

Lucent Technologies
Bell Labs Innovations



INTUITY Interchange

Release 5.3

MAP/100P System Maintenance

585-313-809
Comcode 108455320
Issue 1
November 1999

Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Your Responsibility for Your System's Security

Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party, for example, persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf. Note that there may be a risk of toll fraud associated with your telecommunications system and, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your system manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The system manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use.

Lucent Corporate Security

Whether or not immediate support is required, all toll fraud incidents involving Lucent products or services should be reported to Lucent Corporate Security at 1 800 821-8235. In addition to recording the incident, Lucent Corporate Security is available for consultation on security issues, investigation support, referral to law enforcement agencies, and educational programs.

Lucent Technologies Fraud Intervention

If you *suspect that you are being victimized* by toll fraud and you need technical support or assistance, call the Lucent Technologies National Customer Care Center Toll Fraud Intervention Hotline at 1 800 643-2353.

Federal Communications Commission Statement

Part 15: Class A Statement. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Part 68: Network Registration Number. This equipment is registered with the FCC in accordance with Part 68 of the FCC Rules. It is identified by an FCC registration number.

Part 68: Answer-Supervision Signaling. Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 Rules. This equipment returns answer-supervision signals to the public switched network when:

- Answered by the called station

- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

This equipment returns answer-supervision signals on all DID calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered
- A busy tone is received
- A reorder tone is received

Canadian Department of Communications (DOC)

Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le reglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Trademarks

See the section titled "About This Book."

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Issue 1, November 1999

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Warranty

Lucent Technologies provides a limited warranty on this product. Refer to the "Limited Use Software License Agreement" card provided with your package.

European Union Declaration of Conformity

Lucent Technologies Business Communications Systems declares that the equipment specified in this document conforms to the referenced European Union (EU) Directives and Harmonized Standards listed below:

EMC Directive 89/336/EEC
Low-Voltage Directive 73/23/EEC



The "CE" mark affixed to the equipment means that it conforms to the above directives.

Comments

To comment on this document, see the section titled "About This Book."

Acknowledgment

This document was prepared by Technical Publications, Lucent Technologies, Columbus, OH and Milpitas, CA.

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About This Book

Purpose

This book, *Lucent™ INTUITY™ Messaging Solutions Release 4 MAP/100P Maintenance, Issue 1, 585-313-114* contains information for troubleshooting and diagnosing problems associated with the MAP/100P hardware. Component replacement procedures and common system procedures are also included in the book. Installation procedures for base system software, Lucent system software, UNIX Multi-User software, and RFUs are also included. Appendices contain a system configuration description, a list of component ordering numbers, a checklist for building a system, and checklists for disaster recovery.

Intended Audiences

This book is intended primarily for the on-site service technician and system administrators. Secondary audiences include the following from Lucent:

- Field support — Technical Service Organization (TSO)
- Field support — Global Support Organization (GSO)
- Helpline personnel

We assume that the primary users of this book have completed the Lucent MAP/100P hardware installation training course (see “Related Documentation and Training” below).

Release History

This is the first release of this book.

How to Use This Book

This book is designed to help you maintain your Lucent system. It should be used as a quick-reference to obtain specific information you may need on a particular topic.

For Troubleshooting Information

Basic troubleshooting information is available in [Chapter 1, "Troubleshooting"](#).

For Diagnostic Information

Instructions for conducting diagnostics are available in [Chapter 2, "Diagnostics"](#).

For Common System Procedures

Instructions for conducting common system procedures are available in [Chapter 3, "Common System Procedures"](#).

For Hardware Information

Instructions for replacing or installing hardware components of the MAP/100P are available in [Chapter 4, "Getting Inside the Computer"](#), [Chapter 5, "Replacing or Installing Circuit Cards"](#), [Chapter 6, "Replacing the Hard Disk Drive"](#), and [Chapter 7, "Replacing Other Components"](#).

For Software Information

Instructions for replacing or installing software components of the MAP/100P are available in [Chapter 8, "Installing Base System Software"](#), [Chapter 9, "Installing Lucent Intuity System Software"](#), [Chapter 10, "Installing the Optional Feature Software"](#), and [Chapter 11, "Installing an RFU"](#).

Conventions Used in This Book

This section describes the conventions used in this book.

Terminology

- The word "type" means to press the key or sequence of keys specified. For example, an instruction to type the letter "y" is shown as

Type **y** to continue.

- The word "enter" means to type a value and then press `ENTER`. For example, an instruction to type the letter "y" and press `ENTER` is shown as

Enter **y** to continue.

- The word "select" means to move the cursor to the desired menu item and then press `ENTER`. For example, an instruction to move the cursor to the start test option on the Network Loop-Around Test screen and then press `ENTER` is shown as

Select Start Test.

- The Lucent INTUITY system displays *windows, screens, and menus*. "Windows" show and request system information ([Figure 1](#) and [Figure 2](#), respectively). "Screens" request that you enter a command at the `enter command: prompt` ([Figure 3](#)). "Menus" ([Figure 4](#)) present options from which you can choose to view another menu, or a screen or window.
- The words "subscriber" and "user" are interchangeable terms that describe a person administered on the Lucent INTUITY system. The word "user" is the preferred term in the text; however, "subscriber" appears on most of the screens.

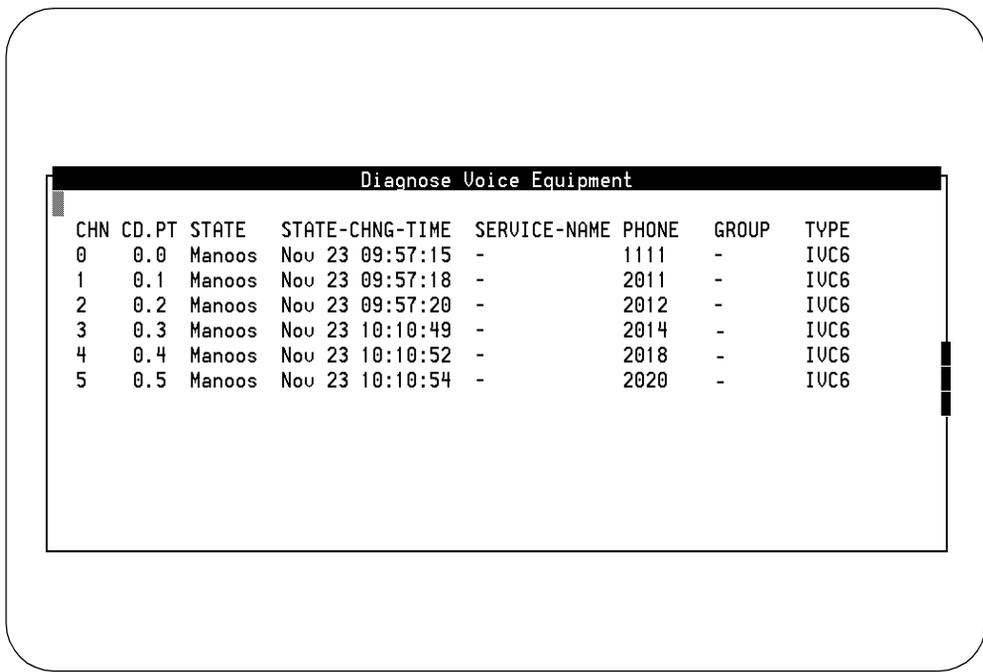


Figure 1. Example of an Lucent INTUITY Window

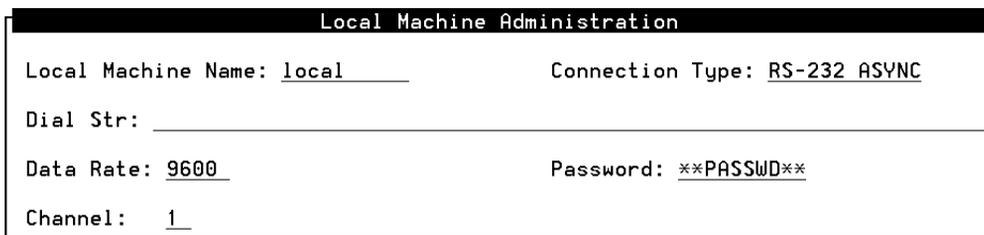


Figure 2. Example of an Lucent INTUITY Window

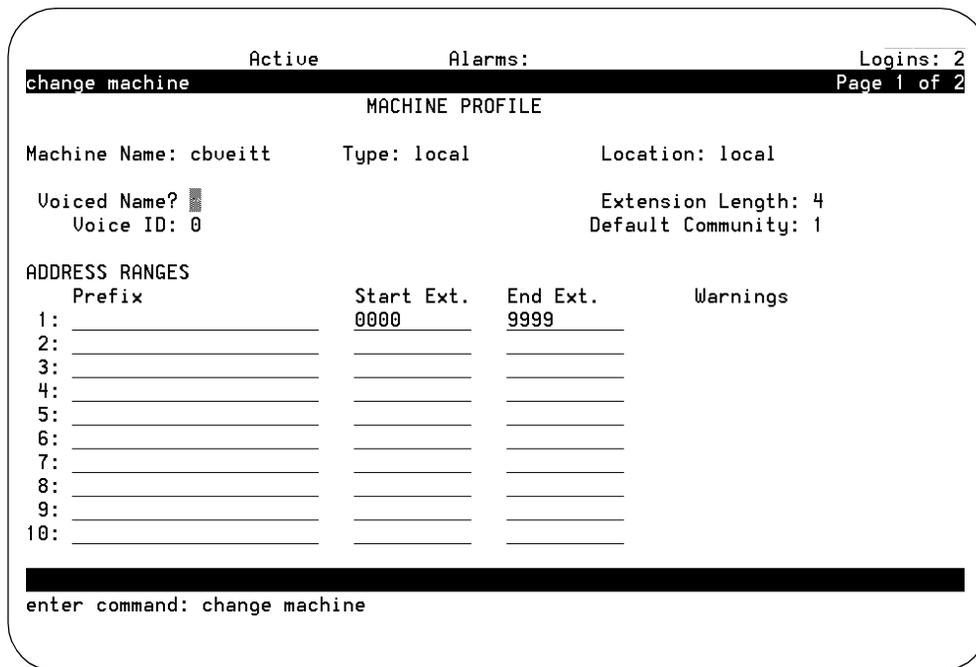


Figure 3. Example of an Lucent INTUITY Screen



Figure 4. Example of an Lucent INTUITY Menu

Terminal Keys

- Keys that you press on your *terminal or PC* are represented as rounded boxes. For example, an instruction to press the enter key is shown as

Press **ENTER**.

- Two or three keys that you press at the same time on your *terminal or PC* (that is, you hold down the first key while pressing the second and/or third key) are represented as a series of separate rounded boxes. For example, an instruction to press and hold **ALT** while typing the letter “d” is shown as

Press **ALT** **D**.

- Function keys on your terminal, PC, or system screens, also known as *soft keys*, are represented as round boxes followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

Press **F3** (Choices).

- Keys that you press on your *telephone keypad* are represented as square boxes. For example, an instruction to press the first key on your telephone keypad is shown as

Press **1** to record a message.

Screen Displays

- Values, system messages, field names, and prompts that appear on the screen are shown in typewriter-style `constant-width` type, as shown in the following examples:

Example 1:

```
Enter the number of ports to be dedicated to outbound traffic in the
Maximum Simultaneous Ports field.
```

Example 2:

```
Alarm Form Update was successful.
Press <Enter> to continue.
```

- The sequence of menu options that you must select to display a specific screen or submenu is shown as follows:

Start at the Lucent INTUITY Main menu and select

```
> Customer/Services Administration
```

```
> Alarm Management
```

In this example, you would access the Lucent INTUITY Main menu and select the Customer/Service Administration menu. From the Customer/Service Administration menu, you would then select the Alarm Management screen.

- Screens shown in this book are examples only. The screens you see on your machine will be similar, but not exactly the same.

Other Typography

- Commands and text you type in or enter appear in **bold type**, as in the following examples:

Example 1:

Enter **change-switch-time-zone** at the `enter` command: prompt.

Example 2:

Type **high** or **low** in the `Speed:` field.

- Command variables are shown in ***bold italic*** type when they are part of what you must type in and *regular italic* type when they are not, for example

Enter **ch ma *machine_name***, where *machine_name* is the name of the call delivery machine you just created.

Safety and Security Alert Labels

This book uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

CAUTION:

Indicates the presence of a hazard that if not avoided can or will cause minor personal injury or property damage, including loss of data.



WARNING:

Indicates the presence of a hazard that if not avoided can cause death or severe personal injury.



DANGER:

Indicates the presence of a hazard that if not avoided will cause death or severe personal injury.



SECURITY ALERT:

Indicates the presence of a toll fraud security hazard. Toll fraud is the unauthorized use of a telecommunications system by an unauthorized party.

