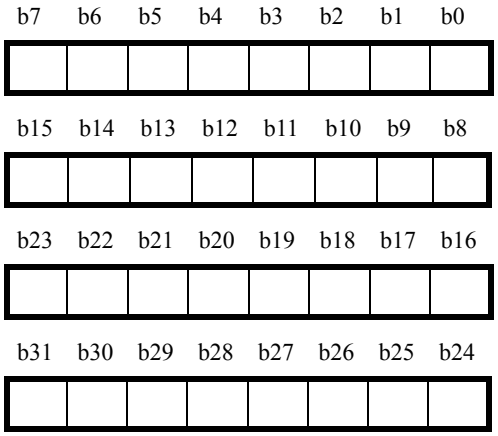
[3] Accommodated location of originated terminal

b0-b31 = Accommodated Equipment Number of Originated Terminal that performed the bandwidth restriction



[4] Accommodated location of destination terminal

b0-b31 = Accommodated Equipment Number of Destination Terminal that performed the bandwidth restriction



Note: If call origination via IPPAD is restricted, the accommodated location (LENS) of IPPAD is outputted.

Note: For FCCS over IP:
Terminal in self-office: Accommodated location (LENS) of the terminal is outputted.
Terminal in a different office: Fusion Point Code (FPC) of the destination office is outputted to bit 8 - bit 15.

Note: For CCIS over IP (PHC):
Accommodated location (LENS) of Virtual Speech Channel is outputted.

36-J:Bandwidth Fault Recovery

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when reserving enough of the bandwidth resource [for two calls calculated by G.711 (sending period 10ms)] after the bandwidth fault has terminated the bandwidth restriction. Output of this message can be controlled by using the office data settings (ABNDL). For more details refer to Command Manual.

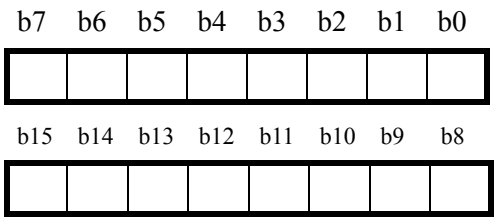
```
1:XXXX XXXX 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000
   [1]  [2]

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

[1] A Location ID

b0-b15 = A Location ID that recovered from the bandwidth fault



[2] B Location ID

b0-b15 = B Location ID that recovered from the bandwidth fault



36-K:Fusion Health Check Report (Recovery)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		-

[36-K] Fusion Health Check Report (Recovery) message is output when Fusion Health check succeeded after [36-F] Fusion Health Check Report (Temporary/Permanent) or [36-T] Fusion Health Check Report (Permanent) is output.

```
1:XXXX XXXX XXXX XX00  2:XXXX XXXX XX00 0000  3:0000 0000 0000 0000
  [1] [2] [3] [4] [5] [6]   [7]      [8]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Message Type

b7 b6 b5 b4 b3 b2 b1 b0

03H=FCCS Link Restore

[2] Health Check Type

b7 b6 b5 b4 b3 b2 b1 b0

01H=Health check to FCH
02H=Health check to other node without FCH in LANI-A
03H=Health check to other node without FCH in LANI-B
04H=Health check to Peer-to-Peer Fusion LANI-A
05H=Health check to Peer-to-Peer Fusion LANI-B

[3] Health Check Interface

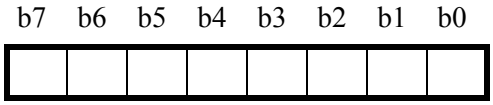
b7 b6 b5 b4 b3 b2 b1 b0

01H=LANI-A
02H=LANI-B
03H=Peer-to-Peer Fusion LANI-A
04H=Peer-to-Peer Fusion LANI-B

When [2] = 01H (Health Check to FCH)

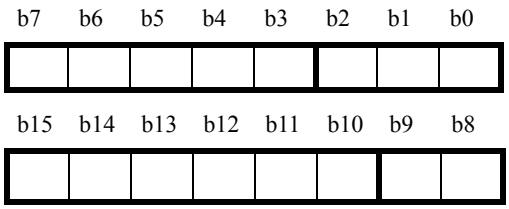
[4] FCH Number

00H=Health check between nodes without FCH
01H-FFH: FCH number (1-255)



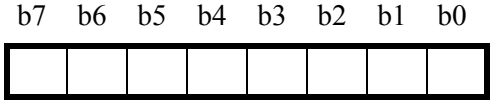
[5] Accommodated Location of FCH Card

b0-b2: Level Number
b3-b7: Group Number (0-23)
b8-b9: Unit Number (0-3)
b10-b15: Module Group Number (0-31)
(00=Health check between nodes without FCH)



[6] FPC of the node accommodated FCH Card

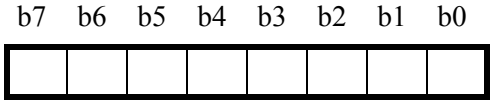
00H=Health check between nodes without FCH
01H-FDH: FPC (1-253)



When [2] = 02H (Health Check to Other Node without FCH in LANI-A)
03H (Health Check to Other Node without FCH in LANI-B)
04H (Health Check of Peer-to-Peer Fusion LANI-A)
05H (Health Check of Peer-to-Peer Fusion LANI-B)

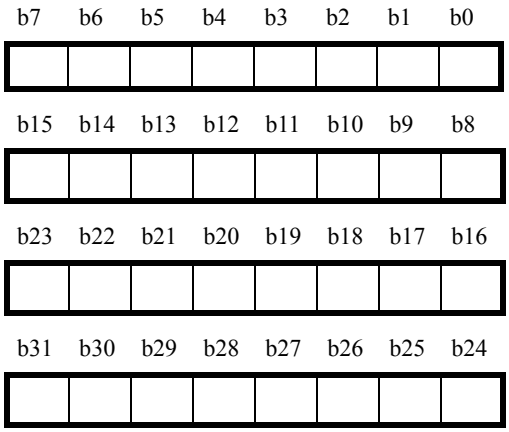
[7] Destination FPC

00H=Health check to FCH
01H-FDH: Destination FPC (1-253)



When [2] = 04H (Health Check of Peer-to-Peer Fusion LANI-A)

[8] Destination IP Address



b0-b31: Destination IP Address of Fusion Health Check recovery detection (00=Except health check to Peer-to-Peer Fusion LANI-A)

Note: Available from FP95-112 V2.

36-M:BLF Clear Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when FCCS link is down and BLF information clear of the node has started.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000


7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] FPC of BLF clear

01H-FDH: FPC (1-253)

b7	b6	b5	b4	b3	b2	b1	b0

36-N:IP Equipment Status Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

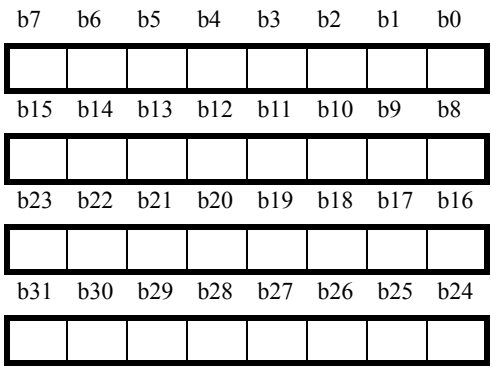
This message is displayed with the following fault log on IP devices. For more information on how to read the fault log, refer to Fault Log Information in Chapter 2.

```
1:XXXX XXXX XXXX XXXX 2:XXXX XXXX XXXX XXXX 3:XXXX XXXX XXXX XXXX
      [1]       [2]       [3]       [4]  [5]  [6]

4:XXXX XXXX XXXX XXXX 5:XXXX XXXX XXXX XXXX 6:XXXX XXXX XXXX XXXX

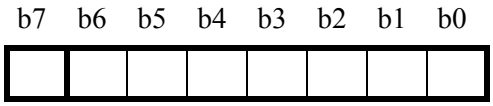
7:XXXX XXXX XXXX XXXX 8:0000 0000 0000 0000
```

[1] Port Number of Terminal



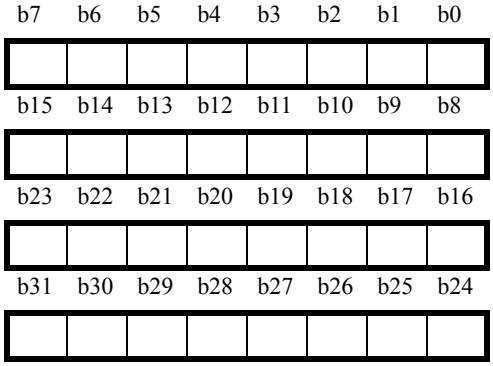
b0-b31: Port Number

[2] Type of Message



b0-b6: Sequence Number (1 - N) when message is divided.
b7: Kind of Fault Log Output
0=Message collected periodically
1=Message collected immediately after registry

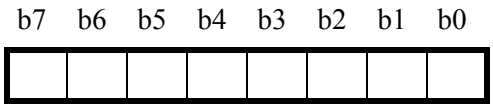
[3] IP Address of Terminal



b0-b31: IP Address (Big Endian)

Note: IP Address is indicated only for Sequence No = 1 of the divided message.

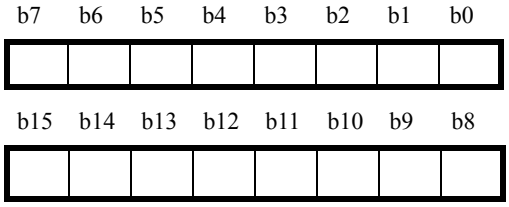
[4] TAG1



01H=TAG1

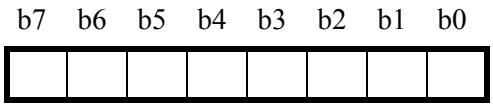
Note: The bits following TAG1 are not fixed.

[5] DTC



Data Length

[6] Data Kind



01H=Reset Factor
02H=Control Packet Send and Receive Information
03H=Registry NG Factor
F0H-FFH=Individual Data Kind

Note: Registry NG factor is not notified for DtermIP (SIP) and Softphone (SIP).

When [6] = 01H (Reset Factor) is indicated

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX 01XX XX00  3:XXXX XXXX XXXX XXXX
                                    [7]  [8]    [9] [10] [11][12]  [13]

4:XXXX XXXX 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000
    [13]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[7] DTC

Data Length

b7	b6	b5	b4	b3	b2	b1	b0

[8] Block Number

A maximum of Eight Blocks.

b7	b6	b5	b4	b3	b2	b1	b0

Note: Bits from [9] Reset Factor to [13] The number of blocks will be output by the number of Block Number.

[9] Reset Factor

b7	b6	b5	b4	b3	b2	b1	b0

00H: Not used
01H: Autonomous Reset (before registration [DRS01: Initial Setting Request])
02H: Autonomous Reset (during registration to the system [DRS03: Signaling Path Set Response])
03H: Autonomous Reset (after registration and while setting initial values)
04H: Autonomous Reset (during call processing)
05H: Autonomous Reset (during partial initialization)
06H: Autonomous Reset
(diagnosis command not received/Keep-alive NG.)
07H: Software Reset
08H: DHCP lease is expired
09H: Configuration Mode is ended (only for DtermIP)
0AH: Reset Statement from PROTIMS (only for DtermIP)
0BH-FFH: Not used

For more details see Chapter 2 Detailed Information of Reset Factors.

[10]-[12]Destination Reset Factor (Not used)

b7	b6	b5	b4	b3	b2	b1	b0

[13]Reset Execution Time

b7	b6	b5	b4	b3	b2	b1	b0
b15	b14	b13	b12	b11	b10	b9	b8
b23	b22	b21	b20	b19	b18	b17	b16
b31	b30	b29	b28	b27	b26	b25	b24
b39	b38	b37	b36	b35	b34	b33	b32
b47	b46	b45	b44	b43	b42	b41	b40
b55	b54	b53	b52	b51	b50	b49	b48
b63	b62	b61	b60	b59	b58	b57	b56

b0-b63: Reset Time
Year-Month-Day-Hour-Minute-Seconds.Hundred Millisecond

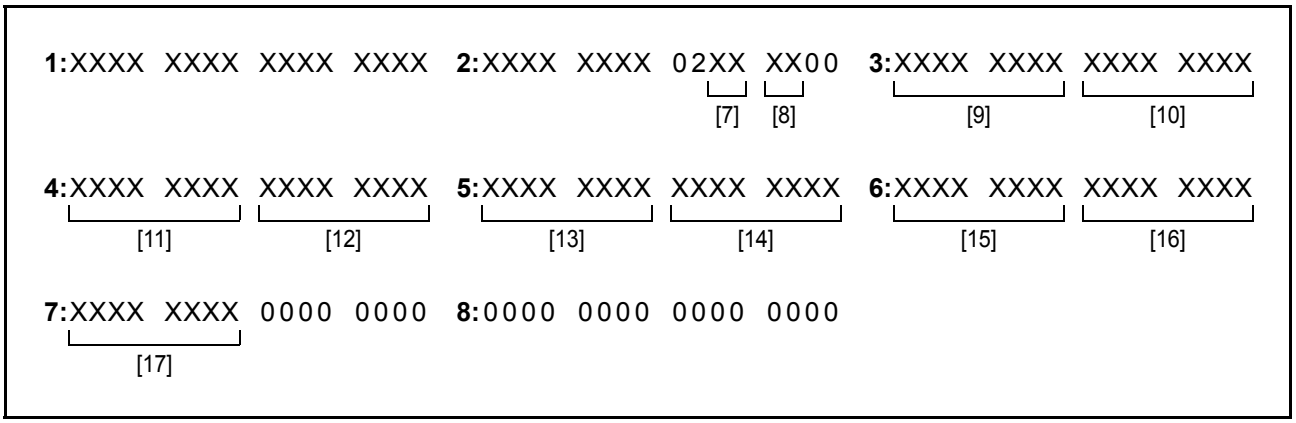
b0-b7: Year (YY1)
b8-b15: Year (YY2)
b16-b23: Month
b24-b31: Day
b32-b39: Hour
b40-b47: Minute
b48-b55: Second
b56-b63: Hundred Millisecond (SS2)

Example)
2004-04-01-09:01:12.81
b0-b7: 20
b8-b15: 04
b16-b23: 04
b24-b31: 01
b32-b39: 09
b40-b47: 01
b48-b55: 12
b56-b63: 81

Note: Not used when DTC = 2 and Block Number = 0.

When [6] = 02H (Control Packet Send and Receive Information) is indicated

Note: This is an example of the format for explanation. Actual start bit varies because it follows the undetermined size of bits ([6] = 01H) explained in the previous page.



[7] DTC

Data Length

b7	b6	b5	b4	b3	b2	b1	b0

[8] Protocol Type

b7	b6	b5	b4	b3	b2	b1	b0

01H: iLP-PM
02H: PROTIMS
03H: SIP
04H: DtermIP (SIP) or Softphone (SIP)

Note: Message that includes unsupported proprietary header or contents (such as SIP header Analysis NG, illegal dialog, CSeq error, SIP-URI error, syntax error) is not regarded as an illegal message.

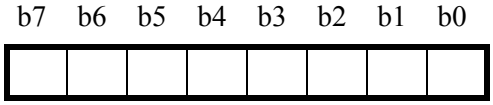
[9] Number of Control Packets Transmitted/Total Number of Packets Transmitted/Number of Request Transmitted : iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

PROTIMS: indicates the total number of transmitted PAWs/PRWs (including retransmitted and ACK).
DtermIP (SIP)/Softphone (SIP): indicates the number of request messages transmitted from the terminal to SP.

b7	b6	b5	b4	b3	b2	b1	b0

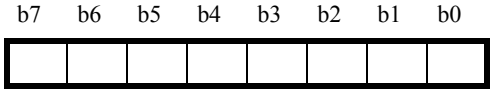
[10] Number of Control Packets Retransmitted/Number of ACK Request Packets Transmitted/ Number of Request Transmitted : iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

PROTIMS: indicates the number of retransmit PAW/PRW asking for ACK (including retransmitted ones).
DtermIP (SIP)/Softphone (SIP): indicates the number of request messages the terminal received from SP.



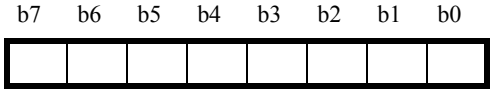
[11] Number of NG Control Packets Retransmitted/Number of Retransmitted Packets sent/Number of Response Transmitted (Normal) : iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

PROTIMS: indicates the number of retransmitted PAWs/PRWs asking for ACK. The number is incremented for every retry. (Not the number of retransmitted occurrence)
DtermIP (SIP)/Softphone (SIP): indicates the number of 200 OK response transmissions for various types of request messages.



[12] Total Number of Control Packets received/Number of Packets retried third time/Number of Response Transmitted (Error) : iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

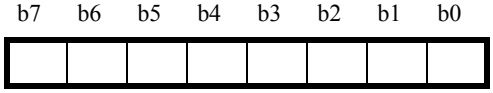
DtermIP of PROTIMS: indicates the total number of network busy indications.
DtermIP (SIP)/Softphone (SIP): indicates the number of messages other than 200 OK response for various types of request messages.



[13] Total Number of Abnormal Packets received/Total Number of Packets received/Number of Illegal Message received : iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

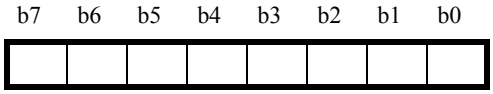
PROTIMS: indicates the total number of received PAWs/PRWs (including retransmission and ACK).
DtermIP (SIP)/Softphone (SIP): indicates the number of illegal messages which cause the system unable to continue processing.

Note: Message that includes unsupported proprietary header or contents (such as SIP header Analysis NG, illegal dialog, CSeq error, SIP-URI error, syntax error) is not regarded as an illegal message.



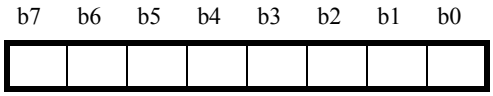
[14] Number of Abnormal Sequence/ Number of PAWs/PRWs received asking for ACK Reply/Number of Retransmission (once)
: iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

PROTIMS: indicates the total number of PAW/PRW received (including retransmission).
DtermIP (SIP)/Softphone (SIP): indicates the number of 1st retransmission (after 500 ms from the previous transmission).



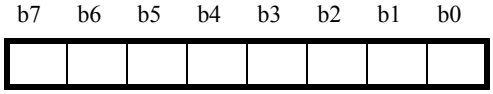
[15] Number of Overlapped Sequence/ Total Number of Abnormal Packets/Number of Retransmission (2nd)
: iLP-PM/PROTIMS/DtermIP (SIP), Softphone (SIP)

PROTIMS indicates the number of abnormal packets in PAW/PRW. Abnormal packets described here indicate unknown packets, data length abnormal, abnormal ACK number, abnormal sequence number.
DtermIP (SIP)/Softphone (SIP): indicates the number of 2nd retransmission (after 1 second from the previous transmission).



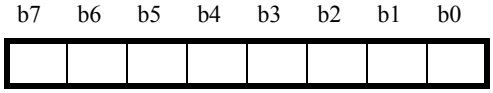
[16] Number of Retransmission (3rd)
: DtermIP (SIP), Softphone (SIP)

DtermIP (SIP)/Softphone (SIP): indicates the number of 3rd retransmission (after 2 seconds from the previous transmission).



[17] Number of Retransmission (4 times or more)
: DtermIP (SIP), Softphone (SIP)

DtermIP (SIP)/Softphone (SIP): indicates the number of 4th or more retransmission (incremented every time when 4th or more retransmission is made).



When [6] = 03H (Registry NG Factor) is indicated

Note: This is an example of the format for explanation. Actual start bit varies because it follows the undetermined size of bits ([6] = 01H) explained in the previous page.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX 03XX XX00  3:XXXX 0000 0000 0000
                                   [7]  [8]      [9] [10]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[7] DTC

Data Length

b7	b6	b5	b4	b3	b2	b1	b0

[8] Block Number

A maximum of Eight Blocks.

b7	b6	b5	b4	b3	b2	b1	b0

Note: Bits from [9] Reset Factor to [13] The number of blocks will be output by the number of Block Number.

[9] Registry NG Factor

b7	b6	b5	b4	b3	b2	b1	b0

01H: Unregistered ID (System does not have any registration.)
02H: Not available. (Equipment that had tried to make a registration is restricted.)
03H: Duplicated registry (Designated ID/Station number has been already registered. DtermIP is only available.)
05H: Invalid Accommodation Location. Function is available only when Terminal ([1] Port Number of Terminal) is used.
07H: Failed to obtain PH (Equipment that had tried to make a registration failed to obtain PH.)
09H: Equipment type is invalid. (Registration failed to obtain PH.)
0FH: A part of PH cannot be obtained.
10H: Exceeded Registration Capacity
11H: Resource is not available.
12H: Message Error

[10] DRS Number

b7	b6	b5	b4	b3	b2	b1	b0

01H: First DRS
02H: Second DRS
03H: Third DRS
04H: Fourth DRS

36-O:System Message Overflow Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	3		

This message is displayed when the number of stored system message gets to 512, the maximum storage capacity. The indication is fixed to all 0 in this system message.

```
1:0000 0000 0000 0000 2:0000 0000 0000 0000 3:0000 0000 0000 0000

4:0000 0000 0000 0000 5:0000 0000 0000 0000 6:0000 0000 0000 0000

7:0000 0000 0000 0000 8:0000 0000 0000 0000
```

36-P:IP Terminal Auto Assignment Report

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message displays the result when IP terminal automatic assignment and deletion is executed.

```
1:XXXX XX00 XXXX XXXX  2:XXXX XXXX 0000 0000  3:XXXX 0000 XXXX XX00
  [1] [2]  [3]   [4]     [5] [6] [7] [8]        [9]      [10]

4:XXXX 0000 0000 0000  5:XXXX XXXX XXXX XXXX  6:0000 0000 0000 0000
  [11]                   [12]

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Message Type

b7	b6	b5	b4	b3	b2	b1	b0

b0-b7: 01H = Assignment
02H = Deletion

[2] Result

b7	b6	b5	b4	b3	b2	b1	b0

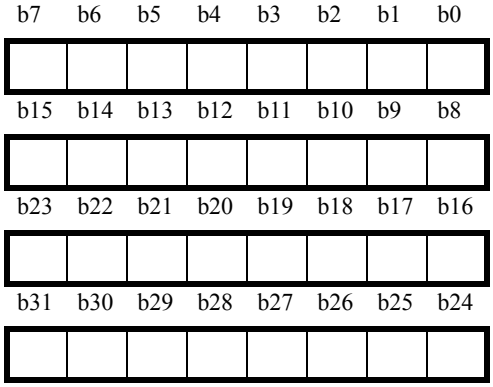
b0-b7: 00H = OK
01H = NG

[3] Error Code (when Result = NG)

b7	b6	b5	b4	b3	b2	b1	b0

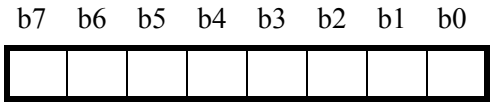
b0-b7: 00H = Nothing
01H = Station UCD Hunting Group Exists
02H = Phantom Station Data Exists
03H = Hot Line Station Data Exists
04H = Name Display Data Exists
05H = DTE Attribute Data 1 Exists
06H = DTE Attribute Data 2 Exists
07H = Secretary Station Data Exists
08H = Call Pickup Group Exists
09H = Call Pickup Expand Group Exists
0AH = Station Circular Hunting Group Exists
0BH = Station Pilot Hunting Group Exists
0CH = NDM Telephone Number Exists
0DH = Internal Zone Paging Data Exists

[4] LENS of IP Terminal (4 byte)



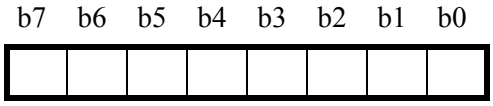
b0-b7: MG = 00-07
b8-b15: Unit = 0-3
b16-b23: Group = 00-23
b24-b31: Level = 0-7

[5] IP Terminal Kind



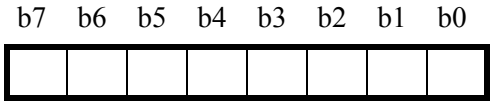
b0-b7: 01H = DtermIP (DtermIP, IP Enabled Dterm)
02H = Softphone
03H = Smart Phone (DtermIP INASET)

[6] Template ID



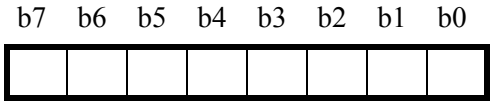
b0-b7: Template ID = 1-30

[7] RSC



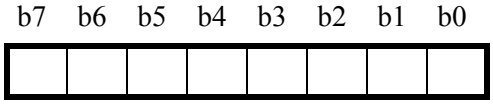
b0-b7: Route Restriction Class (0-15)

[8] SFC



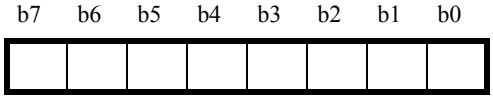
b0-b7: Service Feature Class (0-15)

[9] Tenant Number (TN) (HEX)



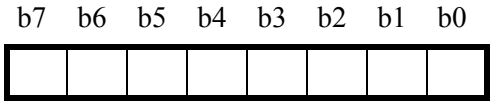
b0-b7: Tenant Number (1-63)

[10] Station Number (HEX) **Note 1**



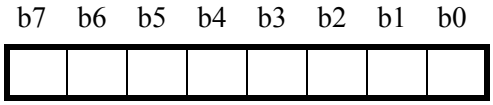
	b4 - b7	b0 - b3
[10]	DC1	DC0
	DC3	DC2
	DC5	DC4

[11]User Group Number (UGN) (HEX) **Note 1**



	b4 - b7	b0 - b3
[11]	DC1	DC0
	DC3	DC2

[12]Telephone Number (TELN) (HEX) **Note 1**



	b4 - b7	b0 - b3	b4-b7	b0-b3
[12]	DC1	DC0	DC9	DC8
	DC3	DC2	DC11	DC10
	DC5	DC4	DC13	DC12
	DC7	DC6	DC15	DC14

Note 1: Each Number/code is output in hexadecimal. Detailed meanings are as follows:

Output Data (HEX)		Actual Meaning
1 to 9	→	1~9
A	→	0
B	→	*
C	→	#
0	→	blank

36-T:Fusion Health Check Report (Permanent)

Default Alarm	Default Grade	Grade Modified	Lamp Modified
SUP	3		-

[36-T] Fusion Health Check Report message (Permanent) is output when the timeout of Fusion health check has been detected ten consecutive times after an output of temporary timeout of Fusion Health Check of [36-F] Fusion Health Check Report (Temporary/Permanent). At this time, the temporary timeout is not counted.

Fusion Health Check is executed by assigning the system data [ASYDL/ASYDN: SYS1, Index 530]. Also, the system message [36-F/36-K/36-T] is output when the timeout of Fusion Health Check is detected, by assigning the system data [ASYDL/ASYDN: SYS1, Index 534]. Refer to Command Manual for the detail.

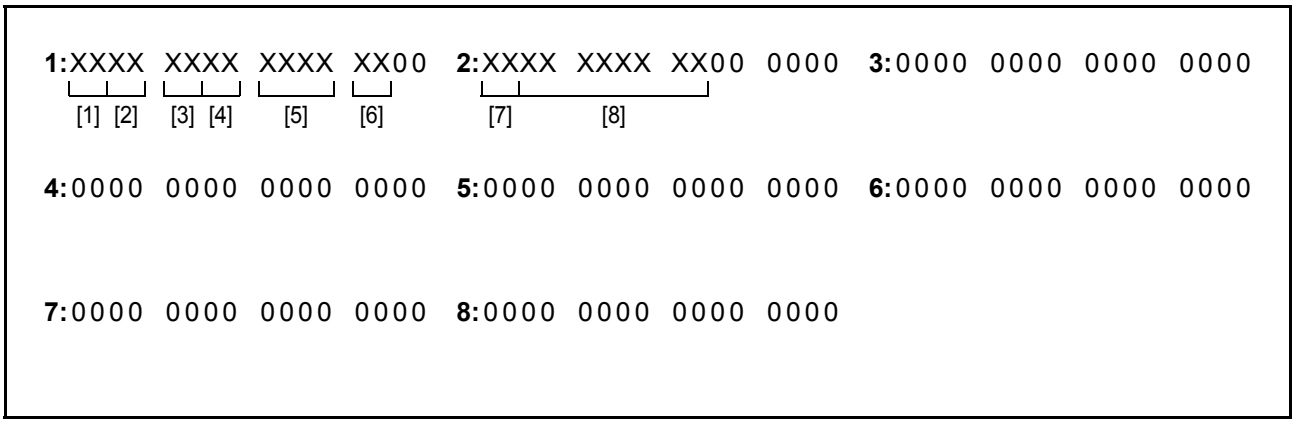
Note: [36-T] Fusion Health Check Report (Permanent) can be output instead of [36-F] Fusion Health Check Report (Temporary/Permanent) for the permanent timeout of Fusion Health Check when the system data [ASYDL/ASYDN: SYS1, Index 655, Bits 0-2 = 1] is assigned, which can be specified on an FCCS type basis as shown on the table below.

FCCS Type		Target Device	Remark
Peer-to-Peer		External LAN → External LAN	Except for Ether Link Disconnection
Legacy	FCH/IPTRK	HUB → FCH/IPTRK	Except for Internal LAN Cable Disconnection
	Internal LAN Direct Connection	HUB → HUB	

Note: When [36-F] Fusion Health Check Report (Temporary/Permanent) or [36-T] Fusion Health Check Report (Permanent) is output, if there is no alternate route, a call cannot be made to the node where a failure is occurring until [36-K] Fusion Health Check Report (Recovery) is output. However, a call can be made within the same node or node where a failure is not occurring.

Note: When [36-F] Fusion Health Check Report (Temporary/Permanent) or [36-T] Fusion Health Check Report (Permanent) is output, Fusion Health Check Report (Recovery) [36-K] is output when released.

The details of this message are in the following:



[1] Message Type

b7 b6 b5 b4 b3 b2 b1 b0

01H=FCCS Link Failure (Permanent)

[2] Health Check Type

b7 b6 b5 b4 b3 b2 b1 b0

01H=Health check to FCH
02H=Health check to other node without FCH in LANI-A
03H=Health check to other node without FCH in LANI-B
04H=Health check to Peer-to-Peer Fusion LANI-A
05H=Health check to Peer-to-Peer Fusion LANI-B

[3] Health Check Interface

b7 b6 b5 b4 b3 b2 b1 b0

01H=LANI-A
02H=LANI-B
03H=Peer-to-Peer Fusion LANI-A
04H=Peer-to-Peer Fusion LANI-B

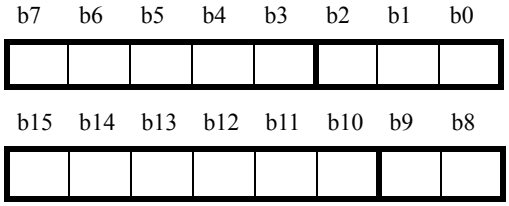
When [2] = 01H (Health Check to FCH)

[4] FCH Number

b7 b6 b5 b4 b3 b2 b1 b0

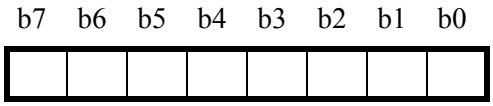
00H=Health check between nodes without FCH
01H-FFH: FCH number (1-255)

[5] Accommodated Location of FCH Card



b0-b2: Level Number
b3-b7: Group Number (0-23)
b8-b9: Unit Number (0-3)
b10-b15: Module Group Number (0-31)
(00=Health check between nodes without FCH)

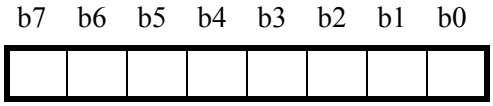
[6] FPC of the node accommodated FCH Card



00H=Health check between nodes without FCH
01H-FDH: FPC (1-253)

When [2] = 02H (Health Check to Other Node without FCH in LANI-A)
03H (Health Check to Other Node without FCH in LANI-B)
04H (Health Check of Peer-to-Peer Fusion LANI-A)
05H (Health Check of Peer-to-Peer Fusion LANI-B)

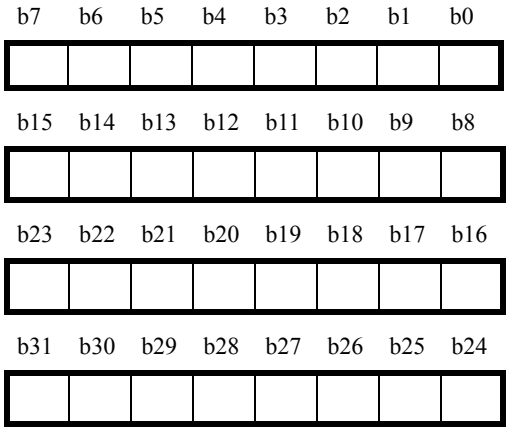
[7] Destination FPC



00H=Health check to FCH
01H-FDH: Destination FPC (1-253)

When [2] = 04H (Health Check of Peer-to-Peer Fusion LANI-A)

[8] Destination IP Address



b0-b31: Destination IP Address of Fusion Health Check failure detection
(00=Except health check to Peer-to-Peer Fusion LANI-A)

Note: Available from FP95-112 V2.

36-Y:Preventative Maintenance Notification

Default Alarm	Default Grade	Grade Modified	Lamp Modified
NON	0		

This message is displayed when there is a part whose Notice Year/Month passes. One system message includes 56 System Messages in maximum. When there are 57 or more information of Preventative Maintenance Notification, Product ID is displayed by ascending order across the multiple messages.

```
1:XXXX XXXX XXXX XXXX  2:XXXX XXXX XXXX XXXX  3:XXXX XXXX XXXX XXXX
  [1] [2] [3] [4] [5] [6] [7] [8]  [9] [10] [11][12] [13][14] [15][16]  [17][18] [19][20] [21][22] [23][24]

4:XXXX XXXX XXXX XXXX  5:XXXX XXXX XXXX XXXX  6:XXXX XXXX XXXX XXXX
  [25][26] [27][28] [29][30] [31][32]  [33][34] [35][36] [37][38] [39][40]  [41][42] [43][44] [45][46] [47][48]

7:XXXX XXXX XXXX XXXX  8:0000 0000 0000 0000
  [49][50] [51][52] [53][54] [55][56]
```

[1]-[56]: Product ID

b7	b6	b5	b4	b3	b2	b1	b0

01-FF hex: Product ID whose Notice Time (Month/Year) passes.

36-Z:Connected Equipment Failure

Default Alarm	Default Grade	Grade Modified	Lamp Modified
MJ	3		

This message is displayed when a silence is detected or input error occurs on VS-32.

Note: This system message is available from FP95-114 V4 and the firmware version SP-3891 CA-VS32 PROG-A Issue 13.

```
1:XX00 0000 0000 0000  2:0000 0000 0000 0000  3:0000 0000 0000 0000
  [1]

4:0000 0000 0000 0000  5:0000 0000 0000 0000  6:0000 0000 0000 0000

7:0000 0000 0000 0000  8:0000 0000 0000 0000
```

[1] Sequence Number

b7	b6	b5	b4	b3	b2	b1	b0

[01H]: The First Message Transmission
[02H]: The Second Message Transmission

[01H] The First Message Transmission

```
1: 01XX XXXX 0004 XXXX  2: XX00 XXXX XXXX XXXX  3: XXXX XXXX XXXX XXXX
    [1] [2] [3] [4]  [5]  [6] [7]   [8]  [9] [10]    [11]     [12]  [13]  [14][15] [16][17]

4: XXXX 0000 0000 0000  5: 0000 0000 0000 0000  6: 0000 0000 0000 0000
    [18][19]

7: 0000 0000 0000 0000  8: 0000 0000 0000 0000
```

[1] Sequence Number

[01H] The First Message Transmission

[2] LENS of Connected Device (Group, Level)

b0-b2: Level
b3-b7: Group

b7	b6	b5	b4	b3	b2	b1	b0

[3] LENS of Connected Device (MG, Unit)

b0, b1: Unit
b2-b6: MG

b7	b6	b5	b4	b3	b2	b1	b0

[4] LENS of Connected Device (FPC)

b0-b7: Fusion Point Code (FPC)

b7	b6	b5	b4	b3	b2	b1	b0

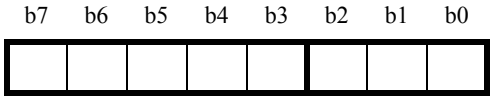
[5] Information for Engineer

NEC engineers use only.

b7	b6	b5	b4	b3	b2	b1	b0

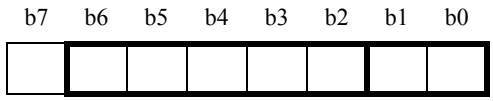
[6] Destination LENS of Connected Device (Group, Level)

b0-b2: Level
b3-b7: Group



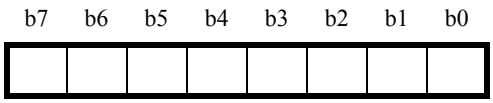
[7] Destination LENS of Connected Device (MG, Unit)

b0, b1: Unit
b2-b6: MG



[8] Destination LENS of Connected Device (FPC)

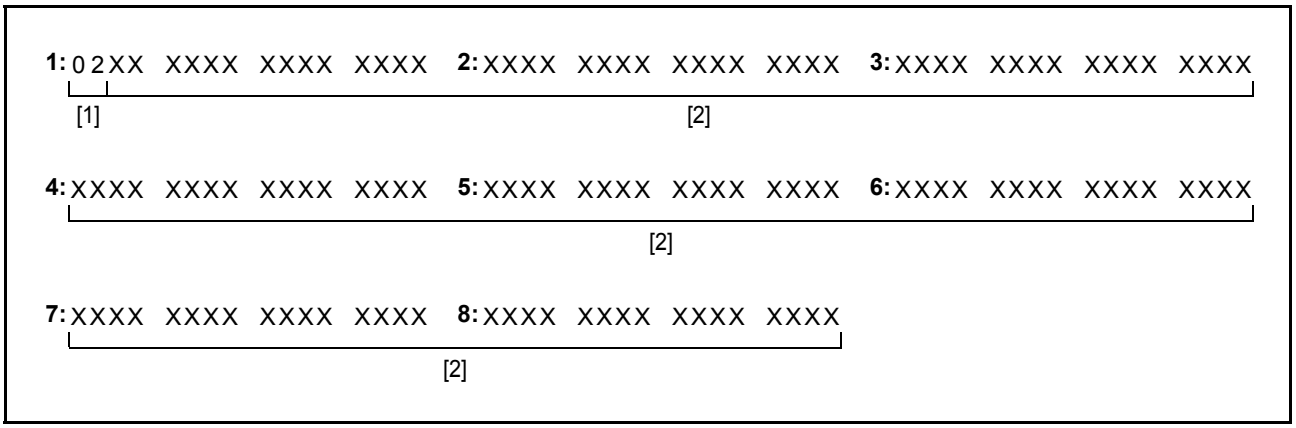
b0-b7: Fusion Point Code (FPC)



[9] - [19] Information for Engineer

NEC engineers use only.

[[02H] The Second Message Transmission



[1] Sequence Number

[02H] The Second Message Transmission

[2] Information for Engineer

NEC engineers use only.

b7	b6	b5	b4	b3	b2	b1	b0

CHAPTER 4
FAULT REPAIR PROCEDURES

This chapter provides information on how to repair the fault(s) within the system. If any of the components or equipment listed in the table below has a failure, move on to the repair procedure explained for each faulty condition.

List of Fault Repair Procedures

Fault Section	Fault status	Reference
TCP/IP link fault	LAN fault, Host fault	page 701
LAN\WAN communication fault	Network failure	page 703
IP related System Message and its reason	System Message 33-R and 33-S.	page 707
System down fault	When cannot define the reason of failure	page 711
	When a card with failure is indicated by system message	
	Fault repair/localization flow	
	Fault repair/detailed localizing operation	
TP clock failure	Clock failure	page 718

1. IP RELATED FAULT AND ITS REASON

Because of the system characteristic, there will be faults related to system side equipment and other faults (including the fault occurred on the network). Refer to system message and detailed data for the best treatment. In a certain condition, alarm may not be released or the failure may not be solved by the operation of procedure below.

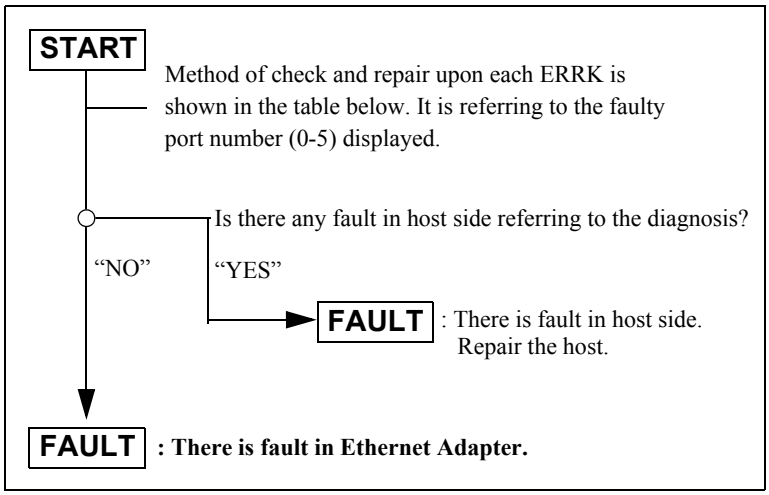
IP Related Fault and Its Reason

Fault Message		Reasons to be fixed	Reference
33-R	FNC=02H, INF=04H, FLT=04H (Exceeding maximum number of connection)	• Connection unavailable	
	FNC=05H (Sequence Error), INF=01/02H, FLT=xxH	• Initializing fault for IPPAD card • Fault in IP station while processing registration	
	FNC=03H, INF=01H, FLT=02H (Excessive loss of RTP packets)	• Occurrence of packet loss • Voice cut-off or sudden-mute • IPPAD card failure	
	FNC=05H, INF=01H, FLT=02H (Command re-sending Error)	• Communication unavailable	
33-S	FNC=02H, INF=01H (Ethernet (LAN) cable not plugged-in)	• Link down of Ethernet (LAN) cable in front panel of IPPAD card	
	FNC=05H (Sequence Error), INF=01/02H, FLT=xxH	• Initializing fault for IPPAD card • Fault in IP station while processing the registry	
	FNC=05H, INF=04G, FLT=02H (Command re-sending Error)	• Communication unavailable	

1.1 TCP/IP Link Fault

(1) Diagnosis

Because of the system characteristic, there will be faults related to system side equipment and other equipment faults (including the fault occurred on the network). Refer to system message and detailed data for the best treatment.



1.1.1 Method of Checking and Repairing Each of "4-R"KIND=03ERRK

ERRK	Detailed description about the fault and its repair	Method of check and repair
01	Indication from the Host to release all current connection corresponding TCP port was received. All of the resource related to connection on TCP port of system side is released.	Restart the Host
02 - 0B	Not used	-
0C	On all current connection corresponding TCP port, all of the resource related to connection on TCP port of system side is released, because Host operation failure was detected by the Host Health Check (Heart Beat) function.	Re-confirm if there is any problem in Host operation.
0D - FF	Not used	-

1.1.2 Method of Checking and Repairing Each of "26-V"ERRK

ERRK	Detailed description about the fault and its repair	Method of check and repair
01	All connection resource towards the corresponding TCP port is released, because text sending failure has occurred continuously on the communicating TCP port.	[1] Reconfirm if there is any failure in UAP side TCP/IP receiving process.
		[2] Reconfirm if there is any trouble in UAP side operation.
02	Text received from the Host for the corresponding TCP port was in invalid format, system side couldn't define the text received.	[1] Confirm the operation of the Host side software.
		[2] Confirm the line status of the LAN.
03	In the corresponding TCP port in link establishing process, all connection resource toward the corresponding TCP port is released upon receiving the request of Host to release (disconnect) all link establishing process.	Restart the Host.
04	All connection resource towards the corresponding TCP port is released, because operation error is detected for TCP port of host in connected state.	Reconfirm if there is any trouble in Host side operation.
05	Connection was requested, but connection could not be established because the number of connection exceeds the maximum (=16).	Adjust the number of connection to be below 17 in the application side.
06	Connection was requested, but connection could not be established because the service was invalid.	[1] Confirm ASYDL, SYS1, Index 864, bit 0=1 (internal IP/ACDP available) is assigned.
07-FF	Not used	-

1.2 LAN/WAN Communication Fault

System administrator needs to find out the fault part, define it and repair it in prompt. Administrator needs to define the trouble part by localizing the trouble down to find out the trouble part when handling the network failure for the system, peripheral equipment or other network equipment (Routers, Switches, etc.).

STEP 1 Localize the failure of communication line equipment, WLAN/LAN hardware and network environment.

STEP 2 Localize the failure of WAN/LAN equipment and its wiring.

STEP 3 Repair the failure part (equipment/change the parts or interim patch up).

Basic commands used to confirm the network equipment is listed below.

Note: Screens shown below are examples.

[PING]: Command to Confirm Physical Network Connection.

The “ping” command sends out the IP packets toward the desired Host to confirm the packet reach ability and its reply. The status of IP packet is reported by using the ICMP (Internet Control Message Protocol).

Method: ping IP address (i.e.: ping 192.168.2.10)

```
C:\TEMP>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: bytes=32 time<10ms TTL=128
Reply from 192.168.2.10: bytes=32 time<10ms TTL=128
Reply from 192.168.2.10: bytes=32 time<10ms TTL=128
Reply from 192.168.2.10: bytes=32 time<10ms TTL=128


Ping statistics for 192.168.2.10:
    Packet Sent=4, Received=4, Lost=0(0% loss)
Approximate round trip times in milli-seconds:
```

Some of the error screens when ping command is used are shown below.

- Routing trouble to the IP address

  Figure below shows that routing towards 192.168.2.10 is unavailable. Confirm the trouble part by using the tracert command.

```
C:\TEMP>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: Destination net unreachable.
Reply from 192.168.2.10: Destination net unreachable.
Reply from 192.168.2.10: Destination net unreachable.
Reply from 192.168.2.10: Destination net unreachable.
.
.
```

- Trouble in routing setting

  Figure below indicates the number of hops exceeding the TTL (Time To Live) caused by the invalid setting of default gateway or subnetmask.

```
C:\TEMP>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: TTL expired in transit
Reply from 192.168.2.10: TTL expired in transit
Reply from 192.168.2.10: TTL expired in transit
Reply from 192.168.2.10: TTL expired in transit

Ping statistics for 192.168.2.10:
     Packet Sent=4, Received=4, Lost=0(0% loss)
Approximate round trip times in milli-seconds:
     Minimum=0ms, Maximum=0ms, Average=0ms
```

- Missed to solve the host name

  Figure below indicates miss to solve the host name with the IP address in the DNS searching when sending the packet. Confirm if there is any fault in name of the host or the DNS setting.

```
C:\TEMP>ping pab160

Unknown host pab160.
```

- Communication error with the corresponding port

  Figure below indicates that routing setting is correct, however that routing is not available. Confirm the fault part using the tracert command.

```
C:\TEMP>ping pab110
Ping pab110[192.168.2.110] with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
.
.
```

[TRACERT]: Traces Route Towards Corresponding Point.

TRACERT command is used to confirm the routing setting of the router on the network route when result of ping command had any kind of fault.

Note: Some router is set not to pass the ICMP command depending on the network environment.

Method: tracert IP address (ie: tracert 192.168.2.10)

```
C:\TEMP>tracert 192.168.2.10
Tracing route to 192.168.2.10
over a maximum of 30 hops:

1 40ms 40ms 40ms lan1.xx.jp [192.xxx.xxx.xxx]
2 40ms 40ms 40ms lan2.xx.jp [192.xxx.xxx.xxx]
3 40ms 40ms 40ms lan3.xx.jp [192.xxx.xxx.xxx]
4 40ms 40ms 40ms lan4.xx.jp [192.xxx.xxx.xxx]

Trace complete.
```

[NETSTAT]: Command Used to Specify Network Status.

NETSTAT command is used to specify the cause of the problem (network problem, host setting problem or the interface problem). This command can specify the log of the packet error, indicate packet transfer on port base and protocol base. Refer to the command help for further details on netstat command.

Method: netstat

```
C:\TEMP>netstat -an
Proto(1)    Local Address(2)   Foreign Address(3)   State(4)

 TCP       router1:2972      router2:netbios-ssn  ESTABLISHED
 TCP       router1:3809      router3:netbios-ssn  ESTABLISHED
 UDP        router1:53           *
 UDP        router1:53           *
  .           .                    .                    .
  .           .                    .                    .
```

```
C:\TEMP>netstat -s

IP Statistics(a)

 Packet Received             =129314
 Received Header Errors      =0
 Received Address Errors     =0
       .
       .

ICMP Statistics(b)           Received   Sent
                             20(14)     208(15)
 Messages                    0          0(17)
 Errors                      0          0
 Destination Unreachable     0          0
 Time Exceeded               0          0
        .
        .

TCP Statistics

 Active Opens                =18613
 Passive Opens               =132
 Failed Connection Attempts  =1547
        .                       .
        .                       .
UDP Statistics(d)