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- Voice Bridge is a registered trademark of Voice Technologies Group, Inc.
- VOXEM is a registered trademark of VOXEM, Inc.
- VT100 is a trademark of Digital Equipment Corporation.
- Windows is a trademark of Microsoft Corporation.

Related Resources

This section describes additional documentation and training available for you to learn more about installation of the Lucent INTUITY product.

Documentation

NOTE:

The *INTUITY Messaging Solutions Release 4 Documentation Guide*, 585-310-540, contains a detailed description of all books included in the Release 4 Lucent INTUITY documentation library. Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an Lucent INTUITY system.

It is suggested that you obtain and use the following books in conjunction with this installation book:

- *INTUITY Messaging Solutions System Description*, 585-310-235, for a complete description of the Lucent INTUITY product and features
- *INTUITY Messaging Solutions Release 4 MAP/100P System Installation*, 585-313-115, for a detailed source of complete maintenance procedures and troubleshooting information

It is suggested that you obtain and use the following book for information on security and toll fraud issues:

- *BCS Products Security Handbook*, 555-025-600

See the inside front cover for information on how to order Lucent INTUITY documentation.

Training

The following training class is recommended as a prerequisite to installing a Release 4 Lucent INTUITY system:

- Course No. MO1616A, INTUITY Messaging Solutions Installation and Maintenance

For more information on Lucent INTUITY training, call the Global Learning Solutions (GLS) at one of the following numbers:

- Organizations within Lucent: (904) 636-3261
- Lucent customers and all others: (800) 255-8988

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Denver, Colorado 80234

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Troubleshooting

1

Overview

This chapter describes some basic troubleshooting procedures for the most common system problems.

Purpose

The purpose of this chapter is to provide the on-site technician or system administrator with repair procedures for the most common system procedures. All of the troubleshooting procedures can be accomplished with a craft login.

Modem Does Not Answer

Table 1-1. Modem Does Not Answer

Possible Cause	Check/See	Probable Fix
There is no power to the modem.	Check the power source.	Apply power to the modem.
The modem is not connected.	The modem should be connected with a D25F cord through a 25 to 9 pin adapter to COM2.	Connect the modem correctly.
The normal D4 conductor cord is not plugged in to the correct port.	Make sure that the normal D4 cord is plugged into the Dial portion of the 3820 Modem. This cord should not be plugged into the Phone portion.	Plug the normal D4 cord into the Dial portion of the modem.
There is no continuity.	<p>Check the Alarm Management window by doing the following:</p> <ol style="list-style-type: none"> Starting at the Lucent™ INTUITY™ Main menu window, select <pre> > Customer/Serv. Admin > Alarm Management </pre>	<p>Fill in the Alarm Screen.</p> <ol style="list-style-type: none"> Enter the product ID in the Product ID field. If the product ID is not known, enter 2200000000 Enter a valid telephone number in the Alarm Destination field. Press F8 (Chg-Keys). Press F1 (Test_Alm). If the product ID was not known in Step 1 call INADS for the correct number.

The Tape Backup Alarm Is Activated Daily at 3:00 A.M.

Table 1-2. The Tape Backup Alarm Is Activated Daily at 3:00 A.M.

Possible Cause	Check/See	Probable Fix
The tape is not in the drive.	Check the position of the tape in the drive.	Position the tape correctly.
The tape is write protected.	Check the read/write dial on the tape.	Place the read/write dial in the "not safe" position. The small dial on the front of the tape should be in the horizontal position.
The tape is not compatible with the drive.	Check the type of tape in the drive. All tapes created in a 2-Gbyte tape drive can be read by a 525-Mbyte tape drive. The only tapes, created in a 525-Mbyte tape drive, which can be read by a 2-Gbyte tape drive, are Lucent INTUITY system backup tapes.	Replace the tape with a compatible tape.
The tape is not formatted.	Check the format status.	Format the tape. See "Formatting Cartridge Tapes" , in Chapter 3, "Common System Procedures" for the procedure.
The tape drive is not working correctly.	Check the operation of the tape drive during a backup. If the tape drive is spinning but there is no processor time being allotted to the cpio process, the tape drive is not working correctly.	Replace the tape drive. See "Replacing the Cartridge Tape Drive" , in Chapter 7, "Replacing Other Components" for the procedure.

The DCIU Link Is Not Functioning

Table 1-3. The DCIU Link Is Not Functioning

Possible Cause	Check/See	Probable Fix
The DCIU Link is not assigned properly.	<p>Check the administrator's log for translation error entries.</p> <p>Check the assignment parameters in the installation manual for both the switch and the Lucent system.</p>	Reassign the DCIU Link.
The assigned node number is not correct.	<p>System 85 and G2 Refer to procedure 275, word 3, field 8.</p>	<p>Change the Lucent node setting to match the switch setting.</p> <p>If the node number listed in the Lucent INTUITY system is above 20 escalate to tier 3.</p>
	<p>DEFINITY® G1 Refer to the Display Dial Plan.</p> <p>If UDP is off then the correct node number is 1.</p> <p>If UDP is on then refer to page two and determine the correct node number from the RNX field. If this field is blank then escalate to tier 3.</p>	Change the Lucent INTUITY node number to match the switch.
	<p>DEFINITY G3 Refer to the Display Dial Plan page one.</p>	<p>Change the Lucent INTUITY node setting to match the switch setting.</p> <p>If the node number listed in the Lucent INTUITY system is above 20 escalate to tier 3.</p>
Incorrect link connections.	Check for proper connections.	Adjust the connections as needed.

The Voice Ports Are Answering in Standalone Mode

Table 1-4. The Voice Ports Are Answering in Standalone Mode

Possible Cause	Check/See	Probable Fix
The ports in the hunt group are not in the same order as they are in the Lucent INTUITY system.	Call each port to determine the order.	Reorder the ports.
The link to the switch is out of service.	Check the link to the switch.	Restore the link to service.
The ports are not assigned in the correct order.	Check the connection order by dialing the ports directly and through the UCD.	To reassign the ports, do the following: <ol style="list-style-type: none"> Starting at the Lucent INTUITY Main menu window, select <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> > Voice System Admin. </div> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;"> > Voice Equipment </div> Press F8 (Chg-Keys). Press F2 (Renumber).

Table 1-4. The Voice Ports Are Answering in Standalone Mode

Possible Cause	Check/See	Probable Fix
Incorrect entry in Services to Call Numbers field or Startup Services field.	Refer to the Chapter 6, "Initial Administration and Test for Messaging" of the Installation Manual.	To enter the correct numbers in the Services to Call Numbers field, do the following: <ol style="list-style-type: none"> Starting at the Lucent INTUITY Main menu window, select <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> > Voice System Admin. </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> > Voice Equipment </div> Enter the correct numbers.
Subscribers have the wrong host PBX assigned.	Check the host PBX.	Reassign the host PBX.

(2 of 2)

DCS AUDIX® Does Not Work

Table 1-5. DCS AUDIX Does Not Work

Possible Cause	Check/See	Probable Fix
The DCS is not functional.	Check the DCS status.	Escalate to tier 3.
The Lucent INTUITY system is blank on the switch screen.	Refer to design personnel for the correct translations.	Input correct translations and save. If this does not work escalate to tier 3.

Cannot Assign Voice Ports

Table 1-6. Cannot Assign Voice Ports

Possible Cause	Check/See	Probable Fix
Additional port activation has not been purchased by the customer.	Verify number of ports purchased by the customer. Access Customer/Services Administration from the Lucent INTUITY Administration menu. Access the Feature Options screen and refer to the voice_ports line.	Refer the customer to sales personnel.

System Will Not Outcall

Table 1-7. System Will Not Outcall

Possible Cause	Check/See	Probable Fix
Class of restriction is set to deny outcalling.	Check switch translations.	Change class of restriction.
The voice port translations are incorrect for trunk access.	Check the voice port translations for the FRL and access.	Correct the voice port translations.

System Will Not Boot

Table 1-8. System Will Not Boot

Possible Cause	Check/See	Probable Fix
There is a diskette in the "A" drive.	Check the "A" drive.	Remove the diskette.
The external SCSI connector circuit card terminating module is not properly connected.	Check the terminating module connection.	Properly connect the terminating module.
There is an odd number of SIMMs installed on the P5 200 MHz CPU circuit card.	Check the number of SIMMs on the P5 200 MHz CPU circuit card.	Correct the SIMM configuration. See "Memory Configuration" , in Appendix A, "System Configuration" for the correct configuration.
<p>If the system displays the following message, the problem could be the diskette cable orientation.</p> <p>BIOS Not Installed</p>	<p>Check the diskette cable orientation on the P5 200 MHz CPU circuit card.</p> <p>The tracer on the cable should be on the right as you look at the P5 200 MHz CPU circuit card.</p>	<p>To fix the problem, do the following:</p> <ol style="list-style-type: none"> 1. Access the circuit card cage. See "Accessing the Circuit Card Cage" in Chapter 4, "Getting Inside the Computer", for the procedure. 2. Fix the diskette cable orientation. 3. Close the circuit card cage. See "Replacing the Side Dress Cover" in Chapter 4, "Getting Inside the Computer", for the procedure. 4. Restore power to the system. See "Restoring Power to the MAP/100P" in Chapter 4, "Getting Inside the Computer", for the procedure.

Optional Features Not Working

Table 1-9. Optional Features Not Working

Possible Cause	Check/See	Probable Fix
The Lucent INTUITY version does not support the optional feature.	Check the Lucent INTUITY version.	Refer the customer to their sales representative concerning a migration or upgrade.
The optional feature is not activated.	Check the activated optional features by: <ol style="list-style-type: none"> 1. Starting at the Lucent INTUITY Main menu. 2. Accessing Customer/Services Administration. 3. Accessing Feature Options. 	<p>If the customer has purchased the optional feature, activate the optional feature.</p> <p>If the customer has not purchased the optional feature, refer them to their sales representative.</p>

System Memory Test Fails

Table 1-10. System Memory Test Fails

Possible Cause	Check/See	Probable Fix
There is a SIMM missing from the P5 200 MHz CPU circuit card.	Check the number of SIMMs on the P5 200 MHz CPU.	Correct the SIMM configuration. See “Memory Configuration” , in Appendix A, “System Configuration” for the correct configuration.
There is a a defective SIMM on the P5 200 MHz CPU circuit card.	Check the condition of the SIMMs on the P5 200 MHz CPU. See “Identifying a Damaged SIMM” , in Chapter 7, “Replacing Other Components” for the procedure.	Replace the defective SIMM. See “Replacing the Memory Modules” , in Chapter 7, “Replacing Other Components” for the procedure.

The Keyboard Is Not Operating

Table 1-11. The Keyboard Is Not Operating

Possible Cause	Check/See	Probable Fix
The keyboard is not plugged in.	Check the keyboard connection.	Shut down the system and plug in the keyboard.
The keyboard is "frozen."	Check the keyboard connection.	Reboot the system.

Monitor Is Not Operating

Table 1-12. Monitor Is Not Operating

Possible Cause	Check/See	Probable Fix
The video controller circuit card which has been installed is not compatible with the P5 200 MHz CPU circuit card.	Check the video controller circuit card. The following circuit cards are supported by the Lucent INTUITY system: <ul style="list-style-type: none"> ■ STB Horizon ■ WDXLR831124 ■ WDXLR83160 	Replace the video controller circuit card with a supported circuit card. See " Video Controller Circuit Card ", in Chapter 5, "Replacing or Installing Circuit Cards" for the procedure.
The monitor has not been turned on.	Check the monitor switch.	Turn on the monitor.
The monitor brightness has been turned down.	Check the monitor brightness knob.	Turn up the brightness.

Tip/Ring Circuit Card Is Not Recognized by the Lucent INTUITY System

Table 1-13. Tip/Ring Circuit Card Is Not Recognized by the Lucent INTUITY System

Possible Cause	Check/See	Probable Fix
The Tip/Ring card has incorrect switch settings.	Check the switch settings on the Tip/Ring cards. See “Tip/Ring Circuit Cards” , in Chapter 5, “Replacing or Installing Circuit Cards” for the correct settings.	Correct the switch settings.
The Tip/Ring cards are incorrectly numbered.	There is nothing to check in this instance. If this is the suspected problem continue with the probable fix.	Renumber the Tip/Ring circuit cards by doing the following: This will start and stop the voice system. <ol style="list-style-type: none"> Starting at the Lucent INTUITY Main menu window, select <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> > Voice System Admin. </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> > Voice Equipment </div> Press F8 (Chg-Keys). Select Renumber. Press F2 (Renumber).

The Printer Is Not Operating

Table 1-14. The Printer Is Not Operating

Possible Cause	Check/See	Probable Fix
The printer is not turned on.	Check the power indicator light.	Turn the printer on.
The printer cable is not connected correctly.	Check the printer connection.	Reconnect the printer.
The Lucent INTUITY system has not been configured correctly.	Check the system configuration.	Reconfigure the system. See Chapter 4, "Connecting Peripherals and Powering Up" in "INTUITY™ Interchange Release 5.3 MAP/100P System Installation" .
The printer has not been configured correctly.	Check the printer configuration.	Reconfigure the printer. See Chapter 4, "Connecting Peripherals and Powering Up" in "INTUITY™ Interchange Release 5.3 MAP/100P System Installation" .
The printer is out of paper.	Check the paper supply.	Add paper.
The printer software is not assigned correctly.	Check the printer software.	Complete the following steps: <ol style="list-style-type: none"> 1. Remove the printer. 2. Reboot the system. 3. Reassign the printer software.
The printer is jammed.	Check the printer operating panel.	Remove the paper jam.

Hard Disk Drive Access Troubleshooting

In the event of a SCSI Bus cable or hard disk drive failure the system will stall during the boot procedure. When the system stalls it will display one of several messages.

The System Displays No Boot Device Available Message with Ident-Strings

If the system displays the following message along with one or more SCSI device ident-strings see the troubleshooting procedures in [Table 1-15](#).

```
SCSI target 0 LUN 0 not found
Target-LUN x-0.....
....
Target-LUN y-0....
```

```
No boot device available
Strike F1 to retry boot, F2 for setup utility
```

Table 1-15. The System Displays No Boot Device Available Message with Ident-Strings

Possible Cause	Check/See	Probable Fix
Insufficient power voltages.	Check the power supply output voltage.	<ol style="list-style-type: none"> 1. If the power voltage is not 5V, replace the power supply. 2. Reboot the system.
The power cable is not properly attached to Hard Disk Drive 0.	Check the Hard Disk Drive 0 power cable connection.	<ol style="list-style-type: none"> 1. Correct the power cable connection to Hard Disk Drive 0. 2. Reboot the system.
The SCSI Bus cable is not properly attached to Hard Disk Drive 0.	Check the Hard Disk Drive 0 SCSI Bus cable connection.	<ol style="list-style-type: none"> 1. Correct the SCSI Bus cable connection to Hard Disk Drive 0. 2. Reboot the system.
The SCSI Bus cable is defective.	Check the SCSI Bus cable.	<ol style="list-style-type: none"> 1. Replace the SCSI Bus cable. 2. Reboot the system.

Table 1-15. The System Displays No Boot Device Available Message with Ident-Strings

Possible Cause	Check/See	Probable Fix
A pin on the Hard Disk Drive 0 SCSI Bus cable connector is bent or broken.	Check the pins on Hard Disk Drive 0 by doing the following: <ol style="list-style-type: none">1. Remove the SCSI Bus cable.2. Check the pins on the hard disk drive.	<ol style="list-style-type: none">1. If a pin is bent, straighten the pin. If a pin is broken, replace the hard disk drive.2. Reboot the system.
A pin on the P5 CPU circuit card SCSI Bus cable connector is bent or broken.	Check the pins on the P5 200 MHz circuit card by doing the following: <ol style="list-style-type: none">1. Remove the SCSI Bus cable.2. Check the pins on the circuit card.	<ol style="list-style-type: none">1. If a pin is bent, straighten the pin. If a pin is broken, replace the circuit card.2. Reboot the system.

Table 1-15. The System Displays No Boot Device Available Message with Ident-Strings

Possible Cause	Check/See	Probable Fix
<p>Hard Disk Drive 0 has been corrupted and the system can not access the boot image.</p>	<p>Check the status of Hard Disk Drive 0.</p>	<ol style="list-style-type: none"> 1. If the system has a remote maintenance circuit card diagnose the hard disk drive and replace if necessary. 2. If the system is mirrored, remove cables from Hard Disk Drive 0 and boot off of the backup hard disk drive. 3. If the system did not boot perform the following steps: <ol style="list-style-type: none"> a. Perform a surface analysis on both Hard Disk Drive 0 and its backup hard disk drive. b. If the surface analysis indicates either hard disk drive must be replaced, replace the disk. 4. If the system is not mirrored complete the following steps: <ol style="list-style-type: none"> a. Perform a surface analysis. b. If the surface analysis indicates the hard disk drive must be replaced, replace the disk. c. If the surface analysis does not indicate that the disk should be replaced, reload the system.

The System Displays SCSI Target 0 LUN 0 Not Found Message with Several Additional Messages

If the system displays the following series of messages see the troubleshooting procedures in [Table 1-16](#).

The system displays the following message:

```
Checking for SCSI target 0 LUN 0
```

After several minutes the system displays the following messages:

```
SCSI target 0 LUN 0 not found  
Target-LUN x-0.....
```

```
....  
Target-LUN y-0....
```

```
No boot device available  
Strike F1 to retry boot, F2 for setup utility
```

Table 1-16. The System Displays SCSI Target 0 LUN 0 Not Found Message with Several Additional Messages

Possible Cause	Check/See	Probable Fix
<p>Hard Disk Drive 0 has been corrupted and the system can not access the boot image.</p>	<p>Check the status of Hard Disk Drive 0.</p>	<ol style="list-style-type: none"> 1. If the system has a remote maintenance circuit card diagnose the hard disk drive and replace if necessary. 2. If the system is mirrored, boot off of the backup hard disk drive. 3. If the system did not boot perform the following steps: <ol style="list-style-type: none"> a. Perform a surface analysis on both Hard Disk Drive 0 and its backup hard disk drive. b. If the surface analysis indicates either hard disk drive must be replaced, replace the disk. 4. If the system is not mirrored complete the following steps: <ol style="list-style-type: none"> a. Perform a surface analysis. b. If the surface analysis indicates the hard disk drive must be replaced, replace the disk. c. If the surface analysis does not indicate that the disk should be replaced, reload the system.

The System Displays SCSI Target 0 LUN 0 Not Found Message and Stalls

If the system displays the following message and stalls see the troubleshooting procedures in [Table 1-17](#).

SCSI target 0 LUN 0 not found

At this point the system stalls.

NOTE:

If you press **CONTROL** **ALT** **DELETE** the system displays the following message:

No boot device available

Strike F1 to retry boot, F2 for setup utility

Table 1-17. The System Displays SCSI Target 0 LUN 0 Not Found Message and Stalls

Possible Cause	Check/See	Probable Fix
Hard Disk Drive 0 is defective.	Check the status of Hard Disk Drive 0.	1. Replace Hard Disk Drive 0.

No Ident-Strings Are Displayed during Boot Procedure

If the system does not display ident-strings during the boot procedure see the troubleshooting procedures in [Table 1-18](#).



NOTE:

Once the system has tried to access the SCSI devices it will try to access Hard Disk Drive 0. If the system displays the UNIX logo, Hard Disk Drive 0 has been successfully accessed.

Table 1-18. No Ident-Strings Are Displayed during Boot Procedure

Possible Cause	Check/See	Probable Fix
The SCSI Bus cable is not connected properly to the P5 200 MHz CPU circuit card.	Check the SCSI cable connection to the circuit card.	<ol style="list-style-type: none"> 1. Correct the SCSI cable connection to the circuit card. 2. Reboot the system.
A pin on the SCSI Bus cable connection to the P5 200 MHz CPU circuit card is broken or bent.	Check the pins on the P5 200 MHz circuit card by doing the following: <ol style="list-style-type: none"> 1. Remove the SCSI Bus cable. 2. Check the pins on the circuit card. 	<ol style="list-style-type: none"> 1. If a pin is bent, straighten the pin. If a pin is broken, replace the circuit card. 2. Reboot the system.

The System Displays Failure to Load MIP, SIP, or vfs_mount Message

If the system displays one of the following messages see the troubleshooting procedures in [Table 1-19](#).



NOTE:

Once the system has tried to access the SCSI devices it will try to access Hard Disk Drive 0. If the system displays the UNIX logo, Hard Disk Drive 0 has been successfully accessed.

Can not load MIP

Can not load SIP

vfs_mount failed



NOTE:

A system panic may occur at this point.

Table 1-19. The System Displays Failure to Load MIP, SIP, or vfs_mount Message

Possible Cause	Check/See	Probable Fix
The stand file system is corrupted.	Check the stand file status.	<ol style="list-style-type: none">1. If the system is mirrored, boot off of the backup hard disk drive.2. If the system is not mirrored, or if the problem persists, restore or reload the system.

A Working System Displays WARNING Disk Drive HA0 TC0 LUX - Check Condition Message

If the system displays the following message see the troubleshooting procedures in [Table 1-20](#).

WARNING: Disk Drive HA0 TC0 LUX - Check Condition

where x is a small integer

Table 1-20. A Working System Displays WARNING Disk Drive HA0 TC0 LUX - Check Condition Message

Possible Cause	Check/See	Probable Fix
Hard Disk Drive 0 is defective.	Check the status of Hard Disk Drive 0.	1. Replace Hard Disk Drive 0.

The System is Up but Not Fully Operational or Is Unpredictable

If the system is up but it is not fully operational or it is unpredictable see the troubleshooting procedures in [Table 1-21](#).

Table 1-21. The System is Up but not Fully Operational or is Unpredictable

Possible Cause	Check/See	Probable Fix
The input voltage is not correct.	Check the voltage on the line entering the power supply.	1. Shut down the system. 2. Inform the customer of the problem in their wiring.
The power supply output voltage is not correct.	Check the voltage on the power supply output cables.	1. Replace the power supply.
The file system is partially corrupted.	Check the system file system.	1. If the system is mirrored, boot off of the backup hard disk drive. 2. If the system is not mirrored, or if the problem persists, restore or reload the system.

System with Remote Maintenance Circuit Card Displays SCSI Disk Failure Message after POST

If, after completing the POST and memory test, the system stalls and displays messages indicating a remote maintenance circuit card and SCSI hard disk drive failure see the troubleshooting procedures in [Table 1-22](#).

**Table 1-22. System with Remote Maintenance Circuit Card
Displays SCSI Disk Failure Message after POST**

Possible Cause	Check/See	Probable Fix
The remote maintenance circuit card address is set to C000-CFFF.	Check the remote maintenance circuit card address.	<ol style="list-style-type: none">1. Place the BEE selector switch in the off position.2. Shut down the system.3. Reboot the system.4. Set the remote maintenance circuit card address to DC000-DCFFF.5. Place the BEE selector switch in the on position.6. Stop the voice system.7. Start the voice system.

Troubleshooting Defective Blocks on Hard Disk Drives

It is not always necessary to replace a hard disk drive with defective blocks. If the defective blocks do not affect the overall system performance it is not necessary to replace the hard disk drive. Monitor the system performance prior to replacing a hard disk drive.

Diagnostics

2

Overview

This chapter describes:

- Conducting audits
- Diagnosing digital networking
- Diagnosing Multi-port serial circuit cards
- Diagnosing switch integration
- Diagnosing TCP/IP
- Diagnosing voice ports
- Diagnosing Tip/Ring circuit cards

Purpose

The purpose of this chapter is to provide the on-site technician or system administrator with the correct procedures to diagnose trouble with the Lucent™ INTUITY™ system.

Conducting Audits

You can conduct audits on:

- Voice messaging databases
- Networking databases

Auditing Voice Messaging Databases

During normal operation the Lucent INTUITY system databases work independently under the direction of a set of software managers. These managers, in tandem with hardware and firmware managers, allow the files, databases, and system hardware to work together.

Because databases are handled separately, it is possible for different databases to contain conflicting information. For example, if a subscriber is removed from INTUITY AUDIX® Voice Messaging, other databases may contain messages addressed to that subscriber. In addition, mailing lists that include the deleted subscriber's name could still exist.

To reconcile possible conflicts among databases, software programs called audits run automatically to check for inconsistencies. Audits can also be run on demand by you.

Voice Messaging Database Audit Types

[Table 2-1](#) lists the types of voice messaging database audits.