 Datagrams Received          =35313
 No Ports                    =353
 Receive Errors              =15710
 Datagram Sent               =15710
```

1.3 IP Related System Messages and the Reasons

This section explains the situation when system messages shown below appeared with relation to the IP. Because of the system characteristic, there will be faults related to system side equipment and other faults (including the fault occurred on the network). Refer to system message and detailed data for the best treatment. In a certain condition, alarm may not be released or the failure may not be solved by the operation of procedure shown below.

IP related System Messages

System Messages		Reference
33-R	FNC=02H, INF=04H, FLT=04H (Exceed number of maximum connection)	IP Related System Message and Its Reason (33-R) on page 708
	FNC=03H, INF=01H, FLT=02H (Excessive RTP packet loss)	
	FNC=05H (Sequence error), INF=01/02H, FLT=xxH	
	FNC=05H, INF=04H, FLT=02H (Command re-send error)	
33-S	FNC=02H, INF=01H, FLT=01H (Fall out of Ether (LAN) cable)	IP Related System Message and Its Reason (33-S) on page 710
	FNC=05H (Sequence error), INF=01/02H, FLT=xxH	
	FNC=05H, INF=03H, FLT=01H (Health Check error)	
	FNC=05H, INF=04H, FLT=02H (Command re-send error)	

1.3.1 IP Related System Message and Its Reason (33-R)

About System Message "33-R" Outputted From IPPAD card

(1) FNC=*05H* (Sequence error), INF=*01*/*02H*, FLT=*xxH* is outputted.

Fault reason

- Trouble during a card (IPPAD) initialization
- Trouble during registration process of IP station

<<When trouble occurred during IP station registration or card initialization>>

(a) Confirm all card and IP stations are operating normally.

(b) If all operation is normal, accept it as an impulsive error and continue monitoring. When not activating normally, change the card (in case of IPPAD). Contact NEC maintenance personnel when problem is still not solved after performing this procedure.

About System Message "33-R" Outputted Only from IPPAD card

(1) FNC=*03H*, INF=*01H*, FLT=*02H* (Excessive RTP packet loss) is outputted

Fault reason

- When packet loss has occurred
- When voice data suddenly cut or muted.
- Card fault (IPPAD)

<<Sudden cut off or mute may occur when packet loss was detected on the network side>>

Hardware fault or network problem might be the reason, thus system will notice there was a impulsive problem processing the voice data.

(a) Verify the System Message and faulty part when voice data is suddenly cut off or muted.

(b) Contact the network administrator or confirm each network equipment when this fault occurs frequently.

About System Message "33-R" Outputted From Internal PHC

Note: "33-R" is not outputted by IPTRK (CCIS).

(1) FNC=*02H*, INF=*04H*, FLT=*04H* (Exceed number of maximum connection) is outputted

Fault reason

- Connection is not available.
- Exceeding the maximum number of connection allowed.

<<Unable to originate or terminate any calls using PHC>>

PHC office-to-office connection is operated with exceeding the maximum number of connections allowed.

(a) Confirm the maximum number of connection allowed, and whether trying to establish a number of connection exceeding that number or not.

(b) If operating normally after the confirmation, it is simply a matter of maximum numbers. Continue monitoring.

Note: System Message about exceeding of maximum number is outputted from internal PHC. Confirm the maximum numbers of connection allowed.

- Internal PHC (CCIS) can handle up to 64 links. If you assign ASYDL, SYS1, Index 1020, Bit 7=1 (Expansion of Links to Internal PHC (**Note 1**) is enabled), a maximum of 252 links are available at the same time.

Note 1: Available for FP95-112 V2 or later.

About System Message "33-R" Outputted From Internal PHI

(1) FNC=*05H*, INF=*04H*, FLT=*02H* (Command re-send error) is outputted

Fault reason

- Unable to reply

<<This System Message will be output when control packet send timer time out has occurred eight times continuously or when any communication fault was detected while sending the control packet.>>

Cause of the error may be the hardware fault or network interference.

(a) Confirm the operating status of MG (Media Gateway).

(b) Confirm each network equipment, connection and configuration when this fault occurs frequently.

1.3.2 IP Related System Message and Its Reason (33-S)

About System Message "33-S" Outputted From IPPAD card

(1) FNC=*02H*, INF=*01H*, FLT=*01H* (Fall out of LAN cable) is outputted.

Fault reason

- LAN cable link in the front panel of a card (IPPAD) has gone down.

<<LAN cable link down of the card>>

Drop off of the LAN cable or faulty cable between the card and HUB may be the reason.

(a) Confirm LAN cable is firmly connected to the card.

(b) If link is still down after the confirmation, check the cable again. Change the LAN cable depending on circumstances.

(2) FNC=*05H* (Sequence error), INF=*01/02H*, FLT=*xxH* is outputted.

Fault reason

- Trouble during a card (IPPAD) initialization
- Trouble during registration process of IP station

<<When trouble occurred during IP station registration or card initialization>>

Hardware failure or LAN interference may be the reason.

(a) Confirm all cards and IP stations are operating normally.

(b) If all operation is normal, the failure may be a temporary fault. Continue to monitor the system. When not activating normally, change the card (in case of IPPAD). Contact NEC maintenance personnel when problem is still not solved after performing this procedure.

About System Message "33-S" Outputted From Internal PHI

(1) FNC=*05H*, INF=*04H*, FLT=*02H* (Command re-send error) is outputted.

Fault reason

- Communication is not available.

<<This System Message will be output when control packet send timer timeout has occurred eight times continuously or when any communication fault was detected while sending the control packet.>>

Fall out of the LAN cable or faulty cable between the card and HUB may be the reason.
Hardware failure or network interference may be the reason

(a) Confirm the operation of MG (Media Gateway).

(b) Confirm each network equipment, connection and configuration when this fault occurs frequently.

1.4 System Down Fault

System Down Fault Status

Fault Status	Reference
Unable to define the fault reason	When Cannot Define the Reason of Failure on page 711
Faulty card is displayed on the System Message	When Card with Failure is Indicated on System Message on page 711
Localizing the fault	Fault Repair/Localization Flow on page 712
Specific information for fault localizing procedure	Details of Fault Repair/Localizing Flow on page 716

1.4.1 When Cannot Define the Reason of Failure

(1) Checking the power supply card

(a) Check the power supply of the load side (-48±5 VDC) on the rectifier.

(b) Confirm the NFB (Non-Fuse breaker) of the PWR card is switched ON (placed upward).

(c) Confirm alarm lamp of PWR supply for 7U-PIR Power unit/8U-PIR power (AC-DC) unit is turned on.

(2) Initialize the system. (Office data/program load initialization) (Refer to Chapter 2 of this manual)

[When station to station call is available]

Data in the memory may have been temporary corrupted. Continue to monitor the system.

1.4.2 When Card with Failure is Indicated on System Message

Fault status

- Change the card when detailed message data about the card was displayed.

(1) Change the faulty card

(a) Turn the MB (Make Busy) switch ON (upward), then pull out the card.

(b) Adjust the key setting of the replacement card to the faulty one.

(c) Turn the MB (Make Busy) switch ON (upward), then insert the card to the corresponding slot.

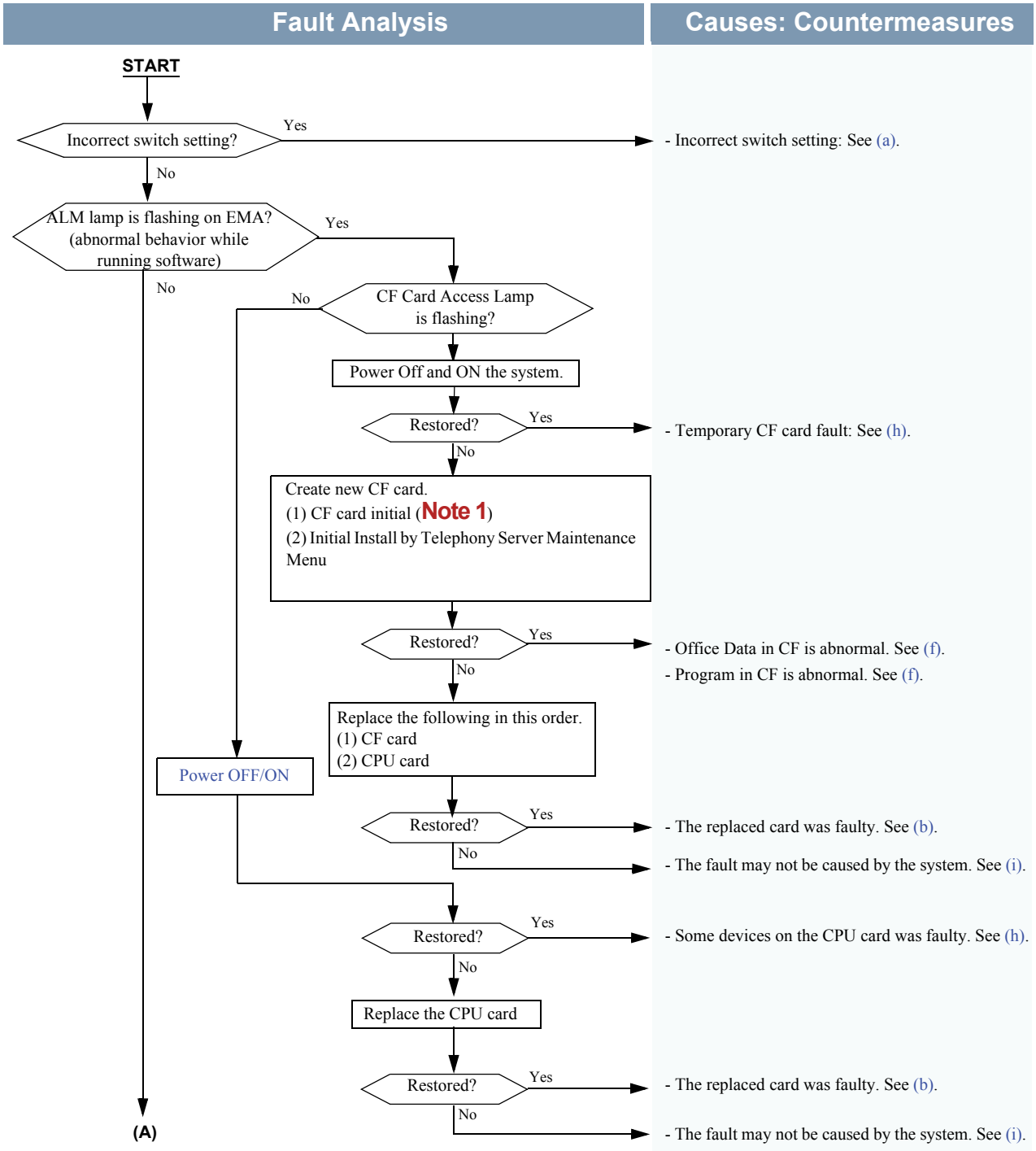
(d) Turn the MB (Make Busy) switch to OFF (downward).

(2) Confirm that station to station connection is available.

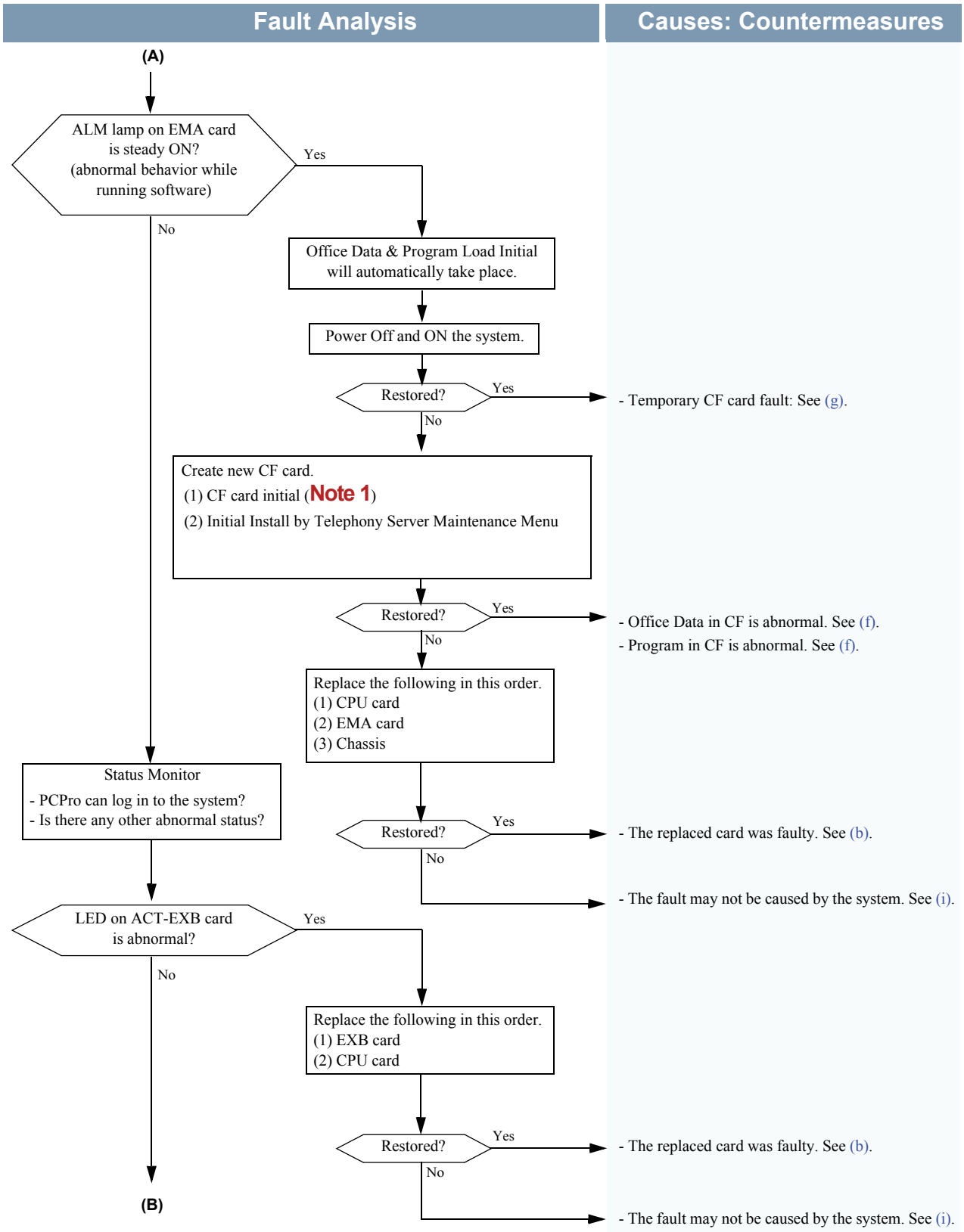
1.4.3 Fault Repair/Localization Flow

This section explains how to restore the system that is not operating normally due to fault. Follow the flow chart given below, which will show you the cause of the fault as well as countermeasures against it. Indicated countermeasures are explained in detail on page 716 "Details of Fault Repair/Localizing Flow".

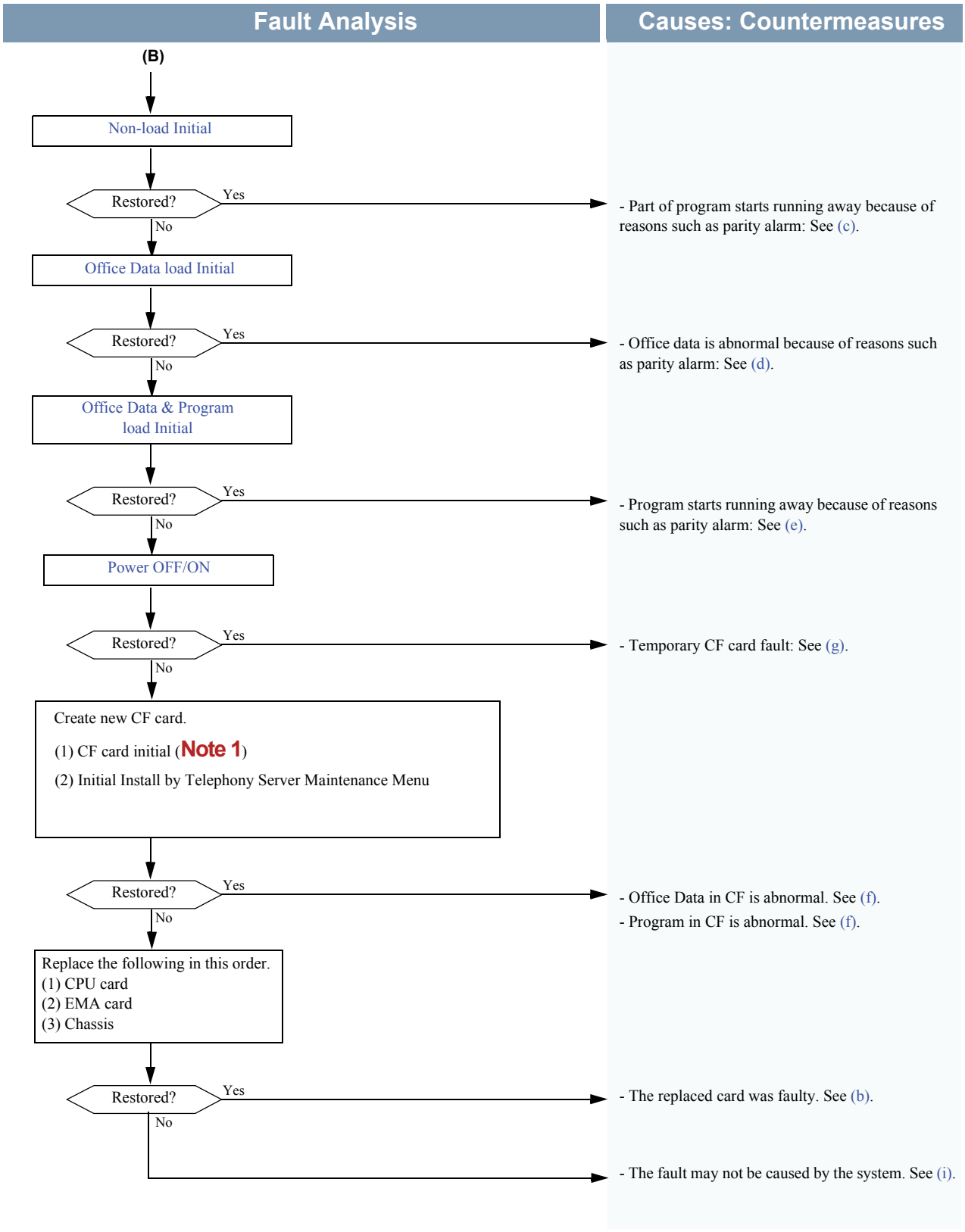
Flow Chart to Localize Faults (1/3)



Flow Chart to Localize Faults (2/3)



Flow Chart to Localize Faults (3/3)



Note 1: Refer to “Appliance Model Installation Manual” → “CHAPTER 5 SYSTEM START-UP” → “Initial Startup” → “CF Card Initialization”.

(1) Countermeasures Against Faults

(a) Available to operate normally after the system is placed in normal operation again.

(b) When the system is restored by this replacement, the replaced parts was faulty. Prepare the spare card/module/parts as required for future needs.

(c) Parity error may be still left in the system, there might be a possibility to have parity error again after normal operation, the system needs to be replaced for preventative measure.

(d) There is no more parity error in the program sector, but there might be a possibility to have parity error again after normal operation, the system needs to be replaced for preventative measure.

(e) There is no more office data error caused by the parity error, but there might be a possibility to have parity error again after normal operation, the system needs to be replaced for preventative measure.

(f) There is possibility that the contents of CF card has been modified improperly, or CF card operation is unstable. The system needs to be replaced for preventative measure.

(g) There is possibility that some devices mounted on the CPU card have a temporary failure. The system needs to be replaced for preventative measure.

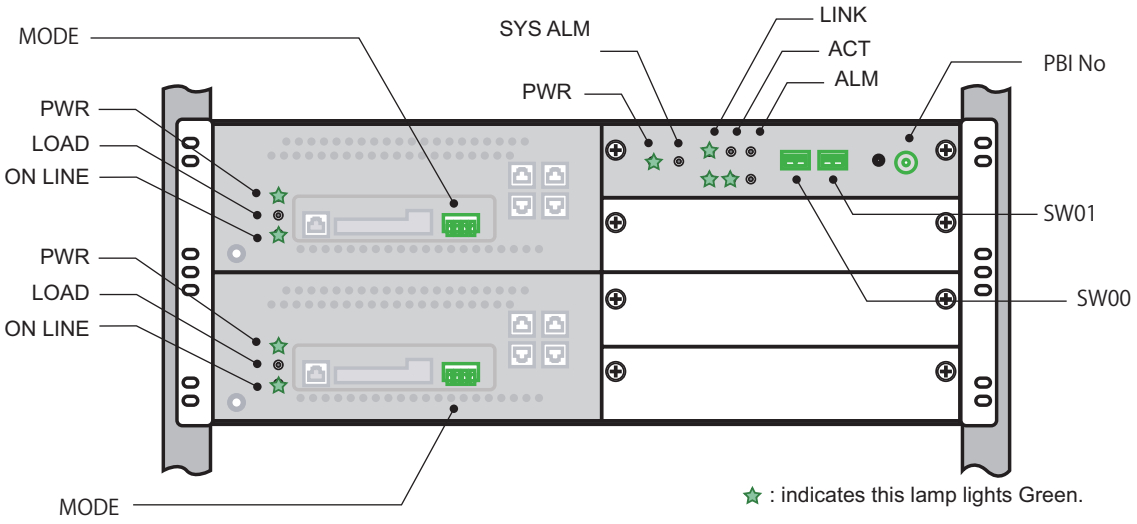
(h) CF card or some devices on the CPU card are faulty.

(i) The fault may not be caused by the system. Please contact the dealer or its service technicians.

1.4.4 Details of Fault Repair/Localizing Flow

(1) Check of Switch Setting and Lamps on the Front Panel

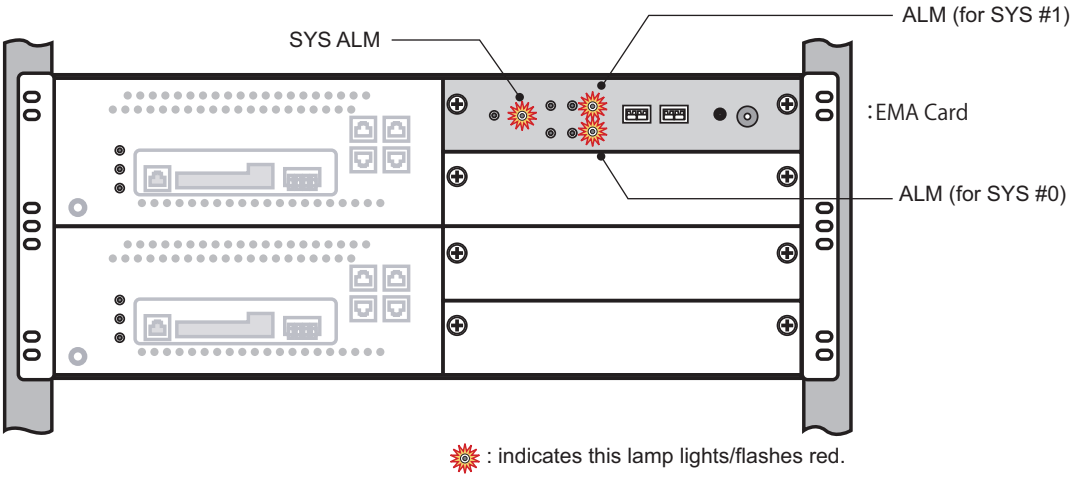
Remove the front cover and confirm the switches and lamps on the front panel when fault occurred and operating the maintenance. The following figure shows an example when the system has CPU card in dual configuration.



(2) Check of ALM lamps

Telephony Server has the following ALM lamps on the front panel. Detailed fault information can also be obtained by using PCPro.

- ALM lamps (on EMA card front panel)
- SYS ALM lamp (on EMA card front panel)
- System messages (available from PCPro)



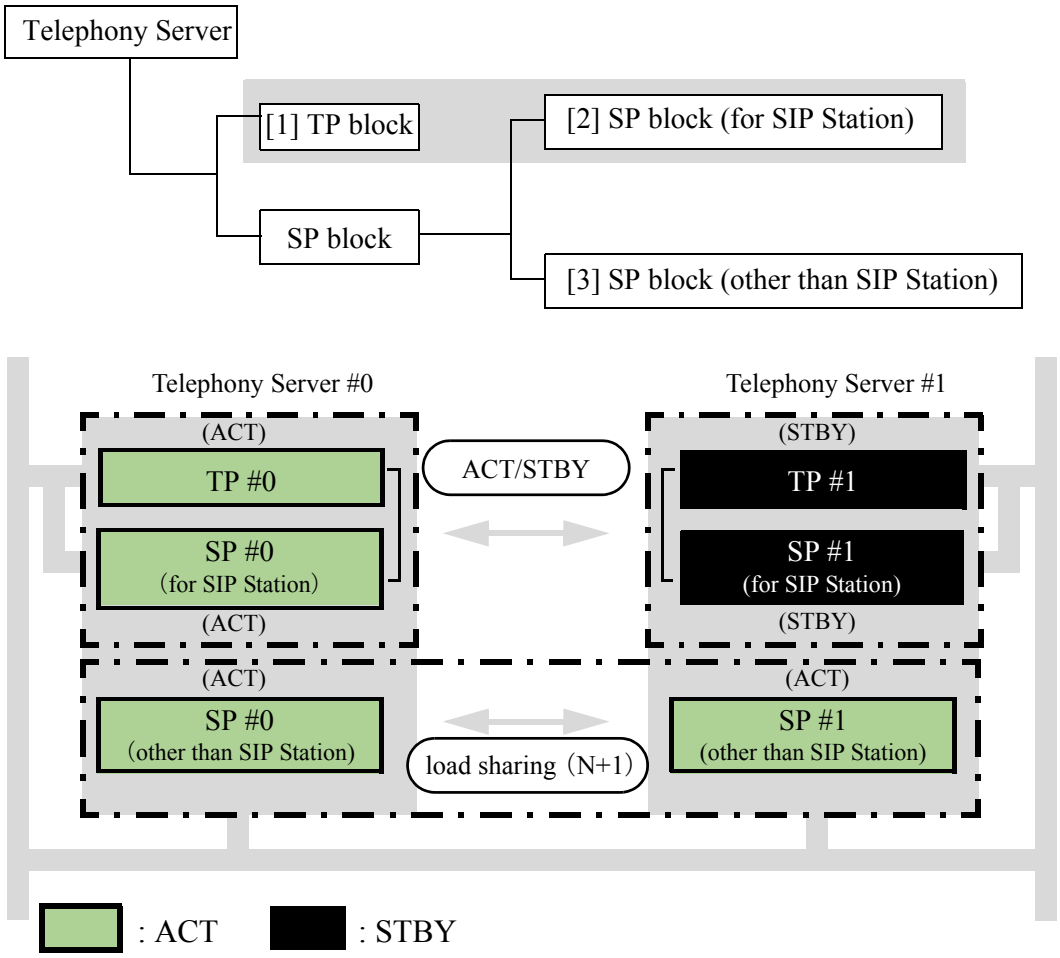
(a) ALM lamp (Red) indicates abnormal software behavior.

(b) SYS ALM lamp indicates MJ alarm when it is steady ON. Also it indicates MN alarm when it is flashing in a certain interval.

(c) Check the alarm status before starting fault repair procedure. If any change is detected, record it.

(3) System Changeover (For Dual Configuration)

Telephony Server has TP block and SP block. The latter can be divided to "SP block for SIP Station" and "SP block for other than SIP Station". When CPU card is changed over, TP block and "SP block for SIP Station" are switched over in combination. This is indicated by shaded background in the figure below. On the other hand, "SP block for other than SIP Station" operates in load sharing (N+1), which means both the "SP block for other than SIP Station" are placed in ACT mode.



(a) TP Changeover

- CMOD command from PCPro: Use this operation when available.
- Changeover by key operation: See "How to Change over CPU Card" for more details.

(b) SP Changeover

- SP block (for SIP Station): Use CMOD command. TP and this block change over in combination.
- SP block (for other than IP station): load sharing (N + 1), both SPs are placed in ACT.

WARNING **The following operations require system shutdown. Perform the following only when system shutdown is permitted.**

(4) Non-load Initial

(a) Use SINZ from the PCPro.

(5) Office Data load Initial

(a) Use SINZ from the PCPro.

Note: Proceed to the next step if this load initialization cannot be executed using this method.

(6) Office Data & Program load Initial

(a) Execute the Office Data & Program load initialization by using SINZ from the PCPro.

Note: Proceed to the next step if this load initialization cannot be executed using this method.

(7) Power OFF/ON

(a) This is to be executed only when above initialization does not work.

Note: For more details, see "How to Turn ON/OFF Whole System" in Chapter 5.

(8) Program Reinstall

(a) Reinstall the program by referring to Program Install procedure of Appliance Model Installation Manual.

(b) Execute the Load initialization by referring to (5).

1.5 Clock Failure

The clock information can be obtained from an SNTP server that is specified in advance. If system message 16-M "Hard Clock Failure" is output, establish synchronization between the SV9500 and the SNTP server. Replace the system to alternative when the clock failure cannot be fixed. See also "HOW TO SET THE CURRENT DATE AND TIME" in Chapter 2.

CHAPTER 5
OPERATION PROCEDURE FOR SYSTEM WITH PIR

1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX)

This section explains how to replace TSW cards (SPZ-SW25-A/SPZ-SW26-A) housed in a TSW-BOX. TSW-BOX plays a key role in call processing of the system and its failure will have a significant impact on the system. Great care must be used during switch operations on TSW cards.

WARNING	**Improper switch operations may result in a system down. Operate the switches with extreme care.**

Note: The TSW card to be replaced must be switched to STBY mode with the CMOD command in advance.

Note: When the TSW card in your system is in single configuration, the whole system must be shut down for replacement of the card.

[Start]

STEP 1 Is the TSW card to be replaced in STBY mode?

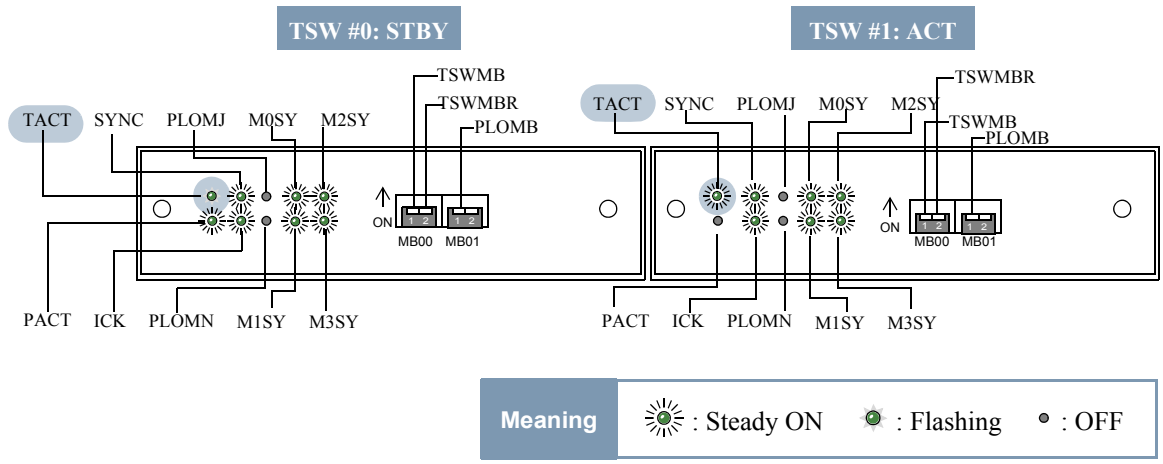
Check the TACT lamp on the TSW card. When the lamp is flashing green, the card is in STBY mode.

YES: Proceed to STEP 3.

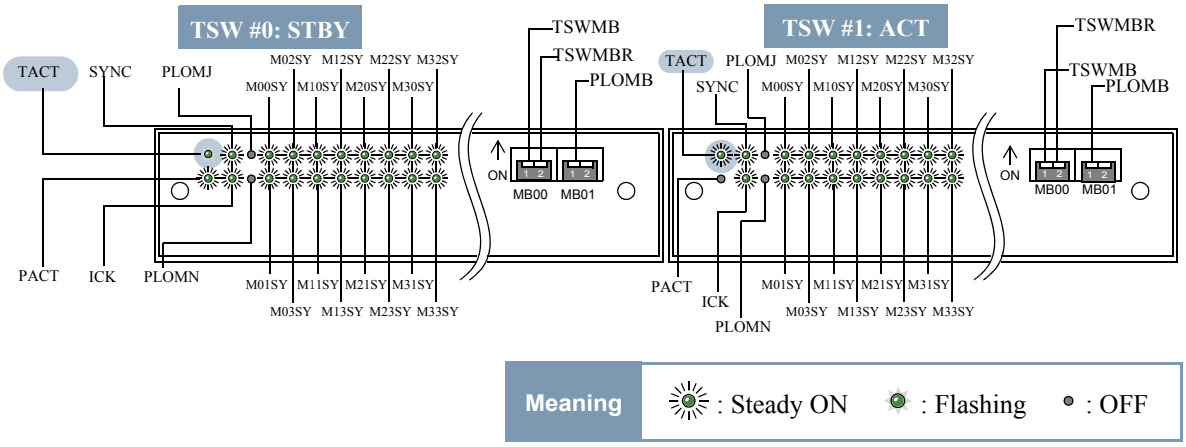
NO: Switch the TSW card to STBY mode by using the CMOD command, then proceed to STEP 2.

The figure below shows an example of the lamp status of TSW cards when TSW #0 is to be replaced.

SPZ-SW25-A



SPZ-SW26-A



STEP 2 Confirm the TSW ACT has been changed normally.

After TSW changeover, check the following lamp status:

<STBY side>

TACT lamp on TSW card = flashing green (60 IPM)
MUXACT lamp on MUX card = off

<ACT side>

TACT lamp on TSW card = steady on green
MUXACT lamp on MUX card = steady on green

STEP 3 On the TSW card to be replaced (in STBY mode), flip the TSWMBR switch up to the ON position.

TACT lamp on TSW card = off
MUXACT lamp on MUX card = off

Note: Be careful not to confuse the TSWMBR switch with the TSWMB switch next to it.

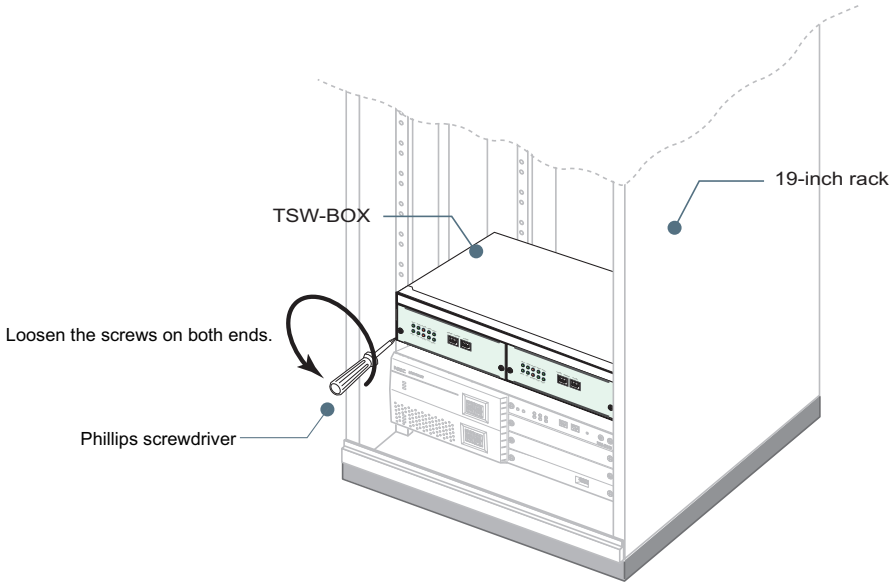
STEP 4 On the TSW card to be replaced, flip the PLOMB switch up to the ON position.

STEP 5 On the TSW card to be replaced, flip the TSWMB switch up to the ON position.

ICK lamp on TSW card = off
SYNC lamp on MUX cards (all MUX cards under the TSW card) = off

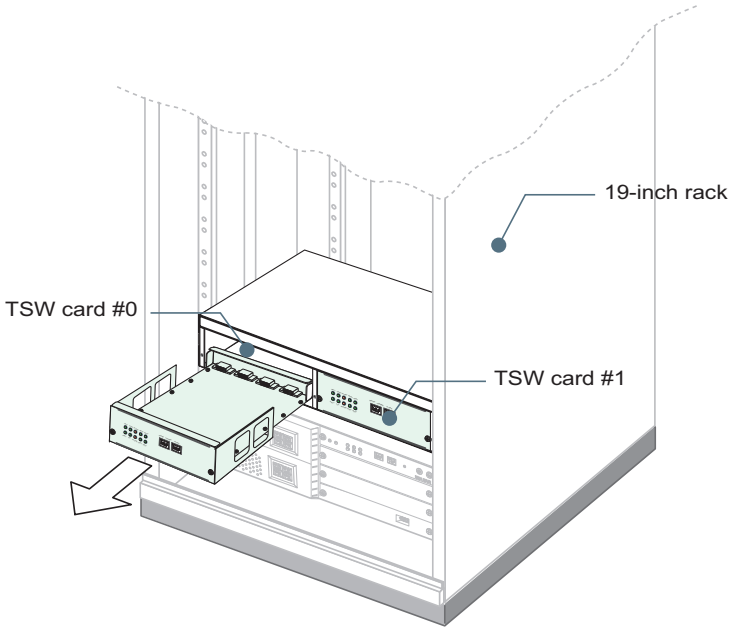
STEP 6 Remove the TSW-MUX cables between the rear side of the TSW-BOX and the MUX cards.

STEP 7 Loosen the screws on both ends (left and right) with a Phillips screwdriver.
The figure below shows an example when mounting SPZ-SW25-A.



Note: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 8 Pull the TSW card slowly toward you to remove it from the TSW-BOX. The figure below shows a TSW-BOX with dual TSW configuration (left: TSW #0, right: TSW #1).
The figure below shows an example when mounting SPZ-SW25-A.



STEP 9 On the new TSW card, set the switches exactly the same as those of the old TSW card.

STEP 10 On the new TSW card, flip the PLOMB, TSWMBR, and TSWMB switches up to the ON position.

STEP 11 Insert the new TSW card into the slot of the TSW-BOX.

STEP 12 Fasten the new TSW card by tightening the screws on both ends (left and right on the front of the card).

STEP 13 Connect the TSW-MUX cables between the rear side of the TSW-BOX and the MUX cards.

STEP 14 On the new TSW card, flip the TSWMB switch down to the OFF position.

ICK lamp on TSW card = steady on green
SYNC lamp on MUX cards (all MUX cards under the TSW card) = steady on green

STEP 15 On the new TSW card, flip the PLOMB switch down to the OFF position.

STEP 16 On the new TSW card, flip the TSWMBR switch down to the OFF position.

TACT lamp on TSW card = flashing green (60 IPM)

STEP 17 Execute the TSW ACT/STBY changeover by using the CMOD command and confirm the new TSW card is operating normally.

TACT lamp on TSW card = steady on green

[End]

2. PIR ACCOMMODATING UNIT/CARD REPLACEMENT PROCEDURE

This section explains procedures for the replacement of unit and cards mounted in PIRs.

Replacement of Unit and Cards in 7U-PIR

Replacement of Unit and Cards in 8U-PIR

Precautions:

- Use these procedures to replace a faulty unit/card with a spare or to check a spare card.
- There are functional switches (having set the default switch) on some of the cards to be replaced. As for switch setting on the cards, confirm the card mounting face layout for the PIR. When a card is replaced with a spare card, always make the same switch setting on the new card as that on the replaced card. Otherwise, electronic components on the card may be destroyed, or the card itself may fail to function normally.
- When handling a card, always use the field service kit for countermeasures against static electricity. Touching a card without using the kit may destroy the card due to static electricity on the human body.

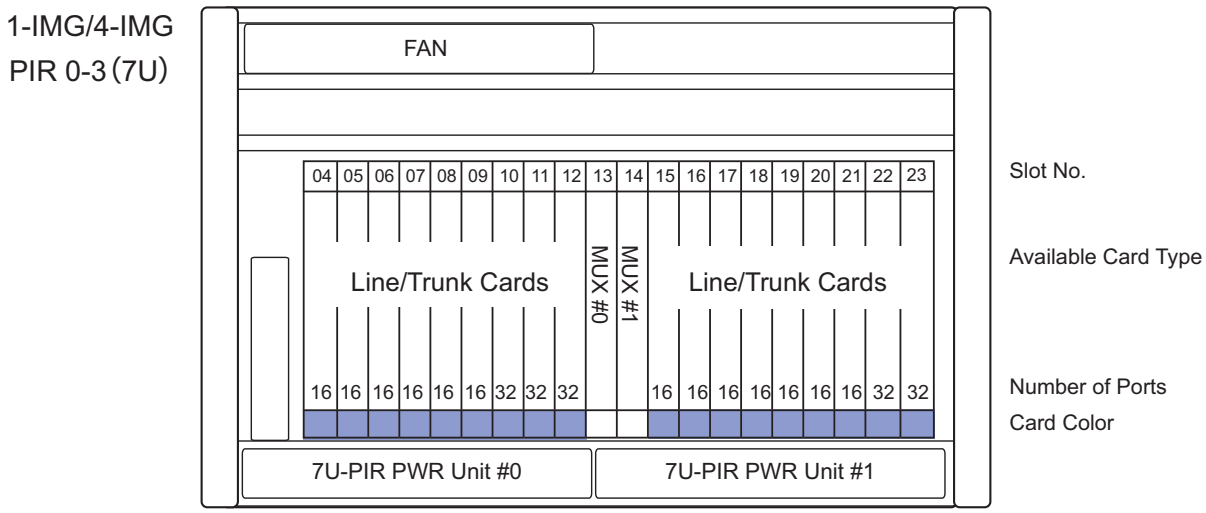
2.1 Replacement of Unit and Cards in 7U-PIR

This section explains how to replace unit and cards mounted in 7U-PIR.

2.1.1 PIR Face Layout (7U-PIR)

The figure below shows the slot configuration and the condition of mounted card types for 7U-PIR.

Card mounting of 7U-PIR



Note: Faulty switch settings may cause system down. Always handle it with care.

Corresponding alarm lamp is lit and system message is generated when a card is replaced. Reset the alarm when card replacement is completed. All system messages will be deleted when alarm is reset by the RALM command. If you need to restore system messages, read out system messages with the DFTD command before executing the RALM command.

2.1.2 Replacement Procedure for Line/Trunk Cards (7U-PIR)



Note: Before starting the process, you need to go to software switch settings of the card to be replaced and take note of them for use in STEP 9. You can access the settings via Serial Console or the CPSW command of PCPro. For information on the display of software switch settings, refer to the section entitled “Software Switch Settings” in Circuit Card Description.

[Start]

STEP 1 On the card to be replaced, check that BUSY lamps are all off.

If any one of them is on, it indicates that a line or terminal is using the card, and wait until the card becomes idle.

Note: When an ELC card is to be replaced and CALL FORWARDING (CF) BUTTON - ONE TOUCH [C-208] is being used, verify the following:

- The Call Forwarding - All Calls feature is not set to the Desktop terminals accommodated in the ELC card.

Verification can be performed by the following:

- By checking the CF Setting button lamp.
  If the lamp of the CF Setting button is turned on, press the button and check that it turns off.
- By checking the ACFS command.
  If the Call Forwarding - All Calls feature is set, disable the feature by clicking the DEL button.

Make sure that all the Desktop terminals accommodated in the ELC card have the Call Forwarding - All Calls feature in a disabled state. If the card is replaced without all the terminals having the feature disabled, in some cases the lamp of the CF Setting button may turn off but the feature still continue being set when the desktop terminals start up. In that case, use the ACFS command to disable the Call Forwarding - All Calls feature.
For an explanation of the CF Setting button, see CALL FORWARDING (CF) BUTTON - ONE TOUCH [C-208] in Data Programming Manual - Business.
For an explanation of the ACFS command parameters, see ACFS section in Business System Command Descriptions and Data Sheets chapter of Command Manual.

STEP 2 Start the MBPM command, enter data in **MG**, **Unit**, and **Group** to specify the location of the card to be replaced, and then set **MB** to 1 (Make Busy).

STEP 3 On the card to be replaced, flip the Make Busy (MB) switch up to the ON position.

STEP 4 Pull out the card from the slot.

STEP 5 On the new card, set the switches exactly the same as those of the removed card.

STEP 6 On the new card, flip the MB switch up to the ON position.

STEP 7 Insert the new card to the slot.

STEP 8 Flip the MB switch of the new card down to the OFF position.

STEP 9 Configure the software switch settings of the new card using the notes you have taken.

STEP 10 On the MBPM command screen, enter data in **MG**, **Unit**, and **Group** to specify the location of the new card, and then set **MB** to 0 (Make Idle).

[End]

2.1.3 Replacement Procedure for IPPAD Card (7U-PIR)



Note: Before starting the process, you need to go to software switch settings of the card to be replaced and take note of them for use in STEP 9. You can access the settings via Serial Console or the CPSW command of PCPro. For information on the display of software switch settings, refer to the section entitled “Software Switch Settings” in Circuit Card Description.

[Start]

STEP 1 In order to set Make Busy (MB = 1) for all the trunks connected to the IPPAD card which is to be replaced, do the following:

(1) Start the MBCT or MBCTC command.

(2) In **C_RT** and **C_TK**, enter the connection route number and connection trunk number of every trunk connected to the card, respectively, to specify the physical location of the trunk.

(3) Choose “1” for **MB** to set the connection trunk to Make Busy.

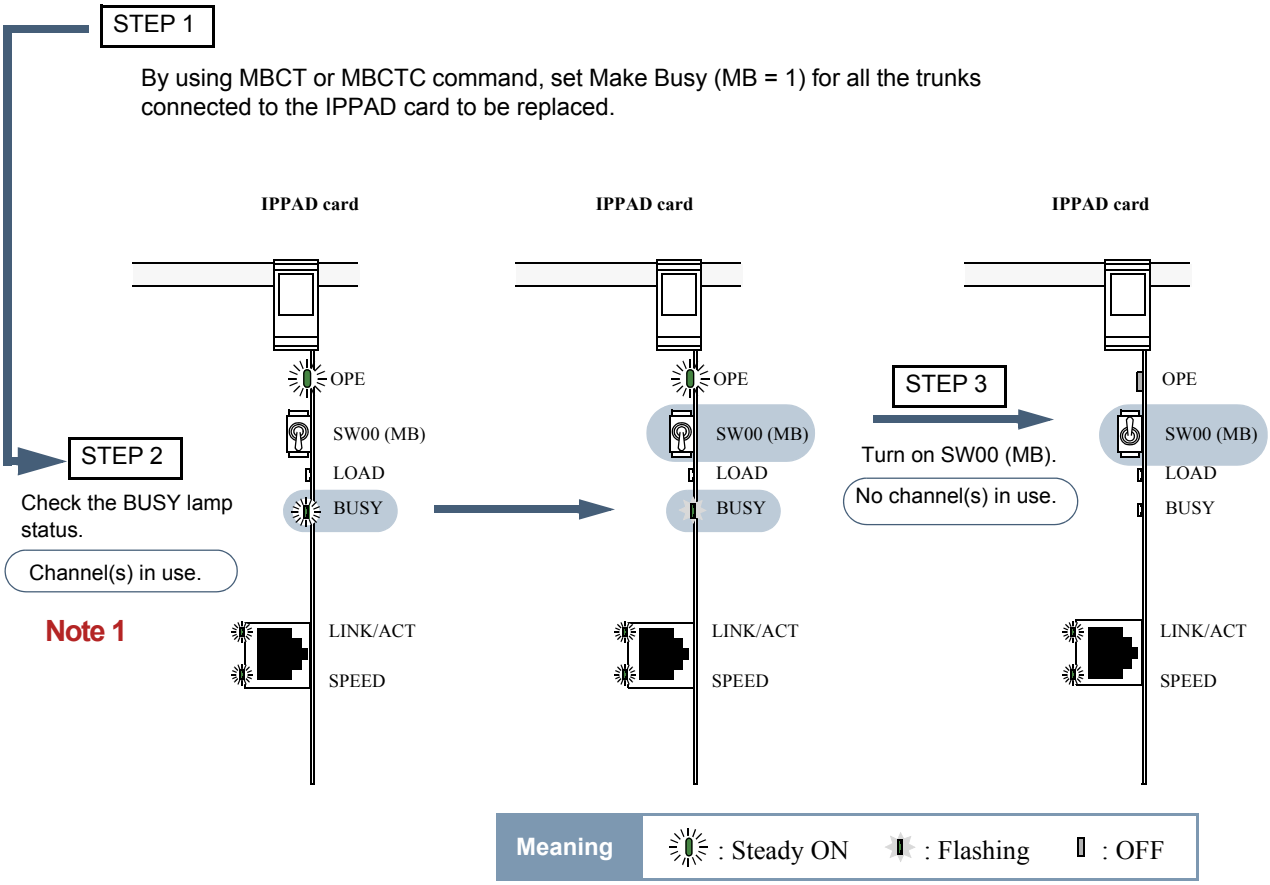
STEP 2 Make sure that the IPPAD to be replaced has no ongoing call.

When IPPAD has no ongoing call, the BUSY lamp flashes green (120 IPM).

When one or more channels are in use, the BUSY lamp will be steady on green.

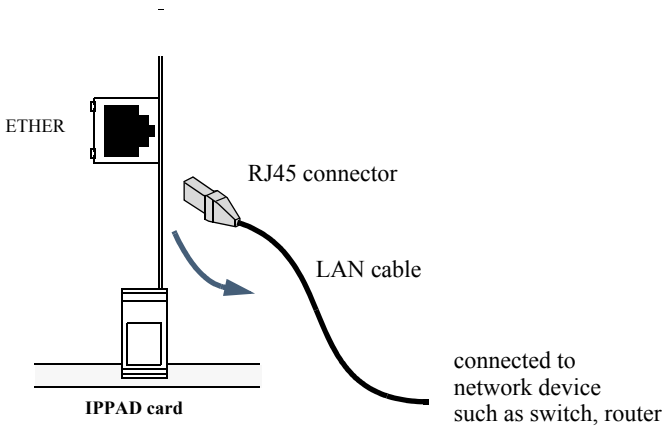
STEP 3 On the IPPAD card to be replaced, flip the MB switch up to the ON position.

The OPE lamp on the card goes off.



Note 1: When one or more lines are in use, the BUSY lamp is steady on.

STEP 4 Disconnect the LAN cable from the ETHER connector.



STEP 5 Pull out the IPPAD card from the slot.

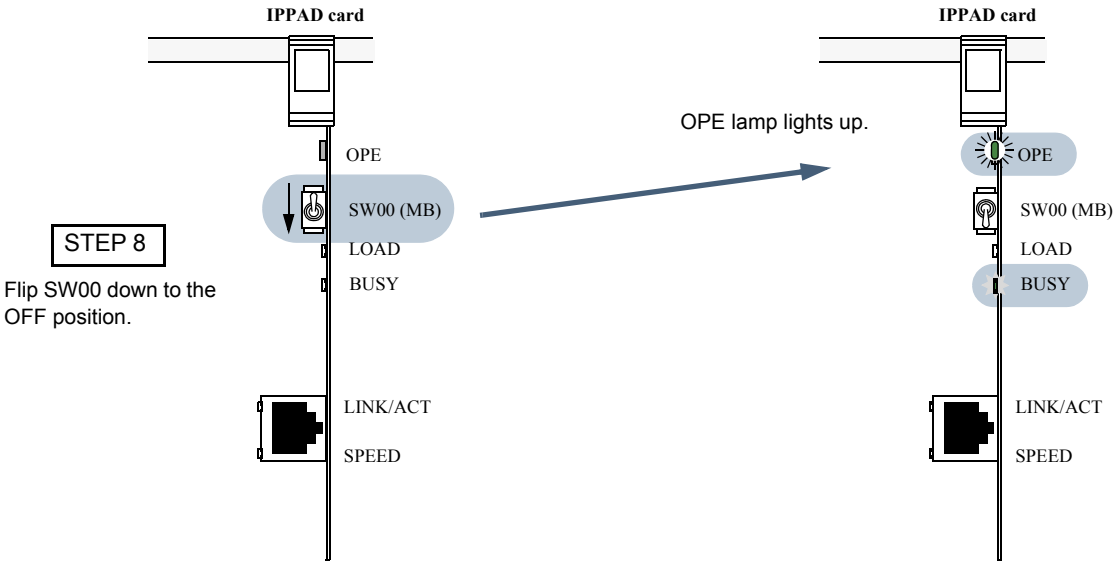
STEP 6 On a new IPPAD card, flip the MB switch up to the ON position.

STEP 7 Insert a new IPPAD card to the same slot.

STEP 8 On the new IPPAD card, flip the MB switch down to the OFF position.

The OPE lamp on the card lights up steady green.

The BUSY lamp on the card flashes green (120 IPM).



STEP 9 From Serial Console or the CPSW command of PCPro, configure the software switch settings using the notes you have taken.

STEP 10 Connect the cable disconnected in STEP 4 to the ETHER connector.

STEP 11 By using the MBCT or MBCTC command, set Make Idle (MB = 0) for all the trunks connected to the new IPPAD card.

The procedure is similar to that in STEP 1 except that **MB** must be set to “0” (Make Idle).

[End]

2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)



2.1.4.1 MUX Replacement: TSW-BOX (1-IMG/4-IMG)

This section explains the replacement Procedure for MUX card (CJ-PC00) for the system using TSW-BOX. MUX card is mounted on PIR 0/1/2/3 (Slots 13 and 14).

This card is an interface card to accommodate the Line/Trunk circuits. Replacement Procedure for this card is shown below.

WARNING

- **Improper switch operations may result in a system down. Operate the switches with extreme care.**
- **If a MUX card to be replaced has speech path in a single configuration, the PIR is unavailable when the MB switch is turned on.**

Note: When a MUX card is replaced, its speech path (TSW and MUX) must be set to STBY mode. You can use the CMOD command to switch speech path between ACT and STBY modes.

Note: Module where TSW card is mounted differs depending on system model.
1-IMG system: TSW-BOX
4-IMG system: TSW-BOX or TSWR

[Start]

Note: Proceed to STEP 6 when TSW card is in single configuration. In this case, MN alarm is generated.

STEP 1 Is the MUX card to be replaced in STBY mode?

Check the MUXACT lamp on the MUX card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 3.

NO: Switch the speech path (TSW ACT changeover) to STBY mode by using the CMOD command, then proceed to STEP 2.

STEP 2 Confirm the TSW ACT changeover is successfully completed.

Check the following lamp indications:

<STBY side>

TACT lamp on TSW card = flashing green (60 IPM)
MUXACT lamp on MUX card = off

<ACT side>

TACT lamp on TSW card = steady on green
MUXACT lamp on MUX card = steady on green

STEP 3 On the TSW card on STBY side, flip the TSWMBR switch up to the ON position.

TACT lamp on TSW card = off
MUXACT lamp on MUX card = off

Note: Be careful not to confuse the TSWMBR switch with the TSWMB switch next to it.

STEP 4 On the TSW card on STBY side, check that the PACT lamp is off. If not, flip the PLOMB switch up to the ON position to switch PLO ACT.

PACT lamp on TSW card = off

STEP 5 On the TSW card on STBY side, flip the MB switch up to the ON position.

ICK lamp on TSW card = off
SYNC lamp on MUX card = off

STEP 6 On the MUX card to be replaced, flip the MB switch up to the ON position.

PMCLKALM lamp on MUX card = steady on red

STEP 7 Disconnect the cable from the connector on the front panel of the MUX card to be replaced.

STEP 8 Extract the MUX card from the PIR.

STEP 9 On a new MUX card, flip the MB switch up to the ON position.

STEP 10 On the new MUX card, set the switches exactly the same as those of the removed card.

STEP 11 Insert the new MUX card into the PIR.

STEP 12 Connect the cable disconnected in STEP 7 to the connector on the front panel of the new MUX card.

STEP 13 On the new MUX card, flip the MB switch down to the OFF position.

PMCLKALM lamp on MUX card = off

STEP 14 Turn OFF the TSWMB switch on the TSW card.

ICK lamp on TSW card = steady on green
MUXACT lamp on MUX card = off
SYNC lamp on MUX card = steady on green

STEP 15 On the TSW card, check that M00SY-M03SY, M10SY-M13SY, M20SY-M23SY and M30SY-M33SY (M10SY-M33SY: only for 4-IMG system) lamps are all steady on green. If not, the new MUX card may not be connected correctly.

<TSW card>

TACT lamp on TSW card = off
ICK lamp on TSW card = steady on green

<MUX card>

SYNC lamp on MUX card = steady on green

STEP 16 If PLOMB switch on the TSW card is set to ON, flip it down to the OFF position.

Note: PLO ACT #0 has higher priority than PLO ACT #1. Therefore, PLO ACT #0 is automatically set to ACT when the TSWMB switch is turned ON/OFF while the PLOMB switch of TSW #0 is OFF.

STEP 17 On the TSW card, flip the TSWMBR switch down to the OFF position.

TACT lamp on TSW card = flashing green (60 IPM)

STEP 18 Execute the TSW ACT/STBY changeover by using the CMOD command and confirm the new MUX card is operating normally.

[End]

2.1.4.2 MUX Replacement: TSWR (4-IMG)

MUX card is mounted on each PIR. This card is an interface card to accommodate the Line/Trunk circuits. Replacement procedure for this card is shown below.

WARNING	• **Improper switch operations may result in a system down. Operate the switches with extreme care.** • **If a MUX card to be replaced has speech path in a single configuration, the PIR is unavailable when the MB switch is turned on.**

Note: When a MUX card is replaced, its Speech Path System must be set to STBY mode. You can use the CMOD command to switch Speech Path System between ACT and STBY modes. Before beginning this procedure, refer to Section 8.1.5.3 Manual Changeover for 4-IMG with TSWR of Section 8.1.5 Manual Changeover of Speech Path System in Chapter 2.

Note: TSW cards are mounted in a TSWR.

[Start]

Note: Proceed to STEP 3 when speech path is in single configuration. In this case, MN alarm is generated.

STEP 1 Is the MUX card to be replaced in STBY mode?

Check the MUXACT lamp on the MUX card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 3.

NO: Switch the speech path (TSW ACT changeover) to STBY mode by using the CMOD command, then proceed to STEP 2.

STEP 2 Confirm the TSW ACT changeover is successfully completed.

After TSW changeover, check the following lamp indications:

<STBY side>

TSWACT lamp on TSW card = off
OPE/MB lamp on DLKC card = off
MUXACT lamp on MUX card = off

<ACT side>

TSWACT lamp on TSW card = steady on green
OPE/MB lamp on DLKC card = steady on green
MUXACT lamp on MUX card =steady on green

STEP 3 On the TSW card (PH-SW12) on STBY side (connected to the MUX card to be replaced), flip the MBR switch up to the ON position to close the TSW.

All TSWACT lamps on TSW card on STBY side = steady on red

STEP 4 On the same TSW card, flip the MB switch up to the ON position.

SYNC lamp on MUX card = off

STEP 5 On the MUX card to be replaced, flip the MB switch up to the ON position.

PMCLKALM lamp on MUX card = steady on red

STEP 6 Disconnect the cable from the connector on the front panel of the MUX card to be replaced.

STEP 7 Extract the MUX card from the PIR.

STEP 8 On a new MUX card, flip the MB switch up to the ON position.

STEP 9 On the new MUX card, set the switches exactly the same as those of the removed MUX card.

STEP 10 Insert the new MUX card into the PIR.

STEP 11 Connect the cable disconnected in STEP 6 to the connector on the front panel of the new MUX card.

STEP 12 On the new MUX card, flip the MB switch down to the OFF position.

PMCLKALM lamp on MUX card = off

STEP 13 On the TSW card (on which you turn on the MB switch in STEP 4), flip the MB switch down to the OFF position.

ACT lamp on TSW card = steady on red
SYNC lamp on MUX card = steady on green

STEP 14 On the same TSW card, flip the MBR switch down to the OFF position.

All ACT lamps of TSW card on STBY side = off

STEP 15 Execute the TSW ACT/STBY changeover by using the CMOD command and confirm the new MUX card is operating normally.

[End]

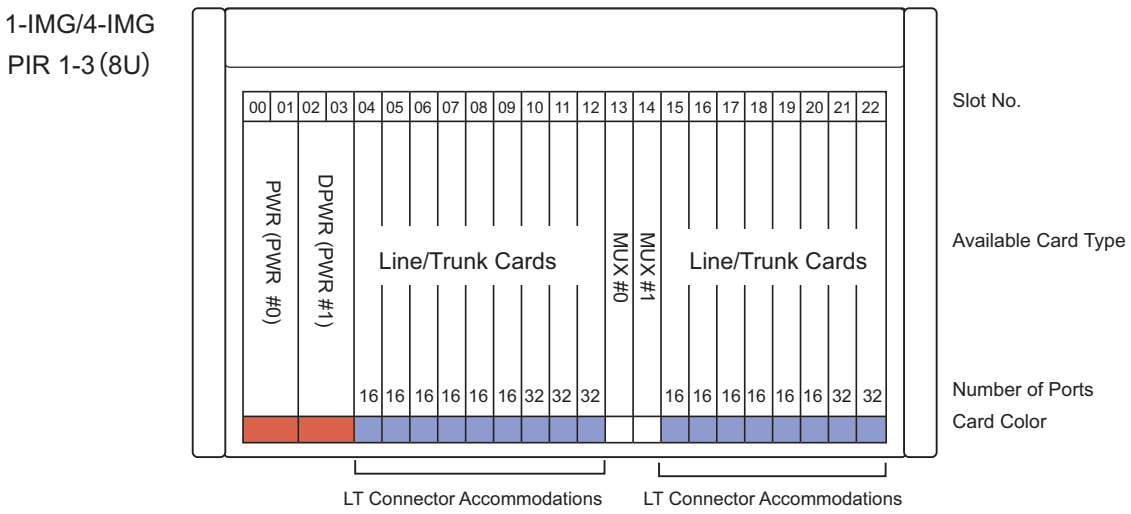
2.2 Replacement of Unit and Cards in 8U-PIR

This section explains how to replace unit and cards mounted in 8U-PIR.

2.2.1 PIR Face Layout (8U-PIR)

The figure below shows the slot configuration and the condition of mounted card types for 8U-PIR.

Card mounting of PIR



Note: Faulty switch settings may cause system down, always handle it with care.

Corresponding alarm lamp is lit and system message is generated when replacing a card. Reset the alarm when card replacement is completed. All system messages will be deleted when alarm is reset by the RALM command. If you need to restore system messages, read out system messages with the DFTD command before executing the RALM command.

2.2.2 Replacement Procedure for Line/Trunk Cards (8U-PIR)



[Start]

STEP 1 On the card to be replaced, check that BUSY lamps are all off.

If any one of them is on, it indicates that a line or terminal is using the card, and wait until the card becomes idle.

STEP 2 On the card to be replaced, flip the Make Busy (MB) switch up to the ON position.

STEP 3 Pull out the card from the slot.

STEP 4 On a new card, set the switches exactly the same as those of the removed card.

STEP 5 On the new card, flip the MB switch up to the ON position.

STEP 6 Insert the new card to the slot.

STEP 7 Flip the MB switch of the new card down to the OFF position.

[End]

2.2.3 Replacement Procedure for IPPAD Card (8U-PIR)



[Start]

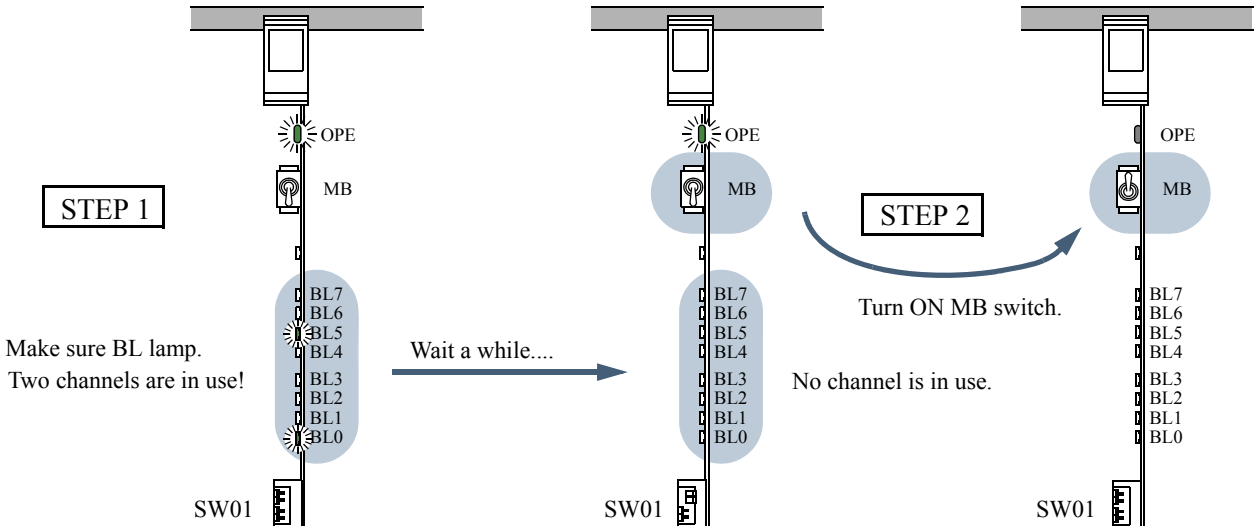
STEP 1 Make sure that the IPPAD to be replaced has no ongoing call.

Corresponding BL lamp will light green when a channel is in use.

Note: You can see the status of each channel by changing SW01 setting. For more details, see the chapter entitled “Cards in 8U-PIR” in Circuit Card Description.

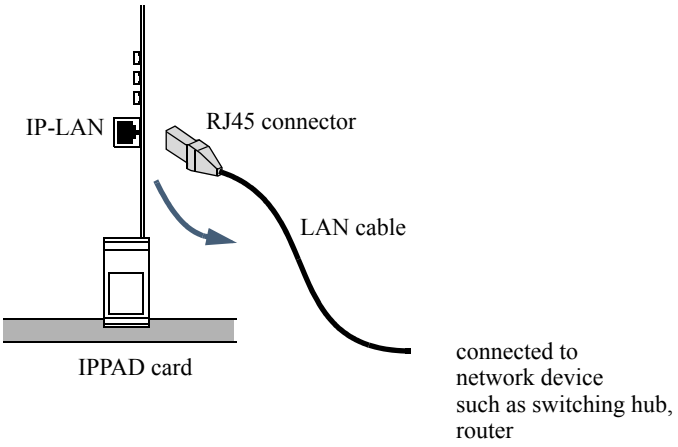
STEP 2 On the IPPAD card to be replaced, flip the MB switch up to the ON position.

OPE lamp turns OFF on the IPPAD card to be replaced.



Note: BL0 - BL7 indicate Idle/Busy status of channels. By changing SW01, the status of all channels can be monitored. For more details, see the chapter entitled “Cards in 8U-PIR” in Circuit Card Description.

STEP 3 Disconnect the LAN cable from IP-LAN connector.



STEP 4 Pull out the card mounted on the slot.

STEP 5 Make sure the switch setting of a new IPPAD card is the same as the one replaced.

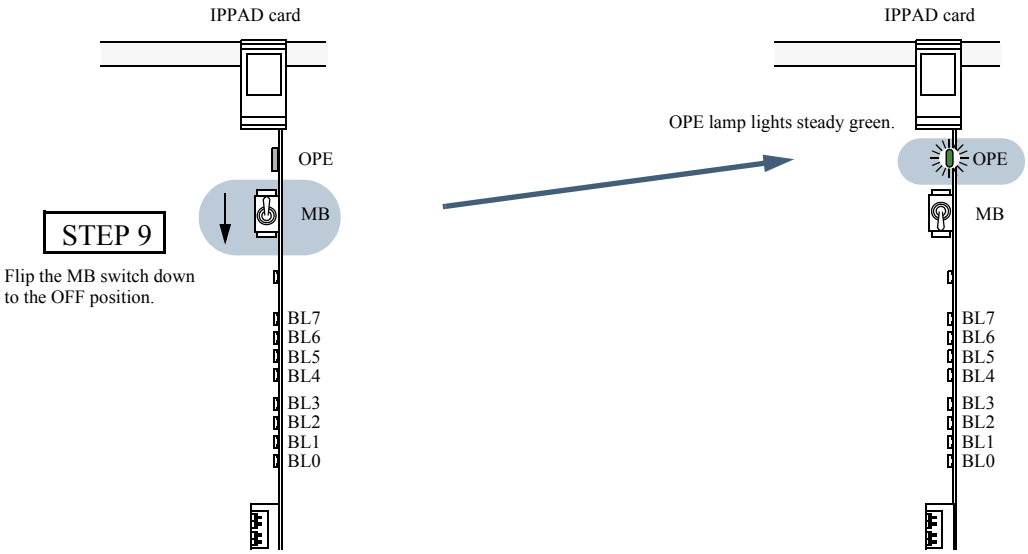
STEP 6 On the new IPPAD card, flip the MB switch up to the ON position.

STEP 7 Insert the new card to the slot.

STEP 8 Insert the LAN cable to IP-LAN connector.

STEP 9 On the new IPPAD card, flip the MB switch down to the OFF position.

OPE lamp lights steady green on the IPPAD card.



[End]

2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR)



2.2.4.1 MUX Replacement: TSW-BOX (1-IMG/4-IMG)

This section explains the replacement procedure for MUX card (PH-PC36) for the system using TSW-BOX. MUX card is mounted on PIR 0/1/2/3 (Slots 13 and 14).

This card is an interface card to accommodate the Line/Trunk circuits. Replacement procedure for this card is shown below.

WARNING

- **Improper switch operations may result in a system down. Operate the switches with extreme care.**
- **If a MUX card to be replaced has speech path in a single configuration, the PIR is unavailable when the MB switch is turned on.**

Note: When a MUX card is replaced, its speech path (TSW and MUX) must be set to STBY mode. You can use the CMOD command to switch speech path between ACT and STBY modes.

[Start]

Note: Proceed to STEP 6 when TSW card is in single configuration. In this case, MN alarm is generated.

STEP 1 Is the MUX card to be replaced in STBY mode?

Check the MUXACT lamp on the MUX card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 3.

NO: Switch the speech path (TSW ACT changeover) to STBY mode by using the CMOD command, then proceed to STEP 2.

STEP 2 Confirm the TSW ACT changeover is successfully completed.

Check the following lamp indications:

<STBY side>

TACT lamp on TSW card = flashing green (60 IPM)
MUXACT lamp on MUX card = off

<ACT side>

TACT lamp on TSW card = steady on green
MUXACT lamp on MUX card = steady on green

STEP 3 On the TSW card on STBY side, flip the TSWMBR switch up to the ON position.

TACT lamp on TSW card = off
MUXACT lamp on MUX card = off

STEP 4 On the TSW card on STBY side, check that the PACT lamp is off. If the lamp is steady on green, flip the PLOMB switch up to the ON position to switch PLO ACT.

PACT lamp on TSW card = off

STEP 5 On the TSW card on STBY side, flip the MB switch up to the ON position.

ICK lamp on TSW card = off
SYNC lamp on MUX card = off

STEP 6 On the MUX card to be replaced, flip the MB switch up to the ON position.

PMCLKALM lamp on MUX card = steady on red

STEP 7 Disconnect the cable from the connector on the front panel of the MUX card to be replaced.

STEP 8 Extract the MUX card from the PIR.

STEP 9 On a new MUX card, flip the MB switch up to the ON position.

STEP 10 On the new MUX card, set the switches exactly the same as those of the removed card.

STEP 11 Insert the new MUX card into the PIR.

STEP 12 Connect the cable disconnected in STEP 7 to the connector on the front panel of the new MUX card.

STEP 13 On the new MUX card, flip the MB switch down to the OFF position.

PMCLKALM lamp on MUX card = off

STEP 14 Turn OFF the TSWMB switch on the TSW card.

ICK lamp on TSW card = steady on green
MUXACT lamp on MUX card = off
SYNC lamp on MUX card = steady on green

STEP 15 On the TSW card, check that M00SY-M03SY, M10SY-M13SY, M20SY-M23SY and M30SY-M33SY (M10SY-M33SY: only for 4-IMG system) lamps are all steady on green. If not, the new MUX card may not be connected correctly.

<TSW card>

TACT lamp on TSW card = off
ICK lamp on TSW card = steady on green

<MUX card>

SYNC lamp on MUX card = steady on green

STEP 16 If PLOMB switch on the TSW card is set to ON (upper position), turn it OFF (lower position).

Note: PLO ACT #0 has higher priority than PLO ACT #1. Therefore, PLO ACT #0 is automatically set to ACT when the TSWMB switch is turned ON/OFF while the PLOMB switch of TSW #0 is OFF.

STEP 17 On the TSW card, flip the TSWMBR switch down to the OFF position.

TACT lamp on TSW card = flashing green (60 IPM)

STEP 18 Execute the TSW ACT/STBY changeover by using the CMOD command and confirm the new MUX card is operating normally.

[End]

2.2.4.2 MUX Replacement: TSWR (4-IMG)

MUX card is mounted on each PIR. This card is an interface card to accommodate the Line/Trunk circuits. Replacement procedure for this card is shown below.

WARNING

- **Improper switch operations may result in a system down. Operate the switches with extreme care.**
- **If a MUX card to be replaced has speech path in a single configuration, the PIR is unavailable when the MB switch is turned on.**

Note: When a MUX card is replaced, its Speech Path System must be set to STBY mode. You can use the CMOD command to switch Speech Path System between ACT and STBY modes. Before beginning this procedure, refer to Section 8.1.5.3 Manual Changeover for 4-IMG with TSWR of Section 8.1.5 Manual Changeover of Speech Path System in Chapter 2.

[Start]

Note: Proceed to STEP 3 when speech path is in single configuration. In this case, MN alarm is generated.

STEP 1 Is the MUX card to be replaced in STBY mode?

Check the MUXACT lamp on the MUX card. When the lamp is off, the card is STBY in mode.

YES: Proceed to STEP 3.

NO: Switch the speech path (TSW ACT changeover) to STBY mode by using the CMOD command, then proceed to STEP 2.

STEP 2 Confirm the TSW ACT changeover is successfully completed.

After TSW changeover, check the following lamp indications:

<STBY side>

TSWACT lamp on TSW card = off
OPE/MB lamp on DLKC card = off
MUXACT lamp on MUX card = off

<ACT side>

TSWACT lamp on TSW card = steady on green
OPE/MB lamp on DLKC card = steady on green
MUXACT lamp on MUX card =steady on green

STEP 3 On the TSW card (PH-SW12) on STBY side (connected to the MUX card to be replaced), flip the TSWMBR switch up to the ON position to close the TSW.

All TSWACT lamps on TSW card on STBY side = steady on red

STEP 4 On the same TSW card, flip the MB switch up to the ON position.

SYNC lamp on MUX card = off

STEP 5 On the MUX card to be replaced, flip the MB switch up to the ON position.

PMCLKALM lamp on MUX card = steady on red

STEP 6 Disconnect the cable from the connector on the front panel of the MUX card to be replaced.

STEP 7 Extract the MUX card from the PIR.

STEP 8 On a new MUX card, flip the MB switch up to the ON position.

STEP 9 On the new MUX card, set the switches exactly the same as those of the removed MUX card.

STEP 10 Insert the new MUX card into the PIR.

STEP 11 Connect the cable disconnected in STEP 6 to the connector on the front panel of the new MUX card.

STEP 12 On the new MUX card, flip the MB switch down to the OFF position.

PMCLKALM lamp on MUX card = off

STEP 13 On the TSW card (on which you turn on the MB switch in STEP 4), flip the MB switch down to the OFF position.

ACT lamp on TSW card = steady on red
SYNC lamp on MUX card = steady on green

STEP 14 On the same TSW card, flip the TSWMBR switch down to the OFF position.

All ACT lamps of TSW card on STBY side = off

STEP 15 Execute the TSW ACT/STBY changeover by using the CMOD command and confirm the new MUX card is operating normally.

[End]

2.2.5 Replacement Procedure for Power (PWR) Card (8U-PIR)



This section explains the replacement procedure for the PWR card. DC-DC PWR and DC-DC Dual Power (DPWR) cards are mounted on Slot 01 and 03 of the PIR, supplying the power to the cards mounted on the PIR. Replacement procedure for each power card is shown below.

Note: When the PWR card is not provided in dual configuration, the corresponding PIR cannot be used during PWR card replacement.

[Start]

STEP 1 On the PWR and DPWR (DC-DC) card to be replaced, flip the MB switch up to the ON position.

OPE lamp on the card goes off.

STEP 2 Turn OFF (downward) the -48 V switch of the card to be replaced.

STEP 3 Disconnect the power cable of the -48 V connector.

STEP 4 Pull out the card mounted on the slot.

STEP 5 Turn OFF (downward) the -48 V switch of a new PWR/DPWR card.

STEP 6 On the new PWR/DPWR card, flip the MB switch up to the ON position.

STEP 7 Insert new card into the PIR.

OPE lamp of the new card remains off.

STEP 8 Connect the power cable to the -48 V connector.

STEP 9 Turn ON (upward) the -48 V switch of the new card.

STEP 10 On the new card, flip the MB switch down to the OFF position.

OPE lamp on the new card lights green.

[End]

3. TSWR ACCOMMODATING CARD REPLACEMENT PROCEDURE (4-IMG ONLY)

This section explains the procedure for replacing cards accommodated in the TSWR.

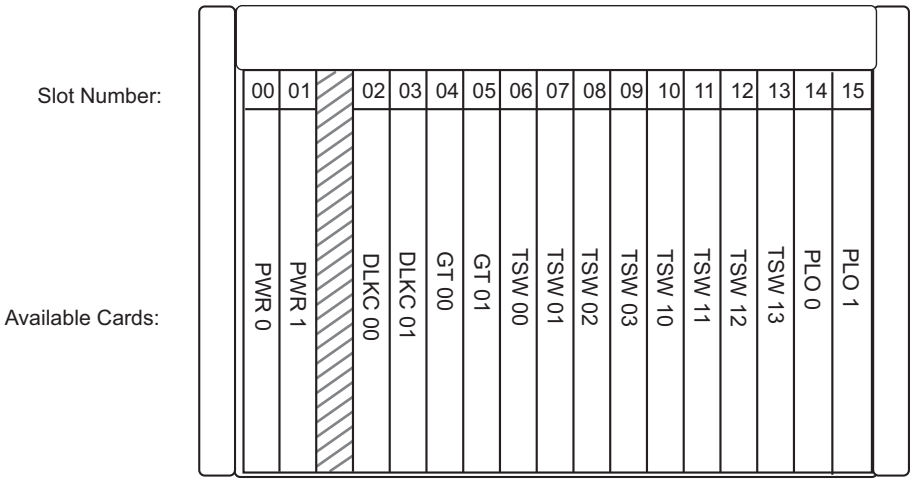
3.1 Precaution

- This procedure is applied when replacing a faulty card with a spare. It is also able to be applied when checking a spare card.
- There are functional switches (having set the default switch) on some of the cards to be replaced. As for switch setting on the cards, confirm the card mounting face layout for the PIR. When a card is replaced with a spare card, always make the same switch setting on the new card as that on the replaced card. Otherwise, electronic components on the card may be destroyed, or the card itself may fail to function normally.
- When handling a card, always use the field service kit for countermeasures against static electricity. Touching a card without using the kit may destroy the card due to static electricity on the human body.

3.2 Card Mounting Face Layout

The face layout of the cards housed in the TSWR is shown in the figure below.

Card Mounting Face Layout of TSWR



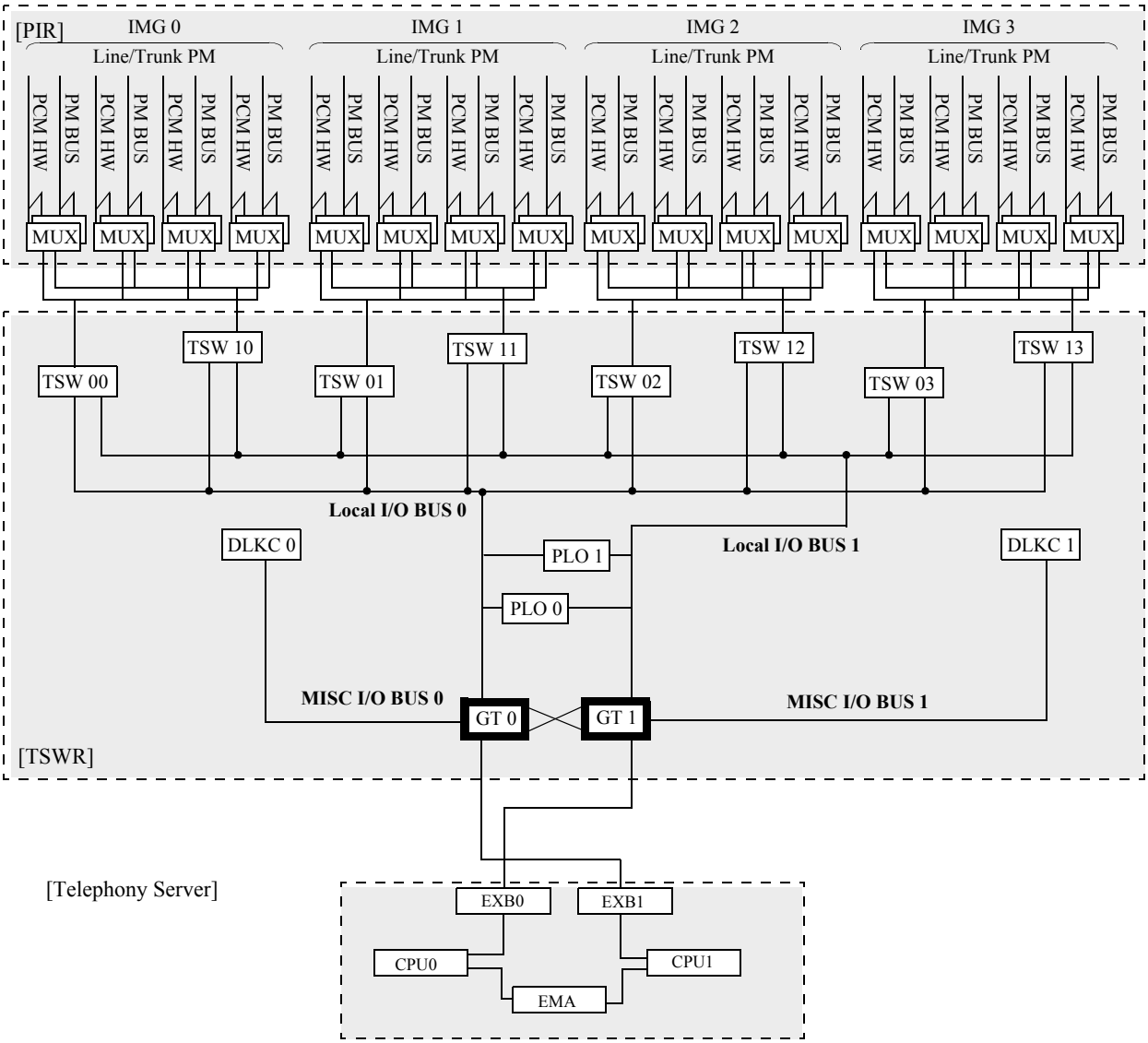
WARNING **Improper switch operations may result in a system down. Operate the switch with extreme care. During replacement of a card, the system issues fault messages and activates the related alarm. Reset the indicated alarm after completing the replacement procedure.**

Corresponding alarm lamp is lit and system message is outputted when replacing the card. Release the alarm when card replacement has completed. All system messages will be deleted when alarm is released by the RALM command, read the system messages using the DFTD command when the system messages are needed.

3.3 GT Card Replacement Procedure

GT (PH-GT09) card is mounted in slots 4 and 5 of the TSWR, providing an interface function between DLKC, TSW, MUX cards and I/O Local Bus.

System Block Diagram (Connections Between GT and CPU)



WARNING **Improper switch operations may result in a system down. Operate the switch with extreme care.**

[Start]

STEP 1 GT card to be replaced is in STBY mode?

Check OPE/MB lamp on the GT card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 3.

NO: Changeover the ACT/STBY of speech path by using CMOD. Proceed to STEP 2.

STEP 2 Make sure that the GT card to be replaced is placed in STBY mode.

OPE/MB lamp on the GT card goes OFF.

STEP 3 Make sure that the mate GT is placed in ACT mode.

OPE/MB lamp on the GT card lights green.

STEP 4 Confirm that ACT mode of the TSW card matches that of the CPU card. And make sure that both ACT mode are same.

When the mode does not match, change the mode of TSW card by using the CMOD command.

STEP 5 On the GT that has been placed in STBY side, flip the MB switch up to the ON position.

OPE/MB lamp lights red on the GT card.

STEP 6 Extract the GT card with the MB switch turned ON from the TSWR.

STEP 7 On a new GT card, flip the MBR switch up to the ON position.

STEP 8 On the new GT card, flip the MB switch up to the ON position.

STEP 9 Insert the new GT card to the slot.

STEP 10 On the new GT card, flip the MB switch down to the OFF position.

STEP 11 Change over the ACT/STBY of speech path by using the CMOD command.

Make sure that OPE/MB lamp lights green on the new GT card.

STEP 12 Make test calls to confirm that the new GT card is operating normally.

STEP 13 Display system messages from PCPro and analyze them when needed.

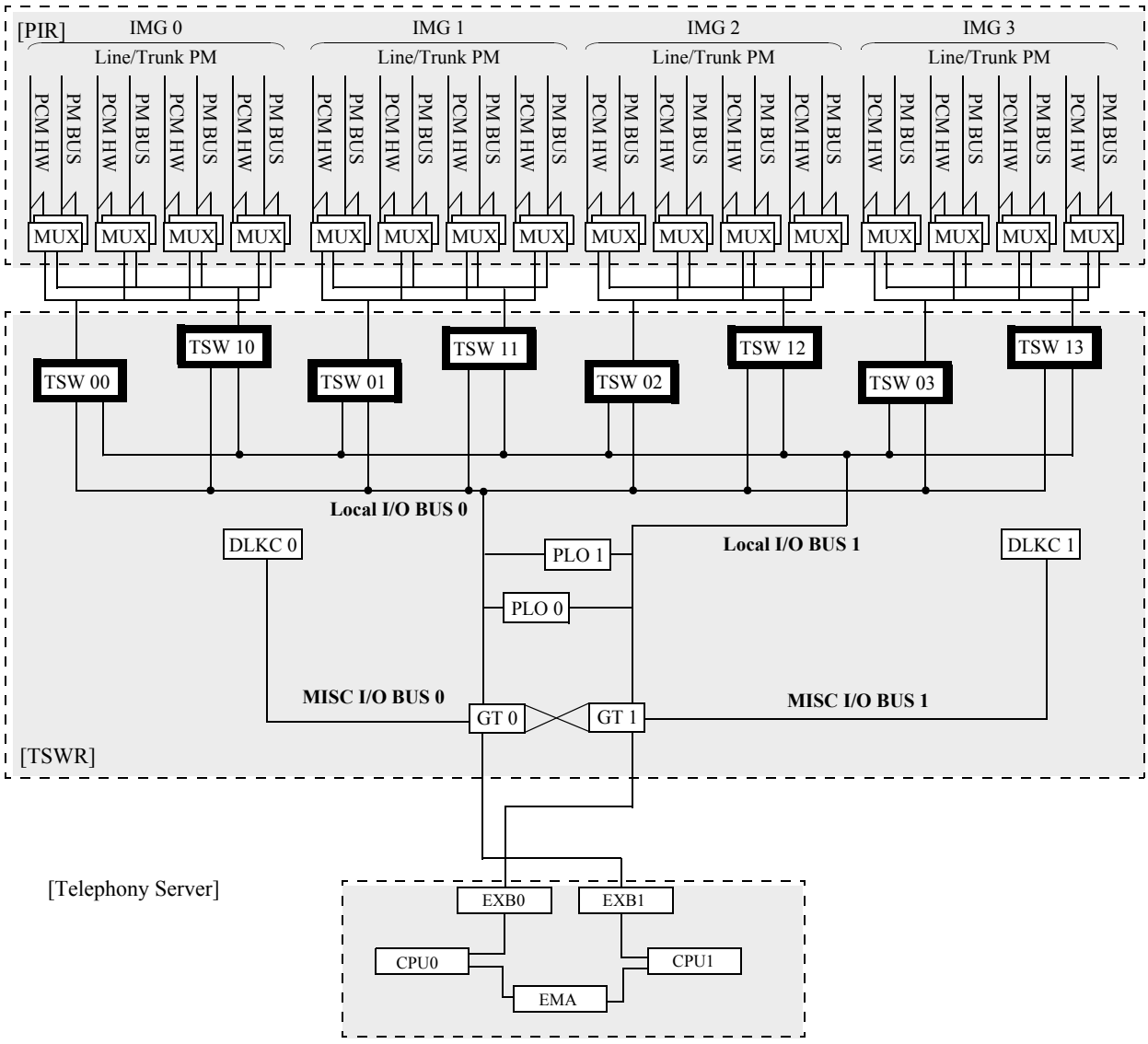
[End]

3.3.1 TSW Card Replacement Procedure

TSW card is located in the slot numbers, ranging from 06 to 13 within the TSWR. Equipped with the Time Division Switch (TSW) and Speech Path Controlling Interface (INT), the card's main function is to provide a maximum of 8192 × 2048 Time Slot (TS) switching for a designated single IMG. Because a single TSW card only enables the TS switching associated with a single, individual IMG alone, note that the fully expanded 4-IMG system requires a total of four TSW cards when it adopts a single configuration, or as many as eight in the case of dual configuration. If your system adopts the latter's dual configuration, the card's replacement procedures are as follows:

The figure below provides the system block diagram centering on the TSW cards. If the ACT/STBY of TSW is changed over, that of DLKC and MUX in the same switching block are also totally changed over.

System Block Diagram (TSW and Other Speech Path)



[Start]

STEP 1 TSW card to be replaced is in STBY mode?

Check TSWACT lamp on the TSW card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 4.

NO: Proceed to STEP 2.

STEP 2 Switch the speech path to STBY mode by using the CMOD command. Check that the following lamps are off, and if everything is OK, proceed to the next step.

- TSWACT lamp on the TSW card
- OPE/MB lamp on the DLKC card
- MUXACT lamp on the MUX card

STEP 3 Confirm the mate TSW has been placed in ACT mode.

When the following lamps are steady on green, changeover is successful:

- TSWACT lamp on the mate TSW card
- OPE/MB lamp on the mate DLKC card
- MUXACT lamp on the mate MUX card

STEP 4 On the TSW (PH-SW12) to be replaced, flip the TSWMBR switch up to the ON position.

On all TSW cards placed in STBY mode, TSWACT lamps are steady on red.

STEP 5 On the TSW card to be replaced, flip the MB switch up to the ON position.

On all MUX cards that are under the TSW card to be replaced, the SYNC lamps go off.

STEP 6 Extract the TSW card from the TSWR.

STEP 7 Set the switches on the new TSW card, referring to the card replaced.

STEP 8 On a new TSW card, flip the TSWMBR and MB switches up to the ON position.

STEP 9 Insert the new TSW card.

TSWACT lamp on the new TSW card lights up red (on steady).

STEP 10 On the new TSW card, flip the MB switch down to the OFF position.

TSWACT lamp on the new TSW card = steady on red

M0SY/M1SY/M2SY/M3SY lamps on the new TSW card = steady on green

SYNC lamps on all MUX cards that are under the new TSW card = steady on green

STEP 11 On the new card, flip the TSWMBR switch down to the OFF position.

TSWACT lamps on all TSW cards that are placed in STBY mode go off.

STEP 12 Switch the speech path mode (ACT/STBY) by using the CMOD command.

STEP 13 Make sure the following:

<ACT side>

TSWACT lamp on the TSW card = steady on green

OPE/MB lamp on the DLKC card = steady on green

MUXACT lamp on the MUX card = steady on green

<STBY side>

TSWACT lamp on the TSW card = off

OPE/MB lamp on the DLKC card = off

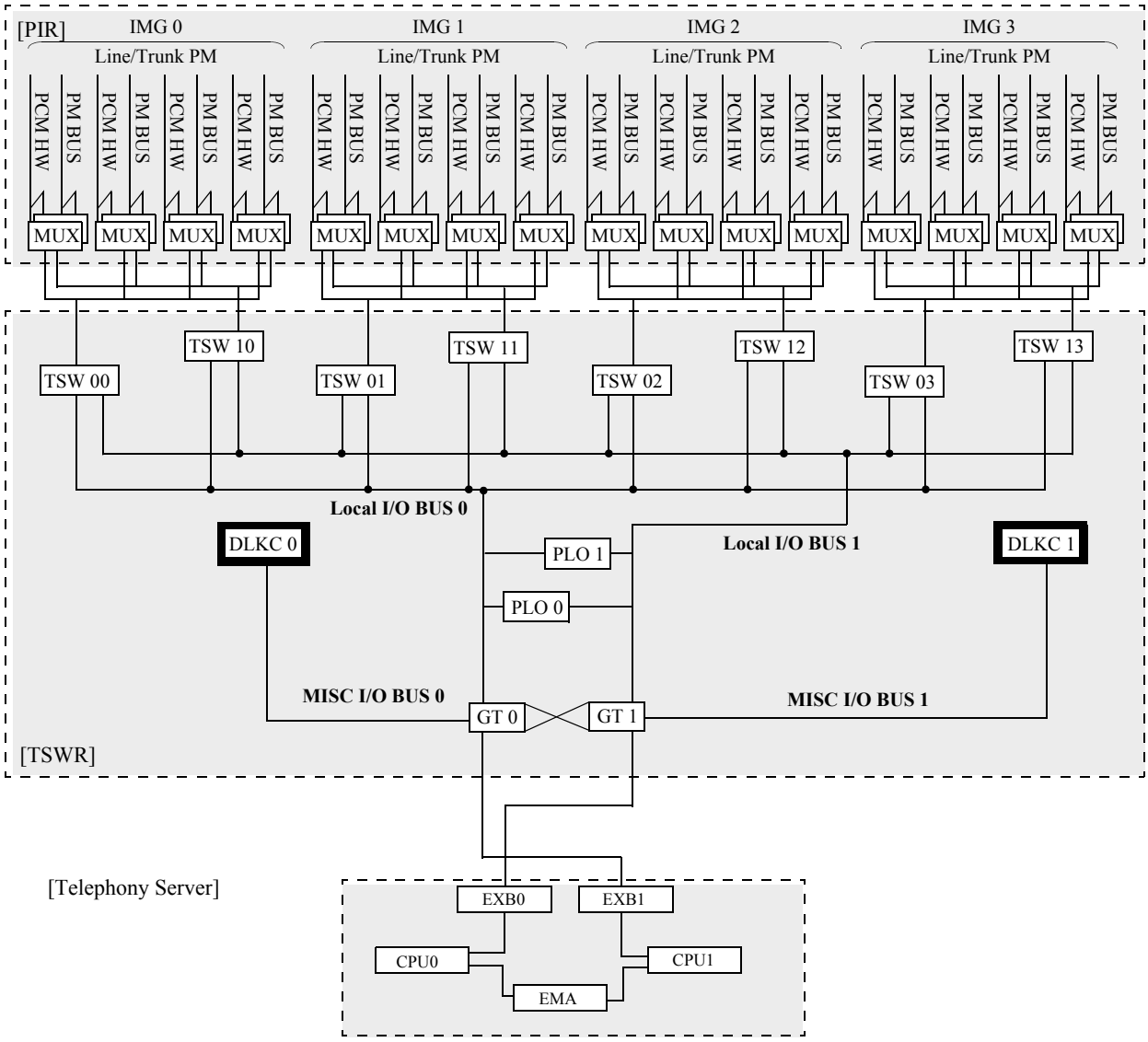
MUXACT lamp on the MUX card = off

[End]

3.3.2 DLKC Card Replacement Procedure

DLKC (PH-PC20/PH-PC20-B) card is located in slot 02 or 03 within the TSWR. The main function is to provide all the Desk Consoles with information such as termination/answer/release (abandonment) of ATT calls or BUSY/IDLE status of stations via the link of TSW system. Use the following procedures to replace DLKC card with a spare.

System Block Diagram



WARNING **Improper switch operations may result in a system down. Operate the switch with extreme care.**

[Start]

STEP 1 DLKC card to be replaced is in STBY mode?

Check OPE/MB lamp on the DLKC card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 3.

NO: Proceed to STEP 2.

STEP 2 Switch the speech path to STBY mode by using the CMOD command. Check that the following lamps are off, and if everything is OK, proceed to STEP 3.

- TSWACT lamp on the TSW card
- OPE/MB lamp on the DLKC card
- MUXACT lamp on the MUX card

STEP 3 Confirm the mate DLKC card has been placed in ACT mode.

When the following lamps are steady on green, changeover is successful:

- TSWACT lamp on the mate TSW card
- OPE/MB lamp on the mate DLKC card
- MUXACT lamp on the mate MUX card

STEP 4 On the TSW card in STBY mode, flip the TSWMBR switch up to the ON position.

On all TSW cards placed in STBY mode, TSWACT lamps are steady on red.

STEP 5 On the DLKC that has been placed in STBY mode, flip the MB switch up to the ON position.

STEP 6 Extract the DLKC card with the MB switch turned ON from the TSWR.

STEP 7 On a new DLKC card, flip the MB switch up to the ON position.

STEP 8 Insert the new DLKC card to the slot.

STEP 9 On the new DLKC card, flip the MB switch down to the OFF position.

STEP 10 On the TSW card with the TSWMBR switch set to ON in STEP 4, flip the TSWMBR switch down to the OFF position.

All TSWACT lamps on STBY side = off

STEP 11 Switch the speech path mode (ACT/STBY) by using the CMOD command.

STEP 12 Check the following:

(1) The new DLKC card enters from STBY to ACT mode.

<ACT side lamp state>

TSWACT lamp on the TSW card = steady on green

OPE/MB lamp on the DLKC card = steady on green

MUXACT lamp on the MUX card = steady on green

(2) The mate DLKC card switches from ACT to STBY mode.

<STBY side>

TSWACT lamp on the TSW card = off

OPE/MB lamp on the DLKC card = off

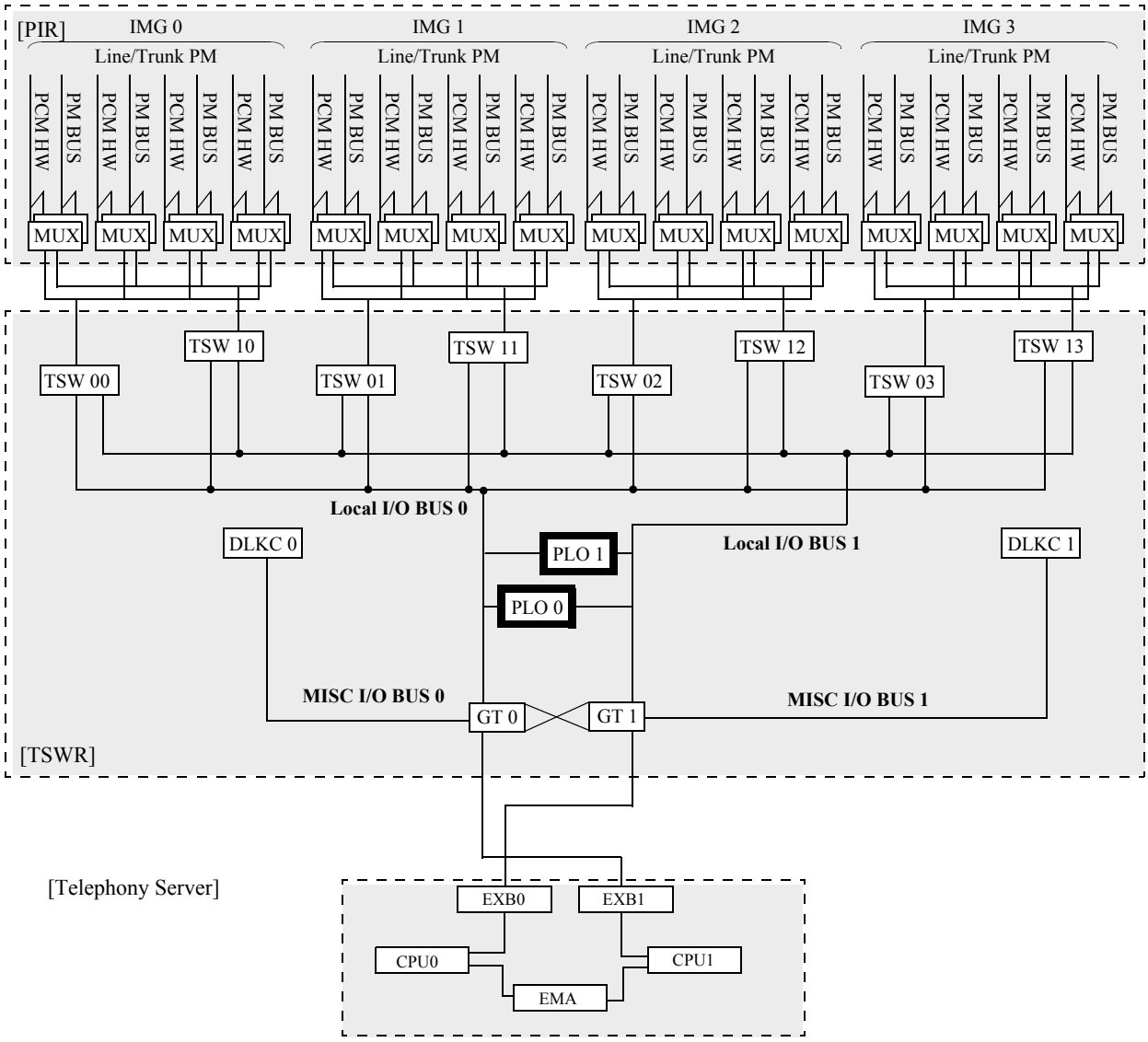
MUXACT lamp on the MUX card = off

[End]

3.3.3 PLO Card Replacement Procedure

PLO (PH-CK16-D, etc) card is located in slot 14 or 15 within the TSWR. Used together with digital interface cards, the card's main function is to establish clock synchronization on the digital network. In addition, the MUSIC ROM supplies Music-On-Hold to each station line via the TSW card. Use the procedures below to replace PLO card with a spare.

System Block Diagram



WARNING **Improper switch operations may result in a system down. Operate the switch with extreme care.**

[Start]

STEP 1 PLO card to be replaced is in STBY mode?

Check OPE lamp on the PLO card. When the lamp is off, the card is in STBY mode.

YES: Proceed to STEP 2.

NO: Switch the PLO card to STBY mode by flipping the MB switch up to the ON position, and then proceed to STEP 2.

Note: PLO ACT/STBY can be switched independently by MB switch operation. See "Manual Changeover of PLO" in Chapter 2 for more details.

STEP 2 Make sure that the mate PLO is placed in ACT mode.

OPE lamp on the mate PLO card = steady on green

STEP 3 Extract the PLO card from the TSWR.

STEP 4 On a new PLO card, configure the switch settings exactly the same as those of the old PLO card removed in STEP 3.

STEP 5 On the new PLO card, flip the MB switch up to the ON position.

STEP 6 Insert the new PLO card to the slot of TSWR.

STEP 7 On the new PLO card, flip the MB switch down to the OFF position.

STEP 8 On the new PLO card, flip the MB switch up to the ON position.

Check the following:

OPE lamp on the new PLO card = off

OPE lamp on the mate PLO card = steady on green

STEP 9 Make sure the ACT/STBY status of PLO that is shown by CMOD exactly reflects the actual ACT/STBY status that is indicated by OPE lamps.

STEP 10 Repeat the previous two steps.

STEP 11 Set PLO #0 in ACT mode. (Usually, PLO #0 should be placed in ACT mode.)

[End]

3.3.4 PWR SW Card Replacement Procedure

PWR SW (PH-PW14) card is located in slot 00 or 01 of TSWR. This card provides operating power for cards that are accommodated in TSWR.

WARNING	**Improper switch operations may result in a system down. Operate the switch with extreme care.**

[Start]

STEP 1 On the PWR SW card to be replaced, flip the SW switch down to the OFF position.

P-ON lamp on the PWR SW card goes off.

ALM lamp on the PWR SW card lights steady red.

STEP 2 Extract the PWR SW (PH-PW14) card from TSWR.

STEP 3 On a new PWR SW card, flip the SW switch down to the OFF position.

STEP 4 Insert the new PWR SW card to the slot of TSWR.

P-ON lamp on the new PWR SW card remains off.

ALM lamp on the new PWR SW card lights steady red.

STEP 5 On the new PWR SW card, flip the SW switch up to the ON position.

P-ON lamp on the PWR SW card lights steady green.

ALM lamp on the PWR SW card goes off.

[End]

3.4 Replacement Procedure for CF Card

Always backup the current program and office data stored in CF card before replacing the CF card.



WARNING **CF card cannot be removed while Telephony Server is in operation. Doing so stops the system operation.**

WARNING **Be sure to use anti-static measures when handling a CF card. See "How to Handle a CF card" for more details.**

[Start]

STEP 1 Backup the office data stored in CF card and copy it into a reliable storage device.

STEP 2 Write in the program to the new CF card by referring to Appliance Model Installation Manual. Also, write in the office data stored in the storage device such as a hard disk of a PC.

STEP 3 Shutdown the system, referring to "Initialization by Turning OFF and ON the System".

STEP 4 Take out the fault CF card and insert the new CF card in which program and office data have been written.

STEP 5 Turn ON the system again, referring to "Initialization by Turning OFF and ON the System".

STEP 6 Set the data and time by using ATIM.

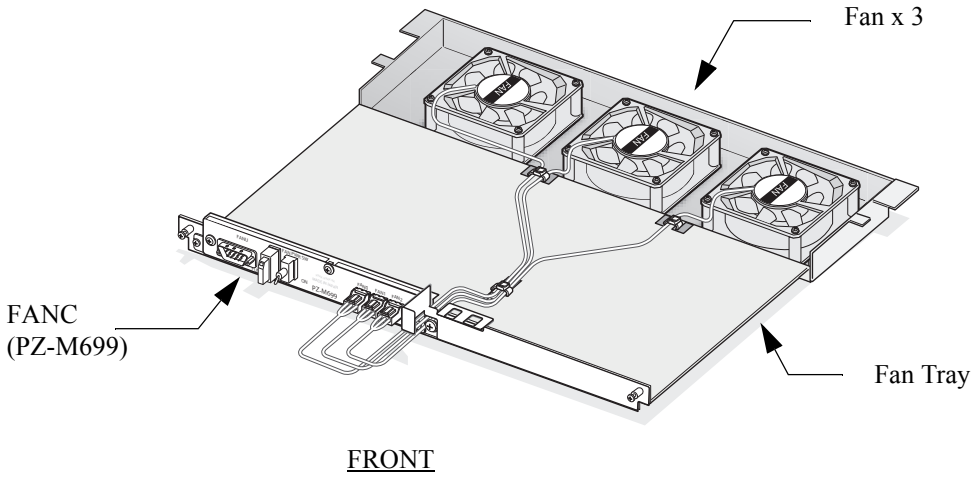
[End]

3.5 Replacement Procedure for Fans (7U-PIR/TSWR)

This section explains how to replace a fan that is accommodated in 7U-PIR. Fans cool the system to prevent overheating and eventual failure. We recommend that fans be replaced every four years.

Fans Accommodated in Fan Tray

Fans are mounted on the fan tray as shown below. To replace a fan, the fan tray must be removed from the system.



CAUTION Do not put your finger in the fan while it is running. Before replacing a fan, make sure that the fan blades are completely stopped

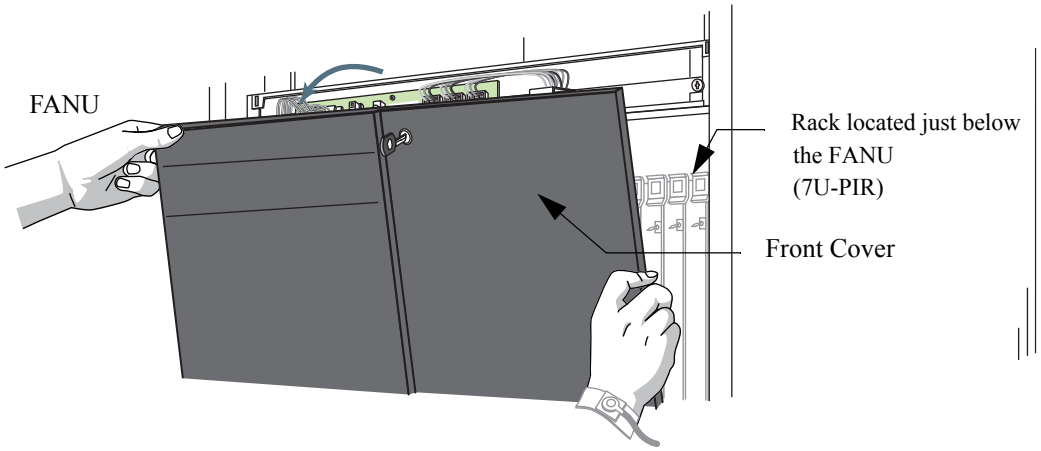
CAUTION Complete the entire procedure within about 15 minutes; where the temperature is around 77 degrees F.

CAUTION It is not necessary to turn off the power of 7U-PIR during fan replacement.

[Start]

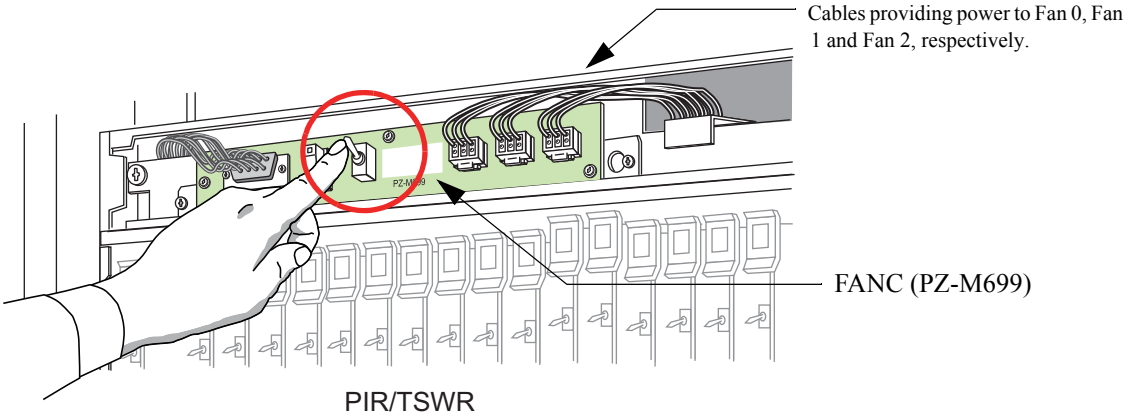
STEP 1 Identify a faulty fan if this replacement is not regular fan replacement.

STEP 2 Remove the front cover of the rack (7U-PIR) located just below the FANU.



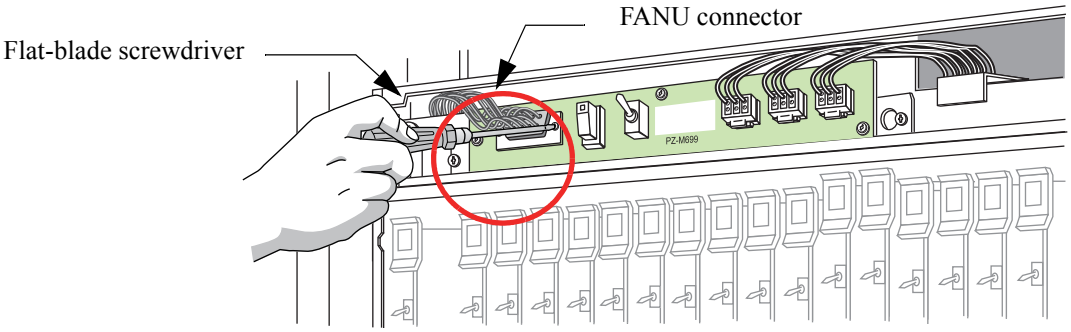
STEP 3 Flip the Fan Power Switch up to the OFF position.

All fans are stopped by this operation.

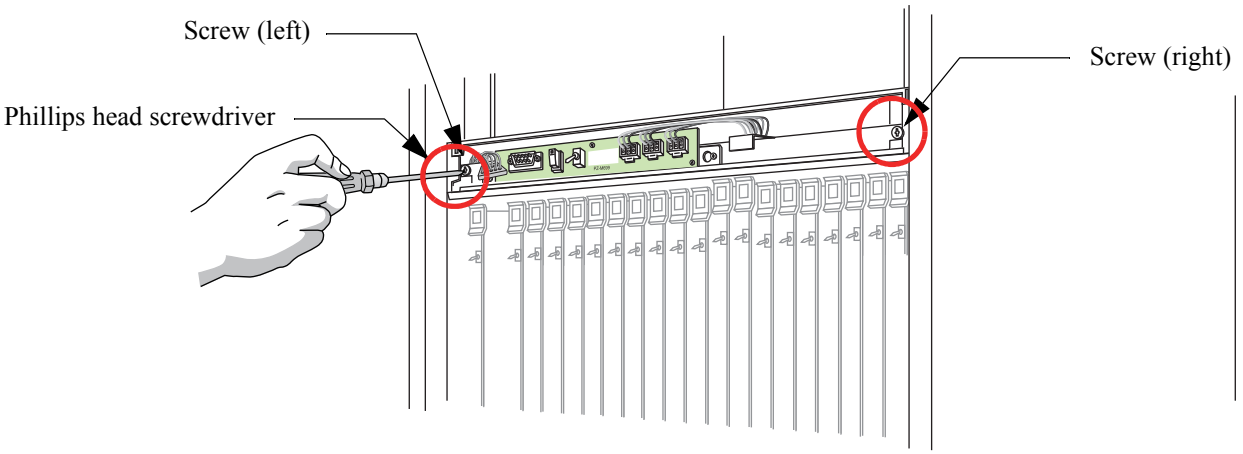


STEP 4 Disconnect the cable from the FANU connector.

Use a flat-blade screwdriver.

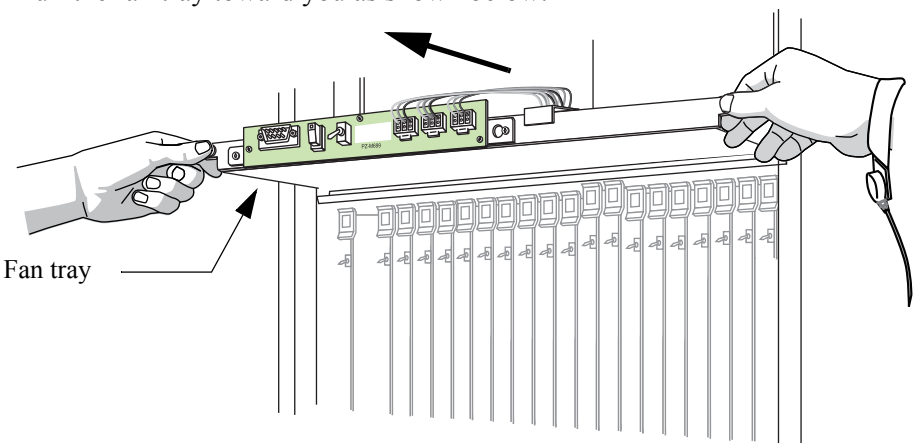


STEP 5 Loosen the screws fixing the fan tray on both sides.

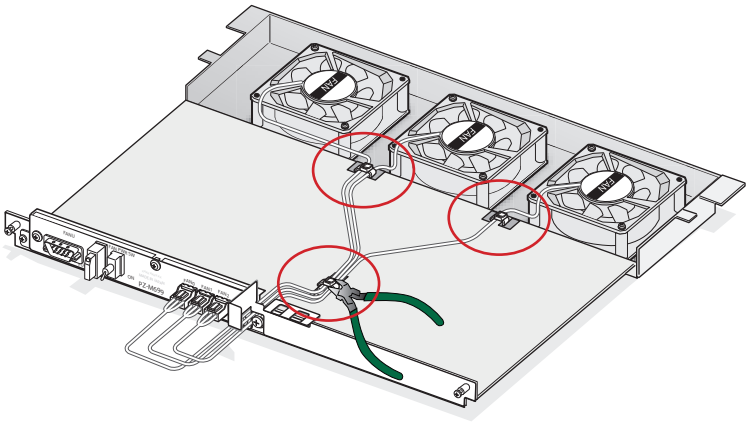


Note: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 6 Pull the fan tray toward you as shown below.



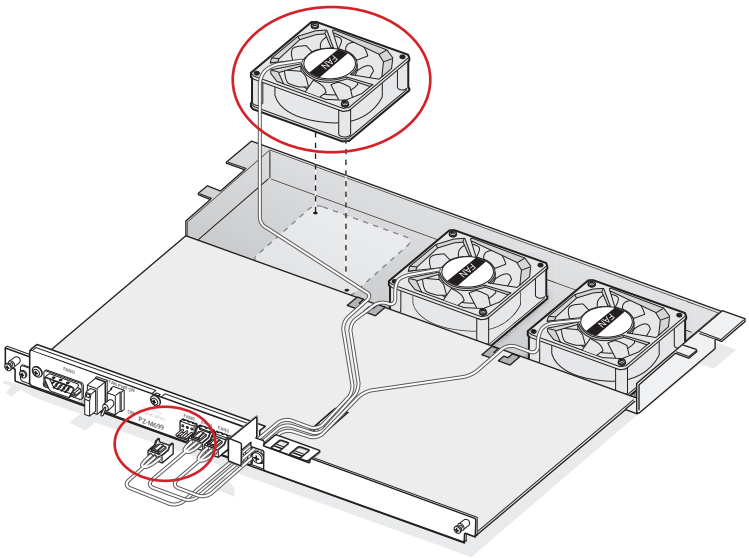
STEP 7 Unfasten the fan cables from the cable support.



STEP 8 Replace the fan.

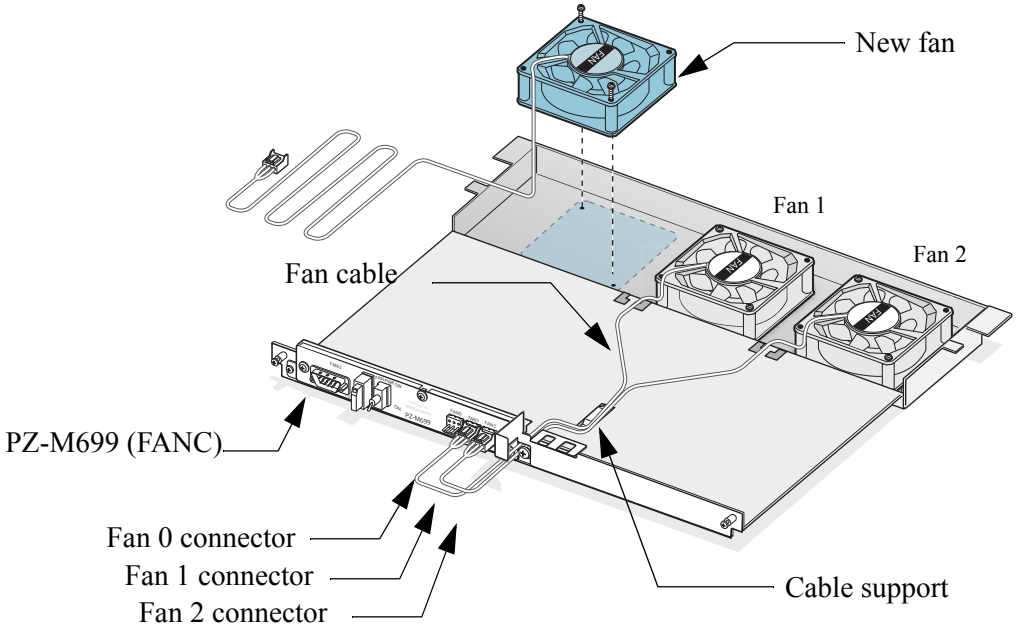
(1) Disconnect Fan 0, Fan 1, or Fan 2 connector.

(2) Remove the old fan.



STEP 9 Mount a new fan in the old location.

Insert the cables into the Fan 0, Fan 1, and Fan 2 connectors, respectively.



Note: When mounting a fan, orient it so that the cable can reach the fan connector.

Note: Insert the fan cable firmly to the appropriate fan connector until you hear an audible click.

STEP 10 Secure the cable in the cable support.

STEP 11 Attach the fan tray again.

(1) Insert the fan tray to the original position.

(2) Fix the fan tray on the FANU again.

STEP 12 Reconnect the cables to the FANU connector, and tighten the screws with a flat-blade screwdriver.

STEP 13 Flip the Fan Power Switch down to the ON position.

Check all the fans are operating normally.

Note: If fans do not operate normally, check the cable connections.

STEP 14 Return the fan cover to the FANU.

STEP 15 Return the front cover of the rack (7U-PIR) located just below the FANU.

[End]

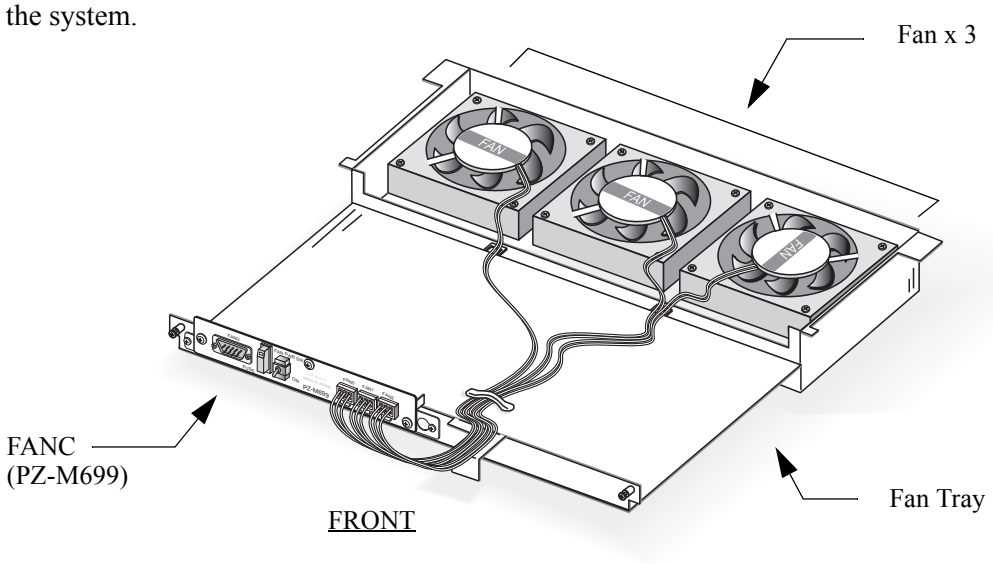
3.6 Replacement Procedure for Fans (8U-PIR/TSWR)



This section explains how to replace a fan that is accommodated in 8U-PIR or TSWR. Fans cool the system to prevent overheating and eventual failure. We recommend that fans be replaced every four years.

Fans Accommodated Fan tray

Fans are mounted on the fan tray as shown below. To replace a fan, the fan tray must be removed from the system.



CAUTION **Do not put your finger in the fan while it is running. Before replacing a fan, make sure that the fan blades are completely stopped.**

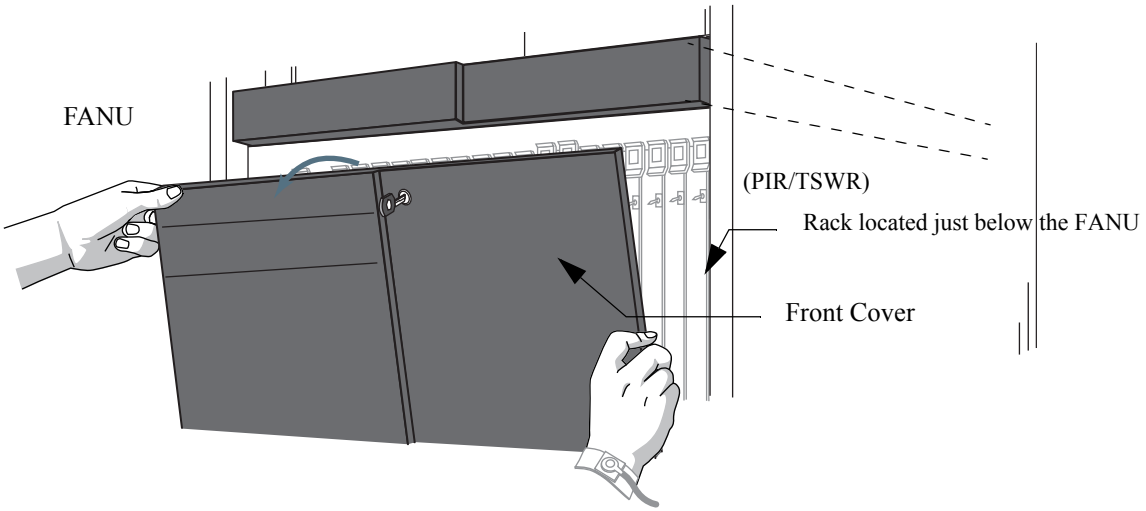
CAUTION **Complete the entire procedure within about 15 minutes; where the temperature is around 77 degrees F.**

CAUTION **It is not necessary to turn off the power of PIR/TSWR during fan replacement.**

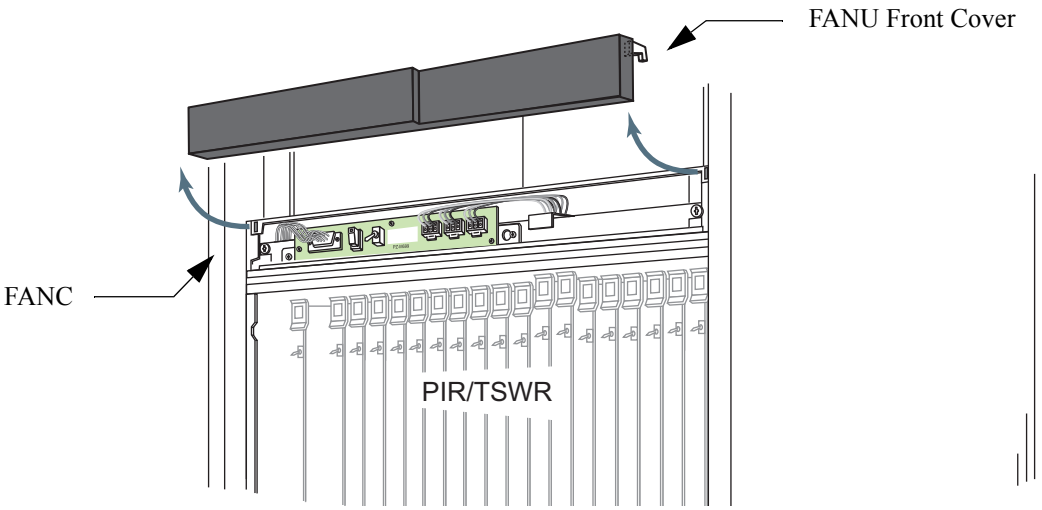
[Start]

STEP 1 Identify a faulty fan if this replacement is not regular fan replacement.

STEP 2 Remove the front cover of the rack (PIR/TSWR) located just below the FANU.

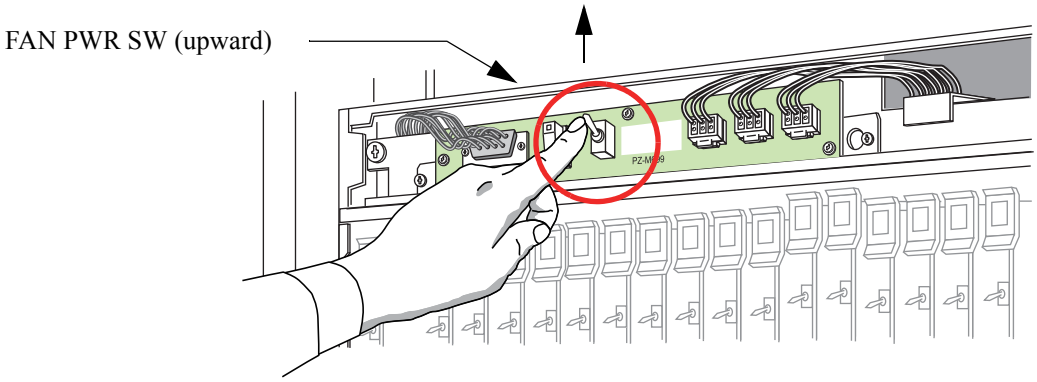


STEP 3 Remove the front cover of FANU for the FANC to be replaced.



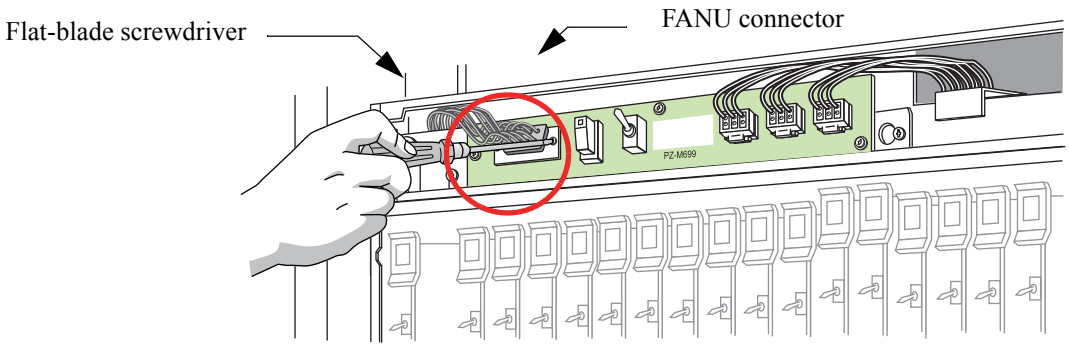
STEP 4 Flip the Fan Power Switch (FAN PWR SW) up to the OFF position.

All fans are stopped by this operation.

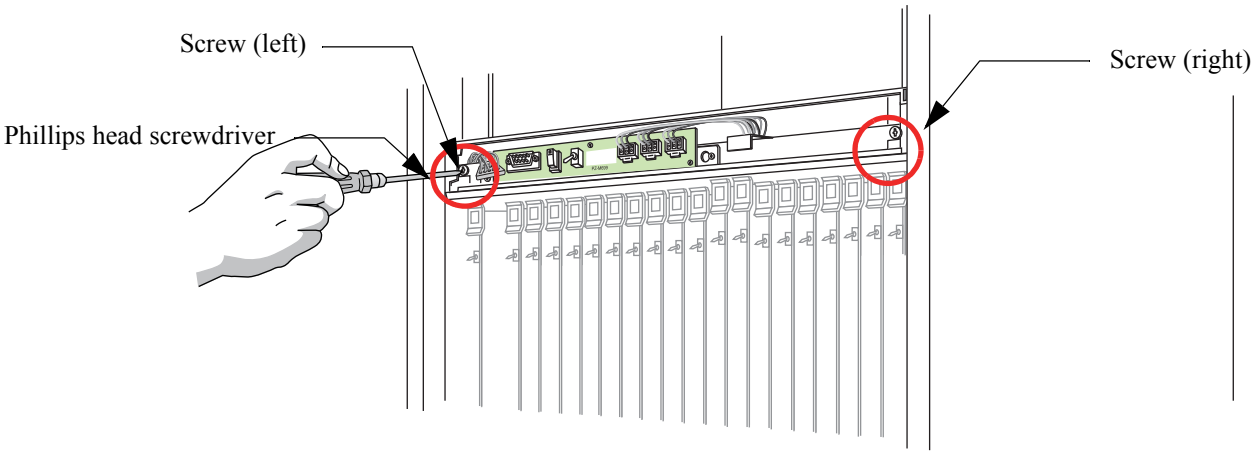


STEP 5 Disconnect the cable from the FANU connector.

Use a flat-blade screwdriver.

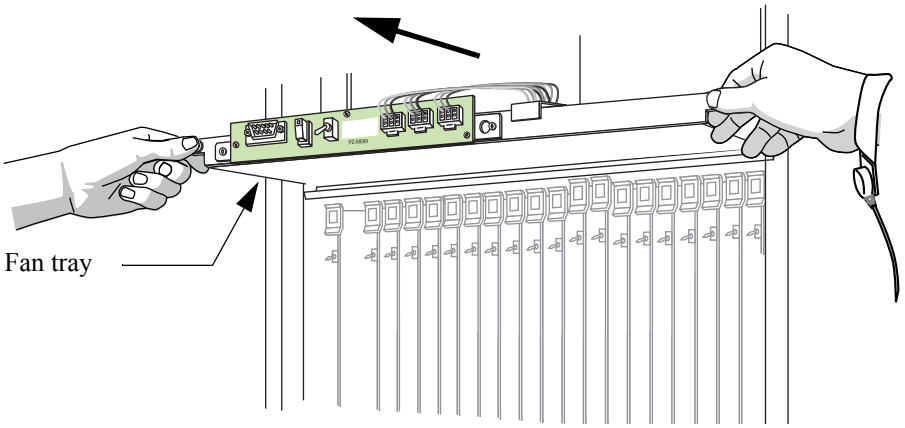


STEP 6 Loosen the screws fixing the fan tray on both sides.



Note: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 7 Pull the fan tray toward you as shown below.



STEP 8 Unfasten the fan cables from the cable support.

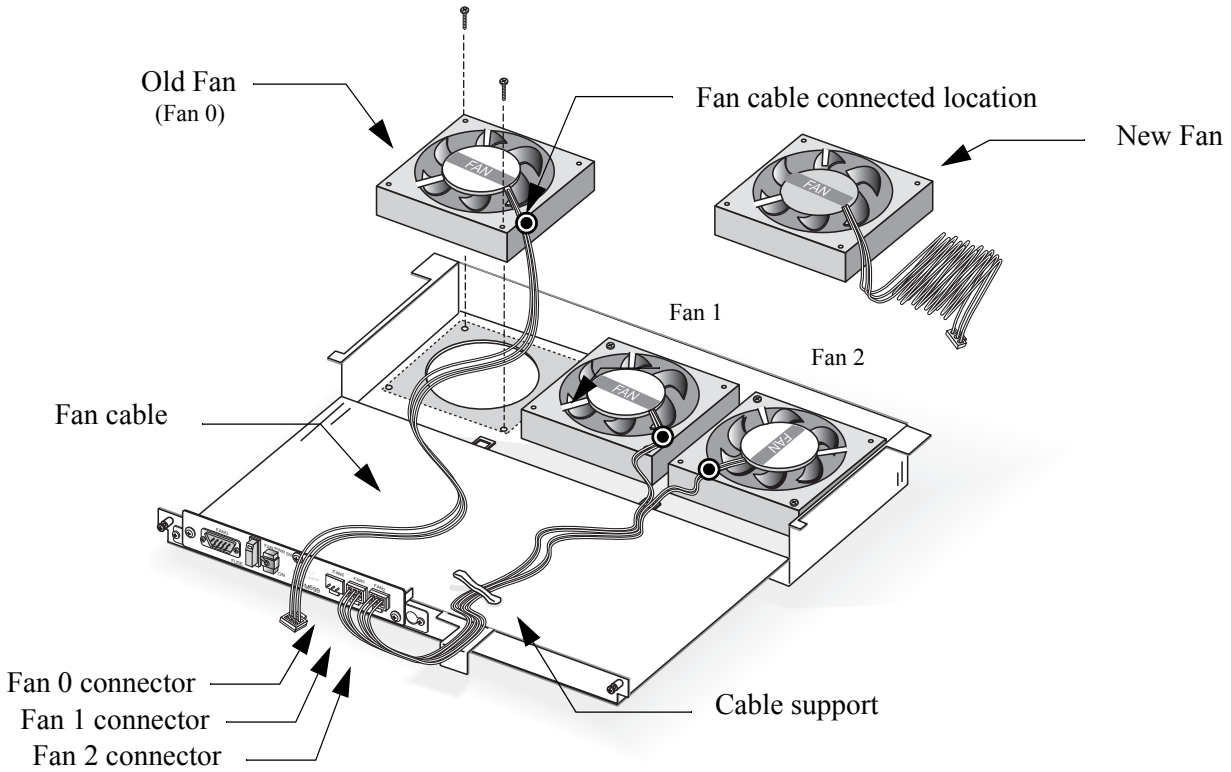
STEP 9 Replace the fan.

(1) Disconnect Fan 0, Fan 1, or Fan 2 connector.

(2) Remove the old fan.

(3) Install a new fan. **Note 1**

(4) Connect the fan cable.



Note 1: When mounting a fan, orient it so that the cable can reach the fan connector.

Note: Insert the fan connector firmly to the appropriate fan connector until you hear an audible click.

STEP 10 Attach the fan tray again.

(1) Insert the fan tray to the original position.

(2) Fix the fan tray on the FANU again.

STEP 11 Reconnect the cables to the FANU connector, and tighten the screws with a flat-blade screwdriver.

STEP 12 Flip the fan Power Switch down to the ON position.

Check all the fans are operating normally.

Note: If fans do not operate normally, check the cable connections.

STEP 13 Return the fan cover to the FANU.

STEP 14 Return the front cover of the rack (PIR/TSWR) located just below the FANU.

[End]

3.7 Replacement Procedure for 7U-PIR Power Unit

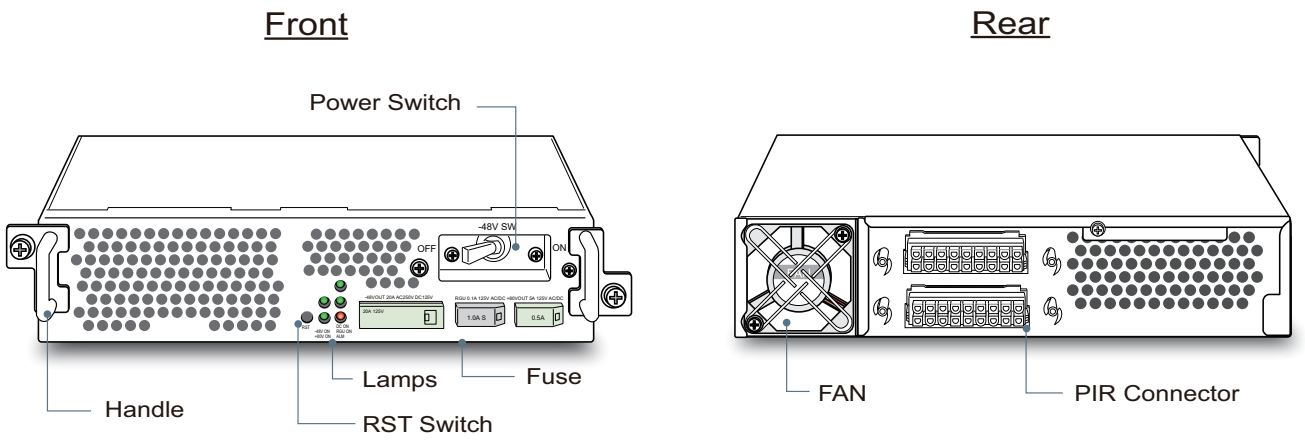
This section explains how to replace the power units for 7U-PIR. The power units are mounted in power unit slots in the lower section of 7U-PIR.

CAUTION

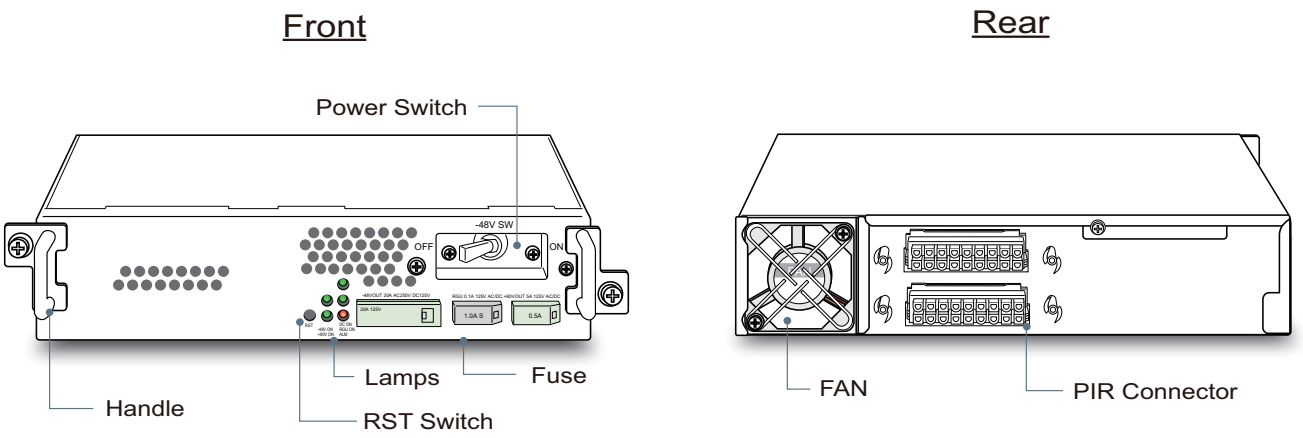
When working with 7U-PIR power units, follow the instructions below.

- **When carrying/pulling the power unit, hold the handles on the front of the unit. Do not touch the bottom or top of the unit since they get very hot from the heat generated during operation.**
- **Before beginning the replacement, be sure to turn OFF the power switch on the front panel.**
- **Always replace one power unit at a time. Do not cut off power for both power units (power units #0 and #1).**
- **Noise and call loss may occur while the replacement work is in progress. In order to minimize the effects of such problems, the replacement should be done during a time when the least amount of traffic is expected.**

7U-PIR Power (AC-DC) Unit



7U-PIR Power (DC-DC) Unit

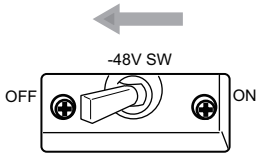


Note: When installing or removing 7U-PIR power units, follow the instructions below.

1. 7U-PIR has two power unit slots (one on left and the other on right), supporting dual power supply. The left slot is for power unit #0 and the right one is for power unit #1. If your system is in Single Power Configuration, install the power unit in the left (power unit #0) slot.
2. Connectors on the back of the power unit are used for connection to the 7U-PIR. When inserting the power unit into the slot, make sure that these connectors are engaged properly.
3. Replace the power units once every seven years.

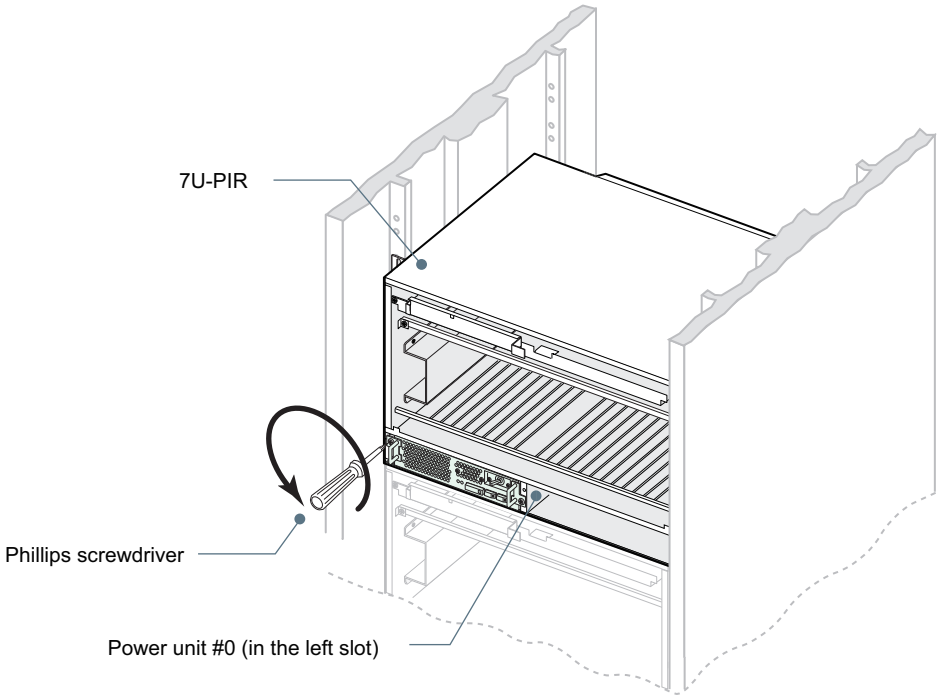
[Start]

STEP 1 On #0 side of the 7U-PIR power unit, turn off the power switch.



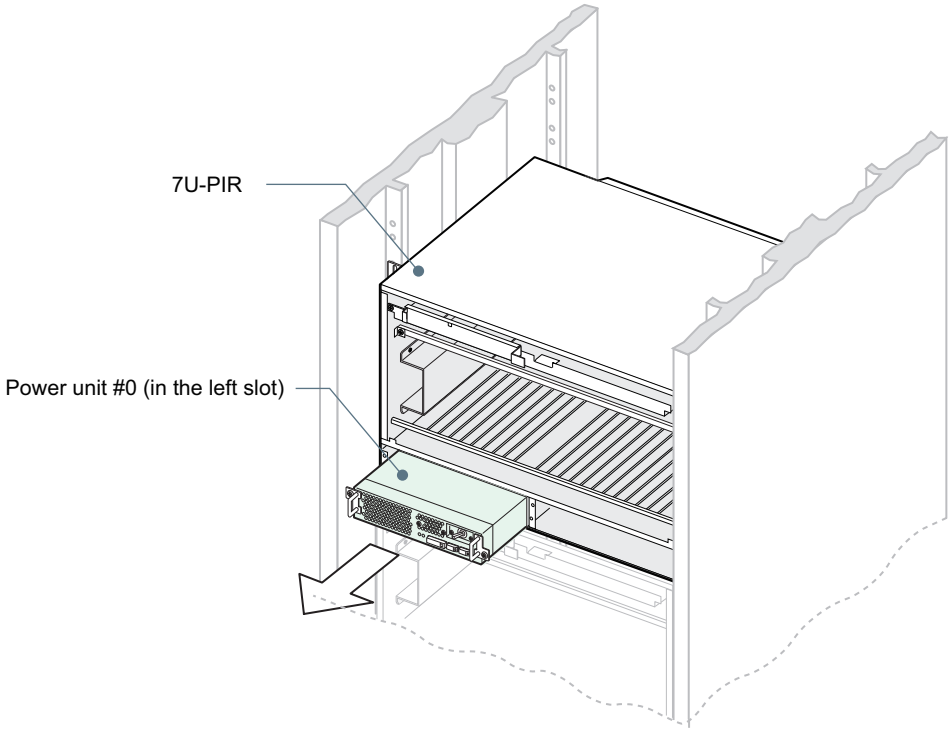
STEP 2 Loosen the screws on both ends (left and right) of power unit #0 with a Phillips screwdriver.

Note: The following steps use 7U-PIR power (AC-DC) unit as an example.



Note: Do not use an electric screwdriver. Excessive torque may damage the thread.

STEP 3 Using the handles on the power unit #0, pull the unit out of the 7U-PIR.

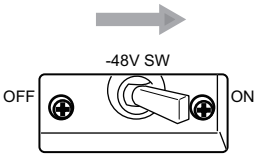


STEP 4 Slide a new AC-DC power unit into the slot.

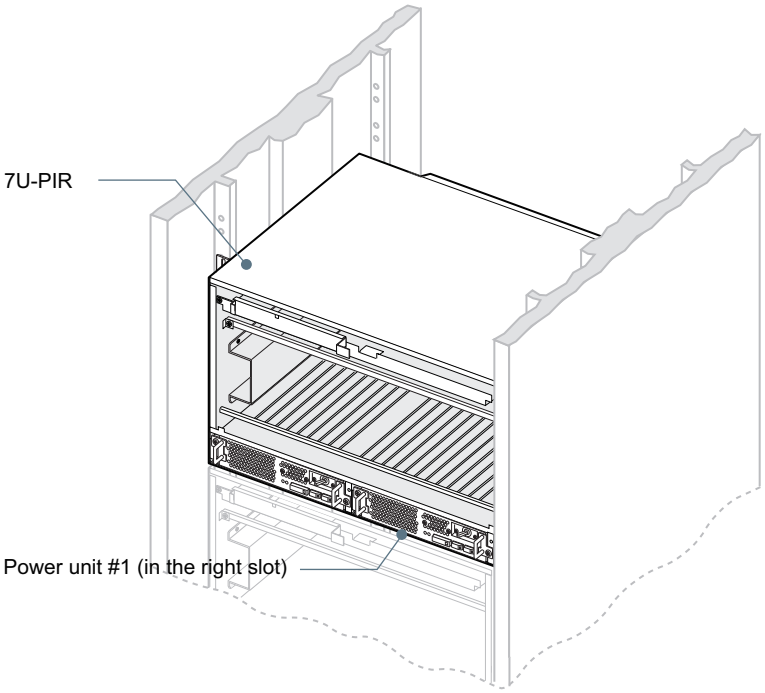
Note: If the unit does not slide in easily, check that the connectors on the unit and the 7U-PIR are correctly engaged.

STEP 5 Fasten the new AC-DC power unit by tightening the screws on both ends (left and right on the unit) with a Phillips screwdriver.

STEP 6 On the new AC-DC power unit, turn on the power switch.



STEP 7 Repeat the above steps for #1 side of AC-DC power unit if necessary.



[End]

3.8 Replacement Procedure for 8U-PIR Power (AC-DC) Unit

This section explains how to change the 8U-PIR Power (AC-DC) Unit from a Single Power Configuration to a Dual Power Configuration as well as replacing the power units.

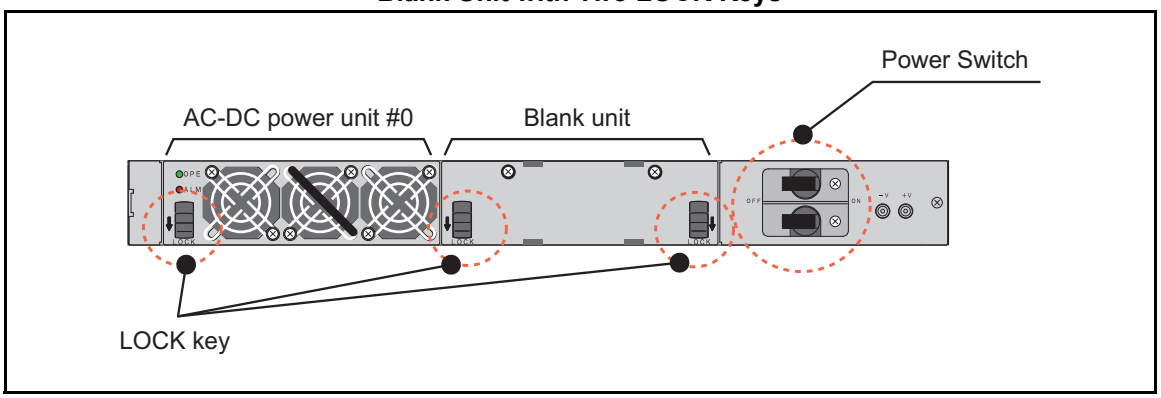
Note: 8U-PIR Power (AC-DC) unit is in Single Power Configuration for shipping. Therefore, a blank unit is mounted on the #1 side of the unit when shipped. There are two types of blank units: unit with two LOCK keys and unit with one LOCK key.

Note: Replacement should be processed one power unit at a time. Do not cut off power for both AC-DC Power Units at the same time.

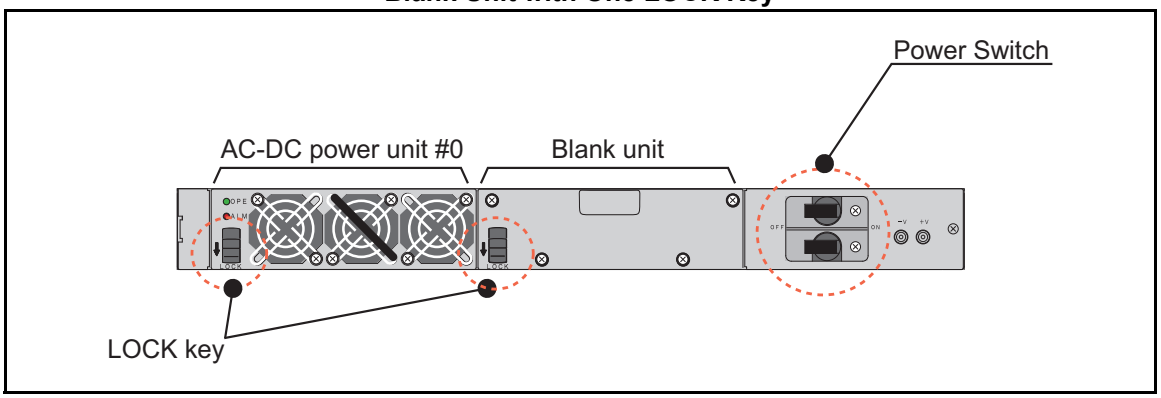
Note: Replace the 8U-PIR Power (AC-DC) unit once every seven years.

Note: When the 8U-PIR Power (AC-DC) unit is in Single Power Configuration, the cover provided must be secured to the empty slot on the unit's front side.

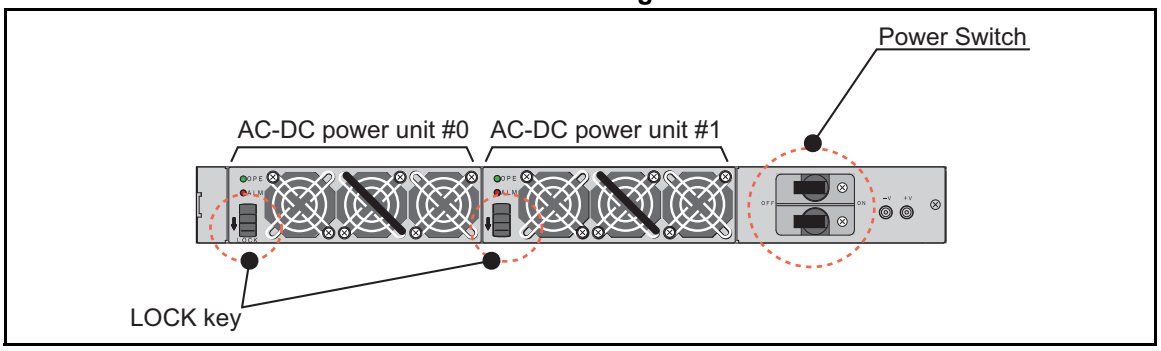
Single Power Configuration (For Shipping)
Blank Unit with Two LOCK Keys



Single Power Configuration (For Shipping)
Blank Unit with One LOCK Key

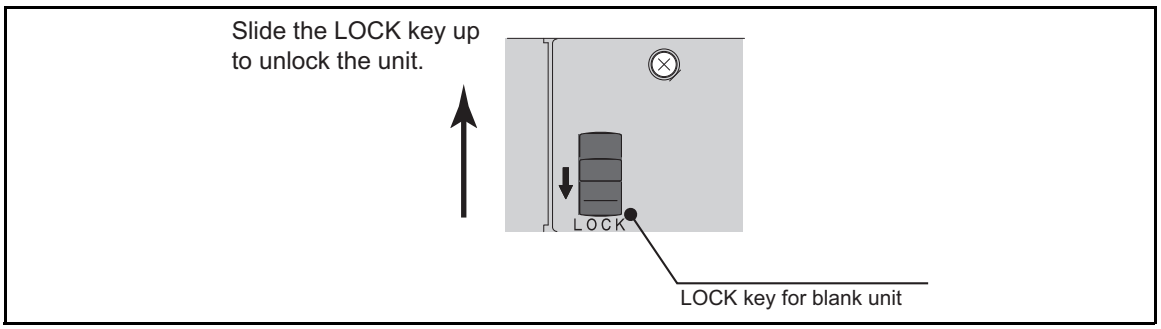


Dual Power Configuration



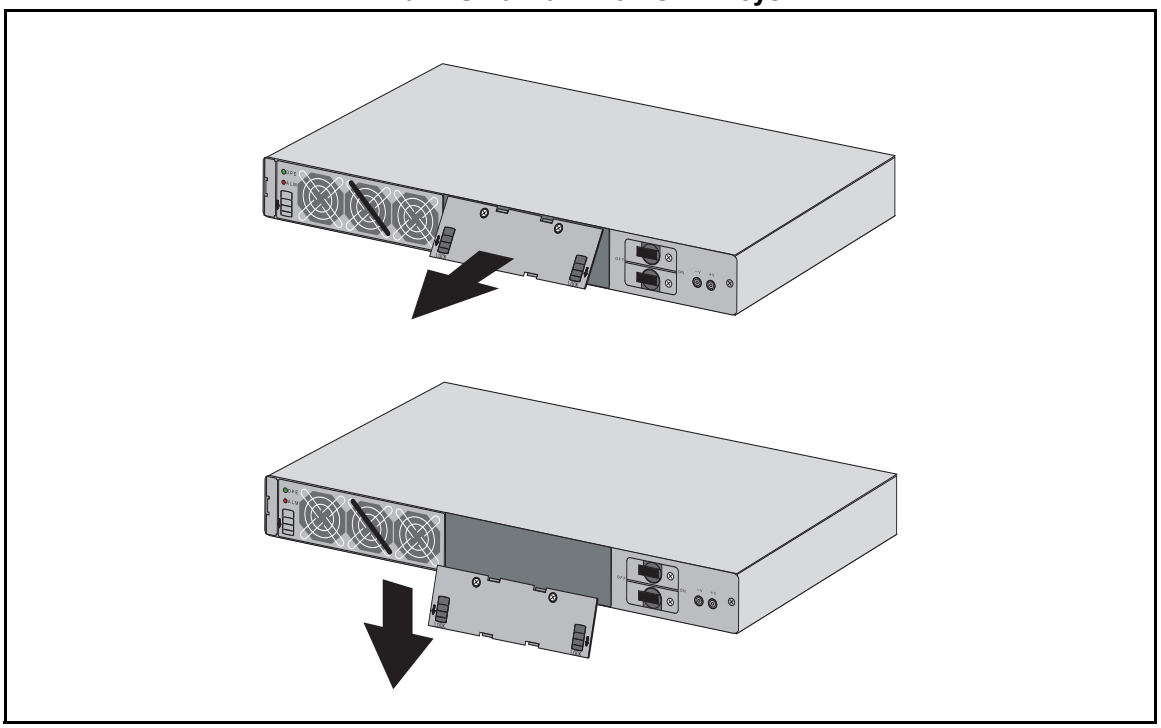
3.8.1 Procedure for Upgrading to Dual Power Configuration

STEP 1 Unlock the blank unit.

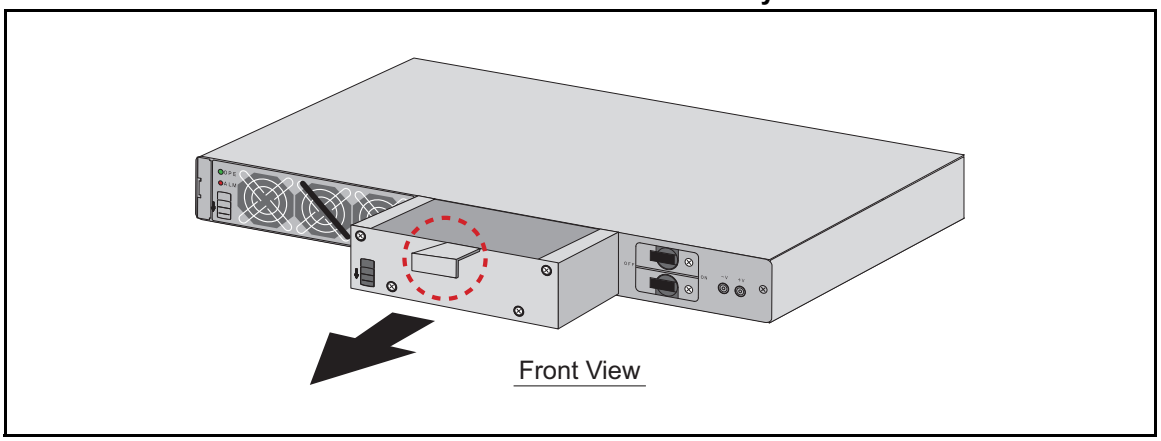


STEP 2 Remove the blank unit.

Blank Unit with Two LOCK Keys



Blank Unit with One LOCK Key



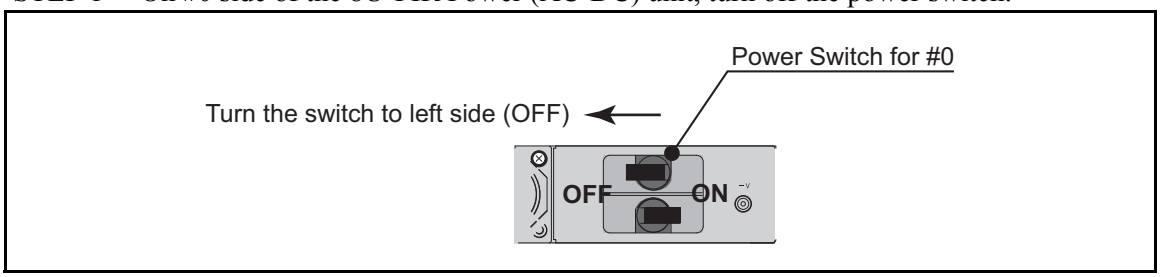
STEP 3 Slide a new 8U-PIR Power (AC-DC) unit into the slot. Check that the OPE lamp light is ON and the fan is turning.

STEP 4 Slide the LOCK key downward to lock the unit.

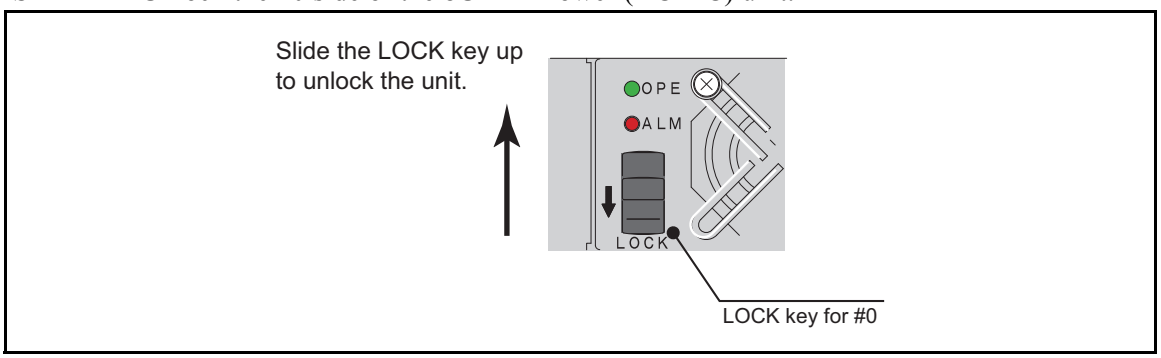
STEP 5 Turn the power switch ON for the newly installed #1 side of the 8U-PIR Power (AC-DC) unit.

3.8.2 Procedure for Replacing #0 Side of 8U-PIR Power (AC-DC) unit

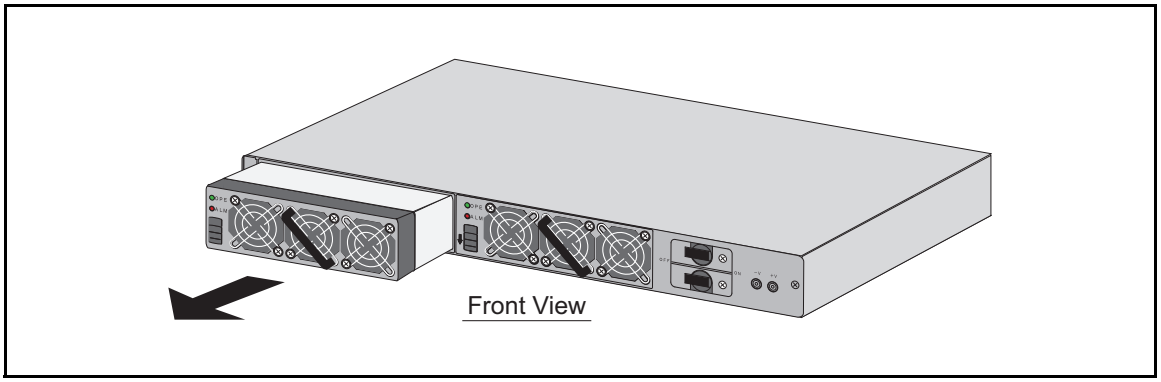
STEP 1 On #0 side of the 8U-PIR Power (AC-DC) unit, turn off the power switch.



STEP 2 Unlock the #0 side of the 8U-PIR Power (AC-DC) unit.



STEP 3 Using the handles on the AC-DC Power unit #0, pull the unit out of the 8U-PIR Power (AC-DC) unit.



Note: Fans constantly turn as long as power units are inserted. Be careful not to touch the fans.

STEP 4 Slide a new 8U-PIR Power (AC-DC) unit into the slot. Check that the OPE lamp light is ON and the fan is turning.

STEP 5 Slide the LOCK key downward to lock the unit.

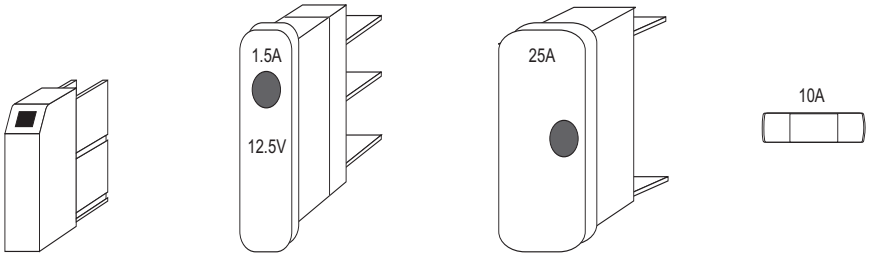
STEP 6 Turn the power switch ON for #0 side of the 8U-PIR Power (AC-DC) unit.

STEP 7 Repeat the above steps for #1 side of the 8U-PIR Power (AC-DC) unit, if necessary.

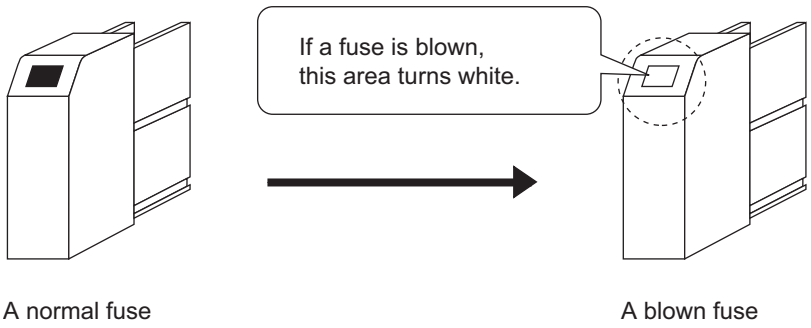
3.9 Replacement Procedure for Fuse



The system uses the following fuses as a protection against an overload resulting from a short circuit.



When excessive current is applied to a PWR card, the related fuse is blown. The blown fuse after a fault can be confirmed as shown in the following figure.



The purpose of fuses is to let them blow before the components are damaged. If any fuse gets blown, replace it immediately with a new one using the following procedure:

(1) Confirm the blown fuse via System Message [6-A] or MJ lamp.

(2) Replace the fuse with the new one.

(3) Determine the cause of the blowout of RGU/-48 VDC fuse.

- For 7U-PIR

  Blowout of RGU Fuse (7U-PIR), Blowout of -48 VDC Fuse (7U-PIR)

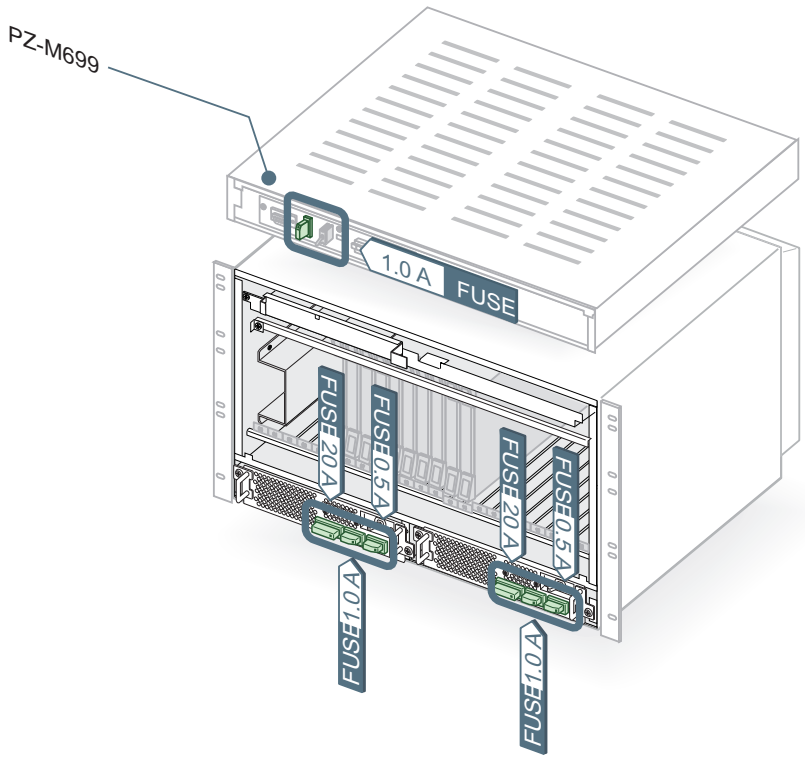
- For 8U-PIR

  Blowout of RGU Fuse (8U-PIR), Blowout of -48 VDC Fuse (8U-PIR)

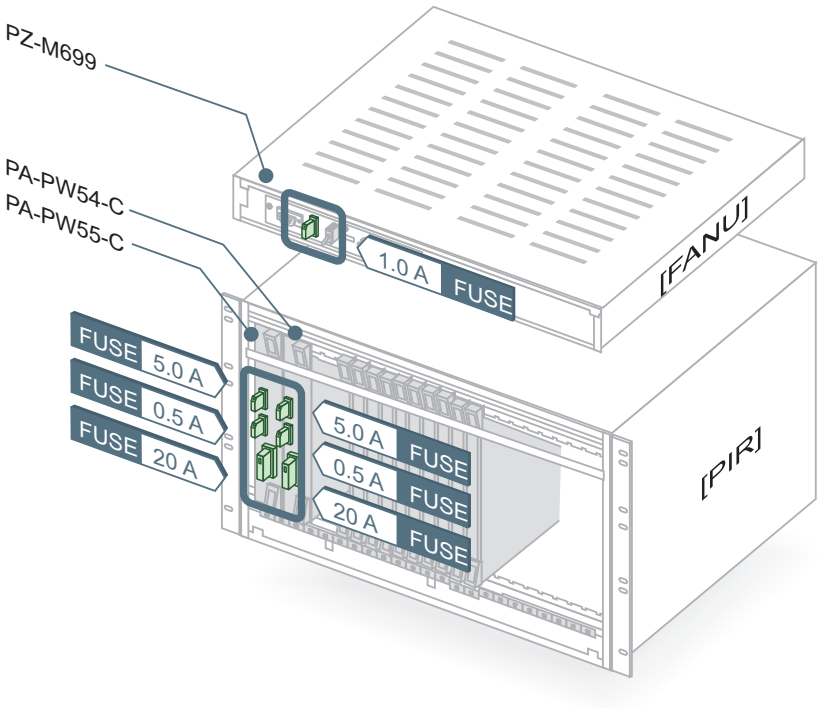
The following figure shows the location of fuses for the system.

Fuse Location on PIR and TSWR

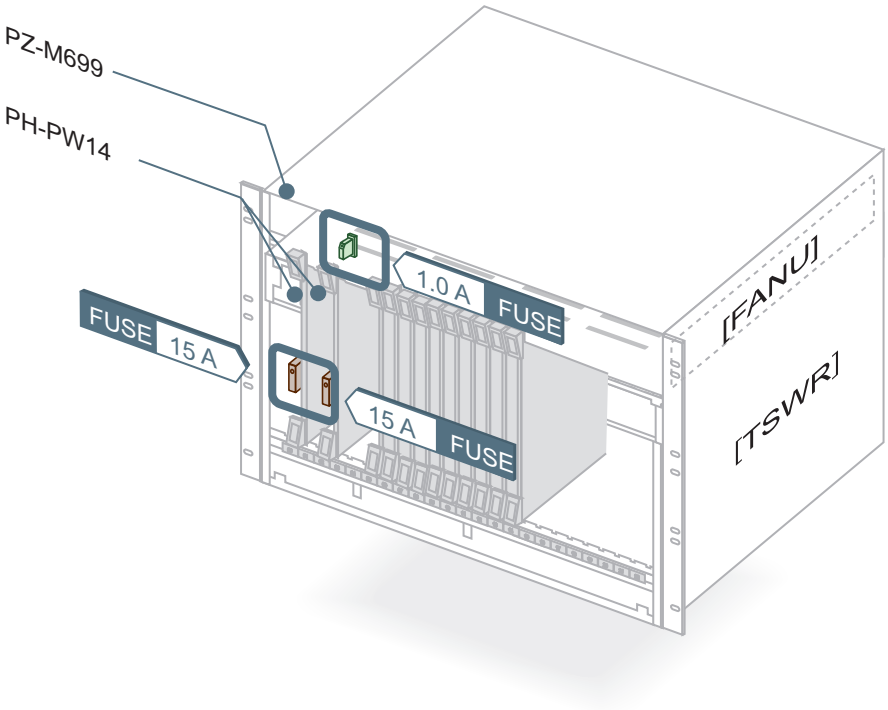
7U-PIR:



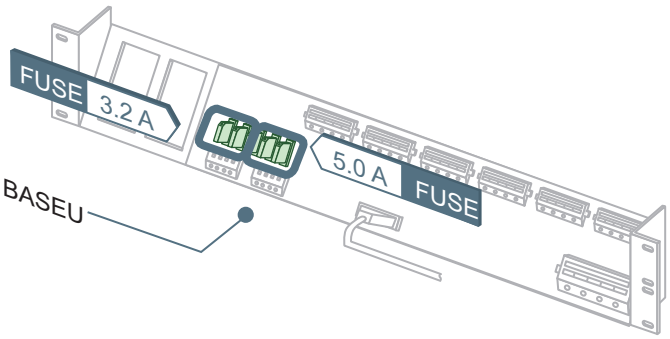
8U-PIR:



TSWR:



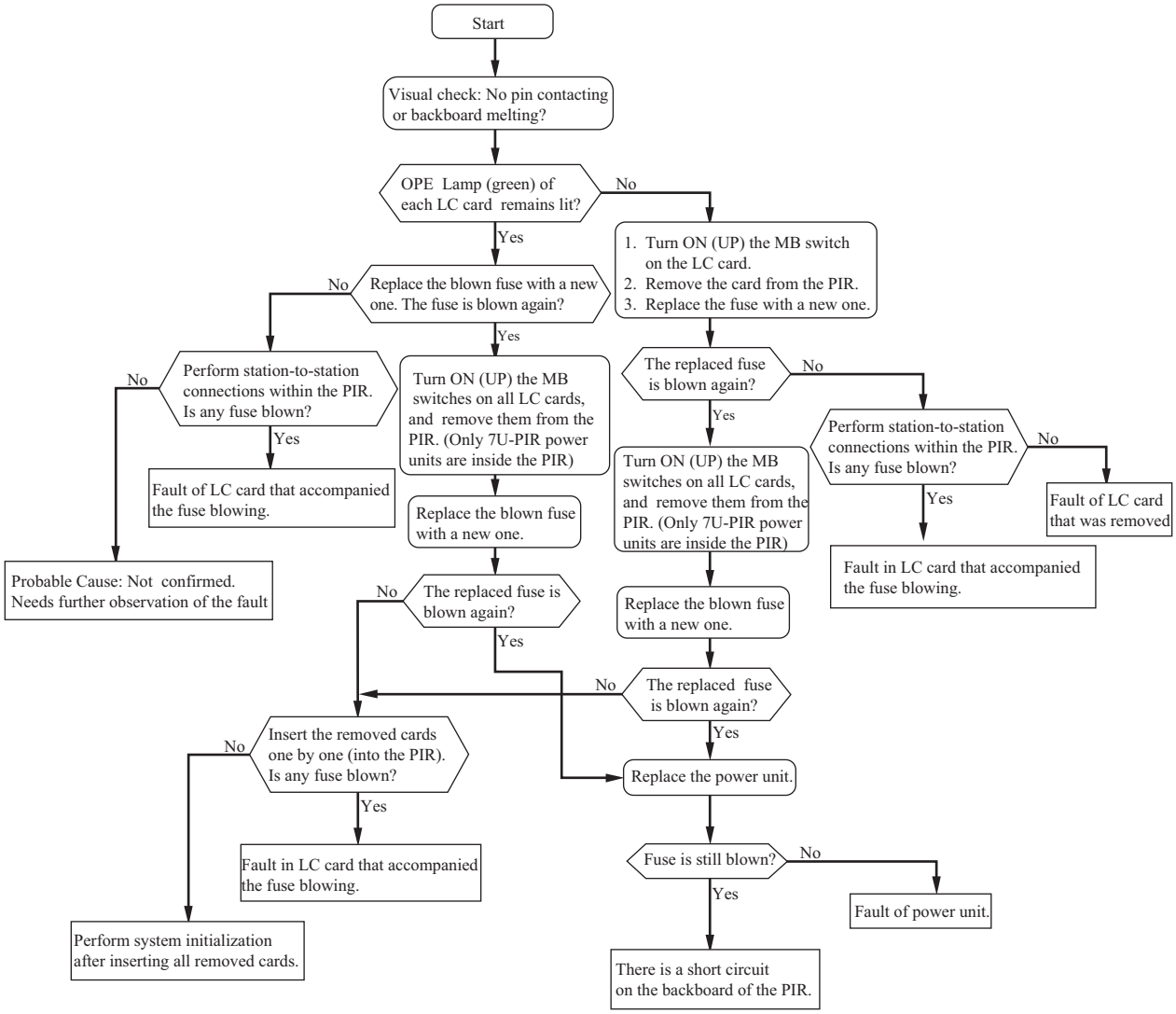
BASEU:



Note: For more details, see the flow charts on page 783 to page 787.

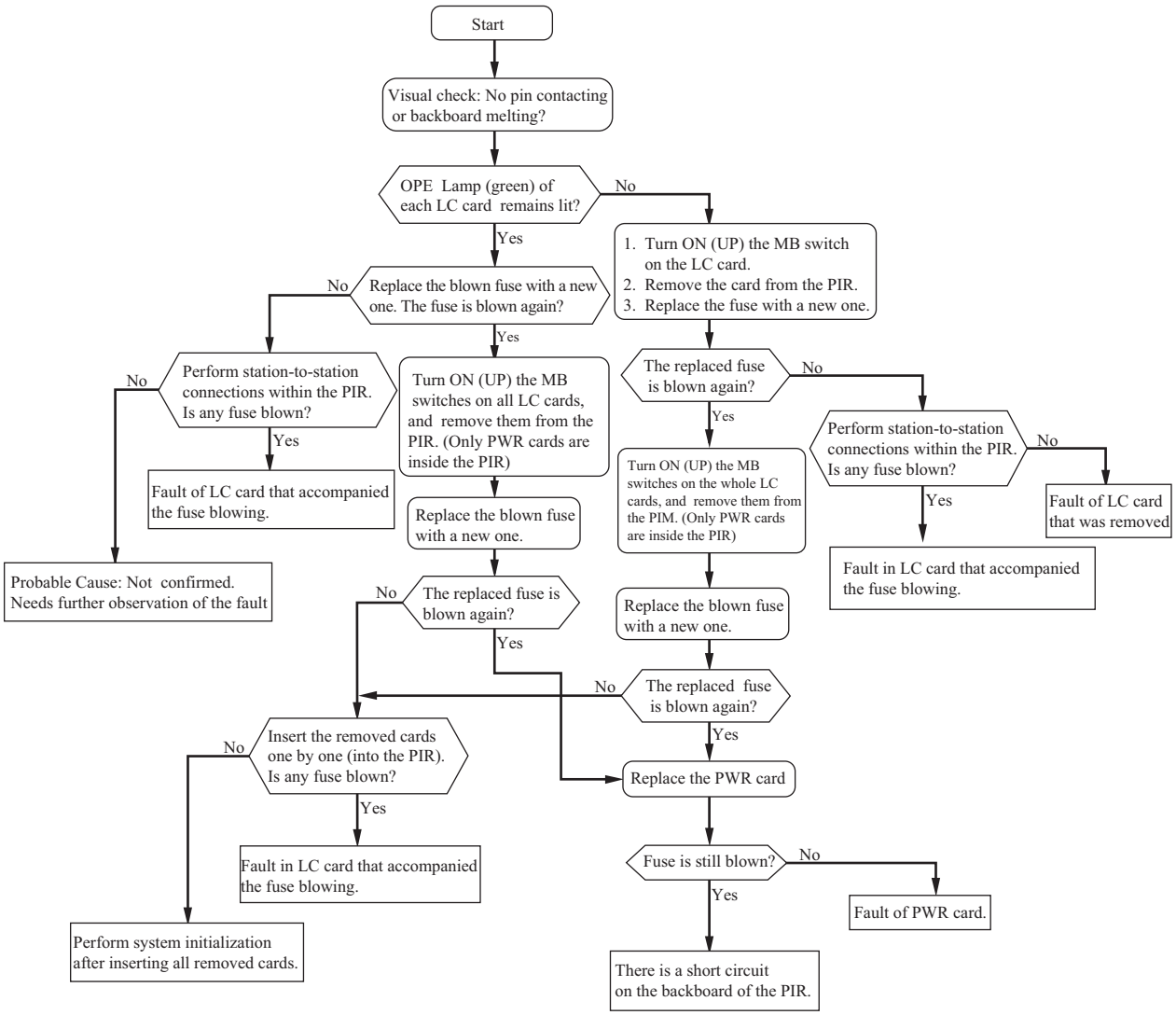
Perform the following procedure to confirm the cause of the RGU fuse blown fault. (7U-PIR)

Blowout of RGU Fuse (7U-PIR)



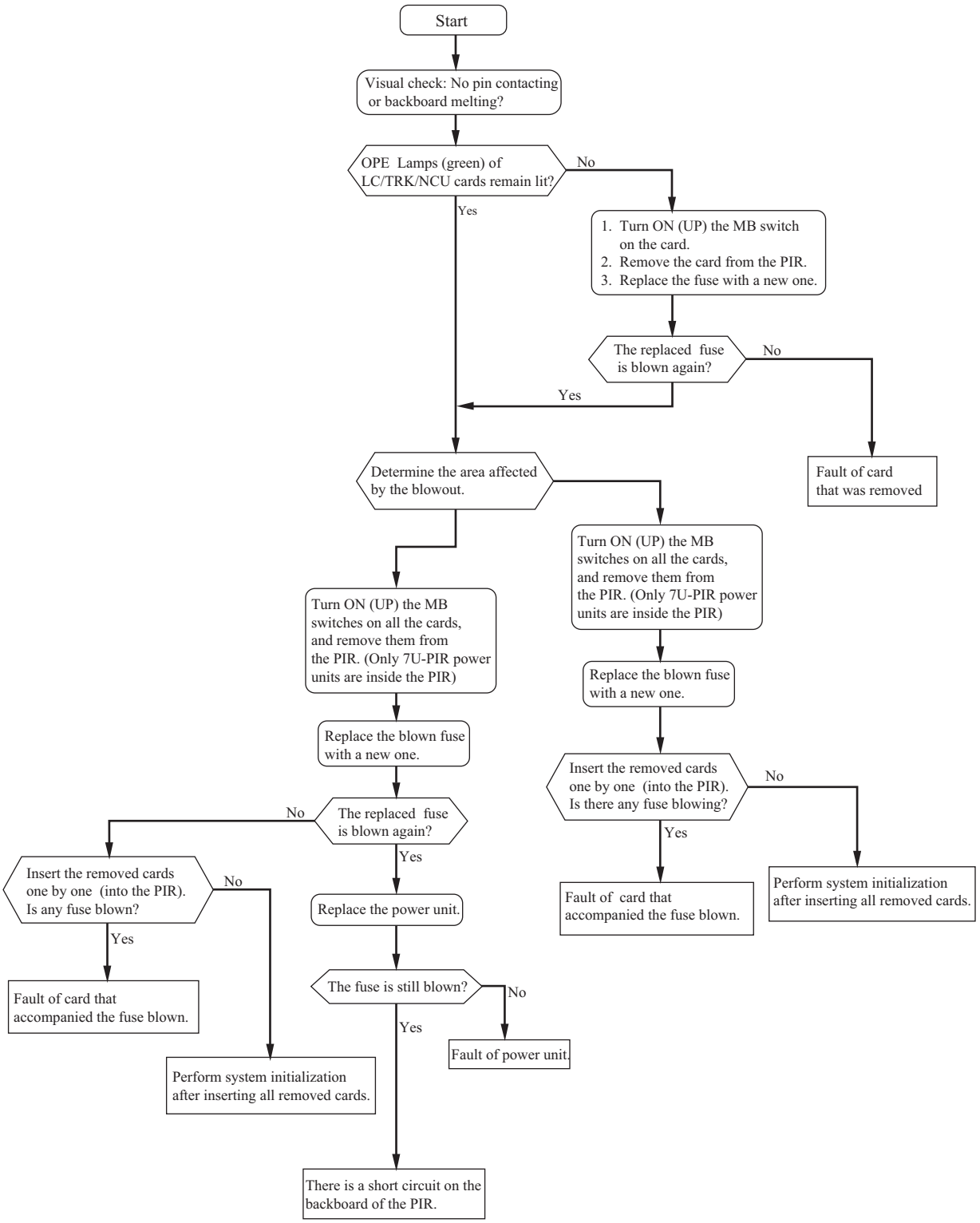
Perform the following procedure to confirm the cause of the RGU fuse blown fault. (8U-PIR)

Blowout of RGU Fuse (8U-PIR)



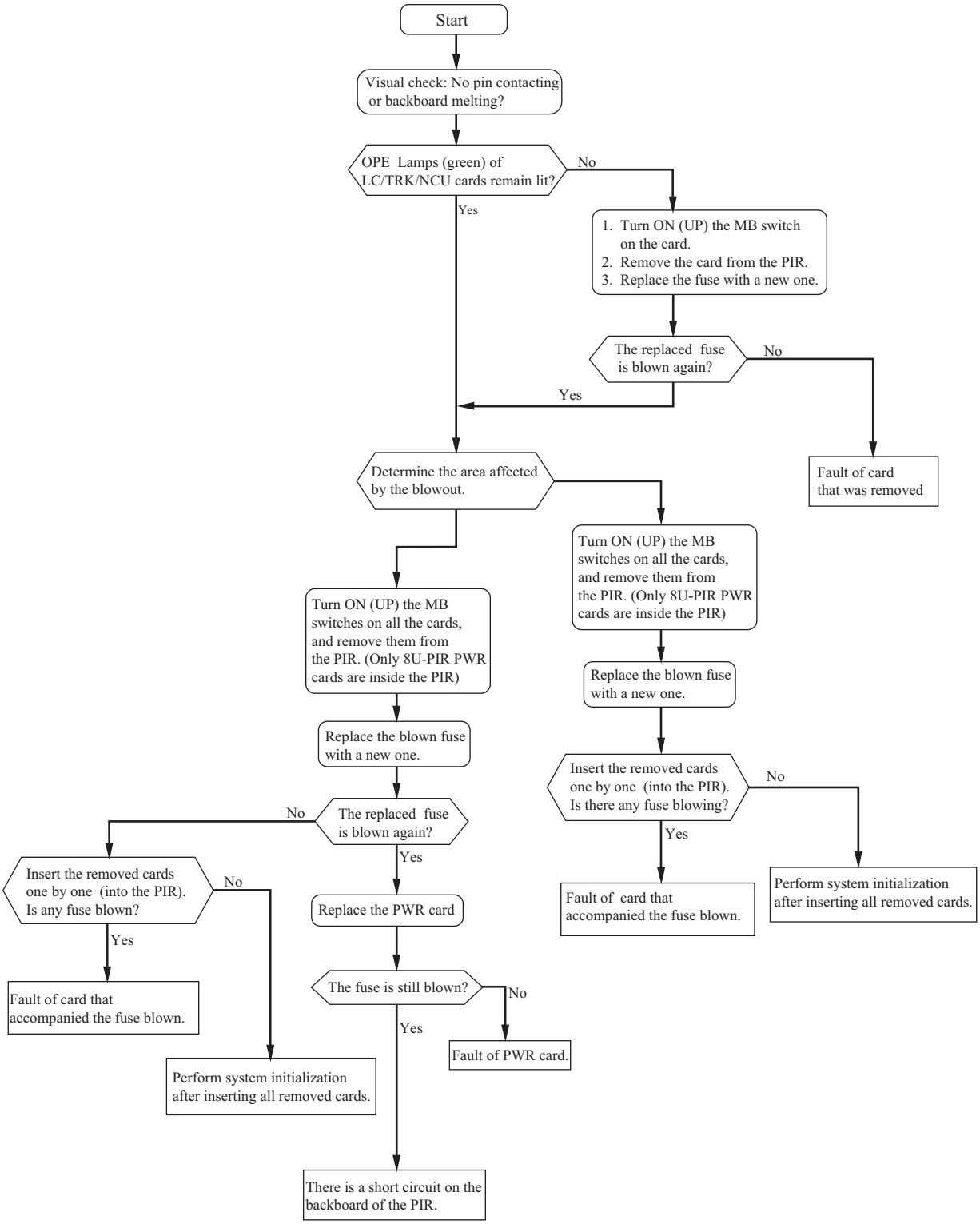
Perform the following procedure to confirm the cause of the -48 VDC fuse blown fault (7U-PIR).

Blowout of -48 VDC Fuse (7U-PIR)



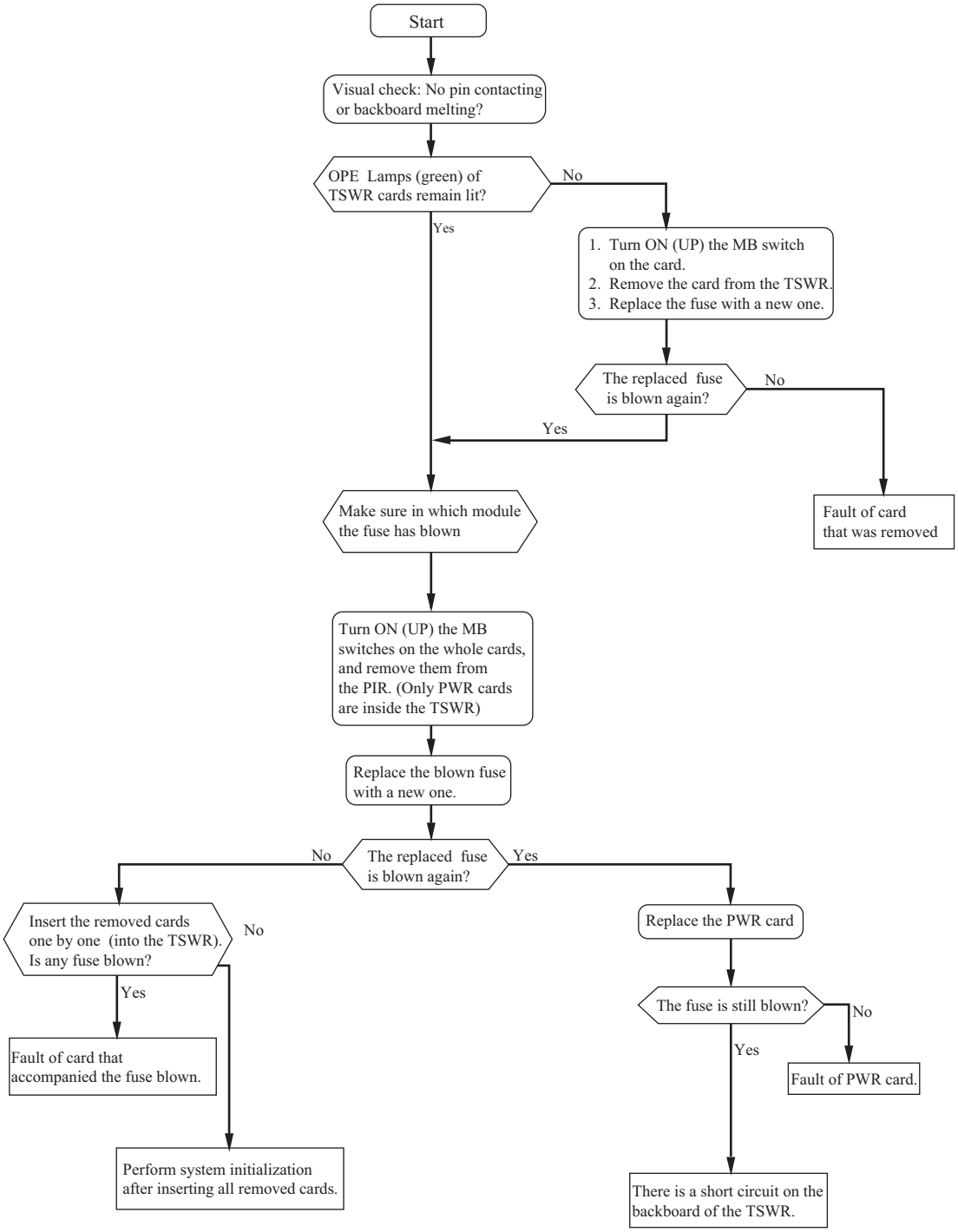
Perform the following procedure to confirm the cause of the -48 VDC fuse blown fault (8U-PIR).

Blowout of -48 VDC Fuse (8U-PIR)



Perform the following procedure to confirm the cause of the -48 VDC fuse blown fault (TSWR)

Blowout of -48 VDC Fuse (TSWR)



4. Replacing TSWR with TSW-BOX

This section explains how to replace faulty TSWR with TSW-BOX.

[Start]

STEP 1 Turn OFF the power of the Telephony Server referring to “Power ON/OFF Procedure” in CHAPTER 6 SYSTEM STARTUP of Appliance Model Installation Manual.

STEP 2 In order to facilitate cable connections to TSW-BOX, mark the connection destination on each cable as necessary.

STEP 3 Disconnect cables from TSWR. For detailed information on cables connected to TSWR, see the following sections.

In the case of 7U-PIR configuration:

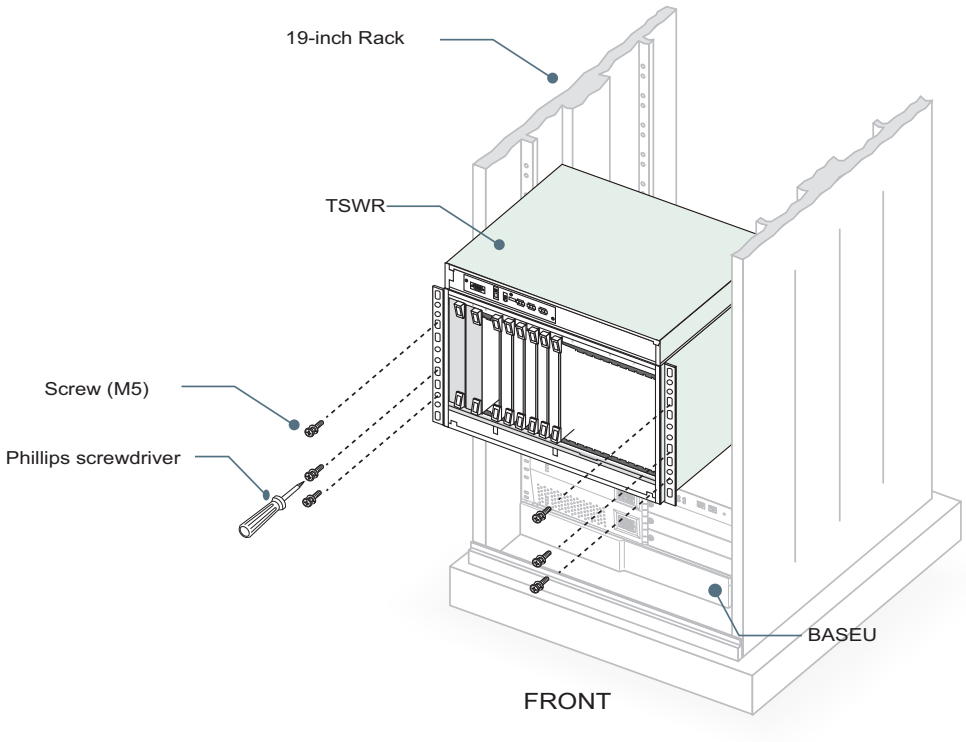
CHAPTER 4 MODULES MOUNTING AND CONNECTION (7UPIR CONFIGURATION) - 4. Cable Connections - 4.3 Internal and Inter-Frame Cable Connection - 4.3.3 Cable Connection for DC-Powered Model (4-IMG Configuration) in Appliance Model Installation Manual.

In the case of 7U-PIR and 8U-PIR mixed configuration

CHAPTER 5 MODULES MOUNTING AND CONNECTION (7U-PIR AND 8U-PIR MIXED CONFIGURATION) - 5. Cable Connections - 5.3 Internal and Inter-Frame Cable Connection - 5.3.4 Cable Connection for DC-Powered Model (4-IMG Configuration) in Appliance Model Installation Manual.

STEP 4 Remove TSWR from the rack.

Note: Do not use an electric screwdriver. The fastening torque could be excessive and damage the screws.



STEP 5 Mount TSW-BOX on the rack referring to the following sections.

In the case of 7U-PIR configuration:

CHAPTER 4 MODULES MOUNTING AND CONNECTION (7UPIR CONFIGURATION) - 3. Installing Modules - 3.3 Module Mounting (DC-Powered Model (4-IMG) of 7U-PIR) - 3.3.1 Checking the PIR Position and 3.3.2 Mounting on the 19-inch Rack in Appliance Model Installation Manual.

In the case of 7U-PIR and 8U-PIR mixed configuration

CHAPTER 5 MODULES MOUNTING AND CONNECTION (7U-PIR AND 8U-PIR MIXED CONFIGURATION) - 4.3 Module Mounting (DC-Powered Model (4-IMG)) - 4.3.1 Checking PIR Position and 4.3.4 Mounting on the 19-inch Rack in Appliance Model Installation Manual.

STEP 6 Connect each cables to TSW-BOX referring to the following sections.

In the case of 7U-PIR configuration:

CHAPTER 4 MODULES MOUNTING AND CONNECTION (7UPIR CONFIGURATION) - 4. Cable Connections - 4.3 Internal and Inter-Frame Cable Connection - 4.3.3 Cable Connection for DC-Powered Model (4-IMG Configuration) - 4.3.3.1 When Using TSW-BOX in Appliance Model Installation Manual.

In the case of 7U-PIR and 8U-PIR mixed configuration

CHAPTER 5 MODULES MOUNTING AND CONNECTION (7U-PIR AND 8U-PIR MIXED CONFIGURATION) - 5. Cable Connections - 5.3 Internal and Inter-Frame Cable Connection - 5.3.4 Cable Connection for DC-Powered Model (4-IMG Configuration) - 5.3.4.1 When Using TSW-BOX in Appliance Model Installation Manual.

STEP 7 Turn ON the power of the Telephony Server referring to “Power ON/OFF Procedure” in CHAPTER 6 SYSTEM STARTUP of Appliance Model Installation Manual.

[End]

5. FAULT REPAIR PROCEDURE

This section provides information on how to repair the fault(s) within the system. If any of the components or equipment listed in the table below has a failure, move on to the repair procedure explained for each faulty condition.

Fault Repair Procedure Quick Reference

FAULTY ITEM	FAULTY SITUATION		REFERENCE SECTION
Line Fault	DP/PB Telephone	Dial Tone is not heard.	Section 5.1.3 Line Fault - When DT Cannot be Heard
		Dialing results in a wrong connection.	Section 5.1.4 Line Fault - When Dialing Results in Wrong Connection
		Bell does not ring.	Section 5.1.5 Line Fault - When Bell Does Not Ring
		Answer/speech cannot be made.	Section 5.1.6 When Call Cannot be Answered and Speech Cannot be Made
	Digital Terminal	• Digital terminal cannot be operated. • Operations are abnormal.	Section 5.1.7 Line fault - Digital terminal
Trunk Fault	• No connections can be set up. • PB/DP signals are erroneously received or sent out from ORT/SND. • No three-way calling can be made on CFT, or noise gets in a established connection. • A connection results in no speech. • Noise gets in a established connection.		Section 5.2.3 Trunk (ORT, SND, CFT) Fault and Section 5.2.4 Trunk (COT, TLT, DTI) Fault
Unit Fault	Faults related to speech.		Section 5.4.3 Unit Fault - Fault Related to Speech
	Dial Tone is not heard.		Section 5.4.4 Unit Fault - When Dial Tone (DT) Cannot be Heard
	The ACT MUX card side has become faulty and system changeover has been executed.		Section 5.4.5 Unit Fault - ACT-Side MUX Card is Faulty and System Has Changed Over

Fault Repair Procedure Quick Reference (Continued)

FAULTY ITEM	FAULTY SITUATION		REFERENCE SECTION
Speech System Fault	Faults related to speech.		Section 5.5.2 Speech Path System Fault - Fault Related to Speech
	Dial Tone is not heard.		Section 5.5.3 Speech Path System Fault - When Dial Tone (DT) Cannot be Heard
	STBY side is faulty.		Section 5.5.4 Speech Path System Fault - STBY Side Has Become Fault
Control System Fault	Fault occurs occasionally at the ACT side.		Section 5.6.2 Control System Fault - Fault Occurs Intermittently on ACT side
Alarm Indication Fault	Fault is not detected.		Section 5.6.4 Fault That Cannot be Detected
Power Supply Fault	7U-PIR	Fuse for RGU/-48 V has blown.	Section 5.7.2 Fuse Blown Fault of 7U-PIR
		The circuit breaker of 7U-PIR Power unit is off.	Section 5.7.3 Circuit Breaker OFF Fault in Power Supply of 7U-PIR
		Alarm lamp on 7U-PIR Power unit is lit.	Section 5.7.4 Fault of Alarm Lamps on Power Supply of 7U-PIR
	8U-PIR	Fuse for RGU/-48 V has blown.	Section 5.8.2 Fuse Blown Fault of 8U-PIR
		The circuit breaker of 8U-PIR PWR (DC-DC) card is off.	Section 5.8.3 Circuit Breaker OFF Fault in 8U-PIR PWR (DC-DC) card
		Alarm lamp on the 8U-PIR PWR (DC-DC) card is lit.	Section 5.8.4 Fault of Alarm Lamps on 8U-PIR PWR (DC-DC) card
Fan Unit Fault	• Fans are not activated even if the temperature has risen higher than a predetermined degree. • Fans are not activated even if the FAN START switch is set to AUTO position.		Section 5.9 Fault of Fan in PIR/TSWR
Tone Fault	Tone is distorted.		Section 5.10.2 Tone Fault
CCIS Line Fault	• A specific CCH/CCT card is faulty. When the signal transmission line is a digital line, transmission/receiving of control signals cannot be performed. • When the signal transmission line is an analog line, transmission/receiving of control signals cannot be performed.		Section 5.11.3 Specific CCH/CCT Card is Faulty and Section 5.11.4 Fault of CCH, DTI and Related Flat Cable
ISDN Line Fault	• A specific DCH/PRT card is faulty. • When the signal transmission line is a digital line, transmission/receiving of control signals cannot be performed.		Section 5.12.3 Specific DCH/PRT Card is Faulty and Section 5.12.4 Fault of DCH, DTI, and Related Flat Cable

5.1 Line Fault

This section explains the fault repair procedure in a case where only one specific station line is in any of the faulty conditions listed in the table below.

Line Fault Situation

FAULTY SITUATION	REFERENCE SECTION
When Dial Tone cannot be heard	Section 5.1.3 Line Fault - When DT Cannot be Heard
When dialing results in a wrong connection	Section 5.1.4 Line Fault - When Dialing Results in Wrong Connection
When the bell does not ring	Section 5.1.5 Line Fault - When Bell Does Not Ring
When call cannot be answered and speech cannot be made	Section 5.1.6 When Call Cannot be Answered and Speech Cannot be Made
Desktop terminal fault	Section 5.1.7 Line fault - Digital terminal

5.1.1 Check Point

When repairing a line fault, consider the following items:

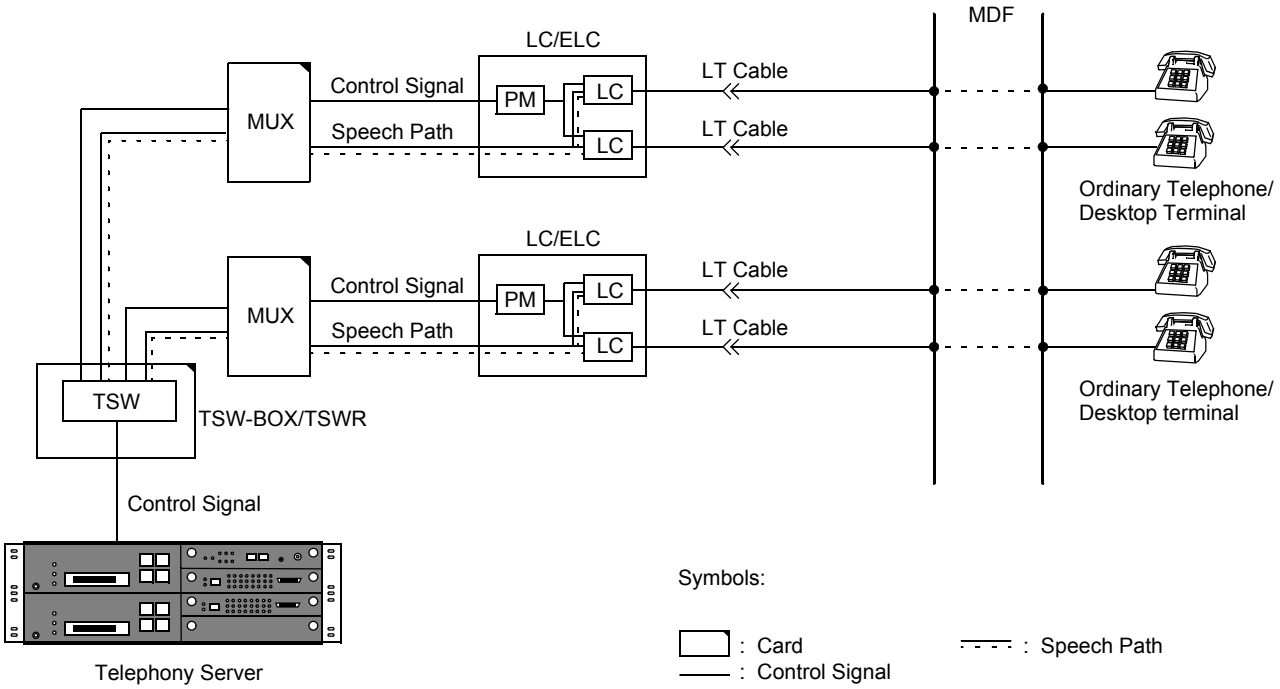
(1) Check alarm lamps on line cards.

(2) Check the fault line on the MDF.

5.1.2 Line Control

Each line in a specific Line Circuit (LC/ELC) card is controlled by the PM in that line card. The line cards are controlled from Telephony Server via the MUX. The following figure shows the control route of line cards.

Controlling LC/ELC Cards and Speech Path



5.1.3 Line Fault - When DT Cannot be Heard



Note: If a card is replaced because only one line is faulty, no other lines in that card can be used until the replacement is complete.

(1) When OPE lamp on the LC card does not illuminate.

(a) Confirm MB switch of the LC card is in ON position (UP).

(b) Use the ASDT command to confirm that station data in the LC card is assigned.

(c) Replace the LC card with a spare.

(2) When BL lamp for each line is flashing or illuminating on the LC card

(a) Confirm MB switch of the LC card is in ON position (UP side).

(b) Use the MBST command to confirm LC card has not been placed into make-busy state.

(c) Use the ASDT command to check the station data assignment.

(d) Replace the LC card with a spare.

(3) Check the faulty line on the MDF.

(a) Isolate the faulty line to the in-house wiring side and to the system side.

(b) Connect the test telephone to the system side and check to see if Dial Tone can be heard.

<When Dial Tone (DT) is heard>

- Check the in-house wirings.
- Replace the station telephone set with a spare.

<When no DT or side tone is heard>

- Check LT cables.
- Replace the station telephone set with a spare.

<When DT is not heard, but side tone can be heard>

- Replace the LC card with a spare.

5.1.4 Line Fault - When Dialing Results in Wrong Connection



Note: If a card is replaced because only one line is faulty, no other lines in that card can be used until the replacement is complete.

(1) When a call addressed to a specific station has terminated to another station.

(a) Check to see if Call Forwarding-All Calls data has been deleted.

(2) Check the faulty line on the MDF.

(a) On the MDF, isolate the faulty line to the in-house wiring side and to the system side.

(b) Connect the test telephone to the system side.

(c) Repeat station-to-station connections and check to see if the connection is established normally.

<When the dialed station is called>

- The station telephone set is faulty. Replace the station telephone set with a spare.

<When a wrong connection occurs>

- Replace the LC card with a spare.

5.1.5 Line Fault - When Bell Does Not Ring



Note: If a card is replaced because only one line is faulty, no other lines in that card can be used until the replacement is complete.

(1) Call the faulty station line by station-to-station calling and check to see if the bell of the telephone rings.

(a) Replace the telephone set and check to see if its bell rings.

(2) Check the faulty line on the MDF.

(a) Isolate the faulty line to the in-house wiring side and to the system side.