Table 2-1. INTUITY AUDIX Voice Messaging Database Audits

Audit	Function	Frequency
Mailboxes	Checks and deletes old messages and log-in announcements	Daily
	Clears broadcast-deleted messages from subscriber mailboxes	Daily
	Verifies that Lucent INTUITY MWL status matches with the switch's MWL status for each subscriber	Daily
	Checks for valid mailbox structure	Weekly
	Makes space-accounting corrections on a per-subscriber and system basis	Weekly
	Checks for valid message subscriber IDs	Weekly

Table 2-1. INTUITY AUDIX Voice Messaging Database Audits

Audit	Function	Frequency
Mailing Lists	Counts subscriber lists and entries on a system and per-subscriber basis to ensure that they are not exceeding internal limits	Weekly
	Removes deleted subscribers from lists	Weekly
	Removes deleted remote subscribers from local mailing lists	Daily
	Audits delivery manager queues and makes undeliverable entries for deleted subscribers	Daily
Names	Matches each voice name with a valid local or remote subscriber	Weekly
	Logs messages in the administrator's log for the first 20 local subscribers not having voiced names	Weekly
Network Data	Deletes information on remote nodes that have been eliminated from the network	Weekly
	Compares internal network files to synchronize information on nodes and subscribers, for example, which node each subscriber belongs to	Weekly
Personal Directories	Removes deleted subscribers (local and remote) from local subscribers' personal directories	Weekly

Table 2-1. INTUITY AUDIX Voice Messaging Database Audits

Audit	Function	Frequency
Subscriber Data	Checks delivery lists associated with current outgoing messages	Weekly
	Validates fields in class-of-service templates, subscriber profiles, and automated attendant profiles	Weekly
	Counts subscribers to ensure that the number is not exceeding internal limits	Weekly
	Checks the system guest password against individual subscriber passwords, and makes appropriate entries in the administration log	Weekly
	Checks subscriber profiles against class-of-service templates and changes subscribers to class-of-service	Weekly
	Deletes remote unverified subscribers who have not been on delivery lists in the last 24 hours	Daily
	Deletes remote subscribers with no valid nodes	Daily
	Deletes unadministered remote subscribers who have not used the system for a specified time period	Daily
	Cross-checks name, extension, touch-tone, user directory, and remote node list translations files for consistency with subscriber profiles	Weekly

Voice Messaging Database Audits General Procedure

All of the voice messaging database audit types use the same general procedure.

Procedure

To audit a voice messaging database, do the following:

1. Start at the Lucent INTUITY Main menu ([Figure 2-1](#)).

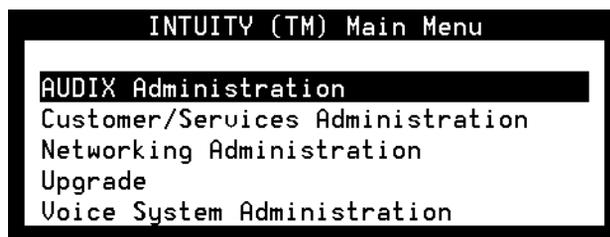
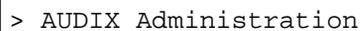


Figure 2-1. Lucent INTUITY Main Menu

2. Select



The image shows a terminal window with the text "> AUDIX Administration" displayed, indicating that the user has selected the first option from the menu.

The system displays the AUDIX Administration screen ([Figure 2-2](#)).

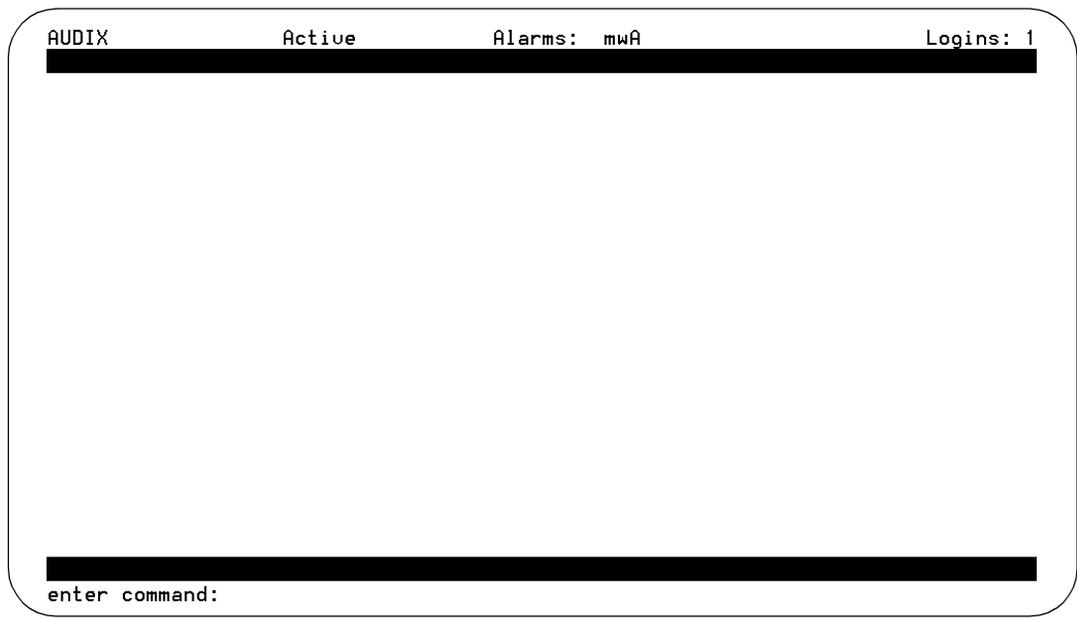


Figure 2-2. AUDIX Administration Screen

3. Enter the appropriate command from [Table 2-2](#) after the `enter` command prompt.

Table 2-2. Voice Messaging Database Audit Commands

To Audit	Enter
Mailboxes	audit mailboxes or au mailb
Mailing lists	audit mailing-lists or au maili
Names	audit names or au na
Network data	audit network-data or au ne

⇒ NOTE:
This audit is available only if the system has Digital or AMIS Analog Networking. For more information on networking, see *AMIS Analog Networking*, 585-300-512, or *INTUITY AUDIX Digital Networking Administration*, 585-310-533.

Table 2-2. Voice Messaging Database Audit Commands

To Audit	Enter
Personal directories	audit personal-directories or au p
Subscriber data	audit subscriber-data or au su

(2 of 2)

The system displays an Audit screen ([Figure 2-3](#)).

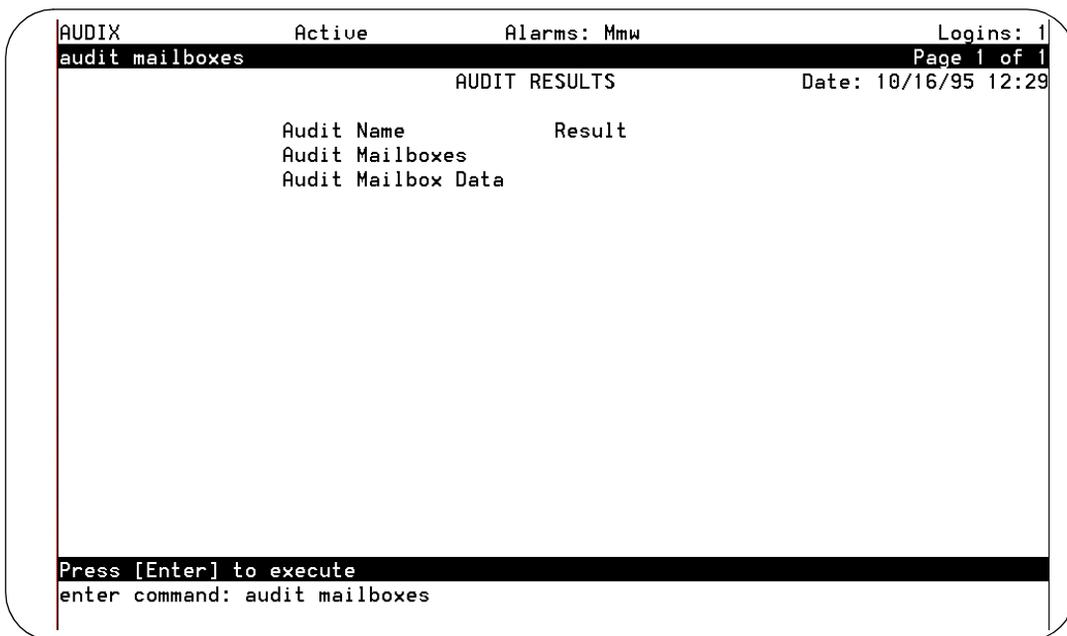


Figure 2-3. Audit Screen

4. Press **F3** (Enter).
5. The system displays the audit name and Result code R, which indicate that the audit is running.
6. Wait for the audit to finish or take one of the following steps:
 - Press **F1** (Cancel) to abort the audit and exit the form.
 - OR
 - Press **F3** (Enter) to put the audit in the background mode and return to the command line. Enter **status audit** to reconnect to the screen.

Field Descriptions

A description of each display field is provided below.

- Date — This field displays the date and time that the audit was requested.
- Audit Name — This field displays the name of the audit being run.
- Result — This field displays a 1-character code that indicates the last result of the named audit, and up to 20 characters of text of additional audit-result information. [Table 2-3](#) lists the result codes and their meanings.

Table 2-3. Auditing Result Codes

Code	Meaning
blank	Audit has not been executed.
R	Audit is running.
P	Last audit passed.
F	Last audit failed.
A	Last audit aborted.

If the Audit Fails

If the audit fails, do the following:

1. Resolve any active alarms and rerun the audit. See Chapter 1, “Getting Started,” in *INTUITY Interchange Release 5.3 Alarms and Log Messages* 585-313-809, for the alarm resolve procedure.
2. If the audit fails again, contact the remote service center.
3. If the system is not providing service and the remote service center cannot help immediately, restart the system. See [“Rebooting the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.

Auditing Networking Databases

The networking database consists of two parts: the networking administration database and the remote subscriber update status database. The networking administration database contains data relevant to the following areas:

- Connectivity to other Lucent INTUITY systems and AMIS machines
- Local machine connectivity
- Channel configuration information

The remote subscriber update status database contains the information used by the Lucent INTUITY system to request and send remote updates of subscriber information.

Networking Database Audit

The networking database audit consists of a series of internal checks which verify, for example, that files are not corrupted and that values within the files are within the proper ranges.

The networking database audit is performed automatically nightly, before the nightly unattended backup. This audit occurs whenever the voice system is restarted or the UNIX system is rebooted. You may want to perform this audit on demand when directed to do so by alarm repair actions.

To perform this audit on demand, do the following:

```
> Customer/Services Administration
> Database Audits
```

The system displays the Database Audit menu ([Figure 2-4](#)).

```
Database Audits
>Networking Audit
Platform User Database Audit
```

Figure 2-4. Database Audit Menu

4. Make sure the cursor is on *Networking Audit*.
5. Press **F8** (Chg-Keys).
6. Press **F1** (Run Audit).

The system displays the Confirm Audit window ([Figure 2-5](#)).

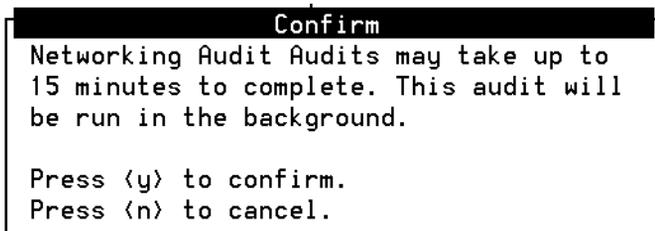


Figure 2-5. Confirm Audit Window

7. Press **y**.



NOTE:

The audit takes approximately 5 minutes.

8. Press **F8** (Chg-Keys).
9. Press **F4** (View_Res).

If the audit is successful the system displays the following message:

```
Networking Database Audit completed successfully.
```

If the audit fails, the system displays the following message:

```
Networking Database Audit failed.
```

If a failure message appears, look for related alarms such as NW SOFTWARE-1004. Follow the repair actions for any active alarms as appropriate. See "Accessing the Alarm Log" in Chapter 1, "Getting Started," in *INTUITY Interchange Release 5.3 Alarms and Log Messages* 585-313-809, for the procedure.

Platform User Database Audit

Because the Lucent INTUITY system switch integration software acts as the interface between the applications and the switch, the Lucent INTUITY system switch integration database must periodically be synchronized with the applications' databases. The Station Manager Subscriber Database audit performs this synchronization.

The Lucent INTUITY system switch integration database monitors the applications with which each user is registered. When the audit is executed, the station manager matches its user's extension and MWL status with each user application database. When successful matches are made, the audit progresses to the next user. If a match is not found, a message is printed in the audit report (see below).

This audit is performed automatically at 12:10 am. You may want to perform this audit on demand when alarms (SOFTWARE VP-12) indicate that subscribers

cannot be found, users report message-waiting light problems, or the system was shutdown improperly causing databases to become unsynchronized.

Platform User Database Audit Procedure

To perform this audit on demand, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
```

```
> Database Audits
```

The system displays the Database Audit menu ([Figure 2-4](#)).

2. Make sure the cursor is on Platform User Database Audit.
3. Press **F8** (Chg-Keys).
4. Press **F1** (Run Audit).

The system displays the Confirm Audit screen ([Figure 2-5](#)).

5. Press **y** to confirm that you want to run the audit.

⇒ NOTE:

The audit takes approximately 60 minutes, depending on the system's load and may degrade service.

6. Press **F8** (Chg-Keys).
7. Press **F4** (View_Res).

If the audit is successful, the system displays the following message:

```
Station Manager Subscriber Audit is successfully done.
```

If the audit terminates before completion, the system displays the following message:

```
Station Manager Subscriber Audit is terminated because  
of <reason>.
```

If the Audit Fails

The audit could have prematurely terminated because of problems in the application with which it was synchronizing. For example, if a database could not be opened or the package is down the audit will prematurely terminate. Follow the repair actions for any active alarms as appropriate. See "Accessing the Alarm Log" in Chapter 1, "Getting Started," in *INTUITY Interchange Release 5.3 Alarm and Log Messages*, 585-313-809, for the procedure.

- If a user exists in the INTUITY system switch integration database but does not exist in any of the registered applications, the system displays the following message:

```
Station Manager Subscriber Database Audit found an  
extra subscriber user's extension requesting Station  
Manager to delete it from database
```

The user is automatically deleted from the Lucent INTUITY system switch integration database.

- If a user exists in one of the application databases and not in the Lucent INTUITY system switch integration database, the system displays the following message:

```
Station Manager Subscriber Database Audit found a  
missing subscriber user's extension requesting Station  
Manager to add it to database
```

The user is automatically added to the Lucent INTUITY system switch integration database.

- If the MWL status in the Lucent INTUITY system switch integration database does not match the MWL status in the application databases, the system displays the following message:

```
Station Manager Subscriber Database Audit found a  
mismatched subscriber user's extension requesting  
Station Manager to update its database
```

The user MWL status is automatically updated in the Lucent INTUITY system switch integration database.

Conducting Diagnostics

You can diagnose:

- AMIS Analog Networking
- INTUITY AUDIX Digital Networking
- Multi-port serial circuit cards
- Switch integration
- TCP/IP
- Voice circuit cards
- Voice ports

AMIS Analog Networking Diagnostics

AMIS analog networking diagnostics allow you to perform a trace of the system. The trace display information that describes the interaction between two voice messaging systems during an AMIS call.

Performing an AMIS Analog Networking Trace

To perform an AMIS analog networking trace, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> AUDIX Administration
```

The system displays the AUDIX Administration screen ([Figure 2-2](#)).

2. Enter **trace**

The system displays the AMIS Trace Activation screen ([Figure 2-6](#)).

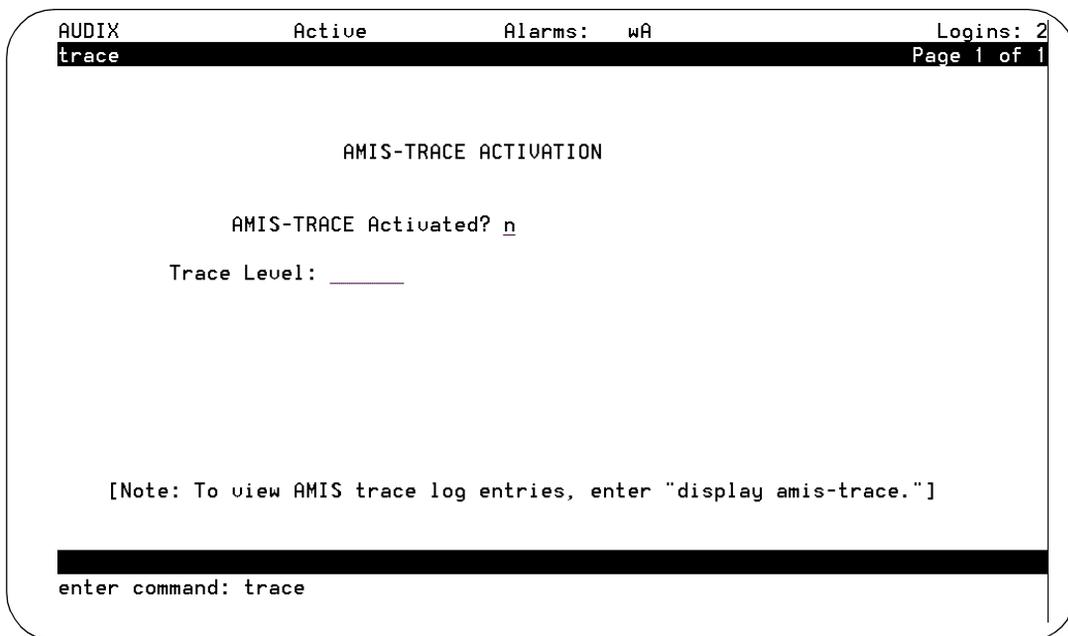


Figure 2-6. AMIS Trace Activation Screen

3. In the AMIS-TRACE Activated? field, enter **y**
4. In the Trace Level: field, enter one of the following choices:
 - **full** - to trace errors, protocol, and touch tone information
 - **normal** - to trace errors and protocol
 - **error** - to trace errors
5. Press **F3** (Enter).

Viewing the AMIS Analog Networking Trace Log

To view the AMIS analog networking trace log, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> AUDIX Administration
```

The system displays the AUDIX Administration screen ([Figure 2-2](#)).

2. Enter **display amis-trace**

The system displays the AMIS Trace Log screen ([Figure 2-7](#)).

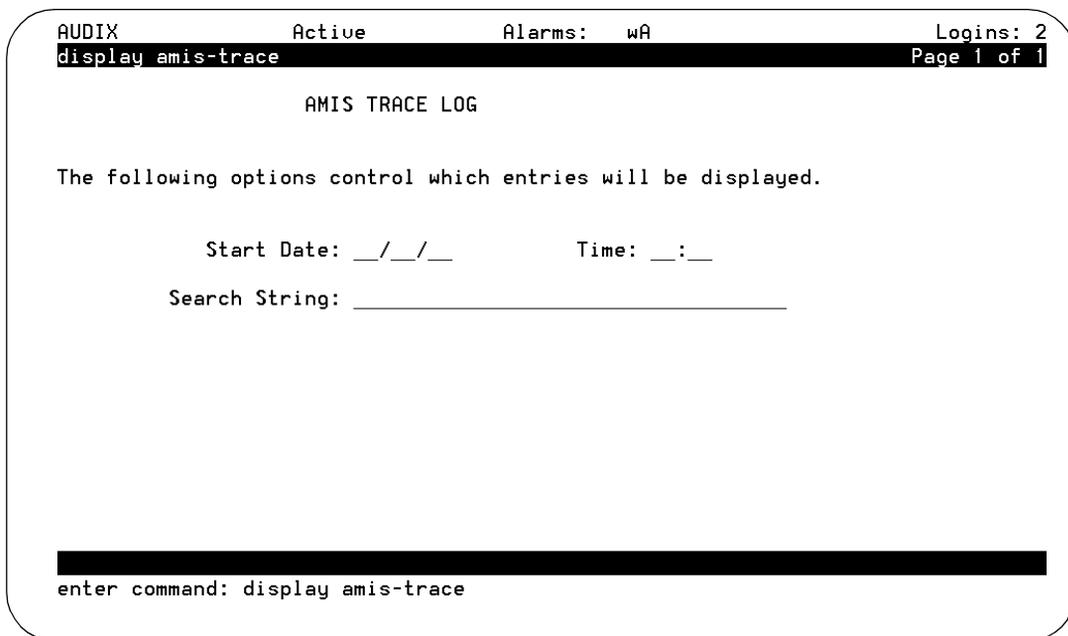


Figure 2-7. AMIS Trace Log Screen

3. In the `Start Date:` field, enter the appropriate date.
4. In the `Time:` field, enter the appropriate time.
5. In the `Search String:` field, enter any key words.
6. Press **F3** (Enter).

The system displays the AMIS Trace Log screen ([Figure 2-8](#)).

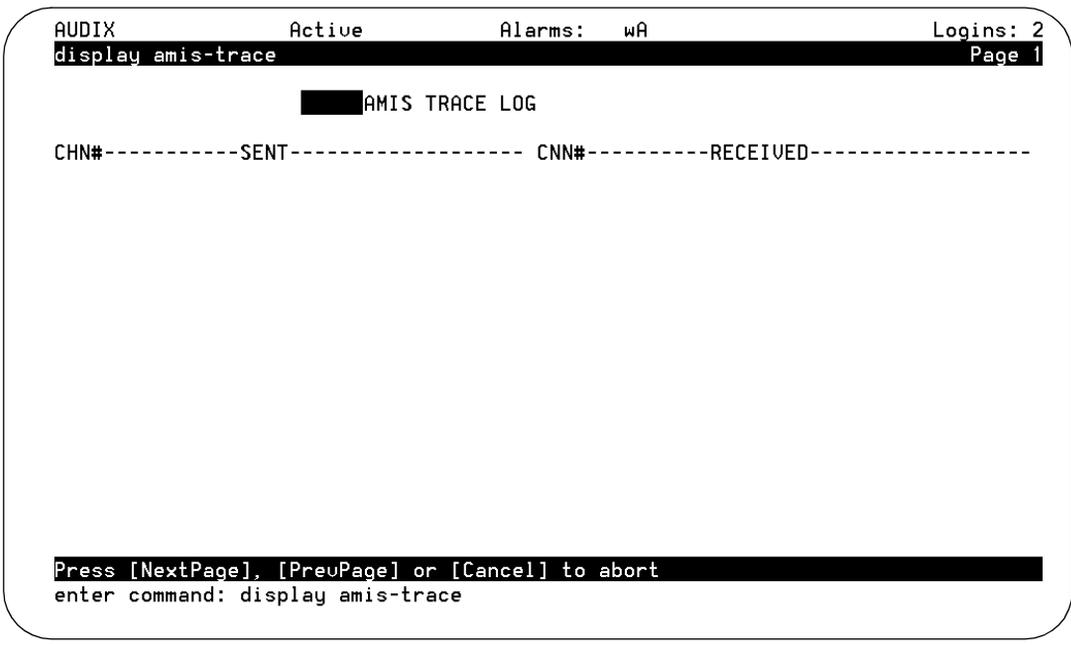


Figure 2-8. AMIS Trace Log Screen

INTUITY AUDIX Digital Networking Diagnostics

INTUITY AUDIX Digital Networking diagnostics allow you to check all aspects of the networking feature including hardware connections, remote and local machine administration, and basic functions of INTUITY AUDIX Digital Networking. The INTUITY AUDIX Digital Networking diagnostics include the following tests:

- Remote connection
- Channel internal loop-around
- Modem loop-around
- Networking board reset
- Busyout digital networking channels
- Release digital networking channels

Remote Connection Test

The remote connection test checks the transmission path from the local machine to the remote machine. You can perform a remote connection test for each remote machine with which voice messages are exchanged. The test assumes that all components of the network, from the ACCX card to the remote machine administration, are operating and complete. If the remote connection test fails, see "[Network Connections Test](#)" below.

Requirements

The following requirements are necessary to perform a remote connection test:

- The remote machine name is needed
- The channel can be DCP or RS-232
- The channel must be equipped

Procedure

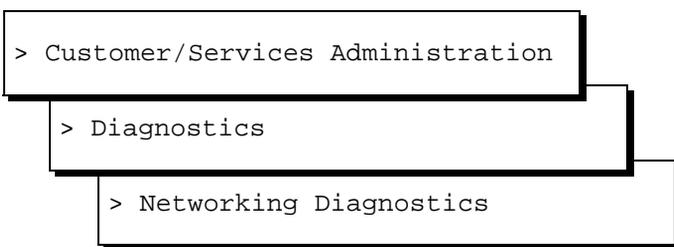
To perform a remote connection test, do the following:



NOTE:

Perform the [“Channel Internal Loop-Around Test”](#) below before performing this procedure. If the internal channel loop-around test fails the circuit card is defective.

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Networking Diagnostics window ([Figure 2-9](#)).

Networking Diagnostics					
CHANNEL	TYPE	RATE	STATUS	MACHINE	ACTIVITY
-----	----	----	-----	-----	-----
1	DCP		NOT EQUIPPED		
2	DCP		NOT EQUIPPED		
3	DCP		NOT EQUIPPED		
4	DCP		NOT EQUIPPED		
5	DCP		NOT EQUIPPED		
6	DCP		NOT EQUIPPED		
7	DCP		NOT EQUIPPED		
8	DCP		NOT EQUIPPED		
9	DCP		NOT EQUIPPED		
10	DCP		NOT EQUIPPED		
11	DCP		NOT EQUIPPED		
12	DCP		NOT EQUIPPED		

Figure 2-9. Networking Diagnostics Window

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Networking Diagnostics menu ([Figure 2-10](#)).

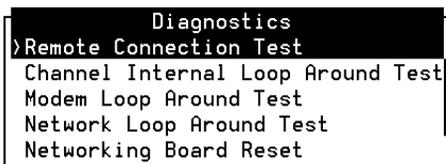


Figure 2-10. Networking Diagnostics Menu

4. Select



The system displays the Remote Connection Test window ([Figure 2-11](#)).

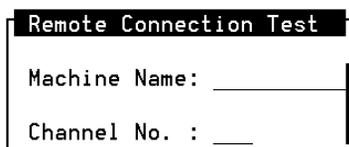


Figure 2-11. Remote Connection Test Window

5. Enter the name of the remote machine to be tested.

If you do not know the remote machine name, press **F2** (Choices) to access a menu of remote machines. Select from the menu by moving the selection bar over a machine name and pressing **ENTER**.

6. If you are testing a dedicated RS-232 connection, enter the number of the dedicated channel.

The system displays the message `working...` and attempts to connect with the remote machine.

When the process completes, the system displays the Test Results window ([Figure 2-12](#)).

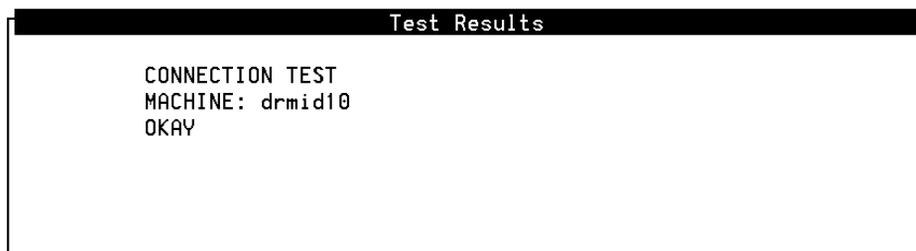


Figure 2-12. Test Results Screen for a Remote Connection Test

7. If the screen contains a message stating that the test completed successfully, continue with [Step 8](#).

If the screen contains a message stating that the test failed, press **F6** (Cancel) to exit the screen and return to the Networking Diagnostics menu ([Figure 2-10](#)). See "[Network Connections Test](#)" below for the procedure to determine the reason for the remote connection test failure.

8. Press **F6** (Cancel) to exit the screen and return to the Networking Diagnostics window ([Figure 2-9](#)).
9. Repeat [Step 2](#) through [Step 8](#) for each remote machine to be tested.

The network's abilities to exchange voice messages can also be tested. *INTUITY AUDIX Digital Networking Administration*, 585-310-533, contains instructions for exchanging voice messages with test remote subscribers on each remote machine in the digital network after completing a remote connection test.

Network Connections Test

Use the instructions in this section to test each component of the digital network. Perform the following tests when a remote connection test fails or when voice messages cannot be exchanged with remote subscribers.

- Channel internal loop-around
- Modem loop-around (if applicable)
- Network loop-around

One other test may be performed to test or reset the network, the networking board reset. Do not perform this procedure unless instructed by the remote service center.

Channel Internal Loop-Around Test

The channel internal loop-around test checks the operation of an individual channel on the ACCX board. Perform this test first to make sure the board is operating correctly. If the board does not operate properly, the other acceptance tests will fail.

Requirements. The following requirements are necessary to perform a channel internal loop-around test.

- The channel can be DCP or RS-232.
- The channel must be equipped.

Procedure. To perform a channel internal loop-around test, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
> Diagnostics
> Networking Diagnostics
```