(b) Connect the test telephone to the system side.

(c) Call the faulty line by station-to-station calling and check to see if the bell rings.

<When the bell does not ring>

- Replace the LC card with a spare.

<When the bell rings>

- The in-house wiring side is faulty. Confirm that the A-wire is not short-circulating with ground.

5.1.6 When Call Cannot be Answered and Speech Cannot be Made



Note: If a card is replaced because only one line is faulty, no other lines in that card can be used until the replacement is complete.

(1) Check the faulty line on the MDF.

(a) Isolate the faulty line to the in-house wiring side and to the system side.

(b) Connect the test telephone to the system side.

(c) Call the faulty line by station-to-station calling.

<When speech can be made>

- Replace the telephone set with a spare.

<When speech cannot be made>

- Replace the LC card with a spare.

5.1.7 Line fault - Digital terminal



[1] When using ELC card.

Note: If a card is replaced because only one line is faulty, no other lines in that card can be used until the replacement is complete.

Note: If any of the in-house cable wirings short-circuit, the PWR ALM lamp on the ELC card lights. Remove the cause of the short-circuit and initialize the ELC card.

(1) When OPE lamp on the ELC card does not illuminate.

(a) Confirm that MB switch of the ELC card is not in ON position (UP).

(b) Confirm that station data (ASDT command) in the ELC card is assigned.

(c) Replace ELC card with a spare.

(2) When BL lamp for each line is flashing or illuminating on the ELC card.

(a) Confirm that MB switch of the ELC card is not in ON position (UP).

(b) Use the MBST command to confirm that ELC card has not been placed into make-busy state.

(c) Check the station data (ASDT command) assignment.

(d) Replace the ELC card with a spare.

(3) Check the faulty line on the MDF.

(a) Isolate the faulty line to the in-house wiring side and to the system side.

(b) Connect the test Digital terminal to the system side.

(c) Confirm speech by station-to-station calling.

<When speech cannot be made>

- Check LT cables.
- Replace ELC card with a spare.

<When speech can be made>

- Check to see if the modular plug is firmly connected with the Digital terminal.
- Check the wiring inside the rosette.
- Check the in-house wiring for any abnormality.
- Replace the Digital terminal with a spare.

5.2 Trunk Fault

This paragraph explains the fault repair procedure when a fault, shown in the table below, has occurred to a specific trunk.

Trunk Fault Situation

TRUNK	FAULTY SITUATION	REFERENCE SECTION
ORT	No connection can be set up. PB/DP signals are erroneously received or cannot be received.	Section 5.2.3 Trunk (ORT, SND, CFT) Fault
SND	No connections can be set up. PB/DP signals are erroneously sent out or cannot be sent out.	
CFT	No connections can be set up. No three-way calling can be made. Noise gets in an established connection.	
COT TLT DTI	No connections can be set up. A connection results in no speech. Noise gets in an established connection.	Section 5.2.4 Trunk (COT, TLT, DTI) Fault
MG	No connections can be set up. A connection results in no speech. Noise gets in an established connection.	Refer to the Installation and startup procedure for MG (Media Gateway) in Peripheral Equipment Description (IP Devices).

5.2.1 Check Point

When repairing a trunk fault, consider the following items:

(1) Check alarm lamps on trunk cards.

(2) When an outgoing call cannot be originated to a specific trunk or when an incoming call cannot be terminated from a specific trunk, check Tenant Restriction Data (assigned via the ATNR command) and Route Restriction Data (assigned via the ARSC command).

(3) In a 1-IMG system, Three-Way Conference Trunk (CFT) is on the MUX cards. If a three-way conference call cannot be established, check the MUX cards.
In a 4-IMG system, Three-Way Conference Trunk (CFT) is on the TSW and MUX cards. If a three-way conference call is unavailable, check the TSW and MUX cards.

(4) If the present timing for supervising the trunk/sender status is considered responsible for the fault, change the timing. The specifications for timings that can be changed with respect to trunks and senders are shown in the tables entitled “Timings for Trunks” and “Timings for Senders.”

Timings for Trunks

	ITEMS FOR STATUS SUPERVISION	CONDITIONS FOR SUPERVISION	TIMING SPECIFICATIONS
1	Detection of Call Termination	• Ringdown System Detection by ringing signal (20Hz) from the opposite office. • Loop System Detection by loop from the opposite office. • E&M System Detection by incoming signal (ground or –48V) on E (RG2) lead.	Ringing signal of more than four cycles is detected within 800 milliseconds. Detection within 16 milliseconds after call termination.
2	Acknowledge Signal Sending	• Wink Signal • Delay Start	160 milliseconds (standard) Timing can be assigned using the ARTD command.
3	Detection of Release at the time of Incoming Connection	• E&M System • Loop System	288milliseconds (standard) 160 milliseconds (standard) Timing can be assigned using the ARTD command.
4	Timing for Restricting Call Origination after Release	After release of the user's trunk or the trunk at the opposite office has been detected, a new call origination is restricted.	3070 milliseconds (standard) Timing can be assigned using the ARTD command.
5	Seizure of Opposite Office	• Loop System Closure of DC loop. • E&M System Supply of outgoing call signal (ground or –48V) onto M (DL) lead.	
6	Detection of Acknowledge Signal	• Wink Signal • Delay Start	Timing is assigned using the ARTD command.
7	Trunk Hold Time	Even if answer signal has not reached from the opposite office, the call is regarded as answered.	• If DP Signal is 10 seconds (standard) after dial pulses are sent out Timing can be assigned using the ARTD command. • If PB Signal is 30 seconds (standard) after seizure of the trunk Timing can be assigned using ASYD, SYS1, Index 156 (only when 2nd Dial Tone System).
8	Detection of Release at the time of Outgoing Connection	• Loop System Detection of polarity reversal across tip and ring. • E&M System Detection of Release Signal (ground or –48V) on E lead.	608 milliseconds (standard) Timing can be assigned using the ARTD command.

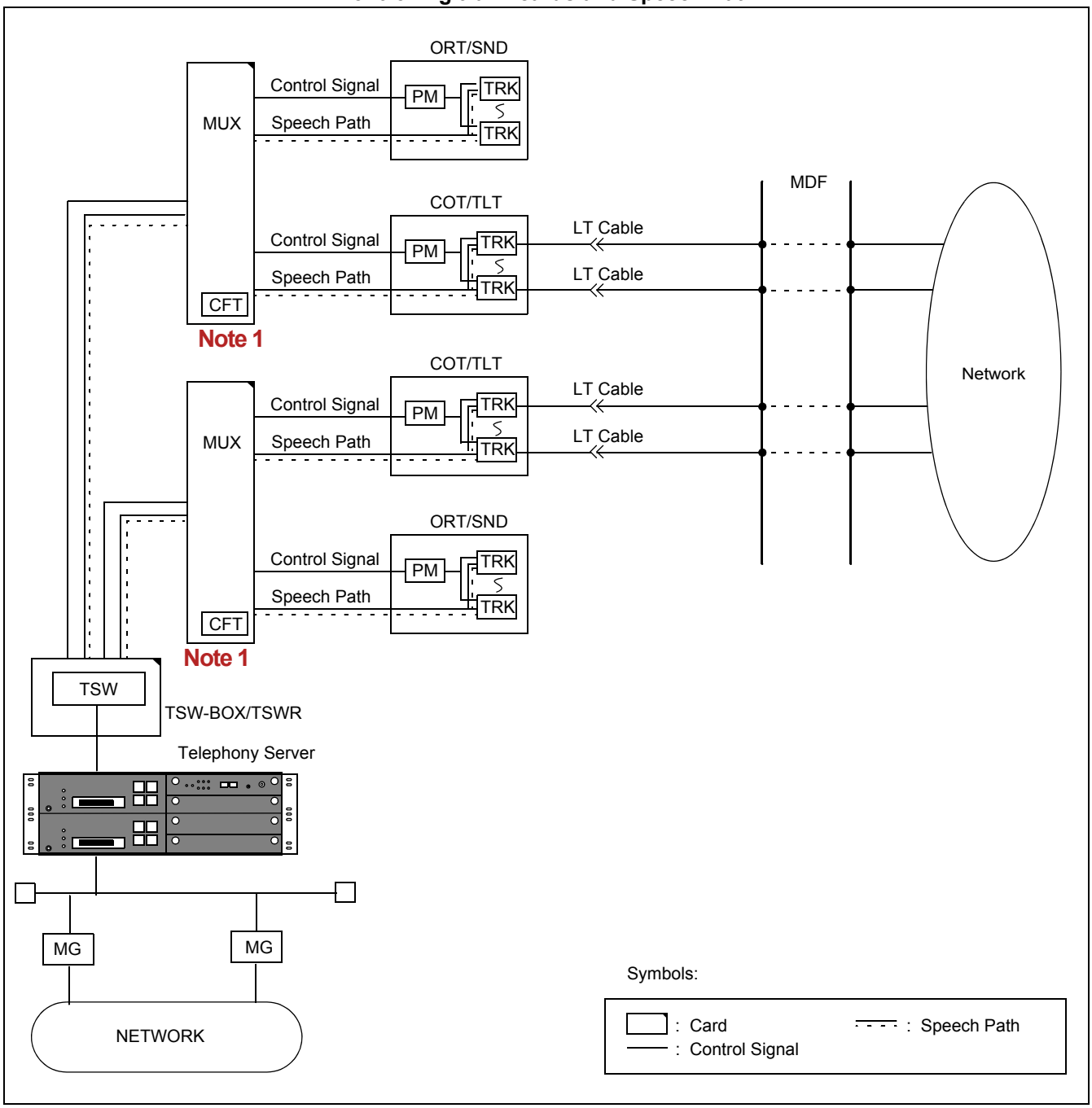
Timings for Senders

	ITEMS FOR STATUS SUPERVISION	CONDITIONS FOR SUPERVISION	TIMING SPECIFICATIONS
1	Sender Acknowledge Wait Timer	Timing limit for waiting to receive connection acknowledgement signal from the opposite office after seizing the opposite office.	4 seconds (standard) Timing can be assigned using the ASYD command (SYS1, Index 130).
2	Sender Prepause Timer	Time from sender seizure until sending of the 1st digit where connection acknowledgment is made by interface with the opposite office.	DP: 3 seconds (standard) PB: 2.5 seconds (standard) Timing can be assigned using the ASYD command (SYS1, Index 131).
3	Sender Inter-digit Timer	Inter-digit timing for the numbers sent out by the sender.	• For DP 10 pps: 860 milliseconds (standard) 20 pps: 460 milliseconds (standard) Timing can be assigned using the ASYD command (SYS1, Index. 132). • For PB 60/120 milliseconds (selected by ONSG of ARTD command.) Timing can be changed using the ASYD command (SYS1, Index 133).

5.2.2 Trunk Control

Trunk cards are controlled from the CPU via the MUX. Each trunk line in a specific trunk card is controlled by the Port Microprocessor (PM) in a trunk card. The following figure shows the control route of the trunk card.

Controlling trunk cards and Speech Path



Note 1: CFT for eight party is mounted within the MUX card.

5.2.3 Trunk (ORT, SND, CFT) Fault



Note: If a card is replaced because only one line is faulty, no other lines in that card can be used until the replacement is complete.

(1) When only one line is faulty.

(a) Place the faulty line into make-busy state.

- For ORT/SND, set MB switch of each circuit to ON position.
- For CFT, place it into make-busy state using the MBTK command.

(2) Replace the card with a spare.

(a) Flip the MB switch UP and extract the card from its mounting slot.

(b) On the new card, flip the MB switch UP and insert the card into its mounting slot.

(c) Flip the MB switch DOWN.

(d) If the line is under make-busy state, cancel it.

5.2.4 Trunk (COT, TLT, DTI) Fault



Note: If a card is replaced because only one line is faulty, any other lines in that card cannot be used until the replacement is complete.

Note: If the polarities of the external line are reversed, it is detected in the form of Trunk Ineffective Hold.

(1) When OPE lamp on the trunk card does not illuminate.

(a) Confirm that MB switch of the trunk card is in ON position (UP side).

(b) Confirm that trunk data (ATRK command) in the trunk card is assigned.

(c) Replace trunk card with a spare.

(2) When BL lamp is flashing or illuminating on the trunk card.

(a) Confirm that MB switch of trunk card is in ON position (UP side).

(b) Use the MBTK command to confirm that trunk card has not been placed into make-busy state.

(c) Check trunk data (ATRK command) assignment.

(d) Replace trunk card with a spare.

(3) Check the faulty line on the MDF.

<If the C.O./Tie Line is in Loop Start system>

(a) Isolate the faulty line to C.O. side and to the system side.

(b) Connect the test telephone to the C.O. side.

(c) Confirm that Dial Tone (DT) is heard and the call is connected to the destination party at the opposite office.

Note: Check can be made only on temporarily opened C.O./TIE lines.

<If C.O./TIE line is any other type than Loop Start>

(a) By cross connections on the MDF, connect the faulty line to a normal trunk.

(b) By a designated connection from the ATTCON/DESKCON, seize the trunk connected with the faulty line.

(c) After the trunk has been seized, check to see if a call can be originated.

Note: When the connection is not set up, the C.O./TIE line is faulty.

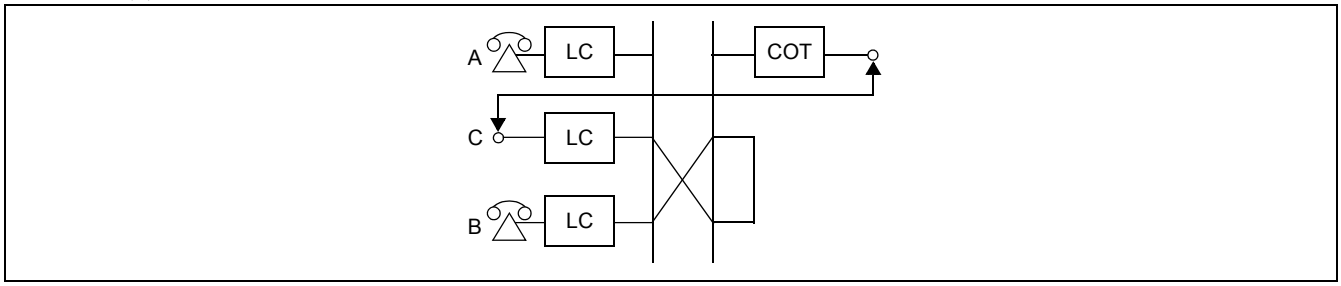
<When the connection is set up>

- Replace the Desktop terminal with a spare.

Note: Cross connection methods are explained on the following pages.

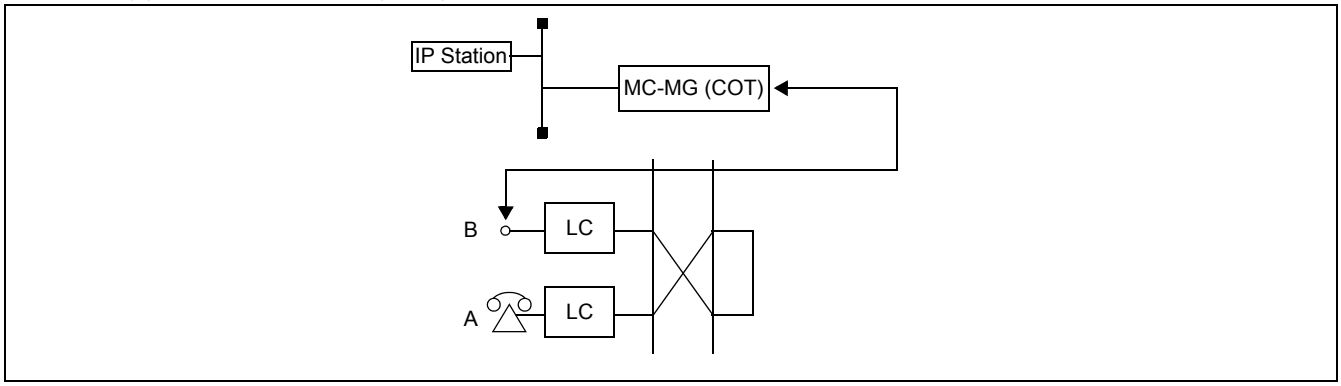
Note: When performing loop-back connection tests on the trunks at the user's office, provide cross connection as follows:

(1) For a COT



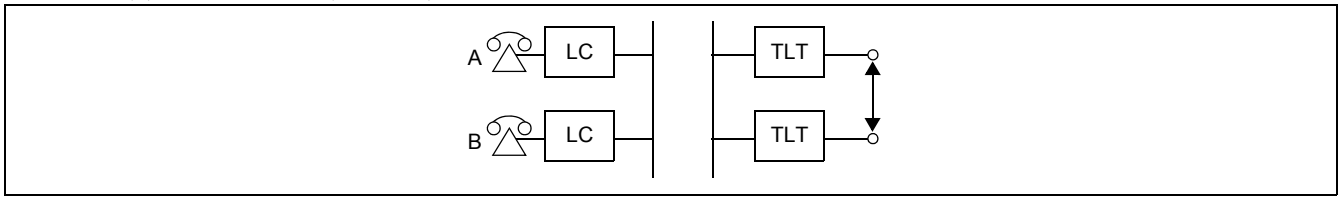
- Set up a loop-back connection between the C.O. Trunk (COT) to be tested and station line.
- The trunk route must be assigned for Loop Start.

(2) For a MC-MG (COT)



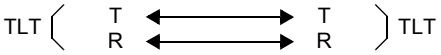
- Set up a loop-back connection between the C.O. Trunk (COT) to be tested and station line.
- The trunk route must be assigned for Loop Start.

(3) For a TLT (for DID)

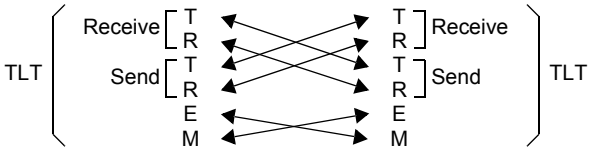


- Set up a loop-back connection between the TIE Line Trunk (TLT) to be tested and another TLT.

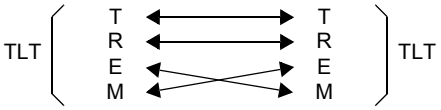
- If the TLT is a Direct Inward Dialing (DID) Trunk, connect the related leads as shown below:



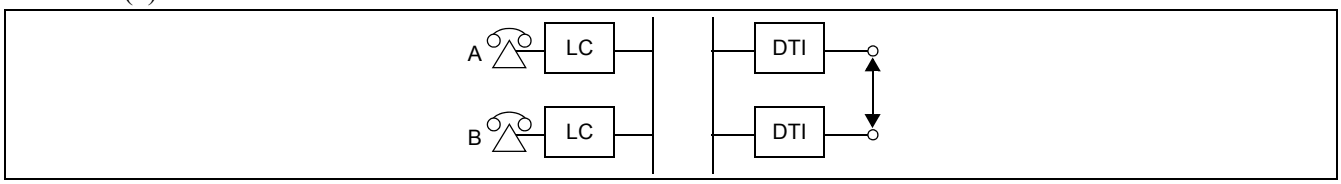
- If the TLT is a 4-wire E & M System, connect the related leads as shown below:



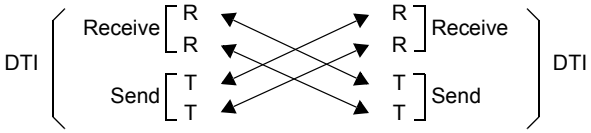
- If the TLT is a 2W E & M System, connect the related leads as shown below:



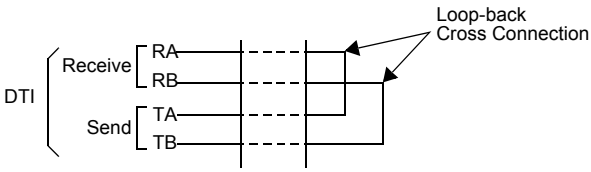
(4) For a DTI



- Set up a loop-back connection between the DTI Trunk to be tested and another DTI Trunk as shown below:



- If the office is the PLO-source office, perform the tests by disconnecting the PLO and M-OSC. The mode of the PLO becomes Self Operation Mode.
- When the loop-back test is performed at the time of PCM LOSS, FRM LOSS, or MFRM LOSS alarm lamp (red) illuminates. If the alarm lamp goes out, the DTI card side is normal.
- When only one DTI card is to be checked, make the following connections and confirm that no alarm lamps illuminates.



5.3 ATTCON/DESKCON Fault

This section explains the fault repair procedure when a specific Attendant Console (ATTCON) is in any of the following faulty conditions.

- No speech can be made
- No operations can be made

5.3.1 Check Point

When repairing an ATTCON/DESKCON fault, consider the following items:

(1) Check the cable connections on the backplane.

(2) When replacing the ATI card for primary ATTCON/DESKCON, the system is placed under Night Mode during replacement procedure.

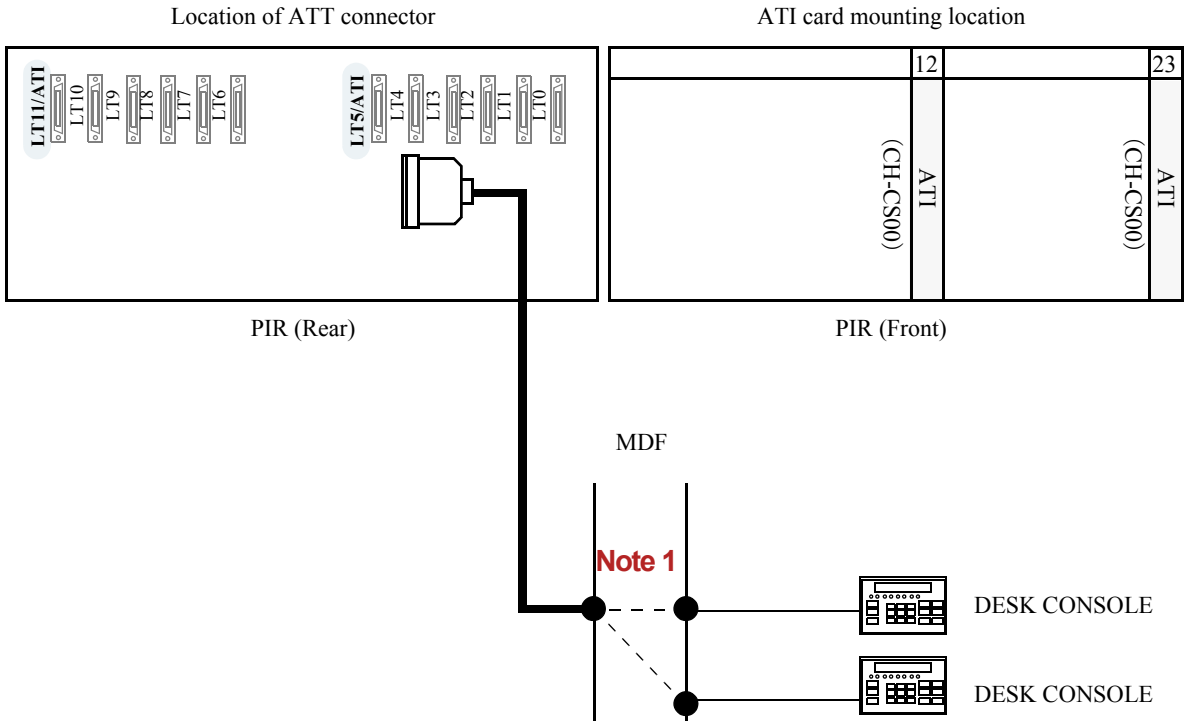
(3) When replacing the primary ATTCON/DESKCON, the system is placed under Night Mode during replacement procedure.

5.3.2 ATTCON/DESKCON Control

Each ATTCON/DESKCON is controlled by an ATI (CH-CS00) card for 7U-PIR or an ATI (PA-CS33-C) card for 8U-PIR. ATI cards are controlled by the CPU card via TSW-BOX (for 1-IMG system/4-IMG system) or TSWR (for 4-IMG system). The figure below shows the control route of the ATI cards.

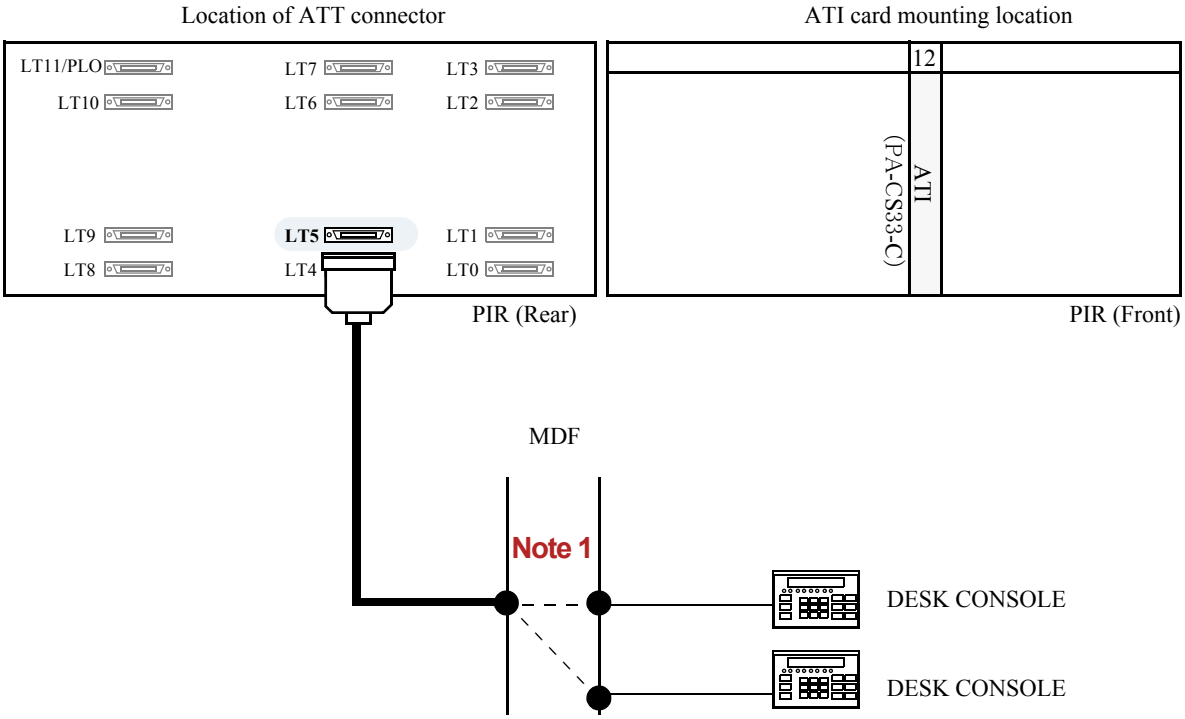
ATI (PA-CS33-C) card is used as an interface card between Telephony Server and ATTCON/DESKCON. The card is mounted in slot 12.

ATT Connector Cabling and Connector Leads Accommodation (7U-PIR)



Note 1: For more detailed information on the wiring, refer to Circuit Card Description.

ATT Connector Cabling and Connector Leads Accommodation (8U-PIR)



Note 1: For more detailed information on the wiring, refer to Circuit Card Description.

5.3.3 ATTCON/DESKCON Fault



Faulty Situation:

- No speech can be made

Note: While replacement of the ATI card for the primary ATTCON/DESKCON is in progress, the system is placed under Night Mode.

START

- On the ATTCON/DESKCON, LCHK (Lamp Check) key has been pressed but no lamps have illuminated.
  - Check the ATT connector cable between the ATTCON/DESKCON and the PBX.
- When the OPE lamp of the ATI (CHCS00/PA-CS33-C) card does not illuminate
  - Confirm that MB switch of the ATI card is in ON position (UP side).
  - Confirm that trunk data (ATRK command) in the ATI card are assigned.
  - Replace the ATI card with a spare.
- When the BL lamp of the ATI card is flashing or illuminating
  - Confirm that MB switch of the ATI card is in ON position (UP side).
  - Use the MBTK command to confirm ATI card is placed into make-busy state.
  - Check assignment of ATI data (ATRK command.)
  - Replace the ATI card with a spare.
- When keys cannot be operated
  - Replace the operator's headset.
  - Replace the ATI card with a spare.

END

Faulty Situation:

- No operations can be made



START

Replace the ATTCON/DESKCON with a spare.

- Flip the MB switch of ATI (CH-CS00/PA-CS33-C) card up to the ON position.
- If the card is equipped with a fuse, remove the fuse.
- Disconnect the CHAMP connector of the ATTCON/DESKCON and replace the ATTCON/DESKCON.
- If the card is equipped with a fuse, insert the fuse into its position.
- Flip the MB switch of the ATI card down to the OFF position.
- Confirm the PA lamp illuminates on the ATTCON/DESKCON.

END

5.4 Unit Fault

This section explains the fault repair procedure in a case where any of the faults shown in the table below has occurred to all the line/trunk cards mounted in a specific unit.

Unit Fault Situation

FAULT SITUATION	REFERENCE SECTION
Noise, one-way speech, no tone. Even if dialing has been made, Dial Tone does not stop.	Section 5.4.3 Unit Fault - Fault Related to Speech
Dial Tone cannot be heard. System Message “4-S”, “4-T” and “23-Y” is displayed.	Section 5.4.4 Unit Fault - When Dial Tone (DT) Cannot be Heard
MUX card has become faulty and, as a result the CPU has changed over. System Message “4-S”, “4-T” and “23-Y” is displayed.	Section 5.4.5 Unit Fault - ACT-Side MUX Card is Faulty and System Has Changed Over

5.4.1 Check Point (1/2)

Confirm the data shown below when service features cannot be assigned or service cannot be operated:

(1) Confirm that line capacity of physical PIR and virtual PIR is set correctly.

(2) Confirm that value of the ASYD command to display LP mounting status is assigned as below.

- ASYD, SYS1, Index 198=33
- ASYD, SYS1, Index 199=33

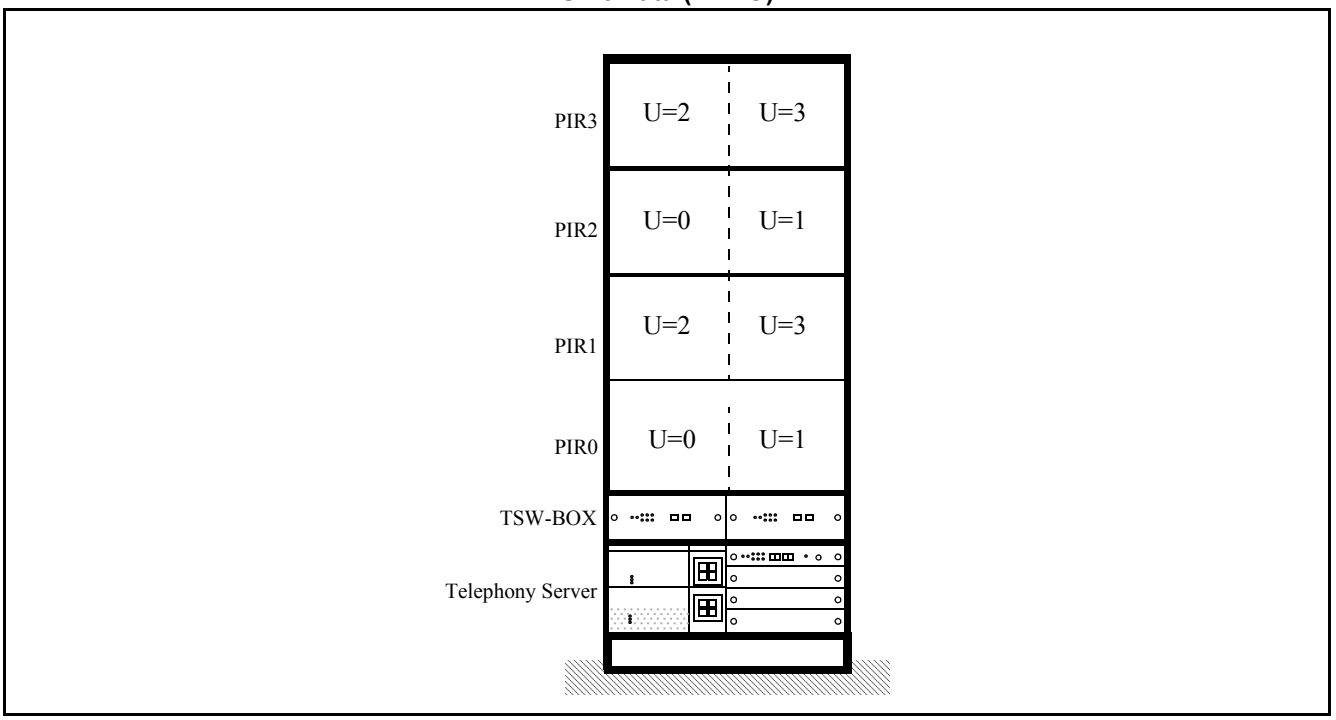
(3) Compare the status of “virtual PIR mounting information” with “physical/virtual PIR line capacity” displayed. Data is assigned as below in this system.

- ASYDL, SYS1, Index 556=F0
- ASYDL, SYS1, Index 557=FF

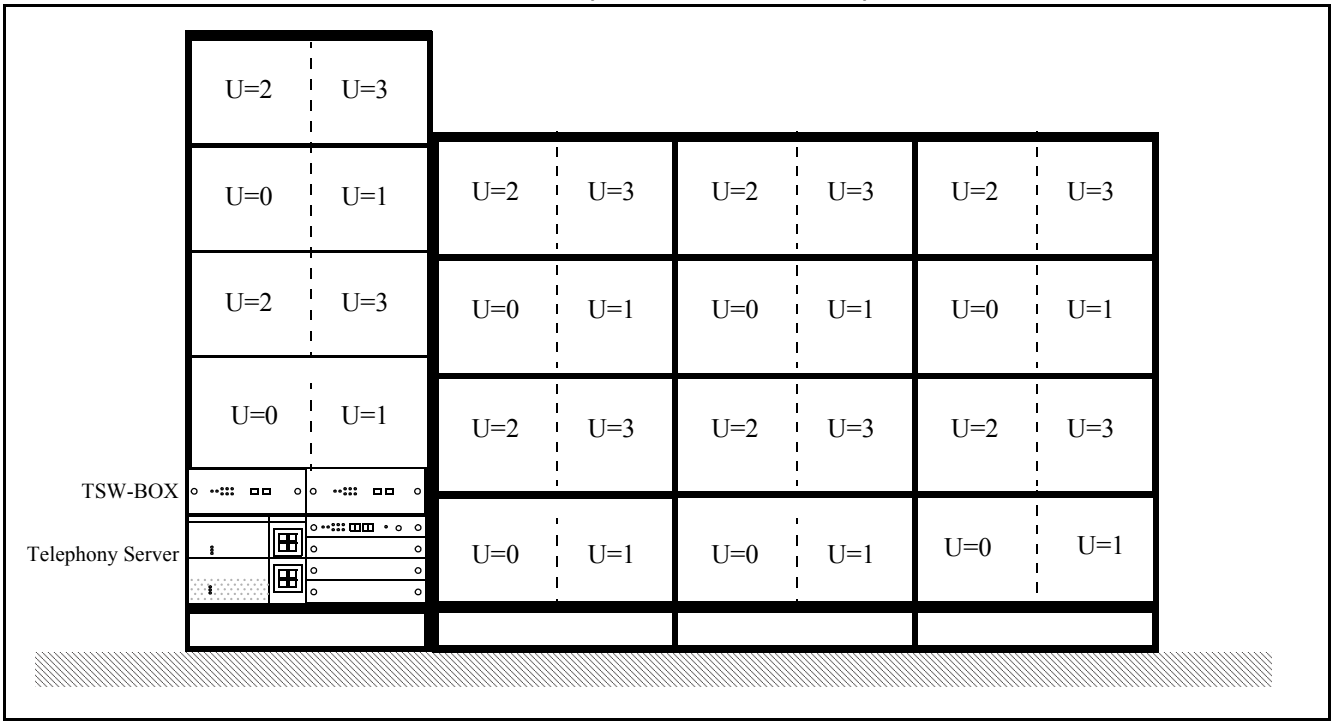
(4) Confirm that all units are properly mounted by using the AUNT command.

Unit structure of PIR is as shown below. Note that the following shows a DC type as an example.

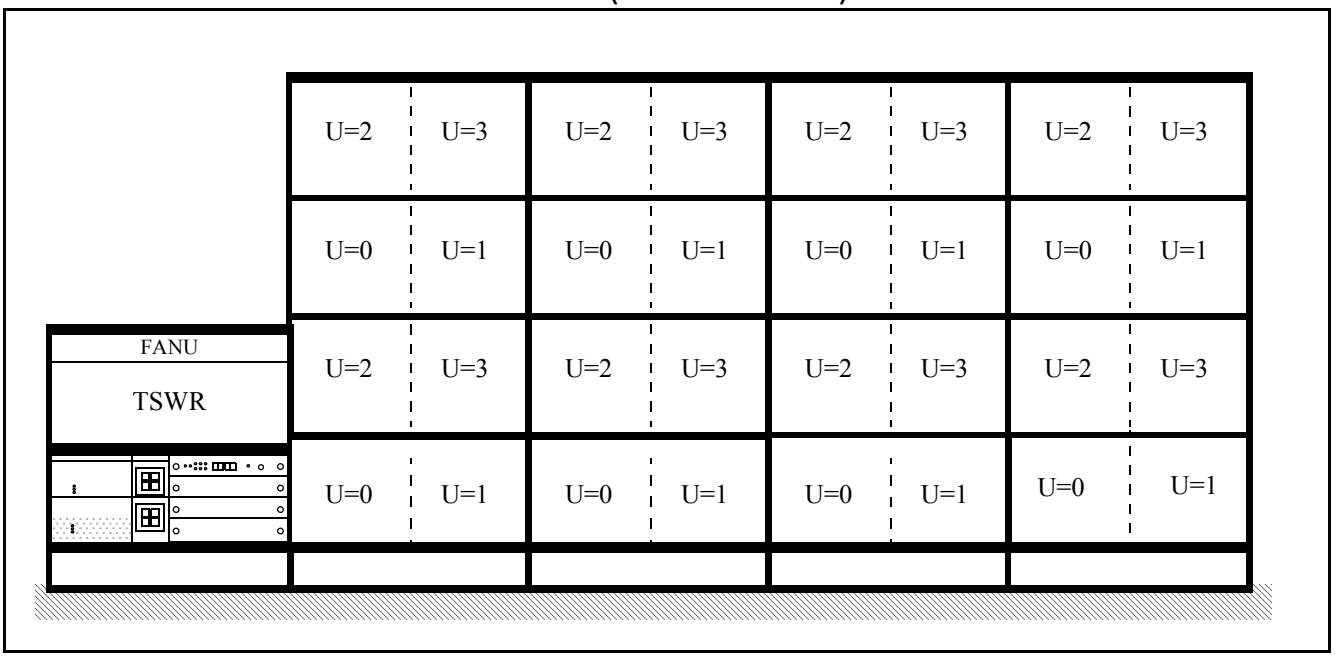
Unit Data (1-IMG)



Unit Data (4-IMG with TSW-BOX)



Unit Data (4-IMG with TSWR)



5.4.2 Check Point (2/2)

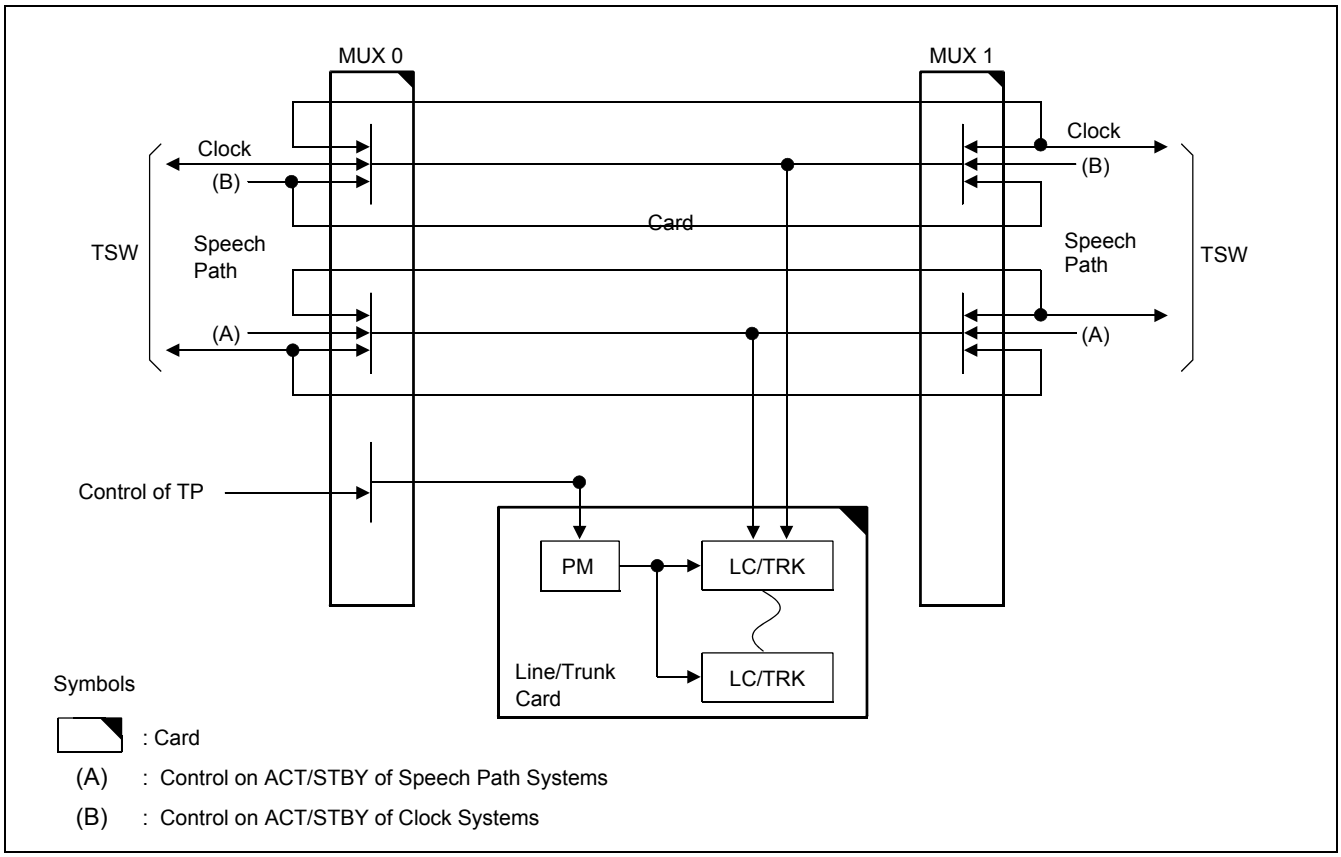
When repairing a unit fault, consider the following items:

(1) Speech paths and control paths in the unit are connected to line/trunks via the MUX cards. Be sure to check the alarm lamps on the MUX cards, and check to see if the cable between each MUX card and TSW card is connected correctly. The figure below shows the block diagram within the unit.

(2) The MUX cards are operating in the ACT/STBY modes under control of the CPU circuit. When the ACT-side CPU has detected a fault in the ACT-side MUX card, CPU changeover is executed and the ACT/STBY mode of the Speech Path System is also changed over. When both of the MUX cards have become faulty, all the lines/trunks in that unit are placed into make-busy state. (If a PFT card is located in that specific unit, the PFT is activated.) The figure entitled "MUX Card Locations" shows the location of the MUX cards.

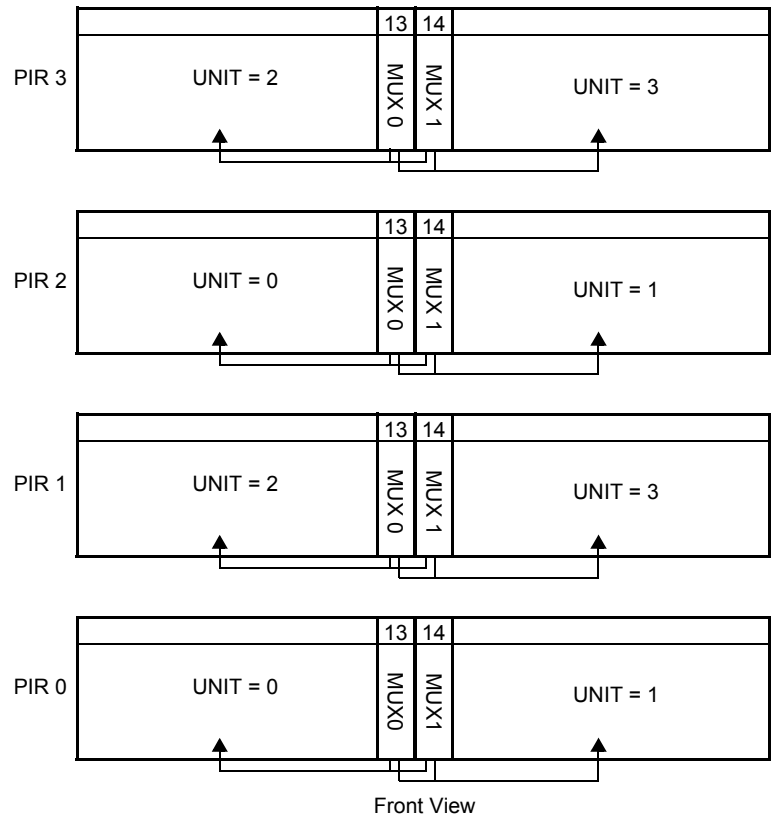
(3) When both units in a PIR are faulty, it is possible that the 7U-PIR power unit/8U-PIR PWR card mounted in the PIR is faulty. In such a case, refer to Section 5.7 Power Supply Fault of 7U-PIR/ Section 5.8 Power Supply Fault of 8U-PIR.

Unit Control Block Diagram (Dual Configuration)



MUX Card Locations

MUX card is mounted in Slot 13 and/or 14 of each PIR.



5.4.3 Unit Fault - Fault Related to Speech



Faulty Situation:

- Noise, one-way speech, no tone, etc. occurs only within a unit.
- Even if dialing has started, Dial Tone does not stop.

<For Dual Configuration>

(1) Replace the MUX card with a new one and check speech connection.

- After replacement of the MUX card, make a station-to-station call in the faulty unit and see if speech is normal.

(a) For 7U-PIR, replace the MUX card referring to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

(b) For 8U-PIR, replace the MUX card referring to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(c) Place the MUX card into ACT mode referring to How to Control Switching Block in Chapter 2.

(2) Replace the TSW card with a new one and check speech connection.

- After replacement of the TSW card, make a station-to-station call in the faulty unit and see if speech is normal.

(a) For 1-IMG, replace the TSW card referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX).

(b) For 4-IMG, replace the TSW card referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX) or Section 3. TSWR ACCOMMODATING CARD REPLACEMENT PROCEDURE (4-IMG ONLY).

(c) Place the TSW card into ACT mode referring to Section 8.1.4 How to Control Switching Block in Chapter 2.

(3) Check every line/trunk card in the unit one by one to determine which one is causing problem.

(a) On one of the line/trunk cards, flip the MB switch up to the ON position and extract it from its mounting slot.

(b) Make a station-to-station call and see if a fault occurs.

- If the problem is corrected, the card you removed is faulty. Replace it with a new one.

- If the fault remains, repeat steps (a) and (b) until the problem is corrected.

<For Single Configuration>

(1) Replace the MUX card with a new one and check speech connection.

- After replacement of the MUX card, make a station-to-station call in the faulty unit and see if speech is normal.

(a) For 7U-PIR, replace the MUX card referring to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

(b) For 8U-PIR, replace the MUX card referring to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(c) Place the MUX card into ACT mode referring to How to Control Switching Block in Chapter 2.

(2) Check if the TSW card has been replaced with a new one.

- After checking the TSW card, make a station-to-station call in the faulty unit and see if speech is normal.

(a) For 1-IMG, replace the TSW card referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX).

(b) For 4-IMG, replace the TSW card referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX) or Section 3. TSWR ACCOMMODATING CARD REPLACEMENT PROCEDURE (4-IMG ONLY).

(c) Place the TSW card into ACT mode referring to Section 8.1.4 How to Control Switching Block in Chapter 2.

(3) Check every line/trunk card in the unit one by one to determine which one is causing problem.

(a) On one of the line/trunk cards, flip the MB switch up to the ON position and extract it from its mounting slot.

(b) Make a station-to-station call and see if a fault occurs.

- If the problem is corrected, the card you removed is faulty. Replace it with a new one.

- If the fault remains, repeat steps (a) and (b) until the problem is corrected.

5.4.4 Unit Fault - When Dial Tone (DT) Cannot be Heard



Faulty Situation:

- Dial Tone (DT) cannot be heard except within a unit.
- [4-T] Both MUX Failure / [4-S] MUX Ready Failure
- [23-Y] MUX Clock Failure

Note: For dual system configuration, if a system message indicates that both systems are faulty, first repair the fault in the indicated system and then proceed to repair the PIR in the other system.

<For Dual Configuration>

(1) Check to see if the MUX card is making poor contact.

(a) For 1-IMG, turn the TSWMBR switch of ACT side TSW card ON and OFF to set the MUX card to STBY mode.

For 4-IMG, turn the following switch ON to OFF to set the MUX card to STBY mode.

When using TSW-BOX: TSWMBR switch of ACT side TSW card

When using TSWR: MBR switch of ACT side GT card

(b) On the MUX card, flip the MB switch up to the ON position.

(c) Extract the MUX card from its mounting slot and clean the contact portion. If cleaning cannot be done, repeat insertion and extraction of the card two or three times.

(d) Flip the MB switch of the MUX card up to the ON position, and insert the card into its mounting slot.

(e) On the MUX card, flip the MB switch down to the OFF position.

(f) Check to see if a Dial Tone (DT) connection is established within the faulty unit.

(2) Replace the MUX card with a new one and check for a DT.

(a) For 1-IMG, turn the TSWMBR switch of ACT side TSW card ON and OFF to set the MUX card to STBY mode.

For 4-IMG, turn the following switch ON to OFF to set the MUX card to STBY mode.

When using TSW-BOX: TSWMBR switch of ACT side TSW card

When using TSWR: MBR switch of ACT side GT card

(b) Replace the MUX card.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(c) Change the new MUX card to ACT mode.

(d) Check to see if a DT connection is established within the faulty unit.

(3) Extract all the line/trunk cards from their mounting slots in the unit. Insert every line/trunk card back into the slots one by one and see if a DT is heard each time.

(a) Extract all the line/trunk cards from their slots.

Note: Before extracting a line/trunk card, flip the MB switch up to the ON position.

(b) Confirm the MUXACT lamp on the MUX card illuminates.

(c) On an extracted line/trunk card, make sure that the MB switch is in the upper position (ON), and insert the card into the mounting slot.

(d) Confirm the OPE lamp of the inserted card illuminates by flipping the MB switch down to the OFF position.

(e) Lift the handset and check for a DT.

- If a DT is heard, repeat steps (c) to (e) for another line/trunk card.

- If a DT is not heard, replace the card with a new one.

<For Single Configuration>

(1) Check to see if the MUX card is making poor contact.

(a) Flip the MB switch of the MUX card up to the ON position.

(b) Extract the MUX card from its mounting slot and clean the contact portion. If cleaning cannot be done, repeat insertion and extraction of the card two or three times.

(c) Flip the MB switch of the MUX card up to the ON position, and insert the card into its mounting slot.

(d) On the MUX card, flip the MB switch down to the OFF position.

(e) Check to see if a Dial Tone (DT) connection is established within the faulty unit.

(2) Replace the MUX card with a new one and check for a DT.

(a) Replace the MUX card.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Check to see if a DT connection is established.

(3) Extract all the line/trunk cards from their mounting slots in the unit. Insert every line/trunk card back into the slots one by one and see if a DT is heard each time.

(a) Extract all the line/trunk cards from their slots.

Note: Before extracting a line/trunk card, flip the MB switch up to the ON position.

(b) Confirm the MUXACT lamp on the MUX card illuminates.

(c) On an extracted line/trunk card, make sure that the MB switch is in the upper position (ON), and insert the card into the mounting slot.

(d) Confirm the OPE lamp of the inserted card illuminates by flipping the MB switch down to the OFF position.

(e) Lift the handset and check for a DT.

- If a DT is heard, repeat steps (c) to (e) for another line/trunk card.

- If a DT is not heard, replace the card with a new one.

5.4.5 Unit Fault - ACT-Side MUX Card is Faulty and System Has Changed Over



Faulty Situation:

- The ACT side has become faulty and the system changeover has executed in the dual configuration system.
- [4-S] MUX Ready Failure / [4-T] Both MUX Failure
- [23-Y] MUX Clock Failure

(1) Check to see if the MUX card of the STBY side is making poor contact.

(a) Flip the MB switch of the MUX card up to the ON position.

(b) Extract the MUX card from its mounting slot and clean the contact portion. If cleaning cannot be done, repeat insertion and extraction of the card two or three times.

(c) Make sure that the MB switch of the MUX card is in upper position (ON), and insert the card into its mounting slot.

(d) On the MUX card, flip the MB switch down to the OFF position.

(e) Place the faulty MUX card in ACT mode.

- For 1-IMG, turn the TSWMBR switch of currently active TSW card ON and OFF to place the faulty MUX card in ACT mode.
- For 4-IMG, turn the following switch ON to OFF to place the faulty MUX card in ACT mode.

When using TSW-BOX: TSWMBR switch of ACT side TSW card

When using TSWR: MBR switch of ACT side GT card

(f) Check to see if a station-to-station connection can be set up within the faulty unit.

(g) If the connection cannot be established, change the faulty side to STBY and repeat the above procedure for the rest of the MUX cards.

(2) Replace the MUX card with a new one, and check for station-to-station connection.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).
- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Place the MUX card into ACT mode, referring to Section 8.1.4 How to Control Switching Block in Chapter 2.

(c) Check to see if a station-to-station connection can be set up and identify the card responsible for the fault.

(d) Perform the above check by extracting each MUX card individually.

5.5 Speech Path (TSW) System Fault

This section explains the fault repair procedure when any of the faults shown in the table below has occurred in the whole system.

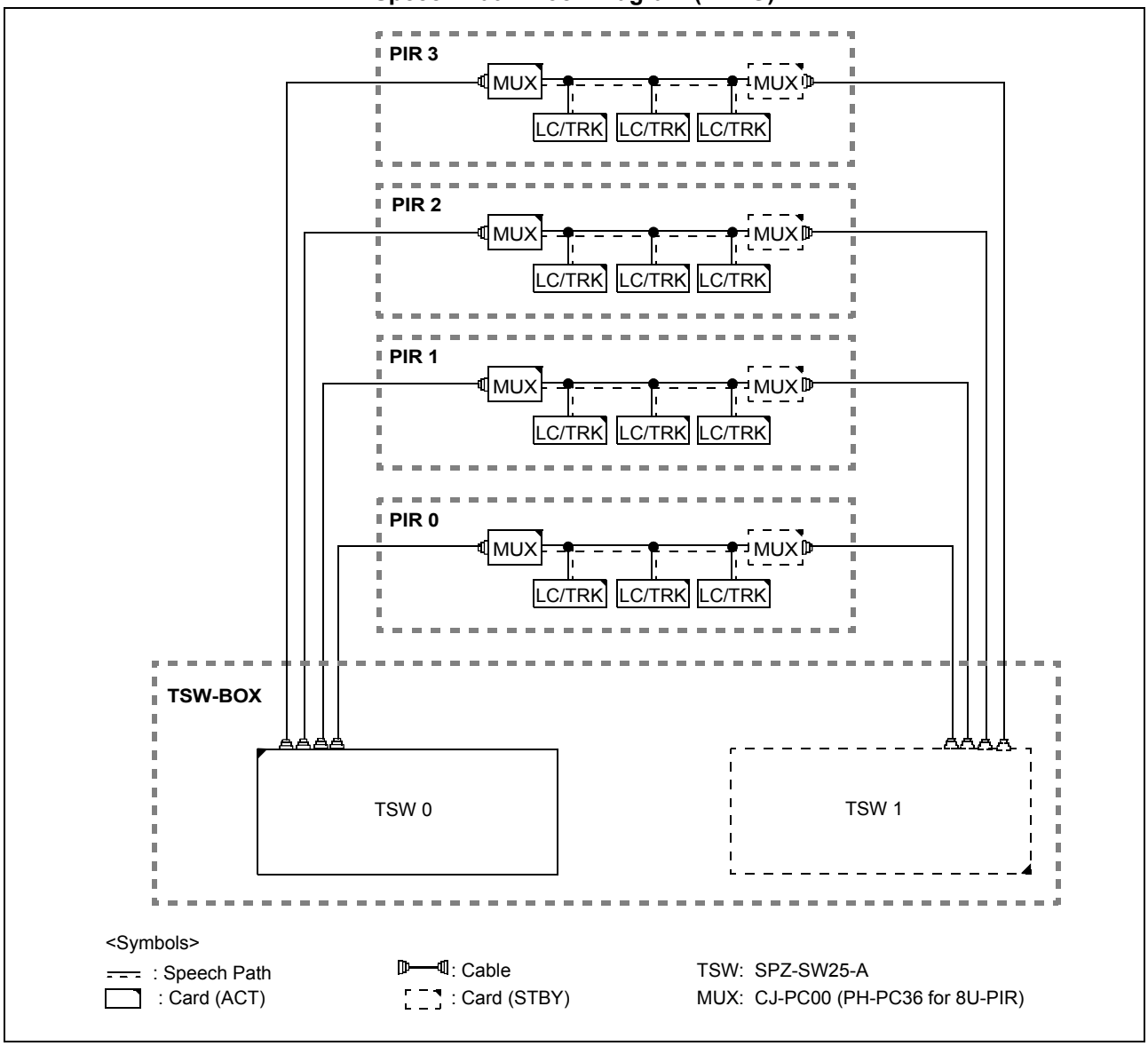
Speech Path (TSW) System Fault Situation

FAULTY SITUATION	REFERENCE SECTION
Noise, one-way speech, no tone	Section 5.5.2 Speech Path System Fault - Fault Related to Speech
Dial Tone does not stop, even if dialing has been made.	
Dial Tone cannot be heard.	Section 5.5.3 Speech Path System Fault - When Dial Tone (DT) Cannot be Heard
A fault occurring in the STBY side TSW is indicated by a system message or an alarm lamp.	Section 5.5.4 Speech Path System Fault - STBY Side Has Become Fault

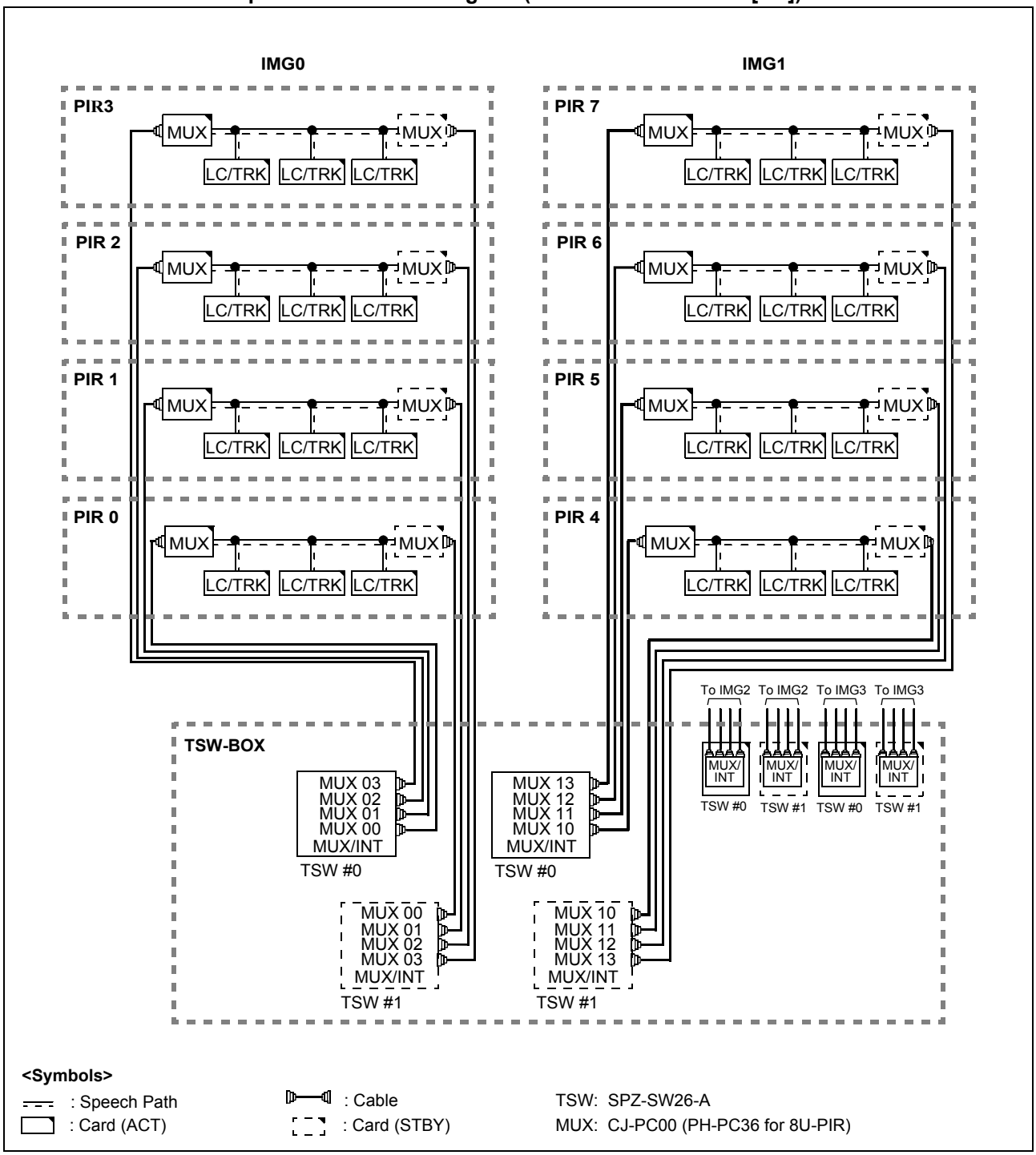
5.5.1 Check Point

When repairing a speech path fault, consider that when any of the faults shown in the table entitled “Speech Path (TSW) System Fault Situation” have occurred in the system, it is possible that the TSW card is at fault. Always check the alarm lamps on the TSW card.

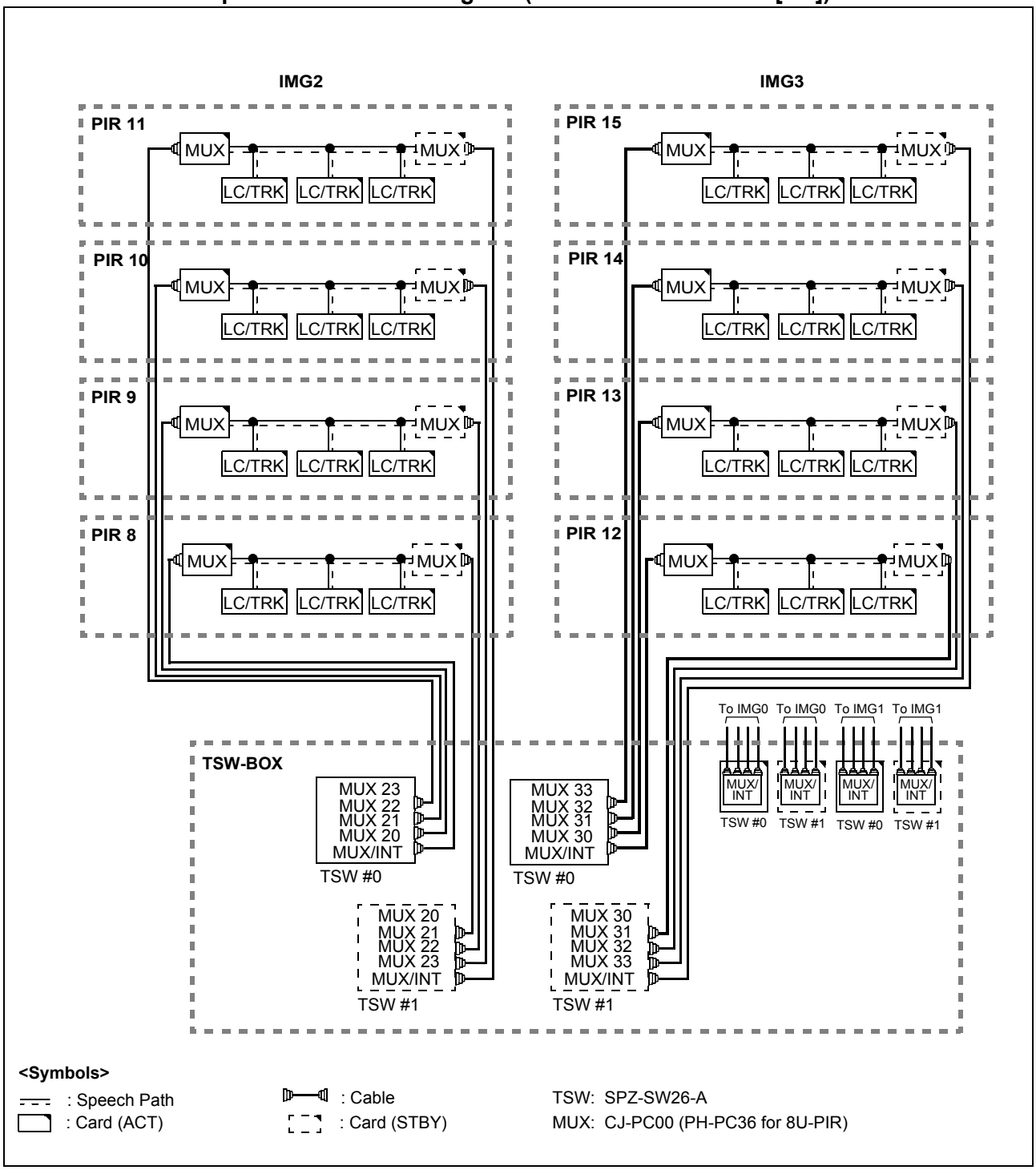
Speech Path Block Diagram (1-IMG)



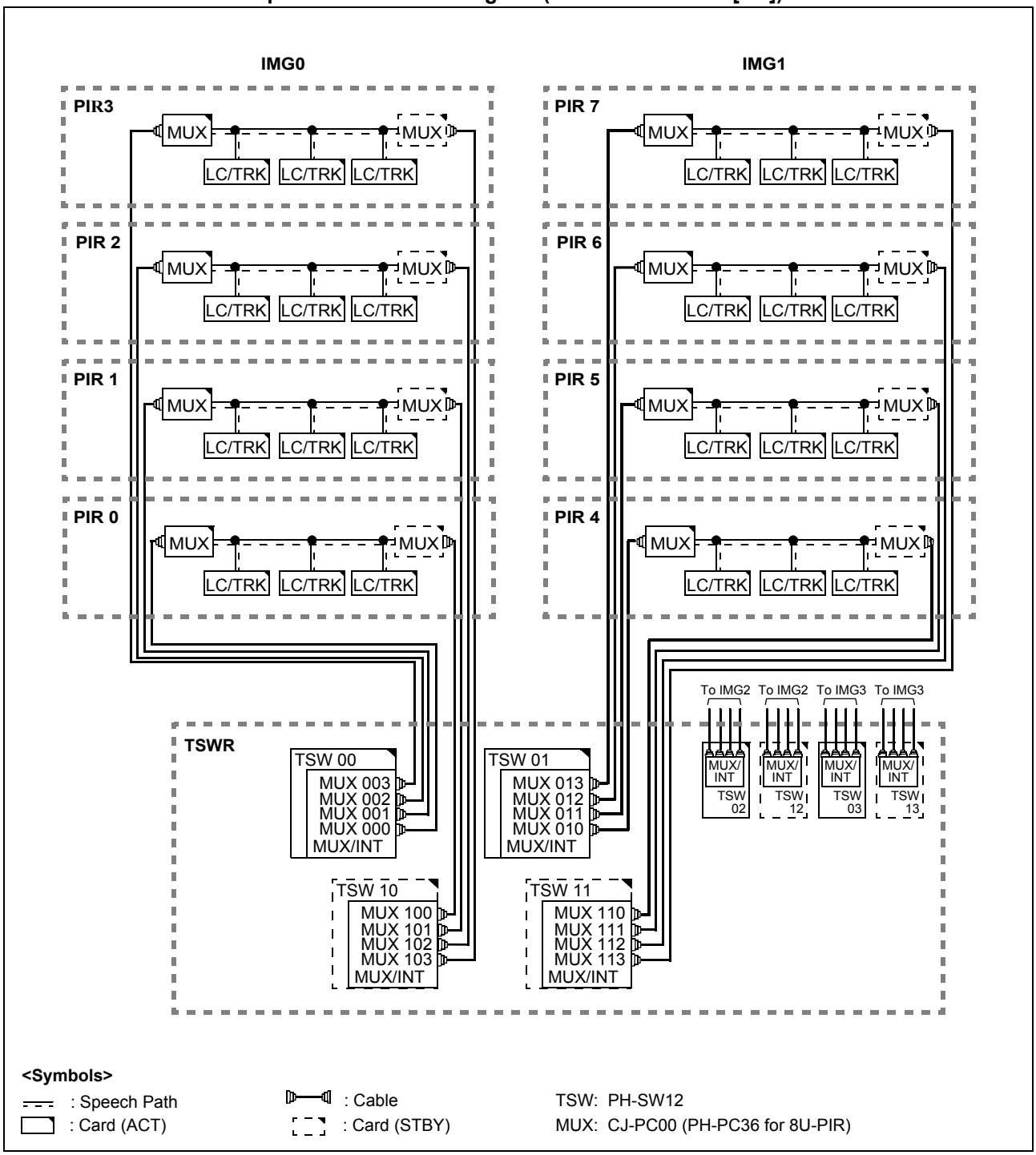
Speech Path Block Diagram (4-IMG with TSW-BOX [1/2])



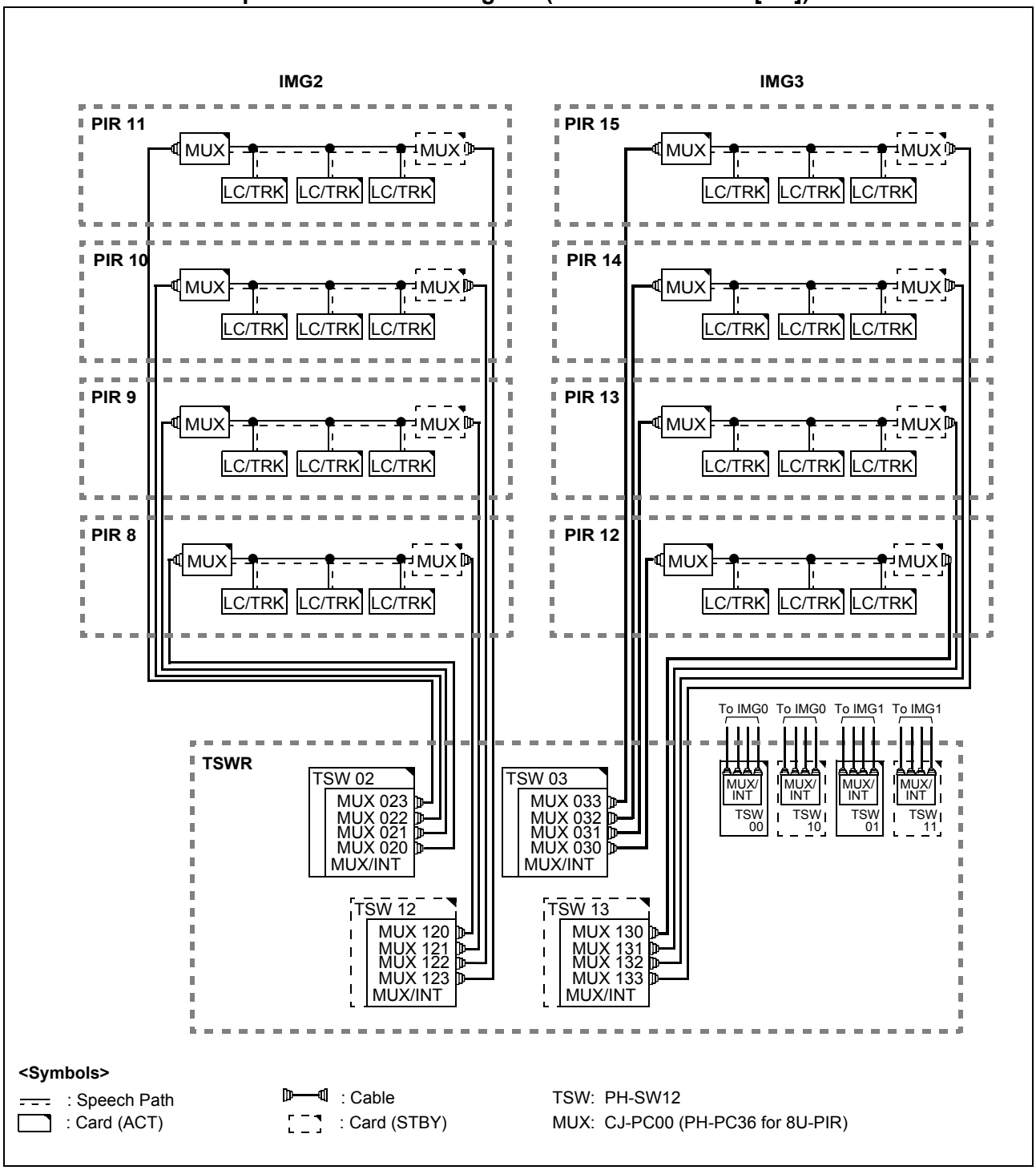
Speech Path Block Diagram (4-IMG with TSW-BOX [2/2])



Speech Path Block Diagram (4-IMG with TSWR [1/2])



Speech Path Block Diagram (4-IMG with TSWR [2/2])



5.5.2 Speech Path System Fault - Fault Related to Speech



Faulty Situation:

- Fault related to speech such as noise, one-way speech, no-speed, etc. occurs.
- Even if dialing is made, Dial Tone (DT) does not stop.
- [1-C] Both TSW Write Failure
- [1-D] TSW Write Failure

1-IMG/4-IMG with TSW-BOX

Note: For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be initialized. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.
When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

<For Dual Configuration>

(1) Replace every TSW card one by one, and check to see if fault occurs.

(a) Replace one of the existing TSW cards with a new one, referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX).

(b) Turn on and off the TSWMBR switch on the active TSW card to place the new TSW card in ACT mode.

(c) Check to see if a station-to-station connection can be set up and identify a TSW card responsible for the fault.

(d) Perform the above check by extracting the TSW cards individually.

(2) Replace every MUX card one by one, and check to see if fault occurs.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Turn the TSWMBR switch of currently active TSW card ON and OFF to place the new MUX card in ACT mode.

(c) Check to see if a station-to-station connection can be set up and identify a MUX card responsible for the fault.

(d) Perform the above check by extracting the MUX cards individually.

<For Single Configuration>

(1) Replace every TSW card one by one, and check to see if fault occurs.

(a) Replace one of the existing TSW cards with a new one, referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX).

(b) Check to see if a station-to-station connection can be set up and identify a TSW card responsible for the fault.

(c) Perform the above check by extracting the TSW cards individually.

(2) Replace every MUX card one by one, and check to see if fault occurs.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Check to see if a station-to-station connection can be set up and identify a card responsible for the fault.

(c) Perform the above check by extracting the MUX cards individually.

4-IMG with TSWR

Note: For manual speech path changeover with switch operation, be sure to use the MBR switch on the active GT card. Without setting the MBR switch to ON (upper position) on the active GT card, if you flip the MB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.

<For Dual Configuration>

(1) Replace every TSW card one by one, and check to see if fault occurs.

(a) Replace one of the existing TSW cards with a new one, referring to Section 3. TSWR ACCOMMODATING CARD REPLACEMENT PROCEDURE (4-IMG ONLY).

(b) Turn on and off the MBR switch on the active GT card to place the new TSW card in ACT mode.

(c) Check to see if a station-to-station connection can be set up and identify a TSW card responsible for the fault.

(d) Perform the above check by extracting the TSW cards individually.

(2) Replace every MUX card one by one, and check to see if fault occurs.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Turn the MBR switch of currently active GT card ON and OFF to place the new MUX card in ACT mode.

(c) Check to see if a station-to-station connection can be set up and identify a card responsible for the fault.

(d) Perform the above check by extracting the MUX cards individually

(3) When a PLO card is mounted for digital interface, replace the PLO card with a new one and check for station-to-station connection.

(a) Flip the MB switch of the PLO card up to the ON position.

(b) Confirm the ACT lamp on the PLO card of the mate system illuminates.

(c) Extract the PLO card from its mounting slot.

(d) On the new PLO card, flip the MB switch up to he ON position and insert the card into its mounting slot.

(e) Flip the MB switch down to the OFF position.

(f) On the active PLO card, flip the MB switch up to the ON position to change ACT/STBY mode.

(g) Check that the ACT lamp on the new PLO card is steady on green, indicating that the card is active.

(h) On the standby PLO card, flip the MB switch down to the OFF position.

(i) Confirm that speech can be carried out normally by a station-to-station call.

<For Single Configuration>

(1) Replace every TSW card one by one, and check to see if fault occurs.

(a) Replace one of the existing TSW cards with a new one, referring to Section 3. TSWR ACCOMMODATING CARD REPLACEMENT PROCEDURE (4-IMG ONLY).

(b) Check to see if a station-to-station connection can be set up and identify a TSW card responsible for the fault.

(c) Perform the above check by extracting the TSW cards individually.

(2) Replace every MUX card one by one, and check to see if fault occurs.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Check to see if a station-to-station connection can be set up and identify a card responsible for the fault.

(c) Perform the above check by extracting the MUX cards individually

(3) When a PLO card is mounted for digital interface, replace the PLO card with a new one and check for station-to-station connection.

(a) Flip the MB switch of the PLO card up to the ON position.

(b) Confirm the ACT lamp on the PLO card of the mate system illuminates.

(c) Extract the PLO card from its mounting slot.

(d) On the new PLO card, flip the MB switch up to he ON position and insert the card into its mounting slot.

(e) Flip the MB switch down to the OFF position.

(f) Check that the ACT lamp on the new PLO card is steady on green, indicating that the card is active.

(g) Confirm that speech can be carried out normally by a station-to-station call.

5.5.3 Speech Path System Fault - When Dial Tone (DT) Cannot be Heard



Faulty Situation:

- Dial Tone (DT) cannot be heard.
- [1-A] Both TSW Failure (Permanent)
- [1-E] Both TSW Clock Failure
- [4-C] Both TSW Ready Failure
- [23-Y] MUX Clock Failure

Note: For dual system configuration, if a system message indicates that both systems are faulty, first repair the fault in the indicated system and then proceed to repair the PIR in the other system.

1-IMG/4-IMG with TSW-BOX

Note: For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.
When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

(1) Check to see if the TSW card is making poor contact.

(a) Turn the TSWMBR switch of currently active TSW card ON and OFF to place the faulty TSW card in STBY mode.

(b) On the TSW card to be checked, flip the TSWMBR switch up to the ON position.

(c) Flip the TSWMB switch up to the ON position.

(d) Extract the TSW card from the slot and clean the contact portion. Repeat insertion and extraction of the card two or three times.

(e) On the TSW card, flip the TSWMBR and TSWMB switches up to the ON position, and insert the card into the slot.

(f) On the same card, flip the TSWMB switch down to the OFF position.

(g) Flip the TSWMBR switch down to the OFF position.

(h) Check if a Dial Tone (DT) connection is established.

(2) Check cable connections.

(a) Check the cable connections.

For details, see Speech Path Block Diagram (1-IMG)/Speech Path Block Diagram (4-IMG with TSW-BOX [1/2]).

(b) Initialize the system by pressing the INIT button on the EMA card and see if a Dial Tone (DT) connection is established.

4-IMG with TSWR

Note: For manual speech path changeover with switch operation, be sure to use the MBR switch on the active GT card. Without setting the MBR switch to ON (upper position) on the active GT card, if you flip the MB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.

(1) Check to see if the TSW card is making poor contact.

(a) Turn the MBR switch of currently active GT (PH-GT09) card ON and OFF to place the faulty TSW card in STBY mode. For details, refer to Changeover of CPU/TSW/PLO.

(b) On the TSW card to be checked, flip the TSWMBR switch up to the ON position.

(c) Flip the MB switch up to the ON position.

(d) Extract the TSW card from the slot and clean the contact portion. Repeat insertion and extraction of the card two or three times.

(e) On the TSW card, flip the TSWMBR and MB switches up to the ON position, and insert the card into the slot.

(f) On the same card, flip the MB switch down to the OFF position.

(g) Flip the TSWMBR switch down to the OFF position.

(h) Check if a Dial Tone (DT) connection is established.

(2) Check cable connections.

(a) Check the cable connections.

For details, see Speech Path Block Diagram (4-IMG with TSWR [1/2]).

(b) Initialize the system by pressing the INIT button on the EMA card and see if a Dial Tone (DT) connection is established.

5.5.4 Speech Path System Fault - STBY Side Has Become Fault



Faulty Situation:

- A fault has occurred in the STBY side of the Dual Configuration system.
- [1-B] TSW Failure (Permanent)
- [1-D] TSW Write Failure
- [1-F] TSW Clock Failure
- [4-D] TSW Ready Failure

1-IM/4-IMG with TSW-BOX

Note: For manual TSW changeover with switch operation, be sure to use the TSWMBR switch on the active TSW card. Without setting the TSWMBR switch to ON (upper position) on the active TSW card, if you flip the TSWMB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.
When operating TSWMBR switch, be careful not to confuse it with TSWMB switch next to it.

(1) Check to see if the TSW card is making poor contact.

(a) Flip the TSWMBR switch of the standby TSW card up to the ON position.

(b) Flip the TSWMB switch of the card up to the ON position, and extract the card from the slot.

(c) Extract the TSW card from the slot and clean the contact portion. Repeat insertion and extraction of the card two or three times.

(d) On the TSW card, flip the TSWMBR and TSWMB switch up to the ON position, and insert the card into the slot.

(e) On the same card, flip the TSWMB switch down to the OFF position.

(f) Flip the TSWMBR switch down to the OFF position.

(g) Check if a station-to-station connection can be normally set up.

(2) Check PCM cables.

(a) Check the PCM cables. See Speech Path Block Diagram (1-IMG).

(b) Initialize the system by depressing the INIT button on the EMA card and see if a station-to-station connection can be set up.

(3) Replace every TSW card one by one, and check to see if fault occurs.

(a) Replace one of the existing TSW cards with a new one, referring to Section 1. REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX).

(b) Turn on and off the TSWMBR switch on the active TSW card to place the new TSW card in ACT mode.

(c) Check to see if a station-to-station connection can be set up.

(d) Perform the above check by extracting the TSW cards individually and identify a TSW card responsible for the fault.

(4) Replace every MUX card one by one, and check to see if fault occurs.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Turn the TSWMBR switch of currently active TSW card ON and OFF to place the new MUX card in ACT mode.

(c) Check to see if a station-to-station connection can be set up.

(d) Perform the above check by extracting the MUX cards individually and identify a MUX card responsible for the fault.

4-IMG with TSWR

Note: For manual speech path changeover with switch operation, be sure to use the MBR switch on the active GT card. Without setting the MBR switch to ON (upper position) on the active GT card, if you flip the MB switch up for ON and down for OFF, the card will be reset. During this initialization, all channels on the card will be placed in MB status, disconnecting all active calls.

(1) Check to see if the TSW card is making poor contact.

(a) Flip the TSWMBR switch of the standby TSW card up to the ON position.

(b) Flip the MB switch of the card up to the ON position, and extract the card from the slot.

(c) Extract the TSW card from the slot and clean the contact portion. Repeat insertion and extraction of the card two or three times.

(d) On the TSW card, flip the TSWMBR and MB switch up to the ON position, and insert the card into the slot.

(e) On the same card, flip the MB switch down to the OFF position.

(f) Flip the TSWMBR switch down to the OFF position.

(g) Check if a station-to-station connection can be normally set up.

(2) Check PCM cables.

(a) Check the PCM cables. See Speech Path Block Diagram (4-IMG with TSWR [1/2]).

(b) Initialize the system by depressing the INIT button on the EMA card and see if a station-to-station connection can be set up.

(3) Replace every TSW card one by one, and check to see if fault occurs.

(a) Replace one of the existing TSW cards with a new one, referring to Section 3. TSWR ACCOMMODATING CARD REPLACEMENT PROCEDURE (4-IMG ONLY).

(b) Turn the MBR switch of currently active GT card ON and OFF to place the new TSW card in ACT mode.

(c) Check to see if a station-to-station connection can be set up and identify a TSW card responsible for the fault.

(d) Perform the above check by extracting the TSW cards individually.

(4) Replace every MUX card one by one, and check to see if fault occurs.

(a) Replace one of the existing MUX cards with a new one.

- For 7U-PIR, refer to Section 2.1.4 Replacement Procedure for MUX (Multiplexer) Card (7U-PIR).

- For 8U-PIR, refer to Section 2.2.4 Replacement Procedure for MUX (Multiplexer) Card (8U-PIR).

(b) Turn the MBR switch of currently active GT card ON and OFF to place the new MUX card in ACT mode.

(c) Check to see if a station-to-station connection can be set up and identify a MUX card responsible for the fault.

(d) Perform the above check by extracting the MUX cards individually.

5.6 Control System Fault

This section explains the fault repair procedure for the control system listed in the table below.

Control System Fault Situation

FAULTY SITUATION	REFERENCE SECTION
Fault occurs occasionally at the ACT side.	Section 5.6.2 Control System Fault - Fault Occurs Intermittently on ACT side
Fault occurs occasionally at the STBY side.	Section 5.6.3 Control System Fault - STBY Side is Faulty

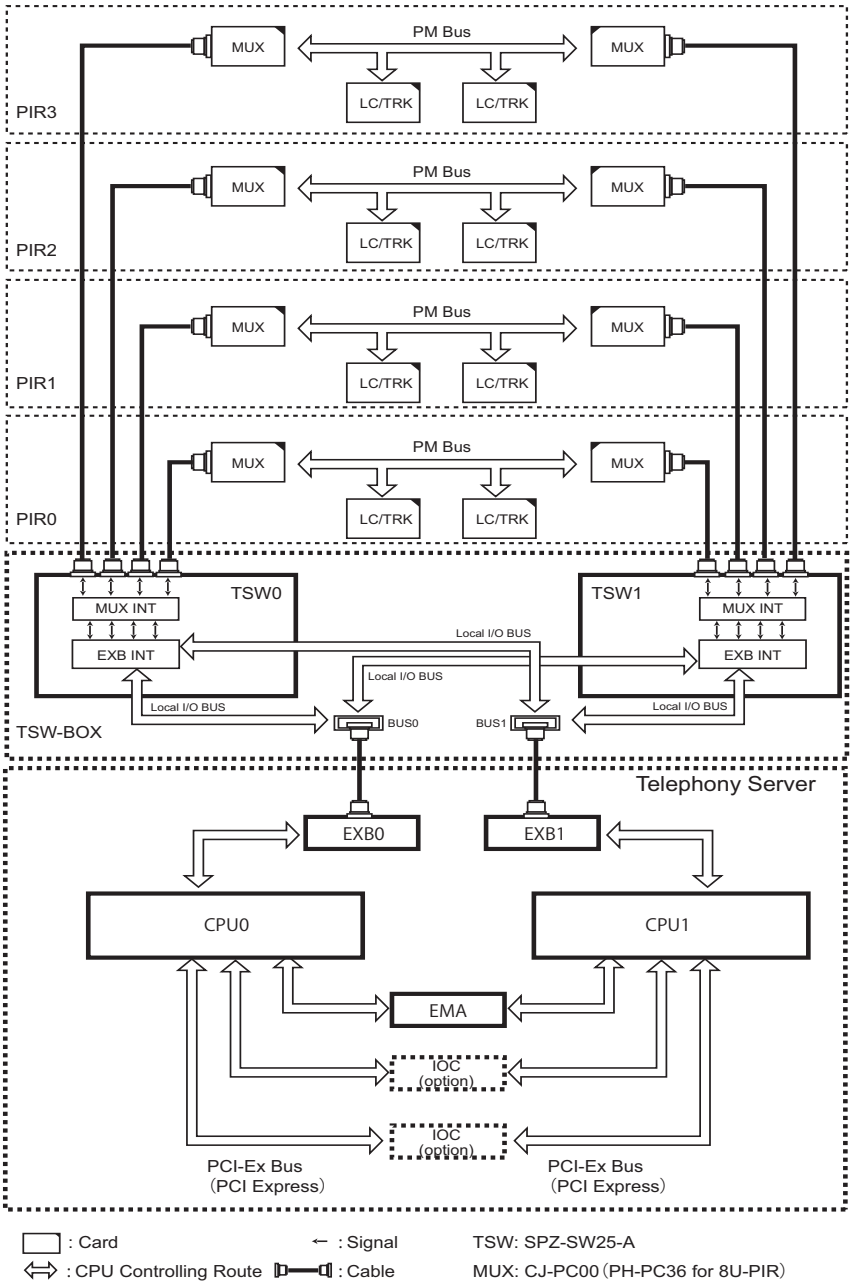
5.6.1 Check Point

When repairing the control system, check the status of the following lamps:

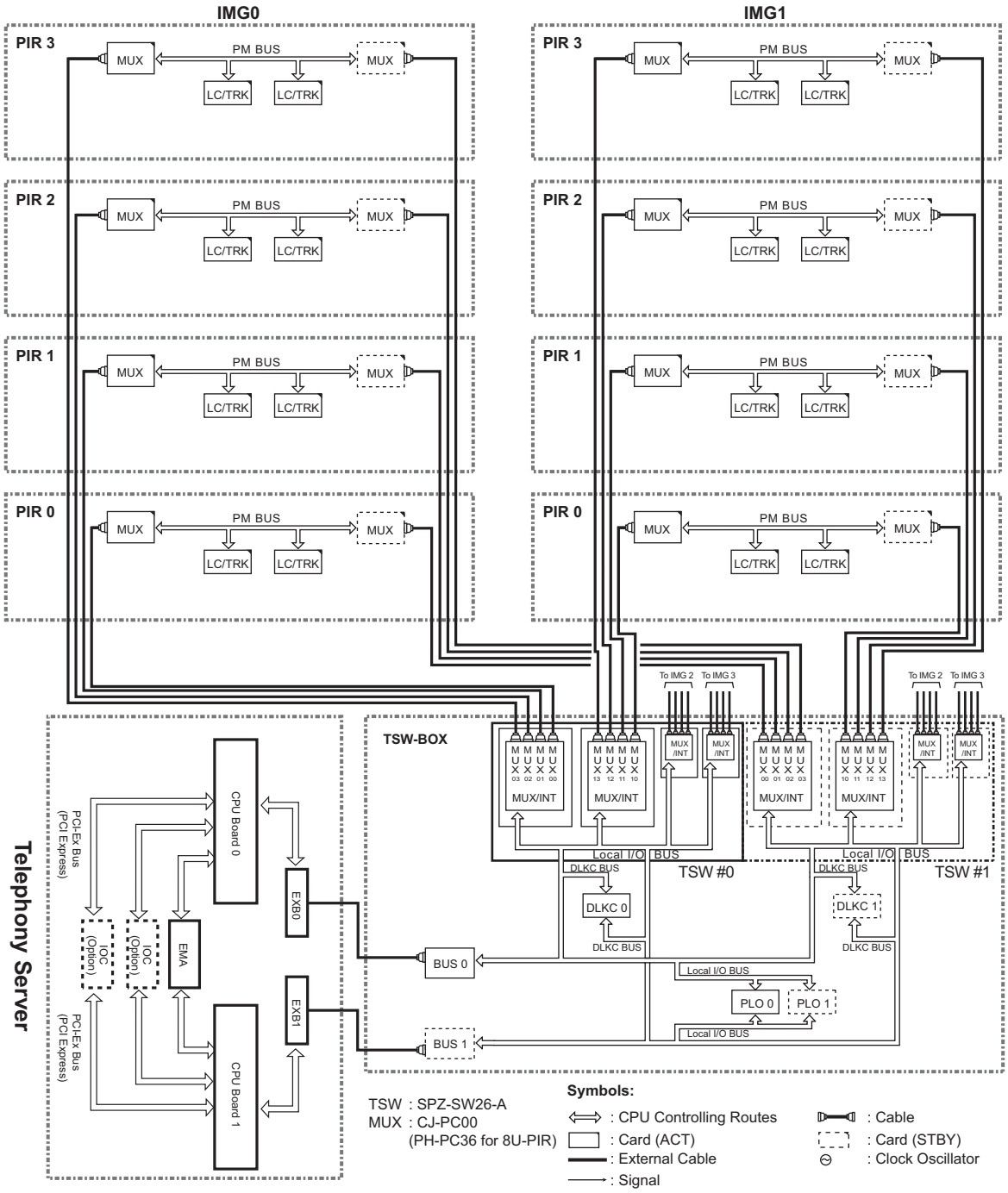
- Telephony Server (TP/SP) TSW lamp
- Telephony Server (TP/SP) MUX lamp

The following figures show a block diagram of the CPU controlling block, where CPU 0 is active.

CPU Controlling Block Diagram (1-IMG)



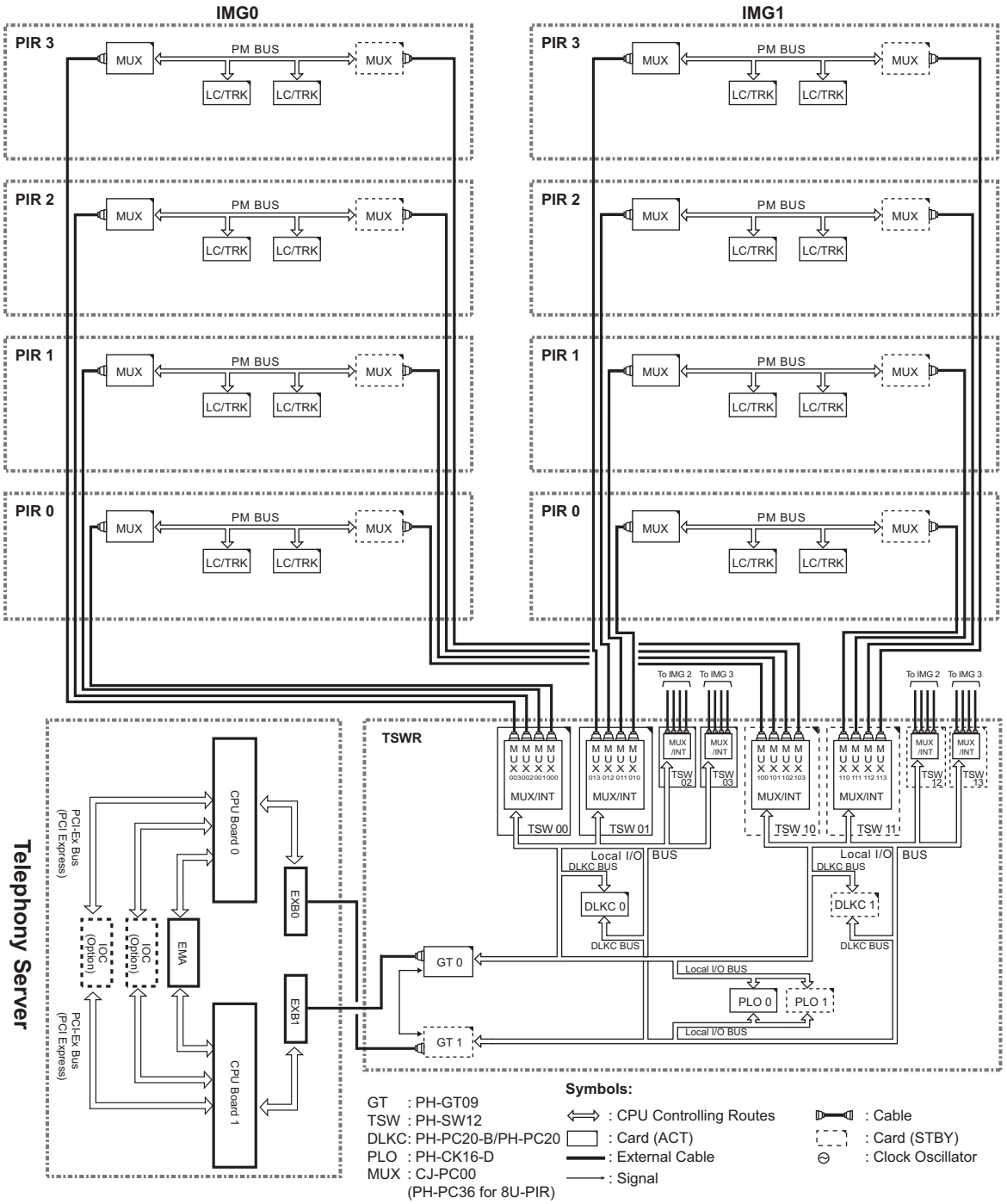
CPU Controlling Block Diagram (4-IMG with TSW-BOX)



Note: Circuit cards shown by dotted lines are operated in STBY mode.

Note: IOC card is optional.

CPU Controlling Block Diagram (4-IMG with TSWR)



Note: Circuit cards shown by dotted lines are operated in STBY mode.

Note: When CPU changeover is executed, ACT/STBY mode of GT (in TSWR) is also changed over.

Note: IOC card is optional.

5.6.2 Control System Fault - Fault Occurs Intermittently on ACT side



Faulty Situation:

- Fault occurs intermittently.
- [0-C] ~ [0-J] CPU Failure
- [1-C] Both TSW Write Failure
- [1-D] TSW Write Failure
- [3-D], [3-E] Lock-up Failure (Permanent/Temporary)

<For Dual-Configuration System>

(1) Replace the related cards one by one referring to each of the following pages:

- CPU Card Replacement Procedure
- EMA Card Replacement Procedure
- EXB (EXB-TSW) Card Replacement Procedure
- GT Card Replacement Procedure
- For 1-IMG/4-IMG with TSW-BOX, REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX)
- For 4-IMG with TSWR, TSW Card Replacement Procedure
- For 7U-PIR, Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)
- For 8U-PIR, Replacement Procedure for MUX (Multiplexer) Card (8U-PIR)

(2) Change over the CPU or speech path referring to SYSTEM CONTROL PROCEDURES.

(3) Make test calls (station-to-station call) to see if the fault occurs again.

(4) After completing all steps, place the related cards into ACT mode.

(5) Check to see that any fault information is displayed.

<For Single-Configuration System>

(1) Replace the related cards one by one referring to each page:

- CPU Card Replacement Procedure
- EMA Card Replacement Procedure

- EXB (EXB-TSW) Card Replacement Procedure
- GT Card Replacement Procedure
- For 1-IMG/4-IMG with TSW-BOX, REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX)
- For 4-IMG with TSWR, TSW Card Replacement Procedure
- For 7U-PIR, Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)
- For 8U-PIR, Replacement Procedure for MUX (Multiplexer) Card (8U-PIR)

(2) Initialize the system by pressing the INIT button on the EMA card.

(3) Check to see that any fault information is displayed.

5.6.3 Control System Fault - STBY Side is Faulty



Faulty Situation:

- Fault has occurred at the STBY side of Dual Configuration system.
- [0-I] STBY CPU Failure.
- The ACT side has become faulty, and system changeover has been executed.
- [0-C], [0-H], [0-J] Processor Failure (ACT side)

1-IMG/4-IMG with TSW-BOX

START

Replace STBY-side related card (CPU, GT, TSW, MUX, EMA) with a spare, and check.

Replace the card (CPU, GT, TSW, MUX, EMA) individually by referring to the following:

- CPU Card Replacement Procedure
- EMA Card Replacement Procedure
- EXB (EXB-TSW) Card Replacement Procedure
- GT Card Replacement Procedure
- REPLACEMENT PROCEDURE FOR TSW CARDS (TSW-BOX)
- For 7U-PIR, Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)
- For 8U-PIR, Replacement Procedure for MUX (Multiplexer) Card (8U-PIR)

Place the card (CPU, GT, TSW, MUX) to ACT mode by executing CPU or TSW change-over. (Refer to SYSTEM CONTROL PROCEDURES)

Check to see if a station-to-station connection can be set up to identify the card responsible for the fault.

When a fault is not indicated, set the faulty systems to STBY side. Refer to SYSTEM CONTROL PROCEDURES.

END

4-IMG with TSWR



START

- Replace STBY-side related cards (CPU, GT, TSW, MUX, EMA) with a spare, and check.
  - Replace the cards (CPU, GT, TSW, MUX, EMA) individually by referring to the following:
    - CPU Card Replacement Procedure
    - EMA Card Replacement Procedure
    - EXB (EXB-TSW) Card Replacement Procedure
    - GT Card Replacement Procedure
    - TSW Card Replacement Procedure
    - For 7U-PIR, Replacement Procedure for MUX (Multiplexer) Card (7U-PIR)
    - For 8U-PIR, Replacement Procedure for MUX (Multiplexer) Card (8U-PIR)
  - Place the cards (CPU, GT, TSW, MUX) into ACT mode by executing CPU changeover. (Refer to SYSTEM CONTROL PROCEDURES)
  - Check to see if a station-to-station connection can be set up to identify the card responsible for the fault.
  - When a fault is not indicated, set the faulty systems to STBY side in advance by executing CPU changeover. Refer to SYSTEM CONTROL PROCEDURES.

END

5.6.4 Fault That Cannot be Detected

If Telephony Server does not detect faults that occur in the system, do the following referring to the figure below:

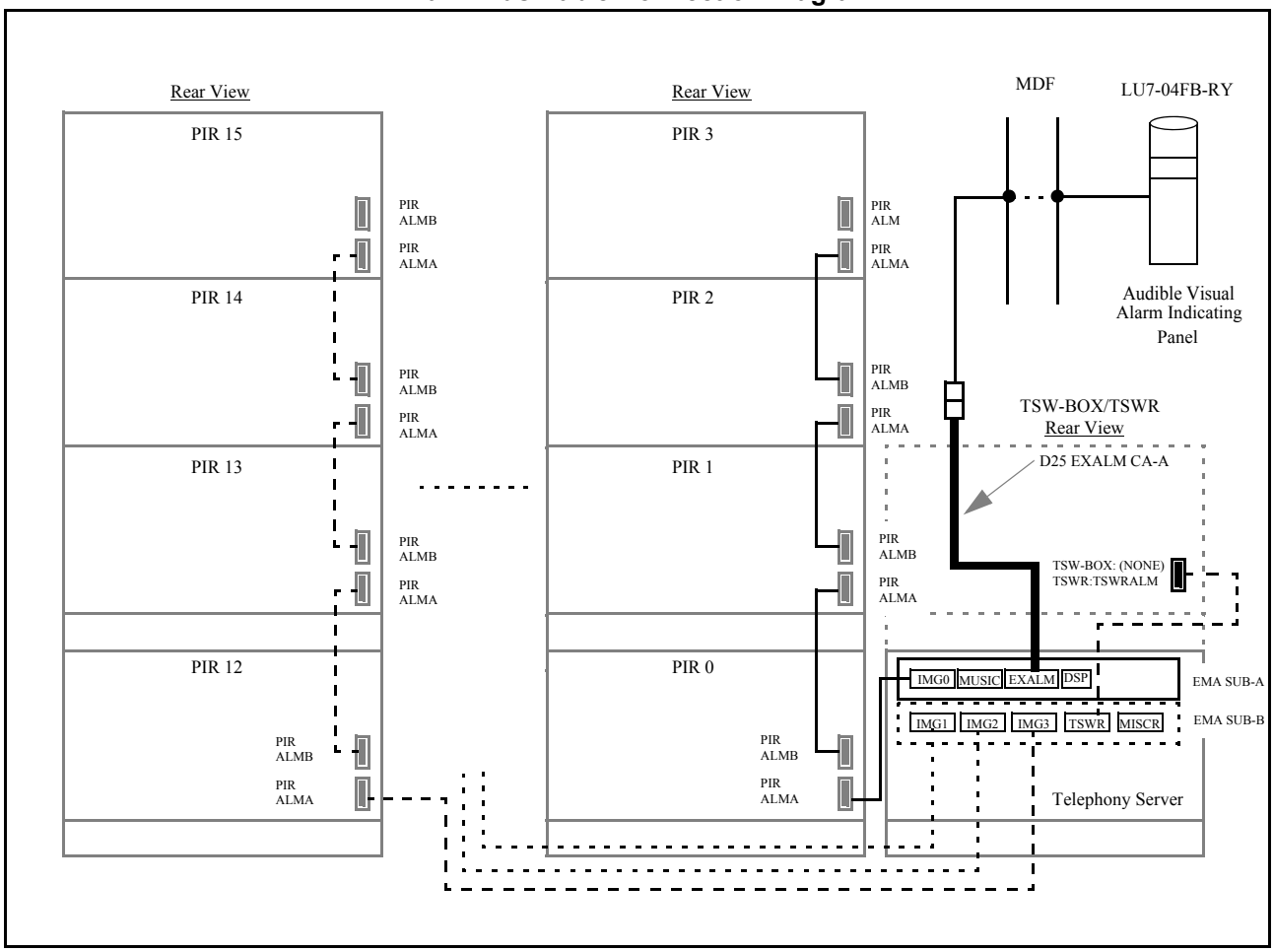
STEP 1 Check the alarm cable connections.

STEP 2 Check the wiring on the MDF (**Note 1**) when Audible Visual Alarm Indicating Panel is used.

STEP 3 Make sure that the cable is securely inserted to "EXALM" connector on the EMA SUB-A card.

Note 1: Refer to "Audible Visual Alarm Indicating Panel" in Peripheral Equipment Description (Digital/Analog Devices).

Alarm Bus Cable Connection Diagram



5.7 Power Supply Fault of 7U-PIR

This section explains the fault repair procedure when any of the faults shown in the table below occur.

Power Supply Fault Situation <7U-PIR>

FAULTY SITUATION	REFERENCE SECTION
When the "RGU" / "-48 V" Fuse has Blown	Section 5.7.2 Fuse Blown Fault of 7U-PIR
DC-DC Power card Breaker OFF, Fault in Power Supply	Section 5.7.3 Circuit Breaker OFF Fault in Power Supply of 7U-PIR
Fault of Alarm Lamps on DC-DC Power card	Section 5.7.4 Fault of Alarm Lamps on Power Supply of 7U-PIR

5.7.1 Check Point

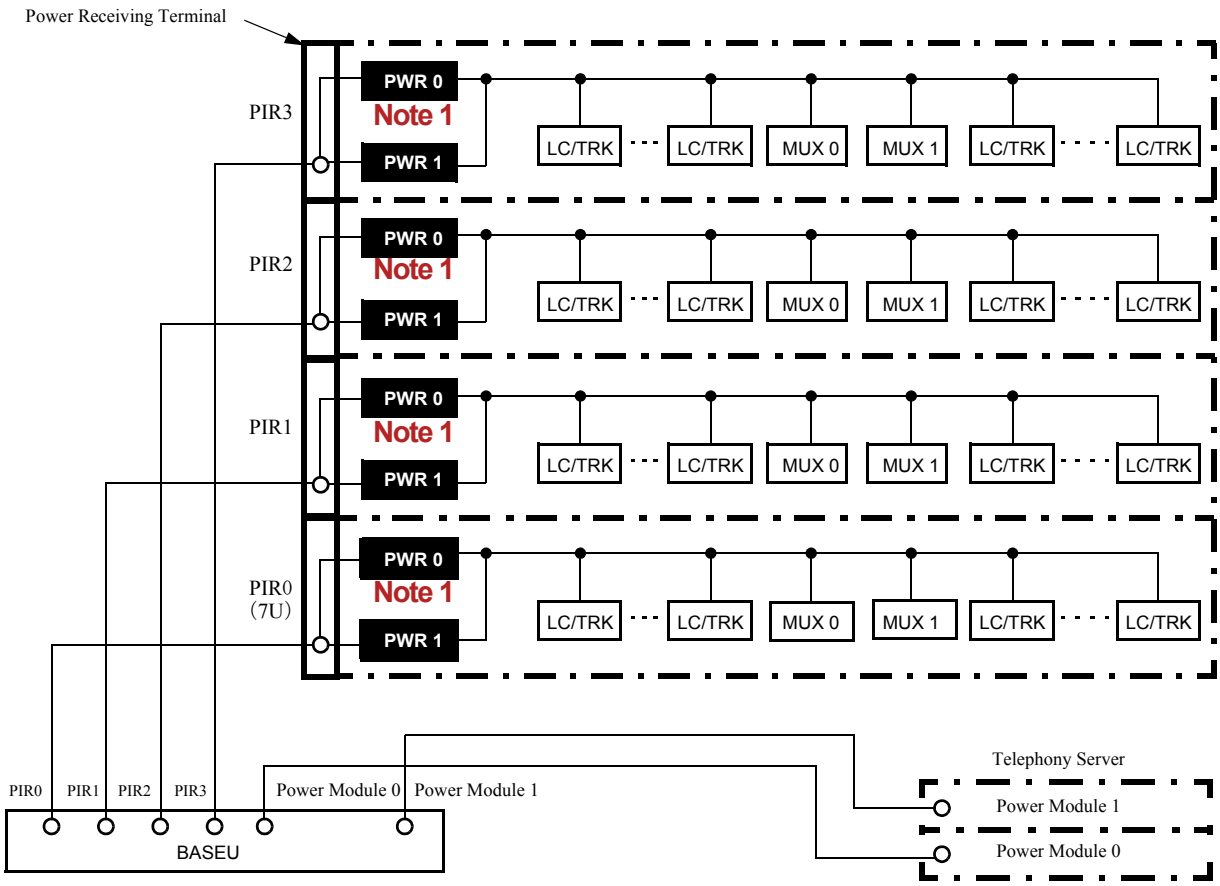
When repairing a power supply fault, consider the following items:

(1) Before checking the system, check the Rectifier, Battery, and Power cables.

(2) 7U-PIR power unit is equipped with the circuits to supply ringing signal. When a fault occurs that causes the bell of the telephone not to ring, etc., check the alarm lamp on the power unit.

(3) The figure below shows the block diagrams for the power supply to each module.

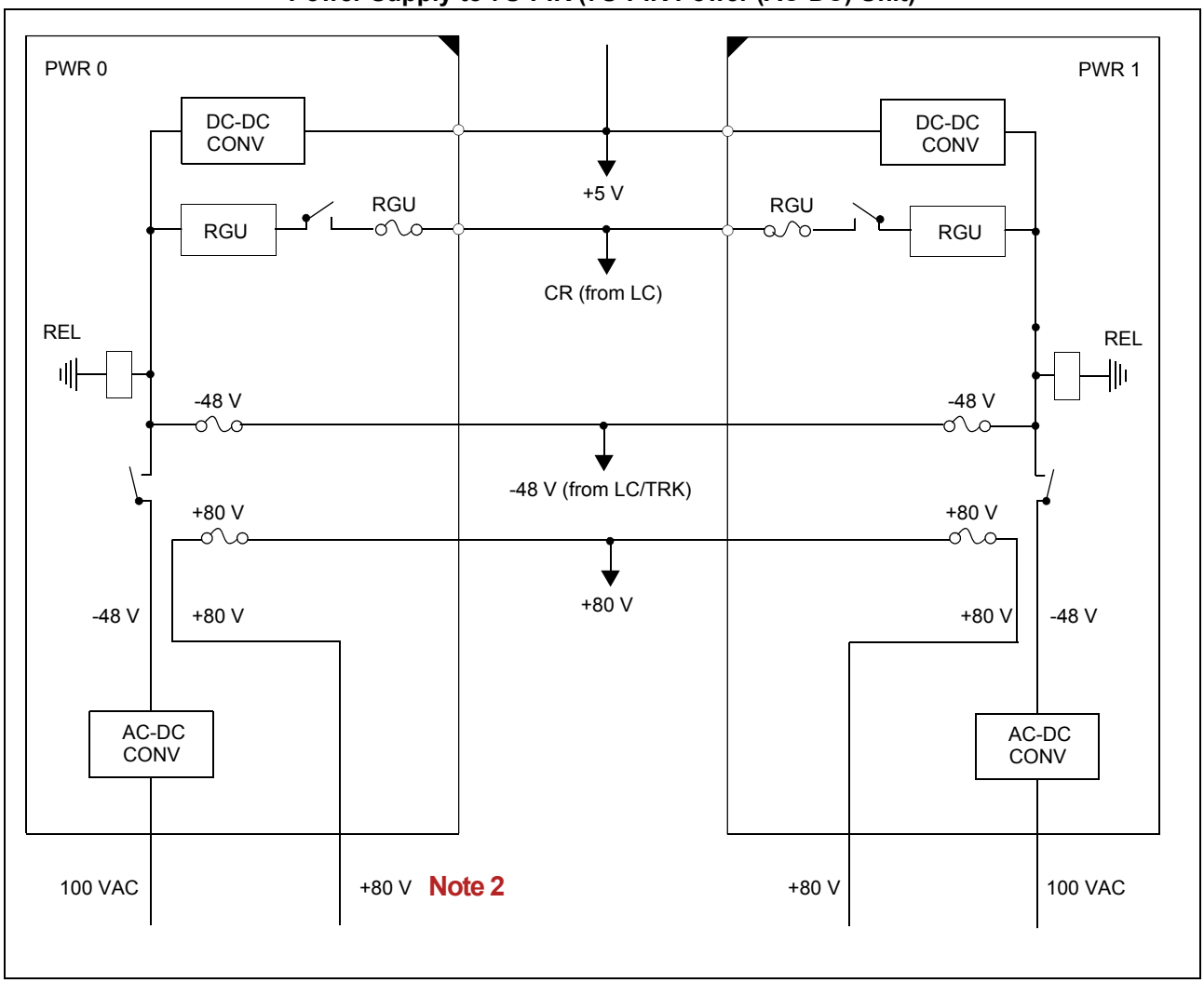
Block Diagram of Power Supply System (7U-PIR)



Note 1: PWR 1 is used when power is provided in dual configuration.

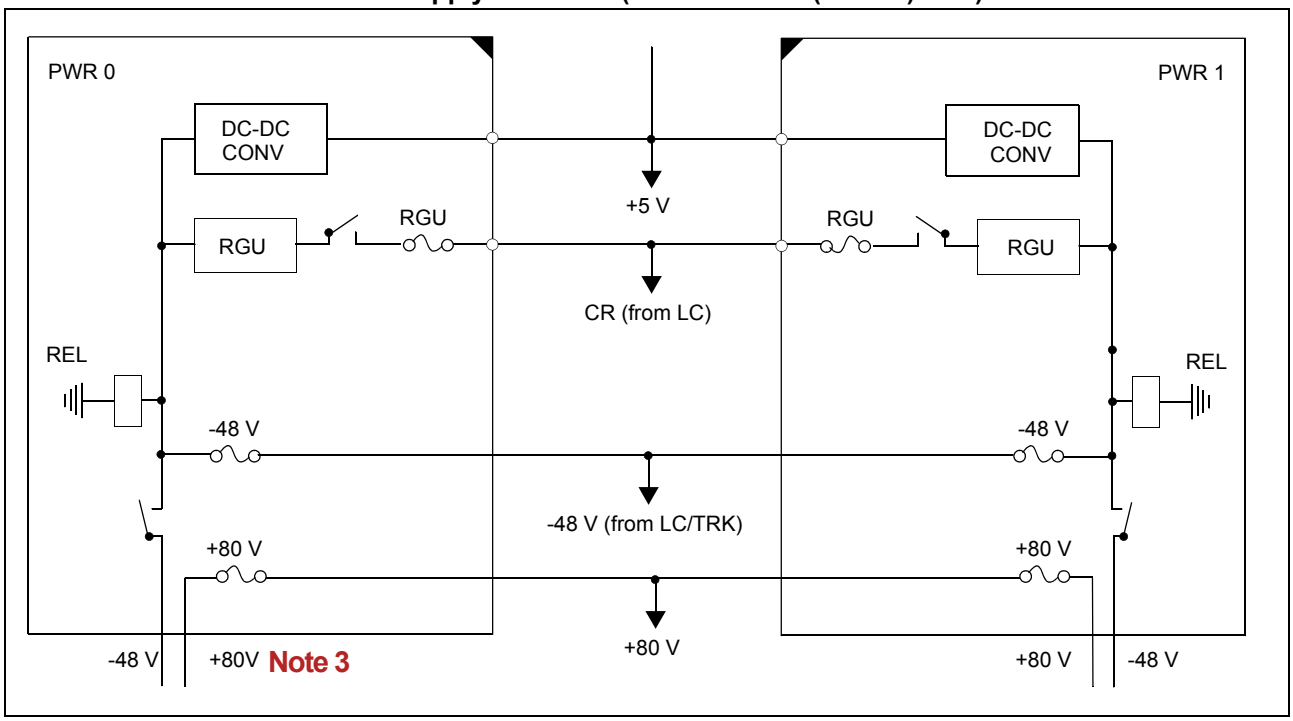
(4) The figure below shows the power supply system for 7U-PIR.

Power Supply to 7U-PIR (7U-PIR Power (AC-DC) Unit)



Note 2: RGU is activated by ACT/STBY. +80 V is supplied to each Message Waiting Lamp.

Power Supply to 7U-PIR (7U-PIR Power (DC-DC) Unit)



Note 3: RGU is activated by ACT/STBY. +80 V is supplied to each Message Waiting Lamp.

5.7.2 Fuse Blown Fault of 7U-PIR



(1) Check the backplane of the 7U-PIR.

(a) Make a visual check on the backplane for pin contacting, melting or burn, etc.

(2) Extract all the cards from the 7U-PIR, and insert them back into their slots one by one to see if the fuse blows.

(a) Turn off the power switch of the 7U-PIR power unit.

(b) Switch the circuit breaker to the OFF position to stop the power supply to the 7U-PIR power unit.

(c) On all the cards, flip the MB switch up to the ON position.

(d) Extract all the cards from their mounting slots.

(e) Replace the blown fuse with a new one.

(f) Switch the circuit breaker to the ON position to restore power to the 7U-PIR power unit.

(g) Turn on the power switch of the 7U-PIR power unit.

(h) Insert one of the cards, with the MB switch ON, into the mounting slot.

(i) On the card, flip the MB switch down to the OFF position and check to see if the fuse blows.

(j) Repeat steps (h) and (i) for all the cards one by one.

5.7.3 Circuit Breaker OFF Fault in Power Supply of 7U-PIR



(1) Check the backplane of the 7U-PIR.

(a) Make a visual check on the backplane for pin contacting, melting or burning, etc.

(2) Extract all the cards from the 7U-PIR, and make a visual check of the cards.

(a) Turn off the power switch of the 7U-PIR power unit.

(b) Switch the circuit breaker to the OFF position to stop the power supply to the 7U-PIR power unit.

(c) Extract all the cards from their mounting slots.

(d) Make a visual check of the extracted cards. Check ICs, resistors, and capacitors to see if any are burned.

5.7.4 Fault of Alarm Lamps on Power Supply of 7U-PIR



(1) Press the RESET button of the 7U-PIR power unit.

[Alarm lamp goes off]

- FAULT OBSERVATION

[Alarm lamp illuminates again]

(a) Turn off the power switch of the 7U-PIR power unit.

(b) Switch the circuit breaker to the OFF position to stop the power supply to the 7U-PIR power unit.

(c) On all the cards, flip the MB switch up to the ON position.

(d) Extract all the cards from their mounting slots.

(e) Switch the circuit breaker to the ON position to restore power to the 7U-PIR power unit.

(f) Turn on the power switch of the 7U-PIR power unit.

(g) Check to see if the alarm lamp illuminates.

- If it does, replace the 7U-PIR power unit with a new one.
- If the alarm lamp does not illuminate, insert the cards into their mounting slot one by one to see if the alarm lamp illuminates. **Note 1**

Note 1: Insert each 7U-PIR power unit with the power switch OFF, and then set it back to ON.

5.8 Power Supply Fault of 8U-PIR

This section explains the fault repair procedure when any of the faults shown in the table below occur.

Power Supply Fault Situation (8U-PIR)

FAULTY SITUATION	REFERENCE SECTION
When the "RGU" / "-48 V" Fuse has Blown	Section 5.8.2 Fuse Blown Fault of 8U-PIR <8U-PIR>
DC-DC PWR Card Breaker OFF, Fault in Power Supply	Section 5.8.3 Circuit Breaker OFF Fault in 8U-PIR PWR (DC-DC) card <8U-PIR>
Fault of Alarm Lamps on DC-DC PWR Card	Section 5.8.4 Fault of Alarm Lamps on 8U-PIR PWR (DC-DC) card <8U-PIR>

5.8.1 Check Point

When repairing a power supply fault, consider the following items:

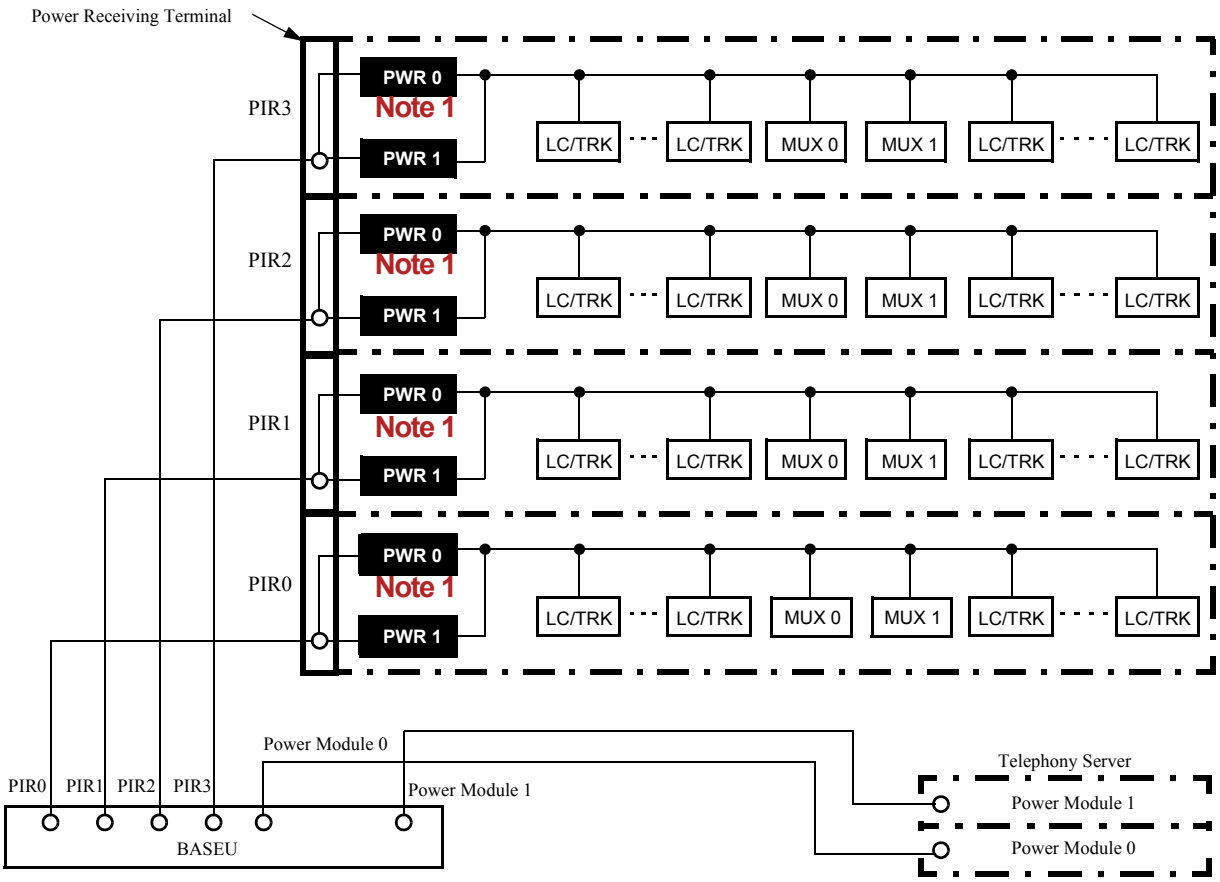
(1) Before checking the system, check the Rectifier, Battery, and Power cables.

(2) PWR (DC-DC) card is equipped with the circuits to supply ringing signal and howler tone. When a fault occurs that causes the bell of the telephone not to ring, or howler tone cannot be heard, etc., check the alarm lamp on the PWR (DC-DC) card.

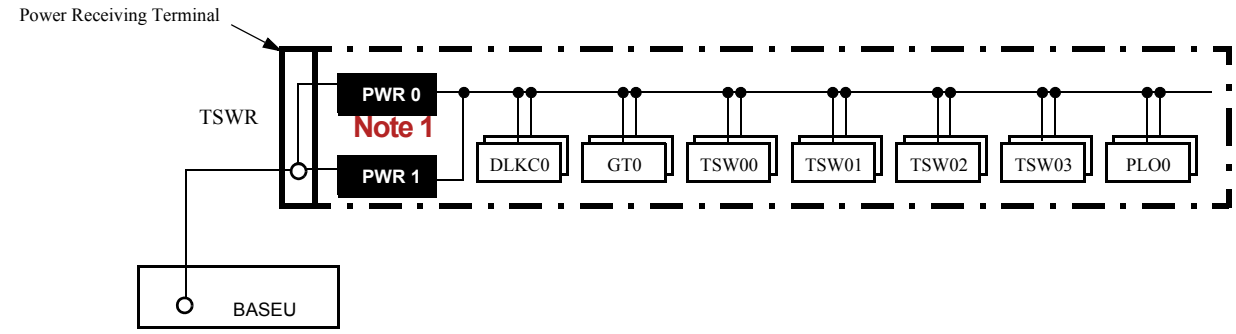
(3) The figures below show the block diagrams for the power supply to each module.

Block Diagram of Power Supply System (8U-PIR)

[PIR]



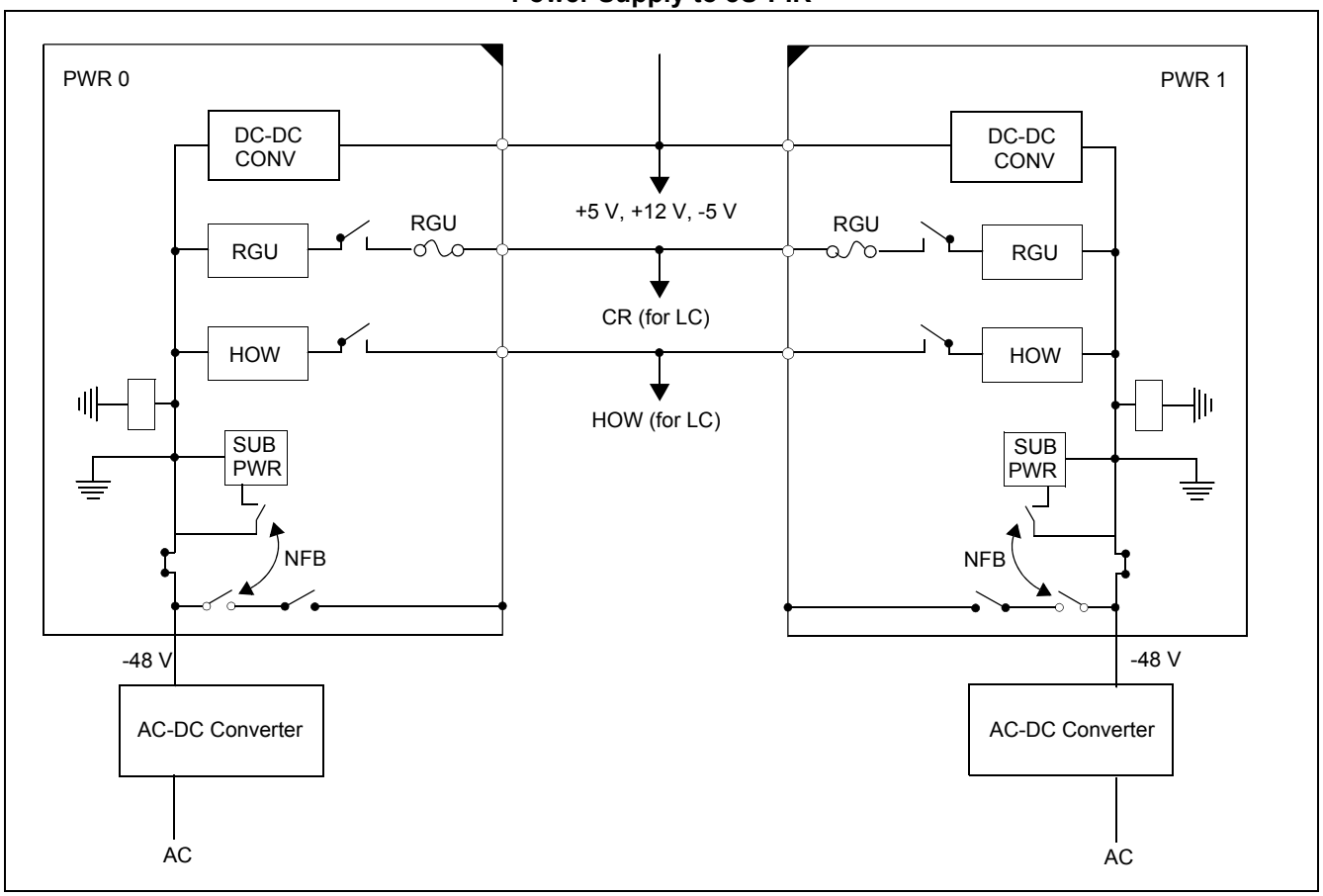
[TSWR]



Note 1: PWR 1 is used when power is provided in dual configuration.

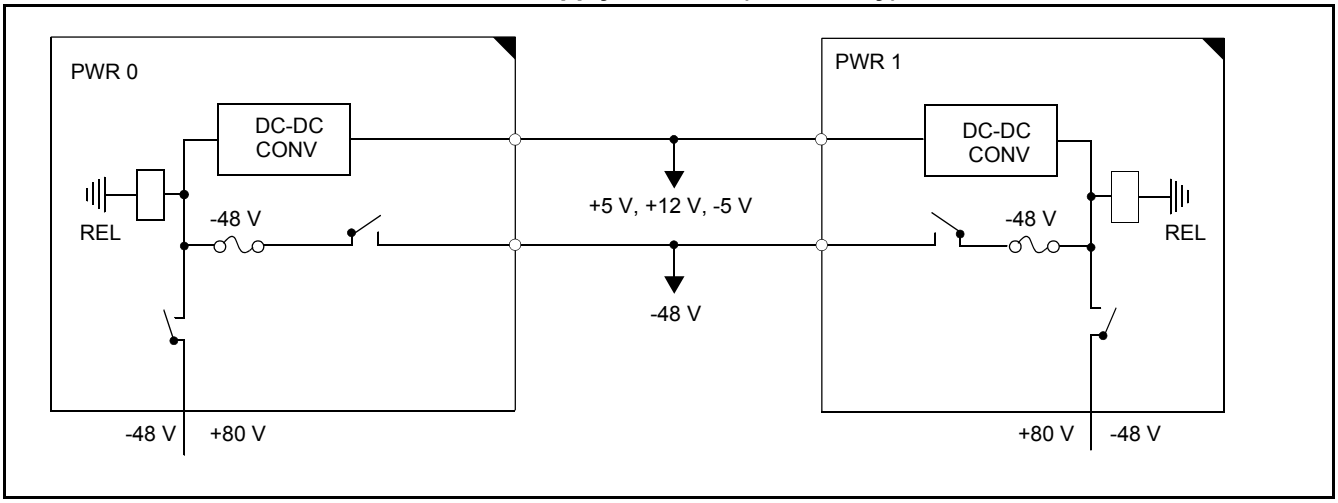
(4) The figures below show the power supply system for 8U-PIR and TSWR.

Power Supply to 8U-PIR



Note: RGU and HOW activate by ACT/STBY.

Power Supply to TSWR (4-IMG Only)



5.8.2 Fuse Blown Fault of 8U-PIR



(1) Check the backplane of the 8U-PIR.

(a) Make a visual check on the backplane for pin contacting, melting or burn, etc.

(2) Extract all the cards from the PIR, and insert them back into their slots one by one to see if the fuse blows.

(a) Flip the MB switch of the 8U-PIR PWR (DC-DC) card up to the ON position.

(b) Switch the circuit breaker to the OFF position to stop the power supply to the 8U-PIR PWR (DC-DC) card.

(c) Extract all the cards from their mounting slots, except the 8U-PIR PWR (DC-DC) card.

(d) Replace the blown fuse with a new one.

(e) Switch the circuit breaker to the ON position to restore power to the 8U-PIR PWR (DC-DC) card.

(f) Flip the MB switch of the 8U-PIR PWR (DC-DC) card down to the OFF position.

(g) Insert the cards into their mounting slots one by one, with their MB switch up (ON position).

(h) Check to see if the fuse blows when the MB switch is set to OFF position.

5.8.3 Circuit Breaker OFF Fault in 8U-PIR PWR (DC-DC) card



(1) Check the backplane of the 8U-PIR.

(a) Make a visual check on the backplane for pin contacting, melting or burning, etc.

(2) Extract all the cards from the 8U-PIR, and make a visual check of the cards.

(a) Flip the MB switch of the 8U-PIR PWR (DC-DC) card up to the ON position.

(b) Switch the circuit breaker to the OFF position to stop the power supply to the 8U-PIR PWR (DC-DC) card.

(c) Extract all cards from their mounting slots.

(d) Make a visual check of the extracted cards. Check ICs, resistors, and capacitors to see if any are burned.

5.8.4 Fault of Alarm Lamps on 8U-PIR PWR (DC-DC) card



(1) Press the RESET button of the 8U-PIR PWR (DC-DC) card.

[Alarm lamp goes off]

- FAULT OBSERVATION

[Alarm lamp illuminates again]

(a) On the 8U-PIR PWR (DC-DC) card, flip the MB switch up to the ON position.

(b) Turn the circuit breaker OFF.

(c) On every card except 8U-PIR PWR (DC-DC) card, flip the MB switch up to the ON position.

(d) Extract all cards except 8U-PIR PWR (DC-DC) card from their mounting slots.

(e) Turn the circuit breaker ON.

(f) On the 8U-PIR PWR (DC-DC) card, flip the MB switch down to the OFF position.

(g) Check to see if the alarm lamp illuminates.

- If it does, replace the 8U-PIR PWR (DC-DC) card with a new one.
- If the alarm lamp does not illuminate, insert the cards into their mounting slot one by one to see if the alarm lamp illuminates. **Note 1**

Note 1: Insert each 8U-PIR PWR (DC-DC) card with the MB switch turned ON, and then set it back to OFF.

5.9 Fault of Fan in PIR/TSWR



This section explains the fault repair procedure where a cooling fan in a PIR or TSWR does not operate.

5.9.1 Check Point

Check the following before doing the repair process:

- Turn off the fans.

  - Flip the FAN PWR SW switch (**Note 1**) up to the OFF position.

  Note 1: For the location of the FAN PWR SW switch, see Section 3.5 Replacement Procedure for Fans (7U-PIR/TSWR)/Section 3.6 Replacement Procedure for Fans (8U-PIR/TSWR).

- Check the voltage at the connector when the fans are stopped.
  - Is the measured voltage is -48 V?

<When the measured voltage is less than -48 V>

- For 7U-PIR, check the wire connection between the fan tray and the 7U-PIR/TSWR.
- For 8U-PIR, check the cable connection between the FANU and the 8U-PIR/TSWR.

<When the measured voltage is -48 V>

STEP 1 Replace the faulty fan with a new one.

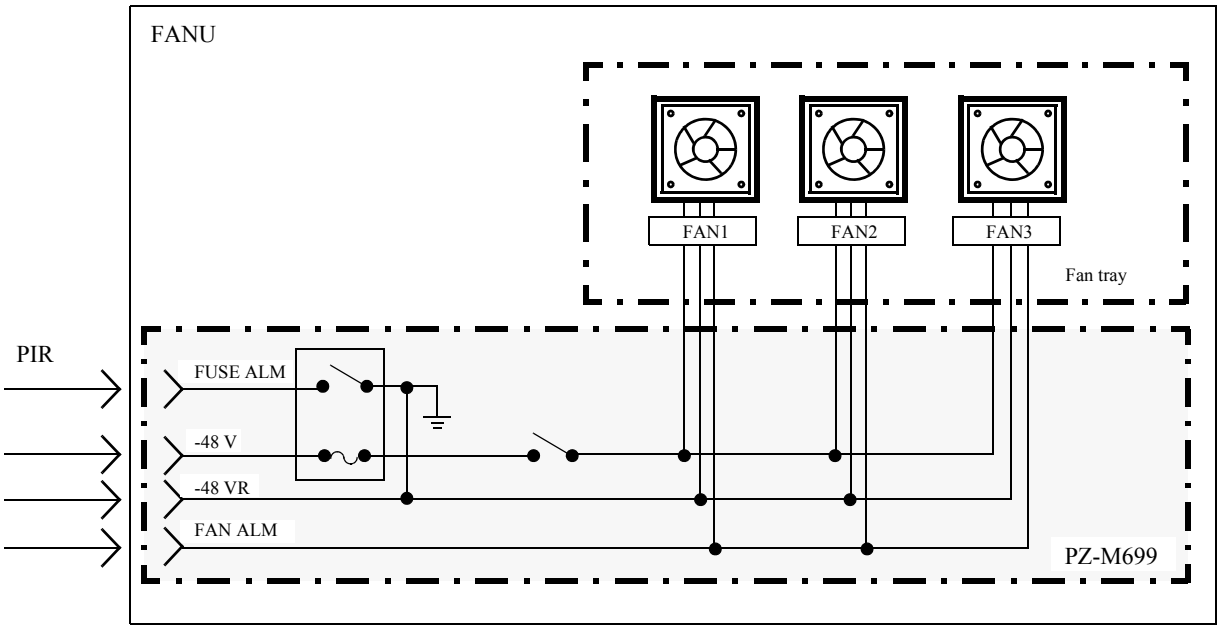
For 7U-PIR, see *Section 3.5 Replacement Procedure for Fans (7U-PIR/TSWR).*

For 8U-PIR/TSWR, see *Section 3.6 Replacement Procedure for Fans (8U-PIR/TSWR).*

STEP 2 Turn on the fans.

Flip the FAN PWR SW switch down to the ON position.

Circuit Diagram of Fan Unit and Thermal Unit



5.10 Tone Fault



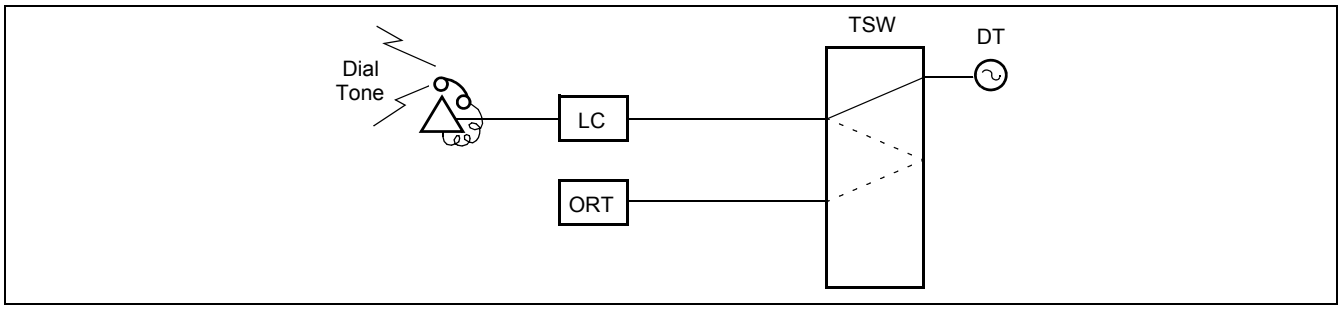
This section explains the fault repair procedure when any of the various tones cannot be heard in the whole system.

5.10.1 Check Point

Since the tone generator circuit is embedded in the TSW card, check the state of the TSW when repairing a tone fault.

The figure below shows an example of the related trunking for Dial Tone connection.

Dial Tone Connection



5.10.2 Tone Fault

(1) When overall tone is faulty.

- Replace the TSW card with a spare and check.

(2) When Hold Tone only is faulty.

The following are available as a Music-On-Hold source. Check each card, equipment.

- TSW-BOX (for 1-IMG/4-IMG with TSW-BOX only)
- PLO (for 4-IMG with TSWR only)
- External Music-On-Hold

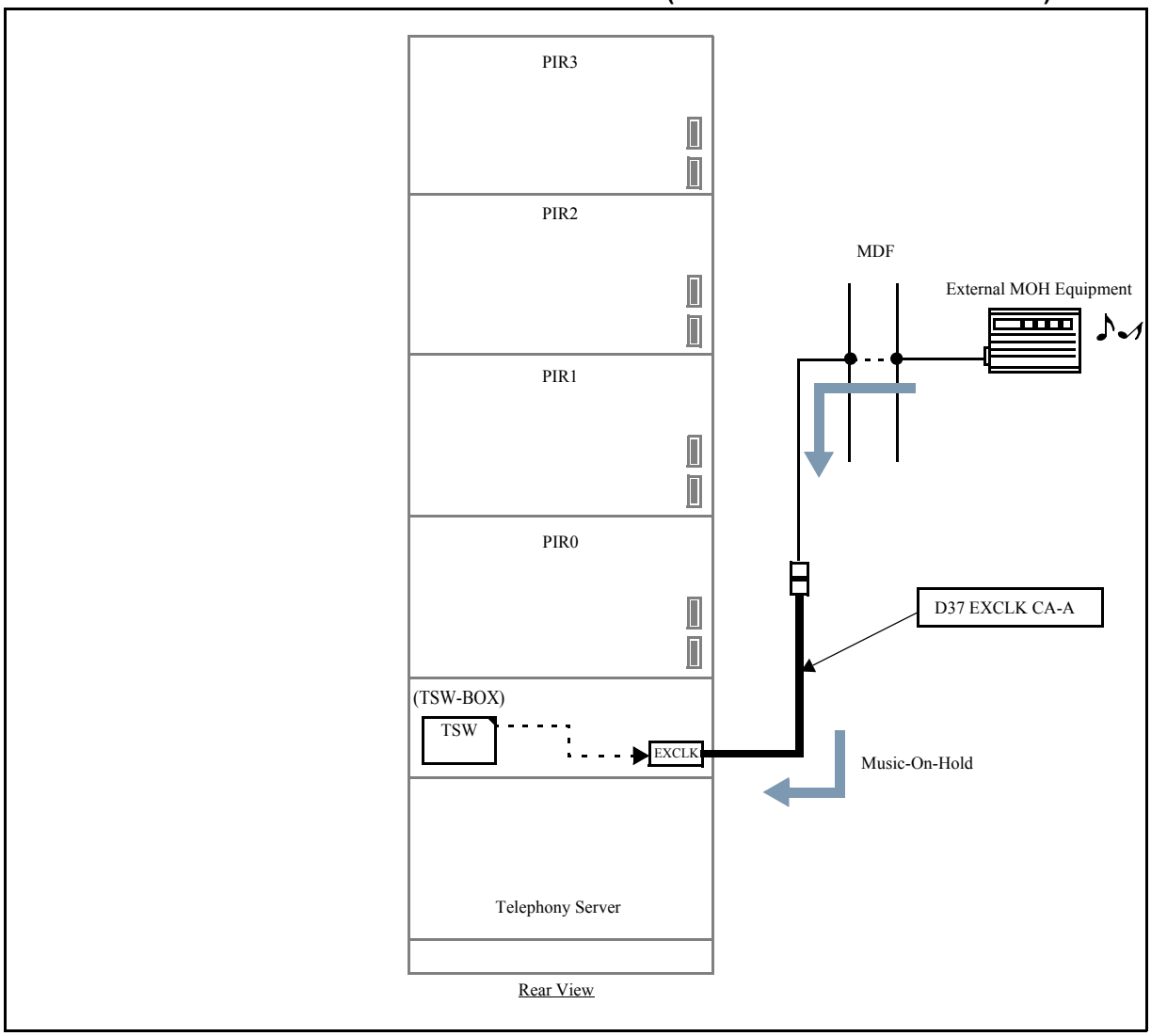
Perform the following procedure when external MOH is used.

STEP 1 Check the External Music-On-Hold device.

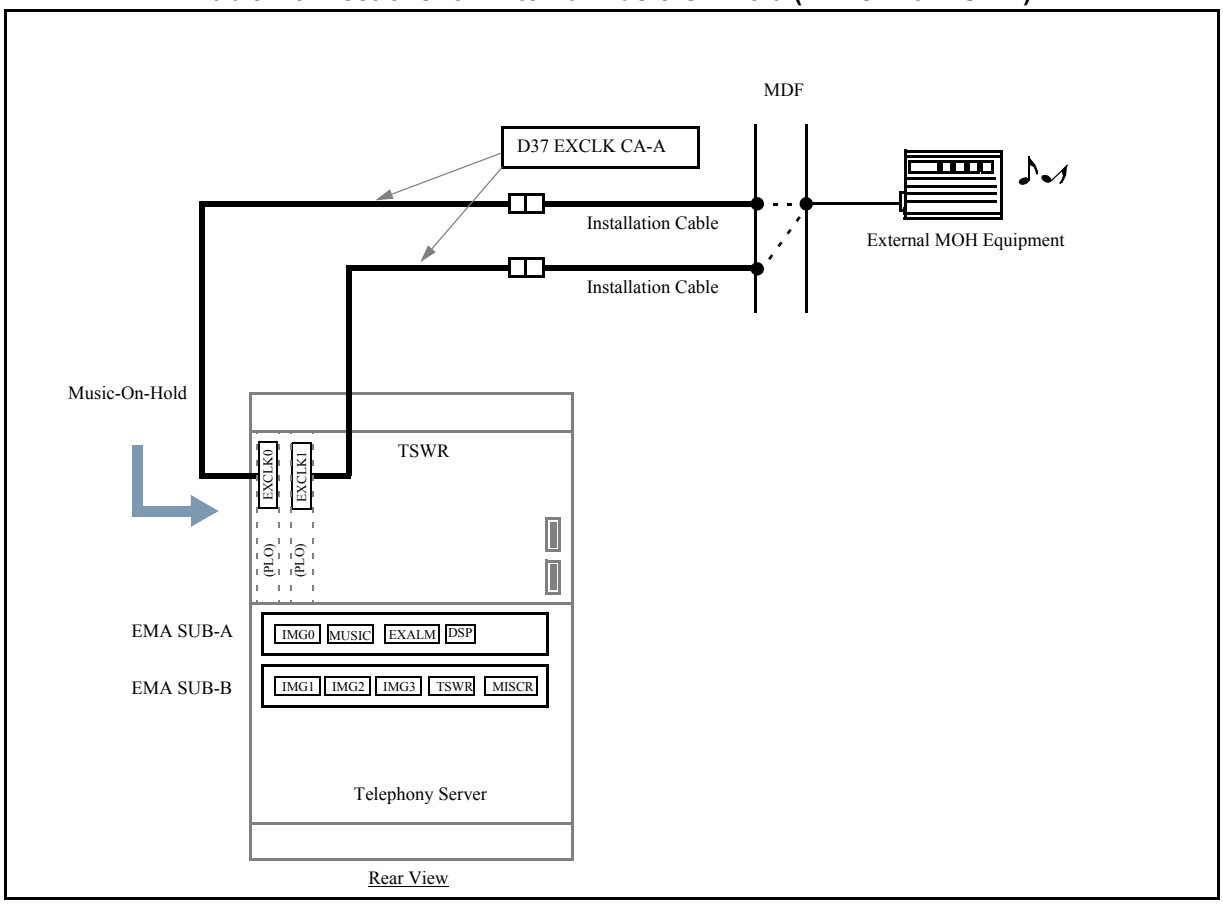
STEP 2 Check the wiring of the MDF referring to "Cable Connections for External Music-On-Hold (for 1-IMG/4-IMG with TSW-BOX)".

STEP 3 Check cable connections in the system referring to "Cable Connections for External Music-On-Hold (4-IMG with TSWR)".

Cable Connections for External Music-On-Hold (for 1-IMG/4-IMG with TSW-BOX)



Cable Connections for External Music-On-Hold (4-IMG with TSWR)



5.11 Common Channel Interoffice Signaling (CCIS) Line Fault

This section explains the fault repair procedure when any of the faults shown in the table below occur to a specific CCIS line.

CCIS Line Fault Situation

FAULTY SITUATION	REFERENCE SECTION
A specific CCH/CCT card is faulty.	Section 5.11.3 Specific CCH/CCT Card is Faulty
When the signal transmission line is a digital line, transmitting/ receiving of control signals cannot be performed.	Section 5.11.4 Fault of CCH, DTI and Related Flat Cable

5.11.1 Check Point

When repairing a CCIS Line fault, consider the following items:

(1) Check alarm lamps on the CCH or CCT card.

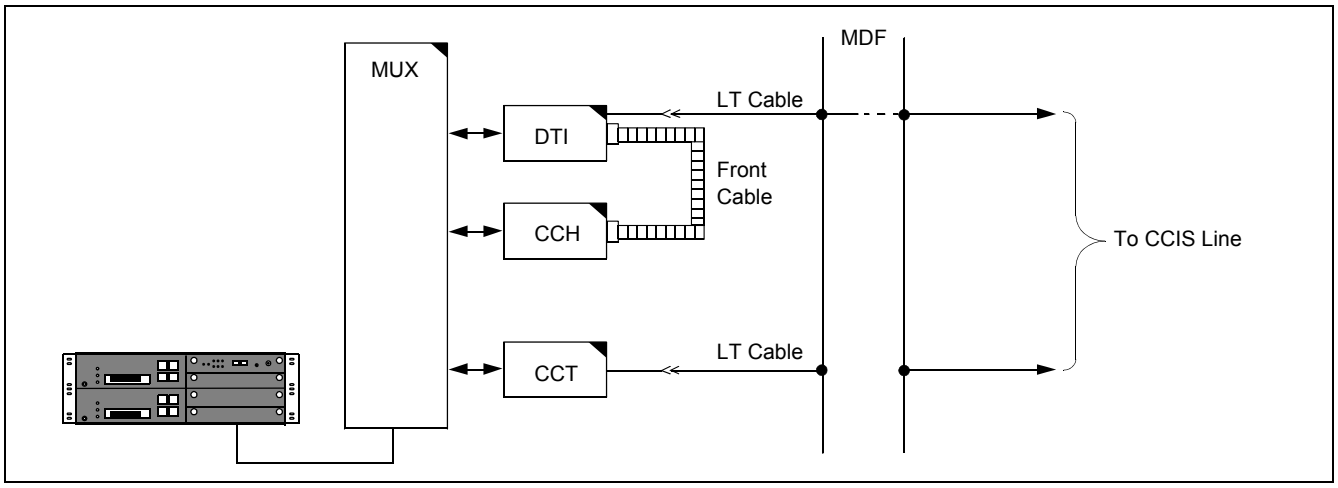
(2) Refer to Controlling CCIS Line, and check the cable connection.

5.11.2 CCIS Line Control

The CCH/CCT card controls the signal link (digital) of the interoffice common channel signaling system and transmitting/receiving call processing information. The signal link controls permit normal transmission and reception of call processing information.

A break in signal links is detected, then restored to establish signal links. The call processing information is converted into signal format for Channel 1 (any channel) of the DTI before being transmitted to a distant office. Controlling CCIS Line shows the CCIS line control route.

Controlling CCIS Line



5.11.3 Specific CCH/CCT Card is Faulty

(1) Replace the CCH/CCT card with a spare, and see if the fault remains.

(a) On the CCH/CCT card, flip the MBR switch up to the ON position.

(b) On the CCH/CCT card, flip the MB switch up to the ON position, and extract the card from its mounting slot.

(c) On a new CCH/CCT card, configure the switch setting exactly the same as that of the card extracted in step (b).

(d) On the new CCH/CCT card, flip the MBR and MB switches up to the ON position, and insert the card into its mounting slot.

(e) On the new CCH/CCT card, flip the MB switch down to the OFF position.

(f) On the new CCH/CCT card, flip the MBR switch down to the OFF position.

(g) Check whether the fault is still indicated.

5.11.4 Fault of CCH, DTI and Related Flat Cable

(1) Check connectors and flat cables between DTI and CCH.

<Check the connector>

(a) On the DTI cards, flip the MB switch up to the ON position. On the CCH card, flip the MBR switch up to the ON position.

(b) Check whether the connector is correctly connected or not. If the connection is found improper, plug and unplug the connector a few times.

(c) On the DTI cards, flip the MB switch down to the OFF position. On the CCH card, flip the MBR switch down to the OFF position.

(d) Check whether the fault is still indicated.

<Check the Flat cable>

(a) On the DTI cards, flip the MB switch up to the ON position. On the CCH card, flip the MBR switch up to the ON position.

(b) Test the continuity of the flat cable. If found abnormal, replace the flat cable with a spare.

(c) On the DTI cards, flip the MB switch down to the OFF position. On the CCH card, flip the MBR switch down to the OFF position.

(d) Check whether the fault is still indicated.

(2) Check by replacing the DTI card with spare.

(a) On the DTI card, flip the MB switch up to the ON position, and extract the card from the mounting slot.

(b) On a new DTI card, configure the switch setting exactly the same as that of the DTI card extracted in step (a).

(c) On the new DTI card, flip the MB switch up to the ON position, and insert the card into the mounting slot.

(d) On the new DTI card, flip the MB switch down to the OFF position.

(e) Check whether the fault is still indicated.

5.12 Integrated Service Digital Network (ISDN) Line Fault

This section explains the fault repair procedure when any of the faults shown in the table below occur to a specific ISDN.

ISDN Line Fault Situation

FAULTY SITUATION	REFERENCE SECTION
A specific CCH/CCT card is faulty.	Section 5.12.3 Specific DCH/PRT Card is Faulty
When the signal transmission line is a digital line, transmitting/ receiving of control signals cannot be performed.	Section 5.12.4 Fault of DCH, DTI, and Related Flat Cable

5.12.1 Check Point

When repairing an ISDN Line fault, consider the following items:

(1) Check the alarm lamps on the DCH or PRT card.

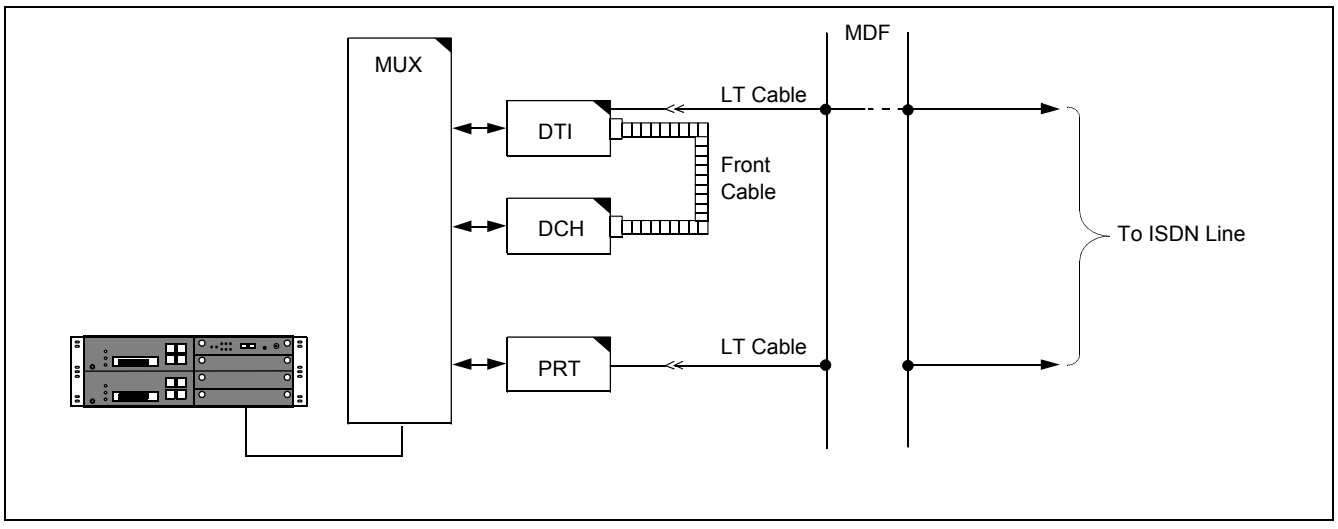
(2) Refer to the figure entitled “Controlling ISDN Line,” and check the cable connection.

5.12.2 ISDN Line Control

The DCH card controls the signal link (digital) of the ISDN line and transmits/receives call processing information.

The signal link controls permit normal transmission and reception of call processing information. The figure below shows the ISDN line control route.

Controlling ISDN Line



5.12.3 Specific DCH/PRT Card is Faulty



(1) Check by replacing the DCH or PRT card with a spare.

(a) On the DCH or PRT card, flip the MBR switch up to the ON position.

(b) On the card, flip the MB switch up to the ON position, and extract the card from its mounting slot.

(c) On a new DCH or PRT card, configure the switch setting exactly the same as that of the card extracted in step (b).

(d) On the new DCH or PRT card, flip the MBR and MB switches up to the ON position, and insert the card into its mounting slot.

(e) On the new DCH or PRT card, flip the MB switch down to the OFF position.

(f) On the new DCH or PRT card, flip the MBR switch down to the OFF position.

(g) Check whether the fault is still indicated.

5.12.4 Fault of DCH, DTI, and Related Flat Cable



(1) Check the connectors and flat cables between DTI and DCH.

<Check the connector.>

(a) On the DTI cards, flip the MB switch up to the ON position. On the DCH card, flip the MBR switch up to the ON position.

(b) Check whether the connector is correctly connected. If the connection is found improper, plug and unplug the connector a few times.

(c) On the DTI cards, flip the MB switch down to the OFF position. On the DCH card, flip the MBR switch down to the OFF position.

(d) Check whether the fault is still indicated.

<Check the flat cable.>

(a) On the DTI cards, flip the MB switch up to the ON position. On the DCH card, flip the MBR switch up to the ON position.

(b) Test the continuity of the flat cable. If abnormal, replace the flat cable with spare.

(c) On the DTI cards, flip the MB switch down to the OFF position. On the DCH card, flip the MBR switch down to the OFF position.

(d) Check whether the fault is still indicated.

(2) Check by replacing the DTI card with a spare.

(a) On the DTI card, flip the MB switch up to the ON position, and extract the card from the mounting slot.

(b) On a new DTI card, configure the switch setting exactly the same as that of the card extracted in step (a).

(c) On a new DTI card, flip the MB switch up to the ON position, and insert the card into the mounting slot.

(d) On the new DTI card, flip the MB switch down to the OFF position.

(e) Check whether the fault is still indicated.

6. SYSTEM OPERATION

This section explains the system operation of the system with PIR.

6.1 Indication of Lockout Stations

When a station is in lockout status (permanent signaling state, shorting across speech wires, etc.), it can quickly be discovered, preventing the situation from developing into serious trouble.

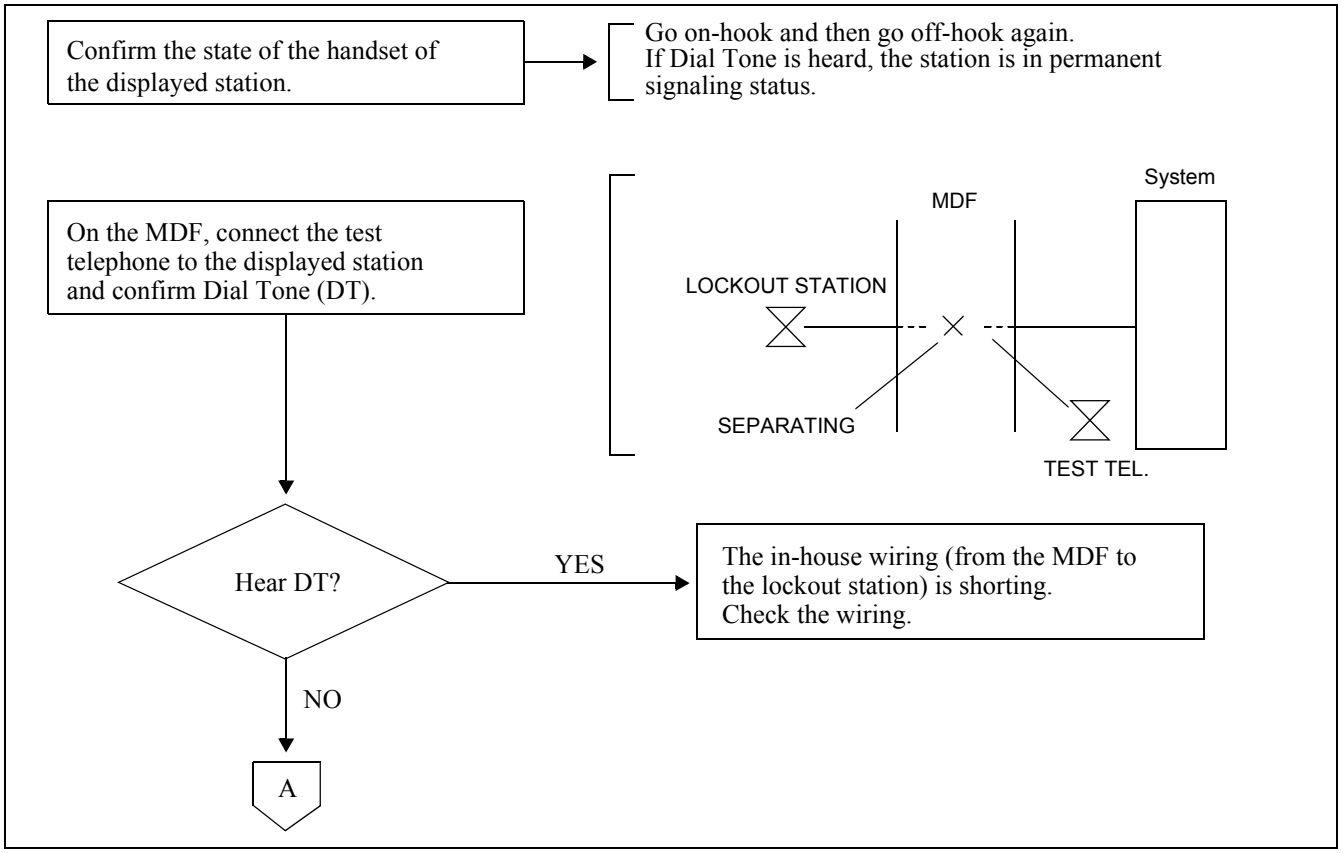
(1) Indicating Method

By entering the following commands from PCPro, information pertaining to the lockout station concerned will display.

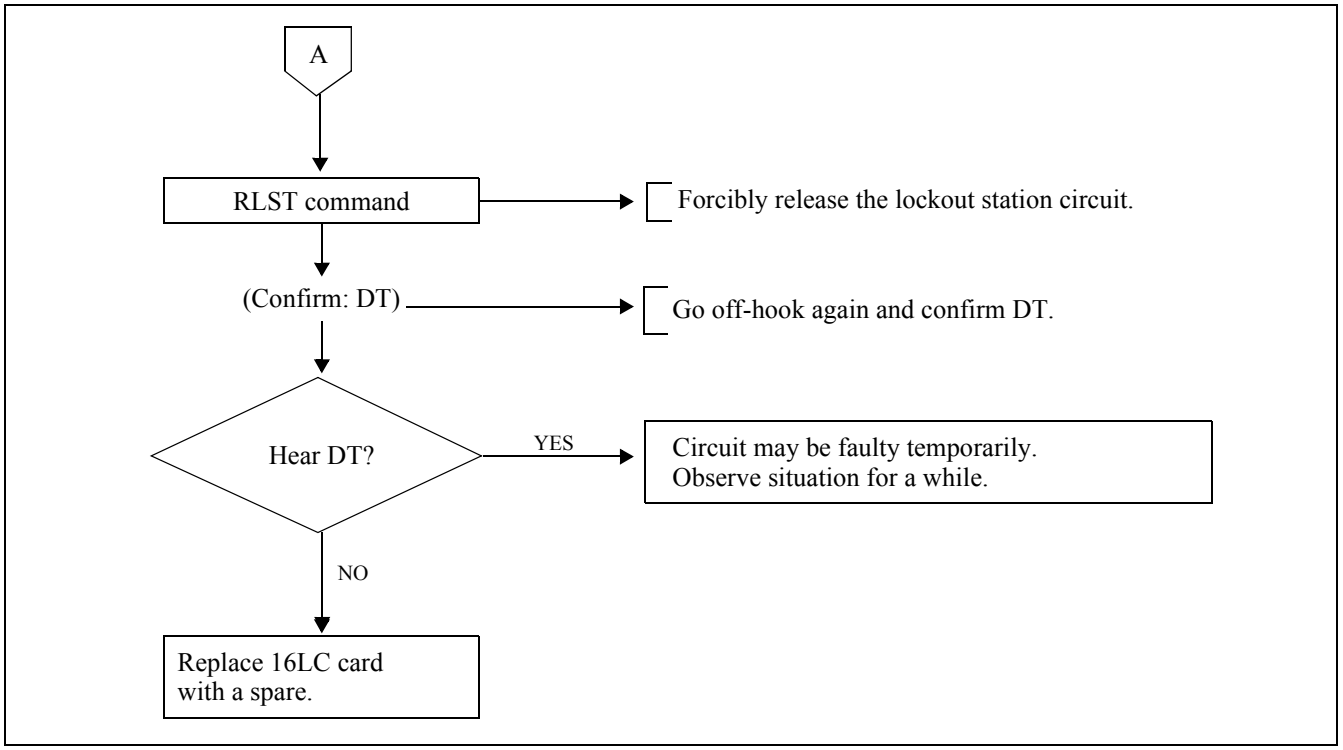
COMMAND	COMMAND FULL NAME
DLSL	Display of Lockout Station - LENS
DLSS	Display of Lockout Station - Number

6.2 Recovery Procedure

Recovery Procedure From Lockout Station (1 of 2)



Recovery Procedure From Lockout Station (2 of 2)



COMMAND	COMMAND FULL NAME
RLST	Release Station/Trunk

6.3 Line Load Control

In Telephony Server system, Line Load Control can be activated automatically or manually as a counter-measure against abnormal traffic congestion towards the stations accommodated in the PIR.

In the case of automatic control, the system automatically monitors an overloaded situation and restricts outgoing calls from stations and incoming calls from trunks.

In the case of manual control, the operator at an Attendant/Desk Console or PCPro restricts outgoing calls from stations and incoming calls from trunks.

This section covers the following methods to activate Line Load Control:

- Control by dialing an access code from the ATTCON/DESKCON
- Control by entering command data from PCPro
- System automatic monitoring

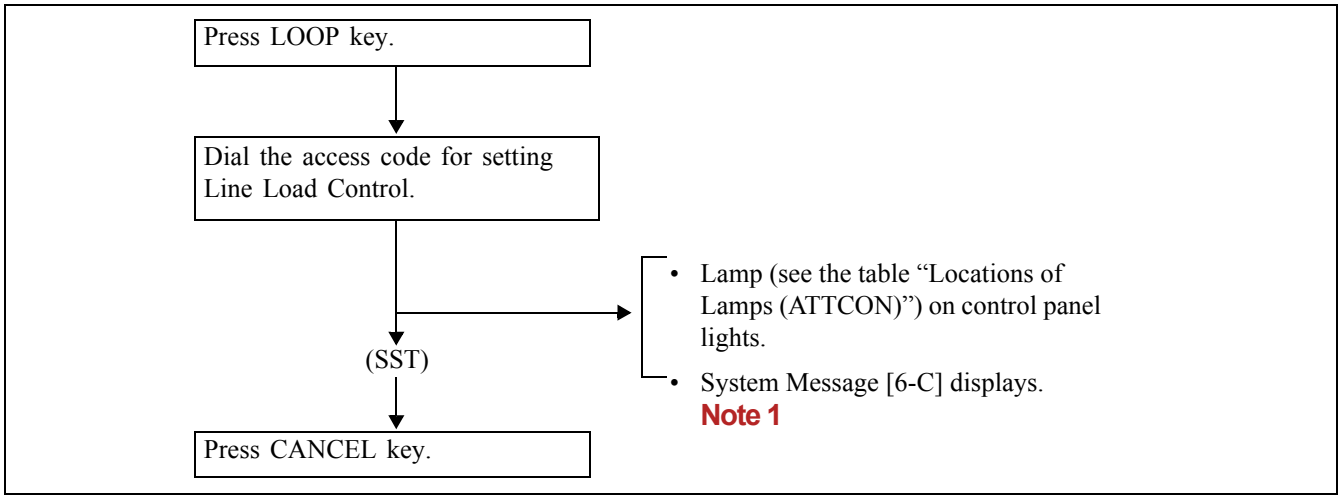
6.3.1 Operating Procedure

(1) Operations on the Attendant Console

By the operations on the ATTCON, restriction is effected on an outgoing call from a station having SFC in which the SFI = 16 (Line Load Control) of the ASFC command is set as RES=0 (incoming calls to that station are allowed). For restricting incoming calls from a trunk, system data ASYD, SYS 1, Index 59, b0=1 should be assigned.

- Setting

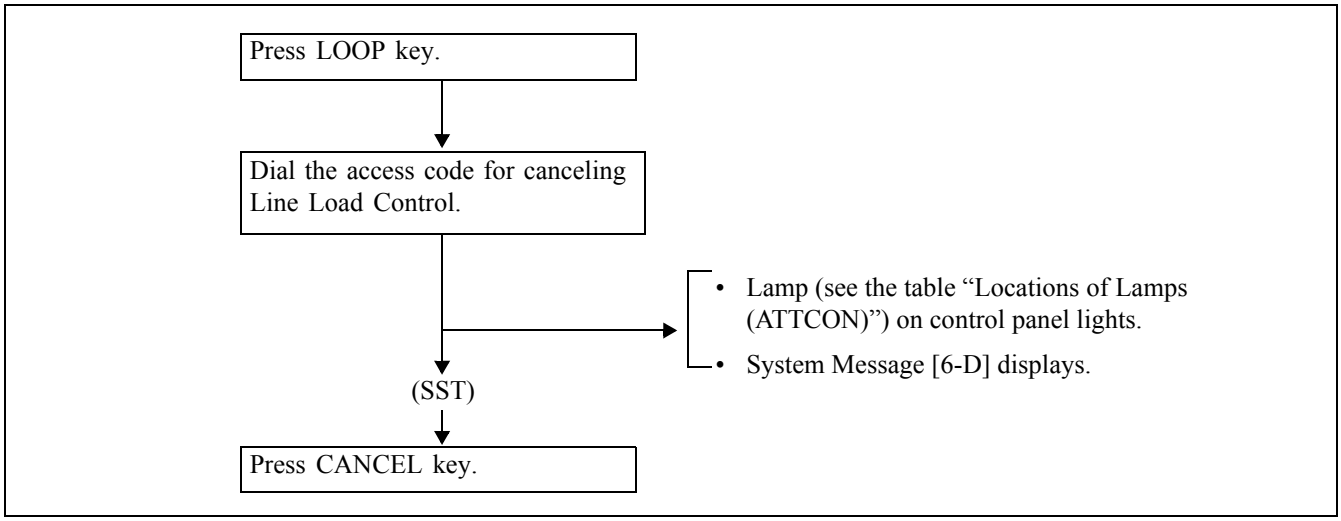
Line Load Control Operations on ATTCON—Setting



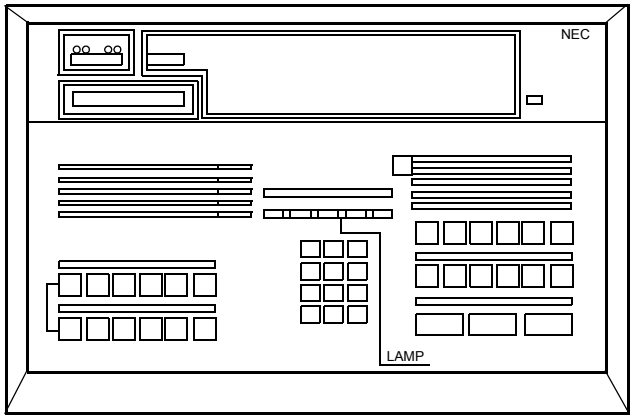
Note 1: In System Message [6-C], the messages are displayed toward all LP.

- Canceling

Line Load Control Operations on ATTCON—Canceling



Locations of Lamps (ATTCON)

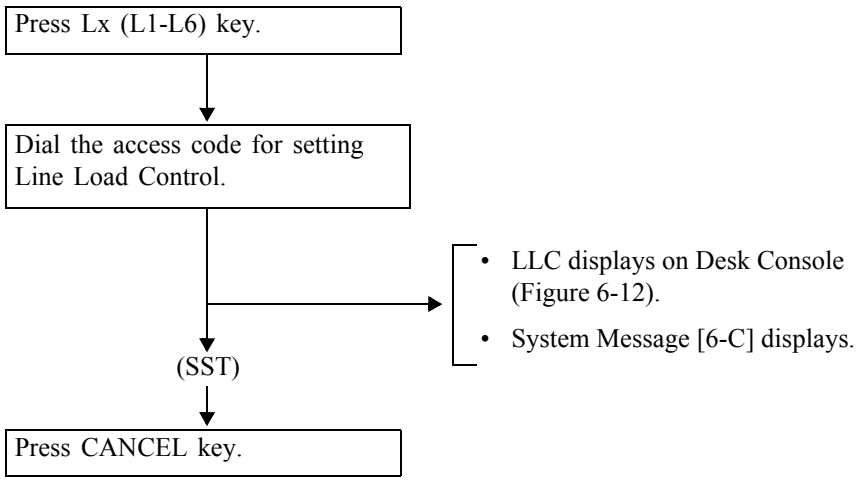


(2) Key Operations on the Desk Console (DESKCON)

By the operations on the Desk Console, restriction is applied on an outgoing call from a station having SFC in which the SFI=16 (Line Load Control) of the ASFC command is set as RES=0 (incoming calls to that station are allowed). For restricting incoming calls from a trunk, system data ASYD, SYS 1, Index 59, b0=1 should be assigned.

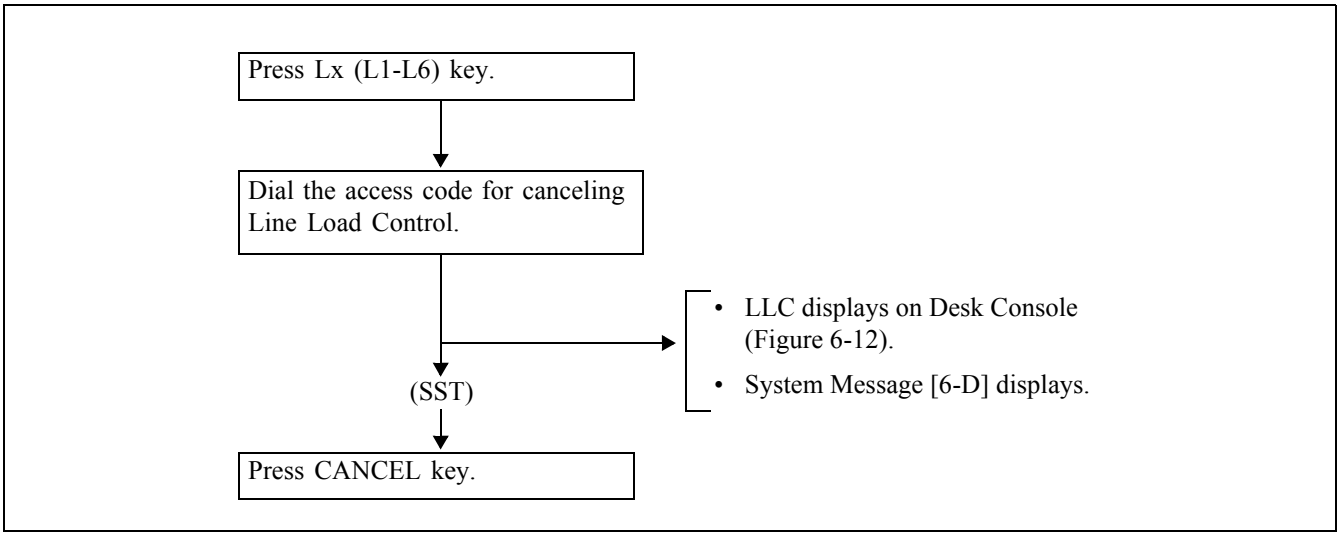
- Setting

Line Load Control Key Operations on DESKCON—Setting

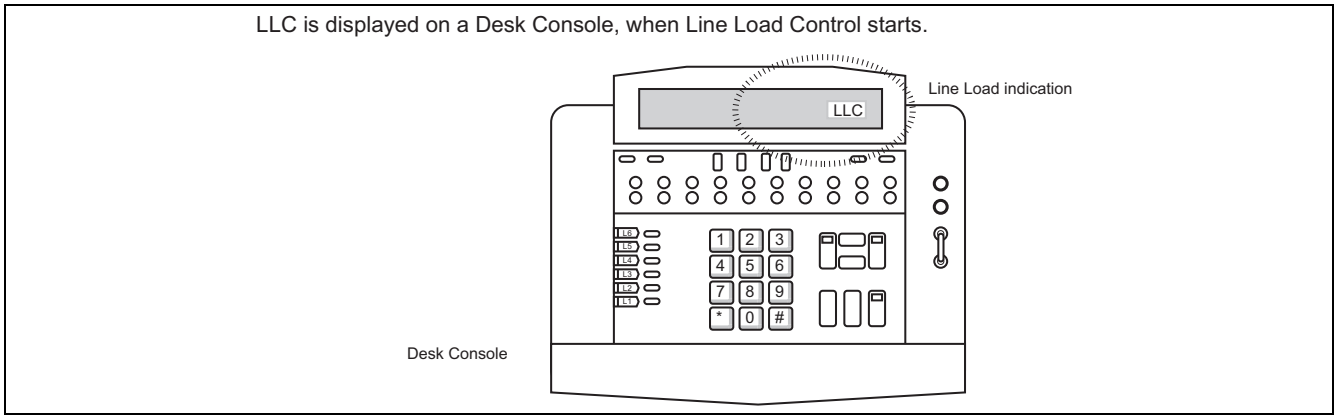


- Canceling

Line Load Control Key Operations on DESKCON—Canceling



Line Load Control Indication (DESKCON)



(3) Operations on PCPro

Line Load Control operates by entering the ALLC command from PCPro. Stations with RES=0 assigned for ASFC SFI=16 (Line Load Control) will be restricted to originate a call. (Call termination is available). Assign SYS1, Index 59, bit 0=1 of System Data to restrict the call termination from the trunk.

Note: System Message [6-C] is not displayed until the restricted station goes off-hook. In this System Message, the message is displayed toward LP which is applicable to the restricted station.

COMMAND	COMMAND FULL NAME
ALLC	Assignment of Line Load Control

(4) Automatic Setting

If the usage rate of the CPU exceeds the system data usage rate, Line Load Control is automatically set. In this case, System Message [6-C] displays. The station controlled and the contents of the Automatic Line Load Control are the same as those in Step (1) Operations on the Attendant Console.

If the usage rate of the CPU drops below the system data usage rate, the Line Load Control is automatically canceled. In this case, System Message [6-D] displays.

6.4 IOC Line Monitor

(1) Functional Outline

This function monitors the IOC port status. As a result of the monitoring by this function, the following is executed:

- When the connection with a port has been disconnected, it is reported by a message.
- When the connection with a port is set up, it is reported by a message.
- The port status is stored in the memory and updated continuously.

(2) Message Judgment Criteria

The table below describes the message judgement criteria.

Message Judgment Criteria

MESSAGE	CONTENT
Port Normal	System data is assigned, and DR signal is ON.
Port Abnormal	System data is assigned, and DR signal is OFF.
Output of Port Disconnected	This message is output when Port Abnormal status has lasted for 30 seconds. This message is immediately output if port abnormal occurs after the IOC card is initialized.
Output of Port Status Restored	This message is output when DR signal is ON for the port about which Output of Port Disconnected message is output.

6.5 Line Management

The following explanations apply to line management:

- Make-Busy/Make-Busy Cancel of Station and Data Terminal
- Class Change and Number Change of Station and Data Terminal
- Make-Busy/Make-Busy Cancel of C.O. Line/Tie Line

Note: Make-Busy means a status rejecting any registration so as to change its equipment, etc.

6.5.1 Make-Busy/Make-Busy Cancel of Station and Data Terminal

Stations and data terminals can be put into make-busy state by the following operations:

(1) On the basis of each station (Make Busy with the MBST command)

Assign the station number in **STN** and choose "1" for **MB** of the MBST command.

For the make-busy cancellation, choose "0" for **MB**.

(2) On the basis of each circuit (Make Busy with the MBLE command)

Assign physical location data to **LENS** and choose "1" for **MB** of the MBLE command.

For the make-busy cancellation, choose "0" for **MB**.

(3) On the basis of each card (Make Busy with the MBPM command or with the MB (toggle) switch on the card)

- Assign the required LENS in **MG**, **UNIT** and **Group** and choose "1" for **MB** of the MBPM command.
- For the make-busy cancellation, choose "0" for **MB**.

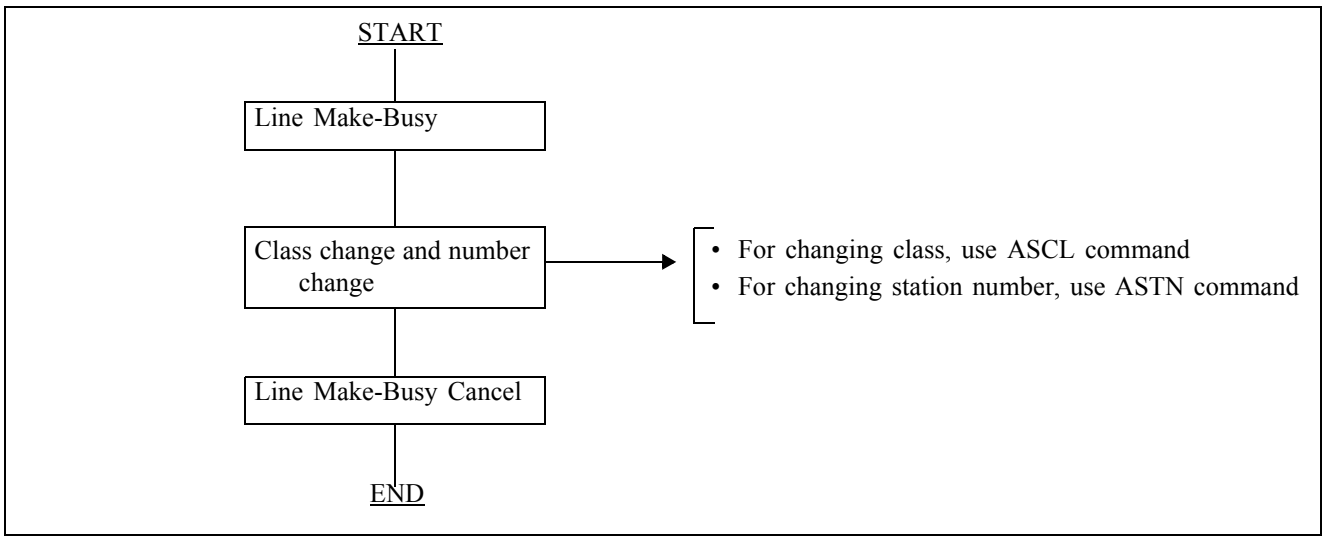
or

- On the card, flip the MB switch up to the ON position.
- For make-busy cancellation, flip the MB switch down to the OFF position.

6.5.2 Class Change and Number Change of Station and Data Terminal

The figure below shows the procedure for class change and number change of station and data terminal.

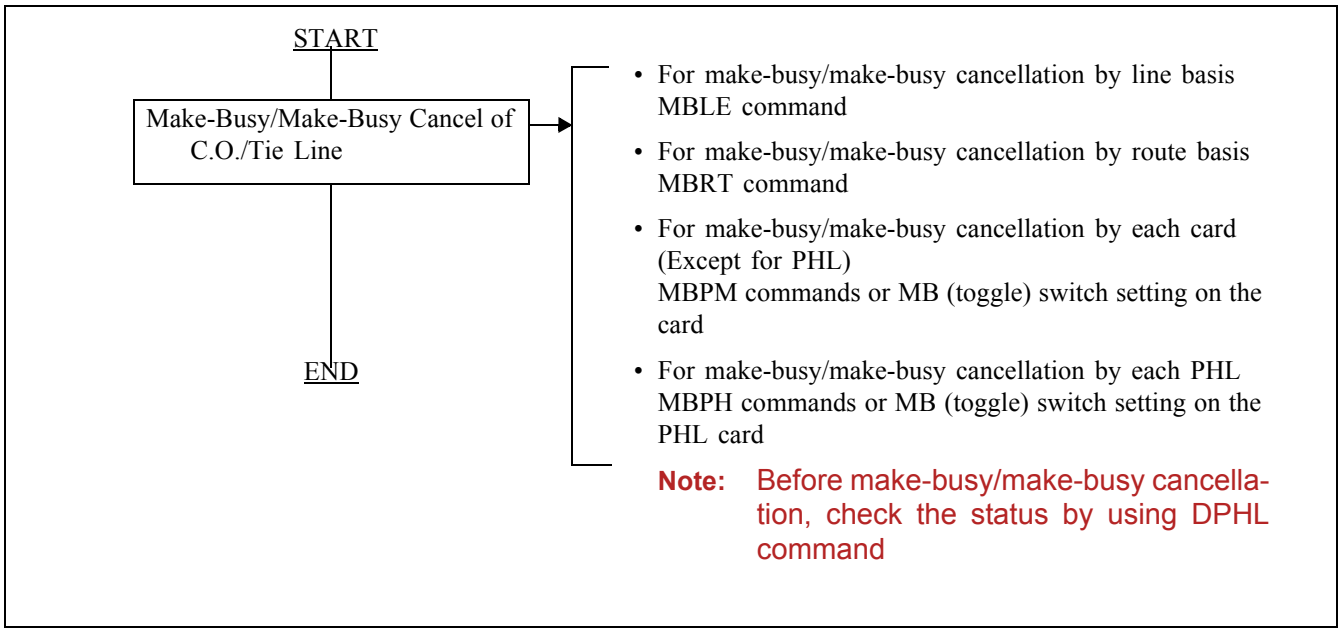
Class Change and Number Change of Station and Data Terminal Procedure



6.5.3 Make-Busy/Make-Busy Cancel of C.O. Line/Tie Line

The figure below shows the procedure to make-busy/make-busy cancel of C.O. line/tie line.

Make-Busy/Make-Busy Cancel of C.O. Line/Tie Line Procedure



6.5.4 Card Initialization Procedure



Card Initialization procedure for LINE/TRUNK card is as follows.

(1) Flip the MB switch of the card up to the ON position.

(2) Flip the MB switch of the card down to the OFF position and confirm that the MB lamp lights steady on green.

Note: When initialization is executed, all calls using that card will be disconnected and all channels will be make-busy state.

6.6 How to Turn ON/OFF Whole System



This section explains the order to turn ON/OFF the power of the whole system when PIR is mounted.

Be sure to follow the procedures below to power on/off the system.

6.6.1 Power ON/OFF Procedure for Telephony Server

<System Power ON>

Turn on the components of the system in accordance with numbers given in the parentheses in the following figure.

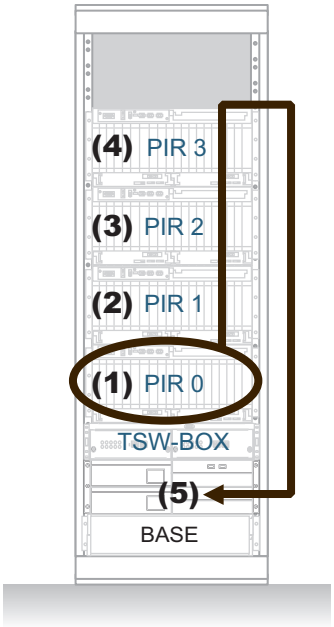
Note: PIR modules should be turned on in ascending order of PIR number (PIR 0 → PIR 1 → PIR 2.....).

- 1-IMG configuration

  7U-PIR power unit or PWR /DPWR card on 8U-PIR → Power module on Telephony Server

Note: For the detailed procedure, see Section 6.6.3 PIR Power ON/OFF Procedure, and Section 6.6.2 Telephony Server Power ON/OFF Procedure.

1-IMG Configuration



- 4-IMG configuration

  When Using TSW-BOX:

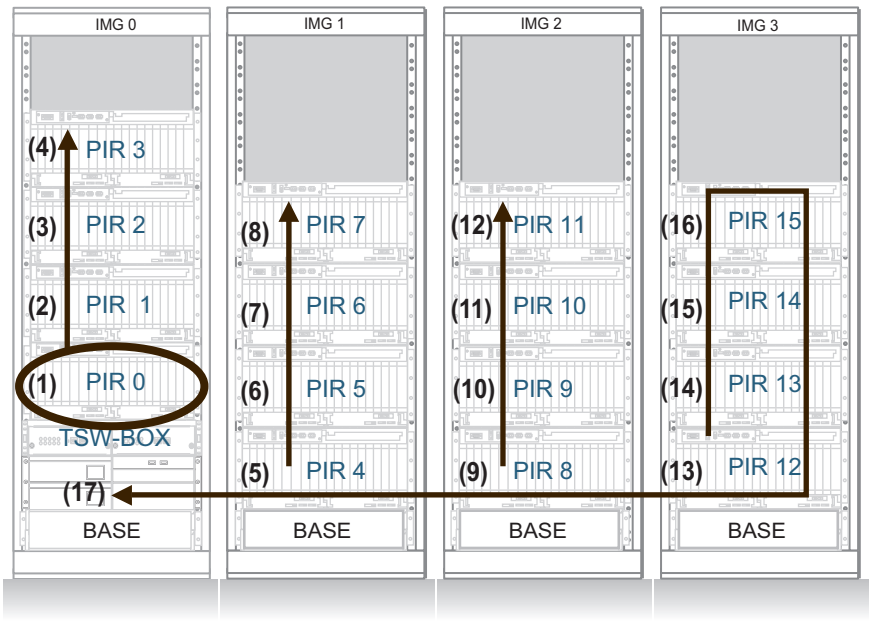
  7U-PIR power unit or PWR/DPWR card on 8U-PIR → Power module on Telephony Server

  When Using TSWR:

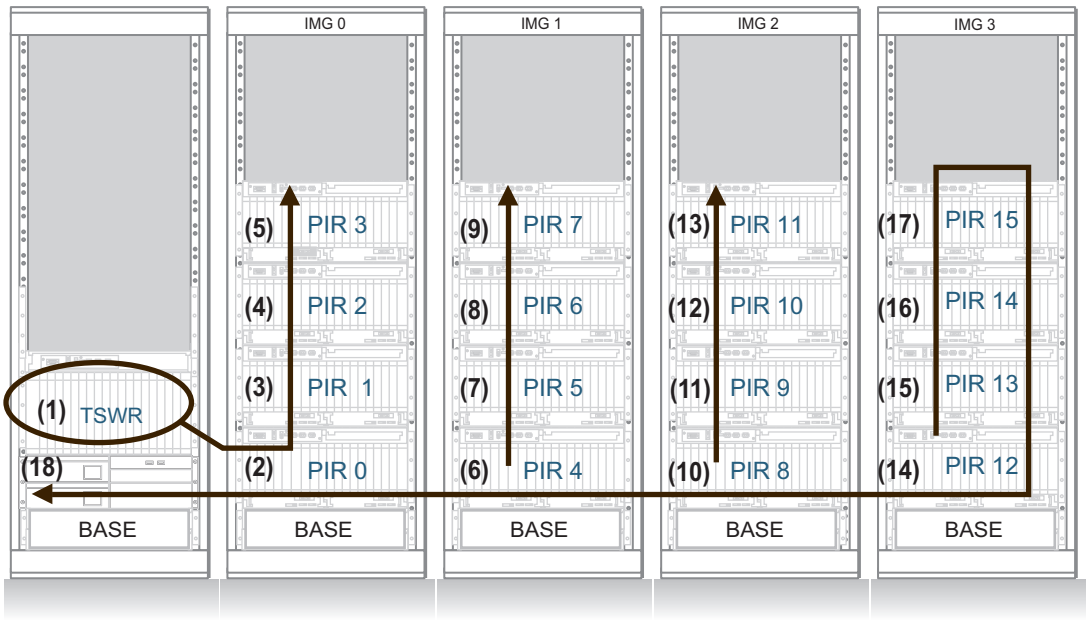
  PWR card on TSWR → 7U-PIR power unit or PWR/DPWR card on 8U-PIR → Power module on Telephony Server

Note: For the detailed procedure, see Section 6.6.4 TSWR Power ON/OFF Procedure, Section 6.6.3 PIR Power ON/OFF Procedure, and Section 6.6.2 Telephony Server Power ON/OFF Procedure.

4-IMG configuration (When Using TSW-BOX)



4-IMG configuration (When Using TSWR)



<System Power OFF>

Turn off the components of the system in accordance with numbers given in the parentheses in the following figure.

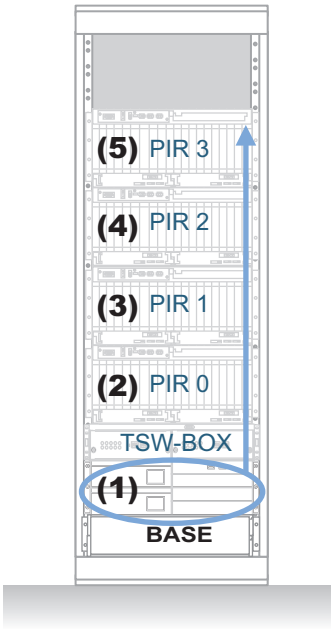
Note: PIR modules should be turned off in ascending order of PIR number (PIR 0 → PIR 1 → PIR 2.....).

- 1-IMG configuration

  Power module on Telephony Server → 7U-PIR power unit or PWR/DPWR card on 8U-PIR

  Note: For the detailed procedure, see Section 6.6.2 Telephony Server Power ON/OFF Procedure, and Section 6.6.3 PIR Power ON/OFF Procedure.

1-IMG Configuration



- 4-IMG configuration

  When Using TSW-BOX:

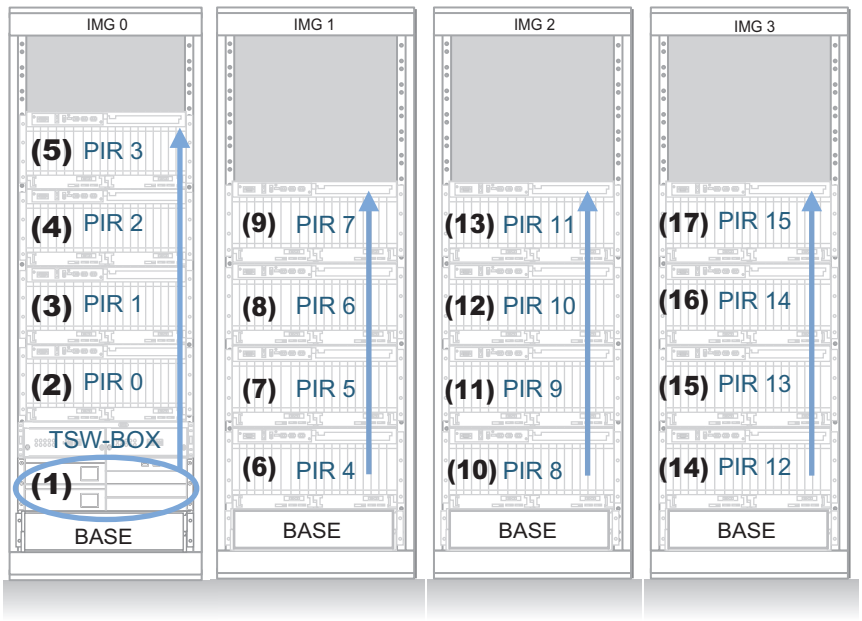
  Power module on Telephony Server → 7U-PIR power unit or PWR/DPWR card on 8U-PIR

  When Using TSWR:

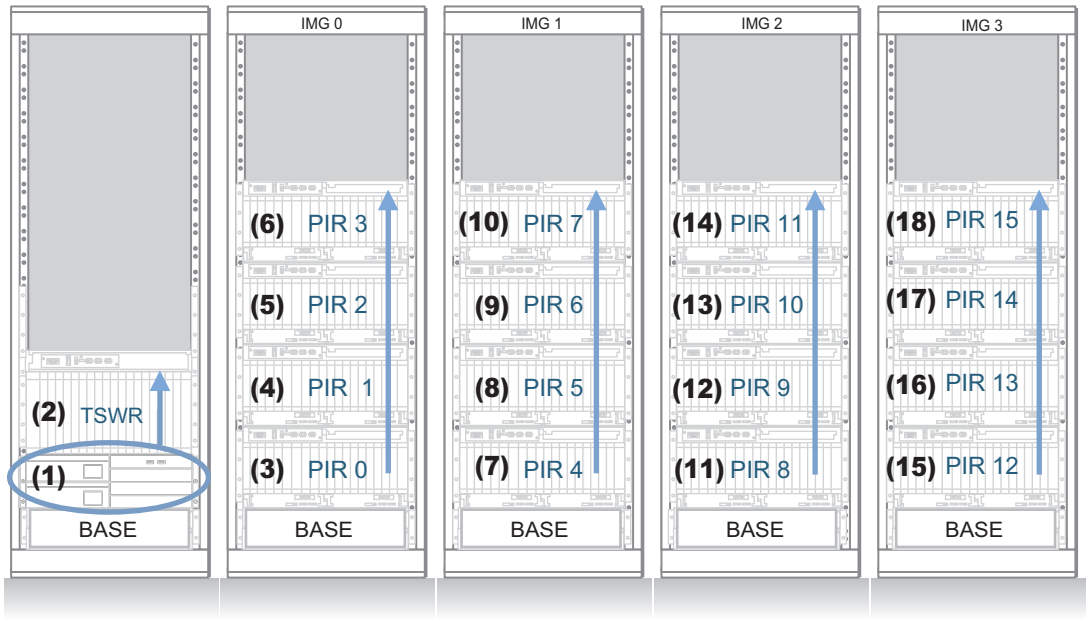
  Power module on Telephony Server → PWR card on TSWR → 7U-PIR power unit or PWR/DPWR card on 8U-PIR

Note: For the detailed procedure, see Section 6.6.2 Telephony Server Power ON/OFF Procedure, Section 6.6.4 TSWR Power ON/OFF Procedure, and Section 6.6.3 PIR Power ON/OFF Procedure.

4-IMG configuration (When Using TSW-BOX)



4-IMG configuration (When Using TSWR)



6.6.2 Telephony Server Power ON/OFF Procedure



<AC-Powered Model of Telephony Server>

Turn ON:

(1) Connect an AC power cord to the AC inlet on the Power module (on the rear panel of Telephony Server module).

(2) Turn on the power switch (to left) (**Note 1**). The PWR lamp (on the left of Power switch) lights green.

Turn OFF:

(1) On the **Telephony Server Maintenance Menu** screen, click the **Shutdown** button in the **SYSTEM CONTROL** area. The **Shutdown** dialog box appears in the lower right portion of the screen.

(2) Click the **Shutdown** button in the **Shutdown** dialog box.

(3) Make sure that the PWR lamp on the CPU card is off. **Note 2**

(4) On the Power module, turn off the Power switch (to right).

(5) Disconnect the AC power cord.

<DC-Powered Model of Telephony Server>

Turn ON:

(1) Supply power to the BASEU. When the power cable connection between the BASEU and the Telephony Server is completed, the BASEU starts supplying power to the Telephony Server.

(2) Turn on the Power switch (to left) on the Power module (on the rear panel of Telephony Server module) (**Note 1**). The PWR lamp (on the left of Power switch) lights green.

Turn OFF:

(1) On the Telephony Server Maintenance Menu screen, click the **Shutdown** button in the **SYSTEM CONTROL** area. The **Shutdown** dialog box appears in the lower right portion of the screen.

(2) Click the **Shutdown** button in the **Shutdown** dialog box.

(3) Make sure that the PWR lamp is off on the CPU card. **Note 2**

(4) Turn off the Power switch (to right) on the Power module.

(5) Stop the power supply to the BASEU.

Note 1: When you want to turn on Telephony Server right after turning off the powered system, wait for a while (about 10 seconds) before powering on the system again.

Note 2: Check the PWR lamp on the front panel of CPU card turns off. When the system is in a dual configuration, check the PWR lamp goes off on both #0 and #1 CPU cards.

6.6.3 PIR Power ON/OFF Procedure



<Turn ON/OFF Procedure: AC-Powered Model of 7U-PIR>

Turn ON:

(1) Connect an AC power cord to the AC inlet on the 7U-PIR. Now the 7U-PIR power (AC-DC) unit is powered on (The OPE lamp lights and fans start turning).

(2) Turn on the power switch (to right) on the front of the 7U-PIR power (AC-DC) unit.

Turn OFF:

(1) Turn off the power switch (to left) on the front of the 7U-PIR power (AC-DC) unit.

(2) Disconnect the AC power cord.

<Turn ON/OFF Procedure: AC-Powered Model of 8U-PIR>

Turn ON:

(1) Connect an AC power cord to the AC inlet on the AC-DC Power unit. Now the AC-DC Power unit is powered on (The OPE lamp lights and fans start turning).

(2) Turn on the power switch (to right) on the front right of the AC-DC Power unit. Now the AC-DC Power unit starts supplying power to the 8U-PIR.

(3) On the PWR/DPWR card on 8U-PIR, flip the -48 V SW switch up to the ON position.

Turn OFF:

(1) On the PWR/DPWR card on 8U-PIR, flip the -48 V SW switch down to the OFF position.

(2) Turn off the power switch (to left) on the front right of the AC-DC Power unit.

(3) Disconnect the AC power cord.

<Turn ON/OFF Procedure: DC-Powered Model of 7U-PIR>

Turn ON:

(1) Supply power to the BASEU. When the power cable connection between the BASEU and the 7U-PIR is completed, the BASEU starts supplying power to the 7U-PIR.

(2) On the 7U-PIR power (DC-DC) unit, turn on the power switch.

Turn OFF:

(1) Turn off the power switch (to left) on the front of the 7U-PIR power (DC-DC) unit.

(2) Stop the power supply to the BASEU.

<Turn ON/OFF Procedure: DC-Powered Model of 8U-PIR>

Turn ON:

(1) Supply power to the BASEU. When the power cable connection between the BASEU and the 8U-PIR is completed, the BASEU starts supplying power to the 8U-PIR.

(2) On the PWR/DPWR card on the 8U-PIR, flip the -48 V SW switch up to the ON position.

Turn OFF:

(1) On the PWR/DPWR card on the 8U-PIR, flip the -48 V SW switch down to the OFF position.

(2) Stop the power supply to the BASEU.

6.6.4 TSWR Power ON/OFF Procedure



Turn ON:

(1) Supply power to the BASEU. When the power cable connection between the BASEU and the TSWR is completed, the BASEU starts supplying power to the TSWR.

(2) On the PWR card for the TSWR, flip the -48 V SW switch up to the ON position.

Turn OFF:

(1) On the PWR card for the TSWR, flip the -48 V SW switch down to the OFF position.

(2) Stop the power supply to the BASEU.

CHAPTER 6
ROUTINE MAINTENANCE PROCEDURE

1. GENERAL

This chapter explains the routine maintenance procedure of SV9500 system.

Even if the system is operating normally, it is necessary to perform a routine check to prevent a fault occurrence before it is too late to discover any latent cause of a fault.

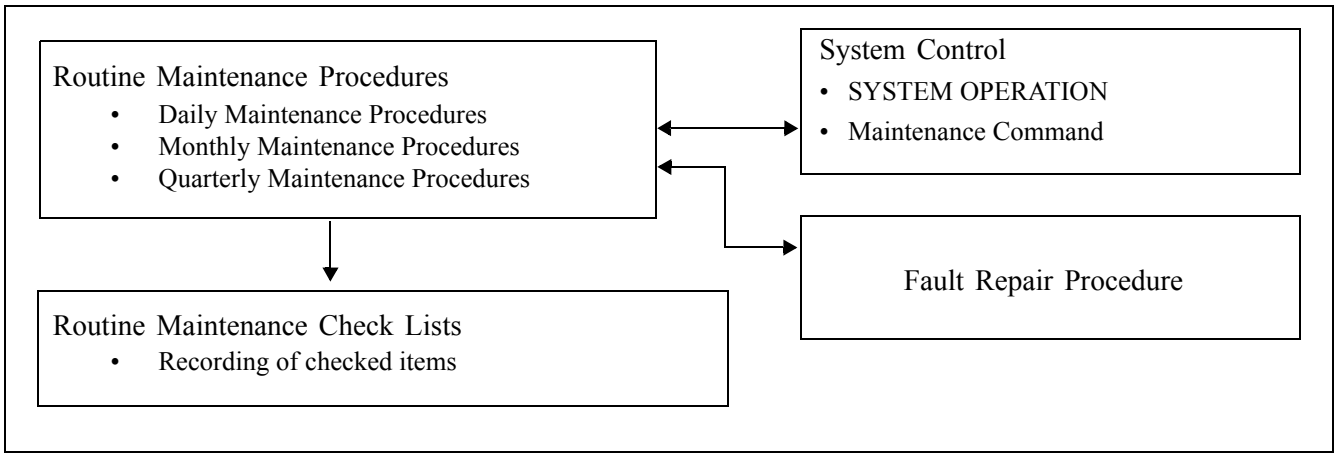
This chapter categorizes the routine maintenance procedures of the Telephony Server into the following three types, and explains the minimum required work steps and precautions pertaining to each of the following three procedures.

- Daily Maintenance Procedure
- Monthly Maintenance Procedure
- Quarterly Maintenance Procedure

2. FLOW OF PROCEDURES

The scheduling of routine maintenance (daily, monthly, quarterly) varies depending on each installation and organization. The following figure shows the flow of the routine maintenance procedures.

Flow of Procedures



2.1 Test Equipment and Tools

Test equipment and tools needed for routine maintenance test are shown in the list below.

List of equipment and tools for routine maintenance

NO.	TEST EQUIPMENT/ TOOLS	PURPOSE	REMARKS
1	Telephone Set	A telephone set is used when performing connection tests on trunks, etc.	
2	Blown Fuse	A blown fuse is used when performing alarm tests.	
3	VOM Digital Meter	VOM digital meter is used when checking output voltages of the rectifier and the battery.	
4	Phillips Screwdriver	A screwdriver is used when replacing the fan.	

2.2 Routine Maintenance Procedure

This section explains dairy, monthly and quarterly maintenance procedures. Prior to the routine maintenance, check if any error messages are output. If any faults are found, analyze and repair the faults before the maintenance.

(1) Daily Maintenance

(a) Checking of Ambient Conditions in the Switch Room

(b) Checking of PCPro

(c) Collection of System Messages

(d) Display of Locked-out Station

(e) Checking of Fans

(2) Monthly Maintenance

(a) Alarm Check

(b) Trunk/RGU Check

(3) Quarterly Maintenance

(a) System Check

(b) Battery Check

2.2.1 Checking of Ambient Conditions in the Switch Room

(1) Checking of temperature

Check whether the room temperature is within the range of 5°C (41°F) to 30°C (86°F).

Note: The temperature described above is the guaranteed operating range. The recommended operating temperature is within the range of 15°C (59°F) to 27°C (80°F).

(2) Checking of relative humidity

Check whether the relative humidity in the room is within the 20% to 90% range.

(3) Adjustment of the temperature and relative humidity

If the temperature or humidity in the room goes out of the range described above, adjust them with air conditioners.

2.2.2 Checking of PCPro

(1) Check PCPro.

(a) Turn on PCPro.

(b) Confirm that Login is available.

(2) Confirm that PCPro collects the information such as System Messages and Traffic Information.

2.2.3 Collection of System Messages

(1) Display System Messages on the screen of PCPro.

Refer to Chapter 3: System Messages.

(2) When any error messages are displayed

When any error messages are output, analyze and repair the faults by referring to Chapter 3: System Messages.

(3) Checking of the results of routine diagnosis

When a routine diagnosis is completed, either of the following messages is automatically output.

(a) System Message [7-O] indicates that the system is normal.

(b) System message [7-P] indicates that the system is abnormal. Perform a recovery procedure by referring to Chapter 3: System Messages.

(4) When the system operates normally or has been restored to normal state

Use the RALM command to clear the alarm indication and registered system messages. For more detailed information, refer to ALARM INDICATIONS in Chapter 2: System Operations.

2.2.4 Display of Locked-out Station

(1) Checking of locked-out stations with PCPro

(a) DLSL: Command to display the status of locked-out stations in the order of LENS

(b) DLSS: Command to display the status of locked-out stations in the order of station numbers

[Display of Locked-out stations]

For information about the DLSL and DLSS command, refer to Indication of Lockout Stations in Chapter 5: Operation Procedure for System with PIR.

2.2.5 Checking of Fans

(1) When fans operate

Confirm that all fans operate normally.

(2) When fans do not operate

(a) Refer to Fault of Fan in PIR/TSWR, in Chapter 5: Operation Procedure for System with PIR.

(b) Replace the fan with a spare by referring to: FAN REPLACEMENT PROCEDURE in Chapter 2: Operations of SV9500 Server, Replacement Procedure for Fans (7U-PIR/TSWR) and Replacement Procedure for Fans (8U-PIR/TSWR) in Chapter 5: Operation Procedure for System with PIR.

2.2.6 Alarm Check

(1) Replace the fuse in FANU (Fan Unit) with a test fuse (blown fuse).

(2) Check the alarm lamps on the front panel of Telephony Server.

(3) Replace the test fuse with the original one.

(4) Clear the alarm indication.

For information about the clearing procedure of alarm indication, refer to ALARM INDICATIONS in Chapter 2: Operations of SV9500 Server.

2.2.7 Trunk/RGU Check

(1) Confirm the alarm lamps on Line/Trunk circuit card.

(2) If any of the alarm lamps light up, check if there are any faults in the circuit card by analyzing System Messages.

(3) Confirm the connection status such as a speech and a ringing tone at each PIR.

2.2.8 System Check

(1) Confirm the OPE lamps of all circuit cards light green.

(2) Check if there are any faults in CPU/TSW by analyzing System Messages.

(3) Make a station-to-station call and confirm the connection status such as a speech and tones at each PIM.

  (a) If there are any faults in the call, define the phenomena of the faults such as no Dial Tone and no speech.

  (b) Confirm which system (System 0/System 1) of TSW has the fault.

  (c) Confirm which system (System 0/System 1) of CPU has the fault.

(4) Check the Office Data in the system.

2.2.9 Battery Check

(1) Measure the floating voltage with a digital voltmeter. Read the voltmeter on the front panel as a replacement for a digital voltmeter.

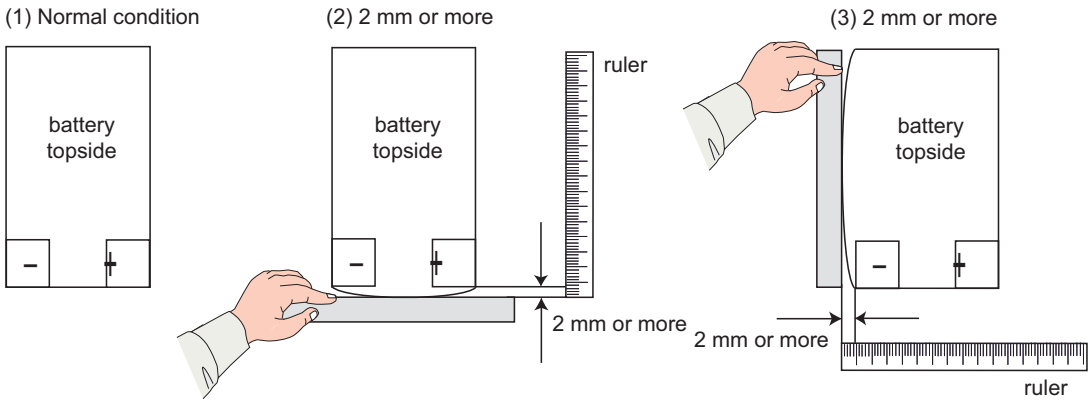
(2) Check the BATTERY REPLACEMENT TABLE on the battery label.
The battery's life expectancy is affected by its environment.

  (a) If the REPLACEMENT DATE is overdue, battery needs to be exchanged.
  Refer to the instruction manual attached to the battery.

  (b) If within the REPLACEMENT DATE, go to the next procedure.

(3) Check if the sides of the battery is inflated.
If batteries are mounted on multiple-stages, check the battery on the top-stage.

Note: The figure below shows the method of measuring the bulge.



(a) If the bulge is 2 mm or more, the battery needs to be exchanged since the life expectancy will end shortly.
Refer to the instruction manual attached to the battery.

(b) If the battery is not bulged, go to the next procedure.

(4) Check for any exothermic reaction or acrid odor.

(a) If found, the battery is at the end of its life and should be replaced immediately.
Refer to the instruction manual attached to the battery.

Note: Disconnect the system in exothermic reaction immediately. Other systems can be used till the end of their life expectancy.

(b) If not found, continue using the battery.
Check the battery condition again on the next routine maintenance.

Note: Consider the following cautions when exchanging the batteries:

- If any of the batteries is determined as a dead battery by the procedures above, exchange all the batteries in the equipment. This is because other batteries are close to an end of their life expectancy and to prevent the combined use of the old and new batteries. (The combined use of old and new batteries shortens the life expectancy of the new battery.)
- When a battery acid leak occurs in any of the systems, disconnect from the rest of the systems. Be aware not to touch the battery acid.
- After exchanging the batteries, fill out the installation date on the label attached to the battery and paste it on the battery or the system.

2.3 Routine Maintenance Check List

This section provides check lists (Maintenance Procedure Reports) used when performing routine maintenance Routine Maintenance Check Lists consist of the following:

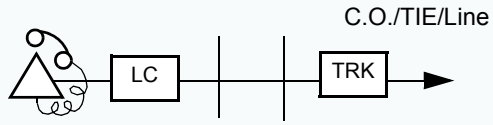
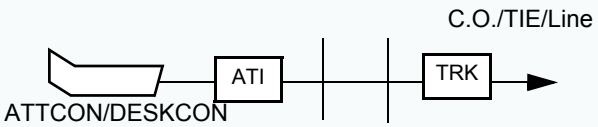
- Maintenance Procedure Report
- C.O. Trunk/TIE Trunk Check
- Register/Sender Trunk (RST)
- Digital Conference Function
- Speech Path for each PIR, and Ringing Generator Unit
- ATTCON/DESKCON Check

Maintenance Procedure Report

User Name	Signature of Supervisor	Work Time (From -)	
Name of User (Company)	Date	Classification	Routine/Non routine
	Control No.	Maintenance Company	
Name of Equipment	Room Temperature °C (°F) Room Humidity %	Name of Worker	

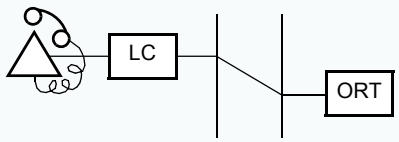
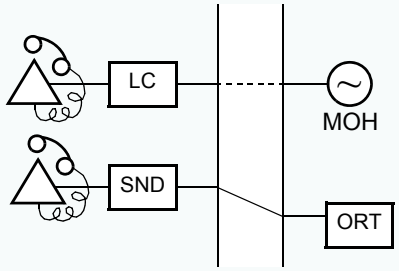
Item	Detail	Check	Item	Detail	Check
Check of Ambient Conditions in the Switch Room	Ambient temperature		Trunk/RGU Check	SND Trunk	
	Relative humidity			DCF Function	
PCPro Check				Tone	
Collection of System Messages	Related Fault				
	Result of Routine Diagnosis		ATTCON/DESKCON check	Ringing Signal	
Display of Locked- out Station	Locked-out Stations		System Check	-	
Fan Unit Check	-			CPU	
Alarm Check	TOPU			TSW	
Trunk/RGU Check	C.O.Trunk			PIR	
	TIE trunk				
	ORT				
	IRT				
Condition and Cause					
Procedure and Used Parts					

C.O. Trunk/TIE Trunk Check

TEST TYPE	TEST ITEM	CONNECTION DIAGRAM
C.O. Trunk/TIE Line	• Perform the speech test according to the figures shown in the next column.	• Station  • ATTCON/DESKCON 

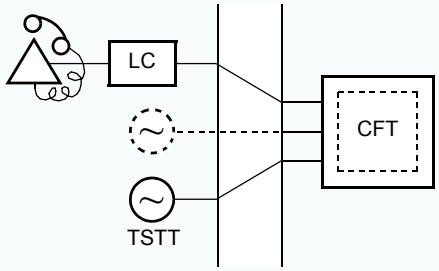
TRUNK ROUTE NO.	ACCESS NO.	ROUTE NO.	TRUNK NO.	CHECK	REMARKS

Register/Sender Trunk (RST)

TEST	TEST ITEM	CONNECTION DIAGRAM
ORT Function	• Perform the test by specifying an ORT with the Connection Test Station • Confirm the test results by referring to System Message “6-I”.	DP/PB 
SENDER Function	• Perform the test by specifying an ORT with the Connection Test Station. • Confirm the test results by referring to System Message“6-I”.	

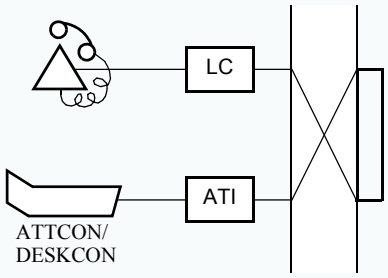
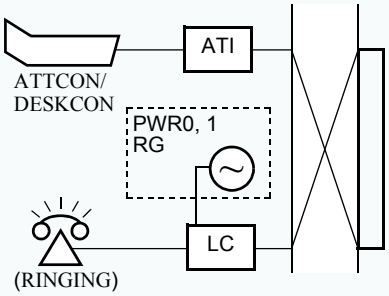
TRUNK NO.			FUNCTION			
			ORT		SENDER	REMARKS
			PB RECEIVING	DP RECEIVING		
RST No.	ORT0	SND0				
	1	1				
	2	2				
	3	3				
	4	4				
	5	5				
	6	6				
	7	7				
RST No.	0	0				
	1	1				
	2	2				
	3	3				
	4	4				
	5	5				
	6	6				
	7	7				

Digital Conference Function

TEST TYPE	TEST ITEM	CONNECTION DIAGRAM
Three-way call	• Perform the test by specifying a CFT with the Connection Test Station. • Confirm the test results with reference to System Message“6-I”.	

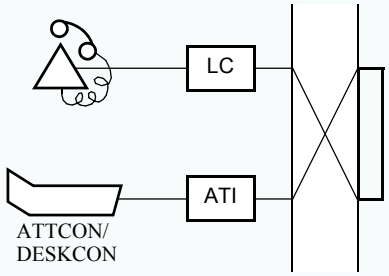
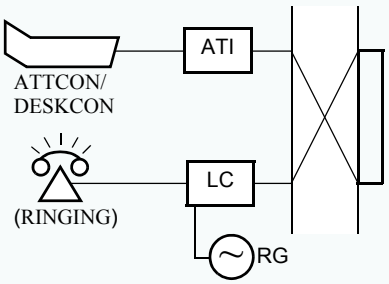
TRUNK NO.	FUNCTION		
	SPEECH	RELEASE	REMARKS
CFT0			
1			
2			
3			
4			
5			
6			
7			

Speech Path for each PIR, and Ringing Generator Unit

NO.	TEST TYPE	TEST ITME	CONNECTION DIAGRAM
1	Call to ATTCON/ DESKCON from a station located in each PIR.	• Confirm the speech path is normal.	
2	The called at ATTCON/DESKCON operator calls the station back.	• Confirm that the station rings.	

MOUNTING LOCATION		CHECK	REMARKS
MODULE NAME	UNIT NAME		
PIR0	0		
	1		
	2		
	3		
PIR1	0		
	1		
	2		
	3		
PIR2	0		
	1		
	2		
	3		
PIR3	0		
	1		
	2		
	3		

ATTCON/DESKCON Check

TEST TYPE	TEST ITEM	CONNECTION DIAGRAM
Call Termination Test	• Dial the operator access codes and confirm the calls can be terminated to all ATTCON/DESKCON. • Confirm all ATTCON/DESKCON answer the calls and the speeches are normal.	
Call Origination Test	• Call to a station with pressing the Loop key on ATTCON/DESK-CON and confirm the call is terminated to the station.	

ATTCON/ DESKCON NO.	FUNCTION					REMARKS
	CALL TERMINATION			CALL ORIGINATION		
	INDICATION	SPEECH	RELEASE	SPEECH	RELEASE	
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

CHAPTER 7
MAINTENANCE COMMANDS

1. GENERAL

This chapter explains various commands and list up commands that are used in the system administrative management procedure. The table below shows the list of commands.

Command List

COMMAND	COMMAND FULL NAME	REMARKS
AACT	Assignment of Activation Code	
ALLC	Assignment of Line Load Control	
ALMG	Assignment of Alarm Grade Data	
AONE	Assignment of One Activation Password Data	
APENL	Assignment of Periodical Exchange Device Notice for LDM	
ASECL	Assignment of Security Data (LDM)	
ASSW	Assignment of Soft SW Data	
ATDL	Assignment of Terminal for Download	
ATRF	Assignment of Traffic Measurement Order	
ATRFN	Assignment of Traffic Measurement Order for FCCS Network	
BOSD	Back Up One-Touch Speed Call Memory Data	
CADSD	Continuous Assignment of Station Data	
CARR	Continuous Assignment of Alternative Route Restriction	
CARRN	Continuous Assignment of Alternative Route Restriction for NDM	
CATK	Continuous Assignment of Trunk Data	
CBCN	Control of Broadcasting for NDM	
CBCV	Control of Broadcasting for VNDM	
CBKS	Control Backup Station	
CBND	Calculate Bandwidth Data	
CCSE	Change of Common Signaling Channel Equipment	
CDBU	Change of Dch Backup	
CFCS	Control of Flash Card System	
CLPB	Control of Local Phone Book	
CMNT	Control of SR-MGC/Geographic Redundancy Maintenance	
CMOD	Change of System Mode	
CMWL	Control Message Waiting Lamp	
CMWL_T	Control Message Waiting Lamps – Telephone Number	
COPM	Change of Remote Node Operation Mode	
COSSL	Control of SIP Server Data for LDM	

Command List

COMMAND	COMMAND FULL NAME	REMARKS
COSSN	Control of SIP Server Data for NDM	
CPBKN	Continuous Assignment of System Phone Book for NDM	
CPCP	Control of PC Port	
CPDM	Copy of Remote Node Data Memory	
CPRS	Controlled Alternate PRSCs	
CPSW	Control of Package/Card Switch Data	
CSCL	Continuous Change of Station Class	
CSPAL	Continuous Delete of Special Access Code for LDM	
CSPAN	Continuous Delete of Special Access Code for NDM	
CSTN	Continuous Change of Station Number	
CTSP	Control of Terminal Registration	
DCBD	Display of Call Block Entry Data	
DCEN	Display of Connection Trunk LENS Data for LDM	
DCON	Display of Connection Status	
DDMO	Display of Data Memory Occupancy	
DFLN	Display Up of Location Free Numbering	
DFTD	Display of System Message Details	
DHDF	Display of HD File Information	
DHDS	Display of HD File Issue	
DHDSN	Display of HD File Issue for Fusion Network	
DICBD	Display of Individual Call Block Data	
DIMG	Display Information of Media Gateway	
DISD	Display of IP Station Data	
DISI	Display of IP Statistics Information	
DISS	Display of Program Issue	
DISSN	Display of Program Issue for Fusion Network	
DLEN	Display of LENS Data	
DLSL	Display of Lockout Station - LENS	
DLSS	Display of Lockout Station - Number	
DLSS_T	Display of Lock Out Station – Number – Telephone Number	
DLTEL	Display of Telephone Number from LENS for LDM	

Command List

COMMAND	COMMAND FULL NAME	REMARKS
DMOS	Display of Module Operation Status	
DNTEL	Display of Telephone Number from LENS for NDM	
DPHL	Display of PH Status	
DPKG	Display Setting on Port Package	
DPSW	Display Package Switch Status	
DPTR	Display of Capacity / License	
DRAI	Display of Remote Equipment Data by Autofill Input	
DRPM	Display of Remote Node Information	
DSOS	Display of System Operation Status	
DSTN	Display of Station Data	
DTELN	Display of Telephone Number Data for NDM	
DTF101	Display of Terminal Traffic Data	
DTF102	Display of Route Traffic Data	
DTF103	Display of Station Peg Count Data	
DTF104	Display of Attendant Peg Count Data	
DTF105	Display of Route Peg Count Data	
DTF201	Display of Service Peg Count Data	
DTF301	Display of UCD Route Peg Count Data	
DTF302	Display of UCD Group Peg Count Data	
DTF303	Display of UCD Station Peg Count Data	
DTF501	Display of Attendant Answering Peg Count Data	
DTF601	Display of Connection Route Peg Count Data	
DTF602	Display of Connection Route Traffic Data	
DTF701	Display of IP Service Peg Count Data	
DTF702	Display of IP Service Traffic Data	
DTF801	Display of SIP Terminal Peg Count Data	
DTF101N	Display of Terminal Traffic Data for FCCS Network	
DTF102N	Display of Route Traffic Data for FCCS Network	
DTF103N	Display of Station Peg Count Data for FCCS Network	
DTF104N	Display of Attendant Peg Count Data for FCCS Network	
DTF105N	Display of Route Peg Count Data for FCCS Network	
DTF201N	Display of Service Peg Count Data for FCCS Network	

Command List

COMMAND	COMMAND FULL NAME	REMARKS
DTF301N	Display of UCD Route Peg Count Data for FCCS Network	
DTF302N	Display of UCD Group Peg Count Data for FCCS Network	
DTF303N	Display of UCD Station Peg Count Data for FCCS Network	
DTF501N	Display of Attendant Answering Peg Count Data for FCCS Network	
DTF601N	Display of Connection Route Peg Count Data for FCCS Network	
DTF602N	Display of Connection Route Traffic Data for FCCS Network	
EVLOG	General Purpose Event Log Output Function	
IPAN	Display of IP machine status display function	
IPDM	Management Function of the IP Telephone Fault	
MBCT	Make-Busy of Connection Trunk for LDM	
MBCTC	Make-Busy of Connection Trunk-Continuous for LDM	
MBLE	Make-Busy of LENS	
MBPM	Make-Busy of Port Microprocessor	
MBRT	Make-Busy of Route	
MBRT_LR	Make-Busy of Route - Logical Route Number	
MBSM	Make-Busy of System Message Printout	
MBST	Make-Busy of Station	
MBST_T	Make-Busy of Station – Telephone Number	
MBTC	Make-Busy of Trunk-Continuous	
MBTC_LR	Make-Busy of Trunk-Continuous – Logical Route Number	
MBTK	Make-Busy of Trunk	
MBTK_LR	Make - Busy of Trunk – Logical Route Number	
MEM_HDD	Data Control Between Memory and HDD	
MEM_HDD_N	Data Control Between Memory and HDD for Fusion Network	
MFCH	Make Busy of FCCH	
PMBU	Port Microprocessor Back Up	
RALM	Release Alarm	
RALMN	Release Alarm for NDM	
RDPD	Remove of IP Station Password	
RINZ	Route Initialize	
RLMG	Release of Media Gateway	

Command List

COMMAND	COMMAND FULL NAME	REMARKS
RLST	Release Station/Trunk	
RLST_T	Release of Station/Trunk – Telephone Number	
RPID	Remove of Pad Lock ID Data	
SCVT	Setting / Change of Virtual Trunk Operation Data	
SINZ	System Initialize	
SINZN	System Initialize for the FCCS Network	
SPTS	Scanning of Port Status	
SRTS	Scanning of Route Status	
SRTS_LR	Scanning of Route Status - Logical Route Number	
TOGC	Test of Originating Connection	
TLBK	Test of Loop Back Connection for IP Terminal	
XPAT	On–line Patch Install	

AACT: Assignment of Activation Code

1. Functional Outline

- This command registers an Activation Code. Registering the activation code clears the alarm, which requires the user to input the activation code.
- Displays the license files (Hardware/Software Key Code List).
- Updates the license files.
- This command is possible to start even if the connection with PCPro is restricted. The steps are follows:

  STEP 1 Start PCPro.

  STEP 2 Click the [System] menu, and select the [Activate] to open the Activate screen.

  STEP 3 Select the [AACT] radio button in Command area, and click the [Execute] button to execute the command.

  Note: Before executing this command, specify the following with ASYDL command.
  SYS1, Index 513 = 01.

  Note: If the System is in dual configuration, both CPUs should be started up before executing this command.

  Note: If the activation code is later found to be incorrect, you need to run the AACT command again and enter the correct code.

  Note: When using SV9500 (Prepackaged Server Model), register the activation code after you set the IP address of LAN1(ACT) (only for IPv4 addresses). If you change the IP address of LAN1(ACT) after the Certify Status is “Certify OK”, the status will change to “Certify NG (HKC)”. In that case, see the appendix of SV9500 Prepackaged Server Model Installation and Operation Manual.

2. Parameters

Output Data

Certify Status

This parameter displays the Certify Status.

Certify OK
Certify NG(HKC)
Certify NG(A.C)
Certify NG(etc)
Expired (Not used)
License Disagreement

Trial Period (read only)

This parameter displays the number of elapsed days when Certify is NG.

Note: This parameter is available in the case of "Certify NG" is displayed as the Certify Status.

License File Expiration Date (Not used)

Operation

Select whether to confirm the license data and create a file or to register the activation code.

Confirm License Data and Create File
Register Activation Code
Load the license files **Note 1**

Note 1: Executable only when PCPro is restricted from connecting.

<Operation: Confirm License Data and Create File>

[Hardware Key Code List]

This list displays the Hardware Key Code.

System: System 0 / System 1 **Note 2 Note 3**
Hardware Key Code

Note 2: Each Hardware Key Code for System 0 and System 1 will be shown when the system is in dual configuration. A single Hardware Key Code will be output without the System column shown in the window for a single configuration system.

Note 3: This parameter is not displayed in case of SV9500 (Prepackaged Server Model).

[Software Key Code List]

Software Key Code
Software Name
The number of licenses

Input Data

<Operation: Register Activation Code>

Activation Code:	Specify the Activation Code (16 digit). You can enter the Activation Code in the format of XXXX-XXXX-XXXX-XXXX or XXXXXXXXXXXXXXXX. (X indicates a number)

Buttons

<Operation: Confirm License Data and Create File> **Note 4**

Note 4: When using SV9500 (Prepackaged Server Model), register the activation code after you set the IP address of LAN1(ACT) (only for IPv4 addresses). If you change the IP address of LAN1(ACT) after the Certify Status is “Certify OK”, the status will change to “Certify NG (HKC)”. In that case, see the appendix of SV9500 Prepackaged Server Model Installation and Operation Manual.

Get: Readout the Hardware Key Codes of all of active CPUs and the Software Key Code of all the Software installed to the system.

File Save: Output the displayed Hardware Key Code and the Software Key Code to the Key Code file.

<Operation: Register Activation Code>

Get: Readout the registered Activation Code.

Set: Register the Activation Code. If fails to be Certify OK, confirm the entered Code and retry to input.

<Operation: Load the License File> **Note 5 Note 6**

Execute: Load the license files in a CF card/HDD.

Note 5: This button is used for loading the license files to memory while PCPro is restricted from connecting. If the connection with PCPro is available, load the license files (SVI files) by the CFCS command. Depending on the aim to operate the license files, use this command according to the table below.

Aim of operation	Operation
Add the client licenses	With the AACT command, the license files (SVI file) are loaded only into active side. When the system is in dual-configuration Appliance Model, load the license files (SVI files) with the CFCS command to the standby side after the state where PCPro is restricted from connecting is cleared. **Note:** When the system is in dual-configuration Appliance Model, the SVI file needs to be loaded to the CF in both system 0 and system 1.
Add the client optional licenses where they already exist (license number is 1 or bigger).	
Add the client optional licenses for the first time (license number is 0).	Execute either of the following. • Program load initialize by the SINZ command • Non-load initialize by the SINZ command after loading the license files by the AACT command.
Add the optional licenses	

Note 6: This will load an active CPU only.

ALLC: Assignment of Line Load Control

1. Functional Outline

This command specifies the start and stop of Line Load Control.

2. Parameters

Input Data

ALL/ONE: Operation Mode Selection (1,2)

A=All LPs

A is not valid for 1-IMG-system.

O=Only One LP

LP: Local Partition (LP) Number

Note: This parameter appears when O (only one LP) is set in ALL/ONE input data.

The data is designated as 00 for a 1-IMG-system.

STATUS: Line Load Control Status (0-3)

0=Stop Line Load Control

1=Start Line Load Control

2=Automatic Line Load Control is in effect (read only)

3=Status of all LPs do not match (read only)

ALMG: Assignment of Alarm Grade Data

1. Functional Outline

This command provides flexibility in changing the system message output grade and alarm lamp grade. The SV9500 user can give a proper output grade and alarm lamp grade to each system message according to their requirements.

- Output grade - - - - - - - Specifies whether the fault information is output on system alarm lamp and system message.
- Alarm lamp grade - - - Specifies how to indicate fault information.

When no data is assigned, the default alarm grades are automatically applied.

2. Precautions

(a) This command cannot change the alarm grade for System Message [6-A].

(b) Use LLMG (Listup of Alarm Grade Data) command TYPE=3 to output the default value of alarm lamp grade for system message.

(c) "Delete" in this command means to turn back the changed output grade and alarm lamp grade data to default value.

3. Parameters

Input data

FK: Fault Message Kind (0-7, 10-17, 20-27, 30-37)

FI: Fault Message Index (A-Z)

LMP: Alarm Lamp Grade (0-3)
Specifies the lamp kind for system alarm lamp and system message output.

0=NON lamp ON

1=SUP lamp ON

2=MN lamp ON

3=MJ lamp ON

GRD: Output Grade (0-3)
Specifies the output grade for system alarm lamp and system message.

Note: When lower grade of GRD is assigned than SYSM GRD, system message is not output.

SYSM GRD: System Alarm Lamp Output Grade
Specifies the output grade of system alarm lamp and system message on a node basis, depending on the setting on ASYD SYS1 Index 91 bit 2 and bit 3.

0=Output all fault

1=Output the fault higher than Grade 1 (SUP/MN/MJ)

2=Output the fault higher than Grade 2 (MN/MJ)

3=Output the fault higher than Grade 3 (MJ)

LLMG (Listup of Alarm Grade Data) command

TYPE: Listup Type (1-3)

1=All data

2=Change data

3=Default data

AONE: Assignment of One Activation Password Data

1. Function Outline

This command is used to release the PCPro connection restriction that is implemented when an Activation Code has not been registered yet or when the Certify Status in the AACT command shows “Certify NG”. This cancellation is allowed only once.

This command is possible to start even if the connection with PCPro is restricted. The steps are follows:

STEP 1 Start PCPro.

STEP 2 Click the [System] menu, and select the [Activate] to open the Activate screen.

STEP 3 Select the [AONE] radio button in Command area, and click the [Execute] button to execute the command.

2. Precautions

(a) Use this command when PCPro connection restriction is implemented.

(b) The cancellation of PCPro connection restriction is allowed only once and valid for 168 hours (seven days). Be sure to register an Activation code within this period. Otherwise, PCPro connection restriction is in effect again.

(c) Even if this command was used in the past, it becomes available again when the Certify Status in the AACT command shows “Certify OK” by registering an Activation Code.

3. Parameters

Input Data

<One Time Activation Password (fixed length of 20 digits, single-byte characters only) >

Assign the 20-digits Software Keycode (without hyphens).

APENL:Assignment of Periodical Exchange Device Notice for LDM

1. Function Outline

This command is used when enrolling and changing Product ID, Product Name and Notice Time of the device which should be exchanged periodically.

2. Precautions

(a) The list of Notice Information is one per one System. The maximum number of Notice Time (Month/Year) data that can be assigned in one System is 255.

(b) Product Name of Notice Information can be overlapped.

(c) Product ID of Notice Information cannot be overlapped.

(d) Notice Time (Month/Year) must not be same time of Day Light Savings (Start/End).

Note: When Notice Time is enrolled as a same time of Day Light Savings (Start), the time that the message is output by DFTD command becomes the time which is changed by Day Light Savings (Start).

Note: When Notice Time is enrolled as a same time of Day Light Savings (End), the notification is output twice in this month.

3. Parameters

Input Data

When assigning the new information of Periodical Exchange Device Notice, write the following parameters and click [SET].

Product ID [1-255]

Enter the desired number.

Product Name [Maximum 32 characters]

Enter the product name.

Notice Time: Month/Year [01/2000-12/9998]

Enter the month/year which notifies the information of the periodical parts that should be exchanged.

Display Data

When [GET] is clicked, the list of Periodical Exchange Device Notice information which is enrolled is displayed. In this data, when there is a part whose Notice Year/Month passes, the information is displayed by red character.

Product ID [1-255]

Product Name [Maximum 32 characters]

Notice Time: Month/Year [01/2000-12/9998]

Notice Information: Notice information of product that need exchange

"Need Exchange" is output when there is a part whose Notice Time passes.

Note: Note the following conditions:

- When editing the data which is already enrolled, click [GET], write the parameter, and click [List Change]. Then, click [SET].
- Enrolled Periodical Parts Exchange Notice information can be selected by writing Product ID and push [Enter] or click the list directly.
- When deleting enrolled Periodical Parts Exchange Notice information, click [Selected Line Clear] and then click [SET].
- When deleting all Periodical Parts Exchange Notice information, click [DEL].

ASECL:Assignment of Security Data (LDM)

1. Function Outline

This command assigns one-time password and its available period. It also lists terminals that have completed the SIP authentication.

Note: For the UMGi system, this command only can be executed only when logging in to CCN (when logging in to RN, information can be displayed but no overwritten).

2. Parameters

Input data

<Certified Terminal Assignment>

One-Time Password: Enter a one-time password. Its password should be entered with numerals (including an asterisk [*] and a number sign [#]) from 4 to 10.

Available period is made indefinite:Selecting this box makes one-time password with no-time-limit.

Available Period: Specify the available period (Day: Hour: Minute). The time can be specified from one second to seven days.

Certified Terminal Count: Select this item and click the Get button to retrieve the total number of terminals that have completed the Terminal Authentication.

Certified Terminal List: Select this item and click the Get button to display list of the terminals that have completed the SIP authentication.

MAC Address: Enter a MAC Address to be deleted and click the Execute button.

Buttons

Get:	Read out the information.
Set:	Set the input data.
Del.:	Delete the input data.
Execute:	Make the input data valid.
Exit:	Exit this command.

Output Data

<Maintenance Function>
Select an item displayed in a list box, and click the Execute button to perform it. The Maintenance Function tab displays only when Encryption License is valid.

Cipher key update

ASSW: Assignment of Soft SW Data

1. Function Outline

This command changes and displays the settings of software switches on the CPU board.

Note: The software switch data assigned by this command can be backed up by the MEM_HDD command. Using the MEM_HDD command, the backed up data can be verified.

Note: If a software switch data is backed up on CF Card when the system is initialized, upload on the memory when loading the office data in order to assign the software switch.

2. Parameters

Node Specification Note 1

CCN

LP

Note 1: This parameter is available in the case of logged in to CCN of UMGi/RNIP.

LP No. Note 2

Note 2: This parameter is available when LP is selected in Node Specification.

System Select:

- System 0
- System 1

SYSTEM SELECT 0: Note 3

SW: 1-4

Note 3: This parameter is for read only.

SYSTEM SELECT 1:

SW: 1-4

- 1: LAN Connector 3
- 2: LAN Connector 2
- 3: LAN Connector 1
- 4: LAN Connector 4

  ON: Not detect fault
  OFF: Detect fault

SW: 5-8

- 5-8: Not used (Fixed to OFF)

SYSTEM SELECT 2:

For a normal system and a UMGi/RNIP system using CCN (Appliance Model):

SW: 1-8

- 1-8: Not used (Fixed to OFF)

For a UMGi/RNIP system using CCN (Prepackaged Server Model):

SW: 1-4

- 1-4: Not used (Fixed to OFF)

SW: 5-8

- 5-8:
  For FP95-112 V2 or later: Not used (Fixed to OFF)

  For FP95-111 V1, see the following (For RNIP system):

  SW5/ SW6/ SW7/ SW8=PBI No.
  OFF/ OFF/ OFF/ OFF=0x30 (0x30-0x3F)
  OFF/ OFF/ ON/ OFF=0x40 (0x40-0x4F)
  OFF/ ON/ OFF/ OFF=0x50 (0x50-0x5F)
  OFF/ ON/ ON/ OFF=0x60 (0x60-0x6F)

SYSTEM SELECT 3:

For a normal system:

- 1-8: Not used (Fixed to OFF)

For a UMGi/RNIP system:

- SW: 1-6 (Not used)
  1-6: Not used (Fixed to OFF)
- SW: 7-8
  7: ON/OFF
  ON: 2-frame configuration
  OFF: 4-frame configuration
  8: ON/OFF
  ON: RN
  OFF: CCN

ATDL: Assignment of Terminal for Download

1. General

This command assigns the data for downloading new firmware or configuration files to IP terminals.

For convenience, firmware and configuration files for IP terminals are hereinafter called, collectively, the "download file".

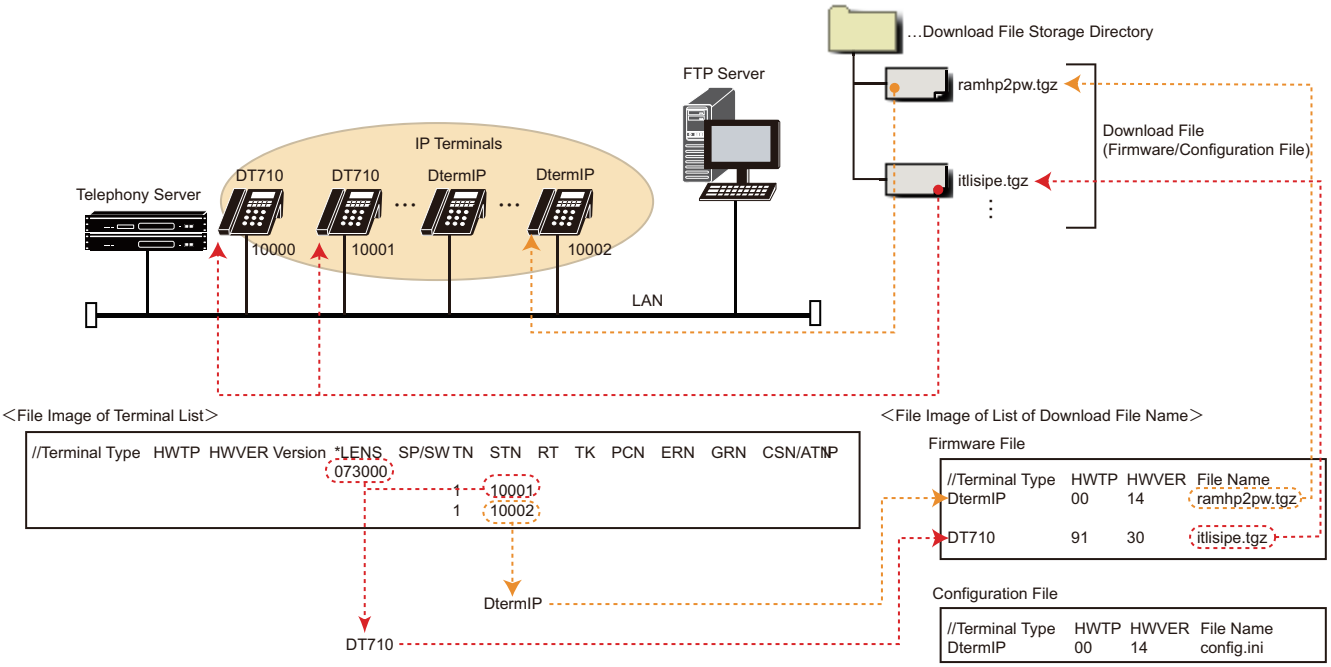
Note: Be sure to upload the required new download files to the FTP server using ADTM command before executing the download procedure by this command.

2. Precautions

(1) The following files can be imported or exported by this command: **Note 1**

(a) File of List of Download File Name
Specify the file name of the download file for each type of terminals. When downloading a configuration file, name the download file the same as the configuration file.

(b) File of Terminal List
Input information on all terminals that execute downloading.



Note 1: When editing these files, note the following:
- Use UTF-16 encoding for the text file used by this command.
- Add "//" at the top of the line to make it a comment line.
- For editing the file with Excel, see the section of Editing Import/Export File with Excel.

(2) The following are the restrictions and conditions for the files used by this command:

(a) File of List of Download File Name
- Do not change the value of Hardware Type (HWTP) and Hardware Version (HWVER). To return to the default values, click "Reset to the Default Setting."
- Up to 255 items of download file information can be input to this file.
- The number of fields separated by tab must be four per line.
- Terminal Type and File Name cannot be left blank.

(b) File of Terminal List
- Up to 4000 items of download file information can be input to this file.
- Input either of the following information. The other information is not used if they are input in the file: **Note 2**
  - LENS
  - TN/STN

  Note 2: When both LENS and TN/STN are input to the file, LENS has first priority to be used.
- The same value cannot be input to LENS and to TN/STN.

(3) When a file of List of Download File Name is imported to [List of Download File Name] on the screen of this command, note the following:

(a) The imported information returns to the default value if the running command is finished. If you want to change the value from the default setting, import a file of List of Download File Name whenever this command is started up.

(b) The imported information is also reflected to the drop-down list of "Terminal Type" and "HWTP-HWVER" in **Terminal Specifying Type**.

(c) If a file is imported while "Execute Downloading" is selected for **Process Type**, the terminal types and the file names listed in [Terminal List] are updated according to the imported file.

(d) If a file is imported while "File Creation for Specifying Terminals" is selected for **Process Type**, the information listed in [Terminal List] is not updated.

(4) The information on terminals that execute downloading can be added to [Terminal List] by either of the following manner.

(a) Adding from Office Data to [Terminal List]
The information on each IP terminal, such as a station number, LENS and Terminal Type is read out and is added to [Terminal List].

(b) Adding from File to [Terminal List] **Note 3**
The information on terminals is added to [Terminal List] by importing the file that is created beforehand to specify terminals executing downloading.

The file for specifying terminals is output by either of the following ways:
- Exporting [Terminal List] to a file
- Outputting a template file for specifying terminals

Note 3: When adding the information by using a file, note the following:
- Only one file can be imported to [Terminal List]. If the information on multiple terminals are to be input, all information must be listed in one file.
- The exported file (*.text) can be edited directly with a text editor or Excel. When editing with Excel, see the section of Editing Import/Export File with Excel.

(5) The conditions and restrictions regarding [Terminal List] are as follows:

(a) Up to 4000 items of information can be input to [Terminal List].

(b) Each column can be replaced by a drag-and-drop operation. The order of the column returns to the default whenever this command is started up.

(c) The listed information can be sorted by clicking the top of each column. For example, when clicking "LENS", the information will be sorted in the order of Line Equipment Numbers. **Note 4**

Note 4: The displayed information cannot be sorted when data read or downloading is in process.

(d) When the information in [Terminal List] is updated, the Auto Scroll of the updated rows is executed.

(e) The Auto Scroll of the updated rows can be disabled by clearing the check box for Auto Scroll on [Terminal List]. Clear the check box if you want to view the information in [Terminal List] during data read or downloading.

(f) The steps of the data assignment for "Adding from Office Data to [Terminal List]" and "Adding from File to [Terminal List]" are independent to each other. When a change is made to **Terminal Specifying Method**, the information listed in [Terminal List] returns to the state as this command is started up.

(6) When downloading is executed after specifying terminals by a file, Input Value Error may occur if the file has problems. In this case, Error Record or Duplicate Record is displayed on the column of Error Detail. Modify the corresponding row in the file and then import the file again.

(7) If ABORT button is pressed while there are some terminals executing downloading, the command processing cannot be aborted until the download by these terminals is completed.

(8) When pressing Export button after the completion of the download, a file for specifying terminals that includes information of Status/Result and Error Detail is created.

(9) Only the IP terminals that have established registration to the MGC can download the new download file.

(10) When information is added to [Terminal List] by selecting "Execute Downloading" for **Process Type**, the terminals that cannot execute downloading appear in gray in [Terminal List]. The check box displayed on the head of the rows cannot be checked in this situation.

(11) As for File Name in [List of Download File name], only one download file can be specified per Terminal Type, regardless of the type of IP terminals. If multiple download files are to be downloaded, a list file (for example: *list.txt, *.list) that specifying the necessary download files must be created. In this case, specify the file name of the list file after storing this list file in the FTP server.

(12) UG50 is not supported.

(13) In the UMGi system, this command only can be used when logging in to CCN.

3. Parameters

The following are the parameters in this command.

☐ **Display the List of Download File Name:**
Click this check box when displaying [List of Download File Name].

Terminal Type: Type of IP terminal (maximum of 64 characters)
The types of IP terminals corresponding to each download file are displayed.

HWTP: Hardware Type (00-FF)
The hardware types corresponding to each type of IP terminals are displayed.

HWVER: Hardware Version (00-FF)
The versions of hardware corresponding to each type of IP terminals are displayed.

File Name: File Name (maximum of 16 characters)
The file names of download files to be downloaded for each terminal are displayed.

Note: A file of List of Download File Name can be imported by pressing Import button. By pressing Export button, the file of List of Download File Name can be output to any folder. When pressing "Reset to the Default Setting" button after importing the file of List of Download File Name, the information listed in [List of Download File Name] returns to be the default values. Also, the imported information returns to the default value if the command processing is aborted. If you want to change the default values, import the file whenever this command is started up.
As for the default values, see the table in Download File Name.

Process Type:
Select one of the following:

- Execute Downloading
  Downloading is executed to the specified terminals.

- File Creation for Specifying Terminals
  A file for specifying terminals is created.

Terminal Specifying Method:

This parameter is displayed only when "Execute Downloading" is selected for **Process Type**.
Select one of the following for specifying terminals that execute downloading.

- Office Data
  The information on terminals that execute downloading is read out from the office data.

- File
  The file that is created beforehand for specifying terminals is imported.

File Creating Method:

This parameter is displayed only when "File Creation for Specifying Terminals" is selected for **Process Type**. Select one of the following to create the file for specifying terminals before executing downloading.

- Office Data
  The information on terminals that execute downloading is read out from the office data and exported to a file.

- Edit directly
  A template file for specifying terminals is output.

Terminal Specifying Type:

This parameter is displayed when "Office Data" is selected for **Terminal Specifying Method** or **File Creating Method**. Select one of the following to specify the type of search.

- Station Number
  Select this when specifying a station number of the IP terminal.

  TN: Tenant Number
  STN: Station Number

- Line Equipment Numbers
  Select this when specifying Line Equipment Numbers of the IP terminal.

  LENS: Line Equipment Numbers (six digits)

- Terminal Type
  Select this when specifying a type of the IP terminal.

  Terminal Type:
  Select a type of the IP terminal.

  HWTP - HWVER: Hardware Type - Hardware Version
  Select the hardware type and the hardware version corresponding to selected "Terminal Type".

Specify Conditions for Filtering:

This parameter is displayed only when "Terminal Type" is selected for **Terminal Specifying Type**.

- All

- Station Number
  Select this from the drop-down listbox to search for terminals by specific Tenant Number (TN) and station number (STN) range.

  Firmware Version: **Note 5**
  The selected Terminal Type can be narrowed down by choosing Firmware Version.

  Version:
  Enter the Firmware Version (00.00 - 99.99).
  Conditions:
  Select the conditions for filtering (!=, <, <=, ==, >=, >).

  TN: Tenant Number

  Start: First tenant number to start searching.
  End: Last tenant number to stop searching.

  STN: Tenant Number

  Start: First station number to start searching.
  End: Last station number to stop searching.

- Line Equipment Numbers
  Select this from the drop-down listbox to search for terminals by specific Line Equipment Numbers (LENS) range.

  Firmware Version: **Note 5**
  The selected Terminal Type can be narrowed down by choosing Firmware Version.

  Version:
  Enter the Firmware Version (00.00 - 99.99).
  Conditions:
  Select the conditions for filtering (!=, <, <=, ==, >=, >).

  LENS: Line Equipment Numbers

  Start: First LENS to start searching (six digits).
  End: Last LENS to stop searching (six digits).

- IP Address
  Select this from the drop-down listbox to search for terminals by specific IP address range.

  Firmware Version: **Note 5**
  The selected Terminal Types can be narrowed down by choosing Firmware Version.

  Version:
  Enter the Firmware Version (00.00 - 99.99).
  Conditions:
  Select the conditions for filtering (!=, <, <=, ==, >=, >).

IP Address:

Start: (0.0.0.1 - 255.255.255.254)
End: (0.0.0.1 - 255.255.255.254)

Note 5: This parameter is not displayed when HWTP (Hardware Type) is 91 or HWVER (Hardware Version) is blank.

File Path:

The file path of the file for specifying terminals is displayed. The file path is displayed only when "File" is selected for **Terminal Specifying Method**.

Terminal List: **Note 6**

[Terminal List] is displayed only when "Execute Downloading" is selected for **Process Type**. Downloading is executed for the checked items of information. The file for specifying terminal types can be output to any folder by pressing Export button.

Note 6: As for this parameter, note the following conditions.

- When "File" is selected for **Terminal Specifying Method**, and both LENS and TN/STN are included in the specified file, LENS has first priority to be used.
- When information is added to [Terminal List] by selecting "Execute downloading" for **Process Type**, the terminals that cannot execute downloading appear in gray in [Terminal List]. The check box displayed on the head of the rows cannot be checked in this situation.
- Up to 4000 items of information can be added to [Terminal List].

Terminal Type
HWTP: Hardware Type
HWVER: Hardware Version
Version
LENS: Line Equipment Numbers
SW/SP: SW/SP Number
TN: Tenant Number
STN: Station Number
RT: Route Number
TK: Trunk Number
PCN: PHS Community Number
ERN: Calling Area Number
GRN: Group Number
CSN/ZTN: CS/ZTN Number
IP Address
File Name
Status/Result
Error Detail

Settings for Download:

FTP Server Type:
Select one of the following to specify the FTP server for storing download files.

- ACT CPU (to specify the ACT side of the Telephony Server as FTP server)
- STBY CPU (to specify the STBY side of the Telephony Server as FTP server, or in dual configuration)
- External Server (to specify the FTP server connected to LAN)

IP Address: **Note 7**
This parameter is displayed only when "External Server" is selected for **FTP Server Type**. Assign the IP Address of FTP server connected to LAN (0.0.0.1 - 255.255.255.254).

Login Name/Password [Maximum 15 digits]:
Enter the Login Name and Password required to login to the FTP server.

☐ Specify File Storage Directory:
Click this check box to specify the directory where the download files are stored. When no directory is specified, the home directory (default directory) that the users are allowed to access after logging in to the FTP server is automatically used.
Directory Name:
Enter a directory name within 63 characters. NEC recommends using the default directory that the users have access to when they are logged in to the FTP server.

Note 7: This parameter is displayed only when "External Server" is specified for **FTP Server Type**.

Download Method:
Select either of the following to specify the download method. Automatically set to Sequential when "ACT CPU" or "STBY CPU" is selected in **FTP Server Type**.

- Sequential
  When download to one terminal has been completed, download to the next sequentially numbered terminal starts immediately.

- Parallel
  Used when "External Server" is selected in **FTP Server Type**. The maximum number of terminals to which download is concurrently executed depends on the number singed to **Concurrent Number**.

  Concurrent Number (2-8)

☐ Specify Download Time:
When specifying the download start time, click this check box and input the starting date and time.

4. Download File Name

The following table shows which IP terminals/equipment are available for this command and the necessary information (Terminal Type, Hardware Type (HWTP), Hardware Version (HWVER) and default File Name) to execute downloading to each type of IP terminals/equipment.

×: Available N: Not Available

Terms in Manual	Product Name	EMEA Product Name	Terminal Type on PCPro	Avail-abil-ity	HWTP	HWVER	File Name (Default)
Analog 2MC	SN8029 MC2A-A	-	-	N	-	-	-
	SN8029 MC2A-B	-	Analog MC Note 8	×	21	-	2amcmwlist.txt
8LC Card	SCA-8LCA SCA-8LCA-EMEA	-	8MC SIP Note 8	×	B1	-	8amcmwlist.txt
MG(PRI) (1.5M) Box [MG-24PRIA]	MG-24PRIA	-	MG-PRI1.5 SIP	×	A8	-	mgprimwlist.txt
MG(PRI) (2M) Box [MG-30PRIA]	MG-30PRIA	-	MG-PRI2.0 SIP	×	A9	-	
MG(PRI) (1.5M) Card [SCA-24PRIA]	SCA-24PRIA	SCA-PRI-SHA24	MG-PRI1.5 SIP	×	A8	-	
MG(PRI) (2M) Card [SCA-30PRIA]	SCA-30PRIA	-	MG-PRI2.0 SIP	×	A9	-	

Terms in Manual	Product Name	EMEA Product Name	Terminal Type on PCPro	Avail-abil-ity	HWTP	HWVER	File Name (Default)
MG-SIP16 Card [SCA-16SIPMGA]	SCA-16SIPMGA Note 12	-	MG(SIP)	×	66	-	mgsipmwlist.txt
MG-SIP16 Box [MG-16SIPMGA]	MG-16SIPMGA Note 12	-		×	66	-	
MG-SIP16 Card [SCA-16SIP-MG(US)]	SCA-16SIP-MG(US) Note 13	-		×	66	-	
MG-SIP96	MG-SIP96 Note 14	-		×	66	-	
MG-SIP128 [MG-128SIPMGL-A]	MG-128SIPMGL-A	-		×	66		
MG-SIP128 [MG-128SIPMGG-B]	MG-128SIPMGG	-		×	66	-	mgsipmwlist.txt
MG-SIP128 [MG-128SIPMGG]	MG-128SIPMGG Note 15	-		×	66	-	
MG-SIP128 [MG-128SIPMGJ-B]	MG-128SIPMGJ	-		×	66	-	
MG-SIP128 [MG-128SIPMGJ]	MG-128SIPMGJ Note 16	-		×	66	-	
Software-based MG-SIP	Software-based MG-SIP	-		×	66	-	
MG-T1(SIP) Card	[SCA-24DTIA]	-	MG-T1[SIP]	×	AF	-	mgdtimwlist.txt
MG-T1(SIP) Box	[MG-24DTIA]	-					
MG(BRI) Box [MG-2BRIA]	MG-2BRIA	-	MG-BRI SIP Note 8	×	A3	-	mgbrisiplist.txt
MG(BRI) Card [SCA-2BRIA]	SCA-2BRIA	-					
MCMG Box [MG-4LC2COTA]	MG-4LC2COTA	-	-	N	67	-	mcmgmwlist.txt
MCMG Card [SCA-4LC2COTA]	SCA-4LC2COTA	-	-	N		-	
MG-COT Card [SCA-6COTA]	SCA-6COTA	-	-	N	6B	-	mgcotmwlist.txt
MG-COT Card [SCA-6COTC]	SCA-6COTC	SCA-6COTB	-	N		-	
VS32 Conference Server [MG-VS32-VA]	MG-VS32VA	-	-	N	C1	-	vs32atdl.txt
VS32 Conference Server [SCA-VS32-VA]	SCA-VS32VA	-	-	N	C1	-	

Terms in Manual	Product Name	EMEA Product Name	Terminal Type on PCPro	Availability	HWTP	HWVER	File Name (Default)
IP Enabled Dterm (Dterm Series *i*)	(IP Adapter) North America/Other Countries except Australia: IP-R UNIT Australia: IP-RA UNIT (Telephone) DTR-8D/16LD/16D/32D	-	Dterm Series *i* w/ IP Adaptor	×	11	12	ramhp2pr.hex
DtermIP (Proprietary Protocol) **Note 9**	ITR-4D/8D/16D/16LD/32D	-	DtermIP	×	11	14	ramhp2pw.out
DtermIP (SIP) **Note 10**	ITN-4D/8D/16D/32D **Note 11**	-	Dterm-SIP(ITN)	×	91	20	appsipe.tgz
DT700 Series	DT710	-	DT710	×	91	30	itlisipe.tgz
	DT730	-	DT730	×	91	33	itlisipv.tgz
	DT730G (12/24DG)	-	DT730DG	×	91	51	itlisipvg.tgz
	DT730G (12/24CG)	-	DT730CG	×	91	52	itlisipvc.tgz
	DT750	-	DT750	×	91	34	itlisips.tgz
	DT770G	-	DT770G	×	91	54	itlisipcr.tgz
DT800 Series	DT820 (6D/6DG)	-	DT820 (6D)	×	91	70	ityisipe.tgz
	DT820 (8LDX/32LDG)	-	DT820 (8LDX)	×	91	71	ityisipex.tgz
	DT830	-	DT830/DT830DG	×	91	61	itzisipvg.tgz
	DT830G (12/24DG)	-		×	91	61	
	DT830G (12/24CG)	-	DT830CG	×	91	62	itzisipvc.tgz
DtermIP INASET (Classic) **Note 10**	ITR-LC	-	DtermIP Inaset	×	13	11	dpPtoP1E.ini
DtermIP INASET240G **Note 10**	ITR-240G (Countries except Australia)	-	Inaset240G	×	13	21	dp24GP1E.ini
DtermIP INASET320C **Note 10**	North America/Other Countries except Australia: ITR-320C-1 Australia: ITR-320C-1A	-	Inaset320C	×	13	31	dp32CP1E.ini

Terms in Manual	Product Name	EMEA Product Name	Terminal Type on PCPro	Availability	HWTP	HWVER	File Name (Default)
DtermIP INA-SET320G **Note 10**	ITR-320G-1 (North America only)	-	Inaset320G	×	13	41	dp32GP1E.ini
DtermIP INA-SET320C (XML version)	ITR-320C-1M	-	-	×	13	51	dp32CP1ME.ini
DtermSP30 (Proprietary Protocol)	Dterm SP30 AE-	-	-	**N**	15	00	-
DtermSP30 (SIP)	Dterm SP30 FE-	-	-	**N**	93	93	-
Soft Client SP350	Soft Client SP350	-	-	**N**			-

Note 8: For this terminal, Internal FTP Server cannot be used.

Note 9: When upgrading this terminal from 2.99 (or lower) to 3.01 (or higher), Internal FTP option cannot be used.

Note 10: When using this terminal, only External FTP is supported.

Note 11: Available firmware version is 3.0.0.0 or later.

Note 12: Available firmware version is SP-3905 MG SIP (16) PROG-A Issue 5 or later

Note 13: Available firmware version is SP-3988 MG SIP(16) PROG-G Issue 3 or later.

Note 14: Available firmware version is SP-3987 MGSIP PROG-B Issue 3 or later.

Note 15: Available firmware version is SP-4051 MGSIP PROG-G Issue 1 or later.

Note 16: Available firmware version is SP-4032 MGSIP PROG-E Issue 1 or later.

Note: This command does not support the following Terminal Types even if they are displayed in List of Download File Name. Do not use the following Terminal Types and their additional information in the list.

Terminal Type	HWTP	HWVER	File Name
Dterm Series i with IP Adaptor	00	12	ramhp2pr.hex
DtermIP	00	14	ramhp2pw.out
IP-CS(3ch)	31	-	BPRG_IPBSA.DAT
IP-CS(6ch)	32	-	BPRG_IPBSA.DAT
IP-ZT	34	00	BPRG_IPZT.DAT
IPVPS	51	00	-
Analog MG	61	-	-
T1 MG	62	-	-

5. Editing Import/Export File with Excel

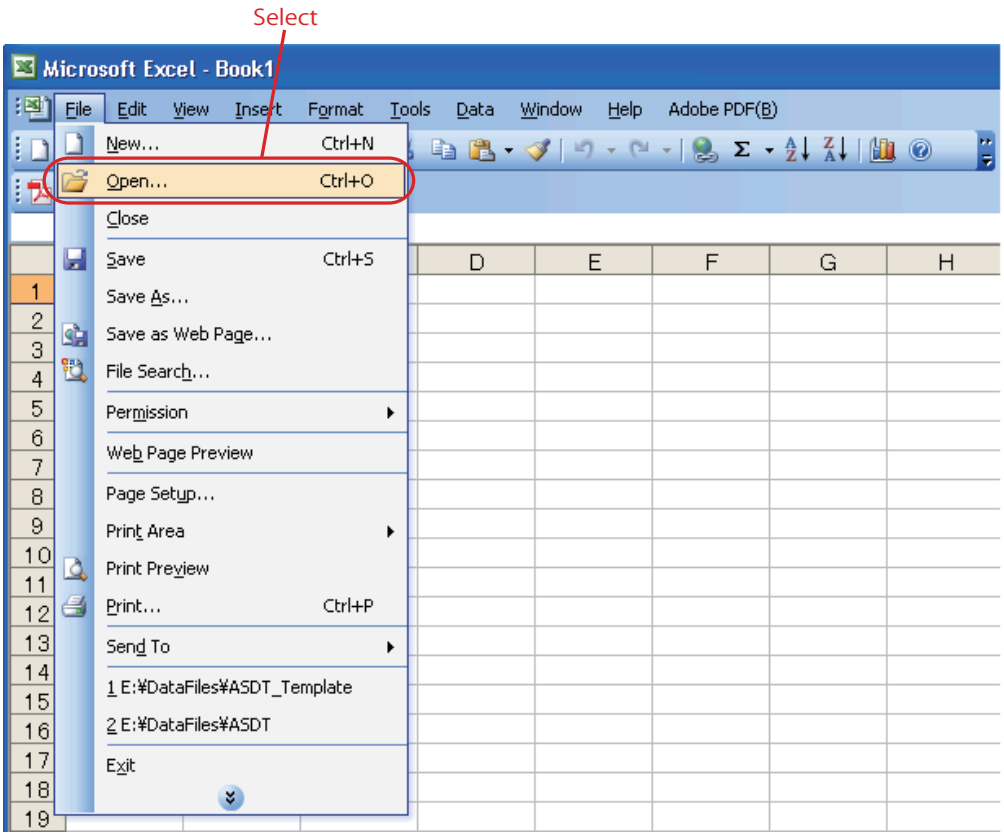
This section explains the procedure to edit the file with Excel.

Note: The file may not be created properly if the procedures are not performed as provided in this section.

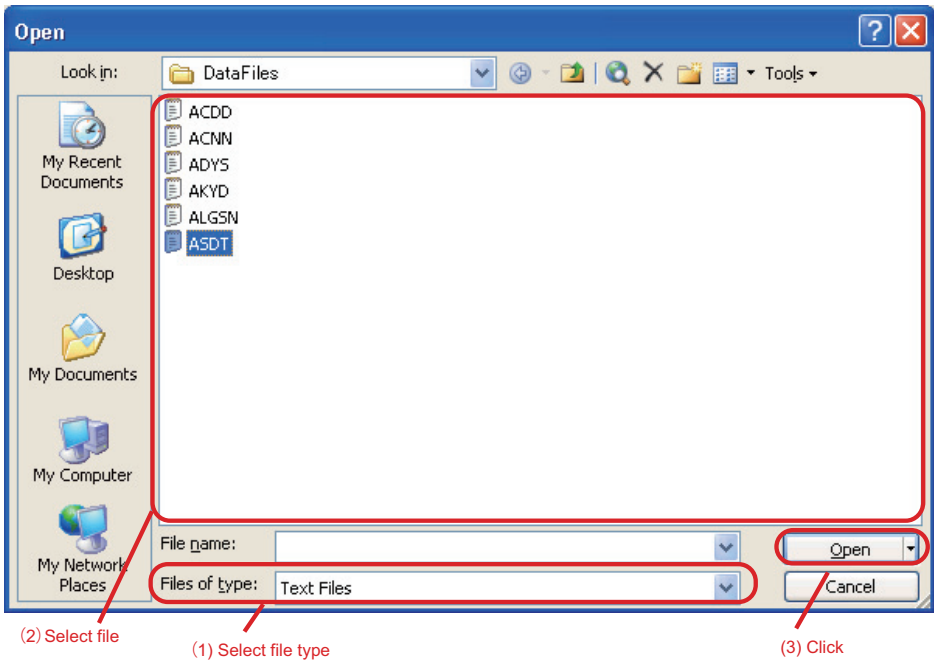
Note: The appearance of each image for Excel may differ according to your Excel settings and environment.

STEP 1 Activate Excel.

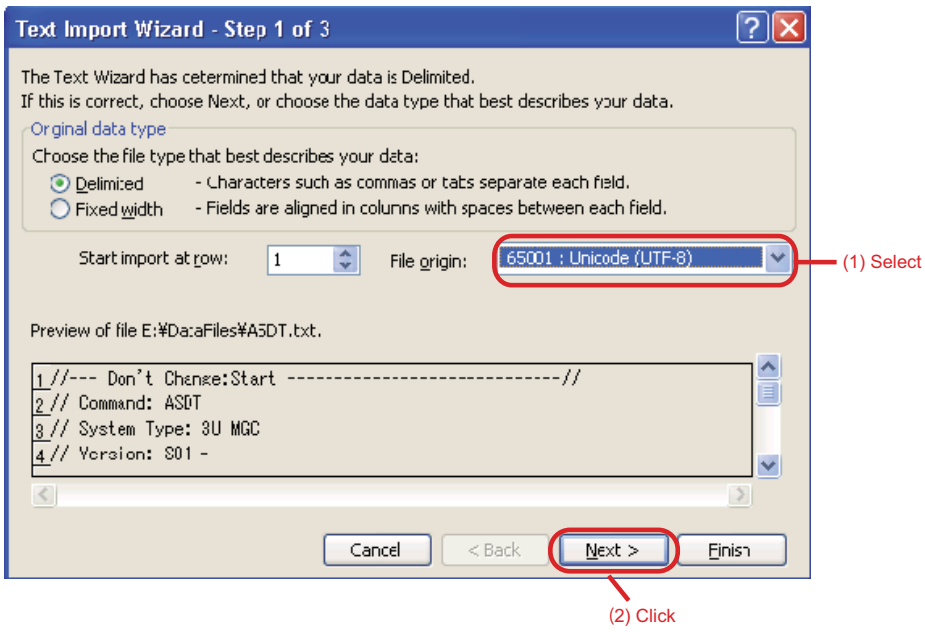
STEP 2 Select [File] - [Open] from the menu bar.



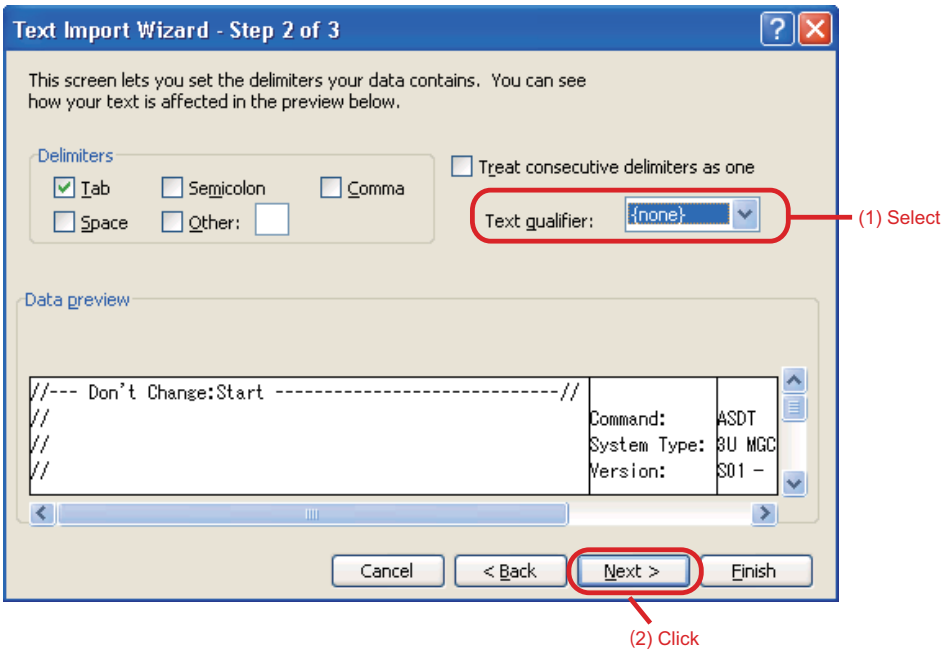
STEP 3 Select [Text File] from [Files of type] drop-down list, choose the applicable file from the list and click [Open] button.



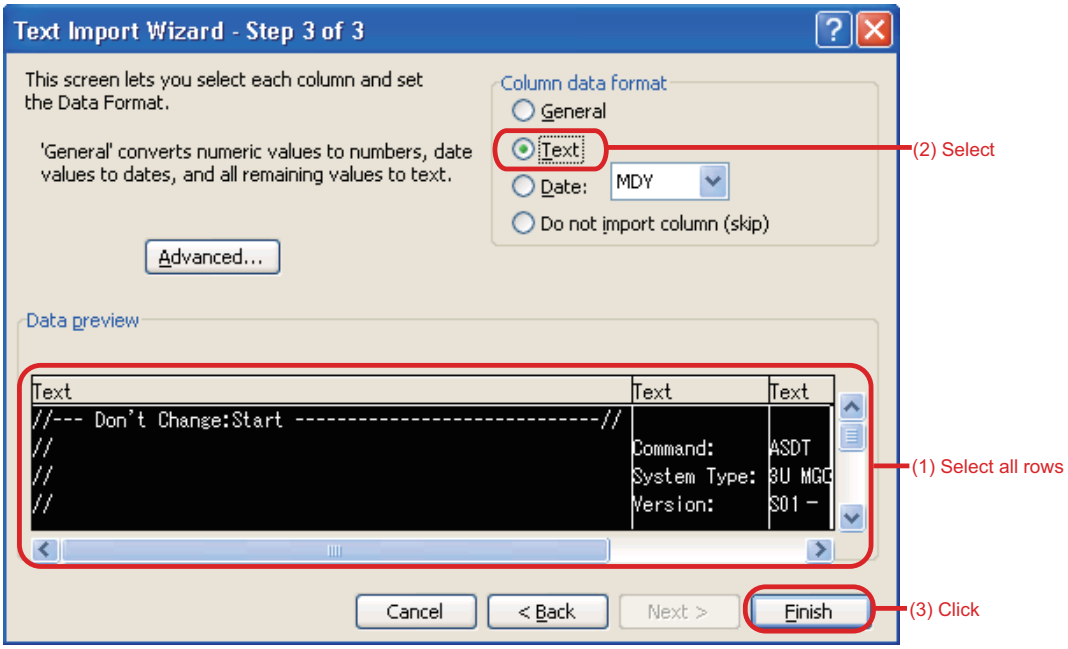
STEP 4 In [Text Import Wizard - Step 1 of 3] dialog, select [65001: Unicode (UTF-8)] from [File origin] drop-down list and click [Next] button.



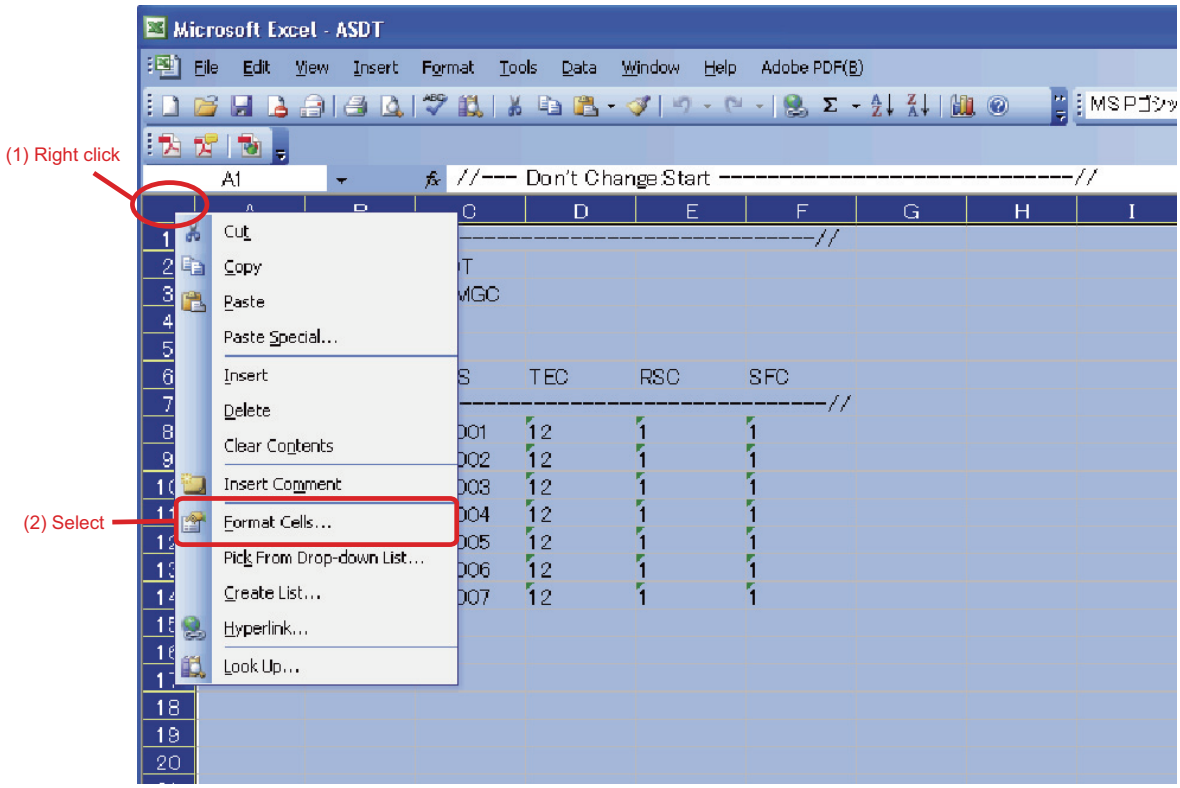
STEP 5 In [Text Import Wizard - Step 2 of 3] dialog, select [{none}] from [Text qualifier] drop-down list and click [Next] button.



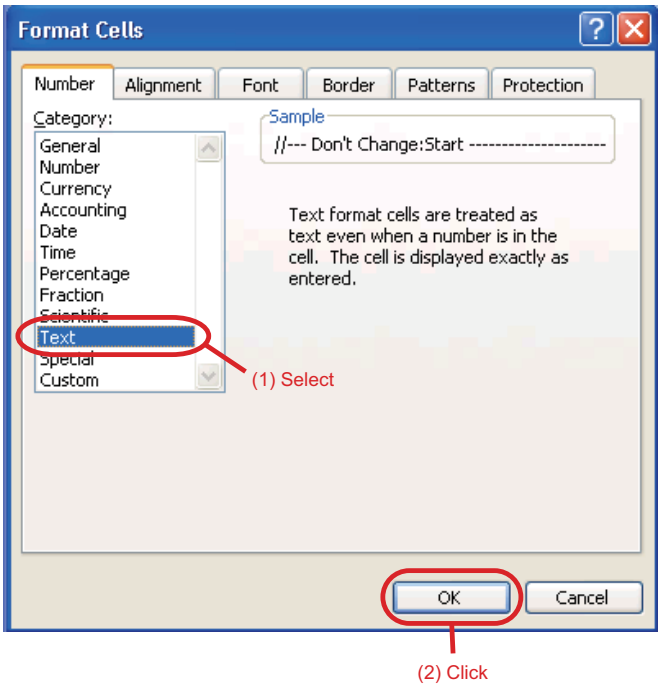
STEP 6 In [Text Import Wizard - Step 3 of 3] dialog, select all rows in [Data preview] field (the background will turn black), [Text] from [Column data format] and click [Finish] button. To select all rows, press [Shift] key and click on each rows and select multiple rows.



STEP 7 Right click the top left column to select all cells and select [Format Cells...] from the right click menu.



STEP 8 In [Number] tab, select [Text] from [Category] list box and click [OK] button.



STEP 9 Input data to each field according to the specification of this command.

ATRF: Assignment of Traffic Measurement Order

1. Functional Outline

This command assigns and deletes traffic measurement programs. A request for traffic measurement is performed when a traffic measurement instruction has been assigned by this command. The collected traffic measurement data can be stored on the HD of PCPro, that can be designated on the basis of the traffic measurement type.

2. Precautions

(a) Assign the following when you execute Traffic Measurement for Terminal, Route Traffic, Connection Route Traffic and IP Service Traffic:
ASYD, SYS1, Index 47, Bit 0= (0/1=CCS/Erlang)
Bit 7=1(Execute Traffic Measurement)

(b) When the Traffic Measurement target node is in the FCCS network, programming Traffic Measurement order on a node basis is not available by the ATRF command. Use the ATRFN command instead of the ATRF command.

(c) If you have set traffic measurement order with the SNMP manager but not with the ATRF command, invoke it with the SNMP manager. The ATRF command cannot successfully invoke it.

3. Parameters

Input Data

TYPE: Type of Traffic Measurement (1-22) (See the table below.)

ATRF - Type of Traffic Measurement Explanation

DATA	MEANING	DATA	MEANING
1	Terminal Traffic	2	Route Traffic
3	Station Peg Count	4	ATT Peg Count
5	Route Peg Count	6	Service Peg Count
8	UCD Route Peg Count	9	UCD Group Peg Count
10	UCD Station Peg Count	15	ATT Answering Peg Count **Note 2**, **Note 3**
17	CS Peg Count **Note 1**	18	Connection Route Peg Count **Note 4**
19	Connection Route Traffic **Note 4**	20	IP Service Peg Count
21	IP Service Traffic	22	SIP Terminal Peg Count

PORT: Traffic Information Output Terminal Number
(0-7:IOC, 8:LAN, 9:NMS, 10:SNMP(Not used))

INTERVAL (min): Output interval (0, 30-120)
Assign the data (30-120) in ten minute increments. When assigning 0 (available when any of TYPE 3-18, 20, and 22 is selected), instead specify your desired output time in the "Output TIME" parameters below.

Start TIME **Note 6**

End TIME **Note 6**

Output TIME: This data entry is valid only when INTERVAL(min)=0.

Start RT: Start External Route Number (available when TYPE 2/5/8 is selected)

End RT: End External Route Number (available when TYPE 2/5/8 is selected)

Start C_RT: Start Connection Route Number (available when TYPE 18/19 is selected)

End C_RT: End Connection Route Number (available when TYPE 18/19 is selected)

Start NODE: Start Node Number (available when TYPE 20/21 is selected) **Note 5**

End NODE: End Node Number (available when TYPE 20/21 is selected) **Note 5**

Note 1: For North America, ZT is observed in the Peg Count.

Note 2: ATT Answering Peg Count is available for the following Attendant Incoming Calls. Note that the Route Class Data (CDN 6: TCL) of the Incoming Route must be 1 (=DDD Line)/ 2 (=FX Line).

(a) Ringdown
(b) LDN Call via ISDN/MFC Line
(c) Call terminated to the Attendant on the ground from ISDN/MFC trunk when Called Number or Sub Address cannot be received.

Note 3: In the case of following Incoming Call from ISDN/MFC line to Attendant Console, these services are not available.

- Forwarding-CallBusy Line/All Calls/Don't Answer to Attendant Console.
- Call Forwarding to Attendant Console by Vacant number.
- Incoming Call to Attendant Console with All Attendant Access from trunk.
- Incoming Call to Attendant Console with Individual Attendant Access.
- Incoming Call to Attendant Console with Remote Access to System.

Note 4: This traffic measurement is also available for connections via IPPAD; however, incoming and outgoing traffic both are counted as outgoing traffic in the result.

Note 5: To assign Node Number, use the ANTI command.

Note 6: Assign the traffic measurement time period between Start TIME and End TIME longer than an hour. Also, if the measurement should be executed throughout a day, assign the same data in both Start TIME and End TIME parameters.

ATRFN:Assignment of Traffic Measurement Order for FCCS Network

1. Functional Outline

This command assigns and deletes traffic measurement programs available on the Ethernet. A request for traffic measurement is performed on a network basis when a traffic measurement instruction has been assigned by this command. The collected traffic measurement data can be stored on the HD of PCPro [connected to the Network Control Node (NCN)], that can be designated on the basis of the traffic measurement type. This command can be used at the NCN only.

2. Precautions

(a) Assign the following when you execute Traffic Measurement for Terminal and Route Traffic:
ASYDN, SYS1, Index 47, Bit 0= (0/1=CCS/Erlang)
Bit 7=1(Execute Traffic Measurement)

(b) If you have set traffic measurement order with the SNMP manager but not with the ATRFN command, invoke it with the SNMP manager. The ATRFN command cannot successfully invoke it.

(c) After you execute traffic measurement order for FCCS Network (ATRFN), you cannot set the data for traffic measurement order (ATRF) or execute automatic output of traffic information on each node.

(d) When you set the data for traffic measurement order for FCCS Network (ATRFN) after setting traffic measurement order (ATRF) on each node, the ATRFN command data are given priority over the ATRF command data. The ATRF command data on each mode will be invalid.

3. Parameters

Input Data

TYPE: Type of Traffic Measurement (1-19) (See the table below.)

ATRFN - Type of Traffic Measurement Explanation

DATA	MEANING	DATA	MEANING
1	Terminal Traffic	2	Route Traffic
3	Station Peg Count **Note 5**	4	ATT Peg Count **Note 5**, **Note 6**
5	Route Peg Count	6	Service Peg Count **Note 5**
8	UCD Route Peg Count	9	UCD Group Peg Count
10	UCD Station Peg Count	15	ATT Answering Peg Count **Note 3, Note 4, Note 6**
18	Connection Route Peg Count	19	Connection Route Traffic

PORT: Traffic Information Output Terminal Number
(0-7: IOC, 8: LAN, 9:NMS, 10:SNMP(Not used))

INTERVAL (min): Output interval (0, 30-120)
Assign the data (30-120) in ten minute increments. When assigning 0 (available when any of TYPE 3-18 is selected), instead specify your desired output time in the Output TIME parameters below.

Start TIME **Note 1, Note 2**

End TIME **Note 1, Note 2**

Output TIME: This data entry is valid only when INTERVAL(min)=0.

Start LGRT: Start External Route Number (available when TYPE 2/5/8 is selected)

End LGRT: End External Route Number (available when TYPE 2/5/8 is selected)

Start C_RT: Start Connection Route Number (available when TYPE 18/19 is selected)

End C_RT: End Connection Route Number (available when TYPE 18/19 is selected)

Note: The selected traffic measurement data, except for TYPE 1 (Terminal Traffic), is collected with the whole network system as a single unit.

Note: If the data for this command is assigned, the node-level data by the ATRF command is not cleared, but loses its validity (the network-level data takes precedence).

Note: When the traffic measurement order is set from SNMP manager, it cannot be invoked by using ATRFN command.

Note 1: When time difference exists between the nodes, confirm that the related time difference data, based on Universal Coordinated Time (UCT) standard, has been assigned at each node via ATDF command.

Note 2: Assign the traffic measurement time period between Start TIME and End TIME longer than an hour. Also, if the measurement should be executed throughout a day, assign the same data in both Start TIME and End TIME parameters.

Note 3: ATT Answering Peg Count is available for the following Attendant Incoming Calls. Note that the Route Class Data (CDN 6: TCL) of the Incoming Route must be 1 (=DDD Line)/ 2 (=FX Line).

(a) Ringdown

(b) LDN Call via ISDN/MFC Line

(c) Call terminated to the Attendant on the ground from ISDN/MFC trunk when Called Number or Sub Address cannot be received.

Note 4: In the case of following Incoming Call from ISDN/MFC line to Attendant Console, these services are not available.
- Call Forwarding-Busy Line/All Calls/Don't Answer to Attendant Console.
- Call Forwarding to Attendant Console by Vacant number.
- Incoming Call to Attendant Console with All Attendant Access from trunk.
- Incoming Call to Attendant Console with Individual Attendant Access.
- Incoming Call to Attendant Console with Remote Access to System.

Note 5: To activate Station Peg Count, ATT Peg Count and Service Peg Count, assign the largest value of Number of Tenants (ASYDN, SYS1, Index 8) in all nodes. Assign "FF Hex" for MDATA.

Note 6: To activate ATT Peg Count and ATT Answering Peg Count, assign the largest value of Number of Attendant Consoles (ASYDN, SYS1, Index 9) in all nodes. Assign "FF Hex" for MDATA.

BOSD: Back Up One-Touch Speed Call Memory Data

1. Functional Outline

This command saves the data of One-Touch Speed Call Data into the FD or HD, and loads the data from the FD or HD. The One-Touch Speed Call Data, registered to a Digital terminal, is saved in the memory of the connected ELC/DLC. Before replacing the cards, use this command to back up the data. Be aware that the data in the backup file must match the existing data in the SV9500. This means that once a back up has been completed, you cannot perform any deletions or additions to the data (either a station number or LENS), or the data cannot be restored.

Note: One-Touch Speed Call memory data for IP stations is saved in the MEM of SV9500. However, when the system setting (see the Precautions (d)) is available, One-Touch Speed Call Data is saved in the HD in the case of IP terminals.

2. Precautions

(a) Save function

Saves One-Touch Speed Calling data to the specified directly.

(b) Verify function

Verifies the information of One-Touch Speed Calling save data on the specified directly.

(c) Load function

Loads the saved One-Touch Speed Calling data to the specified directly.

Note: Loading time for the One-Touch Speed Calling data is about 10 seconds per station. Depending on the number of stations, it is recommended to divide the save data into Unit, MG, and so on beforehand.

(d) To back up the One-Touch Speed Calling data for IP terminals, assign System Data (ASYD, SYS1, Index 507, Bit 3=1).

(e) When “by Station” is chosen, One-Touch Speed Calling data will be loaded to the same station number. Therefore, when you change the accommodating location for some reason such as when moving the stations, execute backup with this command beforehand, and load the backup data after changing the accommodating location of station data.

(f) When “by LENS” is chosen, One-Touch Speed Calling data will be loaded to the same accommodating location. Therefore, even if the station number is changed, the data will be loaded to the same accommodating location.

3. Parameters

Input data

Direction Select:	PBX Memory to MAT MAT to PBX Memory Verify MAT against MEM	
Data Type Selection:	by Station by LENS	
START TN:	First Tenant Number	**Note 1**
END TN:	Last Tenant Number	**Note 1**
START STN:	First Station Number	**Note 1**
END STN:	Last Station Number	**Note 1**
START LENS:	First Line Equipment Numbers	**Note 2**
END LENS:	Last Line Equipment Numbers	**Note 2**
Auto Verify Afterward:	Verify One-Touch Speed Call Data IP Extension Load is invalid. Checked = On. Unchecked = Off.	**Note 3**
File Name:	Enter the location where the data is to be stored to, verified against or loaded from. For example, if data is stored on the hard drive of PCPro, you would specify a drive and folder. If the data is stored on a floppy disk, you would specify the floppy drive, etc.	

Note 1: Use this parameter when a Station is designated.

Note 2: Use this parameter when a LENS is designated.

Note 3: It takes approximately 10 seconds to load the data per station. It is recommended that the backup be divided per station number or LENS depending on the number of stations before saving the data.

CADSD:Continuous Assignment of Station Data

1. Functional Outline

This command can assign/delete many station data with consecutive numbers at once.

2. Parameters

Input Data

Type: Assign/Delete

[When *Assign* is selected in the TYPE selection list box]

TN(START):	Start Tenant Number	
TN(END):	End Tenant Number	
STN(START):	Start Station Number [maximum six digits]	**Note 1**
STN(END):	End Station Number [maximum six digits]	**Note 1**
STEP:	Station Count-up Step	**Note 2**
	If using asterisk (*) and number (#) → [1-12]	
	If not using asterisk (*) and number (#) → [1-10]	
LENS(START):	First Line Equipment Numbers [six digits]	
LENS(END):	Last Line Equipment Numbers [six digits]	
GROUP(START):	First Group Number [0-31]	
GROUP(END):	Last Group Number [0-31]	
LEVEL(START):	First Level Number [0-7]	
LEVEL(END):	Last Level Number [0-7]	

Note 1: In the bottom part of the display, a check box is provided to determine whether to use "*" and "#" as a part of the station number. If necessary, check the box.

Note 2: In the parameter here, specify the size of increment between the consecutive station numbers to be assigned. See the example below.

Example:

INPUT DATA
STN(START)=100
STN(END)=200
STEP=10

RESULT
A station number is assigned by increments of 10:
-When asterisk (*) and number (#) are not used as part of STN
100 110 120 130... 190 200
-When asterisk (*) and number (#) are used as part of STN
10* 118 126 134... 1** 1#8

TEC: Telephone Equipment Class [1-31]

1=DP (10pps)	2=PB
3=DP/PB	4=DP (20pps)
5-11=Not used	12=Dterm
13=Data Terminal via Dterm	14=Hot Line
15=CAS Line	16=Data Terminal via Data Module
17=Not used	18=Virtual Line Appearance (for Dterm Multi-Line)
19-22=Not used	23=ISDN Terminal
24-26=Not used	27=8 Conference Equipment
28-31=Not used	

RSC: Route Restriction Class [0-15]

SFC: Service Feature Restriction Class [0-15]

Buttons

Execute: Make the input data valid.

Cancel: Cancel the input data.

Exit: Exit this command.

Output Data (after Execute button is pressed)

TN: Tenant Number

STN: Assigned station number

LENS: Line Equipment Numbers

STATUS: Data Entry Result

OK=Data Assignment is successful **Note 3**

Note 3: If OK is not displayed (i.e. the data entry is not successful), related error message is displayed here.

When *DELETE* is selected in the TYPE selection list box

Input Data

TN(START): First Tenant Number

TN(END): Last Tenant Number

STN(START): First station number [maximum six digits]

STN(END): Last station number [maximum six digits]

STEP: Station Count-up Step **Note 4**

If using asterisk (*) and number (#) → [1-12]

If not using asterisk (*) and number (#) → [1-10]

Note 4: In this parameter, specify the size of increment between the consecutive station numbers deleted. See the example below.

Example:

INPUT DATA

STN(START)=100
STN(END)=200
STEP=10

RESULT

Station number is deleted by increments of 10:

-When asterisk (*) and number (#) are not used as part of STN
100 110 120 130 ... 190 200
-When * and # are used as part of STN
10* 118 126 134 ... 1** 1#8

Buttons

Execute:	Delete the input data.
Cancel:	Cancel the deletion.
Exit:	Exit this command.

Output Data

TN:	Tenant Number
STN:	Station Number
STATUS:	Result of Deletion **Note 5**

Note 5: When the deletion is successful, OK is displayed. Otherwise (i.e. the deletion is rejected), related error message is displayed.

CARR: Continuous Assignment of Alternative Route Restriction

1. Functional Outline

This command continuously assigns/deletes the restriction data of relay connections between the outgoing route and the incoming route.

2. Parameters

Input Data

TYPE: Assign/Delete

ICRT (START/END:Incoming Route Number (External Route only)

OGRT (START/END:Outgoing Route Number (External Route only)

ARI A-RES: Restriction Data for Alternative Route Index-A [0/1]

Restriction of the trunk-to-trunk (tandem) connection via ATTCON or station when a C.O./TIE line call terminates.

0 = Alternate routing is restricted.

1 = Alternate routing is allowed.

ARI D-RES: Restriction Data for Alternative Route Index-D [0-2]

Restriction of the trunk-to-trunk (tandem) connection by Direct Dial Access from a station when a C.O./TIE line call terminates.

0 = Alternate routing is restricted.

1 = Alternate routing is allowed.

2 = Toll Restriction is restricted.

Output Data

ICRT: Incoming Route

OGRT: Outgoing Route

STATUS: OK or error message is displayed.

CARRN:Continuous Assignment of Alternative Route Restriction for NDM

1. Functional Outline

This command continuously assigns/deletes the restriction data of relay connections between the outgoing route and the incoming route. The data assigned by this command is written in the Network Data Memory (NDM) of the Network Control Node (NCN), updating the NDM at each Local Node (LN).

2. Parameters

Input Data

TYPE: Assign/Delete

IC LGRT (START/END):Incoming Logical Route Number [1-899]

OG LGRT (START/END):Outgoing Logical Route Number [1-899]

ARI A-RES: Restriction Data for Alternative Route Index-A [0/1]

Restriction of the trunk-to-trunk (tandem) connection via ATTCON or station when a C.O./TIE line call terminates.

0 = Alternate routing is restricted.

1 = Alternate routing is allowed.

ARI D-RES: Restriction Data for Alternative Route Index-D [0-2]

Restriction of the trunk-to-trunk (tandem) connection by Direct Dial Access from a station when a C.O./TIE line call terminates.

0 = Alternate routing is restricted.

1 = Alternate routing is allowed.

2 = Toll Restriction is restricted.

Output Data

IC LGRT: Incoming Logical Route Number [1-899]

OG LGRT: Outgoing Logical Route Number [1-899]

STATUS: OK or error message is displayed.

CATK: Continuous Assignment of Trunk Data

1. Functional Outline

This command can assign/delete many trunk data with consecutive numbers at once.

2. Parameters

Type/KIND: Assign/Delete

When *ASSIGN* is selected in the TYPE/KIND selection list box

Input Data

RT: Route Number

TK (START): First Trunk Number [1-768]

TK (END): Last Trunk Number [1-768]

STEP: Trunk Count-up Step [1-10] **Note 1**

LENS (START): First Line Equipment Numbers [six digits]

LENS (END): Last Line Equipment Numbers [six digits]

TN: Tenant Number

RSC: Route Restriction Class [0-15] **Note 2**

SFC: Service Feature Restriction Class [0-15] **Note 2**

GROUP (START):First Group Number [0-31]

GROUP (END): Last Group Number [0-31]

LEVEL (START): First Level Number [0-7]

LEVEL (END): Last Level Number [0-7]

TYPE: Count-up Type [1-6] **Note 3**

1 = LEVEL → GROUP → UNIT

2 = LEVEL → UNIT → GROUP

3 = GROUP → UNIT → LEVEL

4 = GROUP → LEVEL → UNIT

5 = UNIT → LEVEL → GROUP

6 = UNIT → GROUP → LEVEL

Note 1: In this parameter, specify the size of increment between the consecutive trunk numbers assigned. See the example below:
Example:

INPUT DATA	TK(START)=1 TK(END)=21 STEP=2
RESULT	A Trunk Number is assigned by increments of 2 or A Trunk Number is deleted by increments of 2

Note 2: Data entry for this parameter is necessary when RT is 901 or 915.

Note 3: TYPE parameter determines how to arrange the trunk data. See **Details on Trunk Arrangement TYPE** for details.

Buttons

Execute:	Make the input data valid.
Cancel:	Cancel the input data.
Exit:	Exit this command.

Output Data

TK:	Assigned Trunk Number
LENS:	Line Equipment Numbers
STATUS:	Data Entry Result
	OK=Data Assignment is successful **Note 4**

Note 4: If OK is not displayed (i.e. the data entry is not successful), related error message is displayed here.

When *DELETE* is selected in the TYPE/KIND selection list box

Input Data

RT:	Route Number
TK(START):	First Trunk Number [1-768]
TK(END):	Last Trunk Number [1-768]
STEP:	Trunk Count-up Step [1-10] **Note 5**

Buttons

Execute:	Delete the input data.
Cancel:	Cancel the deletion.
Exit:	Exit this command.

Output Data

TK:	Trunk Number
STATUS:	Result of Deletion
	OK=Deletion Successful **Note 6**