The system displays the Networking Diagnostics window ([Figure 2-9](#)).

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Networking Diagnostics menu ([Figure 2-10](#)).

4. Select

```
> Channel Internal Loop-Around Test
```

The system displays the Channel Internal Loop-Around Test window ([Figure 2-13](#)).

```
Channel Internal Loop Around Test
Channel: ____
```

Figure 2-13. Channel Internal Loop-Around Test Window

5. Enter the channel number to be tested.

The system displays the message `working...` in the upper right corner of the screen and begins the test on the ACCX board channel.

When the process is complete, the system displays the Test Results window ([Figure 2-14](#)).

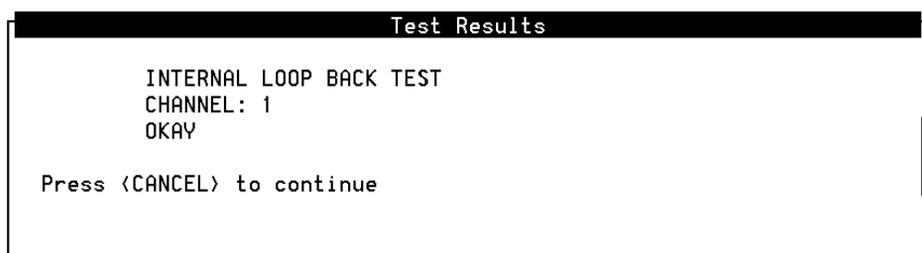


Figure 2-14. Test Results Window for a Channel Internal Loop-Around Test

6. If the screen contains a message stating the test completed successfully, continue with [Step 7](#).

If the screen shows that the test failed, access the Alarm Log enter **NW** as the application, and look for alarms related to the networking board. See Chapter 1, "Getting Started," in *INTUITY Interchange Release 5.3 Alarm and Log Messages*, 585-313-809, for the procedure.

7. Press **(F6)** (Cancel) until the system displays the Networking Diagnostics window ([Figure 2-9](#)).
8. Repeat [Step 2](#) through [Step 7](#) for each equipped channel on the ACCX board.

Modem Loop-Around Test

⇒ NOTE:

This test does not function with all modems. Before conducting the test, contact the remote service center and verify that the test works for the modem.

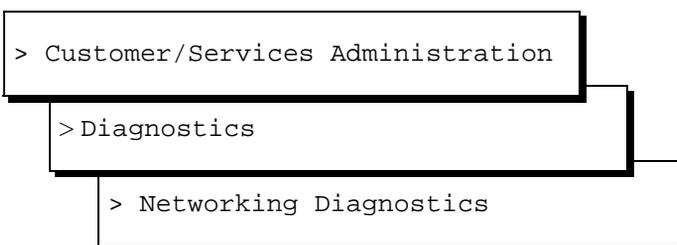
The modem loop-around test checks the connectivity between the ACCX board and the modem through a channel configured as RS-232. The test sends a signal from the ACCX board to the modem and back. Perform this test to make sure the board and the modem are communicating and that the modem is configured correctly.

Requirements. The following requirements are necessary to perform a modem loop-around test:

- The channel state must be in a busyout. Check the status of the channel on the Networking Diagnostics screen. If the channel is not in a busyout state, see [“Busyout and Release Networking Channels”](#) in this chapter.
- The channel must be RS-232 with a modem.
- The channel must be equipped.

Procedure. To perform a modem loop-around test, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Networking Diagnostics window ([Figure 2-9](#)).

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Networking Diagnostics menu ([Figure 2-10](#)).

4. Select



The system displays the Modem Loop-Around Test window ([Figure 2-15](#)).



Figure 2-15. Modem Loop-Around Test Window

5. Enter the channel number to be tested. The channel must be RS-232 and have a modem connected.

The system displays the message `working...` in the upper right corner of the screen. The system begins the test on the channel with the modem connected. When the process completes, the system displays the Test Results screen ([Figure 2-14](#)).

6. If the screen contains a message stating the test completed successfully, proceed to [Step 7](#) below.

If the screen shows that the test failed, see Chapters 3 and 4 of *INTUITY AUDIX Digital Networking Administration*, 585-310-533, for information on modem settings and cabling. In addition, access the Alarm Log enter **NW** as the application, and look for alarms related to networking modems. See Chapter 1, "Getting Started," in *INTUITY Interchange Release 5.3 Alarm and Log Messages*, 585-313-809, for the procedure.

7. Press **F6** (Cancel) to exit the screen and return to the Networking Diagnostics screen ([Figure 2-9](#)).
8. Repeat [Step 2](#) through [Step 7](#) for each equipped channel that is RS-232 and has a modem connected.

Network Loop-Around Test

The network loop-around test checks the data transmission path that connects the local Lucent INTUITY machine with the service office (SO) and the public network. When a channel is in loop-around mode, the channel cannot exchange information with remote machines.

Requirements. This test can only be performed on DCP channels. The test should be coordinated with the local SO.

Operation. The test operates in the following manner.

- To perform the test, specify the channel number and data rate and start the channel in network loop-around mode.
- Notify the SO to send information to the channel to be tested.
- The SO sends a message which loops through the INTUITY AUDIX Digital Network and returns to the SO.
- The SO checks the message to verify that the same information sent was returned by Lucent INTUITY.

Procedure. To perform a network loop-around test, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
```

```
>Diagnostics
```

```
> Networking Diagnostics
```

The system displays the Networking Diagnostics window ([Figure 2-9](#)).

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Networking Diagnostics menu ([Figure 2-10](#)).

4. Select

```
> Network Loop-Around Test
```

```
>Start Test
```

The system displays the Start Network Loop-Around Test window ([Figure 2-16](#)).

```
Start Network Loop Around Test
Speed: █ _____
Channel: _____
```

Figure 2-16. Start Network Loop-Around Test Window

5. Enter **High** or **Low** in the `Speed:` field.
 - High speed refers to channels configured as 64 Kbps DCP.
 - Low speed refers to channels configured as 56 Kbps DCP.
6. Enter the channel number to be tested.

Make sure the channel number corresponds to the channel data rate entered in the previous step.

7. Press **F3** (Save).

The system displays the message `working...` in the upper right corner of the screen, places the channel in loop-around mode, and displays a Test Results window ([Figure 2-17](#)).

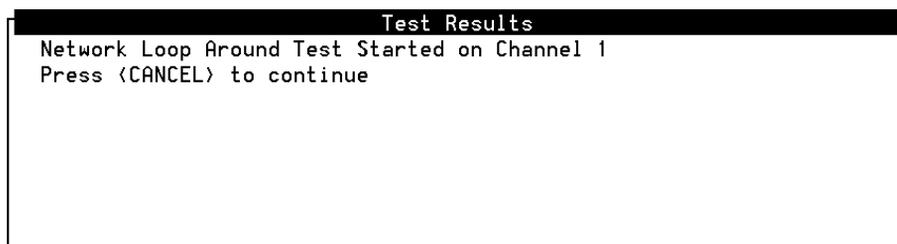
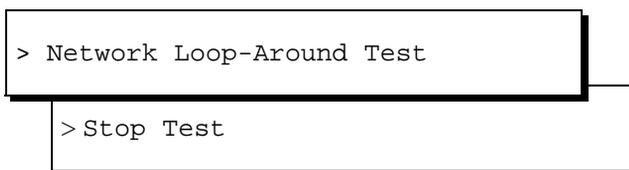


Figure 2-17. Start Test Results Window for a Network Loop-Around Test

8. Press **F6** (Cancel) to exit the screen and return to the Networking Diagnostics menu ([Figure 2-10](#)).
9. Contact the local telephone SO and instruct them to place a call to the telephone number assigned to the channel placed in the loop-around mode. If the test is successful, any data sent by the SO will pass through the Lucent INTUITY channel and return to the SO.
10. Stop the test and remove the channel from the loop-around mode by completing the following Steps a through c:

- a. Select



The system displays the Stop Network Loop-Around Test window ([Figure 2-18](#)).



Figure 2-18. Stop Network Loop-Around Test Window

- b. To stop testing the channel, enter the appropriated channel number in the Channel: field. This is the same channel number entered in [Step 6](#) above.

The system displays the message `working...` in the upper right corner of the screen, removes the channel from loop-around mode, and displays the Test Results window ([Figure 2-19](#)).

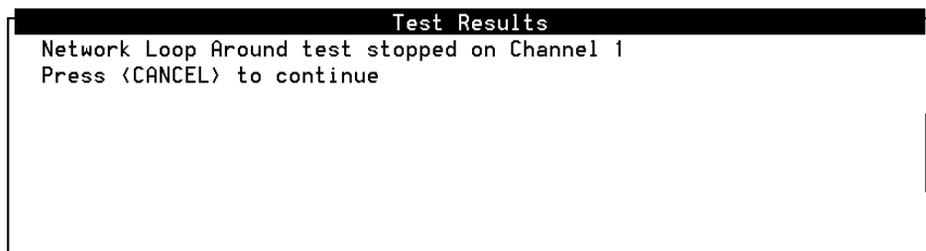


Figure 2-19. Stop Test Results Window for a Network Loop-Around Test

- 11. Press `F6` (Cancel) to exit the screen and return to the Networking Diagnostics menu ([Figure 2-10](#)).
- 12. Repeat [Step 2](#) through [Step 11](#) for each channel to be tested.

Networking Board Reset

This section provides instructions for resetting the ACCX card.

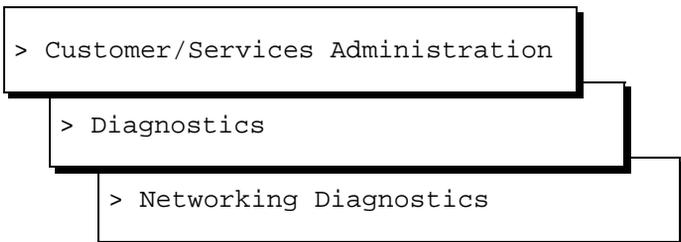
Requirements

The card may need to be reset after other networking diagnostic tests have been performed. In addition, the card may need to be reset as part of an alarm repair procedure.

Procedure

To reset the networking card, do the following:

- 1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Networking Diagnostics window ([Figure 2-9](#)).

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Networking Diagnostics menu ([Figure 2-10](#)).

4. Select



The system displays the Networking Board Reset window ([Figure 2-20](#)).

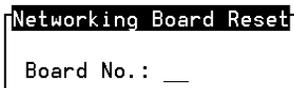


Figure 2-20. Networking Board Reset Window

5. Enter the number of the ACCX card to be reset.

The Lucent INTUITY system resets the networking card. The process takes several minutes. When the process completes, the system displays the Test Results window ([Figure 2-21](#)).



Figure 2-21. Networking Board Reset Results Screen

6. Press **F6** (Cancel) to exit the screen and return to the Networking Diagnostics menu ([Figure 2-10](#)).
7. Repeat [Step 2](#) through [Step 6](#) for each ACCX card to be reset.

Busyout and Release Networking Channels

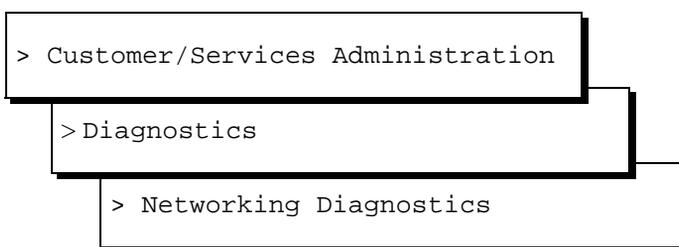
CAUTION:

Do not perform this procedure unless instructed to do so.

Busyout a channel refers to the process of taking a channel out of service so that no data is sent to the channel. *Releasing* a channel refers to the process of making the channel active again and changing the state from *busyout* to *idle*.

Busyout Networking Channels

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Networking Diagnostics window ([Figure 2-9](#)).

2. Press **F8** (Chg-Keys).
3. Press **F2** (Busyout).

The system displays the Busyout Networking Channel window ([Figure 2-22](#)).



Figure 2-22. Busyout Networking Channel Window

4. Enter the number of the channel to busyout.

The system displays the message *working...* in the upper right corner of the screen. When the process completes, the Status field on the Networking Diagnostics window ([Figure 2-9](#)) updates and shows *busyout* for the channel entered.

5. Repeat [Step 2](#) through [Step 4](#) for each channel to busyout.

Release Networking Channels

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
```

```
> Diagnostics
```

```
> Networking Diagnostics
```