Note 5: In this parameter, specify the size of increment between the consecutive trunk numbers deleted. See the example below.

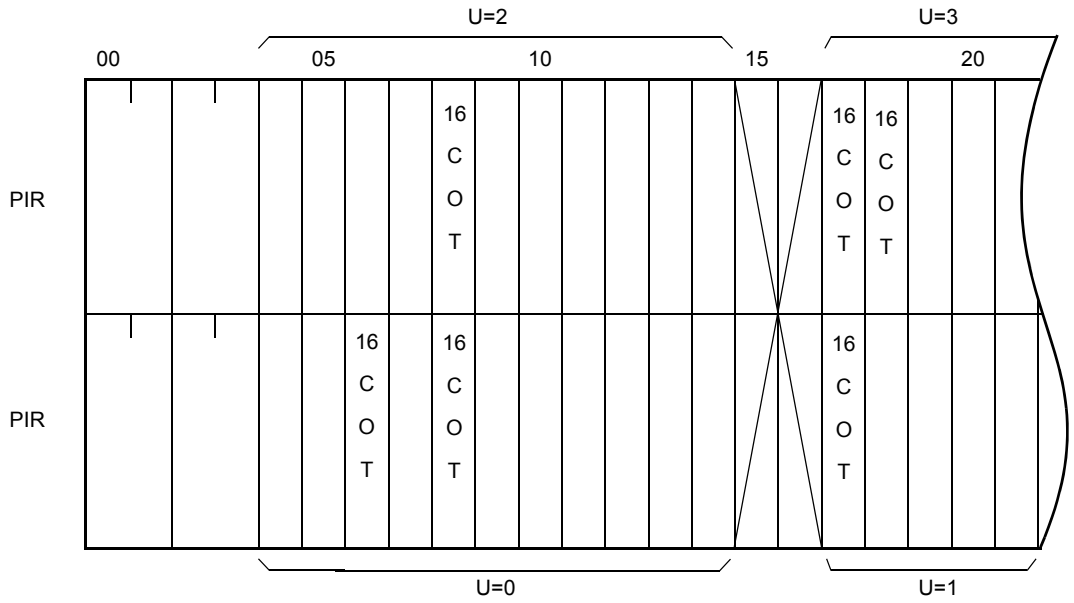
Example:

INPUT DATA	TK(START)=1 TK(END)=21 STEP=2
RESULT	A Trunk Number is deleted by increments of 2.

Note 6: When the deletion is successful, OK is displayed here. Otherwise (i.e. the deletion is rejected), related error message is displayed.

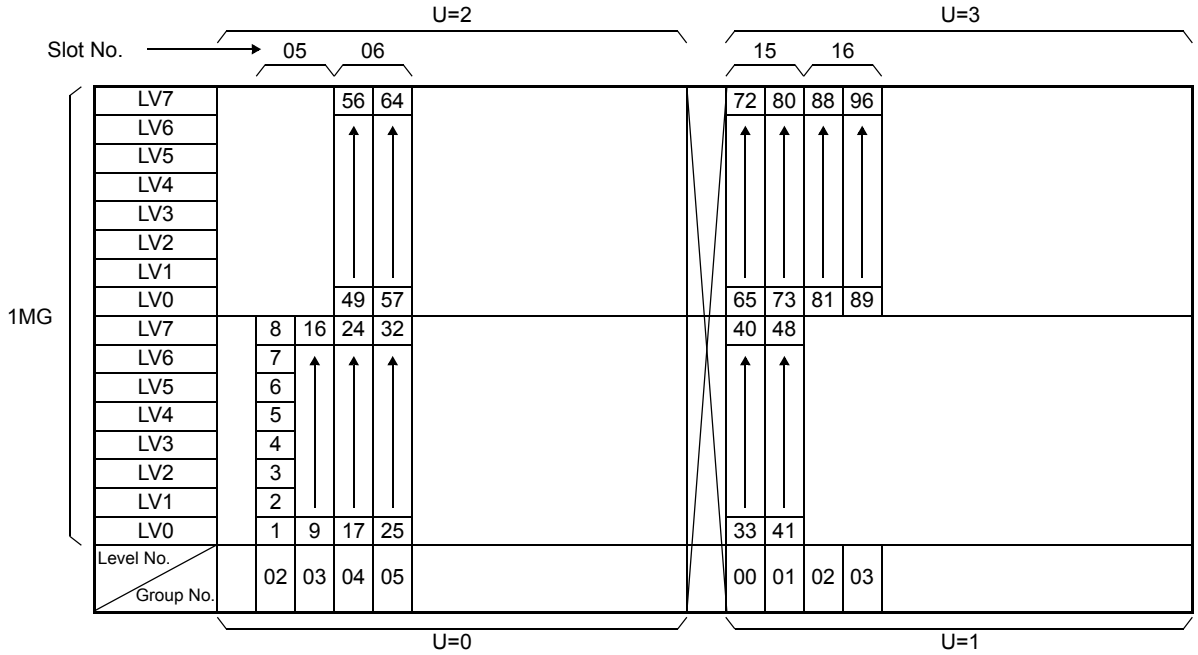
Details on Trunk Arrangement TYPE

When assigning the consecutive trunk data by using CATK command, select the trunk arrangement type (1-6) in the TYPE parameter. The following are examples of accommodated 16 COT cards:



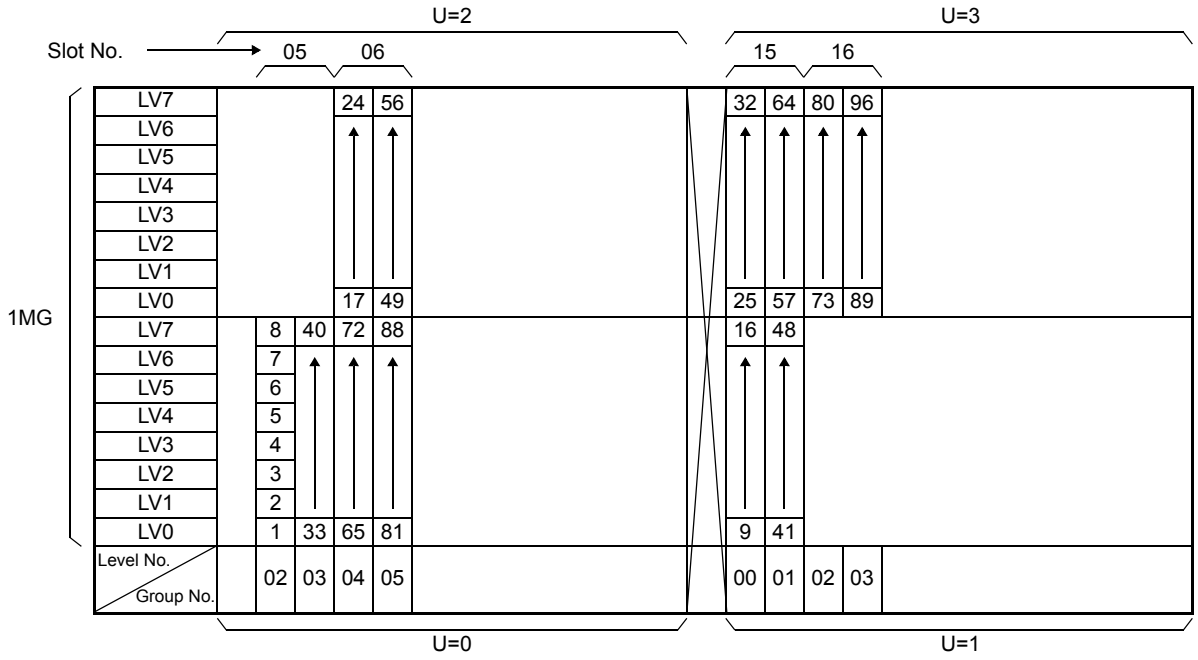
TYPE=1 (Level → Group → Unit)

Trunk data is arranged in the following numerical order.



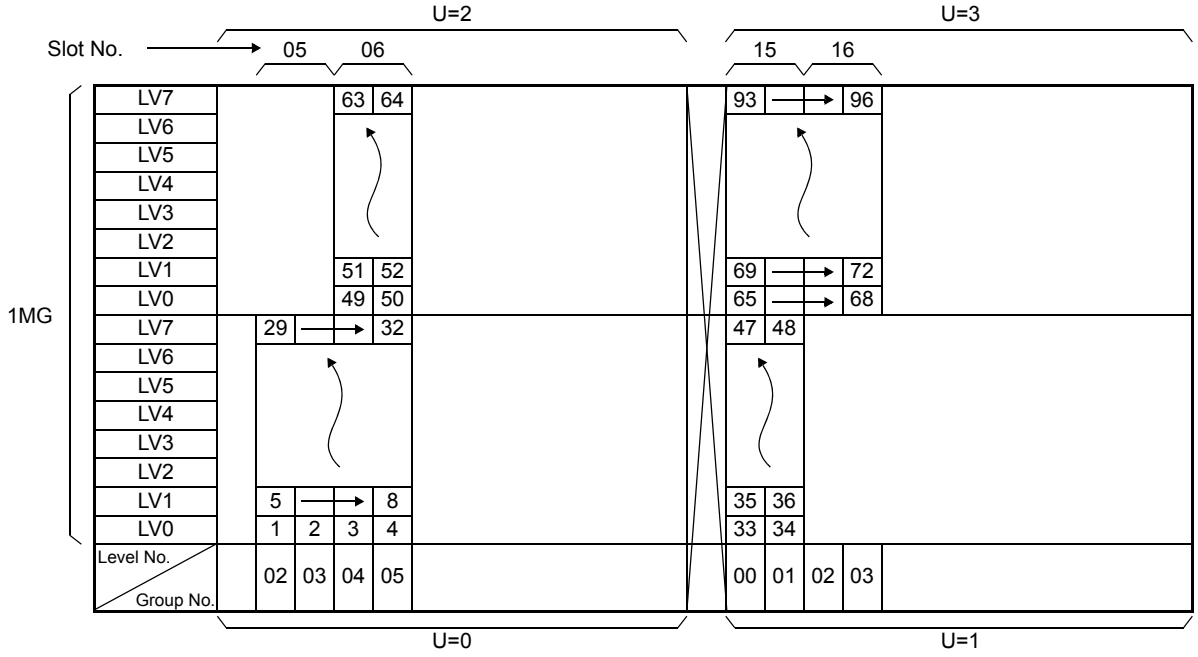
TYPE=2 (Level → Unit → Group)

Trunk data is arranged in the following numerical order.



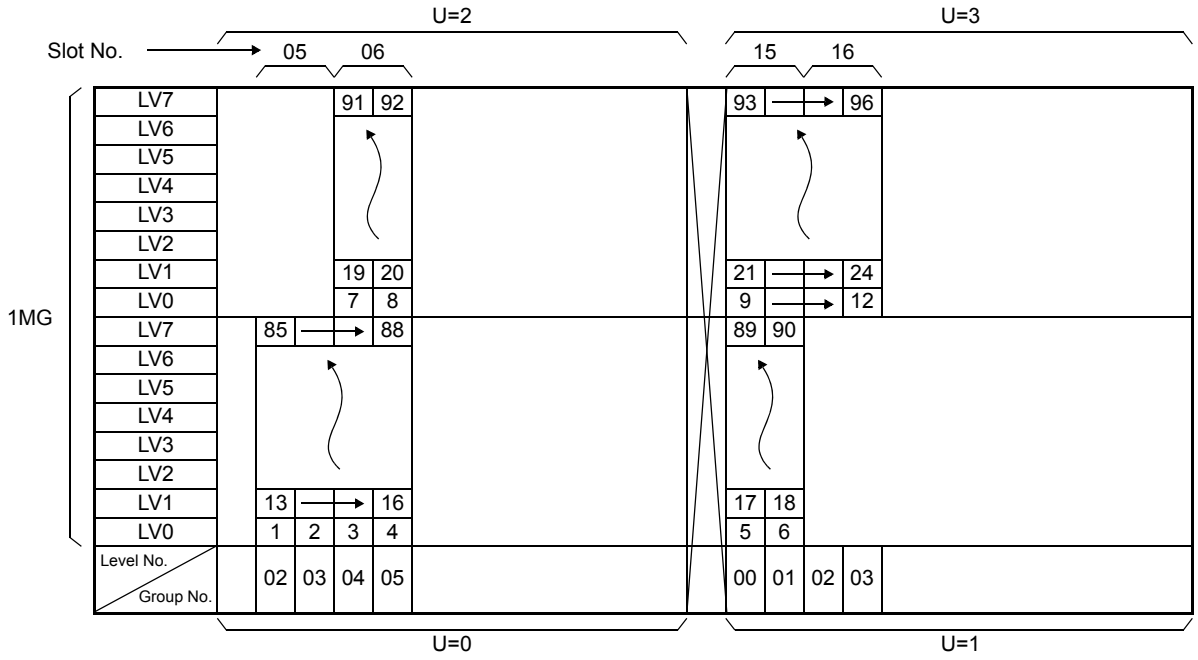
TYPE=3 (Group → Unit→ Level)

Trunk data is arranged in the following numerical order.



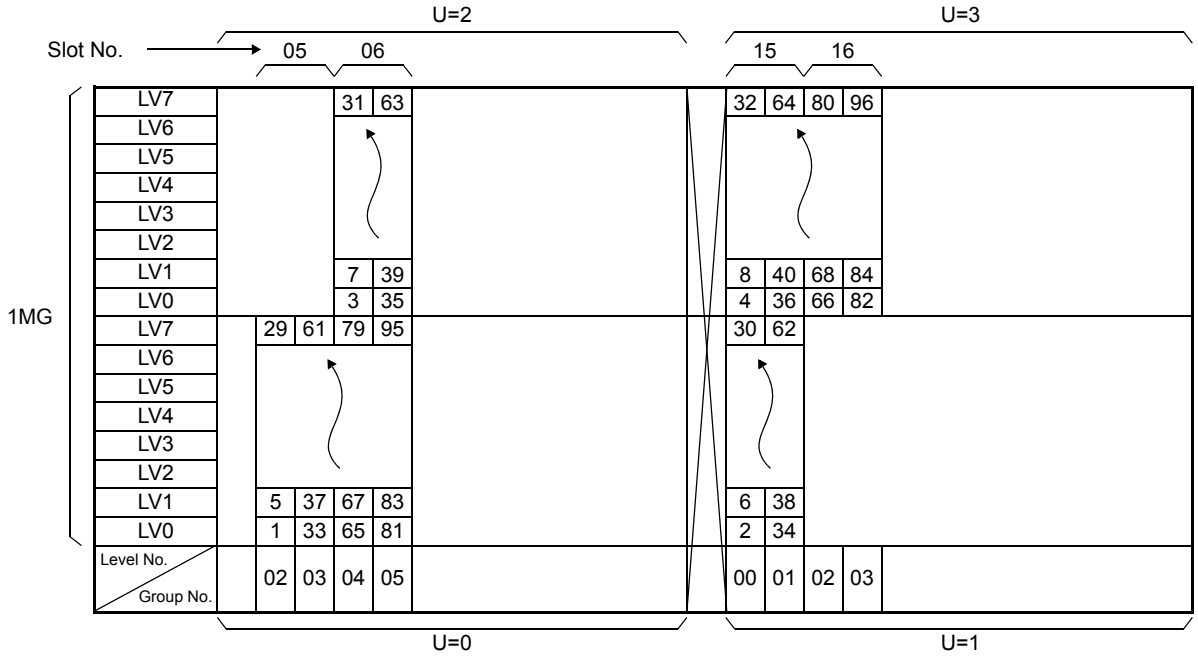
TYPE=4 (Group → Level → Unit)

Trunk data is arranged in the following numerical order.



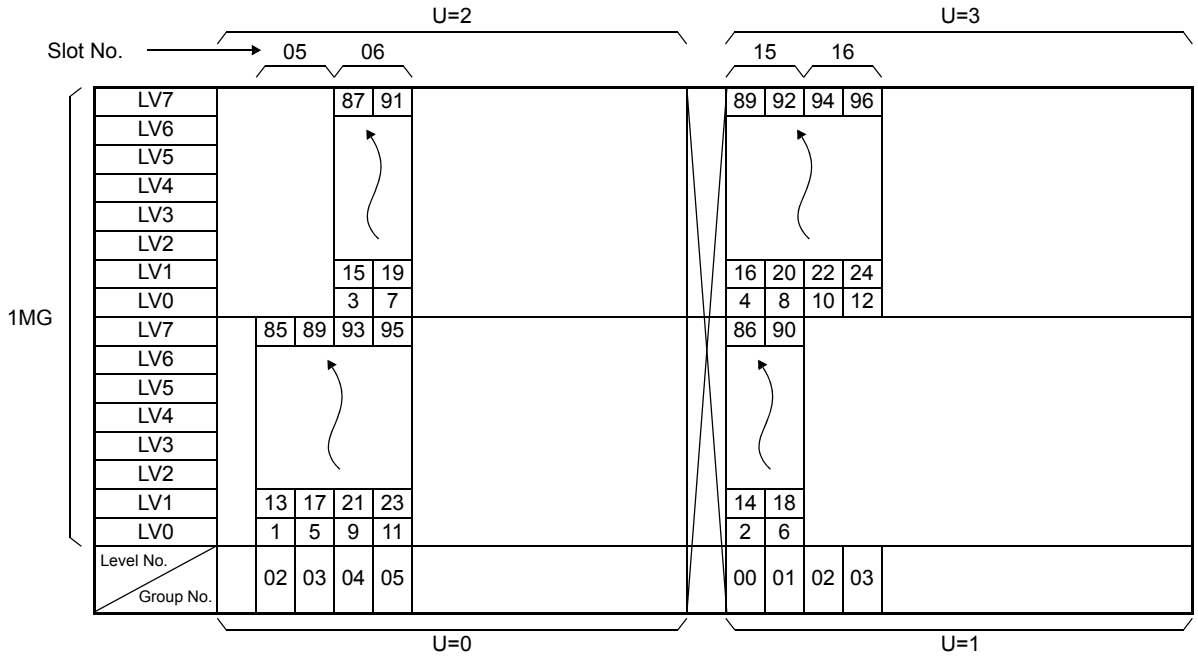
TYPE=5 (Unit → Level → Group)

Trunk data is arranged in the following numerical order.



TYPE=6 (Unit → Group → Level)

Trunk data is arranged in the following numerical order.



CBCN: Control of Broadcasting for NDM

1. Functional Outline

This command specifies the destination of the NDM data broadcast from the NCN. This command is only available at the Network Control Node (NCN).

Note: For adding a new node to the system in which the soft key data is already assigned by the ADSLN command (*1), SKP (soft key pattern) and SN (status number) must be reassigned by the ADSLN command. (To reassign them, press [Get], [Del] and then [Set] buttons in that order.)
(*1) It corresponds to the following situations:

- a new node is added to the existing standalone system and that system is upgraded to FCCS system.
- a new node is added to the existing FCCS system.

2. Parameters

Input data

TYPE:	ALL=(All the nodes)/ONE (One designated node)
FPC:	FPC of the designated node **Note 1**
Interval:	Broadcasting Interval

Note 1: This parameter appears when ONE is selected as TYPE parameter.

CBCV: Control of Broadcasting for VNDM

1. Functional Outline

This command broadcasts the VNDM data from the C-VNDM to all of the L-VNDMs on the FCCS network. **Note 1**, **Note 2**, **Note 3**
This command is available only at the node that has the C-VNDM.
(ASYDN/ASYDL: SYS1, Index 533)

Note 1: Variable Network Data Memory (VNDM)
-VNDM is the memory associated with monitored number and available OAI Facilities (Subscribe) information.
-VNDM is controlled by one node (VNDM Primary Node) in an FCCS network and broadcasted to the other nodes.

Note 2: Center-VNDM (C-VNDM)
This is the primary VNDM. It is only present in the VNDM center node in an FCCS network.

Note 3: Local-VNDM (L-VNDM)
This is the copy of VNDM located in all other Local Nodes in an FCCS network.

2. Parameters

Input Data

Control Type:

Broad Casting to All FPC:
Broadcast the VNDM data to all nodes.

Re-construction to each FPC:
Reconstruct VNDM data and release the stand alone mode
Note 4

Note 4: This parameter is used in the following network configurations:
- Multiple IP
- Multiple OAI Terminal Anywhere
- Multiple ACDP
- Multiple Agent Anywhere

FPC (1-253): This parameter is set when “Control Type = Re-construction to each FPC” is selected. To specify a node, enter FPC of a node re-constructing VNDM data in the FCCS network.

INTERVAL: Interval time of Scan (1-99 seconds)

Output Data

FPC: Fusion Point Code (1-253)

Green: Normal End

Red: Abnormal End

Cyan: Broadcast Request

White: No Broadcast Request

CBKS: Control Backup Station

1. Functional Outline

This command displays information of terminals that are registered within the backup node. Also this command can reset those registered terminals.

2. Parameters

The followings are the parameters in this command.

Backup Kind

List up the all terminals and devices that are registered within the backup node for each item.

- STATION
- ROUTE
- IP-BS (Not used)
- PS

TOTAL: Displays number of terminals that are read out.

Information List: List up the information of selected item on Backup Type.

<STATION>

Displays all IP terminals/SIP Multiple Line terminals, Softphone that are registered to the node which CBKS command is used toward. When "RESET" is clicked, all terminals that are read out can be reset.

List of Station Information: Displays the registered terminal information such as UGN, TELN, TN, STN, FPC, LENS, HOME NODE FPC, KIND, UG50 Multi-Slot Mode (**Note 1**), TEC, and RESULT when "Get" is clicked. When performing the reset of the specified terminal, click the check box of appropriate terminal, and then click "RESET".

Note: TN and STN are not displayed for terminal information that is not registered to the node which CBKS command is used toward.

Note: You cannot reset the terminals (Non-IP/SIP Multiple Line terminals, Softphone) that are not registered to the node which CBKS command is used toward.

Note: Terminal reset is not available when TEC=18 (Virtual Line Appearance (for Dterm Multi-Line) is assigned.

Note 1: Available from FP95-114 V4 Issue 2.0.

<ROUTE>

Displays all peripheral devices such as MG that are registered to the node which CBKS command is used toward. When "RESET" is clicked, all terminals that are read out can be reset.

List of Route Information: Displays the registered route information such as LGRT, RT, TK, TN, FPC, LENS, HOME NODE FPC, and RESULT when "Get" is clicked. When performing the reset of the specified route, add a check mark to the check box of the appropriate route, and then click "RESET".

Note: TK, TN and LENS are not displayed for terminal information that is not registered to the node which CBKS command is used toward.

Note: You cannot reset the terminals that are not registered to the node which CBKS command is used toward.

<PS>

Displays all PSs whose operations are controlled by the node which CBKS command is used toward. When "RESET" is clicked, all PSs that are read out can return to Primary Node.

List of PS Information: Displays the PS information such as UGN, TELN, TN, STN, FPC, LENS, HOME NODE FPC, and RESULT when "Get" is clicked. Add a check mark to the check box of appropriate PS, and then click "RESET" to place the PS back into Primary Node.

Note: TN and LENS are not displayed for terminal information that is not registered to the node which CBKS command is used toward.

Note: You cannot reset the terminals that are not registered to the node which CBKS command is used toward.

CBND: Calculate Bandwidth Data

1. Functional Outline

This command calculates bandwidth data.

2. Parameters

Input data

START LOC-ID: Start location ID (0-4095)

END LOC-ID: End location ID (0-4095)

Cycle: Observation Cycle (10-300 seconds)

Start time: Start time of observation (Year/Month/Day/Hour/Minute/Second)

DisplayRange: Transit graph display time range of bandwidth.

Select the time (30 minutes, 1 hour, 2 hours, 4 hours, 6 hours, 12 hours, 24 hours).

Output Data

Start time: Start time of observation

Last time of acquisition:Last time of observation

Current bandwidth data

A LOC-ID:Location ID A

B LOC-ID:Location ID B

Used bandwidth [Kbps]:Current used bandwidth value

Limit value [Kbps]:Current limit value of bandwidth

Average value [Kbps]:Average value of bandwidth in the observing period

Maximum value [Kbps]:Maximum value in the observing period

Maximum time:Time recorded maximum value (Year/Month/Day/Hour/Minute/Second)

Restriction:Restriction counter

Buttons

Start:	Calculate bandwidth data.
Stop:	Stop the process.
Exit:	Exit the command.
Clear:	Clear the values.
Recalc:	Re-calculate bandwidth data.

CCSE: Change of Common Signaling Channel Equipment

1. Functional Outline

This command sets/resets the make-busy state of CCH card.

2. Parameters

LENS: Line Equipment Numbers of CCH card [five digits]

MG=XX, UNIT=X, GROUP=XX

LINK: Link Status [0-2]

0=Link Open

1=Link Close

2=Not Available

MB: Make-Busy Information [0-2]

0=Make Idle

1=Make Busy

2=Not Available

Note: This command cannot be used for ISDN-related card (such as PRT, DCH card).

CDBU: Change of Dch Backup

1. Functional Outline

This command executes the D-Channel route changeover, associated with the D-CHANNEL BACKUP-PRI feature (for AT&T/NT/N-ISDN2).

2. Parameters

Input Data

MG:	Module Group Number [00-07]	**Note 1**
CNT:	Number of Dch Backup Route [1-32]	**Note 1**

Buttons

Get:	Get information on the Dch Routes.
Change:	Execute the Dch route changeover.
Stop:	Cancel the Dch route changeover.
Exit:	Exit this command.

Output Data

RT:	External Route Number
STS0:	Primary-side DCH Status [ACT/STBY/OOS (out of service)]
STS1:	Backup-side DCH Status [ACT/STBY/OOS (out of service)]
P-LENS:	Primary DCH LENS (six digits)
B-LENS:	Backup DCH LENS (six digits)
CHG-STS:	Change Status [Completed/Executing]

Note 1: Data entry procedure by this command is as follows:

1. Specify the Module Group number in MG parameter.
2. Click Get button. The related Dch data appears in the display data field.
3. Referring to the display data, enter CNT number attached to the Dch to be changed over.
4. Click the Change button.

→ Now, the Dch changeover starts automatically.

CFCS: Control of Flash Card System

1. Functional Outline

This command performs the license files loading (SVI files) and checksum verification.

2. Precautions

(a) If the CPU card is in dual configuration, execute this command to both CPUs when loading the license files (SVI files).

(b) In the UMGi system, operations of the command are possible by the PCPro in each node.

3. Parameters

Input Data

System Select: Select the system to be executed.

System 0

System 1

Note: System Select is not displayed for SV9500 (Prepackaged Server Model).

Control Type:

SVI Load and Checksum Verify: SVI Load and checksum are performed.

CLPB: Control of Local Phone Book

1. Function Outline

This command enables deletion, copy and move of Local Phone book data. Phone book data (names and dial numbers) are not displayed during each operation.

2. Parameters

Input Data

PROCESS TYPE

Phone book data delete:	Select to delete Local Phone book data. All Local Phone book data for any one of STN, TELN(LDM), TELN(NDM) or LENS can be deleted. For the FCCS System, data deletion is available only for Local Phone book data of a terminal accommodated in node to which PC-Pro logs in.
Phone book data copy:	Select to copy Local Phone book data. All Local Phone book data can be copied by specifying any one of STN, TELN(LDM), TELN(NDM) or LENS as the original data and destination for copy. For the FCCS System, data copy is available only for Local Phone book data between terminals accommodated in node to which PCPro logs in. **Note 1**
Phone book data move:	Select to move Local Phone book data. All Local Phone book data can be moved to the specified destination by specifying any one of STN, TELN(LDM), TELN(NDM) or LENS as the original data and moving destination. For the FCCS System, moving data is available only for Local Phone book data between terminals accommodated in node to which PCPro logs in. **Note 2**, **Note 3**

Note 1: "Phone book data copy" is not available if Phone book data exists in the destination.

Note 2: "Phone book data move" is not available if Phone book data exists in the destination.

Note 3: If "Local Phone book data move" is executed, all of originally moved data will be cleared.

Parameter Type

STN:	Select to delete/copy/move the data for specified physical station number.
TELN(LDM):	Select to delete/copy/move the data for specified Telephone Number (LDM).
TELN(NDM):	Select to delete/copy/move the data for specified Telephone Number (NDM).
LENS:	Select to delete/copy/move the data for specified Line Equipment Numbers.

Readout or input data are different depends on Parameter Type. The data in each Parameter Type are shown below.

<Deleting data, Original data (for copy), Destination Copy, Original data (for move), Destination Move>

- Parameter Type=STN is selected, read out or input the following data:

  TN: Tenant Number
  STN: Physical Station Number (0-9, #, * [Maximum 6 digits])
  Phone book Data Num: Number of Local Phone book Data (0-100) is displayed.

- Parameter Type=TELN(LDM) is selected, read out or input the following data:

  UGN: User Group Number (1-255)
  TELN(LDM): Telephone Number (0-9, #, * [Maximum 16 digits])
  Phone book Data Num: Number of Local Phone book Data (0-100) is displayed.

- Parameter Type=TELN(NDM) is selected, read out or input the following data:

  UGN: User Group Number (1-255)
  TELN(NDM): Telephone Number (0-9, #, * [Maximum 16 digits])
  Phone book Data Num: Number of Local Phone book Data (0-100) is displayed.

- Parameter Type=LENS is selected, read out or input the following data:

  LENS: Line Equipment Numbers
  Phone book Data Num: Number of Local Phone book Data (0-100) is displayed.

Buttons

Get: Read out the data.

Execute: Start the process.

Exit: Exit this command.

CMNT: Control of SR-MGC/Geographic Redundancy Maintenance

1. Function Outline

This command controls the MGCs such as Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN), Survivable Remote Node and SR-MGC. MGC number and office name are specified by this command to recognize the MGC allocated to the target MGC, and it can also initialize the MGCs.
This command displays the operation state of the registered MGCs (which mean Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN), Survivable Remote Node and SR-MGC). Office data copy, program version up and changeover can be executed by this command to the SR-MGC; however, only Office Data Copy can be executed to the Primary Node/ Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN) and Survivable Remote Node.

Note: "MGCs" means all kind of MGC which are Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN), Survivable Remote Node and SR-MGC.

Note: Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN) and Survivable Remote Node are available from FP95-112 V2.

Note: MGCs controlled with this command are as follows:

- Geographic Redundancy is disabled:
  SR-MGC only
- Geographic Redundancy is enabled in the IMG/MMG system:
  Primary Node, Geo Redundant Node, Survivable Remote Node and SR-MGC
- Geographic Redundancy is enabled in the UMGi system:
  Primary Node (CCN), Primary Node (RN), Geo Redundant Node (CCN), Geo Redundant Node (RN), Survivable Remote Node and SR-MGC
- The main office belongs to a RNIP system earlier than FP95-112 V2:
  SR-MGC only

Note: For the UMGi system, this command can only be used when logging in to CCN.

2. Precautions

(a) When the Refresh button is clicked, operating state of all the MGCs (Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN), Survivable Remote Node and SR-MGC) in the network managed by the logged-in MGC can be indicated on the list. All the MGCs' data displayed on the list is output as a CSV file by clicking the CSV File Output button.

(b) The MGC data cannot be over written on this command. For Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN) and Survivable Remote Node data modifying except Self MGC, the data can be deleted using the CMNT command after the related data are deleted in the ADTM command. For SR-MGC data modifying except Self MGC, the data can be deleted by the CMNT command only.

(c) The following conditions must be considered when performing Office Data Copy & Load.

- Do not perform any PCPro operations other than CMNT command toward the Telephony Server or target MGCs during office data copy. The PCPro operation such as login/logoff can also cause a copy failure.

- When using the manual copy function of CMNT command, it must be completed before the office data copy of routine diagnosis starts. The manual copy function is canceled when the routine diagnosis starts. Once the office data copy is canceled, it will not be performed on that day regardless of ASYDL, SYS1, Indexes 844 and 845 settings.

  * To work around the above problem, assign data FF HEX to both ASYD SYS1 Index 87 and Index 88 to stop the routine diagnosis program before starting the manual office data copy.

(d) Precautions of SR-MGC Version Upgrade are different depending on the software versions.

SR-MGC (except Operating MGC) Version Upgrade is available with the File Control tab. The following conditions must be considered when performing the SR-MGC Version Upgrade.

- The SR-MGC Version Upgrade is enabled with the PROCESS TYPE: Program Copy/Program Switch parameter in the File Control tab.

- Do not perform any PCPro operations other than CMNT command during the program copy. The PCPro operation such as login/logoff can cause a copy failure.

- While executing a Program Copy/Program Switch, the office data copy process after routine diagnosis will not be performed. Therefore, the office data copy will not be performed within the same day.

- During office data copy process after routine diagnosis, Program Copy/Program Switch is not available.

  * When using the manual program copy function of CMNT command, it must be completed before the office data copy of routine diagnosis starts. To work around the above problem, assign data FF HEX to both ASYD SYS1 Index 87 and Index 88 to stop the routine diagnosis program before starting the manual program copy.

- When Program Copy is executed, a temporary file is created, and then the temporary file is overwritten by the program file.

- When the Stop button is pressed during the manual program copy process, the process is canceled before it is completed, and the temporary file is discarded.

- When the manual program copy process is still running at the time assigned with Appoint Stop Time, the process is canceled.

- During the version upgrade process, MGC does not perform office data copy after routine diagnosis, which means no office data copy on the day.

- During office data copy process after routine diagnosis, version upgrade is not available.

(e) The Telephony Server is required for SR-MGC Remote Version Upgrade using the CMNT command. For more information of SR-MGC Remote Version Upgrade, refer to Peripheral Equipment Description (IP Devices).

(f) It is not available to assign data using this command logging in to an RN of a UMGi System which disables Geographic Redundancy.

(g) [Initialize], [Change Operating] and [File Control] tabs are available on the following cases:

- When Geographic Redundancy is disabled, logging in to the MGCs except SR-MGC by PCPro.

- When Geographic Redundancy is enabled,
  - logging in to the Primary Node (Operating mode/Standby mode) by PCPro.
  - logging in to the Primary Node (CCN) (Operating mode/Standby mode) by PCPro.
  - logging in to the Primary Node (RN) (Operating mode only) by PCPro.
  - logging in to the Geo Redundant Node (Operating mode only) by PCPro.
  - logging in to the Geo Redundant Node (CCN) (Operating mode/Standby mode) by PCPro.
  - logging in to the Geo Redundant Node (RN) (Operating mode only) by PCPro.

(h) Target MGCs for this command are as follows:

X: Available, -: Not Applicable

Target MGC for Operations with CMNT	Geographic Redundancy			
	ASYDL,SYS1, Index 1354, Bit 0=0 (Disabled)	ASYDL, SYS1,Index 1354, Bit 0=1 (Enabled)		
		Login Destination: IMG/MMG System	Login Destination: UMGi System	
			CCN	RN
SR-MGC	X	X	X	-
Survivable Remote Node	-	X	X	-
Primary Node	-	X	-	-
Primary Node (CCN)	-	-	X	-
Primary Node (RN)	-	-	-	X **Note 1**
Geo Redundant Node	-	X	-	-
Geo Redundant Node (CCN)	-	-	X	-
Geo Redundant Node (RN)	-	-	-	X **Note 1**

Note 1: Available only for Primary Node (RN)/Geo Redundant Node (RN) with the same LP number as the PCPro login destination node.

(i) In the Geographic-Redundancy-enabled IMG/MMG system, to execute Office Data Copy & Load on the [File Control] tab and to change the data on the [Setting], [FTP Server Setting] and [Priority] tabs are available when logging in to the Primary Node by PCPro.
In the Geographic-Redundancy-enabled UMGi system, the same operations are available when logging in to the Primary Node (CCN)/Geo Redundant Node (CCN) by PCPro when ASYDL, SYS1, Index 1354, Bit1=1 (Permit the creation, editing and deletion of Office data on the Primary Node (CCN) or operating Geo Redundant Node (CCN)) is set.

(j) When UMGi system uses Geographic Redundancy, the CMNT command is executable from RN as well. However, some of the features are restricted.

(k) To check the status of Primary Node (CCN)/Geo Redundant Node (CCN)/Survivable Remote Node/SR-MGC, log in to Primary Node (CCN) or Geo Redundant Node (CCN) by using PCPro and execute the CMNT command. You cannot check the status of Primary Node (RN)/Geo Redundant Node (RN). Their health check status indicates "??" which means "health checks have not been executed" though they are shown in MGC list of the CMNT Command.

(l) To check the status of Primary Node (RN)/Geo Redundant Node (RN) (**Note 2**), log in to Primary Node (RN) or Geo Redundant Node (RN) by using PCPro and execute the CMNT command. You cannot check the status of Primary Node (CCN)/Geo Redundant Node (CCN)/Survivable Remote Node/SR-MGC. Their health check status indicates "??" which means "health checks have not been executed" though they are shown in MGC list of the CMNT Command.

Note 2: You can check the status of Primary Node (RN)/Geo Redundant Node (RN) only within the same LP number.

(m) To perform manual operations to Primary Node (RN)/Geo Redundant Node (RN), log in to RN that is in normal mode by using PCPro, and then execute the CMNT command.

(n) The following is an MGC list shown in CMNT command on UMGi with Geographic Redundancy.

- To check status of Primary Node (CCN/RN)/Geo Redundant Node (CCN/RN), connect PCPro to the node you want to check and execute the CMNT command.
  You cannot check the status of Primary Node (RN)/Geo Redundant Node (RN) from PCPro connected to Primary Node (CCN)/Geo Redundant Node (CCN), and vice versa. You cannot the status Survivable Remote Node/SR-MGC from PCPro connected to Primary Node (RN)/Geo Redundant Node (RN) as well.
  In addition, only information of nodes with the same LP number within the Primary Node (RN)/Geo Redundant Node (RN) can be collected; it cannot collect information on nodes having other LP number.

- The CMNT command lists all the equipment related to Primary Node/Geo Redundant Node/Survivable Remote Node/SR-MGC.
  This list is shown, regardless of operating or standby state of the node PCPro connected to.

3. Input Parameters (Case where Geographic Redundancy is disabled)

Input Data

Select any of the tabs, Setting, FTP Server Setting, Initialize, Change Operating, or File Control to activate the required operation.

Note: Priority tab is not displayed in when Geographic Redundancy is disabled.

<Setting Tab>

MGC No. [0-255]:

Assign a unique MGC Number to each SR-MGC equipment in remote office.

Note: SR-MGC No. has been used in the system software earlier than FP95-112 V2.

MGC Kind [SR-MGC (fixed)]:

Note: When Geographic Redundancy is disabled, “SR-MGC” is displayed in gray (fixed).

Office Name [Maximum 20 characters]:

Enter the Office Name for corresponding with the MGC Number.

LP No. [0/4/8/12/16/20/24/28]:

Select the Local Processor Number.

Note: This parameter is displayed when the system is a UMGi system.

IP Address:

Enter the IP address of SR-MGC, not the default IP address but the actual IP address to be allocated to the target SR-MGC.

Mode:

The type of changeover and recovery is to be executed as follows:

1 = Automatically switched to SR-MGC operation when communication failure has been detected between MGC and SR-MGC.
Automatically switched back to MGC operation when communication recovery has been detected between MGC and SR-MGC.

In FCCS Cluster network, if SR-MGC detects normality of communication between SR-MGC and Primary Node or SR-MGC and Backup nodes, SR-MGC will switch the rescued terminals back to the recovered node.

2 = Automatically switched to SR-MGC operation when communication failure has been detected between MGC and SR-MGC.
Automatically switched back to MGC operation when communication recovery between MGC and SR-MGC, and normality of communication between MGC and a selected terminal have been detected.

In FCCS Cluster network, if SR-MGC detects normality of communication between SR-MGC and Primary Node, Primary Node and a selected terminal, SR-MGC will switch the rescued terminals back to the Primary Node.

3 = Not used.

C_MGC: **Note 3**

Select an Operating Mode for SR-MGC.

0 = Normal Operation

1 = Office data cannot be copied from the MGC when FCCS Cluster feature is used. This value must be assigned to the Backup nodes used in FCCS Cluster network.

Note 3: This data is required for SR-MGC with FCCS Cluster. For node where this data = 1, office data copy, program copy, program switch and initialization from the Telephony Server are not available.
If KIND: Individual is selected in the Change Operating tab, the operation changeover for SR-MGC is also not allowed.

Assigning MA-ID:

Select this check box to assign MA-ID.

MA-ID [0000-9999]:

Message Area ID

Note: Note the following:
- This data is displayed when Flexible Network Re-routing is valid.
- Only one MGC number can be assigned to each MA-ID. An error message is displayed if the MA-ID which has been allocated to another MGC number.

FTP Server No. [1-256]:

Enter the number to be allocated to the FTP number.

<FTP Server Setting Tab>

Set the FTP server information on this tab for Remote Version Upgrade of SR-MGC.

FTP Server No. [1-256]:

Enter the number to be allocated to the FTP number.

IP Address:

Enter the IP address of FTP server.

Port No.:

Enter the port number to connect FTP server (default data: 21).

Location Name [Maximum 20 characters]:

Enter any name as a location name where the FTP server is provided.

File Directory Path [1 to 128 characters]:

Enter the directory path to where the program file and the checksum file are stored within the FTP server. [“0-9”, “A-Z”, “a-z”, “-”, “/”, “_”, “ ” (space)]

Program File Name [1 to 40 characters]:

Enter the program file name saved in the FTP server (the program file name to be downloaded to the SR-MGC). [“0-9”, “A-Z”, “a-z”, “-”, “.”, “_”, “ ” (space)]

Note: The Program file name is the image file name and the File Directory Path folder must also contain the image file checksum file.
Example of an Image File/Image File Checksum file: 4123_060_0011_120525

User ID [4 to 16 characters]:

Enter the user name to log in to the FTP server. [0-9”, “A-Z”, “a-z”, “-”, “_”]

User Password [4 to 16 characters]:

Enter the user password to log in to the FTP server. [“0-9”, “A-Z”, “a-z”, “-”, “_”]
For personal security, asterisks (*) are displayed on the screen instead of the password.

<Initialize Tab>

Initialization of SR-MGC can be activated on this tab.
Click either of the radio buttons and press the Execute button to execute initialization on the target SR-MGC.

KIND:

- Individual:
  Specify the MGC Number when this button is selected.

  MGC No.: Enter a unique MGC Number.

  Note: The following shows conditions for this parameter:
  - Do not specify the operating SR-MGC.
  - Do not specify the SR-MGC which has the data setting of C_MGC = 1 (SR-MGC is a Backup node in FCCS Cluster network). If specified, it causes an error.

- ALL:
  Select this button to execute the initialization on all the SR-MGCs in the network.

  MGC Kind Select: “SR-MGC” is displayed in gray (fixed).

  Note: The SR-MGCs which are selected by “ALL” of “KIND” are the Standby mode SR-MGCs only.

<Change Operating Tab>

The operation changeover between SV9500 MGC and SR-MGC is manually executed. Select the operation mode in CONDITION and KIND parameters, then click the Execute button. A dialog appears to confirm the changeover execution.

MGC Kind Select: “SR-MGC” is displayed in gray (fixed).

FUNC: “Change Operating” is displayed in gray (fixed).

CONDITION:

Select the direction of the operation changeover for SR-MGC. This command is executed in the MGC side.

- To Operating mode
  Turns the SR-MGC to Operation mode, which allows terminals to register to the SR-MGC. **Note 4**

- To Standby mode with terminal reset
  Turns the SR-MGC to Standby mode, which does not allow terminals to register to the SR-MGC. Use this parameter to switch into Standby mode after “To Operating mode” or manual changeover (ASYDL SYS1 Index 852 Bit 5=0) is executed. **Note 5 Note 6**

Note 4: This parameter forcibly switches SR-MGC into Operation mode from Standby mode, which means SR-MGC allows terminals to register to SR-MGC. This parameter does not help all the terminals registered in MGC to switch to SR-MGC.

Note 5: After the mode of SR-MGC has been switched by this command, the SR-MGC will stay in Operation mode. To switch the SR-MGC into Standby mode, use “To Standby mode with terminal reset” of CONDITION in the CMNT command. Note that the ASYDL setting (ASYDL SYS1 Index 852 Bit 5) is not valid to these operations. When SR-MGC enters Standby mode, the MGC starts to operate.

Note 6: Do not specify the SR-MGC which has the data setting of C_MGC = 1 (SR-MGC is a Backup node in FCCS Cluster network). If specified, it causes an error.

KIND:

Choose either of the operations by radio button.

- Individual
  Changeover to a specified SR-MGC is executed. Enter the MGC Number (0-255) of the target SR-MGC.

MGC No.: Enter a unique MGC Number.

- ALL
  Changeover to all the SR-MGCs in the network is executed.

<File Control Tab>

PROCESS TYPE: Processing type

Select the processing type to be executed.

- Office Data Copy & Load **Note 7**
- Program Copy
- Program Switch **Note 8**

Note 7: Do not specify the operating SR-MGC.

Note 8: Do not turn off SR-MGC during the program switch process. SR-MGC will not start up after it is turned off.

Select MGC No.

Select target MGC to execute the process such as selected with the PROCESS TYPE parameter such as Office Data Copy & Load, Program Copy or Program Switch.

Specifying SR-MGC:
Specify the target MGC number (0-255), the box of specified MGC number is displayed in yellow. And then click the Execute button.
To undo specifying MGC, click the box again.

All MGC (en bloc specifying):
Click the Select All button to execute office data or program copy to all the MGCs in the network.

The meaning of the indication is

COLOR	STATUS
Gray	MGC Number is not assigned/Not applicable
White	No processing request
Yellow	On standby (Already requested to execute the process)
Blue	Under processing
Green	Succeeded in processing
Red	Failed in processing
Magenta (Pink)	Cannot execute, because the SR-MGC is assigned as the Backup node

Note: The other conditions are as follows:
- Magenta is applicable when Location Diversity is enabled.
- When the Clear All button is clicked, all the MGC Numbers return to the state of No Processing Request.

- When the Stop button is clicked during office data copy, the operation is cut off after the currently copying file is completely copied. However, when DM/LDM/NDM copy is executed, the operation is cut off after all the DM/LDM/NDM files are copied. File copy operation takes about two minutes per file. (The time varies depending on the connection status of the network.)
- The following table shows whether or not office data is available to copy to the SR-MGC.

X: Available N: Not Available

Data Type	SR-MGC
Data Memory	X
Name Display	X
Wireless Call Forwarding	X
Call Forwarding	X
Speed Dialing	X
User Assign Key	X
Number Sharing	X
ACD Data Memory	X
Call Block	X
ICB (**Note 9**) and DR	X
Expanded Speed Calling (Not used)	(Not used)
Call Forwarding-Logout	X
One Touch Speed Calling Data for DtermIP	X
SPD Name Data	X
H.323 Terminal Call Transfer (Not used)	(Not used)
Message Area ID Data	X
SR-MGC Data **Note 10**	N
SIP Terminal Call Transfer **Note 11**	X
Mobile Service Data	X
Day/Night Data **Note 9**	N
Local Phone book Data	N
Soft Switch Data	N

Note 9: Available only for North America.

Note 10: This item is generated only on SR-MGC.

Note 11: SIP Terminal Call Transfer indicates the transfer information of SP Controlled SIP terminal.

Appoint Stop Time **Note 12**

Select this check box when the program copy needs to be stopped at the specified time.

OFF: Not appoint
ON: Appoint

Time: Time to Stop the Program Copy [00:00-23:59]

Specify the time to stop the program copy.

Restrict Concurrent Number **Note 12**, **Note 13**

Select this check box to restrict the number of SR-MGCs to allow concurrent copying.

OFF: Not restrict
ON: Restrict

Concurrent Number: Parallel Copy Number [1-255] **Note 14**

Specify the number of SR-MGCs to allow concurrent copying.

Note 12: This parameter is only displayed in the case of PROCESS TYPE = Program Copy is set.

Note 13: If this is not specified, copying will be executed for 256 SR-MGCs.

Note 14: Concurrent Number is limited depending on the maximum number of sessions in the FTP server. Also bandwidth, network configuration with the FTP server and communication status need to be considered. Please consult your network administrator before setting this data.

4. Input Parameters (Case where Geographic Redundancy is enabled)

Select any of the tabs, Setting, FTP Server Setting, Priority, Initialize, Change Operating, or File Control to activate the required operation.

Note: Earlier than FP95-112 V2, this command displays the operation state of the registered SR-MGC. Office data copy, program version up and changeover can be executed by this command only to the SR-MGC.
From FP95-112 V2, this command also displays the operation state of the registered MGCs used for Geographic Redundancy. When Geographic Redundancy is enabled, the operation state display and office data copy of the MGCs such as Primary Node/Primary Node (CCN)/Primary Node (RN), Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN) and Survivable Remote Node are available as well as SR-MGC although Program version up and changeover are only for SR-MGC.

<Setting Tab>

Assign and display MGCs information on this tab. When the data for MGC number assigned, the data is displayed. If not, the data for MGC number can be assigned.

- Common parameters:

Parameter	Description
MGC No.	Assign a unique MGC Number to each MGC equipment in office or remote office. [0-255] **Note 15**
MGC Kind	Select MGC Kind. **Note 16** SR-MGC Survivable Remote Node Geo Redundant Node Primary Node Geo Redundant Node (CCN) Primary Node (CCN) Geo Redundant Node (RN) Primary Node (RN)
LP No. **Note 17**	When the node belongs to a UMGi system, assign an LP number to each MGC. Selectable MGCs are different depending on the login destination. [0, 4, 8, 12, 16, 20, 24, 28, None (Not used)] **Note 18**

- Case of "MGC Kind = SR-MGC":

Parameter	Description
Office Name	Enter the Office Name of the remote office to which the corresponding MGC belongs. [Maximum 20 characters]
IP Address	Enter the IP address of SR-MGC, not the default IP address but the actual IP address to be allocated to the target SR-MGC. [0.0.0.1-255.255.255.254]

Parameter	Description
Mode	The type of changeover and recovery is to be executed as follows: 1: Automatically changed to SR-MGC when communication failure has been detected between SR-MGC and the target MGC. Automatically recovered to SR-MGC when communication recovery has been detected between SR-MGC and the target MGC. 2: Automatically changed to SR-MGC when communication failure has been detected between SR-MGC and the target MGC. Automatically recovered to SR-MGC when communication recovery has been detected between SR-MGC and the target MGC and communication normal between the representative terminal and the target MGC was detected. 3: Not used.
C_MGC **Note 19**	Select an Operating Mode for SR-MGC. 0: Normal Operation 1: Office data cannot be copied from the MGC when FCCS Cluster feature is used. This value must be assigned to the Backup nodes used in FCCS Cluster network.
Assigning MA-ID **Note 21**	Select this check box to assign MA-ID. [OFF/ON]
MA-ID **Note 21**	Message Area ID [0000-9999] **Note 22**
FTP Server No.	Enter the number to be allocated to the FTP number. [1-256]

- Case of "MGC Kind = Survivable Remote Node":

Parameter	Description
Model	Select "E" for SV9500/SR-MGC (E) or "S" for SR-Node(S). [E/S]
Configuration of CPU	Select "Single" for a single configuration or "Dual" for a dual configuration of CPU for MGC. [Single/Dual]
Office Name	Enter the Office Name for corresponding with the MGC Number. [Maximum 20 characters]
Number of Ports	Enter the number of MGC port licenses. [1-4294967295]
IP Address	IP address of Survivable Remote Node is displayed with either of the message below: • IP address is already assigned with the ADTM command. • Please assign IP address with the ADTM command.
Mode	The type of changeover and recovery is to be executed as follows: 1: Automatically changed to Survivable Remote Node when communication failure has been detected between Survivable Remote Node and the target MGC. Automatically recovered to Survivable Remote Node when communication recovery has been detected between Survivable Remote Node and the target MGC. 2: Automatically changed to Survivable Remote Node when communication failure has been detected between Survivable Remote Node and the target MGC. Automatically recovered to Survivable Remote Node when communication recovery has been detected between Survivable Remote Node and the target MGC and communication normal between the representative terminal and the target MGC was detected. 3: Not used.
Assigning MA-ID **Note 21**	Select this check box to assign MA-ID. [OFF/ON]

Parameter	Description
MA-ID **Note 21**	Message Area ID [0000-9999] **Note 22**
ACDP **Note 23**	Select this check box to use Call Distribution. [OFF/ON]
Call Distribution **Note 23**	Select "ACD" for using ACD call distribution method or "UCD" for using UCD call distribution method of ACDP for MGC. [ACD/UCD]

- Case of "MGC Kind = Geo Redundant Node/Geo Redundant Node (CCN)/Geo Redundant Node (RN)":

Parameter	Description
Configuration of CPU	Select "Single" for a single configuration or "Dual" for a dual configuration of CPU for MGC. [Single/Dual]
Use Physical PIR **Note 20**	Select this check box to use physical PIR of MGC. [OFF/ON]
Configuration of TSW **Note 20**	Select "Single" for a single configuration or "Dual" for a dual configuration of TSW for physical PIR of MGC. [Single/Dual]
Office Name	Enter the Office Name for corresponding with the MGC Number. [Maximum 20 characters]
IP Address	IP address of Geo Redundant Node is displayed with either of the message below: • IP address is already assigned with the ADTM command. • Please assign IP address with the ADTM command.
Assigning MA-ID **Note 21**	Select this check box to assign MA-ID. [OFF/ON]
MA-ID **Note 21**	Message Area ID [0000-9999] **Note 22**

- Case of "MGC Kind = Primary Node/Primary Node (CCN)/Primary Node (RN)":

Parameter	Description
IP Address	IP address of Primary Node is displayed with either of the message below: • IP address is already assigned with the ADTM command. • Please assign IP address with the ADTM command.

Note 15: MGC Number "0" is available only for SR-MGC. Do not set "0" for Primary Node, Geo Redundant Node and Survivable Remote Node.

Note 16: The following can be selected depending on the login destination state.
- When the login destination is IMG/MMG system
  SR-MGC
  Survivable Remote Node
  Geo Redundant Node
  Primary Node
- When the login destination is CCN of UMGi system
  SR-MGC
  Survivable Remote Node

Primary Node (CCN)
Geo Redundant Node (CCN)
Primary Node (RN)
Geo Redundant Node (RN)

- When the login destination is RN of UMGi system
  Geo Redundant Node (CCN)
  Primary Node (CCN)
  Geo Redundant Node (RN)
  Primary Node (RN)

Note 17: This parameter is displayed when the system is a UMGi system.

Note 18: The following can be selected depending on the MGC Kind.
- Primary Node (CCN)/Geo Redundant Node (CCN): 0, 8, 16, 24, None (Not used)
- Primary Node (RN)/Geo Redundant Node (RN): 0, 4, 8, 12, 16, 20, 24, 28
- SR-MGC/Survivable Remote Redundant Node: 0, 4, 8,12, 16, 20, 24, 28

Note 19: This data is required for SR-MGC with FCCS Cluster. For node where this data = 1, office data copy, program copy, program switch and initialization from the Telephony Server are not available.
If KIND = Individual is selected in the Change Operating tab, the operation changeover for SR-MGC is also not allowed

Note 20: This parameter is not displayed when the MGC Kind is Geo Redundant Node (CCN)/ Geo Redundant Node (RN).

Note 21: This data is displayed when Flexible Network Re-routing is valid.

Note 22: Only one MGC number can be assigned to each MA-ID. An error message is displayed if the MA-ID which has been allocated to another MGC number.

Note 23: This parameter is not displayed in North America.

<FTP Server Setting Tab>

Set the FTP server information on this tab for Remote Version Upgrade of SR-MGC.

Parameter	Description
FTP Server No.	Enter the number to be allocated to the FTP number. [1-256]
IP Address	Enter the IP address of FTP server.
Port No.	Enter the port number to connect FTP server. (default data: 21) [1-65535]
Location Name	Enter any name as a location name where the FTP server is provided. [Maximum 20 characters]
File Directory Path	Enter the directory path to where the program file and the checksum file are stored within the FTP server. [1 to 128 characters: “0-9”, “A-Z”, “a-z”, “-”, “/”, “_”, “ ” (space)]

Parameter	Description
Program File Name	Enter the program file name saved in the FTP server (the program file name to be downloaded to the MGCs). [1 to 40 characters: “0-9”, “A-Z”, “a-z”, “-”, “.”, “_”, “ ” (space)] **Note 24**
User ID	Enter the user name to log in to the FTP server. [4 to 16 characters: 0-9”, “A-Z”, “a-z”, “-”, “_”]
User Password	Enter the user password to log in to the FTP server. [4 to 16 characters: “0-9”, “A-Z”, “a-z”, “-”, “_”] For personal security, asterisks (*) are displayed on the screen instead of the password.

Note 24: The Program file name is the image file name and the File Directory Path folder must also contain the image file checksum file.
Example of an Image File/Image File Checksum file: 4123_060_0011_120525.

<Priority Tab>

Set the Operation Change Priority on this tab.

Setting of Operation Change Priority

Parameter	Description
Node Kind **Note 25**	When the node belongs to a UMGi system, select the Node Kind. [CCN/RN]
LP No. **Note 25**, **Note 26**	When the node belongs to a UMGi system, assign an LP number of RN to each MGC. Selectable numbers are different depending on the login destination. [0, 4, 8, 12, 16, 20, 24, 28]
MGC No.	Set the Operation Change Priority of Geo Redundant Node Number.

Note 25: This parameter is displayed when the system is a UMGi system.

Note 26: This parameter is displayed when “RN” is selected for Node Kind.

<Initialize Tab>

Initialization of MGCs can be activated on this tab.
Click either of the radio buttons and press the Execute button to execute initialization on the target MGC.

Parameter	Description
KIND	Select either of the radio buttons. Individual: Select this button to execute the initialization of the specified MGC by “MGC No.” ALL: Select this button to execute the initialization on all of MGCs which are selected by “MGC Kind Select” in the network. **Note 27**
MGC No.	Enter MGC Number of the initialize target MGC. [0-255] **Note 28**

Parameter	Description
MGC Kind Select	Select the MGC Kind. **Note 29** • SR-MGC • Survivable Remote Node • Primary Node/Geo Redundant Node • Primary Node (CCN)/Geo Redundant Node (CCN) • Primary Node (RN)/Geo Redundant Node (RN) **Note 30**

Note 27: The MGCs which are selected by "ALL" of "KIND" are only the Standby mode MGCs except the Self MGC.

Note 28: Do not specify the Self MGC and the operating MGC.

Note 29: The following can be selected depending on the login destination.
- When Geographic Redundancy is enabled in the IMG/MMG system
  SR-MGC
  Survivable Remote Node
  Primary Node/Geo Redundant Node
- When the login destination is CCN of UMGi system
  SR-MGC
  Survivable Remote Node
  Primary Node (CCN)/Geo Redundant Node (CCN)
- When the login destination is RN of UMGi system
  Primary Node (RN)/Geo Redundant Node (RN)
  ("Primary Node (RN)/Geo Redundant Node (RN)" is displayed in gray (fixed) if it is the only one selection.)

Note 30: Primary Node (RN)/Geo Redundant Node (RN) corresponds to the node which has the same LP number as the login destination has.

<Change Operating Tab>

The operation changeover between MGCs is manually executed. Select the operation mode in KIND and CONDITION parameters, then click the Execute button. A dialog appears to confirm the changeover execution.

- Case of "MGC Kind Select = SR-MGC" and "MGC Kind Select = Survivable Remote Node":

Parameter	Description
FUNC	"Change Operating" is displayed in gray (fixed).
CONDITION	Select changeover operation. To Operating mode:Switch to Operating mode To Standby mode with terminal reset: Switch to Standby mode with terminal reset
KIND	Select either of the radio buttons. Individual: Changeover to a specified MGC is executed. Enter the MGC Number (0-255) of the target MGC. ALL: Select this button to execute changeover on all of MGCs which is selected by "MGC Kind Select" in the network.

Parameter	Description
MGC No.	Enter the MGC Number of the target MGC. [0-255]

- Case of "MGC Kind Select = Primary Node/Geo Redundant Node":

Parameter	Description
FUNC	Select the operation for MGC. [Change Operating/Terminal Reset Indication]
CONDITION **Note 31**	Select the changeover operation. [Primary Node To Operating mode/Geo Redundant Node to Operating mode] Primary Node to Operating mode: Primary Node switches to Operating mode, and all Geo Redundant Nodes switch to Standby mode without Terminal Reset. Geo Redundant Node to Operating mode: Geo Redundant Node which is specified on "MGC No." switches to Operating mode, and Primary Node and all Geo Redundant Nodes except specified on "MGC No." switch to Standby mode without Terminal Reset.
KIND **Note 32**	Select either of the radio buttons. Individual: Select this button to execute the Terminal Reset of the specified MGC by "MGC No.". ALL: Select this button to execute the Terminal Reset on all of MGCs which are selected by "MGC Kind Select" in the network. **Note 33**
MGC No. **Note 32**, **Note 35**	Enter the MGC Number of the target MGC. [0-255] **Note 36**

- Case of "MGC Kind Select = Primary Node (CCN)/Geo Redundant Node (CCN)/Primary Node (RN)/Geo Redundant Node (RN)":

Parameter	Description
FUNC	Select the operation for MGC. [Change Operating/Terminal Reset Indication]
CONDITION **Note 31**	Select the changeover operation. [Primary Node To Operating mode/Geo Redundant Node to Operating mode] Primary Node to Operating mode: MGC Kind Select = Primary Node (CCN)/Geo Redundant Node (CCN) All Geo Redundant Nodes (CCN) switch to Standby mode without Terminal Reset. MGC Kind Select = Primary Node (RN)/Geo Redundant Node (RN) All the Geo Redundant Nodes (RN) with the same LP No. of the selected device switch to Standby mode without Terminal Reset. Geo Redundant Node to Operating mode: MGC Kind Select = Primary Node (CCN)/Geo Redundant Node (CCN) Primary Node (CCN) and Geo Redundant Nodes (CCN) (except selected Geo Redundant Node (CCN)) switch to Standby mode without Terminal Reset. MGC Kind Select = Primary Node (RN)/Geo Redundant Node (RN) Primary Node (RN) and all the Geo Redundant Nodes (RN) with the same LP No. of the selected device (except the selected Geo Redundant Node (RN)) switch to Standby mode without Terminal Reset.
KIND **Note 32**	Select either of the radio buttons. Individual: Select this button to execute the Terminal Reset of the specified MGC by "MGC No.". ALL: Select this button to execute the Terminal Reset on all of MGCs which are selected by "MGC Kind Select" in the network. **Note 33**, **Note 34**
MGC No. **Note 32**, **Note 35**	Enter the MGC Number of the target MGC. [0-255] **Note 36**

Note 31: This parameter is displayed when "Change Operating" is selected on FUNC.

Note 32: This parameter is displayed when "Terminal Reset Indication" is selected on FUNC.

Note 33: The MGCs which are selected by "ALL" of "KIND" are the Standby mode MGCs only.

Note 34: When MGC Kind Select is Primary Node (RN)/Geo Redundant Node (RN), it includes all the nodes which has the same LP number as the login destination has.

Note 35: This parameter is displayed when "Change Operating" is selected on FUNC and "Geo Redundant Node to Operating mode" is selected on CONDITION.

Note 36: Do not specify the operating MGC when "Terminal Reset Indication" in FUNC is selected.

<File Control Tab>

Manage the each file of MGCs on this tab.

Parameter	Description
PROCESS TYPE	Select the processing type to be executed. Office Data Copy & Load: Select this button to copy the Office Data to the selected MGCs. **Note 37** Program Copy: Select this button to copy programs to the selected SR-MGC. **Note 38** Program Switch: Select this button to switch the main program or backup program. **Note 38**, **Note 39**
Grid (MGC No. displayed)	Select target MGCs to execute the process which selected with the PROCESS TYPE parameter such as Office Data Copy & Load, Program Copy or Program. **Note 47** Specifying MGC: Specify the target MGCs number (0-255), the box of specified MGC number is displayed in yellow. And then click the Execute button. To undo specifying MGC, click the MGC number again. All MGCs (en bloc specifying): Click the Select All button to execute office data or program copy to all the MGCs in the network.
MGC No. Filtering **Note 43**	Only applies to the MGC Numbers of the selected MGC Kind.**Note 40**, **Note 41**, **Note 42** Select All: All MGC Kind. MGC Kind:Select each MGC for processing. [SR-MGC/Survivable Remote Node/Geo Redundant Node (CCN)/Primary Node (CCN)/Geo Redundant Node/Primary Node (RN)/Geo Redundant Node (RN)/Primary Node]
Appoint Stop Time **Note 44**	Select this check box when the program copy needs to be stopped at the specified time. OFF: Not appoint ON: Appoint Time: Time to Stop the Program Copy [00:00-23:59] Specify the time to stop the program copy.
Restrict Concurrent Number **Note 44**	Select this check box to restrict the number of MGCs to allow concurrent copying. **Note 46** OFF: Not restrict ON: Restrict Concurrent Number: Parallel Copy Number [1-255] **Note 45** Specify the number of MGCs to allow concurrent copying.

Note 37: Do not specify the operating MGC.

Note 38: Program Copy and Program Switch can be selected except when the node is an RN of UMGi system.

Note 39: Do not turn off MGC during the program switch process. MGC will not start up after it is turned off.

Note 40: Only controlled Node Kind already assigned can be selected.

Note 41: The following can be selected depending on the login destination.
- When Geographic Redundancy is enabled in the IMG/MMG system
  SR-MGC
  Survivable Remote Node
  Primary Node/Geo Redundant Node
- When the login destination is CCN of UMGi system
  SR-MGC
  Survivable Remote Node
  Primary Node (CCN)/Geo Redundant Node (CCN)
- When the login destination is RN of UMGi system
  Primary Node (RN)/Geo Redundant Node (RN)

Note 42: Primary Node (RN)/Geo Redundant Node (RN) corresponds to the node which has the same LP number as the login destination has.

Note 43: This parameter is available when selecting Office Data Copy & Load in "PROCESS TYPE" and Geographic Redundancy is enabled.

Note 44: This parameter is only displayed in the case of PROCESS TYPE = Program Copy is set.

Note 45: If this is not specified, copying will be executed for 256 MGCs.

Note 46: Concurrent Number is limited depending on the maximum number of sessions in the FTP server. Also bandwidth, network configuration with the FTP server and communication status need to be considered. Please consult your network administrator before setting this data.

Note 47: Only MGC number of SR-MGC is selectable when "Program Copy" or "Program Switch" is selected in the PROCESS TYPE.

The meaning of the indication in Grid is

COLOR	STATUS
Gray	MGC Number is not assigned/Not applicable
Cyan	Cannot execute, because the target MGC is the self MGC or either of the following nodes which manage office data: Primary Node, Geo Redundant Node, Primary Node (CCN), Geo Redundant Node (CCN), Primary Node (RN) or Geo Redundant Node (RN).
White	No processing request
Yellow	On standby (Already requested to execute the process)
Blue	Under processing
Green	Succeeded in processing
Red	Failed in processing

Note: The other conditions are as follows:

- When the Clear All button is clicked, all the MGC Numbers return to the state of No Processing Request.
- When the Stop button is clicked during office data copy, the operation is cut off after the currently copying file is completely copied. However, when DM/LDM/NDM copy is executed, the operation is cut off after all the DM/LDM/NDM files are copied. File copy operation takes about two minutes per file. (The time varies depending on the connection status of the network.)
- The following table shows whether or not office data is available to copy to the MGCs.

X: Available N: Not Available

Data Type	MGCs	
	Primary Node GR-Node SR-Node	SR-MGC
Data Memory	X	X
Name Display	X	X
Wireless Call Forwarding	X	X
Call Forwarding	X	X
Speed Dialing	X	X
User Assign Key	X	X
Number Sharing	X	X
ACD Data Memory	X	X
Call Block	X	X
ICB (**Note 48**) and DR	X	X
Expanded Speed Calling (Not used)	(Not used)	(Not used)
Call Forwarding-Logout	X	X
One Touch Speed Calling Data for DtermIP	X	X
SPD Name Data	X	X
H.323 Terminal Call Transfer (Not used)	(Not used)	(Not used)
Message Area ID Data	X	X
SR-MGC Data **Note 49**	N	N
SIP Terminal Call Transfer **Note 50**	X	X
Mobile Service Data	X	X
Day/Night Data **Note 48**	X	N
Local Phone book Data	X	N
Soft Switch Data	X	N

Note 48: Available only for North America.

Note 49: This item is generated only on SR-MGC.

Note 50: SIP Terminal Call Transfer indicates the transfer information of SP Controlled SIP terminal.

5. Output Parameters

Operating Information

Note: This information is displayed when Geographic Redundancy is enabled.

Parameter		Description
Self	MGC No.	Self MGC number [0-255]
	Kind	[Primary Node/Primary Node (CCN)/Primary Node (RN)/Geo Redundant Node/ Geo Redundant Node (CCN)/Geo Redundant Node (RN)/Survivable Remote Node/Not assigned]
	LP No. **Note 51**	Local Processor number [0/4/8/12/16/20/24/28/None (Not used)]
Control Mode **Note 52**		[Operating/Standby]
Operating **Note 53**	MGC No.	Operating MGC number [0-255/-]
	Kind	[Primary Node/Primary Node (CCN)/Primary Node (RN)/Geo Redundant Node/ Geo Redundant Node (CCN)/Geo Redundant Node (RN)/-]

Note 51: This parameter is displayed when the system is UMGi system.

Note 52: This parameter is not displayed when “Not assigned” is selected for “Kind”.

Note 53: This parameter is displayed when Self MGC Kind is Primary Node/Geo Redundant Node, Primary Node (CCN)/Geo Redundant Node (CCN), Primary Node (RN)/Geo Redundant Node (RN) and the “Control Mode” is Standby.

MGC List

Parameter	Description
MGC No.	MGC number [0-255]
MGC Kind	[Primary Node/Geo Redundant Node/Primary Node (CCN)/Geo Redundant Node (CCN)/Primary Node (RN)/Geo Redundant Node (RN)/Survivable Remote Node/ SR-MGC]
Model **Note 54**	Type of Survivable Remote Node [E/S] **Note 58** (“E” for SV9500/SR-MGC(E) and “S” for SR-Node(S))
LP No. **Note 66**	Local Processor number [0/4/8/12/16/20/24/28/None]
CPU **Note 54**	Configuration of CPU [Single/Dual] **Note 59**
Physical PIR **Note 55**	[Use/Not Use] **Note 57**
TSW **Note 55**	Configuration of TSW for physical PIR of MGC [Single/Dual] **Note 63**
Priority **Note 54**	The priority to operation change (to Operating mode) [1-7] **Note 58**

Parameter	Description
STS	Status of MGC OK: Connection between MGCs has been established normally NG: MGC power OFF, or communication error between MGC ??: Status reading OK (MGC Kind Mismatch): Connection between MGCs has been established normally, however, MGC Kind does not correspond with the registered MGC Kind by the CMNT command. OK (LP No. Mismatch): Connection between MGCs has been established normally, however, LP number does not correspond with the registered LP number by the CMNT command.
Control Mode	Operating mode of MGC Standby: Standby mode Operating: Operating mode ??: Status reading
Number of Ports **Note 54**	[1-4294967295] **Note 58**
Connect CNT	A total number of Terminals [0-65535] **Note 64**
Office Name	Office Name for corresponding with the MGC Number except Primary Node/ Primary Node (CCN)/Primary Node (RN). [Maximum 20 characters]
IP Address	[0.0.0.1-255.255.255.254] **Note 69**
Mode	Changeover/Recover Mode set in MGC **Note 60 Note 71**
Call Distribution **Note 60 Note 65**	Call Distribution of MGC When MGC Kind is SR-MGC: [ACD/UCD/NG/??/Not assigned/blank] When MGC Kind is not SR-MGC: [ACD/UCD/Not assigned]
C_MGC	Operating mode for MGC **Note 56** 0: Normal 1: Backup node in FCCS Cluster network
Assigning MA-ID **Note 67**	[OFF/ON] **Note 61**
MA-ID **Note 67**	Message Area ID [0000-9999] is displayed when Assigning MA-ID is “ON”.
FTP Server No.	FTP server number [1-256] **Note 56**
Location Name of FTP Server	Location Name where the FTP server is provided. [Maximum 20 characters] **Note 56**
WORK Program	Now working program [Maximum 40 characters] **Note 56**
TEMP Program	Now waiting program [Maximum 40 characters] **Note 56**
Office Data Copy Status	Office Data Copy Status in the MGC **Note 68** • No request • On Standby • Executing • Success • Failure • ACT Success, STBY Failure

Parameter	Description
Office Data Copy Time	Office Data Copy Starting Time [yy.MM.dd hh:mm] **Note 70** • yy: YEAR • MM: MONTH • dd: DAY • hh: HOUR • mm: MINUTE
Program Copy Status	Program Copy Status in MGC **Note 56 Note 68** • No request • On Standby • Executing (XX%) • Success • Failure
Program Copy Time	Program Copy Starting Time [yy.MM.dd hh:mm] **Note 56 Note 70** • yy: YEAR • MM: MONTH • dd: DAY • hh: HOUR • mm: MINUTE
SP STS	Status of SP (MPH and SIP Server) **Note 64** ??: Status reading OK: SP is OK NG(1): MPH of one system of dual configuration is NG NG(2): SIP Server of one system of dual configuration is NG NG(3): MPH and SIP Server of one system of dual configuration are NG **Note 73** NG(4): MPH is NG NG(5): SIP Server is NG NG(6): MPH and SIP Server are NG
CPU STS	Status of CPU **Note 64** OK(1): CPU Single OK OK(2): CPU Dual (0 side ACT) ACT OK/STANDBY OK OK(3): CPU Dual (1 side ACT) ACT OK/STANDBY OK NG(1): CPU Dual (0 side ACT) ACT OK/STANDBY NG NG(2): CPU Dual (1 side ACT) ACT OK/STANDBY NG ??: Status reading
Information for Engineer **Note 54**	NEC engineers use only [00-FF] **Note 62**

For the Geographic Redundancy enabled UMGi system, place a check mark for the following check box if it is necessary to display only the data of MGCs whose state is controlled by the PCPro login destination.

Parameter	Description
Display only the data of MGC controlling the state **Note 72**	OFF: Display the data of all the configured MGCs. ON: Display only the data of MGC controlling the state in the login destination. When ON is selected, the displayed data is different depending on the login node as shown below. -CCN SR-MGC Survivable Remote Node Primary Node (CCN) Geo Redundant Node (CCN) -RN Primary Node (RN) * Geo Redundant Node (RN) * *: RN within the same LP number as the login node

Note 54: The information is displayed only when Geographic Redundancy is enabled.

Note 55: The information is displayed only when Geographic Redundancy is enabled in the IMG/MMG system. It is not displayed in the UMGi system.

Note 56: Value is displayed only when the MGC Kind is “SR-MGC”.

Note 57: Value displayed only when the MGC Kind is “Geo Redundant Node”.

Note 58: Value displayed only when the MGC Kind is “Survivable Remote Node”.

Note 59: Value displayed only when the MGC Kind is “Geo Redundant Node”, “Geo Redundant Node (CCN)”, “Geo Redundant Node (RN)” or “Survivable Remote Node”.

Note 60: Value displayed only when the MGC Kind is “Survivable Remote Node” or “SR-MGC”.

Note 61: Value displayed only when the MGC Kind is “Geo Redundant Node”, “Geo Redundant Node (CCN)”, “Geo Redundant Node (RN)”, “Survivable Remote Node” or “SR-MGC”.

Note 62: Value displayed only when the MGC Kind is “Primary Node”, “Primary Node (CCN)”, “Primary Node (RN)”, “Geo Redundant Node”, “Geo Redundant Node (CCN)”, “Geo Redundant Node (RN)” or “Survivable Remote Node”.

Note 63: Value displayed only when the Physical PIR is Use.

Note 64: When STS (Status of MGC) is NG, the information before being set to NG is displayed.

Note 65: This parameter is not displayed in North America.

Note 66: This data is displayed when the system is UMGi system.

Note 67: This data is displayed when Flexible Network Re-routing is valid.

Note 68: “-” is displayed when C_MGC is “1”.

Note 69: This data is blank when no data is set.

Note 70: “--.--.-- --.--” is displayed when Month or Day is “00” or C_MGC is “1”.

Note 71: The displayed parameter depends on the case of “Input parameters” section. For details, see “Mode” description in the each “Input parameters” section.

Note 72: The information is displayed only when Geographic Redundancy is enabled in the UMGi system.

Note 73: When Primary Node is set as a dual configuration system and Geo Redundant Node/Survivable Remote Node is set as a single configuration system, the Geo Redundant Node/Survivable Remote Node is treated as a dual configuration system whose SP part of one side of the system is not working and “NG(3)” is displayed. In this case, “NG(3)” is just a display and the system is operating normally.

CMOD: Change of System Mode

1. Functional Outline

This command executes ACT/STBY change of the processor (CPU)/TSW and displays the status of CPU/TSW/PLO/F-BUS.

WARNING **A System failure may occur if this command is used in an improper way. Pay close attention when operating this command.**

2. Precautions

In an Appliance Model CCN of UMGi system, if there is a difference in SW7 and SW8 data setting in the ASSW command between CPU#0 and CPU#1, ACT/STBY change cannot be executed by this command. Be sure to match data setting between CPU #0 and CPU#1 and back up the soft switch data with the MEM_HDD command.

3. Parameters

Input Data

NODE SPECIFICATION **Note 1**

CCN: Central Control Node

LP: Specific LP

LP No: Specify an LP number [0-31] if you select LP.

Note 1: This item should be assigned only when this command is used in the UMGi/RNIP system. The parameter is displayed only when logging in to CCN.

TYPE: Type of Process (1,2)

1/2=Change Operating Mode/Make Busy of TDSW **Note 2**

DEVICE: Device to be changed (1,2) **Note 3**

1=CPU

2=TSW

SW: Type of Switch **Note 4**

1=TSW (fixed)

SYSTEM: System of Switch (0,1) **Note 4**

0/1=System 0/System 1

Note 2: When the status of TSW is ACT, “Make Busy of TDSW” for TYPE is invalid. Select “Change Operating Mode” to change the status of TSW from ACT to STBY before executing “Make Busy of TDSW”.

Note 3: This parameter appears only when “1” is selected in TYPE.

Note 4: This parameter appears only when “2” is selected in TYPE.

Output data

<Upper field>

Parameter:

- CPU
- TSW
- PLO
- PIR **Note 5**, **Note 6**
- MISCR (Not used)

Note 5: “ACT” or “STBY” is output in PIR field in the following conditions. However, this parameter does not output connection status of BUS cables between PIRs and between PIR and TSWR.
- At least one actual PIR is mounted by assignment of PIR mounting status (ASYDL, System 1, Index 556-557) and Unit status (ASYDL, System 1, Index 1026-1027).
- BUS cable is connected between EXB card and PIR0 or TSWR

Note 6: The following are details of PIR output data.
- “ACT” or “STBY” output for PIR will be the same as that of CPU.
- When BUS cable is not connected between EXB card and PIR or TSWR, “Disconnect” will be output.
- When only virtual PIR is mounted, “Not Mount” will be output.

System 0: Status of each parameter in System 0 side

- 0=Not Mount
- 1=ACT
- 2=STBY
- 3=MB
- 4=Disconnect **Note 7**

System 1: Status of each parameter in System 1 side

- 0=Not Mount
- 1=ACT
- 2=STBY
- 3=MB
- 4=Disconnect **Note 7**

Note 7: This data is output in the case of PIR only.

Note: When EXB card of STBY CPU and BUS cable in PIR are not connected (“Disconnect” will be output) and trying to execute CPU mode changing, the following message will be output in a pop-up menu: “STBY PIR is improper. Execute mode changing?”. When “Yes” is selected, the mode changing is executed. When “No” is selected, it is not executed.

Note: When EXB card of ACT CPU and BUS cable in PIR are connected correctly (“ACT” will be output) and EXB card of STBY CPU and BUS cable in PIR are not connected (“Disconnect” will be output), if CPU mode changing is executed, the mode will be returned to the mode before the execution. It is held by new ACT side faulty recovery to check the irregular between EXB card=PIR 0 and the disconnection of BUS card in PIR. This action is done while the output message of the mode change executing is displayed (“Changing” will be output). Therefore, at the time of CPU mode is output again, displayed mode is not changed yet.

<Lower field>

Parameter:

- F-BUS

A Side: Status of F-BUS in A Side

- 0=Not Mount
- 1=ACT
- 3=MB

B Side: Status of F-BUS in B Side

- 0=Not Mount
- 1=ACT
- 3=MB

CMWL: Control Message Waiting Lamp

1. Functional Outline

This command indicates ON/OFF status and controls the Message Waiting Lamp ON/OFF (MW Lamp) at the station. If the station is a Digital terminal, this command can also control Message Waiting Display on the terminal.

2. Parameters

Input Data

TYPE: Type of Input (1,2)

1=Designation by station number

2=Designation by LENS

TN: Tenant Number **Note 1**

STN: A maximum of five digits for a Business system, and six digits for a Hotel system.

Note 1

LENS: Line Equipment Numbers **Note 2**

MCI: Message Center MW Status (0,1)

0=OFF

1=ON

ATT: Attendant Console MW Status (0,1)

0=OFF

1=ON

STA: Station MW Status (0,1)

0=OFF

1=ON

VMM: Voice Mail Module MW Status (0,1)

0=OFF

1=ON

Note 1: This parameter appears when “1” is selected in TYPE.

Note 2: This parameter appears when “2” is selected in TYPE.

CMWL_T:Control Message Waiting Lamps – Telephone Number

1. Functional Outline

This command controls/displays the Message Waiting Lamp's ON/OFF status, by using Telephone numbers. When the station is a Digital terminal, this command can also control the Message Waiting Lamp Display. This command is only available at NCN (for FCCS network).

2. Parameters

Input Data

TYPE:	Designation by Telephone Number/Designation by LENS	
UGN:	User Group Number	**Note 1**
TELN:	Telephone Number (maximum 16 digits)	**Note 1**
LENS:	Line Equipment Numbers	**Note 2**
MWLAMP:	MW Lamp Status OFF/ON	
MCI:	Message Center MW Status OFF/ON	
ATT:	Attendant Console MW Status OFF/ON	
STA:	Station MW Status OFF/ON	
VMM:	Voice Mail Module MW Status OFF/ON	

Note 1: This parameter is valid when TYPE=1 is selected.

Note 2: This parameter is valid when TYPE=2 is selected.

Output Data

FPC:	Fusion Point Code (1-253)	**Note 3**
TN:	Tenant Number	**Note 3**
STN:	Physical Station Number	
	(a maximum of five digits for a Business system, and six digits for a Hotel system)	

Note 3: These parameters are for read only.

Buttons

Get:	Get information on the MW status.
Set:	Execute the assigned MW lamp control.
Exit:	Exit this command.

COPM: Change of Remote Node Operation Mode

1. Functional Outline

This command executes mode change of an RN manually.

2. Precautions

This command can be used only by logging in to the CCN of the UMGi/RNIP system operation.

3. Parameters

Input Data

Operation Mode Changeover:

- Changeover Mode (Normal Mode -> Survival Mode)
- Changeover Mode (Survival Mode -> Normal Mode)

LP No: Enter an LP Number to be changed over the mode.

COSSL:Control of SIP Server Data for LDM

1. Functional Outline

This command can display the link status of SP. Use COSSL for stand-alone system or COSSN in the FCCS network.

2. Parameters

Input Data

<Channel Status>

SIP Server ID: ID of SP [1-127]

CNT Specified Type: Select the way to specify the CNT

Individual: Execute the reset transaction for Specified individual CNT

Continuation: Execute the reset transaction for Specified continuous CNT

ALL: Execute the reset transaction for all listed CNT **Note 1**

Note 1: If ALL is selected, CNT input is not required.

CNT: When the Specified Type of CNT is selected, input CNT (Count) to execute reset transaction with the following procedure.

Output Data

<SIP Server Status>

SIP Server ID: ID of SP [1-127]

LINK: Status of link on the SP

ACHANNEL: Already assigned number of Speech Channels [3-1200]

OCHANNEL: Operating number of Speech Channels [3-1200]

NAME: SP Name

IP Address: IP address of SP

<Channel Status>

CNT: Count

LENS: Equipment Numbers

Control: Status of Control Channel

ST-B1: Status of Speech Channel (ST-B1)

ST-B2: Status of Speech Channel (ST-B2)

ST-B3: Status of Speech Channel (ST-B3)

PH LENS: Accommodation of PH

Buttons

Get:	Retrieve the information.
Exit:	Exit this command.
Execute:	Execute the reset transaction.

<Redundancy>

SIP Server ID: ID of SP [1-127]

ACT Server ID: Server condition is operated in Active-mode

STBY Server ID: Server condition is operated in Standby mode

WAIT Server ID: Server condition is operated in changing

OFF Server ID: Server condition is operated in suspending

Buttons

Get:	Retrieve the information.
Exit:	Exit this command.
Reset:	Reset specified SP in SIP Server ID.

Note: Only when the SP is in Active mode or Standby mode, reset will be executed, if in other conditions, reset will not be executed.

Note: On Single SP, reset can be executed.

Note: When reset transaction is executing, the remaining time until Time-out is displayed, if reset transaction is not completed within 3 minutes, the task will be stopped with displaying “Time-out”.

SP mode change: Execute forcible system changeover between Active-side SP and Standby-side SP.

Note: Only when system ID is specified in SIP Server ID and the system is redundant, this button is displayed.

Note: Only when the SP is in Active mode and another SP is in Standby mode, system changeover can be executed.

Note: When system changeover is executing, the remaining time until Time-out is displayed, if system changeover is not completed within 3 minutes, the task will be stopped with displaying “Time-out”.

Stop: Back to the screen that operating status is not loaded.

COSSN:Control of SIP Server Data for NDM

1. Functional Outline

This command can display the link status of SP. Use COSSL for stand-alone system or COSSN in the FCCS network.

2. Parameters

Input Data

<SIP Server Status>

FPC: Fusion Point Code [1-253]

<Channel Status>

SIP Server ID: ID of SP [1-127]

FPC: Fusion Point Code [1-253]

CNT Specified Type: Select the way to specify the CNT

Individual: Execute the reset transaction for Specified individual CNT

Continuation: Execute the reset transaction for Specified continuous CNT

ALL: Execute the reset transaction for all listed CNT **Note 1**

Note 1: If ALL is selected, CNT input is not required.

CNT: When the Specified Type of CNT is selected, input CNT (Count) to execute reset transaction with the following procedure.

Output Data

<SIP Server Status>

SIP Server ID: ID of SP [1-127]

LINK: Status of link on the SP

ACHANNEL: Already assigned number of Speech Channels [3-1200]

OCHANNEL: Operating number of Speech Channels [3-1200]

NAME: SP Name

IP Address: IP address of SP

<Channel Status>

CNT: Count

LENS: Equipment Numbers

Control: Status of Control Channel

ST-B1: Status of Speech Channel (ST-B1)

ST-B2: Status of Speech Channel (ST-B2)

ST-B3: Status of Speech Channel (ST-B3)

PH LENS: Accommodation of PH

Buttons

Get:	Retrieve the information.
Exit:	Exit this command.
Execute:	Execute the reset transaction.

<Redundancy>

SIP Server ID: ID of SP [1-127]

FPC: Fusion Point Code [1-253]

ACT Server ID: Server condition is operated in Active-mode

STBY Server ID: Server condition is operated in Standby mode

WAIT Server ID: Server condition is operated in changing

OFF Server ID: Server condition is operated in suspending

Buttons

Get: Retrieve the information.

Exit: Exit this command.

Reset: Execute the reset transaction for specified SP in SIP Server ID.

Note: Only when the SP is in Active mode or Standby mode, reset will be executed, if in other conditions, reset will not be executed.

Note: On Single SP, reset can be executed.

Note: When reset transaction is executing, the remaining time until Time-out is displayed, if reset transaction is not completed within 3 minutes, the task will be stopped with displaying “Time-out”.

SP mode change: Execute forcible system changeover between Active-side SP and Standby-side SP.

Note: Only when system ID is specified in SIP Server ID and the system is redundant, this button is displayed.

Note: Only when the SP is in Active mode and another SP is in Standby mode, system changeover can be executed.

Note: When system changeover is executing, the remaining time until Time-out is displayed, if system changeover is not completed within 3 minutes, the task will be stopped with displaying “Time-out”.

CPBKN:Continuous Assignment of System Phone Book for NDM

1. Functional Outline

This command assigns/deletes System Phone Book data in a lump (Batch Assignment) by drawing up text format database file. The data assigned by this command is written in the Network Data Memory (NDM) of the Network Control Node (NCN), updating the NDM at each Local Node (LN).

2. Parameters

Input Data

Input the following data to text format database file. For the details of database file, refer to "Database File for Batch Assignment".

INDEX: Index of Row [Number/Character string]
This field is not registered to the system. Input the index of row in the database. Do not leave a blank in this field.

RESULT: Result of File Check or Data Assignment/Deletion
Result of file check or data assignment/deletion is displayed. No data input is required in this field.

TN: Tenant Number [1-63]
Input Tenant Number. Do not leave a blank in this field.

UGN: User Group Number [1-255]
Input User Group Number. Do not leave a blank in this field.

NAME: Name [Maximum 24 characters]
Input the name to register to System Phone book. Do not leave a blank in this field. Do not leave a blank space at the end of name.

CNT: Count of DC [0-20]
Input the number of DC to register to System Phone book. Do not leave a blank in this field.

DC_01 - DC_20: Digit Code 01 - Digit Code 20 [Maximum 32 digits (0-9, #, *)]
Input the DC (dial number) to register to System Phone book.

Buttons

Read File: Read out the information.

Execute: Make the input data valid.

Exit: Exit this command.

Output Data

RESULT field:

F_OK: Database file is normal. (Execute button is active.)

F_ERR: Database file error occurs. (Execute button is not active. Data assignment is not available.)
The error occurs when database file is read out because of the following causes.

Input Data	Cause of Error
INDEX	• Data is not input.
TN	• Data is not input. • "0-9" is not input with single byte. • TN is not input correctly in the range of 1-63 (ASYD command SYS1, Index 8).
UGN	• Data is not input. • "0-9" is not input with single byte. • UGN is not input correctly in the range of "1-255".
NAME	• Data is not input. • Input character is not available for PCPro. • A blank space is left at the end of name. • Input name is beyond 24 characters.
CNT	• Data is not input. • 0-9 is not input with single byte. • Input name is beyond "20".
DC	• The number of input DC is fewer than CNT. • Digit Code (0-9, #, *) is not used. • Input data is beyond 32 digits. • The same DC exists in the same row.

R_OK: Data assignment/deletion is finished.

R_ERR: Data assignment/deletion error occurs.
For the details of error, refer to the operation log file ("PBX Alias name"Op.log) stored in Maintenance Console (PC).

R_NOT: No deleting data exists.

Database File for Batch Assignment

To draw up the database for System Phone Book data, the database file should be made under conditions below.

Sample Format of Database File