The system displays the Networking Diagnostics window ([Figure 2-9](#)).

2. Press **F8** (Chg-Keys).
3. Press **F2** (Release).

The system displays the Release Networking Channel window ([Figure 2-23](#)).

```
Release Networking Channel  
Channel: ____
```

Figure 2-23. Release Networking Channel Window

4. Enter the number of the channel to be released.

The system displays the message `working...` in the upper right corner of the screen. When the process completes, the Status field on the Networking Diagnostics window ([Figure 2-9](#)) updates and shows `idle` for the channel entered.

5. Repeat [Step 2](#) through [Step 4](#) for each channel to be released.

Performing a Network Snapshot

To perform a network snapshot, start at the Lucent INTUITY Main menu ([Figure 2-1](#)), and select

```
> Networking Administration
```

```
> Network Snapshot
```

The system displays the Network Snapshot window ([Figure 2-24](#)).

Network Snapshot						
LOG START DATE: 03/25			LOG END DATE: 05/02			

MACHINE	OUTGOING CONNECTIONS			INCOMING CONNECTIONS		
	LAST CONN.	STATUS	RETRY	LAST CONN.	STATUS	
drmid10						
a123456789						
drbig12						
lztiny1	04/30	03:20	success	04/28	11:12	success
lzccs21	04/24	10:45	success	04/24	10:42	success
lzintuit						
lzb1g2						
test1						
scott_ss						
lzccs30	04/12	01:10	success	04/04	04:33	success
lzmid2	04/30	03:35	success	04/28	20:27	success
lzmid3						

Figure 2-24. Network Snapshot Window

Multi-Port Serial Card Diagnostics

The multi-port serial card is equipped with diagnostic utilities that allow you to monitor lead status, view port parameter settings, and test board functionality.

Accessing Multi-Port Serial Card Diagnostics

To access the multi-port serial card diagnostics, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
```

```
> Diagnostics
```

```
> Serial Port Diagnostics
```

The system displays the Megaport and Megaplex Configuration and Diagnostics screen (Figure 2-25). This screen contains a menu bar with the options Driver Stats, Port Stats, and Diagnostics.

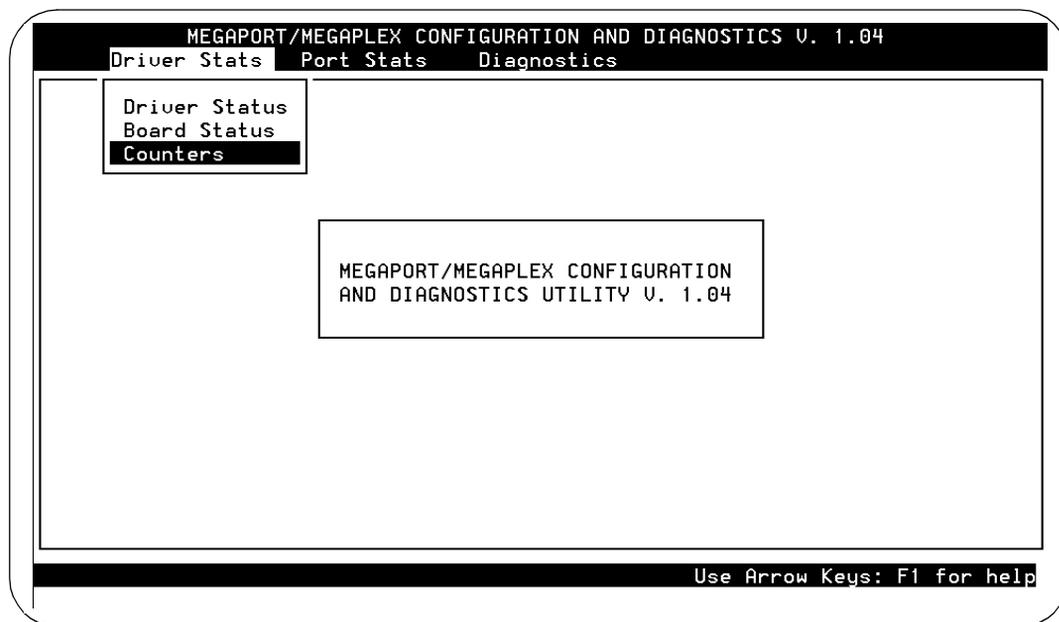


Figure 2-25. Megaport and Megaplex Configuration and Diagnostics Screen

- Use the right and left arrow keys on the keyboard to move between the menu bar options.
- Use the up and down arrow keys to move between menu options.
- Press **ENTER** to select a menu option.
- Press **F1** for help.
- Press **ESC** to exit.

Displaying Serial Port Driver Stats

The serial port driver stats include:

- Drive Status
- Board Status

Driver Status

The Driver Status option displays the device driver's current configuration including the driver version, number of boards configured, number of boards found, and memory mapping.

To display the drive status, do the following:

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)), select

```
> Driver Stats  
> Driver Status
```

2. Press **ENTER**.

The system displays the Driver Status window ([Figure 2-26](#)).

```
Driver Status  
Equinox Megaport STREAMS Device Driver, Version 2.24a  
Currently configured for 1 board(s) (logical).  
Number of boards found: 1  
Board address      BUFFER      REGISTER  
Board # 1          0x000D0000  0x000D2000
```

Figure 2-26. Driver Status Window

Board Status

To display the board status, do the following:

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)), select

```
> Driver Stats  
> Board Status
```

2. Press **ENTER**.

The system displays the Board Status menu ([Figure 2-27](#)).

```
Board
/dev/ttysa[a-x]
/dev/ttysb[a-x]
/dev/ttysc[a-x]
/dev/ttysd[a-x]
/dev/ttyse[a-x]
/dev/ttysf[a-x]
/dev/ttysg[a-x]
/dev/ttysh[a-x]
/dev/ttysi[a-x]
/dev/ttysj[a-x]
```

Figure 2-27. Board Status Menu

Displaying Port Stats

Three options are available on the Port Stats menu:

- Port Status
- Termio
- Register Dump

These options allow the system to show certain port characteristics.

Port Status

The Port Status selection is a real-time representation of the RS-232 leads. It includes:

- Transmit rate
- Receive rate
- Total characters received
- Total characters transmitted
- Buffered data counts

The Port Status display is useful in troubleshooting wiring problems, chattering lines or devices (modems) and in monitoring load activity over a single line. Activity measurements can be taken by noting the Transmitted and Received counts and comparing them with other serial ports.

To display the port status, do the following:

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)), select

```
> Port Stats  
> Port Status
```

- 2. Press **ENTER**.

The system displays the Prompt window ([Figure 2-28](#)).

```
device: /dev/ttysaa
```

Figure 2-28. Prompt Window

- 3. Enter the name of the device to be verified.

The system displays the Port Status window ([Figure 2-29](#)).

OUTPUT		INPUT	
TD	OFF	RD	OFF
DTR	OFF	DCD	OFF
XON/XOFF	XON'ed		
Status	CLOSED		
CPS	0	CPS	0
Transmitted	0	Received	0
Buffered	0	Buffered	0

Figure 2-29. Port Status Window

Termio

The Termio option displays the general terminal interface data associated with the serial card. It is similar to the "stty" command in that it prints all enabled termio flags.

To display the termio, do the following:

- 1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)), select



```
> Port Stats
```



```
> Termio
```

2. Press **ENTER**.

The system displays the Prompt window ([Figure 2-28](#)).

3. Enter the name of the device to be verified.

The system displays the Termio window.

Register Dump

The Register Dump option displays a real-time window of the on-board registers. The data is in raw form and useful to only Equinox technical personnel. It is used to obtain information about the hardware status and various software flags.

To display the Register Dump, do the following:

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)), select



```
> Port Stats
```



```
> Register Dump
```

2. Press **ENTER**.

The system displays the Prompt window ([Figure 2-28](#)).

3. Enter the name of the device to be verified.

The system displays the Register Dump window ([Figure 2-30](#)).

```
Reg. dump for /dev/ttySaa
State: 00000000 mp_flags: 00000000
cflag: 00000000 iflag: 00000522 oflag: 00000000 lflag: 00000000

txbase: 00000000 txidx: 00000000 txend: 00000000
rxbase: 00000001 rxidx: 00000000 rxend: 00000000
txcsr: 00000088 txbaud: 000000FE out_ct: 00000003
rxcsr: 00000088 rxbaud: 000000FE in_ctl: 000000FF
txcsr: 00002081 rxcsr: 00002081 sample: 00000021
mie: 00000000 cie: 00000000 cis: 00000200
rxtdm: 000000CF txtdm: 000000C3
equlz: 00000000 eqmin: 00000000 eqmax: 00000000 linkst: 00000000
Transmit: 00000000 Receive: 00000000
```

Figure 2-30. Register Dump Window

Conducting Diagnostics

There are two options on the Diagnostics portion of the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)):

- Loopback
- Send

These tests are intended for the experienced user. The Loopback test is designed to diagnose the board's primary components and their functionalities. There are two types of loopback tests: internal and external. The Send test simply writes a continuous stream of data to the specified port, which is helpful in resolving wiring issues.

Serial Port External Loopback Test

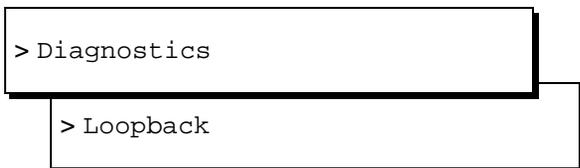
Although the option for the serial port external loopback test appears on the screen, this option is not available. Use the internal loopback test option instead.

Serial Port Internal Loopback Test

The internal loopback test is the same as the external loopback test except that it does not require that the transmit and receive pins be wired together. Because it does not test the full cabling of the port, the internal loopback test is not as thorough as the external loopback test.

To perform the serial port internal loopback test, do the following:

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-25](#)), select



2. Press **ENTER**.

The system displays the Loopback menu ([Figure 2-31](#)).

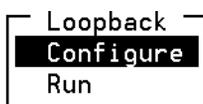


Figure 2-31. Loopback Menu

3. Select



4. Press **ENTER**.

The system displays the Configure menu ([Figure 2-32](#)).



Figure 2-32. Configure Menu

5. Select

```
> Board
```

6. Press **ENTER**.

The system displays the Board menu ([Figure 2-27](#)).

7. Press **ENTER** to select the first group of ports.

8. Press **ESC**.

The system displays the Loopback menu ([Figure 2-31](#)).

9. Select

```
> Run
```

10. Press **ENTER**.

The system displays the Run menu ([Figure 2-33](#)).