```
CPBKN_DATAFILE [CR+LF]
;
;Database File for Batch Assignment
;
;INDEX RESULT TN UGN NAME CNT DC_01 DC_02 DC_03 ... DC_20[CR+LF]
0001 63 255 Abiko 3 1000 2000 3000 [CR+LF]
0002 63 100 Suzuki 20 20001 20002 20003 ... 20020 [CR+LF]
```

Note 1

Input one-tab character between data.

Note: Above data input is an example.

Note 1: Two-tab character input is required between INDEX and TN data input field because RESULT field is not used while drawing up the database.

Conditions:

- The database file is drawn up with text file only. The file extension should be "*.txt".
- Data needs to be input to the file with the "tab delimited" text format.
- All data for one case should be included in a row.
- The end of a row is recognized by inputting "[CR+LF]".
- "CPBKN_DATAFILE '[CR+LF]'" needs to be input in the first row of the file by all means.
- Data for DC needs to be input to left justify.
- Data for CNT takes priority over the number of input DC. For example, only five DCs can be assigned if "5" is input in CNT field even though seven DCs have been already input in database.
- When "0" is input in CNT field, whole data in relevant row will be deleted.
- When ";" is input in left most part of each row, the row is regarded as comment row.
- One-tab character needs to be input between data to separate each data. However, Two-tab character input is required between INDEX and TN data input field because RESULT field is not used while drawing up database.

- Input data will be active only when data are input in the following order.

  INDEX
  RESULT
  TN
  UGN
  NAME
  CNT
  DC_01 - DC_20

- To input NAME, do not use characters and marks that cannot be used by PCPro. If input, error will occur. The following shows available characters and marks for PCPro.

  A-Z, a-z, 0-9, !, ?, -, +, %, &, /, (,), =, ., ,, :, ", ', ;, *, #, @, [,], SP (blank space)

  À, Á, Â, Ã, Ä, Å, Æ, Ç, É, Ê, Ñ, Ö, Ü, ß, à, á, â, ä, å, æ, ç, è, é ,ê, ë, ì, í, î, ï, ñ, ò, ó, ô, õ, ö, ù, ú, û, ü, ¿, ¡

  Note: õ is displayed in capital letter. There is no small letter for this character available.

<To Input Special Characters>

Special characters such as characters having an umlaut can be input in NAME field on PCPro by changing input language using function of Operating Systems. To change input language, refer to the manuals provided by each OS.

<To Open and Save Database File through Microsoft Office Excel>

The database file can be edited also using the Microsoft Office Excel. Refer to the following to open and save the database through the Microsoft Office Excel.

- To open database file

  STEP 1 Startup the Microsoft Office Excel.

  STEP 2 Click **File** → **Open...**.

  STEP 3 Select "Text Files (*.prn; *.txt; *.csv)" in pull down menu of **Files of type**. Select the relevant database file and click **[Open]** button.

  STEP 4 Do not change data in **Text Import Wizard - Step 1 of 3** and **Text Import Wizard - Step 2 of 3**. Click **[Next >]** button.

  STEP 5 **Text Import Wizard - Step 3 of 3** window appears. After selecting all columns in **Data preview** field, click the radio button of **Text** in **Column data format** filed. Then click **[Finish]** button.

  STEP 6 File is opened. Right-click on the top-left box of the sheet to select all cells in the sheet, and select **Format Cells...** from the menu.

  STEP 7 Select "Text" in **Category** filed on **Number** tab of **Format Cells** window, and click **[OK]** button.

  STEP 8 Edit the database file.

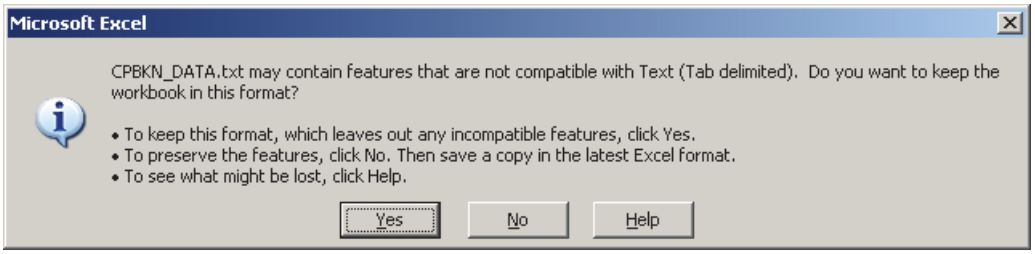
- To save database file

STEP 1 Click **File** → **Save As...** on the menu.

STEP 2 Select "Text (Tab delimited) (*.txt)" in pull down menu of **Save as type**. Select the relevant database file and click **[Save]** button after input the file name.

STEP 3 The following dialogue appears. Click **[Yes]** button.

Note: "CPBKN_DATA.txt" is used here for file name of the database as an example.



STEP 4 The database file is saved.

STEP 5 Open the database file with the text editor and go through the content.

Note: When double quotation marks (") and comma (,) are used in NAME field, they may be enclosed in quotation marks on the database. In that case, delete the enclosing quotation marks.

CPCP: Control of PC Port

1. Functional Outline

This command is used when the maintenance personnel disconnects/connects the PC port of DtermIP from/to the network.

2. Precautions

If an error occurs during data readout with this command, assign the data of the terminals and write it again (the error message appears while the data is being written). Then, perform reregistration of the terminals. When the registration is complete, the data will be reflected.

To reregister the terminal, either of the following operations is required:

- Terminal reregistration (also can be done through the make-busy and idle operation)
- SP-PHD initialization

Note: To initialize SP-PHD, either of the following operations is required:
- System initialization
- Internal PHE module initialization with the ADPM command

3. Parameters

Input Data

<For the data readout>

Kind of Specification: Select one of the following items:

All Data: Specifies all the DtermIP's PC ports.

IP Address Specification: Specifies the IP address of DtermIP that has been completed the Registration process.

STN Specification: Specifies the Tenant Number and station number.

TELN (NDM) Specification: Specifies the UGN and Telephone Number (NDM).

TELN (LDM) Specification: Specifies the UGN and Telephone Number (LDM).

IP Address START/END: Specify the range of IP addresses (0.0.0.1 - 255.255.255.254). This parameter is valid when Kind of Specification = "IP Address Specification".

TN START/END: Specify the range of Tenant Number.
This parameter is valid when Kind of Specification = "STN Specification".

STN START/END: Specify the range of station numbers (Up to six digits (0-9, *, #)).
This parameter is valid when Kind of Specification = "STN Specification".

UGN START/END: Specify the range of User Group Numbers (1-255). This parameter is valid when Kind of Specification = “TELN (NDM) Specification” or “TELN (LDM) Specification”.

TELN START/END: Specify the range of Telephone Numbers (Up to 16 digits (0-9, *, #)). This parameter is valid when Kind of Specification = “TELN (NDM) Specification” or “TELN (LDM) Specification”.

<For the execution of the process>

PC Port Control: Select either “Connection” or “Disconnection”.

<Others>

All Select: Mark the check box when selecting all data in the list.

Auto Scroll: By marking the checkbox, the data in the list is automatically scrolled to the end.

Note: By marking the checkboxes next to the numbers in the list, the individual readout data can be selected.

Output Data

No.: Each data in the list is numbered. (1-n)

Result: Status of the system

TN: Tenant Number (1-63)

STN: Station Number (Up to 16 digits (0-9, *, #))

LENS: Line Equipment Numbers

UGN (NDM): User Group Number (NDM) (1-255)

TELN (NDM): Telephone Number (NDM) (Up to 16 digits (0-9, *, #))

UGN (LDM): User Group Number (LDM) (1-255)

TELN (LDM): Telephone Number (LDM) (Up to 16 digits (0-9, *, #))

IP Address: IP address of Terminal (0.0.0.1 - 255.255.255.254)

Connection Status: Current status of the PC port (Connection/Disconnection)

Connection Status (LDM):Status of the PC port on the office data (Connection/Disconnection)

Buttons

Get:	Readout the data
Execute:	Start the process.
Skip:	Cancel the data readout or the execution of the process.
Exit:	Exit this command.

CPDM: Copy of Remote Node Data Memory

1. Functional Outline

This command provides you a function to copy the data stored in a CCN onto RNs.

2. Precautions

This command can be used only by logging in the CCN of the UMGi/RNIP system operation.

3. Parameters

Input Data

MODE: Specify the node to be copied.

- ALL: LPs except for CCN
- ONE: Specific LP

LP No: Specify an LP number.

Note: Displayed when One is selected in Mode.

Note: Only the numbers of installed LPs can be selected. The LP number of CCN cannot be selected.

KIND: Select the data type to be copied to Remote Node.

- DM/LDM
- NDM
- DM/LDM/NDM
- CM
- VNDM

INTERVAL: Specified a readout cycle [2-99].

Output Data

STATUS: Display status of LP0, LP4, LP8, LP12, LP16, LP20, LP24, and LP28.

CPRS: Controlled Alternate PRSCs

1. Functional Outline

This command is necessary for the Controlled Alternate PRSCs function. It either selects the class used between two priority restriction classes (Normal or Urgent), or indicates the class used. This command is allowed only when Bit 1 of SYS 1, Index 59 is “1” (Controlled Alternate PRSCs in service).

2. Parameters

N/U: Priority Restriction Class [N/U]

N=Normal

U=Urgent

CPSW: Control of Package/Card Switch Data

1. Functional Outline

This command displays information about the switches of a circuit card for 7U-PIR (hereinafter in this section called 7U-PIR card), and allows you to change the current settings of the software switches for the card. This command is also available for 7U-PIR cards with PA Adapter (PZ-M736) accommodated in 8U-PIR.

2. Precautions

(a) Hardware switch settings of a card cannot be changed with this command.

(b) This command is not available for 7U-PIR cards accommodated in 8U-PIR unless they are used with PA Adapter (PZ-M736).

(c) Information about the switches of control cards, such as CH-M01, CJ-PC00, and SPZ-SW25-A, cannot be displayed with this command.

(d) The circuit card database is required to use this command.

(e) You cannot specify the Line Equipment Numbers (LENS) of an empty slot with no card.

(f) Software switch settings cannot be edited when the OPE lamp of the card is off.

(g) An asterisk "*" is added to each item in the list of software switches to indicate that the switch setting has been changed in the Temporary mode.

(h) When changes have been made to software switch settings, you need to check the status of all the switches with the LPSW command before operation to ensure that none of these changes have been made in the Temporary mode without subsequently being saved.

(i) Software switch settings cannot be edited from a remote node in the UMGi/RNIP system.

Note: Only applicable to North America if earlier than FP95-113 V3.

3. Parameter

Parameters for this command are described in this section.

Processing Kind:

Individual Edit

Individual Initialization

Bulk Copy

Bulk Initialization

<In the case of selecting Individual Edit>

PMN: Port Micro Processor Number

Note: LENS from Group 24 to 31 cannot be specified.

Modification Mode

- Normal

  Used to store the settings of software switches (soft and immediate switches) in the Saving memory (Non-volatile memory) of a card. The card will be automatically initialized after the changes are saved.

- Temporary

  Used to reflect immediate switch settings in the Operational memory without initializing the card.

  Note: When a card is initialized, the current switch settings made in the Temporary mode will be reset to the previous state. Be sure to set the switch information in the Normal mode if the settings need to be retained after the initialization.

Circuit Card Information: Information about the card to edit the software switch settings via Individual Edit.

Circuit Card Name

Firm Name/Issue

Switch Information List:

Edit Switch Information:

Select the desired software switch from the **Switch Information List**, and change the settings in **Edit Switch Information.**

Modifiable

X: Switch data is modifiable

Blank: Switch data is unmodifiable

SW: Switch Name

SWTP: Switch Type

Sense Switch

Slide Switch

2 Ream Dip Switch

4 Ream Dip Switch

8 Ream Dip Switch

Short Plug

2 Ream Piano Switch

4 Ream Piano Switch

8 Ream Piano Switch

2 Point Toggle Switch

Push Switch

Short Piece

Power Switch

3 Point Toggle Switch

Soft Switch

Immediate Switch

Switch Data: Switch status.

SW1-8 (ON/OFF)

RSW: Status of Sense Switch (0-F)

2PSW: Status of 2 Point Switch (ON/OFF)

3PSW: Status of 3 Point Switch (UP/MIDDLE/DOWN)

☐ **Displays a Description of the Switch:**

Put a check mark in this check box when you want to view the description of the currently selected switch.

Description: Detailed information on the switch currently selected in the Switch Information List.

<In the case of selecting Individual Initialization>

PMN: Port Micro Processor Number

Note: LENS from Group 24 to 31 cannot be specified.

Circuit Card Information: Information about the card to initialize via Individual Initialization.

Circuit Card Name

Firm Name/Issue

Switch Information List: A set of information about the current switch status of the specified card.

<In the case of Bulk Copy>

Copy Source **Note 1**

PMN: Port Micro Processor Number

Note 1: If you have changed card switch settings in the Temporary mode without saving them, you cannot specify the card as copy source.

Reads per Execution from: Reading range to display the card list of the copy destination (MG/LP/ALL) **Note 2**, **Note 3**

MG: Module Group Number

LP No.: LP Number

Note 2: **LP** can be selected only when you are logged in to a UMGi system or an RNIP system.(UMGi/RNIP systems are available only for North America if earlier than FP95-113 V3.)

Note 3: **List of Circuit Cards to be Executed** shows all cards in the range specified in this parameter that exactly match the firmware information given in **Firm Name/Issue**.

Modification Mode: Normal (Fixed)

Circuit Card Information: Card information of the copy source.

Circuit Card Name

Firm Name/Issue

Switch Information List: Switch information of the card of the copy source.

List of Circuit Cards to be Executed: Bulk Copy will be executed for the selected cards.

PMN: Port Micro Processor Number

Circuit Card Name

Firm Name/Issue

Status/Result: Status of the bulk copy job.

Waiting

Failed to request writing

Status check is in progress

Failed to check the status

Completed

Canceled

Error Information: Detailed information about the error that occurred in the executed process.

<In the case of Bulk Initialization>

Reads per Execution from: Reading range to display the card list to execute initialization (MG/LP/ALL) **Note 4**, **Note 5**

MG: Module Group Number

LP No.: LP Number

Note 4: **LP** can be selected only when you are logged in to a UMGi system or an RNIP system. (UMGi/RNIP systems are available only for North America if earlier than FP95-113 V3.)

Note 5: **List of Circuit Cards to be Executed** will not be displayed if there is no card in the range specified in this parameter.

List of Circuit Cards to be Executed: Bulk Initialization will be executed for the selected cards.

PMN: Port Micro Processor Number

Circuit Card Name

Firm Name/Issue

Status/Result: Status of the bulk initialization job

Waiting

Failed to request writing

Status check is in progress

Failed to check the status

Completed

Canceled

Error Information: Detailed information about the error that occurred in the executed process.

CSCL: Continuous Change of Station Class

1. Functional Outline

This command can change the station class information (TEC, RSC, SFC) for a group of stations by specifying the range of the station number.

2. Parameters

Input Data

TN:	Tenant Number
STN(START):	First station number [0-9, #, * (maximum six digits)] **Note 1**
STN(END):	Last station number [0-9, #, * (maximum six digits)] **Note 1**
TEC(OLD):	Telephone Equipment Class before change [1-31] **Note 2, Note 3**
TEC(NEW):	Telephone Equipment Class after change [1-31] **Note 2**
RSC(OLD):	Route Restriction Class before change [0-15] **Note 3**
RSC(NEW):	Route Restriction Class after change [0-15]
SFC(OLD):	Service Feature Restriction Class before change [0-15] **Note 3**
SFC(NEW):	Service Feature Restriction Class after change [0-15]

Note 1: In the bottom part of the display, a check box is provided to determine whether to use "*" and "#" as a part of the station number. If necessary, check the box.

Note 2: Details on Telephone Equipment Class (TEC) are shown below:

1=DP (10pps)	2=PB
3=DP/PB	4=DP (20pps)
5-11=Not used	12=Dterm
13=Data Terminal via Dterm	14=Hot Line
15=CAS line	16=Data Terminal via Data Module
17=Not used	18=Virtual Line Appearance (for Dterm Multi-Line)
19-22=Not used	23=ISDN Terminal
24-26=Not used	27=8 Conference Equipment
28-31=Not used	

Note 3: If changing all classes of all specified stations, enter "**" for this parameter.

Buttons

Execute:	Make the input data valid.
Cancel:	Cancel the input data.

Exit: Exit this command.

Output Data

STN: Station Number

STATUS: Data Entry Result

OK=Data Assignment is successful **Note 4**

Note 4: If not OK (i.e. the data entry is not successful), related error message is displayed here.

CSPAL:Continuous Delete of Special Access Code for LDM

1. Functional Outline

This command collectively lists/deletes the special access code data (LDM) assigned by the ASPAL command.

2. Precautions

(a) During activating this command, be sure not to run any other commands.

(b) To delete the data collectively, first readout the registered data by either of the following ways:

- Read out the registered data from the saved CSV file.
or
- Refresh the list of registered data on Data field specifying the range by GET TYPE.

When deleting the data collectively with CSV file, be sure to check the difference between the actual assigned data and the data in CSV file beforehand.

(c) In the case of failing in collective deletion, the command shows error message in STATUS field. Data deletion is proceeded to the end even when error message appears.

(d) To specify the range in GET TYPE, Connection Status Index (CI) cannot be selected. N (Normal), H (Hooking), and B (Busy) are all listed.

(e) In FCCS network, when changing the tenant table development by the system data (ASYDN SYS1 Index 800 Bit 1), delete all the data assigned by ASPAL/ASPAN command on NCN and delete all the data assigned by ASPAL command on each LN as well.

(f) Refer to the table below for the required time to execute data deletion by CSPAL command. The running time may vary depending on the network condition.

NUMBER OF DATA ENTRY	RUNNING TIME
100	150 seconds
1,000	1,450 seconds
10,000	14,500 seconds

(g) This command cannot be used on Hotel System.

3. Parameters

CSV File

File Name: Read out CSV file name is displayed.

File Read button

When using the saved CSV file already having got the registered data, read the CSV file out on PC-Pro. Click **File Read** button to open **File Open** dialog box, and then specify the target CSV file.

File Write button

The data listed on the Data field is saved as a CSV file on PCPro. Click **File Write** button to open **Save As** dialog box, and then save the CSV file.

GET TYPE

Select ALL TYPE or RANGE TYPE in the drop-down list to set the range of registered data to be read out and listed in Data field.

- ALL TYPE: All the registered data is to be listed.
- RANGE TYPE: Registered data is to be listed specifying the range by TN and ACC.

  TN (Tenant Number): Set the range by entering START TN and END TN [1-63].

  ACC (Access Code): Set the range by entering START ACC and END ACC [Up to six digits].

Data

☐ ALL SELECT

Place a checkmark to delete all the listed data.

☐ Indicate from CNT to SRV

Place a checkmark to set the parameters CNT through SRV are to be listed.

Note: Regardless of the checkmark ON/OFF selected, STATUS field is always displayed.

<Details on parameters listed>

CNT: Number of lines **Note 1**

TN: Tenant Number

ACC: Access Code

CI: Connection Status Index

SRV: Kind of Service

SID: Service Index

SIDA: Service Index A

NND: Necessary Digit

NND1:	Necessary Digit for Speed Calling
FPC:	Fusion Point Code
STATE:	Hotel Service Code
NO1:	Kind of Assignment Number
NO2:	Kind of Assignment Number
KIND:	Kind of Function
PNO:	Pattern Number for AOSP command
A/G:	Admin/Guest
LGRT:	Logical Route Number
2nd DT:	Second Dial Tone
AH:	Authorization Code
SUB:	Sub Address Dialing
SKIP:	Skip Digits
TN:	Tenant Number
EQP:	Announcement Equipment Number
LGRT1~15:	External Logical Route Number
STATUS:	Deletion result, error message, and error message for abnormal parameter value are displayed.

Note 1: Deletion target data can be selected individually by the CNT check box.

CSPAN:Continuous Delete of Special Access Code for NDM

1. Functional Outline

This command collectively lists/deletes the special access code data (NDM) assigned by the ASPAN command.

2. Precautions

(a) During activating this command, be sure not to run any other commands.

(b) To delete the data collectively, first readout the registered data by either of the following ways:

- Read out the registered data from the saved CSV file.
or
- Refresh the list of registered data on Data field specifying the range by GET TYPE.

When deleting the data collectively with CSV file, be sure to check the difference between the actual assigned data and the data in CSV file beforehand.

(c) In the case of failing in collective deletion, the command shows error message in STATUS field. Data deletion is proceeded to the end even when error message appears.

(d) When NDM data broadcasting comes up between the FCCS nodes during executing the collective deletion by CSPAN command, the error message “Cannot write data because broadcast or Office Data copy is executing.” is displayed in STATUS field. Data deletion is proceeded to the end even when error message appears.

(e) To specify the range in GET TYPE, Connection Status Index (CI) cannot be selected. N (Normal), H (Hooking), and B (Busy) are all listed.

(f) In FCCS network, when changing the tenant table development by the system data (ASYDN SYS1 Index 800 Bit 1), delete all the data assigned by ASPAL/ASPAN command on NCN and delete all the data assigned by ASPAL command on each LN as well.

(g) Refer to the table below for the required time to execute data deletion by CSPAN command. The running time may vary depending on the network condition.

- Stand-alone

NUMBER OF DATA ENTRY	RUNNING TIME
100	160 seconds
1,000	1,630 seconds
10,000	16,500 seconds

- FCCS

NUMBER OF DATA ENTRY	RUNNING TIME
100	160 seconds
1,000	1,630 seconds
10,000	16,300 seconds

- FCCS over IP (P2P)

NUMBER OF DATA ENTRY	RUNNING TIME
100	160 seconds
1,000	1,630 seconds
10,000	16,300 seconds

- FCCS with FCH card

NUMBER OF DATA ENTRY	RUNNING TIME
100	160 seconds
1,000	1,640 seconds
10,000	16,300 seconds

(h) This command cannot be used on Hotel System.

3. Parameters

CSV File

File Name: Read out CSV file name is displayed.

File Read button

When using the saved CSV file already having got the registered data, read the CSV file out on PC-Pro. Click **File Read** button to open **File Open** dialog box, and then specify the target CSV file.

File Write button

The data listed on the Data field is saved as a CSV file on PCPro. Click **File Write** button to open **Save As** dialog box, and then save the CSV file.

GET TYPE

Select ALL TYPE or RANGE TYPE in the drop-down list to set the range of registered data to be read out and listed in Data field.

- ALL TYPE: All the registered data is to be listed.
- RANGE TYPE: Registered data is to be listed specifying the range by TN and ACC.

  TN (Tenant Number): Set the range by entering START TN and END TN [1-63].

  ACC (Access Code): Set the range by entering START ACC and END ACC [Up to six digits].

Data

☐ ALL SELECT

Place a checkmark to delete all the listed data.

☐ Indicate from CNT to SRV

Place a checkmark to set the parameters CNT through SRV are to be listed.

Note: Regardless of the checkmark ON/OFF selected, STATUS field is always displayed.

<Details on parameters listed>

CNT:	Number of lines **Note 1**
TN:	Tenant Number
ACC:	Access Code
CI:	Connection Status Index
SRV:	Kind of Service
SID:	Service Index
SIDA:	Service Index A
NND:	Necessary Digit
NND1:	Necessary Digit for Speed Calling
FPC:	Fusion Point Code

STATE:	Hotel Service Code
NO1:	Kind of Assignment Number
NO2:	Kind of Assignment Number
KIND:	Kind of Function
PNO:	Pattern Number for AOSP command
A/G:	Admin/Guest
LGRT:	Logical Route Number
2nd DT:	Second Dial Tone
AH:	Authorization Code
SUB:	Sub Address Dialing
SKIP:	Skip Digits
TN:	Tenant Number
EQP:	Announcement Equipment Number
LGRT1~15:	External Logical Route Number
STATUS:	Deletion result, error message, and error message for abnormal parameter value are displayed.

Note 1: Deletion target data can be selected individually by the CNT check box.

CSTN: Continuous Change of Station Number

1. Functional Outline

This command can change the consecutive station numbers for a group of stations by specifying the station number range.

2. Parameters

Input Data

TN: Tenant Number

OLD STN(START): First station number before change [0-9, #, * (maximum six digits)] **Note 1**

OLD STN(END): Last station number before change [0-9, #, * (maximum six digits)] **Note 1**

NEW STN(START): First station number after change [0-9, #, * (maximum six digits)] **Note 1**

NEW STN(END): Last station number after change [0-9, #, * (maximum six digits)] **Note 1**

Note 1: In the bottom part of the display, a check box is provided to determine whether to use "*" and "#" as a part of the station number. If necessary, check the box.

Buttons

Execute: Make the input data valid.

Cancel: Cancel the input data.

Exit: Exit this command.

Output Data

OLD STN: Station number before change

NEW STN: Station number after change

STATUS: Data Entry Result

OK=Data Assignment is successful **Note 2**

Note 2: If not OK (i.e. the data entry is not successful), related error message is displayed here.

CTSP: Control of Terminal Registration

1. Functional Outline

This command resets terminals registered to SP part (i.e. cancellation of terminal registration) and moves the member terminals from one side of SP parts in the dual configuration system (System 0 or System 1) to the other.

2. Precautions

Listed below are factors to be considered:

(a) This command only works on a Telephony Server with dual (redundant) configuration in which both SPs are operating normally. If either SP is down due to a problem, this feature is not available.

(b) When this command is used in an ACD system, the following system data assignment is required:

ASYDL/ASYDN, System Data 1, Index 874, Bit 3=1 (ACDP Automatic Logoff is in service.)

Otherwise, ACD terminals are not logged off even after being reset, to which incoming calls are still distributed. Thus calls routed to the terminals during re-registration will remain unanswered.

(c) This command is only valid for terminals being controlled by SP-PHDs, such as IP terminals and SIP Multiple Line terminals.

(d) Resetting terminals registered to SP-PHD can be made with specifying MPH-ID. Assign MPH-ID=1 for SP-PHD in the CPU #0 and MPH-ID=2 for SP-PHD in the CPU #1.

(e) This command resets member terminals according to the parameters (Normal/Force/Registration Restriction) specified for PH Select (PHD):**Note 1 Note 2 Note 3**

- When [Normal] is chosen:

  Resets only the member terminals in idle state (not using the My Line or any Sub Lines). All idle terminals are subject to this reset, regardless of whether the user is logged in or not (only applicable for an agent position), or whether the Headset Key is on or off.

  Calls in transition (on hold or in transfer) are not affected by this setting. Call Hold and Call Transfer features are also available on terminals in operation.

- When [Force] is chosen:

  Resets member terminals placing a call on hold or transferring a call, as well as idle terminals, at the time when a request for terminal reset is issued.

  Calls in transition (on hold or in transfer) are not affected until the request is issued. Call Hold and Call Transfer features are also available on terminals in operation.

- When [Registration Restriction] is chosen:

  Never resets member terminals. Terminals already registered or calls in transition (on hold or in transfer) are not affected.

Note 1: Suspending or terminating the execution of this command will stop sending terminal reset requests and allow the registration procedure. Be sure to keep the command active until the move of the member terminals is complete.

Note 2: When [All Release] is chosen for [Change Type] of this command, terminal registration to the specified SP-PHD is denied during the execution of the command, regardless of the setting of the terminal reset.

Note 3: When [Separate Release] is chosen for [Change Type] of this command, terminal registration to the specified SP-PHD is allowed or denied during the execution of the command, according to the load balance (the number of registered terminals) between SP-PHDs. (Terminals are moved from SP-PHD with more terminals to the one with less terminals so that they are distributed evenly between the SP-PHDs.)

3. Parameters

Input Data

<SP Control>

LP No. (0, 4, 8, 12, 16, 20, 24, 28)

This parameter is displayed when the system in a UMGi system. Select an LP number to apply the setting.

Note: LP numbers displayed for this parameter are different depending on the system:
- In the case of logging in to a CCN in a RNIP system, an LP number of self CPU is displayed.
- In the case of logging in to CCN in a UMGi system, available numbers in the frame configuration are displayed (if logging in to an RN only the LP of the RN will be displayed).

ChangeType (Separate Release/All Release)

Separate Release: Distributes the member terminals of the SP-PHD specified with MPH-ID to share the load balance with the other SP-PHD.

All Release: Moves all the member terminals of the SP-PHD specified with MPH-ID to the other SP-PHD.

PH Select (Normal/Force/Registration Restriction)

Normal: Resets only the member terminals in idle state. Terminals using the My Line or a Sub Line are not affected.

Force: Resets member terminals, regardless of whether its My Line or any of Sub Lines are being used.

Registration Restriction: Denies new terminal registration to the specified SP-PHD, regardless of the setting of [Change Type] (Separate Release/All Release). Does not reset member terminals of the specified SP-PHD.

Output Data

MPH-ID Registration Terminal Information

CNT: Registration count

MPH-ID: Identification number of SP controlling the member terminals **Note 4**

PHD: The number of member terminals registered to the SP-PHD

Note 4: Assign MPH-ID=1 for SP-PHD in the CPU #0 and MPH-ID=2 for SP-PHD in the CPU #1.

DCBD: Display of Call Block Entry Data

1. Functional Outline

This command displays the following Call Block data that user assigned from the terminal:

- Number of station/trunk whose call is to be blocked (in the remainder of this page, denoted as Restriction Number)
- Registered Restriction Numbers in total

Data can be obtained by entering any of the station's telephone number (TYPE 1), physical station number (TYPE 2) or LENS (TYPE 3) in the parameters below:

2. Parameters

Input Data

TYPE:Selection of Input Data Type

TYPE 1 (Input Data = UGN, TELN) **Note 1**

TYPE 2 (Input Data = FPC, TN, STN) **Note 1**

TYPE 3 (Input Data = FPC, LENS) **Note 1**

READ (button to view the Display Data)

EXIT (button to exit)

Note 1: When using this command, first choose the input data type (TYPE 1 - 3) in TYPE selection list box. Then the following parameters appear, according to the selected data type.

- When TYPE 1 is selected: User Group Number [UGN]

  Telephone Number [TELN (maximum 16 digits)]
- When TYPE 2 is selected: Fusion Point Code [FPC (1-253)]

  Tenant Number [TN (maximum three digits)]

  Physical Station Number [STN (maximum six digits)]
- When TYPE 3 is selected: Fusion Point Code [FPC (1-253)]

  Line Equipment Numbers [LENS]

Output Data

CNT:Registered Restriction Numbers in total (1-5)

DC:Each Restriction Number

- When physical station number is registered (maximum six digits)
- When Telephone Number is registered (maximum 16 digits)
- When Trunk Call Number is registered (maximum 32 digits)

DCEN: Display of Connection Trunk LENS Data for LDM

1. Functional Outline

This command displays the registered connection trunk/route data by designating LENS.

2. Parameters

Input Data

C_LENS:	Line Equipment Numbers [six digits]

Output Data

C_RT:	Connection Route Number [1-1023]
C_TK:	Connection Trunk Number [1-4095]
RT:	External Route Number
TK:	Trunk Number [1-255]
TN:	Tenant Number

DCON: Display of Connection Status

1. Functional Outline

This command displays the connection status of the station and trunks. If the specified station or trunk is busy, the connected party is displayed. The activation of this command does not affect calls in progress. Encryption status for voice data is displayed in SEC as follows:
O: encrypted, X: not encrypted, blank: the system or the terminal is not available for encryption. **Note 1**

Note 1: Data in SEC is displayed on a LENS basis. For more detailed information on SEC, see The Relationship between SEC value and Encryption on the next page.

2. Parameters

Input data

Type:	Kind of Connection Status (1-4) 1=Station of Connection Status 2=Trunk of Connection Status 3=LENS of Connection Status 4=Connection Trunk of Connection Status (FCCS Network)
TN:	Tenant Number **Note 2**
STN:	Maximum number of digits is five for Business system, and six for Hotel system. **Note 2**
RT:	Route Number **Note 3**
TK:	Trunk Number **Note 3**
LENS:	Line Equipment Numbers **Note 4**
C_RT:	Connection Route Number (1-1023) **Note 5**
C_TK:	Connection Trunk Number (1-4095) **Note 5**

Note 2: This data entry is valid when TYPE=1.

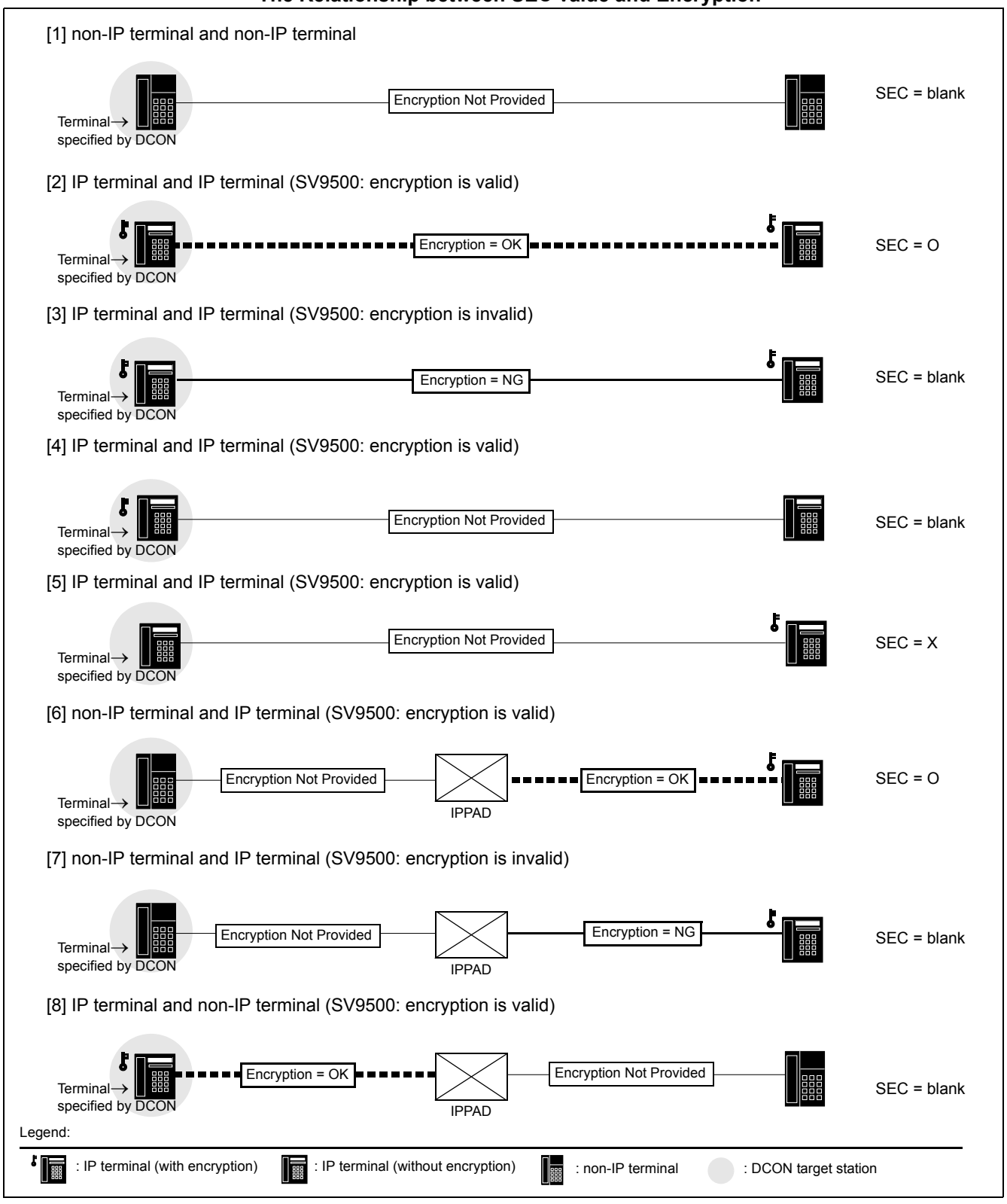
Note 3: This data entry is valid when TYPE=2.

Note 4: This data entry is valid when TYPE=3.

Note 5: This data entry is valid when TYPE=4.

The following shows the relationship between SEC value and encryption on a connection pattern basis.

The Relationship between SEC value and Encryption



DDMO: Display of Data Memory Occupancy

1. Function Outline

This command displays the data memory occupancy (used area size, free area size, maximum area size, and usage rate of data memory).

Note: When there are unassigned memory blocks, their sizes are not to be displayed.

2. Parameters

Output Data

Execute the DDMO command, and click “Get” button; the following area sizes of the data memory are to be displayed.

DM: Data Memory

Used-size: the size of the used area of the data memory

Free-size: the size of the free area of the data memory

Max-size: the maximum area size of the data memory

Usage: the usage rate (proportion of the used area size to the maximum area size)

LDM: Local Data Memory

Used-size: the size of the used area of the data memory

Free-size: the size of the free area of the data memory

Max-size: the maximum area size of the data memory

Usage: the usage rate (proportion of the used area size to the maximum area size)

NDM: Network Data Memory

Used-size: the size of the used area of the data memory

Free-size: the size of the free area of the data memory

Max-size: the maximum area size of the data memory

Usage: the usage rate (proportion of the used area size to the maximum area size)

Click the “Detail” button, and the detailed information of the data memory size is displayed.

DFLN: Display Up of Location Free Numbering

1. Functional Outline

This command checks the assigned data of Location Free Numbering Service. When this command is activated, the assigned data are displayed on a basis of each designated station number.

2. Parameters

Input data

FUNCTION: Function Type

•ID-No

•STN

L-STN: Logical number (ID-No) [Maximum six digits] **Note 1**

TN: Tenant Number [1-63] **Note 2**

P-STN: Physical Number (station number) [Maximum six digits] **Note 2**

Output data

RSC: Route Restriction Class [0-15]

SFC: Service Feature Restriction Class [0-15]

DC: Digit Code [0-9,*,#]

Note 1: This parameter is entered/displayed only when “ID-No” is selected for the FUNCTION.

Note 2: This parameter is entered/displayed only when “STN” is selected for the FUNCTION.

DFTD: Display of System Message Details

1. Functional Outline

This command is necessary to print the system messages detected by Fault Diagnostic programs.

When the fault scanning (Scanning SV9500) is effective, PCPro can scan SV9500 status by polling every 20 seconds, (default setting is effective.) If the SV9500 has faults, this command executes automatically.

Up to 512 messages can be compiled on PCPro. After the number of compiled messages reaches the maximum number, the coming message can not be obtained.

2. Parameters

Input data

New/Old

Show Details: Yes/No

DHDF: Display of HD File Information

1. Functional Outline

This command displays or deletes the Office Data files preserved on the specified SV9500 Hard Disk.

2. Precautions

(a) In the UMGi system, operations of the command are possible by the PCPro in each node.

3. Parameters

Input Data

System Select: 0: System 0

1: System 1

Data Select: 11 - Data Memory Files (DM)

12 - Call Forwarding Data Files (CFD)

13 - Speed Calling Data Files (SPD)

14 - Remote Call Forwarding Data File (RCF) *(JAPAN only)*

15 - Name Display Data Files (ND)

16 - Data Memory Files (NDM)

17 - Data Memory Files (LDM)

18 - User Assign Key Data

19 - Number Sharing Data

22 - ACD Data Memory

23 - Call Block Data

26 - ICB and DR *(Not used)*

27 - Expanded Speed Calling Data *(Not used)*

28 - Call Forwarding-Logout

29 - One Touch Speed Calling Data for DtermIP

32 - H.323 Terminal Call Transfer *(Not used)*

33 - Message Area ID Data

34 - SR-MGC Data

35 - SIP Terminal Call Transfer

36 - SPD Name Data

37 - Mobile Service Data

38 - Day/Night Data

39 - Local Phone book Data

40 - Soft Switch Data

LP No.: Designate the LP number. (Required when 12, 13, 18, 19, 23, 26, 27, 28 or 37 is selected in the Data parameter.)

Drive Select: Designate the Drive of Office Data.

Drive B
Drive C

Output data

After assigning the parameters above and then pressing the Get button, the related file names are listed in the display field at the bottom part of the command screen.

[File List] **Note 1**

File Name

Date Modified

File Size (byte(s))

Note 1: Checked files will be deleted when “Del” button is pressed.

Buttons

Get: Display the related Office Data file information.

Del: Delete the Office Data file specified in the File Name parameter.

DHDS: Display of HD File Issue

1. Functional Outline

This command displays each drive information on HDD of the Telephony Server.

2. Precautions

(a) If the CF card is not mounted on System 1 of the Telephony Server with dual (redundant) configuration, the information of System 1 is not displayed.

(b) For SV9500 (Prepackaged Server Model), only the information of System 0 is displayed.

(c) In the UMGi system, operations of the command are possible by the PCPro in each node.

3. Parameters

Button

Get: Display the current HDD information.

Output data

System 0/System 1

Gray: Not Mounted

Green: ACT

Yellow: STBY

Red: Make Busy

Program Loaded Drive: Drive A or Drive D

[Drive A] and [Drive D] fields:

Type: Program Name

Version: Program Version

Issue: Issue

Date: Date Modified

Information: Error Information

[Drive B] and [Drive C] fields:

Type:	Office Data Kind
	DM
	LDM
	NDM
Office Name:	Office Name
Date:	Date Modified
Information:	Error Information

DHDSN:Display of HD File Issue for Fusion Network

1. Functional Outline

This command displays each drive information on HDD of all Local Telephony Servers.

2. Parameters

Input Data

Target Select

Check the Program Name or Office Data Kind to read the Information.

Type: Program Name/Office Data Kind

MAIN

ACDP

DM

LDM

NDM

Output data

After checking the box for Program Name/Office Data Kind to be read, click the Get button to display the following information.

Drive Information List

- Type: Program Name/Office Data Kind

  MAIN

  ACDP

  DM

  LDM

  NDM

- FPC: Fusion Point Code [1-253]
- System

  System 0

  System 1

- Drive

  When Type = MAIN or ACDP is displayed:

  A: Drive A

  D: Drive D

  When Type = DM, LDM, or NDM is displayed:

  B: Drive B

  C: Drive C

- Version: Program Version **Note 1**
- Issue **Note 1**
- Office Name **Note 2**
- Date: Date Modified
- Information: Error Information

Note 1: This information is displayed when **Type** = **MAIN** or **ACDP** is displayed.

Note 2: This information is displayed when **Type** = **DM**, **LDM**, or **NDM** is displayed.

System Information List

- FPC: Fusion Point Code [1-253]
- System

  System 0

  System 1

- Status: System Operation Status

  Not Mounted

  ACT

  STBY

  Make Busy

- Load Drive: Program Loaded Drive

  A: Loading from A drive (Program Data)

  D: Loading from D drive (Program Data)

- PBX: Not displayed
- Information: Error Information

Buttons

Get:	Display the current HDD information.
Abort:	Stop displaying the current HDD information.

DICBD: Display of Individual Call Block Data

1. Functional Outline

This command displays the information of Individual Call Block Data.

2. Parameters

Input Data

TYPE: Select the item to input data.

1: UGN/TELN
2: FPC/TN/STN
3: FPC/LENS

When "1: UGN/TELN" is selected in TYPE:

UGN: Enter the User Group Number.

TELN: Enter the Telephone Number (Maximum 16 digits).

When "2: FPC/TN/STN" is selected in TYPE:

FPC: Enter the Fusion Point Code.

TN: Enter the Tenant Number.

STN Enter the station number.

When "3: FPC/LENS" is selected in TYPE:

FPC: Enter the Fusion Point Code.

LENS: Enter the Equipment Numbers.

Output Data

CB ACT: Call Block List

0: Inactive
1: Active

AN BLK ACT: Anonymous Call Block

0: Inactive
1: Active

BIN NO: Bin Number [00-15]

DC: Denial DC Number (Maximum 16 digits)

Buttons

Get: Get the Individual Call Block Data.

Exit: Exit this command.

DIMG: Display Information of Media Gateway

1. Functional Outline

This command displays the information of the Media Gateway that is managed by SV9500 (PHI).

2. Precautions

(a) This command supports the following equipment.

- MG(BRI) Proprietary Protocol/SIP mode
- MG(PRI) Proprietary Protocol/SIP mode
- UG50 **Note 1**

Note 1: A Virtual MAC address beginning with “02” is displayed in the MAC column as a “MAC address” of UG50.

(b) In UMGi system:

- Media Gateway Information can be obtained by selecting MPH LENS with the PCPro logged in to the node where the equipment is accommodated. Also, the following conditions apply:
  - When logging in to CCN, Media Gateway Information cannot be obtained by selecting MPH LENS of equipment accommodated to an RN in survival mode.
  - When logging in to RN, Media Gateway Information can be obtained by selecting MPH LENS of equipment accommodated in any node. However, MAC and IP addresses are not displayed.
- ISDN Trunk (PRI) information can be obtained with PCPro logged in to CCN. Also, the following conditions apply:
  - When logging in to CCN, ISDN Trunk (PRI) selection allows to readout the information of all CCN or RN accommodated MG(PRI) Proprietary Protocol.
  - When logging in to RN, ISDN Trunk (PRI) selection does not allow to readout the information of any CCN or RN accommodated MG(PRI) Proprietary Protocol.

3. Parameters

Input Data

View Type: Select the item to be displayed.

Media Gateway Information: Information of Media Gateway belonging to SV9500.
ISDN Trunk (PRI) Information: Information of MG(PRI) belonging to SV9500.

PH LENS: Equipment Numbers (Even Number, Five Digits)

Output Data

CNT:	Counter
LENS:	Line Equipment Numbers As for MG (PRI) Proprietary Protocol mode, MG (BRI) Proprietary Protocol/SIP mode, MC&MG-COT and MG-COT, the LENS of Virtual Speech/Signal Channel assigned by AMGIL command is displayed. As for MG (PRI) SIP mode, the first channel of HW assigned by AMGIL command is displayed. As for MG (SIP) SIP mode, the LENS of Virtual Speech assigned by ATRK command/ Signal Channel assigned by AMGIL command is displayed.
FPC:	Fusion Point Code
MG Type:	Media Gateway Type
Status:	Registration Status
IP Address:	IP Address assigned to Media Gateway
MAC Address:	MAC Address of Media Gateway
SEC:	Encryption status for voice data [O (encrypted) / X (not encrypted) / Readout Failed / Blank (system or terminal does not support encryption)]
Path ID:	Path Identification Number (Available since FP95-113 V3) **Note 2**, **Note 3**
TN:	Tenant Number
RT:	B-Channel Route Number of Media Gateway
LGRT:	Logical Route Number (Available since FP95-113 V3)
TK:	Trunk Number
MPH ID:	MPH identification number
MPH LENS:	MPH Line Equipment Numbers
ISDN Status:	ISDN Status of Media Gateway
Action Mode:	Operation Mode of Media Gateway
Reference	Reference Information

Buttons

Get:	Retrieve the line information.
CSV File Output:	Output the report in CSV format.
Exit:	Exit this command.

Note 2: Only available for MG-SIPs that support MG-SIP TIE LINE POINT-TO-MULTIPOINT CONNECTION [M-126].

Note 3: The **Path ID** parameter does not appear when **View Type** = **ISDN Trunk (PRI) Information**.

DISD: Display of IP Station Data

1. Functional Outline

This command displays the Registration status of IP stations. This command is usually used to check the Registration status of IP stations before the replacement of PH card.

Note: Assign station number or LENS of PH, then click the Get button to display the status of the appropriate IP stations in Detail data list.

Note: When displaying the status of terminals connected to Analog MC, MAC field in Detail data list shows “STN MAC”.

Note: To reset WLAN Handset (MH Series), select “Station” on the View Type parameter and “TelephoneNumber (NDM)/Telephone Number (LDM)” on the Kind of Station parameter.

2. Precautions

(a) A Virtual MAC address beginning with “02” is displayed as a “MAC address” of IPG (Digital), IPG (Analog) or UG50.

(b) A dummy MAC address beginning with “19” is displayed as a “MAC address” of SIP Handler Controlled SIP terminal. The actual MAC address of the terminal is not displayed.

(c) A dummy MAC address beginning with “1D” is displayed as a “MAC address” of IP-DTG.

(d) In UMGi system, to read the information of an IP station, log in to the node where the station is accommodated. Also, the following conditions apply:

- With PCPro logged in to CCN, you cannot use this command for IP stations of an RN in survival mode regarding the Station, Voice Server, IP-DTG and PH control parameters.
- PCPro logged in to RN can use this command for IP stations of CCN or RN in normal mode regarding the Station, PH control and Voice Server parameters. However, the MAC and IP addresses will not be displayed.
- PCPro logged in to RN cannot use this command for IP stations of RN in survival mode regarding the IP-DTG parameter.
- PCPro logged in to RN cannot use this command for IP stations of CCN or other RN regarding the IPCS/IPZT parameter.

3. Parameters

Input Data

ViewType: Select the item to be displayed.

- Station
- PH Control
- IPCS/IPZT

- Gate Keeper
- Voice Server
- SIP Server
- MPH
- IP-DTG

When ViewType = **Station**:

Kind of Station: Select the item to be displayed:

- StationNumber: Physical Station Number
- TelephoneNumber (NDM): Telephone Number for Network Data Memory
- TelephoneNumber (LDM): Telephone Number for Local Data Memory

TN: Enter Tenant Number. **Note 1**

STN: Enter station number. **Note 1**

Note 1: This parameter is valid when “station number” is selected as Kind of Station.

UGN: Enter User Group Number **Note 2**

TELN: Enter Telephone Number **Note 2**

Note 2: This parameter is valid when “TelephoneNumber (NDM)/(LDM)” is selected as Kind of Station.

KIND: Kind of Release **Note 3**, **Note 4**

- PH Control Data Clear and Soft Reset (with idle busy check)
- PH Control Data Clear and Soft Reset (without idle busy check)
- PH Control Data Clear

Note 3: To clear the registration information with specifying SIP Handler Controlled SIP terminal, select the PH Control Data Clear and Soft Reset (with idle busy check) parameter or the PH Control Data Clear and Soft Reset (without idle busy check) parameter. After clearing the registration information, the SIP Handler Controlled SIP terminal cannot be used until it completes re-registration due to the terminal’s periodical REGISTER update or the terminal reset operated manually.

Note 4: To display this parameter, select an item in the Detail data list, and then click the Execute button. Available terminals in this parameter varies depending on the IP KIND. (IP KIND is displayed in the Detail data list.)

<IP KIND>

DtermIP	X	IP terminal
Soft Dterm	X	Softphone (Proprietary Protocol)
Smart Phone	-	
Analog MC	X	Analog 2MC
Digital MC	-	
IP-VPS	-	
H.323 Gate Keeper	-	
MG (Analog)	-	
MG (Digital)	-	
MG (ISDN BRI)	NA	MG (BRI)
MG (ISDN PRI 1.5M)	NA	MG (PRI) [MG-24PRIA]
MG (ISDN PRI 2M)	NA	MG (PRI) [MG-30PRIA]
SIP-MG	NA	MG (SIP)
MCMG_COT	NA	Trunk side of MC&MG-COT
MCMG_aMC	X	Terminal side of MC&MG-COT
Voice Server	X	VS32 (Proprietary Protocol)
SIP Station	X	DtermIP (SIP)
MPH	NA	
SPterm	X	DT800/DT700 Series
Soft SPterm	X	Softphone (SIP)
SIP-VPS	-	
8MC (SIP)	X	8LC Card
VS32 (SIP)	X	VS32 (SIP)
IP-DTG	X	IP-DTG
	X: Available to operate on this parameter NA: Not available to operate on this parameter -: Not used	

When ViewType = **PH Control**:

PH LENS: Specify the first Group of PH accommodated Location.

PH TYPE: Type of card (Read only) **Note 5**

- PHA
- PHD
- PHE

- IPPAD
- Internal PHI
- Internal PHE **Note 5**
- Internal SIP Handler
- MPH
- PHI

Note 5: The information of IP-DTG controlled by Internal PHE is also read out.

REGMAX: Number of ports registered by PH (Read only)

REGCNT: Number of the connected Terminals (Read only)

When ViewType = **IPCS/IPZT**:

PCN: PHS Community Number (1-1024)

ERN: Area Number (1-32)

GRN: Group Number (1-8)

CSN: CS Number (1-32)

When ViewType = **Gate Keeper**:

GKID: Identifier of Gate Keeper (1-255)

GKIP: IP address of Gate Keeper (Read only)

When ViewType = **Voice Server**:

VS-ID: MAC address of Voice Server

Status: Status of Registration

Login

☐ Select All: Detail data list batch data check

KIND: Kind of Release **Note 6**

- PH Control Data Clear and Soft Reset (without idle busy check)

Note 6: To display this parameter, select an item in the Detail data list, and then click the Execute button. Operation on this parameter is available for the login terminals.

When ViewType = **SIP Server**:

SIP Server ID: Identifier of SP (1-255)

SIP Server IP: IP Address of SP (Read only)

When ViewType = **MPH**:

MPH ID: Identifier of MPH (1-4095)

MPH LENS: Line Equipment Numbers (LENS) of MPH (Read only)

When ViewType = **IP-DTG**:

DTG-ID: IP-DTG ID (1-16)

KIND: Kind of Release **Note 7**, **Note 8**

- PH Control Data Clear and Soft Reset (without idle busy check)

Note 7: To display this parameter, select an item in the Detail data list, and then click the Execute button. Operation on this parameter is available for the login terminals.

Note 8: After resetting IP-DTG, SIP Handler Controlled SIP terminals become silent (no tone) when they receive tones from the IP-DTG.

Output Data

The following data is displayed in the Detail data list.

When ViewType = **Station**:

LENS: Line Equipment Numbers
FPC: Fusion Point Code
Status: Status of the terminal
PH LENS: Line Equipment Numbers of PH
PH TYPE: Kind of PH
IP: IP address
MAC: MAC address
SEC: Encryption status for signaling data
IP KIND: Kind of IP Equipment
IP CH KIND: Channel Kind of VS32
MPH LENS: Line Equipment Numbers of MPH
MPH ID: Identifier of MPH

When ViewType = **PH Control**:

LENS: Line Equipment Numbers
FPC: Fusion Point Code

Status: Status of the terminal

IP: IP address

MAC: MAC address

SEC: Encryption status for voice data

TN: Tenant Number

STN: Station Number

UGN (NDM): User Group Number

TELN (NDM): Telephone Number

UGN (LDM): User Group Number

TELN (LDM): Telephone Number

PCN: PS Community Number

ERN: Calling Area Number

GRN: Group Number

CSN: IP-BS Number

GK ID: Gate Keeper Identifier

IP KIND: Kind of IP Equipment

IP CH KIND: Channel Kind of VS32

RT: Route Number

TK: Trunk Number

SIP ID: SIP Server ID

MPH LENS: Line Equipment Numbers of MPH

MPH ID: Identifier of MPH

PH KIND: Kind of PH

DTG-ID: IP-DTG ID

When ViewType = **IPCS/IPZT**:

IP: IP address

MAC: MAC address

SEC: Encryption status for voice data

When ViewType = **Gate Keeper**:

LENS: Line Equipment Numbers

FPC: Fusion Point Code

H.323 IP: IP Address of H.323 Terminal

TN: Tenant Number

STN: Station Number

UGN (NDM): User Group Number

TELN (NDM): Telephone Number

UGN (LDM): User Group Number

TELN (LDM): Telephone Number

PH LENS: Line Equipment Numbers of PH

Status: Status of the terminal

When ViewType = **Voice Server**:

LENS: Line Equipment Numbers

FPC: Fusion Point Code

Status: Status of the terminal

IP: IP address

MAC: MAC address

SEC: Encryption status for voice data

TN: Tenant Number

STN: Station Number

UGN (NDM): User Group Number

TELN (NDM): Telephone Number

UGN (LDM): User Group Number

TELN (LDM): Telephone Number

IP KIND: Kind of IP Equipment

IP CH KIND: Channel Kind of VS32

RT: Route Number

TK: Trunk Number

PH LENS: Line Equipment Numbers of PH

PH TYPE: Kind of PH

When ViewType = **SIP Server**:

LENS: Line Equipment Numbers

FPC: Fusion Point Code

SIP Station IP: IP address of SIP Station

TN: Tenant Number

STN: Station Number

UGN (NDM): User Group Number

TELN (NDM): Telephone Number

UGN (LDM): User Group Number

TELN (LDM): Telephone Number

PH LENS: Line Equipment Numbers of PH

Status: Status of the terminal

When ViewType = **MPH**:

PH TYPE: Kind of PH

LENS: Line Equipment Numbers

REGMAX: Capacity of Registration

MGC PORT: Control Signal Port for TP

TERM PORT: Control Signal Port for IP Equipment

When ViewType = **IP-DTG**:

LENS: Line Equipment Numbers

Status: Status of the terminal

IP KIND: Kind of IP Equipment

MAX_CONN: Maximum Number of Concurrent Connections

DISI: Display of IP Statistics Information

1. Functional Outline

This command outputs the statistic information corresponding to the LENS data of the designated IPELC or IPTRK card.

2. Parameters

Input Data

TYPE: Type of IPTRK Control [1-8]

Select the type from combo box;

1=Internal Ether Traffic Data of IP Trunk Read
2=External Ether Traffic Data of IP Trunk Read
3=Signal Control Traffic Data of IP Trunk Read
4=Voice Control Ether Traffic Data of IP Trunk Data Read
5=IP Trunk Status Read
6=Terminal Data of IPELC Read
7=Traffic Data of IPELC Read
8=Traffic Data of PHG Read (External Ether)

IPTEN: Line Equipment Numbers of IP Trunk (available for TYPE=1-5)

PHGEN: Line Equipment Numbers of PHG (available for TYPE=8)

DST_IP: IP address of destination IP Trunk/PHG (Available for TYPE=3)

LENS: Enter the Line Equipment Numbers of the IPELC card [six digits] (available for TYPE=6-7)

KIND: Read Kind (available for TYPE=7)

1=Ether Driver Statistics data of card
2=PROTIMS/RTP Packet Information

DATA CLEAR: Designated kind statistics data of card clear flag (available for TYPE=7-8)

Clear Data/Not Clear Data

Note: If any wrong data is input, error message “SP H/I Error (Error Code 0x0D05)” is displayed.

Output Data

(a) When 1: Internal Ether Traffic Data of IP Trunk Read is selected;
Frequency of:

Memory Error (CSR0)
Missed Frame (CSR0)
Collision Error
Send Timeout
Send Delay
Retry Once (Send Error)
Retry more than Once (Send Error)
Retry 16 times (Send Error)
Carrier Loss
Late Collision
FIFO Underflow
Buffer Error
Receive Buffer Error
CRC Error
FIFO Overflow
Framing Error
Jabber Error
Data Transfer Error
Send Timeout
RMDI-STP bit Error
Illegal Long Packet Receive Error
Target FPC Abnormal
No Routing Target
Send Waiting Queue Overflow
TTL Overflow
Transfer Error by Line Break
IP Header Checksum Error
Receive Frame Length NG (over 1500 bytes)
Receive LLC Data NG
User Data Area NG
Broadcast Packet (Receive)
Broadcast Packet (Send)
Average Length of Packet (Receive)
Average Number of Packet (Receive)
Maximum Length of Packet (Receive)
Minimum Length of Packet (Receive)
Average Length of Packet (Send)
Average Number of Packet (Send)
Maximum Length of Packet (Send)
Minimum Length of Packet (Send)

(b) When 2: External Ether Traffic Data of IP Trunk Read is selected;
Frequency of:

Memory Error (CSR0)
Collision Error
Send Timeout
Send Delay
Retry Once (Send Error)
Retry More than Once (Send Error)
FIFO Underflow
Framing Error
RMDI-STP bit Error
IP Packet (Receive Total)
IP Packet (Receive Success)
IP Packet (Next Level Protocol Support)
IP Packet (Send Success)
IP Packet (Get Host data no assign)
Fragment Packet Resume Process Starting (Receive)
Fragment Packet Resume Process Complete (Receive)
Fragment Process Starting (Send)
Fragment Packet (Send Total)
ICMP Packet (Receive Total)
ICMP Packet (Receive Failure)
ICMP Type 0 (Receive Echo Reply)
ICMP Type 3 (Receive Destination Unreachable)
ICMP Type 4 (Receive Source Quench)
ICMP Type 5 (Receive Redirect)
ICMP Type 8 (Receive Echo Request)
ICMP Type 11 (Receive Time Exceeded)
ICMP Type 12 (Receive Parameter Problem)
ICMP Type 17 (Receive Address Mask Request)
ICMP Type 18 (Receive Address Mask Reply)
ICMP Packet (Send Total)
ICMP Packet (Send Failure)
ICMP Type 0 (Send Echo Reply)
ICMP Type 3 (Send Destination Unreachable)
ICMP Type 4 (Send Source Quench)
ICMP Type 5 (Send Redirect)
ICMP Type 12 (Send Parameter Problem)
ICMP Type 17 (Send Address Mask Request)
ICMP Type 18 (Send Address Mask Reply)
ICMP Socket
Active Open Executing (TCP Connection)
Passive Open Executing (TCP Connection)
TCP Connection Total (Active/Passive)
TCP Packet (Receive Total)
TCP Packet (Send Retry1)
TCP Header Checksum Error
RST Packet (Send)

Datagram (Receive Total)
UDP Packet (Receive Failure)
Datagram (Send Total)
Port Number and the Frequency of Status Mismatch

(c) When 3: Signal Control Traffic Data of IP Trunk Read is selected;
Target IP Address
Target Port Number
Self IP Address
Self Port Number
Average Delay Time of TCP Packet (Send)
Maximum Delay Time of TCP Packet (Send)
Average Delay Time of TCP Connection Open

Frequency of:

TCP Packet (Send)
TCP Packet (Receive)
TCP User Packet (Send Total)
TCP User Packet (Receive Total)
TCP User Packet (Select Failure)
TCP User Packet Byte (Select Failure)
TCP Packet (Send Retry)
TCP Link Lost
ICMP Packet (Send)
ICMP Packet (Receive)

(d) When 4: Voice Control Ether Traffic Data of IP Trunk Data Read is selected;
CNT
Target IP Address
Target Port Number (RTP Receive Port)
Session Start Time
Session End Time
Maximum Frequency of RTP and RTCP Packet (Self Node Send)
Maximum Frequency of RTP and RTCP Packet Octet (Self Node Send)
Maximum Loss Factor of Arrived Packet (Target Node Receive)
Maximum Frequency of Arrived Packet Loss (Target Node Receive)
Maximum Jitter Arrival Interval (Target Node Receive)
Maximum Frequency of RTP and RTCP Packet (Target Node Send)
Maximum Frequency of RTP and RTCP Packet Octet (Target Node Send)
Maximum Loss Factor of Arrived Packet (Self Node Receive)
Maximum Frequency of Arrived Packet Loss (Self Node Receive)
Maximum Jitter Arrival Interval (Self Node Receive)
Average Delay of Packet (Send and Receive)
Minimum Delay of Packet (Send and Receive)
Maximum Delay of Packet (Send and Receive)
Current Capacity of Jitter Buffer
Maximum Capacity of Jitter Buffer
Frequency of Abandoned Packet by Jitter Buffer Control
Option Data

(e) When 5: IP Trunk Status Read is selected;
CNT
Target IP Address
Target Port Number
Self Port Number
Active Mode
Connect Mode
Time of Connection Lost (minute)
Connection Status

(f) When 6: Terminal Data of IPELC Read is selected;
IP Address
Jitter Buffer Minimum (x 10 milliseconds)
Jitter Buffer Maximum (x 10 milliseconds)
Jitter Buffer Size (x 10 milliseconds)
Jitter Buffer Consumption (x 10 milliseconds)

(g) When TYPE = 7: Traffic Data of IPELC Read and KIND = 1 are selected;
[Receive]

Packets
CRC Error (RMD)
Collision
Ethernet Controller Framing Error
No Receive Buffer
No PCI Bridge SDRAM Space
Bus Parity Error

[Send]

Packets
No PCI Bridge SDRAM Space TMD
Ethernet Controller FIFO Underflow
Ethernet Controller Delay
Ethernet Controller Carrier Loss
Ethernet Controller Retry NG
Bus Parity Error

[Receive Packet Details]

Receive Packet (less than 64 bytes)
Receive Packet (64-127 bytes)
Receive Packet (128-255 bytes)
Receive Packet (256-511 bytes)
Receive Packet (512-1023 bytes)
Receive Packet (1024-1528 bytes)
Receive Packet (more than 1528 bytes)

(h) When TYPE = 7: Traffic Data of IPELC Read and KIND = 2 are selected;
The number of packets to be sent out or received is displayed via channel 0 to 31 on PROTIMS and RTP.

DISS: Display of Program Issue

1. Functional Outline

This command outputs program information in the main memory and the Port Microprocessor (PM) memory into a printer and PCPro: The program information includes Version, Issue No., Date, etc.

Note: DISS command should be run during low traffic only.

2. Precautions

(a) PM memory information cannot be displayed in the following cases.

- The program (firmware) information is not written in PM memory.
- The specified card containing PM is in the state of Make Busy.
- The specified card containing PM is not accommodated.
- The specified card containing PM has no station data or trunk data assigned to the lines. (Station data and trunk data can be entered with the ASDT and ATRK commands, respectively.)
- The specified IPPAD card containing PM has no LAN information assigned. (LAN information data can be assigned with the ALIDL command.)

(b) PM memory information is displayed in the following range.

- On a Unit basis

  PM memory information of the card installed in slots for Group Numbers 00 to 31.

  Note: Group Numbers 24 to 31 are used for Virtual Groups.

(c) Take the notice below about the output of PM memory information from the IPPAD card and IP station.

- The output of PM memory information from the IPPAD card and IP station contains a single SP/SW Number and multiple firmware version numbers. When you contact technical support, please have the SP/SW Number available.

(d) In the UMGi system, operations of the command are possible by the PCPro in each node.

3. Parameters

Input data

Type of Issue

Main Memory

Port Microprocessor

Port Microprocessor Equipment Number

Module Group: Module Group Number **Note 1**

Unit: Unit Number **Note 1**

Note 1: This data is valid when Port Microprocessor is designated.

Output data

<When "Main Memory" is selected for "Type of Issue">

Issue Information List

Type: Program Name

Version: Program Version

Issue: Issue

Date: Date Modified [Month/Day/Year]

System Type

SA: SV9500 Appliance Model

SB: SV9500 Prepackaged Server Model

<When "Port Microprocessor" is selected for "Type of Issue">

Group: Group Number [00-31]

Firmware Information: Firmware Information

SP/SW No.: SP/SW Number [4 digits]

Issue: Issue

DISSN:Display of Program Issue for Fusion Network

1. Functional Outline

This command, available at the NCN only, outputs program information in the main memory of all Local Nodes into a printer and PCPro: The program information includes Version, Issue No., Date, etc.

2. Precautions

If IPX as Network Control Node (NCN) and SV9500 as Local Node (LN) are provided in an FCCS (Fusion) network, this command cannot be executed toward SV9500.

3. Parameters

Input data

Target Select

Type: Program Name

MAIN
ACDP

Output data

Issue Information List

Type: Program Name

MAIN

ACDP

FPC Fusion Point Code [1-253]

System: System 0
System 1

Version: Program Version

Issue: Issue

Date: Date Modified [Month/Day/Year]

Information: Error Information

DLEN: Display of LENS Data

1. Functional Outline

This command is used to display the data (station data or trunk data) assigned to the designated LENS. For Hotel system, Room Class and Floor Service Data [Annex (ANNEX), Ground/Underground (GROUND), Floor (FLOOR)] are also displayed.

2. Parameters

Input data

LENS Line Equipment Numbers

Output data

<For Station>

TN Tenant Number

STN: Station Number (maximum six digits)

TEC: Telephone Equipment Class (1-31) (See the table below.)

Telephone Equipment Classes

DATA	DATA
1: DP (10pps)	2: PB
3: DP/PB	4: DP (20pps)
5: DP (10pps) (for Hotel System)	6: PB (for Hotel System)
7: DP/PB (for Hotel System)	8: DP (20pps) (for Hotel System)
9: House Phone (GST) (for Hotel System)	10: House Phone (ADM) (for Hotel System)
11: VMM/VMM2	12: Dterm
13: Data Terminal via Dterm	14: Hot Line
15: CAS Line	16: Data Terminal via Data Module
17: - (Not used)	18: Virtual Line Appearance (for Dterm Multi-Line)
19: TMM	20: PSM
21: ACD (MIS)	22: EMM
23: ISDN Terminal	24: - (Not used)
25: - (Not used)	26: VPS
27: 8 Conference Equipment	28: PS
29-31: - (Not used)	

RSC: Route Restriction Class (0-15)

SFC: Service Feature Restriction Class (0-15)

ROOM CLASS: (0-15)

ANNEX: Annex (0-3)

GROUND: 0=Ground

1=Underground

FLOOR: Floor (1-127)

<For Trunk>

RT: Route Number (See the table below.)

Internal Route Numbers

DATA	DESCRIPTION
901	Attendant Console
902	Originating Register Trunk
903	Incoming Register Trunk
904	MF Receiver
905	Sender Trunk DP/PB
906	PB Receiver for Automated Attendant Service
907	AMP
908	(Not used)
909	Three-Way Conference Trunk
910-912	(Not used)
913	Three-Way Conference Trunk for ATTCON
914	(Not Used)
915	Night Attendant Console
916	MFC Register
917	MFC Sender
918	(Not used)
919	DLINT (for Hotel) / MODEM (for Business)
920-926	Modem Pooling Trunk
927-928	(Not used)
929	Data Signaling Trunk-Option
930	RCT

Internal Route Numbers

DATA	DESCRIPTION
931-932	(Not used)
933	CRT
934-936	(Not used)
937	Caller ID Modem Sender Trunk
938	Data Link MUX Trunk
939	Continuity Check Sender Trunk
940	Call Waiting Caller ID Register Trunk
941-947	(Not used)

TK: Trunk Number (1-768)

<For FCCS>

C_RT: Connection Route Number (1-1023)

C_TK: Connection Trunk Number (1-4095)

<For PS> **Note 1**

PCN: PHS Community Number (1-1024)

ERN: Calling Area Number (1-32)

GRN: Group Number (1-8)

CSN/ZTN: CS/ZT Number (1-32)

CHNO: Channel Number (2-4)

Note 1: When the Line Equipment Numbers (LENS) of a SIP server configured with the ASSDL/ASSDN command is entered, the following information is provided for the PCN and ERN parameters:
PCN = 1024
ERN: SIP server ID **Note 2**

Note 2: If the number of SIP server IDs exceeds 31, ERN may not be displayed correctly.

DLSL: Display of Lockout Station - LENS

1. Functional Outline

This command prints the LENS of stations in lockout state.

2. Parameters

Input data

Type:	Type of Printout (1-3) 1=Printout of all LENS in lockout 2=Printout of locked out LENS in the designated Module Group 3=Printout of locked out LENS in the designated Unit
MG:	Module Group Number **Note 1, Note 2**
UNIT:	Unit Number **Note 2**

Note 1: The parameter is valid only when TYPE=2.

Note 2: The parameter is valid only when TYPE=3.

Output data

INDEX	Index Number
LENS	Line Equipment Numbers

DLSS: Display of Lockout Station - Number

1. Functional Outline

This command prints the stations in lockout state by station number.

2. Parameters

Input data

Type:	Type of Printout (1-3) 1=Printout of all lockout stations 2=Printout of lockout stations by tenant 3=Printout of lockout stations within a specified range of station number.
TN:	Tenant Number **Note 1, Note 2**
Start STN:	Maximum six digits **Note 2**
End STN:	Maximum six digits **Note 2**

Note 1: The parameter is valid only when TYPE=2.

Note 2: The parameter is valid only when TYPE=3.

Output data

CNT:	Count
TN	Tenant Number
STN	Physical Station Number
LENS	Line Equipment Numbers

DLSS_T:Display of Lock Out Station – Number – Telephone Number

1. Functional Outline

This command prints out stations in lockout state, by using Telephone Numbers. This command is only available at NCN (for FCCS network).

2. Parameters

Input Data

TYPE:	Printout of all lockout stations Printout of lockout stations by tenant Printout of lockout stations within a specified range of station number	
UGN:	User Group Number	**Note 1, Note 2**
Start TELN:	First Telephone Number (maximum 16 digits)	**Note 2**
End TELN:	Last Telephone Number (maximum 16 digits)	**Note 2**

Note 1: This parameter is valid when Type =Printout of lockout stations by tenant is selected.

Note 2: This parameter is valid when Type =Printout of lockout stations within a specified range of station numbers is selected.

Output Data

FPC:	Fusion Point Code (1-253)
TN:	Tenant Number
Start STN:	First Physical Station Number (a maximum of five digits for a Business system, and six digits for a Hotel system)
End STN:	Last Physical Station Number (a maximum of five digits for a Business system, and six digits for a Hotel system)
CNT:	Count
UGN:	User Group Number
TELN:	Telephone Number (maximum 16 digits)
LENS:	Line Equipment Numbers

Buttons

Get:	Get information on the lockout status.
Exit:	Exit this command.

DLTEL: Display of Telephone Number from LENS for LDM

1. Functional Outline

This command, available at each Local Node (LN), displays the Telephone Number or other station data by designating a specific LENS.

2. Parameters

Input Data

LENS:	Line Equipment Numbers [six digits]

Output Data

UGN:	User Group Number
TELN:	Telephone Number [maximum 16 digits]
TN:	Tenant Number
STN:	Station Number [maximum six digits]
TEC:	Telephone Equipment Class [1-31]
RSC:	Route Restriction Class [0-15]
SFC:	Service Feature Restriction Class [0-15]

DMOS: Display of Module Operation Status

1. Functional Outline

This command displays the module status of the Telephony Server. Data that is read-out from the system is displayed per module (individual item). This command does not perform periodic module status readout of Telephony Server. Therefore, you need to click the GET button to update the status if you want to retrieve the current status. When an error occurs in some modules, the status of the modules are not displayed.

Note: When starting this command, the system reads out the status of all modules. If readout is timed out, the status of the modules may stay “Readout” for several minutes.

2. Parameters

Initial Screen:

TYPE: Reading Type

Select All
Select Partial

ITEMS: Partial Items **Note 1**

TCP/IP Module Status
PH Module Status
SIP Server Condition

DM SELECT OF SIP SERVER CONDITION **Note 2**

LDM (Default)
NDM

Note 1: “ITEMS” can be selected only when you select “Select Partial” for “TYPE.”

Note 2: “DM SELECT OF SIP SERVER CONDITION” can be selected only when you select “Select All” for “TYPE,” or “SIP Server Condition” for “ITEMS.”

TCP/IP Module Status:

This section displays the status (ACT/STBY of System-0 and System-1) and the transmission speed of TCP/IP module of LAN1 and LAN2 (Telephony Server).

Transmission Speed

10Mbps
100Mbps
1Gbps
Half Duplex Mode/Full Duplex Mode

Status and Color Coordination is as follows:

Green : Running (ACT)
Yellow : Running (STBY)
Red : Stop
Gray : Not Mounted

Note: For a single CPU system, only the status of System-0 is displayed.

Note: If the link to the read-out LAN interface is disconnected, “1Gbps/Half Duplex Mode” is displayed.

PH Module Status:

TP Control: Displays the status of PH modules controlled by TP in the Telephony Server.

Internal SIP Handler	:	Displays the status of Internal SIP Handler
SIP Transport Layer (TCP):		Displays the status of TCP for Internal SIP Handler **Note 5**
Internal PHI (BRI)	:	Displays the status of internal PHI (BRI) module.
Internal PHI (PRI)	:	Displays the status of internal PHI (PRI) module.
Internal PHE	:	Displays the status of internal PHE module.
Internal PHC	:	Displays the status of internal PHC module.
Internal PHF	:	Displays the status of internal PHF module.
PBUS over IP	:	Displays the status of PBUS over IP module **Note 3 Note 4**

Note 3: This parameter will be shown if ACDP Quick Initialization is enabled (when ASYDL, SYS1, Index 1347, Bit 0=1 is assigned).

Note 4: This parameter will be shown if the system is UMGi/RNIP system. In the UMGi system, this command displays only the status in CCN with PCPro logged in to the CCN side. Also displays only the status in RN with PCPro logged into the RN side.

Note 5: Available from FP95-114 V4.

Status and Color Coordination is as follows:

Green : Running
Red : Stop

SP Control: Displays the status of PH modules controlled by SP in the Telephony Server.

MPH ID	: Identification number of MPH
MPH STATUS	: Status of MPH
MPH LENS	: Line equipment numbers of MPH
PH KIND	: Type of PH (PHD/PHI)
PH STATUS	: Status of PH
PH LENS	: Line equipment numbers of PH

Status and Color Coordination is as follows:

Green	: Running
Red	: Stop

SIP Server Condition:

SIP Server ID : Identification number of SIP server [1-255]

LINK : Displays the link status of SP in the Telephony Server.

Status and Color Coordination is as follows:

Green	: On Line
Gray	: Off Line

DNTEL:Display of Telephone Number from LENS for NDM

1. Functional Outline

This command, available at Network Control Node (NCN) only, displays the Telephone Number or other station data by designating a specific FPC and LENS.

2. Parameters

Input Data

FPC:	Fusion Point Code [1-253]
LENS:	Line Equipment Numbers [six digits]

Output Data

UGN (NDM):	User Group Number for NDM
TELN (NDM):	Telephone Number for NDM [maximum 16 digits]
NID:	Network ID **Note 1**
TN:	Tenant Number
STN:	Station Number [maximum six digits]
TEC:	Telephone Equipment Number [1-31]
RSC:	Route Restriction Class [0-15]
SFC:	Service Feature Restriction Class [0-15]
UGN (LDM):	User Group Number for LDM
TELN (LDM):	Telephone Number for LDM

Note 1: Network ID (NID) is allocated automatically when the Module Group/Unit data is assigned by the AFMU command. For detailed information, refer to the SV9500 FCCS Network System Manual.

DPHL: Display of PH Status

1. Functional Outline

This command displays the status of PHL.

2. Parameters

Output Data

PH TYPE:	PHA PHD PHE Internal PHI **Note 1** Internal PHD Internal PHE Internal SIP Handler MPH PHI

Note 1: "Internal PHI" refers to Internal PHI-BRI.

PH LENS:	Line Equipment Numbers (six digits)
REGMAX:	Registration Maximum
REGCNT:	Number of Connected Terminals
LOGIN CNT:	Number of Login-Terminals
SPECIFIC HUNT:	Number of Terminals assigned by ARICL
MPH LENS:	Line Equipment Numbers of MPH (five digits)
MPH ID:	Index Number of MPH

Buttons

Get:	Get information on each PH.
Abort:	Stop the process.

DPKG: Display Setting on Port Package

1. Functional Outline

This command displays the card name accommodated in each Group of a specific UNIT.

Note: When using this command, make sure that circuit card database file has already been installed to PCPro.

Note: DPKG command should be run during low traffic only.

2. Parameters

Input Data

MG: Module Group Number [00-07]

UNIT: Unit Number [0-3]

Buttons

Get: Get information on mounted cards.

Note: When the Input Data above is entered and the Get button is pressed, the related card name is displayed on a Group basis. A description starting with the following special character indicates each status below.

- # → *Out of Service.*
- ## → *Data does not exist in the circuit card database.*
- ### → *Group cannot be used.*
- * → *Card name not found (for the card is in make-busy state, etc.).*

DPSW: Display Package Switch Status

1. Functional Outline

This command displays the following information on a Line/Trunk or Control circuit card:
When PCPro is in On-line Mode (=connected to the system)

- Current status of each switch
- Explanation of each switch function

When PCPro is in Off-line Mode (= not connected to the system)

- Explanation of each switch function

2. Precautions

(a) When using this command, make sure that circuit card database file has already been installed to PCPro.

(b) For PA/PH card, there may be cases where a value of SW parameter differs from an actual switch name. If you need to compare with an actual one, select the switch in Switch Information List and select the check box for Displays a Description of the Switch to display the Description window. Then confirm the switch of a card which matches the value of XX showing in "SWNO XX=".

3. Parameters

Input Data

Display Kind: Mode of switch information to be provided

- On-line Mode
- Off-line Mode

Circuit Card Type

- Line Trunk Circuit Card
- Control Circuit Card

PMN: Port Micro Processor Number

PKG NAME: Circuit Card Name

LP No.: Local Partition Number [00-06 (even number only)] **Note 1**

MG: Module Group Number [00-07] **Note 1**

UNIT: Unit Number [0-3] **Note 1**

ACT/STBY: ACT/STBY information **Note 1**

- ACT
- STBY

System Select **Note 1**

- System 0
- System 1

Note 1: Set the value for this parameter when Control Circuit Card is selected in the TYPE parameter.

Circuit Card Information

Circuit Card Name
Firm Name/Issue

Switch Information List

Displays the switch data in Display Switch Information which is selected in Switch Information List.

SW: Switch Name

SWTP: Switch Type

Sense Switch
Slide Switch
2 Ream Dip Switch
4 Ream Dip Switch
8 Ream Dip Switch
Short Plug
2 Ream Piano Switch
4 Ream Piano Switch
8 Ream Piano Switch
2 Point Toggle Switch
Push Switch
Short Piece
Power Switch
3 Point Toggle Switch
Soft Switch
Immediate Switch

Switch Data: SW1-8 [ON/OFF]

RSW (Sense Switch): [0−F]

2PSW (2 Point Switch): [ON/OFF]

3PSW (3 Point Switch): [UP/MIDDLE/DOWN]

Displays a Description of the Switch: Select this check box to display a detailed description of the switch that is selected in the Switch Information List.

Description: the detailed description for the switch which is selected in Switch Information List.

Buttons

Get: View the display data.

DPTR: Display of Capacity / License

1. Functional Outline

This command displays the line capacity of the system and the number of client licenses for each IP/SIP terminal type and the number of service licenses.

2. Precautions

(a) This command is available for SR-MGC as well. Only capacity is shown for them.

(b) From FP95-112 V2, this command is available for Geo Redundant Node and Survivable Remote Node for Geographic Redundancy as well. For Geo Redundant Node, capacity, details of client licenses and service licenses are shown. For Survivable Remote Node, only capacity is shown.

3. Parameters

[When connecting to the Telephony Server including Primary Node/Geo Redundant Node]

Read Type: CAPACITY
Details of Client Licenses
Service Licenses
Details of Exceed Licenses **Note 1**

Note 1: Available since FP95-113 V3.

<License Information List displayed by selecting CAPACITY>

Capacity Type:

System Capacity:

Indicates the number of system capacity licenses. Displayed in EMEA.

Physical PIR Capacity:

Indicates the number of physical PIR capacity licenses. Displayed in the countries other than EMEA.

Client License:

Indicates the number of client licenses in the whole system. **Note 2**

ACD License:

Indicates the number of ACD licenses in the whole system.

Number of installed Licenses [1-4194240] **Note 3**

Number of programmed IP Ports [0-4194240] **Note 3**

Number of registered Licenses [1-4194240] **Note 3**

Number of errors [0-4294967295] **Note 3**

Note 2: The number of client licenses includes the number of virtual trunks for CCIS Networking via IP (By PHC) and the number of ports for software-based MG-SIP channels.

Note 3: The following shows conditions for this item:
- Displayed since FP95-113 V3.
- The maximum number is different depending on Capacity Type.

Note: The following parameter is displayed until FP95-112 V2.
Capacity [0-4294967295]:
Displays capacity and number of Client License provided for the System.

<License Information List displayed by selecting Details of Client Licenses>

Device Type:

Voice Station **Note 4**
Hard Phone Type-A
Softphone Type-A
Standard SIP
IPG
UG Phone
UG Trunk **Note 4**
MGSIP-VCH **Note 4**
VS32-VCH **Note 5**
Mobile Client SIP Phone **Note 6**

Number of installed Licenses [1-65535] **Note 7**

Number of programed IP Ports [0-65535]

Number of registered Licenses [0-65535]

Number of errors [0-67108863] **Note 4**

Note 4: Displayed since FP95-113 V3.

Note 5: Displayed since FP95-114 V4.

Note 6: Displayed since FP95-115 V5.

Note 7: This item appears only when licenses are installed.

<License Information List displayed by selecting Service Licenses>

Service Type:

Mobile Service
Active Call Recording **Note 11**

Number of installed Licenses [1-192000] **Note 8**, **Note 9**

Number of programmed IP Ports [0-192000] **Note 10**

Number of registered Licenses [0-192000] **Note 9**

Number of errors [0-67108863] **Note 10**

Note 8: This item appears only when licenses are installed.

Note 9: For the system with FP95-114 V4 or earlier version software, the maximum number is 65535.

Note 10: Displayed since FP95-113 V3.

Note 11: Displayed since FP95-115 V5.

<License Information List displayed by selecting Details of Exceed Licenses>

Note: The following shows conditions for this License Information List:
- Available since FP95-113 V3.
- To delete License Information List for Details of Exceed Licenses, click the Delete button.

Time of occurrence

Indicates the day and time of the occurred error.

Product Name

Indicates the name of the error generated license.

Information of errors

Indicates the following:
- The TN and STN data or the RT data in the error generated office data.
- The number indicating the error generated license and the excessive number of licenses. **Note 12**

Example of Details Displayed in the List

Time of Occurrence	Product Name	Information of Errors
4/19/2017 15:41:39	Softphone Type-A	TN: 1 STN: 10001
4/19/2017 15:41:59	MGSIP-VCH	RT: 55
4/19/2017 17:55:30	Mobile Client SIP Phone	TN: 1 STN: 10002
4/19/2017 00:00:00	Active Call Recording License	03C1: 185 **Note 13**

Note 12: Displayed since FP95-115 V5.

Note 13: **03C1** is the number indicating the Active Call Recording license. **185** is the excessive number of licenses.

[When connecting to Survivable Remote Node and SR-MGC]

Read Type: CAPACITY
Details of Exceed Licenses **Note 14**

Note 14: Available since FP95-113 V3.

<License Information List displayed by selecting CAPACITY>

Capacity Type:

System Capacity: Indicates the amount of circuit capacity in the whole system.

IP Line Capacity: Indicates the amount of circuit capacity corresponding to Survivable Remote Node/ SR-MGC.

Number of installed Licenses [1-4194240] **Note 15**

Number of programmed IP Ports [0-4194240] **Note 15**

Number of registered Licenses [1-4194240] **Note 15**

Number of errors [0-4294967295] **Note 15**

Note 15: Displayed since FP95-113 V3.

Note: The following parameter is displayed until FP95-112 V2.
Capacity [0-2000]:
Displays whole capacity and capacity for IP of the SR-MGC.

<License Information List displayed by selecting Details of Exceed Licenses>

Note: The following shows conditions for this License Information List:
- Available since FP95-113 V3.
- To delete License Information List for Details of Exceed Licenses, click the Delete button.

Time of occurrence

Indicates the day and time of the occurred error.

Product Name

Indicates the name of the error generated license.

Information of errors

Indicates the TN and STN data or the RT data in the error generated office data.

DRAI: Display of Remote Equipment Data by Autofill Input

1. Functional Outline

This command reads and displays the information about devices that are registered with the Telephony Server. The collected information is organized into two lists, one for devices ("List of Remote Equipment Data") and the other for their channels ("List of Remote Equipment Office Data"). You can view the channel records of all those devices or only the records of a specific device.
This command, compared with IPAN or DISD commands, makes easier to verify the idle channels and therefore also the registration operations become easier.

Note: This command is available from FP95-114 V4 Issue 2.0.

2. Precautions

(a) This command provides information only about the devices registered with the Telephony Server.

(b) The devices that are displayed in the DRAI command are as follows:

Device	Operation Mode	Device Type		DRAI Display (SLOT2~6/ Card)
UG50 Note 1	Multi-slot mode	UG50 (DLC)	Proprietary Protocol	DLC
		UG50 (LC) [Proprietary Protocol/SIP]	Proprietary Protocol	LC
			SIP	UG50 LC [SIP]
		UG50 (PRT 1.5M) [Proprietary Protocol/ SIP]	Proprietary Protocol	PRT (1.5M)
			SIP	PRT (1.5M) (SIP)
		UG50 (PRT 2.5M) [Proprietary Protocol/ SIP]	Proprietary Protocol	PRT (2M)
			SIP	PRT (2M) (SIP)
		UG50 (COT-TYPE1)	Proprietary Protocol	COT (Type1)
		UG50 (COT-TYPE2) [Proprietary Protocol/ SIP]	Proprietary Protocol	COT (Type2)
			SIP	COT (Type2) [SIP]
		UG50 (PGT-TYPE1)	Proprietary Protocol	COT (Type1) Note 3
		UG50 (PGT-TYPE2) [Proprietary Protocol/ SIP]	Proprietary Protocol	COT (Type2) Note 3
			SIP	COT (Type2) [SIP] Note 3
	IPG mode	UG50-IPG(Digital)	Proprietary Protocol	DLC
		UG50-IPG(Analog)	Proprietary Protocol	LC (IPG)
UG50 Note 1	Retrofit mode	UG50-8LC	SIP	UG50 LC [SIP]
		UG50-2MC	Proprietary Protocol	LC
		UG50-24PRIA [Proprietary Protocol/SIP]	Proprietary Protocol	PRT (1.5M)
			SIP	PRT (1.5M) [SIP]
		UG50-30PRIA [Proprietary Protocol/SIP]	Proprietary Protocol	PRT (2M)
			SIP	PRT (2M) [SIP]
		UG50-4LC2COTA (COT)	Proprietary Protocol	COT (Type1)
		UG50-4LC2COTA (PGT)	Proprietary Protocol	COT (Type1) Note 3
		UG50-6COT [Proprietary Protocol/SIP]	Proprietary Protocol	COT (Type2)
			SIP	COT (Type2) [SIP]
8MC Note 2	-	8LC Card [SCA-8LCC/SCA-8LCC-EMEA]		8MC [SIP]

Note 1: Available from UG50 software version 2.00.

Note 2: 8MC means SCA-8LCC/SCA-8LCC-EMEA (SP-3983 8MC PROG-B Issue 8.0 or later).

Note 3: The DRAI command displays COT without differentiating between COT and PGT. For the differentiation of COT and PGT, judge from the RT (Route Number).

(c) If you modify the Device Name parameter in the device that already has a channel registered with the Telephony Server, the old name prior to the modification may be displayed on the DRAI command screen depending on the timing of the update on the device side. However, this does not affect the listing of office data for the device. You can update the Device Name parameter in the DRAI command by restarting the corresponding device.

(d) Network addresses cannot be used to search for channel records. Instead, use the specific IP Address assigned to the device.

(e) In the UMGi system, the DRAI used in a CCN connection displays the registration information for CCN and RNs, but if it is used in a RN connection, only displays the registration information of the RN itself.

(f) The following table shows the types of office data that can be viewed on the screen.

Office Data to View

X: Available, N: Not Available

Parameter	Description	UG50				8MC	Remarks
		DLC	LC	PRT	COT		
IP ADDRESS	IP address	X	X	X	X	X	• Information to be entered through Web Programming on UG50 • Information to be entered through Maintenance Command on 8MC
DEVICE NAME	Name of UG50	X	X	X	X	X	
MLT	UG50 Multi-slot Mode	X	X	X	X	X	• Information required for the AISTL/AMGIL command • Fixed to OFF for 8MC
SLOT	Slot Number	X	X	X	X	X	• Information accessible from Web Programming on UG50 • Fixed to SLOT2 for 8MC
Card	Type of card installed in UG50	X	X	X	X	X	• Information accessible from Web Programming on UG50 • 8MC [SIP] for 8MC
MAC ADDRESS	MAC address	X	X	X	X	X	Information required for the AISTL/AMGIL command

Parameter	Description	UG50				8MC	Remarks
		DLC	LC	PRT	COT		
LINE	MG Line Number	N	N	X	X	N	Information required for the AMGIL command
CH	Channel Number of MC/ MG	X	X	X	X	X	Information required for the AISTL/AMGIL command
REG	Registration Status	X	X	X	X	X	
LENS	Line Equipment Number	X	X	X	X	X	Information required for the AISTL/AMGIL command
RT	Route Number	N	N	X	X	N	Information required for the AMGIL command
TK	Trunk Number	N	N	X	X	N	
TN	Tenant Number	X	X	N	N	X	Information required for the AISTL command
STN	Station Number	X	X	N	N	X	
TEC	Telephone Equipment Class	X	X	N	N	X	
RSC	Route Restriction Class	X	X	N	N	X	
SFC	Service Feature Restriction Class	X	X	N	N	X	
ADM/GST **Note 4**	Administration Station / Guest Station	X	X	N	N	X	
ROOM CLASS **Note 4**	Room Class	X	X	N	N	X	
ANNEX **Note 4**	Building in the complex (main building, Annex 1, Annex 2, ...)	X	X	N	N	X	
GROUND **Note 4**	Ground/Underground	X	X	N	N	X	
FLOOR **Note 4**	Floor	X	X	N	N	X	

Note 4: Displayed only when the Hotel feature is enabled (ASYD, SYS1, Index 160, Bit 0 = 1).

3. Parameters

Input Data

Device Type: (Fixed to “All”)

Target: Choices for whether to view the channel records of all devices registered with the Telephony Server or only the records of a specific device.

All:Records of all devices registered with the Telephony Server
Specify IP Address: Records of a specific device registered with the Telephony Server

IP ADDRESS: IP address of the device of your choice **Note 5**

Note 5: This text box is displayed only when “Specify IP Address” is chosen for **Target**.

Output Data

[List of Remote Equipment Data]

IP ADDRESS: IP address of the device of your choice

DEVICE NAME: Name of the device

MLT: Whether or not UG50 Multi-slot Mode is enabled on the device [OFF/ON]

SLOT 2: Type of card installed in Slot 2 **Note 6**, **Note 7**

SLOT 3: Type of card installed in Slot 3 **Note 6**

SLOT 4: Type of card installed in Slot 4 **Note 6**

SLOT 5: Type of card installed in Slot 5 **Note 6**

SLOT 6: Type of card installed in Slot 6 **Note 6**

Note 6: The card types that can be shown in the columns from Slot 2 to Slot 6 are as follows:

- LC
- DLC
- PRT (1.5M)
- PRT (2M)
- COT (Type 1)
- COT (Type 2)
- LC (IPG)
- LC (MC)
- UG50 LC [SIP]
- PRT (1.5M) [SIP]
- PRT (2M) [SIP]
- COT (Type 2) [SIP]
- 8MC [SIP]

Note 7: Because 8MC does not use the concept of slots, it is fixed to SLOT 2.

[List of Remote Equipment Office Data]

IP ADDRESS: IP address of the device of your choice

DEVICE NAME: Name of the device

MLT: Whether or not UG50 Multi-slot Mode is enabled on the device

OFF
ON

SLOT: Slot Number

Slot 2 **Note 7**
Slot 3
Slot 4
Slot 5
Slot 6

Card: Type of card installed in the slot **Note 8**

Note 8: The card types that can be shown in this column are as follows:

- LC
- DLC
- PRT (1.5M)
- PRT (2M)
- COT (Type 1)
- COT (Type 2)
- LC (IPG)
- LC (MC)
- UG50 LC [SIP]
- PRT (1.5M) [SIP]
- PRT (2M) [SIP]
- COT (Type 2) [SIP]
- 8MC [SIP]

MAC ADDRESS: MAC address of each channel of the UG50 of your choice

LINE: Line Number **Note 9**

CH: Channel Number

REG: Registration Status

NG
OK

LENS: Line Equipment Number [Six Digits]

RT: Route Number **Note 9**

TK: Trunk Number **Note 9**

Note 9: Applies to COT, PGT and PRT cards only.

TN: Tenant Number

STN: Station Number

TEC: Telephone Equipment Class [1-31]

1 = DP (10 pps)

2 = PB

3 = DP/PB

4 = DP (20 pps)

5 = DP (10 pps) **Note 10**

6 = PB **Note 10**

7 = DP/PB **Note 10**

8 = DP (20 pps) **Note 10**

9 = House Phone (Administration) **Note 10**

10 = House Phone (Guest) **Note 10**

12 = Dterm

13 = Data Terminal via Dterm

14 = House Phone/Hot Line

16 = Data Terminal via Data Module

26 = VPS Line

RSC: Route Restriction Class [0-15]

SFC: Service Feature Restriction Class [0-15]

ADM/GST: Administration Station / Guest Station **Note 10**

Administration Station
Guest Station

ROOM CLASS: Room Class [0-15] **Note 10**

ANNEX: Building in the complex **Note 10**

Main Building
Annex 1
Annex 2
Annex 3

GROUND: Ground/Underground **Note 10**

Ground
Under Ground

FLOOR: Floor [1-127] **Note 10**

Note 10: Displayed only for the Hotel system.

DRPM: Display of Remote Node Information

1. Functional Outline

This command displays status information on RN's.

Note: This command only can be used when logging in to CCN.

2. Parameters

Input Data

LP No

LP Number

Office Name

MGC No.

MGC Number

This parameter is available only if [MGC Kind] is Primary Node (CCN/RN)/Geo Redundant Node (CCN/RN)/Survivable Remote Node.

Note: The following shows conditions for this parameter:
- This parameter is available only if Geographic Redundancy System is enabled.
- This parameter is set to blank if Operation Status is "Unregistered."

MGC KIND

MGC Kind:

- SR-MGC
- Primary Node (CCN)
- Geo Redundant Node (CCN)
- Survivable Remote Node
- Primary Node (RN)
- Geo Redundant Node (RN)
- Not Assigned

Note: The following shows conditions for this parameter:
- This parameter is available only if Geographic Redundancy System is enabled.
- This parameter is set to blank if Operation Status is “Unregistered.”

Changeover Mode

- Manual
- Automatic

CPU status

- System 0
- System 1

P-BUS Status

Act System: Status of P-BUS connected between CCN and RN

- OK: Normal State
- NG: Abnormal State

Operation status

Operation status of RN

- Normal Mode (Normality)
  The RN is normally operating. The status of P-BUS is normal.
- Normal Mode (Temporary Trouble)
  The RN is normally operating, however, the status of P-BUS is abnormal.
- Normal Mode (ACT/STBY change of the processor (CPU))
  The RN is changing over the system.
- Normal Mode (Initializing)
  The RN is being initialized.
- Survival Mode (Fixation Trouble)
  The RN is operating in survival mode because the status of P-BUS is abnormal.
- Survival Mode (Instruction from mat) (1)
  The RN is in survival mode, because Changeover Mode is set to Manual in the ARPM command, even though health check is transmitted normally between a CCN and the RN.
- Survival Mode (Instruction from mat) (2)
  The RN is in survival mode, because the system has been changed over to Survival Mode by using the COPM command.
- Registering
  The RN is being authenticated.
- Unregistered
  The RN is never been authenticated, because the RN has not received any authorization request yet.

- Unregistered (Changeover demand waiting)
  The RN is never been authenticated, because Changeover Mode is set to Manual in the ARPM command, even though authentication request is sent from the RN. This can be changed over by using the COPM command.

Transfer Mode

Transfer mode of Remote Node over IP system

- Automatic
  Automatic operation

- Manual
  Manual operation
  by using the COPM command.

Office Data Status

Status of both data running between CCN and RN

- Difference
  Data discrepancy between CCN and RN occurred

- No Difference
  Data running on CCN and RN are same

- Processing
  Data on CNN and RN is being verified

FLT

Fault Cause

Note: This parameter is set to blank if Operation Status is “Unregistered.”

Note: Data analyzed by NEC Engineers.

DSOS: Display of System Operation Status

1. Functional Outline

This command displays system operation status such as operation status of IMGs and usage of units.
If office data is inconsistent with the system configuration, detailed information for troubleshooting is shown in DETAIL of Mounting Information and/or Unit Mounting Information.

2. Precautions

System status is not retrieved at stated periods. When you push the Readout button, system status at that time is retrieved and displayed on the screen.

3. Parameters

Buttons

GET: Retrieves and displays information (status).

Output Data (by Parameters)

<PIR Information>

System Capacity License Max Number of PIR:Displays the maximum number of licensed PIRs

Number of Module Groups:Displays the maximum number of MGs

<Mounting Information>

IMG: Displays IMG number

PIR: Displays PIR number

STATUS: Displays mounting status. This status is indicated by the following colors:
Green: Physical PIR
Light blue: Virtual PIR
Gray: Not mounted

DETAIL: Displays the cause when *Not mounted* is indicated in Status of Mounting Information. For more information, refer to the table entitled "System Operation Status Message" on page 1107.

<Unit Mounting Information>

MG: Displays MG number

UNIT: Displays Unit number

STATUS: Displays usage status. This status is indicated by the following colors:
Green: Normal
Red: Make Busy
Gray: Not mounted

DETAIL: Displays the cause when *Make Busy* or *Not mounted* is indicated in Status of Unit Mounting Information. For more information, refer to the table below.

System Operation Status Message

No.	MESSAGE
1	The system data is correct, please initialize system.
2	System capacity license is not enough
3	Confirm the system data (ASYD SYS1 Index 0)
4	Confirm the system data (ASYD SYS1 Index 198)
5	Confirm the system data (ASYD SYS1 Index 199)
6	Confirm the system data (ASYD SYS1 Index 200)
7	Confirm the system data (ASYD SYS1 Index 201)
8	Confirm the system data (ASYD SYS1 Index 202)
9	Confirm the system data (ASYD SYS1 Index 203)
10	Confirm the system data (ASYD SYS1 Index 204)
11	Confirm the system data (ASYD SYS1 Index 205)
12	Confirm the system data (ASYDL SYS1 Index 1026)
13	Confirm the system data (ASYDL SYS1 Index 1027)
14	Confirm the system data (ASYDL SYS1 Index 1028)
15	Confirm the system data (ASYDL SYS1 Index 1029)
16	Confirm the system data (ASYDL SYS1 Index 1030)
17	Confirm the system data (ASYDL SYS1 Index 1031)
18	Confirm the system data (ASYDL SYS1 Index 1032)
19	Confirm the system data (ASYDL SYS1 Index 1033)
20	Confirm the system data (AUNT)

DSTN: Display of Station Data

1. Functional Outline

This command displays the registered Station Data corresponding to the designated Tenant and station number. In addition, the information of Hot Line, Dterm Key Layout, Hunting, and Call Pickup, etc., can also be displayed as the data related to the designated stations.

2. Parameters

Input Data

TN: Tenant Number

STN: Station Number [0-9, #, * (maximum six digits)]

Buttons

For display data selection

SHP: Station Hunting Group-Pilot **Note 1**

KYD: Key Data for Dterm **Note 1**

CPG: Call Pickup Group **Note 1**

CPE: Call Pickup Expand Group **Note 1**

PHN: Phantom Station Number **Note 1**

SHC: Station Hunting-Circular **Note 1**

SHU: Station Hunting-UCD **Note 1**

HLS: Hot Line Station **Note 1**

Note 1: When the designated station has any of the above listed data, the corresponding button(s) can be selected. If the data is necessary, click the button(s).

For execution order

Get: View the display data.

Close: Exit this command.

Output Data (by Parameters)

ETN: Effective Tenant Number

LENS: Line Equipment Numbers (six digits)

TEC: Telephone Equipment Class [1-31]

l=DP (10pps)	2=PB
3=DP/PB	4=DP (20pps)
5-11=Not used	12=Dterm
13=Data Terminal via Dterm	14=Hot Line
15=CAS Line	16=Data Terminal via Data Module
17=Not used	18=Virtual Line Appearance (for Dterm Multi-Line)
19-22=Not used	23=ISDN Terminal
24-26=Not used	27=8 Conference Equipment
28-31=Not used	

RSC: Route Restriction Class [0-15]

SFC: Service Feature Restriction Class [0-15]

DTELN:Display of Telephone Number Data for NDM

1. Functional Outline

This command displays the registered station data corresponding to a specified User Group Number (UGN) and Telephone Number (TELN). The following data related to the Number Group can be displayed by clicking the selection button for each data. This command can be used only when logging in to Network Control Node (NCN).

- ACPGN: Call Pickup Group (NDM)
- ACPEN: Call Pickup Expand Group (NDM)
- ASHUN: Station Hunting Group-UCD (NDM)
- ASHCN: Station Hunting Group-Circular (NDM)
- AHLSN: Hot Line Station (NDM)
- ASHPN: Station Hunting Group-Pilot (NDM)
- AKYD: Key Data for Desktop Terminal

2. Parameters

Input Data

UGN: User Group Number

TELN: Telephone Number

Output Data

FPC: Fusion Point Code (1-253)

TN: Tenant Number

STN: Station Number

LENS: Line Equipment Numbers (six digits)

- MG: Module Group Number
- UNIT: Unit Number
- G: Group Number
- LV: Level Number

TEC: Telephone Class (1-31)

RSC: Route Restriction Class (0-15)

SFC: Service Feature Restriction Class (0-15)

Selection Button

CPGN:	Call Pickup Group (NDM)
CPEN:	Call Pickup Expand Group (NDM)
SHUN:	Station Hunting Group-UCD (NDM)
SHCN:	Station Hunting Group-Circular (NDM)
HLSN:	Hot Line Station (NDM)
SHPN:	Station Hunting Group-Pilot (NDM)
KYD:	Key Data for Desktop Terminal

DTF101:Display of Terminal Traffic Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=1 (Terminal Traffic) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF102:Display of Route Traffic Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=2 (Route Traffic) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF103:Display of Station Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=3 (Station Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF104:Display of Attendant Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=4 (ATT Peg Count) assigned by the ATRF command.

2. Parameters

For details on Traffic Data, refer to TRAFFIC MANAGEMENT in Chapter 2.

Note: The meaning of the parameter “FLAG” which is only displayed on the command screen is as follows.

- FLAG = 1: Tenant Number (TN)
- FLAG = 2: Attendant Number (ATN)

DTF105:Display of Route Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=5 (Route Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF201:Display of Service Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=6 (Service Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF301:Display of UCD Route Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=8 (UCD Route Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF302:Display of UCD Group Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=9 (UCD Group Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF303:Display of UCD Station Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=10 (UCD Station Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF501:Display of Attendant Answering Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=15 (ATT Answering Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF601:Display of Connection Route Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=18 (Connection Route Peg Count) assigned by the ATRF command.

2. Precautions

This traffic measurement is also available for connections via IPPAD; however, incoming and outgoing traffic both are counted as outgoing traffic in the result.

3. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF602:Display of Connection Route Traffic Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=19 (Connection Route Traffic) assigned by the ATRF command.

2. Precautions

This traffic measurement is also available for connections via IPPAD; however, incoming and outgoing traffic both are counted as outgoing traffic in the result.

3. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF701:Display of IP Service Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=20 (IP Service Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF702:Display of IP Service Traffic Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=21(IP Service Traffic) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF801:Display of SIP Terminal Peg Count Data

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=22(SIP Terminal Peg Count) assigned by the ATRF command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF101N:Display of Terminal Traffic Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=1 (Terminal Traffic) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF102N:Display of Route Traffic Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=2 (Route Traffic) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF103N:Display of Station Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=3 (Station Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF104N:Display of Attendant Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=4 (ATT Peg Count) assigned by the ATRFN command.

2. Parameters

For details on the Traffic Data, refer to TRAFFIC MANAGEMENT in Chapter 2.

Note: The meaning of the parameter “FLAG” which is only displayed on the command screen is as follows.

- FLAG = 1: Tenant Number (TN)
- FLAG = 2: Attendant Number (ATN)

DTF105N:Display of Route Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=5 (Route Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF201N:Display of Service Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=6 (Service Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF301N:Display of UCD Route Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=8 (UCD Route Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF302N:Display of UCD Group Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=9 (UCD Group Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF303N:Display of UCD Station Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=10 (UCD Station Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF501N:Display of Attendant Answering Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=15 (ATT Answering Peg Count) assigned by the ATRFN command.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF601N:Display of Connection Route Peg Count Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=18 (Connection Route Peg Count) assigned by the ATRFN command.

Note: This traffic measurement is also available for connections via IPPAD; however, incoming and outgoing traffic both are counted as outgoing traffic in the result.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

DTF602N:Display of Connection Route Traffic Data for FCCS Network

1. Functional Outline

This command displays the result of traffic measurement data for TYPE=19 (Connection Route Traffic) assigned by the ATRFN command.

Note: This traffic measurement is also available for connections via IPPAD; however, incoming and outgoing traffic both are counted as outgoing traffic in the result.

2. Parameters

For details of the parameters, refer to TRAFFIC MANAGEMENT in Chapter 2.

EVLOG:General Purpose Event Log Output Function

1. Functional Outline

This command sets necessary data for outputting evlog information and displaying it on devices connected with LAN.

Following features are available by using this command.

- Buffer overflow

  When EVLOG storage buffer is full and no more logs can be written, the system sends a message to the devices. When the problem has been solved and 10% of the buffer memory is available, the event-log "!!warning, evlog buffer full" is displayed.

- Assignment of optional information

  To enable the detection of the loss of event logs during communication, this feature adds a sequence number (0-99999) and trigger number to the beginning of the message. This feature can also be enabled/disabled by assigning System Data.

2. Precaution

(1) The setting information of this command can be backed up by specifying "Data Memory" and "One-Touch Speed Calling for DtermIP" in Data Type Select field with the MEM_HDD command.

(2) The assignment of optional information is valid when the system data [ASYDL/ASYDN: SYS1, Index 1146, Bit 7 = 1] is assigned.

(3) In a UMGi/RNIP system, you can back up the outputting evlog information (assigned by this command) in a CCN by specifying "Data Memory" and "One-Touch Speed Calling for DtermIP" in the Data Type Select field with the MEM_HDD command.
When you back up the data by specifying "Data Memory" and "One-Touch Speed Calling for DtermIP" in the Data Type Select field with the MEM_HDD command, you can also back up the data in the CF card/HDD of RN.
Operations of the command are possible by the PCPro in each node. Also, the outputting evlog information from RN for Trigger can be set regardless of being in normal or survival mode, Remote Host can be set in survival mode and, if being in normal mode, only if it is set also in the CCN, and TCP/IP and DRS can be set only in survival mode.

3. Parameters

Input data

PROCESSOR: Processor Type

SP: System Processor

<Trigger>

TRIGGER NUMBER Note 1	DESCRIPTION	RELATED DEVICES / FEATURES
0	TCP/IP Buffer Overflow Error Log	LAN Interface
1	Fault Message	Fault Message
2	Digital Telephone Claims	Terminal Claim Handling [T-65]
3	IP Telephone RTP Statistics	RTP Information Output [R-58]
4	TCP/IP Data Trace Log	LAN Interface
5	SMTP Information	System Message Report [S-150]
6	SIP Authentication	VoIP Encryption [V-27]
7	Synchronization (Location Diversity)	FCCS
8	Registration (Location Diversity)	FCCS
9	Station Data (Location Diversity)	FCCS
10	Inter-node IP Address Notification	• Softphone Internodes IP Address Resolution over CCIS/FCCS • Terminal Remote Login [T-66] • SIP Instant Message [S-151] Note 2
11	Inter-node Query Process	SIP Instant Message [S-151] Note 2
12	Protocol Handler Error Log	IP Devices
13	TCP/IP module Heap memory Information	LAN Interface
14	Node watching information (Location Diversity for PHS)	FCCS
15	N/A Note 1	-
16	SIP station movement Log Note 3	• VoWLAN • SP Controlled SIP Terminal [S-168]
17	PHS/SIP station Error Log Note 3	• PHS/PCS • VoWLAN • SP Controlled SIP Terminal [S-168]
18	N/A Note 1	-
19	Extend IP Address Inquiry	SP350
20	N/A Note 1	-

TRIGGER NUMBER Note 1	DESCRIPTION	RELATED DEVICES / FEATURES
21	ISDN CCBS Log (EMEA Only)	Call Completion to Busy Subscriber (CCBS) (EMEA Only) [C-148]
22 - 24	N/A Note 1	-
25	CPU Change Operation Log	System
26	N/A Note 1	-
27	Remote Node over IP/UMGi Operation Log	Remote Node over IP/UMGi
28	N/A Note 1	-
29	LAN1 Socket Error Log	LAN Interface
30	PHS Roaming Error Log	PHS/PCS
31	N/A Note 1	-
32	16-Digit Dial Plan Support for CCIS over IP Error Log	16-digit Dial Plan Support for IP Centrex Functionality
33	N/A Note 1	-
34	ACD Operation Log	ACD
35	OAI Operation Log	OAI
36	OAI Internal Operation Log	OAI
37	ISDN Trace Log	• ISDN • SIP • DPch • MG-SIP
38	IP Trace Log	CCIS Features
39	SIP Trace Log	SP Controlled SIP Terminal [S-168]
40	Call Trace Log Note 4	Call Processing Features (Upon Detection of Failure)
41	N/A Note 1	-
42	Q-SIG Forwarding Station Information/CLI,COL Translation Error Log	ISDN
43 - 46	N/A Note 1	-
47	Extension Language	Optional Language Pack Loading [O-42]

TRIGGER NUMBER Note 1	DESCRIPTION	RELATED DEVICES / FEATURES
48	REGISTER message information which Internal SIP Handler received	SIP Handler - SIP Terminal [S-167]
49	Internal SIP Handler Error Log	SIP Handler - SIP Terminal [S-167]
50	Internal SIP Handler session/heap memory information	SIP Handler - SIP Terminal [S-167]
51 - 255	N/A **Note 1**	-

Note: Other trigger numbers will be added as appropriate.

Note 1: Do not add undefined Trigger Numbers to the Chosen Trigger list.

Note 2: CCIS only.

Note 3: "SIP station" means an SP Controlled SIP terminal.

Note 4: This log is created when a problem with call control is detected.

<Remote Host>

Store evlog info inside MGC (output later):
If not checked, evlog information is stored into main memory only. If checked, the information is stored into main memory and designated remote host.

Output evlog info immediately:

Receive on this MAT **Note 5**:
Evlog information is displayed on this PCPro.

Note 5: "MAT" indicated here refers to "PCPro."

Transmit to remote host:
Evlog information is displayed on a remote host specified by IP Address and Port Number.

IP Address:
IP address of remote host
If Receive on this MAT is checked, the IP address of your personal computer is displayed.

Port Number: Port number of remote host

Note: To display the evlog information, allow UDP communication by the firewall settings on your personal computer.

<TCP/IP>

Output Device

None

Fault printer: Evlog information is output to fault printer.

IO Port: IO port of fault printer [1-7]

Remote Host: Evlog information is output to a remote host.

TCP/IP Evlog information output

None: Suspend TCP/IP trace data.

Warnings: Only warning messages are output.

TX/RX data and warnings:

Protocol Filter:
This group box is displayed only when *TX/RX data and warnings* is chosen. The following can be specified for output of trace information.

UDP: Information such as registration and signaling speech between system and IP terminals.

ICMP: Information regarding PCPro, SMDR, and OAI server

TCP: Information such as PING

ARP: Information regarding Address Resolution Protocol

IP Address and Port Number Filter

Number of bits to check (0=No Filter) (1-32)

Note: When you do not assign the number of bits, assign 0.

Filtering Address

Assign the IP address of tracing devices. Range of IP address can be specified by assigning the number of bits. The following table shows examples of assignment.

Note: When you do not assign the number of bits, assign 0.

Number of bits (Mask value)	IP address	Target address
32 (255.255.255.255)	192.168.10.50	192.168.10.50

Number of bits (Mask value)	IP address	Target address
28 (255.255.255.240)	192.168.10.32	192.168.10.32 - 192.168.10.47 (For 16 devices)

UDP or TCP port number (0=No Filter)

To filter IP address and port number, assign the port number of application to be traced. The following shows the default port number.

Note: When you do not assign the number of bits, assign 0.

Port No.	Protocol	Usage
3456	UDP	Registration
60000	TCP	PCPro
60001	UDP	A/S
60010	TCP	SMDR
60020	TCP	MCI
60030	TCP	OAI
60040	TCP	MIS
60050	TCP	PMS
60060	TCP	NMS
60080	TCP	CS Report
60090	UDP	Internal PHD
60110	UDP	Receive Health Check between MGC and SR-MGC (Server)
60120	UDP	Send Health Check between MGC and SR-MGC (Client)
60130	UDP	Internal PHE
60140	TCP	SR-MGC Billing on MGC
60150	TCP	SR-MGC Billing on SR-MGC
60180	UDP	Internal PHF
64000	TCP/UDP	Internal PHI-PRI (TCP) / Internal PHI-BRI (UDP)
57000	TCP	Internal PHC (Server)
65030	TCP	Internal PHC (Client)
53	UDP	DNS

Port No.	Protocol	Usage
123	UDP	SNTP

<DRS>

Registration Failed: Information of registration failed is output.

Registration Succeeded: Information of registration succeeded is output.

Sending Terminal Reset: Information of Sending Terminal Reset is output.

Fault notification from terminals: Information of Fault notification from terminals is output.

Buttons

Add: Open TRIGGER_LIST to Add items.

Delete: Delete items specified.

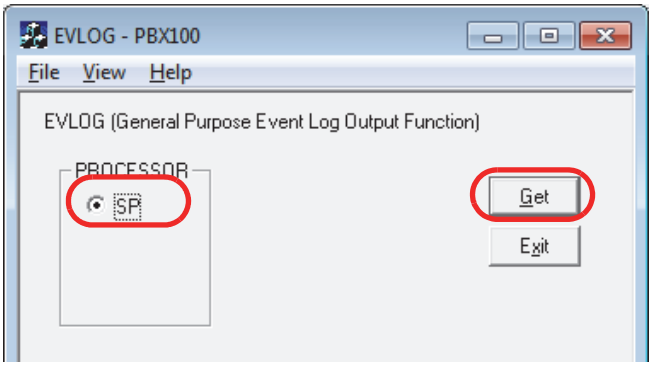
Apply: Apply a change to the system.

Cancel: Close the window.

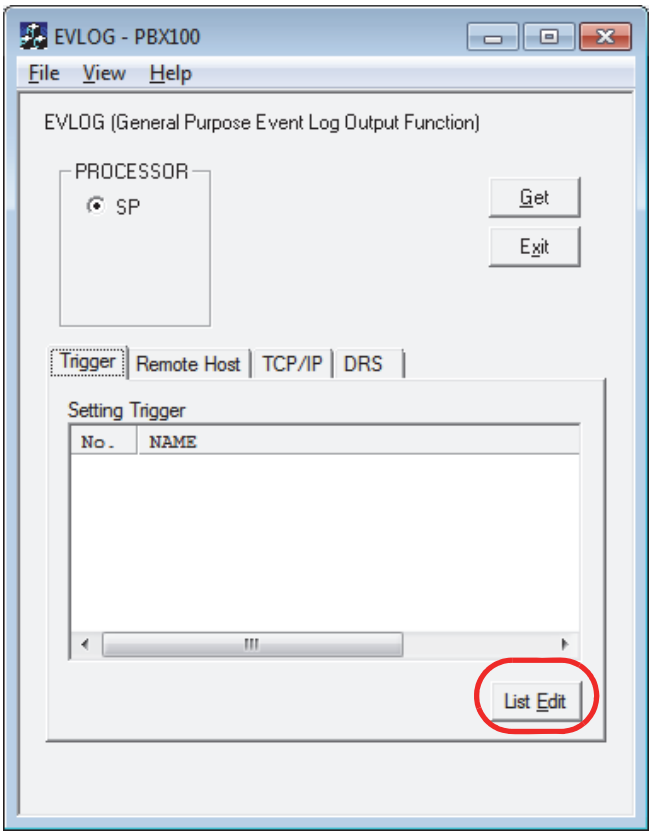
<Reference> How to Capture Call Statistics using EVLOG Command

1. To capture Call Statistics on the local host in PCPro session enter EVLOG command (or select it from the Tool folder).

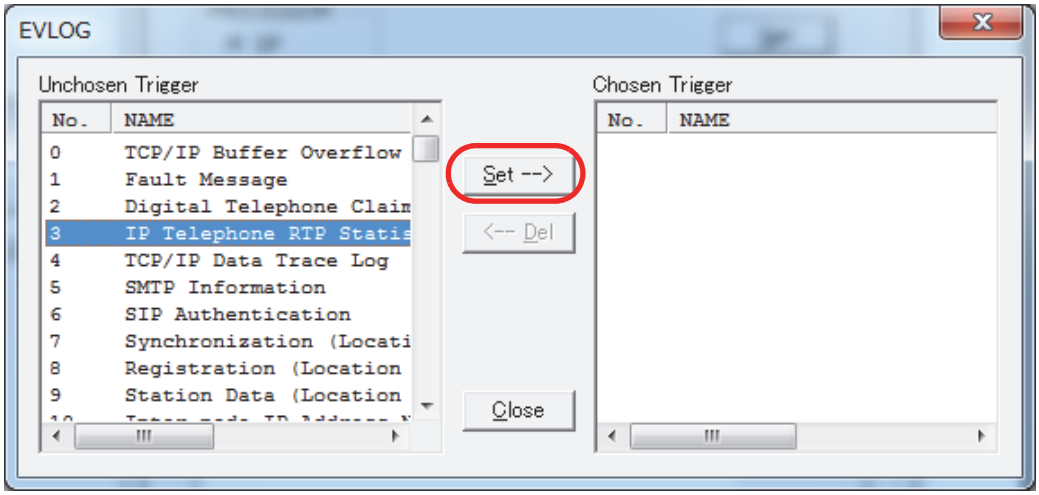
2. Choose the SP radio button and click the Get button.



3. On the Trigger tab click the List Edit button.

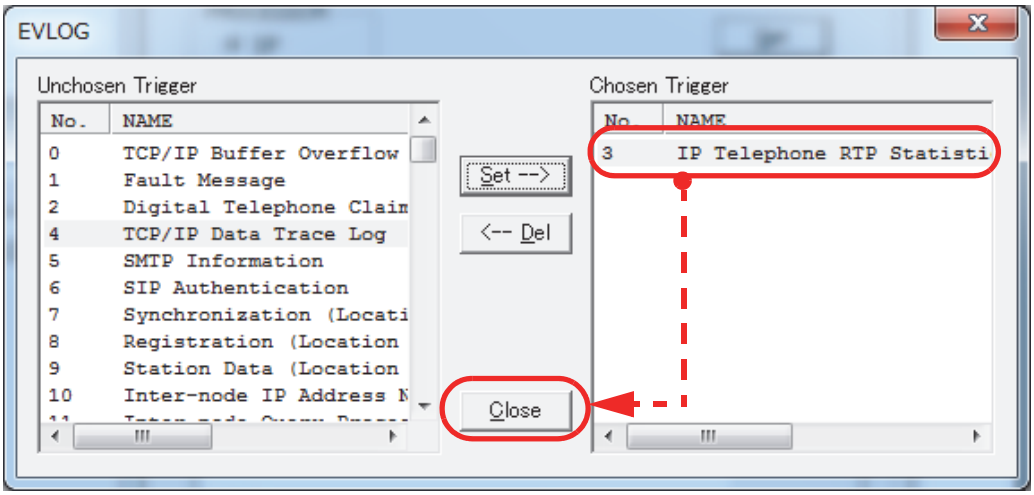


4. From the Unchosen Trigger list, select item 3 (IP Telephone RTP Statistics). Click the Set→ button.

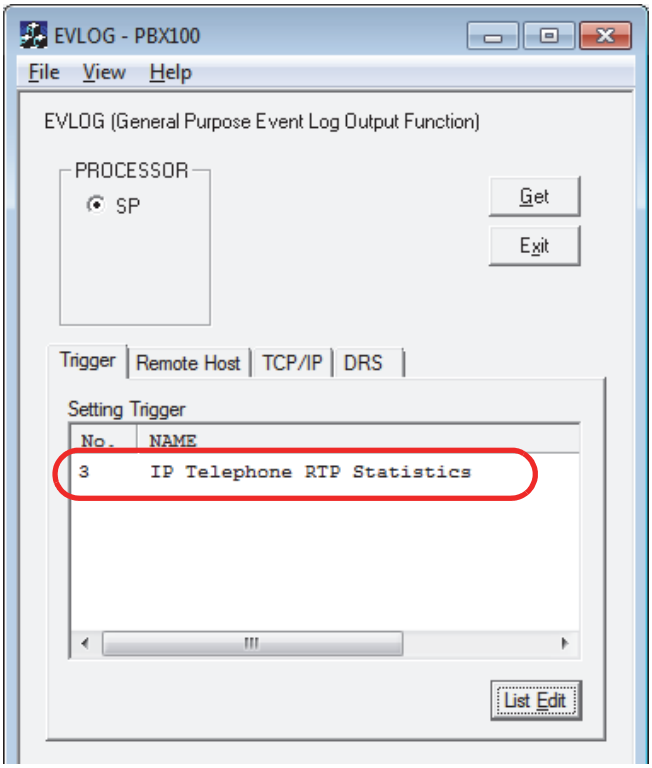


Item 3 is moved to the Chosen Trigger list.

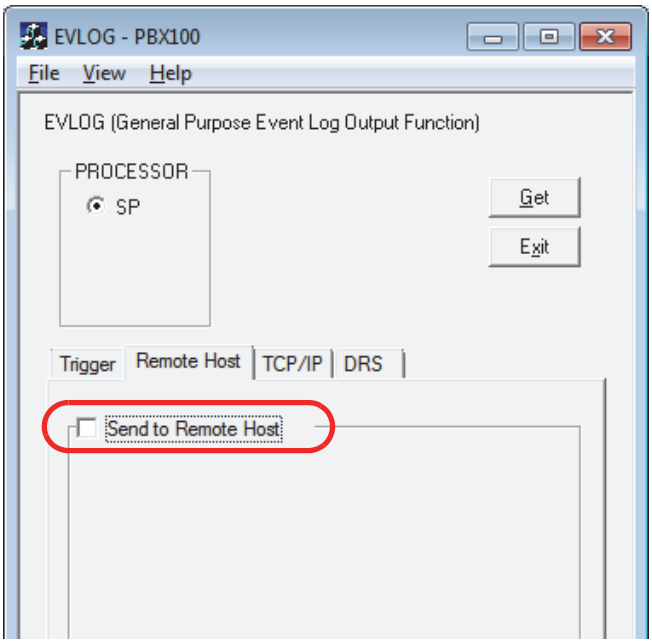
5. Click the Close button.



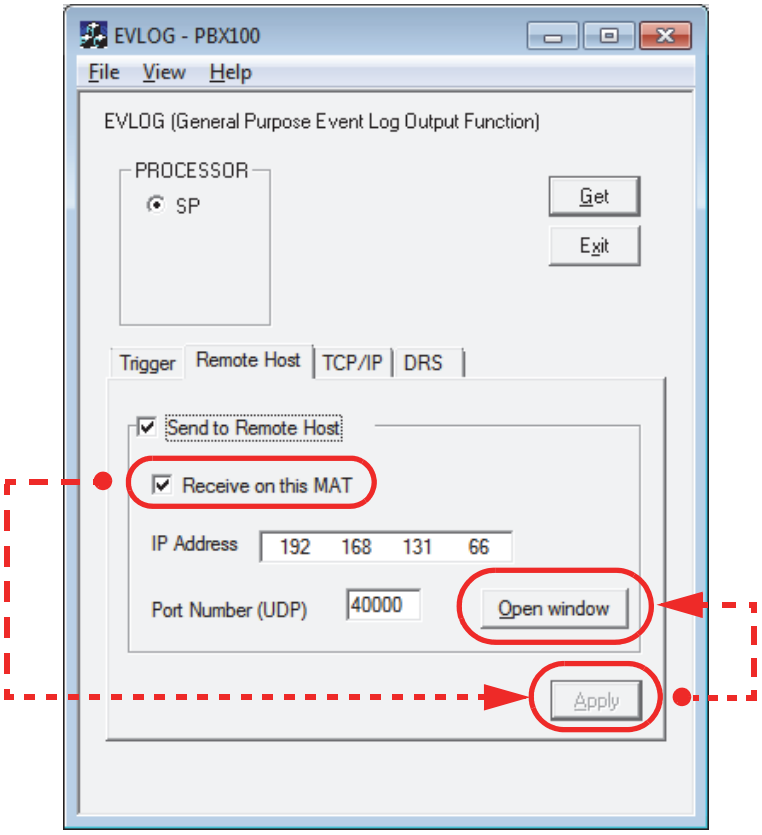
6. Item 3 is displayed in the Setting Trigger list.



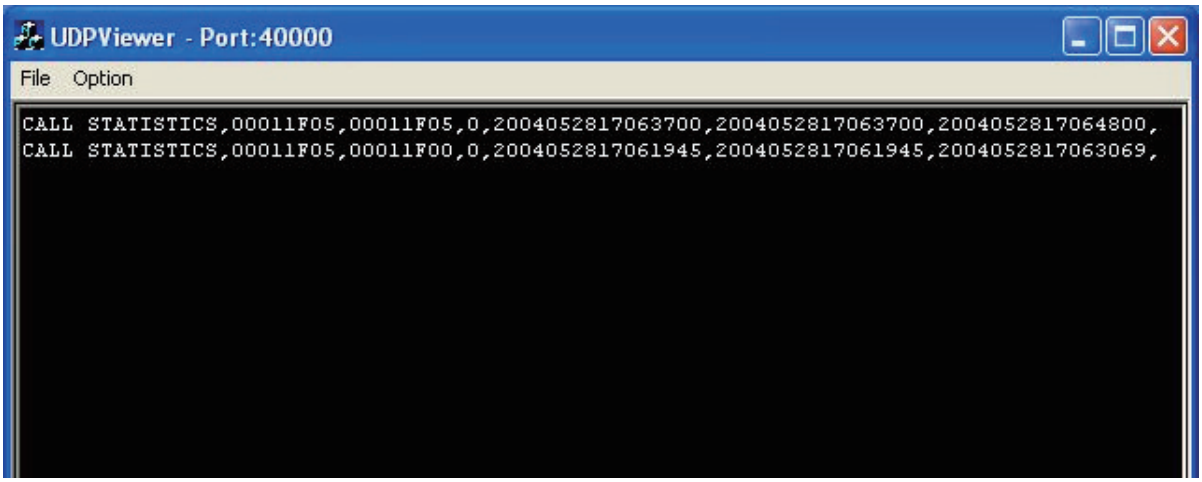
7. Select the Remote Host tab. Check Send to Remote Host box.



8. To capture Call Statistics on the local host, check Receive on PCPro box. Local PC IP Address will appear automatically in the IP Address field as well as Port Number (UDP) 40000. Click the Apply button and Open window button.



9. After clicking Open window button the following console appears. Make IP type of call. The first CALL STATISTICS message will appear. On the Option menu, check Show IP Addr. The LAN2 (ACT) address appears in the front of CALL STATISTICS message.



IPAN: Display of IP machine status display function

1. Functional Outline

This command analyzes the connection status between MGC and IP devices; executing ping test, verifying the station data, and displaying IP equipment information.

2. Precautions

(a) Item to be displayed on "Note" field differs by which Tab is chosen.

(b) When "Stn Verify" tab has been chosen, result will be displayed on "Status" field. Meanings of each item are as shown below.

Display	Meaning
Non	Data coincide
Add	Adding new station data
Change	Changing LENS or IP Address
Delete	Deleting station data

(c) When you execute "ping" in this command, it is only System-LAN2 that you can set as an origin of ping packet transmission.

(d) In the SEC column, encryption status for control data is displayed. When reading out data is failed "Read-out Failed" is displayed.

O: Encrypted

X: Not encrypted

Blank: System or terminal does not support encryption.

(e) A Virtual MAC address beginning with "02" is displayed as a "MAC address" of IPG (Digital), IPG (Analog) or UG50.

(f) A dummy MAC address beginning with "19" is displayed as a "MAC address" of SIP Handler Controlled SIP terminal.

(g) A dummy MAC address beginning with "1D" is displayed as a "MAC address" of IP-DTG.

(h) When this command is started by the PCPro logging in to an RN in a UMGi system, note the following precautions:

(i) In UMGi system:

[1] Use this command with PCPro logged in to CCN. However, the following conditions apply for logging destination:

- When logging to CCN, in the IP Terminal tab, data related with an RN in survival mode will not be displayed.
- With a PCPro logged in to an RN, in the IP Terminal tab, even if the All parameter is selected, only the information of terminals accommodated in the RN is displayed. Information is not displayed for IP terminals of other nodes if using the Collective parameter.

[2] In the SR-MGC tab, PBI numbers (LP numbers) of SR-MGCs are not displayed. Use the CMNT command to confirm PBI numbers (LP numbers). (a number set for the MGC No. parameter assigned with the CMNT command is displayed in the SR-MGC No. field.)

[3] In the MGC tab, it is not available to display the LAN1 (ACT2) information and execute the ping command. Use the ADTM command instead of this command.

(j) When using Geographic Redundancy (available from FP95-112 V2), note the following precautions:

<On the MGC tab>

- Even when logging in to a Geo Redundant Node or a Survivable Remote Node, the IP address of the Primary Node is to be displayed.
  This is also displayed on the IP address area in MGC (Origin of ping packet transmission) information out of tabs.

- As for indications of display the MGC kind parameter above the list, “SV9500” will be displayed instead of “Primary Node/Geo Redundant Node/Survivable Remote Node”.

<On the SR-MGC tab>

- “SR-MGC” is displayed in this tab such as the tab’s name and the list item name, however, the contents of Primary Node, Geo Redundant Node and Survivable Remote Node except SR-MGC are also displayed in this tab because of the registered contents by the CMNT command are displayed in this tab.

- The registered MGC Number by the CMNT command is displayed on the **SR-MGC No.** in the list.

- For the Primary Node/Geo Redundant Node/Survivable Remote Node, the display for **Office Name** will be blank.

3. Parameters

<<For the Telephony Server Login>>

[Input Data]

MGC (origin of ping packet transmission)

System-0/System-1/Both system

Processing type

Individual/All equipment **Note 1**

The number of times of ping

One Time/Four Times

Note 1: When the processing type “All equipment” is selected, all the connected device data on the tabs of MGC, IP Terminal, Package, PHC Point Code, and SR-MGC are intended to affect. When “Individual” is selected, operation is executed on the basis of each tab.

[Output Data]

System-0 operating status **Note 2**

System-1 operating status **Note 2**

IP Address (ACT) **Note 3**

IP Address (System-0) **Note 3**, **Note 4**

IP Address (System-1) **Note 3**, **Note 4**

Subnet Mask **Note 3**

Note: Information of LAN2 will be displayed.

Note 2: The color for the operating status means as shown below.

COLOR	STATUS	ping
Green	Operating normal (ACT)	Available
Yellow	Operating normal (STBY)	Available
Red	Stop	Not available
Gray	Not mounted	Not available

Note 3: When the IP address of MGC is not assigned by the ADTM command or assigned to 0.0.0.0, the default data is indicated.

Note 4: In single configuration, the blank is indicated.

Buttons

Get: Reads out and displays the connected IP device data.

Ping Execute: Executes ping test to verify that a particular IP address exists and can accept request, and to see how long it takes to get response. Ping test is executed to the IP address marked in the check box on the list.

File output: Outputs the listed data as a CSV file format.

Exit: Exits the command window.

<<For SR-MGC Login>>

Note: The SR-MGC mentioned in IPAN section indicates SR-MGC(E).

[Input Data]

SR-MGC (origin of ping packet transmission)

SR-MGC

Processing type

Individual/All equipment **Note 5**

The number of times of ping

One Time/Four Times

Note 5: When the processing type “All equipment” is selected, all the connected device data on the tabs of MGC, IP Terminal, and PHC Point Code are intended to affect. When “Individual” is selected, operation is executed on the basis of each tab.

[Output Data]

SR-MGC operating status: ACT (Fixed)

IP Address (ACT)

Subnet Mask

Buttons

Get: Reads out and displays the connected IP device data.

Ping Execute: Executes ping test to verify that a particular IP address exists and can accept request, and to see how long it takes to get response. Ping test is executed to the IP address marked in the check box on the list.

File output: Outputs the listed data as a CSV file format.

Exit: Exits the command window.

Note: The following tabs are common for the Telephony Server login and SR-MGC login.

<MGC tab>

MGC Kind: SV9500/SR-MGC

[Output Data]

ACT/System-0/System-1

IP Address **Note 6**, **Note 7**

Ping result (system-0)

Ping result (system-1)

Note 6: For the Telephony Server login, only LAN2 indicates the default data when the IP address of MGC is not assigned by the ADTM command or assigned to 0.0.0.0.

Note 7: The data assigned by AIPA command will be indicated for SR-MGC login.

<IP Terminal tab>

[Input Data]

View Type

- **Equipment Kind**

LENS Input Type: All / Collective

Specify the range of LENS in the START and END box when Collective is selected.

Click the type of target IP device. The check box "All Equipment" is provided to select all the types.

☐ Terminal

☐ DtermIP:	IP terminal
☐ Softphone (SP20):	Softphone (Proprietary Protocol) for ACD **Note 8**
☐ Inaset:	DtermIP INASET
☐ Softphone (SP21):	Not used.
☐ Softphone (SP30):	DtermSP30 (Proprietary Protocol)
☐ IPG Digital:	IPG (Digital)
☐ UG50 (DLC):	UG50 (DLC)

☐ Media Converter

☐ Analog MC:	Analog 2MC
☐ IPG Analog:	IPG (Analog)
☐ UG50 (LC):	UG50 (LC)

☐ CS

☐ IPCS/IPZT:	IP-BS

☐ Gateway

☐ Gate Keeper:	Not used.
☐ SIP Server:	SP

☐ VPS

- ☐ IPVPS: Not used.

☐ Media Gateway

- ☐ ISDN Trunk (BRI): MG(BRI) Proprietary Protocol mode
- ☐ ISDN Trunk (PRI 1.5M): MG(PRI) Proprietary Protocol mode
- ☐ ISDN Trunk (PRI 2M): MG(PRI) (Not used)
- ☐ SIP-MG: MG(SIP)
- ☐ MG (COT): MC&MG-COT (4LC2COTA)
- ☐ MG (6COT): MG-COT
- ☐ B2BUA-SIP GW-4ch: Not used.
- ☐ B2BUA-SIP GW-32ch: Not used.
- ☐ UG50 (BRI): Not used
- ☐ UG50 (PRI 1.5M): UG50 (PRT1.5M) Proprietary Protocol mode
- ☐ UG50 (PRI 2M): UG50 (PRT 2M) Proprietary Protocol mode (Not used)
- ☐ UG50 (COT-TYPE1): UG50 (COT-TYPE1) Proprietary Protocol mode
- ☐ UG50 (COT-TYPE2): UG50 (COT-TYPE2) Proprietary Protocol mode

☐ Multi-Function Server

- ☐ Voice Server: VS32
- ☐ Multi-Protocol Handler: MPH

☐ SIP

- ☐ SIP Multi-Function Telephone: SIP Multiple Line terminal
- ☐ SIP Soft-Phone: Softphone (SIP), DtermSP30 (SIP) for ACD
- ☐ SIP-VPS: IP-UMS

☐ SIP Media Gateway

- ☐ ISDN Trunk (BRI) [SIP]: MG(BRI) SIP mode
- ☐ ISDN Trunk (PRI 1.5M) [SIP]: MG(PRI) SIP mode
- ☐ ISDN Trunk (PRI 2M) [SIP]: MG(PRI) (Not used)
- ☐ MG(6COT) [SIP]: MG-COT
- ☐ MG-T1 [SIP]: MG-T1(SIP)
- ☐ UG50 (BRI) [SIP]: Not used
- ☐ UG50 (PRI 1.5M) [SIP]: UG50 (PRT1.5M) SIP mode
- ☐ UG50 (PRI 2M) [SIP]: UG50 (PRT 2M) SIP mode (Not used)
- ☐ UG50 (COT-TYPE2) [SIP]: UG50 (COT-TYPE2) SIP mode

☐ SIP Media Converter

- ☐ 8MC [SIP]: 8LC Card
- ☐ UG50 (LC) [SIP]: UG50 (LC)

☐ SIP Phone

- ☐ SIP Phone: SIP Handler Controlled SIP terminal

☐ IP-DTG

- ☐ IP-DTG: IP-DTG

☐ Other

☐ H.323:	Not used.
☐ SIP Station:	WLAN Handset (MH Series), SP Controlled Standard SIP terminal

Note 8: To display DtermSP30 used as ACD agent position, select Softphone (SP20).

- **Station**
  - "Station Kind" Field
    - Station Number

      Specify the range of Tenant Number in the START TN and END TN

      Specify the range of station number in the START STN and END TN
    - Telephone Number (NDM)

      START UGN and END UGN (fixed to 1)

      Specify the range of Telephone Number in the START TELN and END TELN
    - Telephone Number (LDM)

      START UGN and END UGN (fixed to 1)

      Specify the range of Telephone Number in the START TELN and END TELN
- **Trunk**

  Specify the range of Route Number in the START RT and END RT

  Specify the range of Trunk Number in the START TK and END TK
- **IPCS/IPZT**

  PCN: PCS / PHS Community Number [1-1024]

  Specify the range of Calling Area Number in the START ERN and END ERN [1-32]

  Specify the range of Group Number in the START GRN and END GRN [1-8]

  Specify the range of IPCS Number in the START CSN / ZTN and END CSN / ZTN [1-32]
- **GateKeeper**

  GKID: Gate Keeper ID [1-255]
- **PH Control**

  Specify the PH LENS.
- **SIP Server**

  Specify the SIP Server ID [1-255].
- **MPH**

Specify the Multi-Protocol Handler ID [1-4095]

Note: When MPH is selected for View type, the ping command cannot be executed because the data read out do not have IP address information.

[Output Data]

Items to be displayed will vary depending on the View Type chosen. Items displayed for each View Type are shown in the table listed below.

Equipment Kind	Station	Trunk	IPCS/IPZT	Gatekeeper	PH Control	SIP Server	MPH
Equipment Name	Equipment Name	Equipment Name	Equipment Name	Equipment Name	Equipment Name	Equipment Name	-
IP CH KIND	IP CH KIND	IP CH KIND	-	-	IP CH KIND	-	-
IP Address	IP Address	IP Address	IP Address	IP Address	IP Address	IP Address	-
LOC-ID	LOC-ID	LOC-ID	LOC-ID	LOC-ID	LOC-ID	LOC-ID	-
MAC Address	MAC Address	MAC Address	MAC Address	-	MAC Address	-	-
SEC	SEC	SEC	SEC	-	SEC	-	-
PH TYPE	-	-	-	-	-	-	PH TYPE Note 9
LENS	LENS	LENS	LENS	LENS	LENS	LENS	LENS
TN	TN Note 10	-	-	TN	TN	TN	-
STN	STN Note 10	-	-	STN	STN	STN	-
UGN(NDM)	UGN(NDM) Note 11	-	-	UGN(NDM)	UGN(NDM)	UGN(NDM)	-
TELN(NDM)	TELN(NDM) Note 11	-	-	TELN(NDM)	TELN(NDM)	TELN(NDM)	-
UGN(LDM)	UGN(LDM) Note 12	-	-	UGN(LDM)	UGN(LDM)	UGN(LDM)	-
TELN(LDM)	TELN(LDM) Note 12	-	-	TELN(LDM)	TELN(LDM)	TELN(LDM)	-
RT	-	RT	-	-	RT	-	-
TK	-	TK	-	-	TK	-	-
ISDN STATUS	-	ISDN STATUS	-	-	ISDN STATUS	-	-
MODE	-	MODE	-	-	MODE	-	-
PCN	-	-	PCN	-	PCN	-	-
ERN	-	-	ERN	-	ERN	-	-
GRN	-	-	GRN	-	GRN	-	-
CSN/ZTN	-	-	CSN/ZTN	-	CSN/ZTN	-	-
GKID	GKID	-	-	GKID	GKID	-	-
SIP Server ID	SIP Server ID	-	-	-	SIP Server ID	SIP Server ID	-
MPH LENS	MPH LENS	-	-	-	MPH LENS	-	-
MPH ID	MPH ID	-	-	-	MPH ID	-	-
PHIN	PHIN	-	-	PHIN	-	PHIN	-

Equipment Kind	Station	Trunk	IPCS/IPZT	Gatekeeper	PH Control	SIP Server	MPH
PH LENS	PH LENS	PH LENS	PH LENS	PH LENS	PH LENS	PH LENS	-
PH TYPE	PH TYPE	PH TYPE	PH TYPE	PH TYPE	PH TYPE	PH TYPE	-
DTG-ID	-	-	-	-	DTG-ID	-	-
User Agent Information	User Agent Information	-	-	-	User Agent Information	-	-
Firmware Information **Note 13**	Firmware Information **Note 13**	Firmware Information **Note 13**	Firmware Information **Note 13**	-	Firmware Information **Note 13**	-	-
SP/SW No. **Note 13**	SP/SW No. **Note 13**	SP/SW No. **Note 13**	SP/SW No. **Note 13**	-	SP/SW No. **Note 13**	-	-
ISS **Note 13**	ISS **Note 13**	ISS**Note 13**	ISS **Note 13**	-	ISS **Note 13**	-	-
Hardware Information **Note 13**	Hardware Information **Note 13**	Hardware Information **Note 13**	Hardware Information **Note 13**	-	Hardware Information **Note 13**	-	-
ISS **Note 13**	ISS **Note 13**	ISS **Note 13**	ISS **Note 13**	-	ISS **Note 13**	-	-
Ping Result (system-0)	Ping Result (system-0)	Ping Result (system-0)	Ping Result (system-0)	Ping Result (system-0)	Ping Result (system-0)	Ping Result (system-0)	-
Ping Result (system-1)	Ping Result (system-1)	Ping Result (system-1)	Ping Result (system-1)	Ping Result (system-1)	Ping Result (system-1)	Ping Result (system-1)	-
-	-	-	-	-	-	-	REGMAX
-	-	-	-	-	-	-	MGC PORT
-	-	-	-	-	-	-	TERM PORT
-	-	-	-	-	-	-	MPH LENS

Note 9: This item appears on the left side of the LENS column only when “MPH” was chosen for the View type box.

Note 10: This item appears only when “station number” was chosen for the Station kind field.

Note 11: This item appears only when “Telephone Number (NDM)” was chosen for the Station kind field.

Note 12: This item appears only when “Telephone Number (LDM)” was chosen for the Station kind field.

Note 13: If there are several pieces of information, only the lead information is displayed. For checking other pieces of information not displayed, click the “Version detailed display” button on the right-center side of the screen.

Meanings of each item is shown below:

Equipment Name	Name of the equipment.	**GKID**	Gatekeeper ID
IP CH KIND	Kind of channel for VS32.	**SIP Server ID**	SIP Server ID
IP Address	IP Address	**MPH LENS**	MPH Accommodation Location Information (LENS)
LOC-ID	Location ID	**MPH ID**	MPH ID
MAC Address	MAC Address	**PHIN**	Virtual Accommodation Location
SEC	Encryption status for voice data	**PH LENS**	Accommodation Location Information of PH
LENS	Accommodation Location Information (LENS)	**PH TYPE**	Type of PH
TN	Tenant Number	**DTG-ID**	Software Digital Tone Generator (IP-DTG) ID
STN	Station Number	**User Agent Information**	User Agent Information
UGN(NDM)	User Group Number	**Firmware Information**	Firmware Information
TELN(NDM)	Telephone Number	**SP/SW No.**	Service Package/Software Number
UGN(LDM)	User Group Number	**ISS**	Firmware Version Issue
TELN(LDM)	Telephone Number	**Hardware Information**	Hardware Information
RT	Route Number	**ISS**	Hardware Version Issue
TK	Trunk Number	**Ping Result (system-0)**	Ping result of system-0 side
ISDN STATUS	Line Status	**Ping Result (system-1)**	Ping result of system-1 side
MODE	Operation Mode	**REGMAX**	Maximum Number of Registration Permitted
PCN	PHS Community Number	**TERM PORT**	Port Number used for IP Terminal Control
ERN	Calling Area Number	**MGC PORT**	Port Number used for TP Control.
GRN	Group Number	**MPH LENS**	Accommodation Location Information for MPH
CSN/ZTN	IP-BS Number	-	-

<Package tab>

[Input Data]

Specify the range of LENS in the START PH LENS and END PH LENS [five digits].

[Output Data]

PH LENS

IP Address

PH TYPE: PHA, PHE, PHD, PHC, IPPAD, PHI, Internal PHE, Internal SIP Handler, Internal PHC, Internal PHI

MPH LENS: Line Equipment Numbers of MPH

MPH ID: Identifier of MPH

REGMAX: The maximum number of registration

REG CNT: The number of terminals under the registration of the corresponding PH card

LOGIN CNT: The number of terminals logging in to the MGC

Firmware Information **Note 14**

SP / SW No. **Note 14**

ISS **Note 14**

Ping result (system-0)

Ping result (system-1)

Note 14: If there are several pieces of information, only the lead information is displayed. For checking other pieces of information not displayed, click the “Version detailed display” button on the right-center side of the screen.

<PHC Point Code tab>

[Input Data]

Specify the range of Point Code in the START Remote PC and END Remote PC [1-16367].

[Output Data]

Office: Self office / Destination office

PC: Point Code of the office

IP Address

PH LENS: LENS of the PHC card in the self office (displayed for self office only)

Ping result (system-0)

Ping result (system-1)

<SR-MGC tab>

[Output Data]

SR-MGC No. [1-255]

IP Address

Connect CNT: The number of connected IP terminals in the remote office

Office Name

Ping result (system-0)

Ping result (system-1)

<IP Address Input tab>

[Input Data]

Set Type: Input/File

- When Input is selected:

  IP Address Input Type

  When Individual is selected:

  IP Address: Enter the target IP address.

  When Collective is selected:

  Enter the range of IP addresses in the START IP Address and END IP Address boxes.

- When File is selected:

  File Name

  Select a saved CSV file by pressing “Reference” button for specifying the target IP addresses. The kind of CSV file is indicated in the File Kind box. **Note 15**

Note 15: The following CSV files cannot be selected:
- CSV files output by the STN Verify tab
- CSV files output by the IP terminal tab when View type = MPH is selected

[Output Data]

IP Address

Ping result (system-0)

Ping result (system-1)

Note

<STN Verify tab>

Importable CSV file is the output of the data which is read out on the IP Terminal tab with the following conditions:

Selectable: X, Not selectable: N

The IP Terminal Tab		The Verify Key Data Field in The STN Verify Tab		
View Type	Station Kind	Station Number	Telephone Number (NDM)	Telephone Number (LDM)
Equipment Kind	-	X **Note 16**	X **Note 16**	X **Note 16**
Station	Station Number	X **Note 16**	N	N
	Telephone Number (NDM)	N	X **Note 16**	N
	Telephone Number (LDM)	N	N	X **Note 16**
PH Control	-	X **Note 16**	X **Note 16**	X **Note 16**

Note 16: The targets of verification are the following equipment:

- DtermIP
- SoftPhone (SP21)
- UG50 (DLC)
- UG50 (LC)
- SoftPhone (SP20)
- SoftPhone (SP30)
- Analog MC
- IPVPS
- SmartPhone
- IPG (Digital)
- IPG (Analog)
- Voice Server (IP CH KIND: 8-CONF, 16-CONF or 32-CONF only)
- SIP Multi-Function Telephone
- 8MC [SIP]
- SIP Phone
- SIP Soft-Phone
- UG50 (LC) [SIP]
- H.323
- SIP-VPS
- Voice Server [SIP] (IP CH KIND: 8-CONF, 16-CONF or 32-CONF only)
- SIP Station

[Input Data]

Verify Type: File ↔ Memory / File ↔ File

Verify Key Data: Station Number / Telephone Number (NDM) / Telephone Number (LDM)

File 1: Select the CSV file clicking the “Reference” button.

File 2: Select the CSV file clicking the “Reference” button (for the Verify Type File ↔ File only).

[Output Data]

File 1 / File preservation time: The directory and the saved time of the selected CSV file is displayed.

Data Conditions: This box shows the conditions when the CSV file is obtained. **Note 17**

Note 17: When Equipment Kind is selected for the View Type box on the IP Terminal tab, if there is information other than the target of Station Number Verify (**Note 16**) on the previous page, it is regarded as not meeting the search condition and not displayed in the Verify Result field.

File 2 / File preservation time: The directory and the saved time of the selected CSV file is displayed.

Status

TN (for the Verify Key Data “station number”)

STN (for the Verify Key Data “station number”)

UGN (for the Verify Key Data “Telephone Number (NDM)” or “Telephone Number (LDM)”

TELN (for the Verify Key Data “Telephone Number (NDM)” or “Telephone Number (LDM)”

LENS

IP Address

Ping result (system-0)

Ping result (system-1)

<Registration Log tab>

[Input Data]

LENS Input Type: All / Collective

Specify the range of LENS in the START and END box when Collective is selected.

- Equipment kind [Registration/License Capacity]
  - Terminal
    DtermIP
    Softphone (SP20)
    Inaset
    Softphone (SP21)
    Softphone (SP30)

[Output Data]

Equipment Name

IP CH KIND: Kind of channel for VS32

IP Address

LOC-ID: Location ID

MAC Address

SEC: Encryption status for voice data

LENS: Accommodation Location Information (LENS)

TN: Tenant Number

STN: Station Number

UGN (NDM): User Group Number

TELN (NDM): Telephone Number

UGN (LDM): User Group Number

TELN (LDM): Telephone Number

RT: Route Number

TK: Trunk Number

ISDN STATUS: Line Status

MODE: Operation mode

PCN: PHS Community Number

ERN: Calling Area Number

GRN: Group Number

CSN/ZTN: IP-BS Number

GKID: Gatekeeper ID

SIP Server ID

MPH LENS: MPH Accommodation Location Information (LENS)

MPH ID

PHIN: Virtual Accommodation Location

PH LENS: Accommodation Location Information of PH

PH TYPE: Type of PH

Status: Registration Status

REG Result: Result of Registration

Channel Status: Channel Status

Error Factor

[Buttons]

Get: Get information of selected Equipment Kind of Registration Log. **Note 18**, **Note 19**

Note 18: To display Equipment Kind [Registration/License Count], choose the equipment from the list of Equipment, and get the registration information with pressing “Get” button. When the information is obtained with this command, if registration figure is “0”, Equipment Kind [Registration/License Count] will be displayed.

Note 19: To delete Equipment Kind [Registration/License Count], change the location of terminal accommodation or change the Equipment Kind.

IPDM: Management Function of the IP Telephone Fault

1. Functional Outline

This command displays IP station status to support analyzing the fault status when a fault occurs in the IP station. This command allows maintenance personnel to use the following functions. For each function operating procedure on PCPro, see "6. Operation Procedure."

Function	Description
Error/Warning Scale Grasping	• The window displays the number of IP stations in which a fault occurs. • Maintenance personnel can grasp the fault scale immediately after this command has started up.
Error/Warning Occurrence Time Grasping	• "Error/Warning Number List" window shows number movements of fault events over time so that maintenance personnel can grasp a period of time for errors/warnings occurrences. • The window displays the number of IP station fault events over time until 24 hours before since the data has been read. • Maintenance personnel can output the read out results on TSV (tab delimited) file.
All Stations Scanning	• Fault scanning is available to all IP stations. • Scanning all stations is repeated automatically until it is canceled. • Contents to be scanned are same as "Specific Stations Scanning." • Maintenance personnel can generate TSV file used for "Multiple Stations Scanning."
Multiple Stations Scanning	• Simultaneous fault scanning is available to multiple IP stations by importing a file in the designated file format. • Maintenance personnel can edit the TSV file generated by "All Stations Scanning" and import it. • Scanning the specified stations by using TSV file is repeated automatically until it is canceled. • Contents to be scanned are same as "Specific Stations Scanning."
Specific Stations Scanning	• Fault scanning is available to specific IP stations. • Maintenance personnel can specify IP stations with station numbers or Telephone Numbers (only Telephone Numbers in own system are valid when maintenance personnel specify Telephone Numbers). • Fault scanning can be executed continuously by specifying reading time periods. • Contents to be scanned are same as "Specific Stations Scanning."
Fault History Display	• For the IP stations displayed during "Specific Stations Scanning", "All Stations Scanning" or "Multiple Stations Scanning", the Fault History Display window displays fault history of IP stations whose Error Count/Warning Count is 1 or more. • This function can retrieve current 24 fault events occurred in the specified IP station from fault history (10,000 events) stored in the system. • Maintenance personnel can specify multiple IP stations simultaneously.

Also this command has the following ability to analyze the fault status more easily.

Function	Description
Sort	Maintenance personnel can sort scan data on a content basis by clicking an item on the scan data displayed on the screen.
Filter	For “All Stations Scanning”and “Multiple Stations Scanning”, maintenance personnel can filter the scan data contents by “STATUS” and “CAUSE” of IP stations.
Pause	When fault scanning is in progress, maintenance personnel can pause in the fault scanning.
Scanning Result Output	Maintenance personnel can output a list of scan data which are displayed by fault scanning to a file.
Fault History Clear	Maintenance personnel can delete events (up to 10,000 events) in the fault history collectively. Maintenance personnel can execute this function if needed (such as after output to the file).
Floor Name Display	Maintenance personnel can define floor names on a network address or Extension Number Pattern so that maintenance personnel can display floor names according to IP addresses of IP stations.

2. Precaution

(a) The target for collecting information by this command is only the information in the system to which PC-Pro logs in. If maintenance personnel specify Telephone Numbers in the different system, a message notifies maintenance personnel that information cannot be read.

(b) This command cannot be used with UMGi system.

(c) Up to 10,000 fault events can be stored as the fault history in the system. When the number of fault events exceeds 10,000, older events are deleted.

(d) Fault History Display with “Display Fault History of List Selection Data” button is valid in IP stations whose Error Count/Warning Count is “1” or more. In the following reasons, the number of fault events may not match between Error Count/Warning Count and Fault History Display.

- The window displays existing (up to 10,000) events in the fault history. Fault events are corrected periodically; therefore, some events in the relevant station may be deleted depending on the timing. As a result, the number of events on the window may become lower than the number in Error Count/Warning Count.
- The windows displays current 24 events. The rest of events are not displayed when 25 or more events exist.

(e) Error/Warning Number List can be displayed by selecting from the option menu on the main window. Error/Warning Number List can show Error Count/Warning Count for 24 hours (in 10 minute increments) based on the system clock.

(f) The window can display Floor Name identified from IP address of IP station by defining Floor Name on a network address basis.
Floor Name can be also identified from Extension Number Pattern (specifying several digits from the first station number/Telephone Number) of IP station by defining Floor Name on a Extension Number Pattern basis. For details of Floor Name Setting, refer to [Floor Name Setting] window.

(g) The displayed information is different depending on the IP station status. The following table shows information displayed on the scanning window in each IP station status.

Y: Displayed on the window, N: Not displayed on the window

Item to be Displayed	Display on a Status Basis				
	Login (Normal)	Login (Restored)	Logout (Normal)	Warning	Error
Extension Number	Y	Y	Y	Y	Y
Floor Name	Y	Y	N	Y	Y
Read Time	Y	Y	Y	Y	Y
STATUS	Y	Y	Y	Y	Y
CAUSE	N	Y	N	Y	Y
Error/Warning Time	N	Y	N	Y	Y
Restoration Time	N	Y	N	N	N
Error Count	Y	Y	Y	Y	Y
Warning Count	Y	Y	Y	Y	Y
Equipment	Y	Y	N	Y	Y
IP Address	Y	Y	N	Y	Y
MAC Address	Y	Y	N	Y	Y
PH LENS	Y	Y	N	Y	Y
FPC	Y	Y	Y	Y	Y
LENS	Y	Y	Y	Y	Y
TN	Y	Y	Y	Y	Y
STN	Y	Y	Y	Y	Y
UGNL **Note 1**	Y	Y	Y	Y	Y
TELNL **Note 1**	Y	Y	Y	Y	Y
UGNN **Note 1**	Y	Y	Y	Y	Y
TELNN **Note 1**	Y	Y	Y	Y	Y
Error Information **Note 2**	Y	Y	Y	Y	Y

Note 1: This item appears on the window when Telephone Number is allocated to each station by using ALGSL/ALGSLN command.

Note 2: This item appears on the window when an error occurs in each IP station.

(h) The following table describes IP station types which appear on the Main window and Fault History Display window.

Display	Description
DtermIP	IP terminal
SoftPhone (SP20)	DtermSP30 (Proprietary Protocol mode) for ACD
SmartPhone	DtermIP INASET
SoftPhone (SP30)	DtermSP30 (Proprietary Protocol mode)
IPG Digital	IPG (Digital)
UG50 (DLC)	UG50 (DLC)
SIP Multi-Function Telephone	SIP Multiple Line terminal
SIP Soft-Phone	DtermSP30 (SIP mode)
	DtermSP30 (SIP mode) for ACD
	Soft Client SP350
	Soft Client SP350 for ACD

3. Parameters

The following are parameters in this command.

Scan Mode

Plural: Executes “All Stations Scanning” or “Multiple Stations Scanning”.
Single: Executes “Specific Stations Scanning” by specifying station number or Telephone Number.

[Plural]

Scan Data

All IP Terminals: Fault scanning targets all IP stations (All Stations Scanning).
File: Fault scanning targets multiple IP stations simultaneously by importing a TSV file in the designated file format. (Multiple Stations Scanning).

[TSV file for the scan data]

Create TSV file in the following method.
[1] Select “All IP Terminals” for the “Scan Data” and click “Get” button.
[2] Output the results to the file by clicking “List Data Output to the File” button.
[3] Edit the data on the file and create the file on a station group basis.

* To exclude stations on the file
- Delete the line (station) in itself.
- Input “//” in the first of the line.

Display Filter Setting

In Target Item and Target Data, select items to be displayed on the window.

Target Item	Target Data
STATUS	Login (Normal)
	Login (Restored)
	Logout (Normal)
	Warning
	Error
CAUSE	Health Check Error
	Fault of PHD
	Re-registration warning

[Single]

Kind of Station

STN
TELN(LDM)
TELN(NDM)

Interval (second): Current status is updated in each period which has been specified. (1-300 seconds)

[For STN]

TN: Tenant Number (1-63)
STN: Station Number (0-9, *, #, up to 6 digits)

[For TELN (LDM) /TELN (NDM)]

UGN: User Group Number (1-255)
TELN: Telephone Number (0-9, *, #, up to 16 digits)

4. Buttons

The following are buttons used in this command.

Window		Button	Description
Main Window	"All IP Terminals" is selected.	Get	Reads out all IP stations.
		Re-Specify	Changes IP stations to be scanned.
		Cancel	Cancels scanning.
	"File" is selected.	Get	Reads out IP stations to be scanned from the file.
		Re-Specify	Changes IP stations to be scanned.
		Cancel	Cancels reading the file.
	Fault Scanning	Scan	Reads fault information.
		Pause	Pauses during reading fault information.
		Resume	Release pausing.
		Stop	Stops reading fault information.
	Display Filter Setting **Note 3**	Setting	Selects items to be displayed.
		Change	Changes the selected items.
		Release	Releases the selected items.
	Others	Refresh	Displays Fault Terminals Total.
		Display Fault History of List Selection Data	Displays Fault History Display of the specified station.
		List Data Output to the File	Outputs the scanned result to TSV file. **Note 4**
		Delete All Fault History	Deletes all fault history stored in Telephony Sever
		Close	Closes the command.
Fault History Display		Get	Reads out the fault history.
		Cancel	Cancels reading the fault history.
		File Output	Outputs the fault history.
		Close	Closes the command.

Window	Button	Description
Error/Warning Number List	Refresh	Reads out Error/Warning Number List.
	Reverse Display	Specifies the displaying the list from whether the latest information or oldest information.
	File Output	Outputs Error/Warning Number.
	Exit	Exits the Error/Warning Number List window.
Floor Name Setting	Refresh	Reads the current imported floor name file.
	File Import	Imports the floor name file.
	File Export	Exports the floor name file.
	File Delete	Deletes the floor name.
	Close	Closes the Floor Name Setting window.

Note 3: Display Filter Setting allows maintenance personnel to analyze the scan data more easily by filtering the data with “STATUS” and CAUSE" when “All Stations Scanning” and "Multiple Stations Scanning” are activated.

Note 4:

- Only the stations in a list of scan data can be output to a file.
- Maintenance personnel can use TSV file output to import the specified multiple stations during Multiple Stations Scanning.”

5. Displayed Data

The following are items displayed in each window.

(a) Main window

This window appears when maintenance personnel start up this command.

Item	Description
Error	Displays the number of current error events. **Note 5**
Warning	Displays the number of current warning events. **Note 5**

Note 5:

- Current error/warning events are updated periodically during scanning.
- These are number of stations in which error/warning events occur in a system.

Item	Description
No.	Scan data counter
Extension Number	Extension Number of the IP station
Floor Name	Floor name corresponding to the IP address of IP station/Extension Number Pattern
Read Time	Date and Time that the scan data has been read
STATUS	IP Station Status • Login (Normal) • Login (Restored) • Logout (Normal) * When the IP station is out of management by the system • Warning • Error
CAUSE	Cause of error/warning • Health Check Error **Note 6** • Fault of PHD **Note 6** • Re-registration warning **Note 6**
Error/Warning Time	Date and Time that the error/warning has been occur
Restoration Time	Date and Time that the IP station is restored from the error/warning
Error Count	Number of error events having been occurred
Warning Count	Number of warning events having been occurred
Equipment	See “2. Precaution (h).”
IP Address	IP address of IP station
MAC Address	MAC address of IP station
PH LENS	• When error/warning events are in progress Line Equipment Numbers of SP-PHD to which IP station register before error/warning events occur • Except for above Line Equipment Numbers of SP-PHD to which IP station register
FPC	Fusion Point Code of the node which accommodates the IP station
LENS	Line Equipment Numbers of the IP station
TN	Tenant Number of the IP station
STN	Station Number
UGNL	User Group Number (LDM)
TELNL	Telephone Number (LDM)
UGNN	User Group Number (NDM)
TELNN	Telephone Number (NDM)
Error Information	Display of error information of scan data.

Note 6: The following shows the relationship between CAUSE and STATUS.

Cause	Status
Health Check Error	Error
Fault of PHD	Error
Re-registration warning	Warning

[Fault History Display] window

This window appears by selecting the scanned IP stations whose “Error Count” and “Warning Count” are “1”or more and clicking “Display Fault History of List Selection Data” button on the Main window.

Display Item	Description
No.	Scan data counter
Extension Number	Extension Number of the IP station in which error/warning occurs
Floor Name	Floor name corresponding to the IP address of IP station/Extension Number Pattern
CAUSE	Cause of error/warning • Health Check Error **Note 6** • Fault of PHD **Note 6** • Re-registration warning **Note 6**
Error/Warning Time	Date and Time that the error/warning has been occur
Restoration Time	Date and Time that the IP station is restored from the error/warning
Equipment	See “2. Precaution (h).”
IP Address	IP address of IP station
MAC Address	MAC address of IP station
PH LENS	• Line Equipment Numbers of IP station registration SP-PHD before error/warning events occur when error/warning events are in progress • Except for above, Line Equipment Numbers of current IP station registration SP-PHD
FPC	Fusion Point Code of the node which accommodates the IP station
LENS	Line Equipment Numbers of the IP station

[Error/Warning Number List] window

This window appears by selecting “Error/Warning Number List” in the option menu.

Item	Description
Current Time	Current time (system clock of the system to which the IP station logs in).
Display Order	Error/warning events from whether the latest or the oldest.
Date	Date that the error/warning event has been occur
Start Time	Start time for correcting the error/warning events
End Time	End time for correcting the error/warning events
Error Number	Number of error events which have been occurred between Start Time and End Time
Warning Number	Number of warning events which have been occurred between Start Time and End Time

[Floor Name Setting] window

This window appears by selecting “Floor Name Setting” in the option menu. Data needs to be assigned on this window to display Floor Name.

Item	Description
Floor Name	Floor Name allocated on a network address/mask bit basis or an Extension Number Pattern basis.
Network Address/Mask Bit	Network address/mask bit corresponding to Floor Name.
Extension Number Pattern	Extension Number Pattern corresponding to Floor Name.

* Floor Name File

Maintenance personnel need to create a floor name file for displaying which floor each IP station belongs to. When maintenance personnel import the created file on the Floor Name Setting window, the window can display floor names to which each IP station belongs as the scan data.

<How to Create the Floor Name File>

Create a floor name file by using the text editor and Microsoft® Excel. The file format needs to be the tab delimited text data. Delimit each line by tab input. Input the data in the order as shown in the following table.

- Text Editor: Use Tab key for a tab input.
- Microsoft® Excel: Save the file with “text (tab delimited) (*.txt).”

Order	Parameter	Input Data	Range
1	Floor Name	Floor Name to be displayed on the scan data [Example] • Floor A North side • Floor A North side reception room	ASCII

Order	Parameter	Input Data	Range
2	Network Address/Mask Bit	Specify the subnet corresponding to the floor name using the network address and the mask bit. [Example] • When IP addresses on the floor are 10.20.30.0 - 10.20.30.255 Input Data: 10.20.30.0/24 • When IP addresses on the floor are 10.20.30.240 - 10.20.30.255 Input Data: 10.20.30.0/28	Network Address: 0.0.0.1 - 255.255.255.255 Mask Bit: 1-32
3	Extension Number Pattern	Specify Extension Number Pattern corresponding to the floor name. [Example] • When station numbers on the floor are 40100- 40199 Input Data: 401 • When station numbers on the floor are 40000 - 40999 Input Data: 40	0-9, *, # [Maximum 16 digits]

[Example Text File]

```
//floor name<tab>network address/mask bit<tab>extension number pattern
floor A north side<tab>10.20.30.0/24
floor A north side reception room<tab>10.20.30.0/28
floor A south side<tab><tab>40
floor A south side reception room<tab><tab>40999
floor B <tab>10.20.40.0/24
floor C <tab>10.20.60.0/28
floor D
```

- *<tab> means tab input in the example text file.*
- *Input "//" in the first of the line when the line is not to be imported such as header.*
- *Floor Name File can be managed on a PCPro basis. Floor Name File to be used needs to be imported again depending on the login system.*

<Floor Name to be Displayed on the Window>

[Example Text File]

```
//floor name<tab>network address/mask bit<tab>extension number pattern
(1) floor A north side<tab>10.20.30.0/24
(2) floor A north side reception room<tab>10.20.30.0/28
(3) floor A south side<tab><tab>40
(4) floor A south side reception room<tab><tab>40999
(5) floor B <tab>10.20.40.0/24
(6) floor C <tab>10.20.40.0/24
floor D
```

(a) The floor name to be displayed is identified by the following steps.

To identify the floor name of a station with IP address 10.20.30.15 and Extension Number 4099999

Step 1: Identifying the floor name process is performed by the "network address/mask bit" value.
(1) and (2) are found.
In this case, the "network address" value with the larger "mask bit" value (2) takes priority.

Step 2: Identifying the floor name process is performed by the "extension number pattern" value.
(3) and (4) are found.
In this case, the lager digits of the "extension number pattern" value (4) takes priority.

Step 3: If multiple floor names, whose "network address/mask bit" value and "extension number pattern" value match those of the target station, are found in Step 1 and 2, the "extension number pattern" value takes priority.
In this case, the floor name specified by the "extension number pattern" value (4) takes priority.

According to the above steps, the floor name of (4) will be displayed for the station with IP address 10.20.30.15 and Extension Number 4099999.

Note: If no "extension number pattern" value is found, the floor name of (2) will be displayed.

(b) When the same "network address/mask bit" values or the same "extension number pattern" values are specified to multiple different floor names (See (5) and (6)), the floor name in the latest line (6) will be displayed.

6. Operation Procedure

The following table describes operation procedures on a function basis.

Functions	Relevant Window	Operation/Display Procedures
Error/Warning Scale Grasping	The main window	When this command is activated, "Fault Terminals Total" appears on the upper right of the window.
Error/Warning Occurrence Time Grasping	The Error/Warning Number List window	Select "Error/Warning Number List" in the option menu. (1) The Error/Warning Number List window appears.

Functions	Relevant Window	Operation/Display Procedures
All Stations Scanning	Scan Data field on the Main window	Select "Plural" for Scan Mode. (1) Select "All IP Terminals" for Scan Data and click Get button. (2) After getting the scan data, set the "Display Filter Setting" data as needed. For the contents of Display Filter Setting, see "Display Filter Setting in 3. Parameter." **Note:** This process is not required if "Display Filter Setting" is not used. (3) Scanning the fault status is available by pressing "Scan" button.
Multiple Stations Scanning	Scan Data field on the Main window	Select "Plural" for Scan Mode. (1) Select "All IP Terminals" for Scan Data and click Get button. (2) The Open File window is displayed. Select TSV file for the scan data and read it. See "[TSV file for the scan data]" to create TSV file. (3) After getting the scan data, set the "Display Filter Setting" data as needed. For the contents of Display Filter Setting, see "Display Filter Setting in 3. Parameter." **Note:** This process is not required if "Display Filter Setting" is not used. (4) Scanning the fault status is available by pressing "Scan" button.
Specific Stations Scanning	Scan Data field on the Main window	Select "Single" for Scan Mode. (1) Set each parameter for "Scan Data." See "Single in 3. Parameter." (2) Scanning the fault status is available by pressing "Scan" button.
Fault History Display	The Fault History Display window	* When the "All Stations Scanning", "Multiple Stations Scanning" and "Specific Stations Scanning" scan results are displayed Click "Display Fault History of List Selection Data" button on the Main window. **Note:** Use Shift key or Ctrl key to select multiple events in the fault history. **Note:** Select the IP station whose "Error Count" or "Warning Count" is 1 or more in the scanned result.

MBCT: Make-Busy of Connection Trunk for LDM

1. Functional Outline

This command sets/resets the make-busy state of a connection trunk.

2. Parameters

Input Data

C_RT:	Connection Route Number [1-1023]
C_TK:	Connection Trunk Number [1-4095]
MB:	Make-Busy Information [0-1] 0=Make Idle 1=Make Busy (Outgoing)

MBCTC:Make-Busy of Connection Trunk-Continuous for LDM

1. Functional Outline

This command assigns the IDLE/BUSY status of connection trunks. By using this command, multiple trunks can be placed into IDLE/BUSY state simultaneously per a Connection route designated in C_TK parameter.

2. Parameters

Input data

C_RT: Route Number

C_TK: Trunk Number **Note 1**

MB: Make-Busy Information (0-2)

0=Make Idle

1=Make Busy (Outgoing)

2=Make Busy (Bothway)

Note 1: Multiple trunks can be assigned simultaneously per a route designated in TK parameter.

MBLE: Make-Busy of LENS

1. Functional Outline

This command assigns the IDLE/BUSY status of Line Equipment Numbers (LENS).

2. Parameters

Input data

LENS	Line Equipment Numbers
MB:	Make-Busy Information [0-1] 0=Make Idle 1=Make Busy

MBPM: Make-Busy of Port Microprocessor

1. Functional Outline

This command sets and resets the make-busy state of the card that contains the port microprocessor. This setting and resetting is performed individually for each card. If the location of the card containing the port microprocessor is specified in this command, the operating state of all cards in the associated unit is displayed.

Note: Depending on the card this command cannot be used. For an explanation see CARDS IN 7U-PIR and CARDS IN 8U-PIR chapters in Circuit Card Description manual.

2. Parameters

Input data

MG:	Module Group Number
Unit:	Unit Number
Group:	Group Information
MB:	Make-Busy Information

Output data

MB: Make-Busy Information [0-1]

0=Make Idle

1=Make Busy

Note: Idle/Busy status can be displayed and assigned by the MB parameter.

MBRT: Make-Busy of Route

1. Functional Outline

This command assigns IDLE/BUSY status for all the trunks in the route designated.

2. Parameters

Input data

RT: Route Number of the external route/internal route. The following table provides the meaning of the internal route number.

MB: Make-Busy Information

- Make Idle
- Make Busy

Route Number Explanation

DATA	MEANING	DATA	MEANING
901	Attendant/Desk Console	902	Originating Register Trunk
903	Incoming Register Trunk	904	MF Receiver
905	Sender Trunk DP/PB	906	PB Receiver for Automated Attendant Service
907	AMP	908	Not used
909	Three-Way Conference Trunk	910-912	Not used
913	Three-Way Conference Trunk for ATTCON	914	Not used
915	Night Attendant Console	916	MFC Register
917	MFC Sender	918	Not used
919-926	Modem	927, 928	Not used
929	Data Signaling Trunk-Option	930	Rate Adapter Conversion Trunk
931-932	Not used	933	CRT
934-936	Not used	937	Modem Sender
938-947	Not used		

MBRT_LR:Make-Busy of Route - Logical Route Number

1. Functional Outline

This command assigns Idle/Busy status of all the trunks in the logical route designated. Route number of the MBRT command can be assigned by using logical route.

Note: When logging in to the NCN (Network Control Node), the data of other LN (Local Node) can be changed. If logging in to a LN, only the DM of Self Node can be changed by this command.

2. Parameters

Input data

LGRT: Logical route number allocated to the external/internal route. Refer to the MBRT command as to the Internal route number and its meaning. **Note 1**

MB: Make-Busy Information

- Make Idle
- Make Busy

Note 1: Prior to this command, logical route number must be allocated by using the ALRTN command.

Output Data

FPC: Fusion Point Code [1-253] **Note 2**

RT: External Route Number **Note 2**

Note 2: After entering attributes in LGRT and clicking the GET button, this parameter becomes available.

MBSM: Make-Busy of System Message Printout

1. Functional Outline

This command allows or inhibits the system message printer to output system messages.

2. Parameters

Input data

Port No.:	Port Number of the printer
MB:	Make-Busy Information [0-1]
	0=Make Idle
	1=Make Busy

MBST: Make-Busy of Station

1. Functional Outline

This command assigns the IDLE/BUSY status of stations.

2. Parameters

Input data

TN: Tenant Number

STN: Physical Station Number (a maximum of five digits for Business system, and six digits for Hotel system.)

MB: Make-Busy Information [0-1]

0=Make Idle

1=Make Busy

MBST_T:Make-Busy of Station – Telephone Number

1. Functional Outline

This command assigns the IDLE/BUSY status of stations, by using Telephone Numbers. This command is only available at NCN (for FCCS network).

2. Parameters

Input Data

UGN:	User Group Number
TELN:	Telephone Number (maximum 16 digits)
MB:	Make-Busy Information

Output Data

FPC:	Fusion Point Code (1-253) **Note 1**
TN:	Tenant Number **Note 1**
STN:	Physical Station Number (a maximum of five digits for Business system, and six digits for Hotel system) **Note 1**

Note 1: This data is for read only.

Buttons

Get:	Get information on the station.
Set:	Execute the IDLE/BUSY performance.
Exit:	Exit this command.

MBTC: Make-Busy of Trunk-Continuous

1. Functional Outline

This command assigns the IDLE/BUSY status of trunks. By using this command, multiple trunks can be placed into IDLE/BUSY state simultaneously per a route designated in RT parameter.

2. Parameters

Input Data

RT:	Route Number
TK:	Trunk Number **Note 1**
MB:	Make-Busy Information [0-2]
	0=Make Idle
	1=Make Busy (Outgoing)
	2=Make Busy (Bothway)

Note 1: Multiple trunks can be assigned simultaneously per a route designated in RT parameter.

MBTC_LR:Make-Busy of Trunk-Continuous – Logical Route Number

1. Functional Outline

This command assigns the IDLE/BUSY status of trunks. By using this command, multiple trunks can be placed into IDLE/BUSY state simultaneously per a logical route designated in LGRT parameter. Route number of the MBTC command can be assigned by using logical route.

Note: When logging in to the Network Control Node (NCN), the data of other Local Node (LN) can be changed. If logging in to a LN, only the DM of Self Node can be changed by this command.

2. Parameters

Input Data

LGRT:	Logical route number allocated to the Route Number.	**Note 1**
TK:	Trunk Number	**Note 2**
	START	
	END	
MB:	Make-Busy Information [0-2]	
	0=Make Idle	
	1=Make Busy (Outgoing)	
	2=Make Busy (Bothway)	

Note 1: Prior to this command, logical route number must be allocated by using the ALRTN command.

Note 2: The status of plural trunks can be changed simultaneously, according to the range of trunk number assigned and per a logical route.

Output Data

FPC:	Fusion Point Code [1-253]
RT:	Route Number

MBTK: Make-Busy of Trunk

1. Functional Outline

This command assigns the IDLE/BUSY status of trunks.

2. Parameters

RT: Route Number [1, 901-947]

TK: Trunk Number [1-255]

MB: Make Busy Information [0-2]

0=Make Idle

1=Make Busy (Outgoing)

2=Make Busy (Bothway) **Note 1**

Note 1: For Business system, the data is valid for the ACIS/CCIS line (TCL=4, 5, 7). For a Hotel system, the data is invalid.

STATUS: Make Busy Status **Note 2**

Self trunk MB
Other trunk MB
Both trunk MB
Self trunk MB ready
Both trunk MB ready

Note 2: This parameter is displayed only. This parameter appears only when MB = 2 (Make Busy (Bothway)) is selected.

MBTK_LR:Make - Busy of Trunk – Logical Route Number

1. Functional Outline

This command assigns the IDLE/BUSY status of trunks. Route number of the MBTK command can be assigned by using logical route number.

Note: When logging in to the Network Control Node (NCN), the data of other Local Node (LN) can be changed. If logging in to a LN, only the DM of Self Node can be changed by this command.

2. Parameters

Input Data

LGRT:	Logical route number [1-899]	**Note 1**
TK:	Trunk Number [1-255]	
MB:	Make Busy Information [0-2]	
	0=Make Idle	
	1=Make Busy (Outgoing)	
	2=Make Busy (Bothway)	**Note 2**

Note 1: Prior to this command, a logical route number must be allocated to the route number by the ALRTN command.

Note 2: For a Business system, the data is valid for the ACIS/CCIS line (TCL=4, 5, 7). For a Hotel system, the data is invalid.

Output Data

FPC:	Fusion Point Code [1-253]
RT:	Route Number
STATUS:	Make Busy Status for MB=2
	Self trunk MB
	Other trunk MB
	Both trunk MB
	Self trunk MB ready
	Both trunk MB ready

MEM_HDD:Data Control Between Memory and HDD

1. Functional Outline

This command loads the Office Data from the SV9500 Flash Card to the SV9500 Memory, backs up the Office Data from the SV9500 Memory to the SV9500 Flash Card, and verifies the Office Data between the SV9500 Memory and the SV9500 flash Card.

2. Precautions

(1) Do not load the Call Forwarding data to a memory during system operation. If you do so, the Desktop terminal LCD may not indicate the correct Call Forwarding status.
To correct this, you can do either of the following:

- Setup or cancellation of the Call Forwarding feature
- System Initialization

(2) When this command is used in the UMGi/RNIP system, the following conditions must be considered.

- When this command is executed from PCPro that logs in to CCN, the office data of CCN and RNs in normal mode can be backed up. The office data of RNs in survival mode cannot be backed up.
- To back up the office data only of an RN, back up the office data from PCPro that logs in to the target RN.
- When data loading is executed from PCPro that logs in to CCN, only the data of CCN is loaded. To load the office data backed up to an RN, log in to the target RN.

3. Parameters

Input Data

Direction Select:	Memory to Hard Disk Hard Disk to Memory Verify HDD against MEM
Data Type Select:	Data Memory **Note 1** Name Display Wireless Call Forwarding Call Forwarding Speed Calling User Assign Key Number Sharing **Note 2** ACD Data Memory Call Block ICB and DR *(Not used)* Expanded Speed Calling *(Not used)* Call Forwarding-Logout One Touch Speed Calling for DtermIP SPD Name Data

H.323 Terminal Call Transfer *(Not used)*
Message Area ID Data
SR-MGC Data
SIP Terminal Call Transfer **Note 3**
Mobile Service Data
Day/Night Data
Local Phone book Data
Soft Switch Data **Note 4**

LP Select: Designate the LP number. (Required when Call Forwarding, Speed Calling, User Assign Key, Number Sharing, Call Block, Call Forwarding-Logout, or Mobile Service Data is selected in the Data Type Select parameter.) **Note 5**

All Select: Select this check box when selecting all the data types listed in the Data Type Select field. When individually selecting only a specific number of the data types, leave the box unchecked (and specify the TYPEs in the Data Type Select field).

Auto Verify Afterward: Select this check box to verify the data automatically after backup or restore.

Auto Scroll: Select this check box to refresh the Processing Status Log.

Click Option in the menu bar, and select Drive Select. A window, with the following parameter, appears. In the window, designate the affected Drive:**Note 6**

Office Data:
Drive B (default setting)
Drive C
Drive B/C

Note 1: When Data Memory is selected, Network Data Memory (NDM) and Local Data Memory (LDM) are also loaded/backed up/verified simultaneously.

Note 2: By saving the Number Sharing data, the data concerning Dual Station Calling Over FCCS is also installed/saved/verified simultaneously.

Note 3: This data is for WLAN Handset (MH Series) and SIP standard terminals.

Note 4: If you backup (Memory to Hard Disk) or verify (Verify HDD against MEM) soft switch data specifying an RN's LP in the LP Select field, an error message will appear to say the command is invalid.

Note 5: When this command is used in the UMGi/RNIP system, specify LP's to be processed. The operation varies depending on your choice:
- RN's LP + Memory to Hard Disk:
  A CCN collects and saves corresponding data from the select RN's memory; the RN saves the data from its memory to its HDD.
- RN's LP + Verify HDD against MEM
  The system verifies corresponding data between CCN and the selected RN.
- CCN's LP + Memory to Hard Disk
  The selected CCN saves corresponding data from its memory to its HDD.
- CCN's LP + Verify HDD against MEM
  The system verifies corresponding data between CCN's HDD and its memory.

Note 6: When specifying the data here, consider the following:
- When Drive B/C is specified in the Office Data parameter while Hard Disk to Memory or Verify HDD against MEM is designated in the Direction Select parameter, the data is automatically adjusted as Drive B.

Output data

Action/Information:

Result of the execution

Direction:

HDD to MEM
MEM to HDD
Verify HDD against MEM

Type:

Selected Type

Time Stamp:

Time Stamp loaded/backed up/verified

Buttons

Execute: Execute the specified file load/backup/verification.

Exit: Exit the command.

MEM_HDD_N:Data Control Between Memory and HDD for Fusion Network

1. Functional Outline

This command, available at the NCN only, back up/verifies a series of Office Data from the Memory of all Local Nodes to the Flash Card of each same node.

Note: You can back up/verify the data onto the Flash Card of all the node on the FCCS (Fusion) network (Maximum 63 nodes).

2. Precautions

(a) You cannot save the data of software switches by this command. Use the MEM_HDD command to save the data of software switches.

(b) Do not load the Call Forwarding data to a memory during system operation. If you do so, the Desktop terminal LCD may not indicate the correct Call Forwarding status.
To correct this, you can do either of the following:

- Setup or cancellation of the Call Forwarding feature
- System Initialization

3. Parameters

Input data

Direction Select:	Memory to Hard Disk	
	Verify HDD against MEM	
Data Type Selection:	Data Memory	**Note 1**
	Name Display	
	Wireless Call Forwarding	
	Call Forwarding	
	Speed Calling	
	User Assign Key	
	Number Sharing	**Note 2**
	ACD Data Memory	
	Call Block	
	ICB and DR *(Not used)*	
	Expanded Speed Calling *(Not used)*	
	Call Forwarding-Logout	
	One Touch Speed Calling for DtermIP	
	SPD Name Data	
	H.323 Terminal Call Transfer *(Not used)*	
	Message Area ID Data	
	SIP Terminal Call Transfer	**Note 3**

Mobile Service Data
Day/Night Data
Local Phone book Data

LP Select: Designate the LP number. (Required when Call Forwarding, Speed Calling, User Assign Key, Number Sharing, Call Block, Call Forwarding-Logout, or Mobile Service Data is selected in the Data Type Select parameter.) **Note 4**

All Select: Select this check box when selecting all the data types listed in the "Data Type Select" field. When individually selecting a specific number of data types, leave the box unchecked (and specify the type(s) in the "Data Type Select" field).

Auto Verify Afterward: Automatically verify the data after being copied.

Auto Scroll: Refresh the Processing Status Log

Click "Option" in the menu bar, and select "Drive Select". Then, a window, with the following parameter, appears. On the window, designate the affected Drive: **Note 5**

Office Data: Drive B (default setting)
Drive C
Drive B/C

Note 1: When Data Memory is selected, Network Data Memory (NDM) and Local Data Memory (LDM) are also saved/verified simultaneously.

Note 2: By saving the Number Sharing data, the data concerning Dual Station Calling Over-FCCS is also saved/verified automatically.

Note 3: This data is for WLAN Handset (MH Series) and SIP standard terminals.

Note 4: When this command is used in the UMGi/RNIP system, specify LP's to be processed. The operation varies depending on your choice:

- RN's LP + Memory to Hard Disk:
  A CCN collects and saves corresponding data from the select RN's memory; the RN saves the data from its memory to its HDD.
- RN's LP + Verify HDD against MEM
  The system verifies corresponding data between CCN and the selected RN.
- CCN's LP + Memory to Hard Disk
  The selected CCN saves corresponding data from its memory to its HDD.

Note 5: When specifying the data here, consider the following:

- When "Drive B/C" is specified in the "Office Data" parameter when "Verify HDD against MEM" has been selected for in the "Direction Select" parameter, the data is written to Drive-D only.

Output data

Action/Information:

FPC of Node in which saving/verifying is executed

Result of the execution

Direction:

MEM to HDD

Verify HDD against MEM

Type:

Selected Type

Time Stamp:

Time Stamp backed up/verified

Buttons

Execute: Execute the specified file backup/verification.

Exit: Exit the command.

MFCH: Make Busy of FCCH

1. Functional Outline

This command sets or resets the make-busy state of FCH card.

2. Parameters

Input Data

FCHN:	FCH Number [1-255]
MB:	Make-Busy Information [0-1]
	0=Make Idle
	1=Make Busy

PMBU: Port Microprocessor Back Up

1. Functional Outline

This command saves the contents of the Port Microprocessor (PM) onto a Floppy Disk (FD) or verifies them. Information of firmware (Program Code) also appears on the screen.

2. Parameters

Input data

Direction Select: Port Microprocessor to PCPro

Verify Port Microprocessor

Verify PM with Error List Auto Verify Afterward can be performed when designating Port Microprocessor to PCPro.

PM Information:Module Group

Unit

Group

Data Size (1-6)

1=2 kbytes

2=4 kbytes

3=8 kbytes

4=16 kbytes

5=32 kbytes

6=64 kbytes

Output data

Office

SP Number: Information of firmware (Program Code)

SP Issue: Information of firmware (Program Code)

RALM: Release Alarm

1. Functional Outline

This command clears the fault indications.

2. Precautions

(a) By setting ASYD, SYS1, Index 505, Bit 1 = 1, the system message "26-S" can be displayed when an alarm clear is executed through this command.

(b) When this command is used in the UMGi system and the PCPro logs in to the CCN, a target node (CCN/RN) for alarm clear can be specified.

3. Parameters

Input data

(1) When the PCPro logs in any other system than the CCN of the UMGi system, the following is displayed.

WRT?:

Y=Alarm is released

N=Not released

RETURN TO MENU?:

Y=Return to MENU

N=Start operation again

(2) When the PCPro logs in to the CCN in the UMGi system, the following is displayed.

NODE SPECIFICATION

- CCN: Central Control Node
- LP: Specific LP
- All Nodes: CCN and RNs

LP No: Specify an LP number [0-31] if you select LP.

RELEASE: By clicking this button the alarm is released.

Output data

Alarms Released

RALMN:Release Alarm for NDM

1. Functional Outline

This command, available at the NCN in FCCS system/CCN in UMGi system (from FP95-112 V2) only, clears the fault indications of all the Nodes by clicking the release button on the display.

2. Parameters

Output data

FPC: FPC of alarm released nodes

STATUS: Result of releasing the alarm (OK/NG)

RDPD: Remove of IP Station Password

1. Functional Outline

This command deletes the password of IP station. The IP station assigns the password for logging in to the SV9500 for security use. This is a command to delete the IP station's password from PCPro side.

2. Precautions

(a) This command does not display or list up assigned passwords.

3. Parameters

Input Data

TYPE: Input Station Type

STN: Station Number

TELN: Telephone Number

When STN is selected in Type

TN: Tenant Number

STN: Station Number (Physical Number)

When TELN is selected in Type

UGN: User Group Number

TELN: Telephone Number

Output Data

DPD: IP Station Password

Note: When the IP station has already assigned a password, for personal security, asterisks (*) are displayed on the screen instead of the password.

Buttons

Get: Display a password assigned on the station/tenant.

Delete: Delete a password assigned on the station/tenant.

Exit: Exit this command.

RINZ: Route Initialize

1. Functional Outline

This command initializes virtual trunk data used for Protocol Handler (PH) cards. When in-progress virtual trunk is not able to recover from a fault, this command disconnects the in-progress call forcefully due to the recovery.

2. Parameters

Input data

RT: Route Number

TK: Trunk Number (1-255)

Details of a color:

Not Assign: GRAY (Status/Result2: 0)

Idle: WHITE (Status: 1)

Busy: RED (Status: 2)

Initialize Start: YELLOW (Result: 1)

Initialize Success: GREEN (Result2: 1)

Initialize Failure: BLUE (Result: 2)

Initialize Executing: YELLOW (Result2: 2)

Note: The numbers shown in brackets are used for printout data.
STATUS indicates the trunk status.
Result indicates the result for the initial setting request.
Result 2 indicates the result for the initial setting execution.

RLMG: Release of Media Gateway

1. Functional Outline

This command checks which channel of MG(PRI) is retaining an ongoing call (Initial setting is incomplete). Also, the channel retaining an ongoing call can be reset (Forceful Switchover).

2. Precautions

(a) Only the channel retaining an ongoing call can be switched over forcefully by this command. For other channels, use RLST command.

(b) This command supports the following MG(PRI).

- MG(PRI) (1.5M) [Proprietary Protocol] [SCA-24PRIA/MG-24PRIA] (SP-3884 MG PRI PROG-A Issue 10 or later)
- MG(PRI) (2M) [Proprietary Protocol] [SCA-30PRIA/MG-30PRIA] (SP-3884 MG PRI PROG-A Issue 10 or later)
- UG50 (PRT 1.5M) [Proprietary Protocol]
- UG50 (PRT 2M) [Proprietary Protocol]
- UG50-24PRIA [Proprietary Protocol]
- UG50-30PRIA [Proprietary Protocol]

3. Parameters

Input data

LENS: Line Equipment Numbers
Enter the LENS (six digits) assigned by AMGIL command to read out the information of MG(PRI).

Channel Number to reset: Channel Number (0-31)
Enter the channel number to switch over forcefully.

Note: Each channel data is displayed as follows.

Display	Meaning
Gray	Not registered
Yellow	Initial setting is complete.
Red	Initial setting is incomplete.

RLST: Release Station/Trunk

1. Functional Outline

This command releases a station, trunk, or virtual trunk when using PHG card.
When in-progress virtual trunk is not able to recover from a fault, this command disconnects the in-progress call forcefully due to the recovery.

2. Parameters

Input data

TYPE: Type of Select (1-5)

1=Stations

2=Trunk

3=LENS

4=Connection Trunk

5=Virtual Trunk **Note 1**

TN: Tenant Number **Note 2**

STN: Station Number (maximum six digits) **Note 2**

RT: Route Number **Note 3**

TK: Trunk Number **Note 3**

LENS: Line Equipment Numbers **Note 4**

Connection RT: Connection Route Number (1-1023) **Note 5**

Connection TK: Connection Trunk Number (1-4095) **Note 5**

Note 1: This option is valid when assigning 1 or 2 on CDN68: VIR by the ART command, indicating that the WAN or MG connections are specified as virtual trunk identification data.

Note 2: This parameter is valid only when TYPE=1.

Note 3: This parameter is valid only when TYPE=2.

Note 4: This parameter is valid only when TYPE=3.

Note 5: This parameter is valid only when TYPE=4.

Output data

STATUS: Status of Station/Trunk (1-4)

0=Not Assigned

1=Idle

2=Busy

3=Lockout

4=Make Busy

5=Call Now (PHS system only)

Information: Information of the connected party **Note 6**

Note 6: This parameter appears only when STATUS=2.

CNT: Count

FPC: Fusion Point Code (1-253)

LENS: Line Equipment Numbers

TN: Tenant Number

STN: Station Number

RT: External/Internal Route Number

TK: Trunk Number (1-255)

C_RT: Connection Route Number (1-1023)

C_TK: Connection Trunk Number (1-4095)

PCN: PHS Community Number (1-1024)

ERN: Area Number (1-32)

GRN: Group Number (1-32)

CSN: CS Number (1-32)

INTERVAL: Interval time of scan (seconds) (30-180)

RESULT: After release result (1, 2)

1=Release complete

2=Release executing

Details of a color:

Not Assigned= GRAY (Status: 0)

Idle, Make Busy= WHITE (Status: 1)

Busy = WHITE (Status: 2)

Lockout = WHITE (Status: 3)

Make Busy = GRAY (Status: 4)

Call Now = GRAY (Status: 5)

Release complete = GREEN (Result: 1)

Release executing = YELLOW (Result: 2)

Note: The Numbers shown in brackets are used for printout data.
RESULT indicates the result of data entries.
STATUS indicates the trunk status.

RLST_T:Release of Station/Trunk – Telephone Number

1. Functional Outline

This command releases a station/trunk, by using Telephone Numbers. This command is only available at NCN (for FCCS network).

2. Parameters

Input Data

TYPE:

Telephone Number

Trunk

LENS

Connection Trunk

UGN: User Group Number	**Note 1**
TELN: Telephone Number (maximum 16 digits)	**Note 1**
RT: External/Internal Route Number	**Note 2**
TK: Trunk Number	**Note 2**
LENS: Line Equipment Numbers	**Note 3**
C_RT: Connection Route Number (1-1023)	**Note 4**
C_TK: Connection Trunk Number (1-4095)	**Note 4**

Note 1: This parameter is valid when Telephone Number is designated in the TYPE selection list box.

Note 2: This parameter is valid when Trunk is designated in the TYPE selection list box.

Note 3: This parameter is valid when LENS is designated in the TYPE selection list box.

Note 4: This parameter is valid when Connection Trunk is designated in the TYPE selection list box.

Output Data

FPC: Fusion Point Code (1-253)

TN: Tenant Number **Note 1**

STN: Physical Station Number (a maximum of five digits for a Business system, and six digits for a Hotel system) **Note 1**

STATUS: Status of Station/Trunk (1-5)

1=Idle

2=Busy

3=Lockout

4=Make Busy

5=Now Calling

Information: Information on the connected party **Note 5**

ERN: Area Number (1-32) **Note 6**

GRN: Group Number (1-8) **Note 6**

CSN/ZTN: CS/ZT Number (1-32) **Note 6**

PCN: PHS Community Number (1-1024) **Note 6**

Note 5: This data is displayed when STATUS=2 (Busy).

Note 6: This data is for Wireless System only.

Buttons

Get: Get information on the station/trunk.

Release: Execute the station/trunk release.

Exit: Exit this command.

RPID : Remove of Pad Lock ID Data

1. Functional Outline

This command releases the PAD LOCK ID Code setting of each Desktop terminal by PCPro operation.

2. Parameters

Input Data

TN:	Tenant Number Enter the Tenant Number in which the target station belongs.
STN:	Station Number [Max. 6 digits] Designate the station number whose PAD LOCK ID Code setting is to be released.

Output Data

PID:	PAD LOCK ID Code
RSC:	Route Restriction Class [0-15]
SFC:	Service Feature Restriction Class [0-15]

Note: It is not available to display and list up the ID codes on PCPro screen.

Buttons

Get: Get information for the PAD LOCK ID Code assigned to the station/tenant.

Del.: Delete information for the PAD LOCK ID Code assigned to the station/tenant.

Exit: Exit this command.

SCVT: Setting / Change of Virtual Trunk Operation Data

1. Functional Outline

This command initializes memory due to changing virtual trunk data of the Protocol Handler (PH) cards. Memory initialization starts when trunk status is Idle and Bothway Make-Busy.

Note: Virtual trunks indicated here become available only when virtual channels via PHC are used with CCIS over IP. Virtual channels via Media Gateway is not available.

2. Parameters

Input data

RT: Route Number

INTERVAL: Interval time of scan (seconds) [0-120]

TK: Trunk Number [1-255]

Details of a color:

Not Assigned: GRAY (Status: 0)

Idle: WHITE (Status: 1)

Busy: RED (Status: 2)

Bothway Make-Busy/Not Mounted: YELLOW (Status: 3)

Initialize Success: GREEN (Result: 1)

Initialize Failure: BLUE (Result: 2) **Note 1**

Note 1: The numbers shown in brackets are used for printout data.
RESULT indicates the memory initialization result.
STATUS indicates the trunk status.

[Read]

- Enter the route number.
- Click the Read button.
- Current trunk status is displayed in different colors.

[Execute]

- Click the Execute button.
- When the trunk is idle and Bothway Make Busy/Not Mounted, memory initial starts.

SINZ: System Initialize

1. Functional Outline

This command initializes the system from PCPro.

WARNING	Do not use this command when the system is in normal operation since this command executes the system initialization.

2. Precautions

(a) When the system is initialized, PCPro is disconnected. After initialization is complete, connect the PCPro again.

(b) When "Program & Office Data Load & System Initialize", accompanied by the operating program changeover is executed, it will take approximately 5 minutes until the system starts up because OS is re-booted.

(c) When the system is SV9500 (Prepackaged Server Model), do not execute the following operations using the SINZ command. This is also applied to a CCN and RN (Prepackaged Server Model) in the UMGi/RNIP system. As for RNs in the UMGi/RNIP system, the operating program changeover is available with the SINZ command.

- Operating program changeover by selecting "Switch the Program" when exciting "Program & Office Data Load & System Initialize" **Note 1**
- "Restart" **Note 2**
- "Shutdown" **Note 2**

Note 1: To execute the operating program changeover for SV9500 (Prepackaged Server Model), use Telephony Server Maintenance Menu and not the SINZ command.

Note 2: To restart or shut down SV9500 (Prepackaged Server Model), follow the operating procedure explained in the manual below:

- To restart SV9500 (Prepackaged Server Model)
  Refer to "Rebooting of the Guest OS (SV9500)" in Chapter3: Operations and Maintenance of SV9500 Prepackaged Server Model Installation and Operation Manual
- To shut down SV9500 (Prepackaged Server Model)
  Refer to "Powering On/Off Procedures - Powering Off" in Chapter3: Operations and Maintenance of SV9500 Prepackaged Server Model Installation and Operation Manual

3. Parameters

Parameters displayed in the windows are different depending on the software versions of the Telephony Server. Confirm the software versions of your Telephony Server and see the relevant input data descriptions.

Input Data

[For the Telephony Server]

Node Specification **Note 1**

- CCN: Central Control Node
- LP: Specific LP
- All Nodes: A CCN and RNs

LP No: Specify an LP number [0-31] if you select LP. **Note 2**

System Select (For Dual Configuration Telephony Server Only) **Note 3**

- ACT & STBY: The process is executed in both of the ACT and STBY systems.
- STBY: The process is executed in the STBY system only.

Note 1: This item should be assigned only when this command is used in the UMGi system. The parameter is displayed only when logging to CCN.

Note 2: The following applies:
- Node Specification is displayed for LP.
- Only installed LPs can be selected.

Note 3: System Select is not displayed for SV9500 (Prepackaged Server Model).

Use Optional Function

When this check box is selected, optional functions **Calling keep restore**, **Restart**, and **Shutdown** are displayed in **Process Kind Select**.

Process Kind Select

- System Initialize:

  The system initialize is executed with the current office data of MEM without loading from the CF card.

- Office Data Load & System Initialize:

  The system initialize is executed by loading the office data from the CF card to MEM.

  Drive Select: Office Data

  Drive B (default setting)
  Drive C

- Program & Office Data Load & System Initialize:

  The system initialize is executed by loading the program and the office data from the CF card to MEM.

  Switch the Program: **Note 4**

  When this check box is selected, and then the process is executed, switching programs between WORK side and TEMP side is performed. The programs to be switched include OS, program and license files.

- Calling keep restore: **Note 5**

  The system initialize is executed while maintaining basic two-way connections (STN-STN, STN-TRK, TRK-TRK) in progress.
  This process is available when **Use Optional Function** is checked.

- Restart:

  The system initialize is executed by restarting the system.
  This process is available when **Use Optional Function** is checked.

  Switch the Program: **Note 4**

  When this check box is selected and then the process is executed, switching programs between WORK side and TEMP side is performed. The programs to be switched include OS, program and license files.

- Shutdown:

  The system initialize is executed by shutting the system down.
  This process is available when **Use Optional Function** is checked.

  Switch the Program: **Note 4**

  When this check box is selected and then the process is executed, switching programs between WORK side and TEMP side is performed. The programs to be switched include OS, program and license files.

Note 4: This parameter is displayed when any of the following is selected for **Process Kind Select**.
- Program & Office Data Load & System Initialize
- Restart
- Shutdown

Note 5: This parameter is displayed when **System Select** is hidden or **ACT & STBY** is selected for **System Select**.

[For SR-MGC(E)]

Use Optional Function

When this check box is selected, optional functions **Calling keep restore**, **Restart**, and **Shutdown** are displayed in **Process Kind Select**.

Process Kind Select

- System Initialize:

  The system initialize is executed with the current office data of MEM without loading from the CF card.

- Office Data Load & System Initialize:

  The system initialize is executed by loading the office data from the CF card to MEM.

  Drive Select: Office Data

  Drive B (default setting)
  Drive C

- Program & Office Data Load & System Initialize:

  The system initialize is executed by loading the program and the office data from the CF card to MEM.

  Switch the Program: **Note 6**

  When this check box is selected, and then the process is executed, switching programs between WORK side and TEMP side is performed. The programs to be switched include OS, program and license files.

- Calling keep restore: **Note 7**

  The system initialize is executed while maintaining basic two-way connections (STN-STN, STN-TRK, TRK-TRK) in progress.
  This process is available when **Use Optional Function** is checked.

- Restart:

  The system initialize is executed by restarting the system.
  This process is available when **Use Optional Function** is checked.

  Switch the Program: **Note 6**

  When this check box is selected and then the process is executed, switching programs between WORK side and TEMP side is performed. The programs to be switched include OS, program and license files.

- Shutdown:

  The system initialize is executed by shutting the system down.
  This process is available when **Use Optional Function** is checked.

Switch the Program: **Note 6**

When this check box is selected and then the process is executed, switching programs between WORK side and TEMP side is performed. The programs to be switched include OS, program and license files.

Note 6: This parameter is displayed when any of the following is selected for **Process Kind Select**.
- Program & Office Data Load & System Initialize
- Restart
- Shutdown

Note 7: This parameter is displayed when **System Select** is hidden or **ACT & STBY** is selected for **System Select**.

Buttons

Execute: Execute the specified system initialization.

SINZN: System Initialize for the FCCS Network

1. Functional Outline

This command simultaneously initializes the SV9500 systems on the same FCCS (Fusion) network. At the time of each system initialization, specify whether to load the Program/Office Data, depending on the data setting below.

2. Precautions

(a) When the system initialization is executed by this command, PCPro is disconnected. After initialization is complete, log back into PCPro.

(b) When "Program & Office Data Load & System Initialize" is executed by this command, Non-load initialization will be also executed on each SV9500 system included in the same FCCS network.

3. Parameters

Input Data

Use Optional Function

Check to display the Calling keep restore parameter in the Process Kind Select field.

Process Kind Select

- System Initialize
- Office Data Load & System Initialize **Note 1**
- Program & Office Data Load & System Initialize **Note 2**
- Calling keep restore **Note 3**

Note 1: Office data is loaded from Drive B.

Note 2: Program is loaded from Drive A and office data is loaded from Drive B.

Note 3: Basic two-way connections (STN-STN, STN-TRK, TRK-TRK) in progress are maintained during system initialization. This process is displayed when **Use Optional Function** is checked.

Buttons

Execute: Execute the specified system initialization.

SPTS: Scanning of Port Status

1. Functional Outline

This command displays momentarily the working status of Port Microprocessor (PM) on Module Group (MG), Unit, and Group basis.

2. Parameters

Input data

MG: Module Group Number

Unit: Unit Number

Group: Group Information

Interval: Unit for this parameter is in seconds.

Entry Procedure

Type 1: By MG

Display of Scanning by Designating MG (see the figure entitled "Port Status Report (MG) Display.")

Package Status

PM: Not Mounted **Note 1**

ID: Idle at least one

BY: All Busy

MB: Under Make-Busy Status

Note 1: This information appears when the card is in Make-Busy status (MB key is set upward) or when the designated location has no card.

Port Status Report (MG) Display

Scanning of Port Status (SPTS)

Type
(●) 1: by MG ( ) 3: by MG, Unit, Group
( ) 2: by MG, Unit

MG 0

Interval 10

SCAN STOP EXIT

Dynamic Port Status Report (MG)

Package Status
PM: Package is not Mounted or Package is make Busy.
ID: More than one port in a Group is Idle.
BY: All Port in a Group is Busy.
MB: All Port in a Group is Hard Make Busy or Soft Make Busy.
4: —

Group	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Unit 0	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	RS ID	RS ID	DT ID	DT ID	-- ID	DT ID	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- MB	-- MB	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM
Unit 1	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	DL ID	-- ID	-- PM	-- PM	-- MB	TK MB	-- ID	DT ID	-- MB	DT MB	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- MB	-- MB	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM
Unit 2	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- MB	-- MB	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM
Unit 3	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM	-- PM

The following table provides a list of the cards and the working status of the PM in each group.

Type of Cards

TYPE OF CARD	FUNCTION NAME
LC	Line Circuit
TK	Analog Trunk
RS	Register Sender
AI	Attendant Interface
DL	Digital Line Circuit
CF	3-Party Conference
MO	Modem Pool Trunk
DT	Digital Interface Trunk
DS	DST
DT	Digital Trunk

Type 2: By MG, Unit

Display of Scanning by Designating Unit (see the figure below.)

Port Status on
Card Basis

ID: On-line Status

BY: Make Busy/Not Mounted

Port Status on
Circuit Level Basis

0: Not Assigned

1: Line Idle

2: Line Busy

3: Make Busy

4: Lockout

5: Status 5

Port Status Report (MG, Unit) Display

Scanning of Port Status (SPTS)

Type
○ 1: by MG ○ 3: by MG, Unit, Group
◉ 2: by MG, Unit

MG 0 Unit 1 Interval 10 SCAN STOP EXIT

Dynamic Port Status Report (MG/UNIT)

Port Status
0: Not Assigned 1: Line Idle
2: Line Busy 3: Make Busy
4: LockOut 5: Status5

Group	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Type	--	--	--	--	--	--	DL	--	--	--	--	TK	--	DT	--	DT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Status	BY	BY	BY	BY	BY	BY	ID	BY	BY	BY	BY	ID	BY	ID	BY	ID	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY	BY
Level																																
7	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	1	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	1	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	3	0	0	0	0	3	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Type 3: By MG, Unit, Group

Display of Scanning by Designating Group

When Group is Designated (see the figure below.)

STATUS:

Idle = Idle

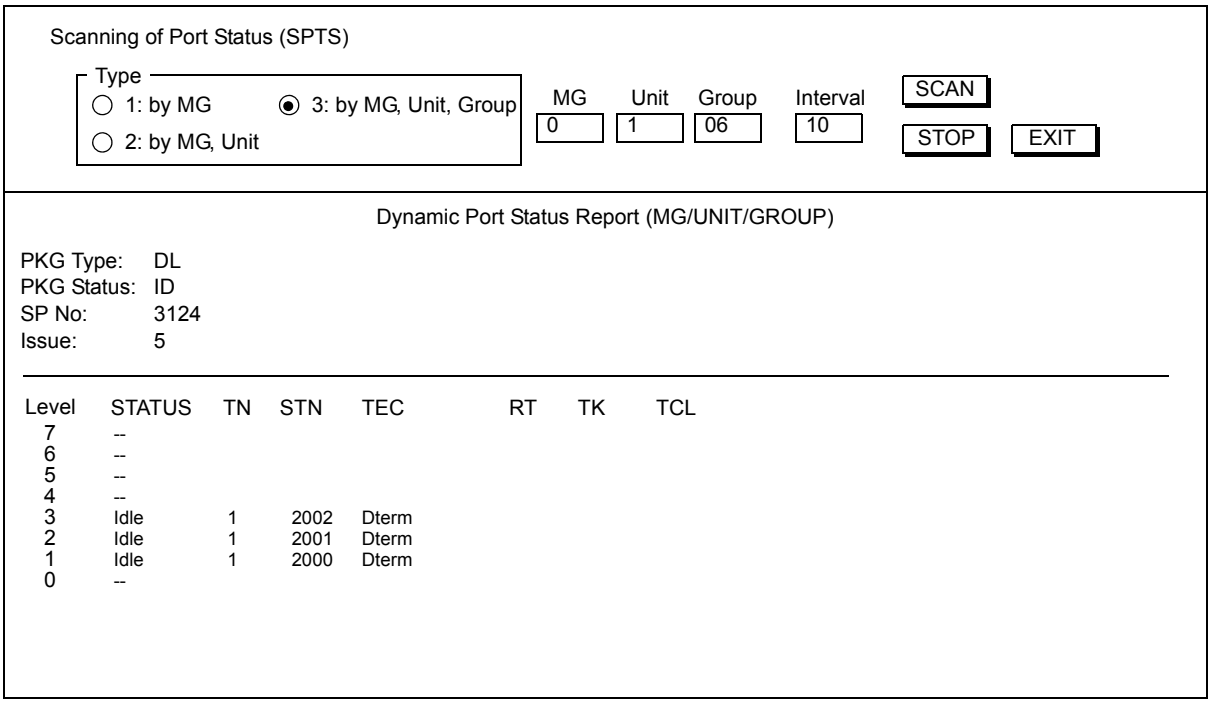
-- = Unassigned Port

TN: Tenant Number

STN: Station Number

TEC: Telephone Equipment Class

Port Status Report (MG, Unit, Group) Display - Designating Group



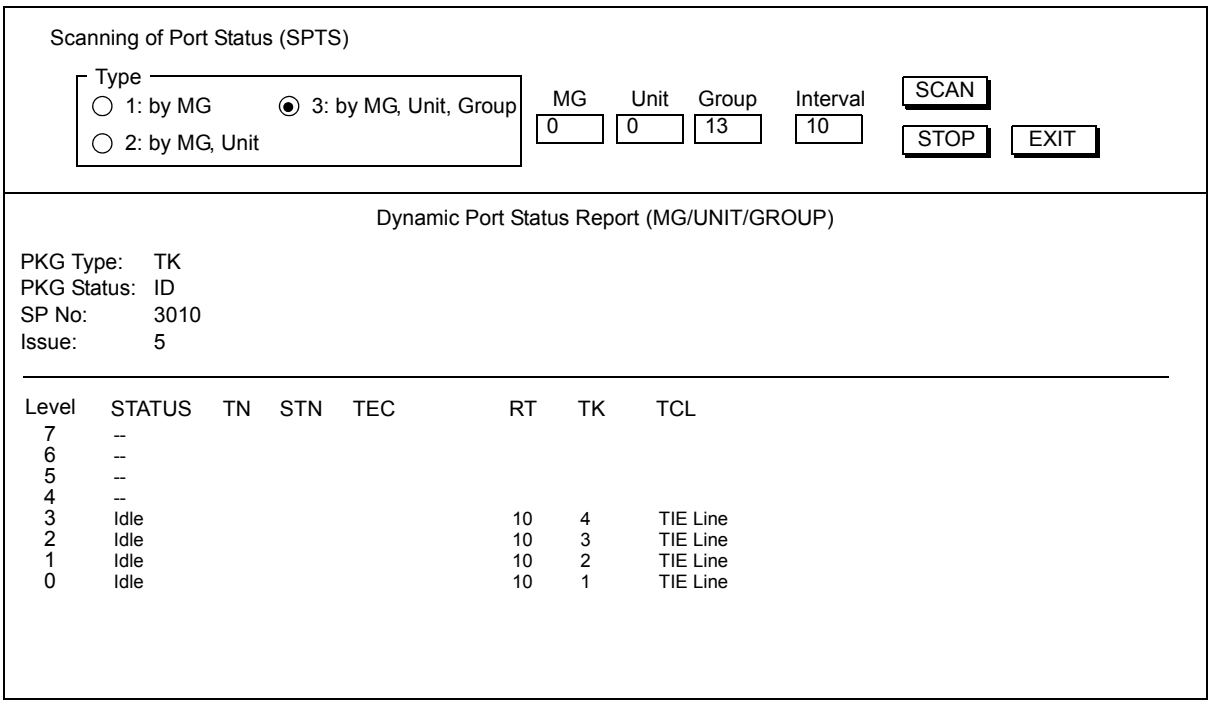
When Group-Trunk is Designated (see the figure below.)

RT: See the table below.

TK: Trunk Number

TCL: Trunk Class

Port Status Report (MG, Unit, Group) Display—Designating Group-Trunk



Route Number Explanation

DATA	MEANING	DATA	MEANING
901	Attendant Console	902	Originating Register Trunk
903	Incoming Register Trunk	904	MF Receiver
905	Sender Trunk DP/PB	906	PB Receiver for Automated Attendant Service
907	AMP	908	Not used
909	Three-Way Conference Trunk	910, 911	Not used
913	Three-Way Conference Trunk for ATTCON	914	Not used
915	Night Attendant	916	MFC Register
917	MFC Sender	918	Not used
919-926	Modem	927, 928	Not used
929	MFC Sender	930-932	Not used
933	CRT	934-936	Not used
937	Modem Sender	938-947	Not used

SRTS: Scanning of Route Status

1. Functional Outline

This command displays the designated trunk status (IDLE/BUSY) at predetermined intervals.

2. Parameters

Input data

RT: Route Number [1-255/901-947]

The Route Number range “1-255” is an external trunk.

The Route Number range “901-947” is an internal trunk.

Interval Time (seconds): Time interval of scan [2-999]

Output data

Number of Idle TK

Number of Busy TK

SRTS_LR:Scanning of Route Status - Logical Route Number

1. Functional Outline

This command displays the designated trunk status (IDLE/BUSY) at predetermined intervals. Route number of the SRTS command can be assigned by using a logical route number.

Note: When logging in to the Network Control Node (NCN), the data of the other Local Node (LN) can be changed. If logging in to a LN, only the DM of Self Node can be changed by this command.

2. Parameters

Input Data

LGRT : Logical route Number [1-899] **Note 1**

Interval Time (seconds): Time interval of scan [2-999]

Note 1: Prior to this command, a logical route number must be allocated by the ALRTN command.

Output Data

FPC : Fusion Point Code [1-253] **Note 2**

RT : Route Number **Note 2**

Number of Idle TK **Note 3**

Number of Busy TK **Note 3**

Note 2: When you enter the LGRT number and then click the GET button, this parameter is displayed.

Note 3: When you enter a time interval and then click the scan button, this parameter is displayed.

TLBK: Test of Loop Back Connection for IP Terminal

1. Functional Outline

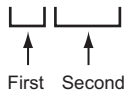
This command specifies a maintenance station and a test station to perform a voice loopback test. Also this command displays test results on the screen.

2. Precaution

When performing loopback tests for two or more test stations, test station data can be registered using a CSV file. Also test results can be output to a CSV file by clicking "CSV File Output" button. The following are information of data input and output using a CSV file.

Example Input of Test station Data to CSV File

```
// TN STN
1,  1500,
1,  1501,
1,  1502,
```



Note: Conditions to input data to CSV file;

- If there is "//" or "$" in a blank line or in the top of a line, the line is not recognized as a data line.
- In CSV file input, the first and the second data which are comma-delimited are read out.
- Input data is read out in this way.
  When "Kind of Station" is set as STN: First data = TN, Second data = STN
  When "Kind of Station" is set as TELN: First data = UGN, Second data = TELN
- A CSV file, output by this command, can be imported even if the CSV file data does not match a current data assignment for "Kind of Station."

Example Output of Test Results to CSV File

```
$Kind of Station: TELN(NDM),
$Test Range: Plural,
$Maintenance Station: UGN 1 TELN 51000,
// UGN, TELN, Test Result, Test Failure Factor, Result of Execute Command
1, ="1001", ="OK",,="OK"
2, ="50001", ="NG(Command Error)",, ="NG(Sending error: Unknown Station/Trunk (Error Code` 0x0201))"
1, ="51000", ="NG(Command Error)",, ="NG(Data validate error: Maintenance Station Number is identical with a Tested Station Number.)"
1, ="51005", ="NG(Test Failure)", ="Test status error", ="OK"
1, ="51006", ="NG(Test Failure)", ="Station status error", ="OK"
```

Note: "$" appears on the top of a line for the data assigned by this command. "//" appears on the header of test results.

3. Parameters

Input Data

When performing a new loopback test, input the following data. Then click "Execute" button.

Kind of Station (Kind of Station)
- STN: Station Number
- TELN (LDM): Telephone Number (LDM)
- TELN (NDM): Telephone Number (NDM)

Test Range
- Single
- Plural

Maintenance Station/Test Station

<Designation when Kind of Station = STN is set>
- TN: Tenant Number [1-63]
- STN: Station Number [Maximum 5 digits]

<Designation when Kind of Station = TELN (LDM) or TELN (NDM) is set>
- UGN: User Group Number [1-255]
- TELN: Telephone Number [Maximum 16 digits]

<Designation when CSV file is used>
CSV File Read **Note 1**

Note 1: This button appears when "Test Range = Plural" is set.

Displayed Data

CNT: Count of Test Result List
Displays the number of test stations.

Test Result
Displays the following test results;
OK
NG (Test Failure)
NG (Command Error)

Test Failure Factor
Displays the following error codes when "NG (Test Failure)" appears in Test Result field.

Test Error Code	Description
1	Maintenance station off-hook timeout
2	Test status error
3	Station status error
4	Connection timeout
5	Connection error
6	Test break (maintenance station's duty)
7	Test break (test station's duty)
8	Internal error
9	Test break (patrol's duty)

Result of Execute Command
Displays the following results;
OK: Command execution succeeds
NG: Command execution fails **Note 2**

Note 2: When "NG (Command Error)" appears in Test Result field, error details accompany to "NG" in Result of Execute Command field.

Buttons

Execute:	Execute a loopback test
Pause:	Pause a loopback test
Resume:	Resume a loopback test
Discontinue:	Discontinue a loopback test.
Exit:	Exit this command.
CSV File Read:	Read out a specified CSV file.
CSV File Output:	Output test results to a CSV file and save it in a maintenance PC.

TOGC: Test of Originating Connection

1. Functional Outline

This command executes originating connection tests by specifying the self-trunk/station number and the destination route/trunk number on PCPro display.

By using this command, the following is available:

- Capable of observing both originating and incoming trunks, you can perform the tests even involving the Tandem connection.
- Different from Individual Trunk Access that uses a specific access code, this test can involve the register/sender, etc., thereby enabling the test condition the same as that in the normal connection.

Also, the following shows service conditions for this test:

(a) The originating side must be a station, ICT/BWT or Attendant Console.

(b) Accessible trunks are REG, SND, CFT, IPPAD or OGT/BWT.

Note: Designed trunk connection is available for ISDN trunks (Q.931a) and also for MG-SIPs.

(c) The test observation by this command is effective for approximately three minutes since the test was initiated.

(d) When the test result is abnormal, due to a factor such as PCPro power failure, etc., the existing data for test connection may remain on the SV9500 side. To clear the data, activate the TOGC command again.

(e) Test results can be observed only on the trunks accommodated in the same SV9500 node even if CALLING STN TYPE = TELN(NDM)/TELN(LDM) or CALLING RT TYPE = LGRT.

(f) This connection test is restricted for FCCS trunk.

(g) When testing a Desktop terminal with this command, be sure to choose My Line. Once the Desktop terminal belongs to My Line, it is possible to perform a test from the terminal with Sub Line.

(h) Test trunks (Internal/External Trunk, IPPAD) assigned by the command flash MB lamp in 60INT.

- While being seized or tested, the lamp lights.
- After the test is completed, the trunk is released.
- After the timeout (three minutes), the trunk is released.

(i) Both of the Calling/Called Party can execute Trunk Access to Station/Trunk only when these are in the same system.

(j) Do not cancel Make Busy of the assigned IPPAD channel by using this command.

2. Parameters

[When *STN* is selected in the *TYPE* selection list box]

Input Data

CALLING STN TYPE: Station Type of Calling Party

STN=Station Number

TELN(NDM)=Telephone Number (NDM)

TELN(LDM)=Telephone Number (LDM)

CALLED RT TYPE: Route Type of Called Party

RT=Physical Route of Called Party

LGRT=Logical Route of Called Party

C_RT=Connection Route of Called Party

CALLING TN: Tenant Number of Calling Party

CALLING STN: Station Number of Calling Party

CALLING UGN: User Group Number of Calling Party

Note: This parameter appears when CALLING STN TYPE = TELN (NDM)/TELN (LDM).

CALLING TELN: Telephone Number of Calling Party

Note: This parameter appears when CALLING STN TYPE = TELN (NDM)/TELN (LDM).

CALLED RT: Route Number of Called Party

Note: This parameter appears when CALLED RT TYPE = RT (Physical Route).

CALLED LGRT: Logical Route Number of Called Party

Note: This parameter appears when CALLED RT TYPE = LGRT (Logical Route).

CALLED TK: Trunk Number of Called Party

CALLED C_RT: Connection Route Number of Called Party

CALLED C_TK: Connection Trunk Number of Called Party

[When *TRUNK* is selected in the *TYPE* selection list box]

Input Data

CALLING RT TYPE: Route Type of Calling Party

RT=Physical Route of Calling Party

LGRT=Logical Route of Calling Party

CALLED RT TYPE: Route Type of Calling Party

RT=Physical Route of Called Party

LGRT=Logical Route of Called Party

C_RT=Connection Route of Called Party

CALLING RT: Physical Route Number of Calling Party

Note: This parameter appears when CALLING RT TYPE = RT (Physical Route).

CALLING LGRT: Logical Route Number of Calling Party

Note: This parameter appears when CALLING RT TYPE = LGRT (Logical Route).

CALLING TK: Trunk Number of Calling Party

Note: This parameter appears when CALLING RT TYPE = RT (Physical Route)/LGRT (Logical Route).

CALLED RT: Route Number of Called Party

Note: This parameter appears when CALLED RT TYPE = RT (Physical Route).

CALLED LGRT: Logical Route Number of Called Party

Note: This parameter appears when CALLED RT TYPE = LGRT (Logical Route).

CALLED TK: Trunk Number of Called Party

CALLED C_RT: Connection Route Number of Called Party

CALLED C_TK: Connection Trunk Number of Called Party

XPAT: On–line Patch Install

1. Functional Outline

This command applies the patches, uploaded to the Telephony Server using Telephony Server Maintenance Menu, at once rather than one at a time.

2. Parameters

Input Data

System Select:

Select target CPU to perform patch application by radio button.

- ACT
- STBY

Patch Information List: **Note 1**

Patch Number:	List of patch number
Target Process:	Program targeted for patch application – main – mph – phi – phd – b2bua – sp_boot – sipsv_phe – sipsv_sip – ip_dtg – sv_siptl
Application Status:	Status of applied patch – Application – Unapplication
Check Result:	Result of patch check – Format OK – Format NG – Process Name NG – Base LM Version NG – Patch Number NG – File Open Failure

Note 1: When pressing “Get” button, if readout cannot be correctly processed for an existing patch file, columns “Target Process” and “Application Status” will remain blank.

Buttons

Get:	Read out a list of patch files uploaded to the Telephony Server.
Check:	Check format of the patch file.
Apply:	Apply the patch file.

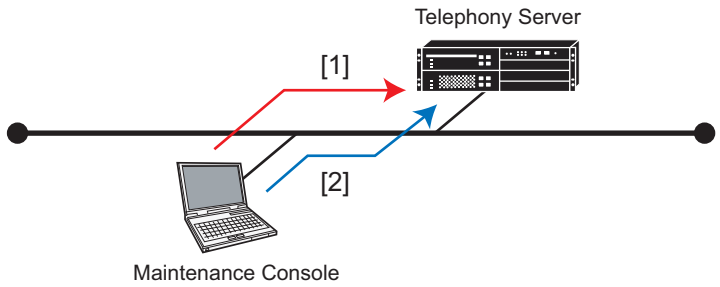
APPENDIX A
Minor Version Update for Online Software

CAUTION

Follow the procedure only when instructed to do so by the service technician.

1. GENERAL

This feature is used to apply patches to the Telephony Server's program.



1. Use Telephony Server Maintenance Menu to upload patch files to the Telephony Server.
2. Use XPAT command to apply uploaded patch files to the Telephony Server.

2. PRECAUTIONS

(1) For dual-CPU system, apply patches to the STBY side as well as the ACT side. Otherwise, after system changeover, the system will operate on a program without the latest patch.

(2) A Maximum of 255 patches can be stored in the Telephony Server.

(3) An attempt to apply multiple patches at one time will fail if any one of the files is in an incorrect format.

(4) For the procedure to update just the ACDP Program, see "ACDP Program Online Update" in the chapter "System Operations" of Data Programming Manual - ACD.

3. APPLYING THE PATCH FILES

(1) Upload patch files to the Telephony Server.

Note: Make sure to upload the patch files to each Telephony Server side (ACT side and/or STBY side) targeted for patch application.

STEP 1 Copy the obtained patch files to the desired directory of the maintenance console.

STEP 2 Start Internet Explorer.

STEP 3 Type "http://xxx.xxx.xxx.xxx:9801/" into the address bar to access Telephony Server Maintenance Menu.

Note: "xxx.xxx.xxx.xxx" represents the LAN1 IP address of the destination Telephony Server.

STEP 4 **Telephony Server Maintenance Menu Login screen** appears. Type a user name and password. Click **OK** to log into **Telephony Server Maintenance Menu**.

Note: The default for both user name and password is “admin”. You are recommended to change user name and password from Advanced Menu.

STEP 5 Click the **Upload** button for **Patch** on **Telephony Server Maintenance Menu** screen. The **Patch Upload** dialog box appears in the lower right portion of the screen.

STEP 6 Click the **Browse** button in the dialog box and specify the patch file copied in STEP 1.

STEP 7 Select **Work** and then click the **Upload** button in the dialog box. When the uploading is complete, “Operation successfully completed” will be displayed. Click **OK**.

(2) Use XPAT command to apply uploaded patch files to the Telephony Server.

STEP 1 Start up XPAT command.

STEP 2 Select target Telephony Server side to apply patches using radio buttons in “System Select: ACT/STBY.”

STEP 3 Press “Get” button to display “Patch Information List” (list of uploaded patch files).

• When application for all uploaded patch files have been completed:

Message “The applicable file does not exist.” appears.
Close XPAT command.

STEP 4 Press “Check” button to check formats for patch files.

• When all files are in correct format:

“Apply” button becomes active.

• When an incorrect file format exists:

Error message is displayed in “Check Result” column of “Patch Information List.”
“Apply” button does not become active.

STEP 5 Press “Apply” button.
Message “Do you want to apply the patch?” appears.
Press “Yes” to start applying the patch. **Note 1**

• When all patch file application was successful:

Message “Succeeded in applying patch. The patch information is read to confirm the present status.” appears.

• When patch application failed:

Message “Failed to apply patch. The patch information is read to confirm the present status.” appears.

Note 1: Pressing the “Yes” button automatically executes readout to update the Patch Information List. When patch application failed, the first patch file in “Application Status” column displayed as “Not Applied Yet” failed to have the patch applied. Contact the patch provider when this problem occurs.

STEP 6 Close XPAT command when patch application is complete.

4. DELETING PATCH FILES

Delete patch files that cannot be applied by XPAT command using the following steps.

STEP 1 Click the **Delete** button for **Patch** on **Telephony Server Maintenance Menu** screen. The **Patch Delete** dialog box appears in the lower right portion of the screen.

STEP 2 Select a drive (**WORK** or **TEMP**) which contains the target patch files and then click the **Check** button. A list of files targeted for deletion is displayed.

Note: In an environment where V1 software version 3.59 or before is used in conjunction with Internet Explorer 8 or later, if you click the **Check** button after selecting **TEMP**, the setting may revert back to **WORK**. In this case, select **TEMP** again.

STEP 3 Select files to be deleted from the list.

Note: Use the Ctrl key or the Shift key for multiple selections.

STEP 4 Click the **Delete** button in the dialog box. When the file deletion is complete, "Operation successfully completed" will be displayed. Click **OK**.

5. CANCELING APPLIED PATCH FILES

Cancel patch files applied by XPAT command using the following steps. System initialization is required for this procedure.

STEP 1 Click the **Delete** button for **Patch** on **Telephony Server Maintenance Menu** screen. The **Patch Delete** dialog box appears in the lower right portion of the screen.

STEP 2 Select a drive (**WORK** or **TEMP**) which contains the target patch files and then click the **Check** button. A list of the patch files is displayed.

STEP 3 Select files to be canceled from the list.

Note: Use the Ctrl key or the Shift key for multiple selections.

STEP 4 Click the **Delete** button in the dialog box. When the file deletion is complete, "Operation successfully completed" will be displayed. Click **OK**.

STEP 5 Use SINZ command of PCPro to execute **Program & Office Data Load & System Initialize**.

Note: To switch programs before starting up the Telephony Server, choose the check box for **Switch the Program**, and execute **Program & Office Data Load & System Initialize**. Then switching the program between **WORK** and **TEMP** sides is performed.

UNIVERGE SV9500
Operations and Maintenance Manual

NWD-165814-001

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