```
Run
24 Ports
12 Ports
8 Ports
Single
```

Figure 2-33. Run Menu

11. Place the cursor on 8 Ports.

12. Press **ENTER**.

The system displays the Loop Type menu ([Figure 2-34](#)).

```
Loop type
External Loopback
Internal Loopback
```

Figure 2-34. Loop Type Menu

13. Place the cursor on Internal Loopback.
14. Press **ENTER**.

The system displays the Internal Loopback window ([Figure 2-35](#)).

Port	Xmit	Rcv	Errors	Rate	Note
saa	156825	151264	0	3874	ESC to exit F2 Reset Errors F3 Reset Test F4 Refresh Screen
sab	156825	151237	0	3874	
sac	156825	151258	0	3875	
sad	156825	151230	0	3876	
sae	156825	151219	0	3875	
saf	156825	151195	0	3870	
sag	156825	151170	0	3861	
sah	156825	151160	0	3857	

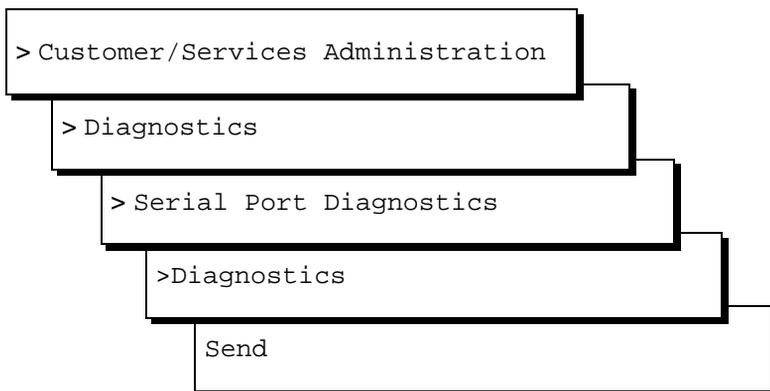
Figure 2-35. Internal Loopback Window

Serial Port Send Test

The Send test simply writes a continuous stream of printable alphanumeric characters to the specified port. This is helpful when a new device is being added to the system and a continuous stream of data is required to resolve wiring issues.

To perform the serial port send test, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



2. Press **ENTER**.

The system displays the Prompt window ([Figure 2-28](#)).

3. Press **ENTER**.

The system displays the Speed menu ([Figure 2-36](#)).

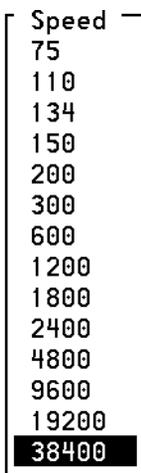


Figure 2-36. Speed Menu

4. Select the appropriate speed.
5. Press **ENTER**.

The system displays the Characters Transmitted window ([Figure 2-37](#)).

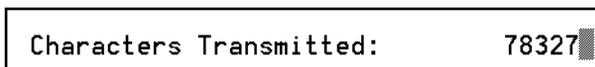


Figure 2-37. Characters Transmitted Window

Switch Integration Diagnostics

Switch integration is the mechanism by which the Lucent INTUITY system and the switch share information. The method of integration is determined by the switch.

➤ NOTE:

At this time, switch integration diagnostic utilities are available only for Lucent data communications interface unit (DCIU) integrations. Therefore, the procedures in the section only apply to those customers with DCIU integrations.

The following switch integration diagnostic utilities are available:

- View switch link status
- Diagnose switch integration card
- Reset switch integration hardware and software
- Busy-out switch integration link
- Release switch integration link

View Switch Link Status

View in the switch link status provides information on the switch link.

Procedure

To view the status of the switch link, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
```

```
> Diagnostics
```

```
> Switch Interface Diagnostics
```

The system displays the Diagnose Switch Link window ([Figure 2-38](#)).

```
Diagnose Switch Link
STATUS SWITCH-LINK
Type  Baud  State
DCIU  9600  In Service

Link Level 2 is Up

DCIU switches (In/Out of data transfer)
  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20
  I
```

Figure 2-38. Diagnose Switch Link Window

Results

[Table 2-4](#) explains each field on the STATUS SWITCH-LINK portion of the Diagnose Switch Link screen. When troubleshooting, first make sure that the link is In service (State field) and Up (Link Level 2 field). If the link is Down, there is likely a physical connection problem (cabling) or a translation problem on the switch. Access the alarm log for more information. See Chapter 1, "Getting Started," in *INTUITY Interchange Release 5.3 Alarm and Log Messages*, 585-313-809, for the procedure.

Table 2-4. Switch Link Status Fields

Status Field	DCIU Value	Definition
Type	DCIU	This is the mode of switch integration for the Lucent INTUITY system.
Baud	9600	This is the speed at which the Lucent INTUITY system and the switch communicate.
State	In Service or BUSIED	This is the status of the link. In Service means that the link is up and running and functioning normally. BUSIED means that the link has been manually busied out.
Link Level 2 is	Up or Down	The field tells you whether the link is Up (actively processing data for calls) or Down (not processing data for calls).
DCIU Switches (In/Out Of Data Transfer)	I, O, or blank	The numbers 1 through 20 represent switches in a DCS network. An "I" indicates that the switch is "in data transfer" and operational. An "O" indicates that the switch is "out of data transfer" and not operational. If the space under the switch number is blank, that particular switch is not being translated for use with the Lucent INTUITY system.

DCIU Circuit Card Diagnostics

The DCIU circuit card is equipped with diagnostic utilities that test circuit card functionality. This diagnostic checks the circuit card's timer and parity. It also does several local loopback tests.

If the system detects a switch link problem, it can invoke this diagnostic automatically.

It may be necessary to diagnose the switch link in order to troubleshoot problems on the Lucent INTUITY system. Do not diagnose the switch link unless instructed to do so.

⚠ CAUTION:

Diagnosing the switch integration card disables all lines associated with the switch link, including all INTUITY AUDIX Voice Messaging lines. Subscribers calling AUDIX will hear a fast busy signal. Callers sent to AUDIX coverage will hear ringing with no answer.

Diagnostics Procedure

To diagnose the switch integration card, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
> Diagnostics
> Switch Interface Diagnostics
```

The system displays the Diagnose Switch Link window ([Figure 2-38](#)).

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Test Type menu ([Figure 2-39](#)).

```
Test Type
>board
reset
```

Figure 2-39. Test Type Menu

4. Select

```
> Board
```

The diagnostic test takes about one minute. The word *working* appears in the upper right corner of the screen.

Diagnostic Results

If the diagnosis of the DCIU circuit card is successful, the system displays the following series of messages.

```
EiconCard Self-Test Utility
ectest 3.03 Rev. 08
Copyright (c) Eicon Technology Corporation 1995. All
Rights Reserved.
```

```
-----
Card #1: EC C20
```

```
ectest: Warning #FA304
The application software running on EiconCard #1 was
stopped.
```

CARD CONFIGURATION:

```
I/O Port Address      : 240
Interrupt Request Level : 12
Memory size           : 1024K
```

CARD DIAGNOSTIC

```
In progress...
```

```
EiconCard EC C20, Diagnostic: Passed
```

```
-----
```

DIAGNOSTIC SUMMARY:

```
Card #1: Success.
```

NOTE:

Not all of the information displayed by the diagnostics appears in the first Command Output window. You must scroll down the window using the function keys.

If the diagnostics fail, replace the DCIU circuit card. See [“DCIU Circuit Card”](#) in [Chapter 5, “Replacing or Installing Circuit Cards”](#).

Reset Procedure

This diagnostic command resets and initializes the DCIU circuit card and its associated software (DCIU software). Occasionally, the DCIU link “hangs.” Resetting the switch integration hardware and software often remedies the problem without a lot of down time.

To reset the switch integration card and its software, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
> Diagnostics
> Switch Interface Diagnostics
```

The system displays the Diagnose Switch Link window ([Figure 2-38](#)).

2. Press **F8** (Chg-Keys).
3. Press **F4** (Diagnose).

The system displays the Test Type menu ([Figure 2-39](#)).

4. Select

```
> Board
```

The reset takes approximately one minute. When it is finished the system displays the following message:

```
Reset completed.
```

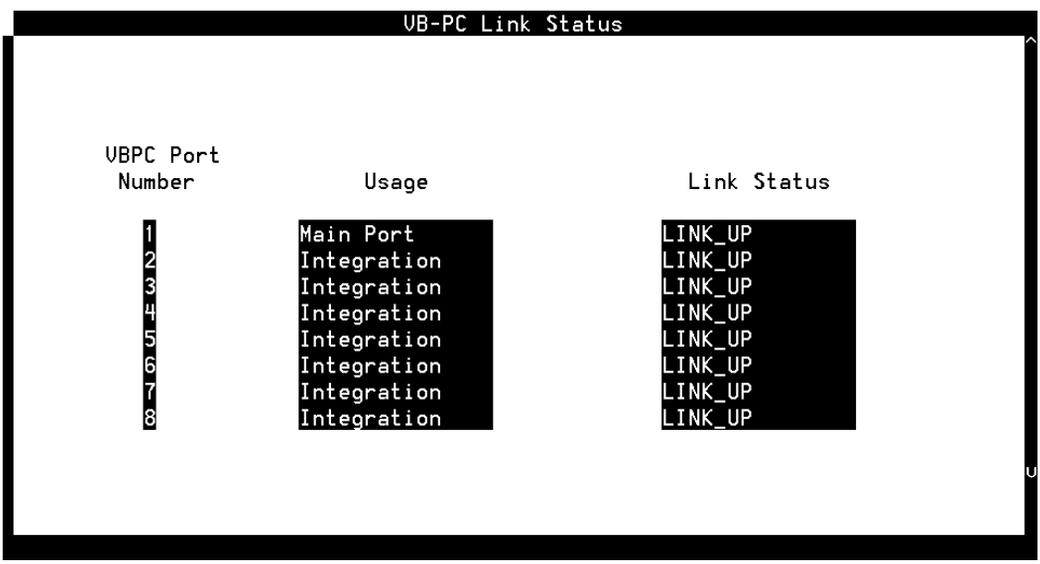
Digital Station Interface Circuit Card Diagnostics

To diagnose a digital station interface circuit card, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Switch Interface Administration
> Call Data Interface Administration
> Switch Link Administration
> VB-PC Interface
Link Status
```

The system displays the Link Status window ([Figure 2-40](#)).



UBPC Port Number	Usage	Link Status
1	Main Port	LINK_UP
2	Integration	LINK_UP
3	Integration	LINK_UP
4	Integration	LINK_UP
5	Integration	LINK_UP
6	Integration	LINK_UP
7	Integration	LINK_UP
8	Integration	LINK_UP

Figure 2-40. Link Status Window

Switch Integration Link Busy-Out Procedure

Busying out the switch link disables all lines associated with the switch link, including all INTUITY AUDIX Voice Messaging lines. Subscribers calling AUDIX will hear a fast busy signal. Callers sent to AUDIX coverage will hear ring/no answer. It may be necessary to busy-out the switch link in order to troubleshoot or replace the switch card or its cables. Do not busy-out the switch link unless instructed to do so.

CAUTION:

In order to prevent alarms being generated by the switch, also busy out the switch link at the switch any time you busy out the switch from the Lucent INTUITY system. See the appropriate switch documents for the procedures.

To busy-out the switch link, do the following:

1. Starting at the Lucent INTUITY Main menu (Figure 2-1), select

```
> Customer/Services Administration
> Diagnostics
> Switch Interface Diagnostics
```

The system displays the Diagnose Switch Link window ([Figure 2-38](#)).

2. Press **F8** (Chg-Keys).
3. Press **F2** (Busyout).

The system displays the Confirm window ([Figure 2-41](#)).

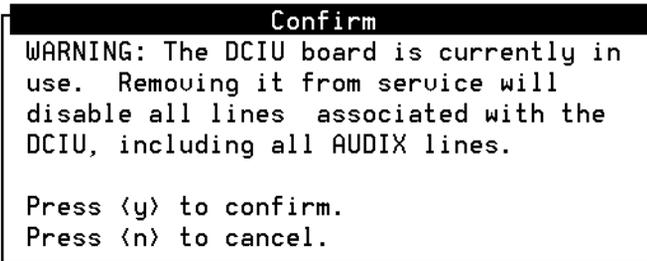


Figure 2-41. Confirm Window



CAUTION:

The DCIU board is currently in use. Removing it from service will disable all lines associated with DCIU, including all voice lines. Subscribers calling will hear a fast busy signal. Callers sent to coverage will hear ring/no answer.

4. Press **y**

The system displays a Busyout Command Output window ([Figure 2-42](#)).

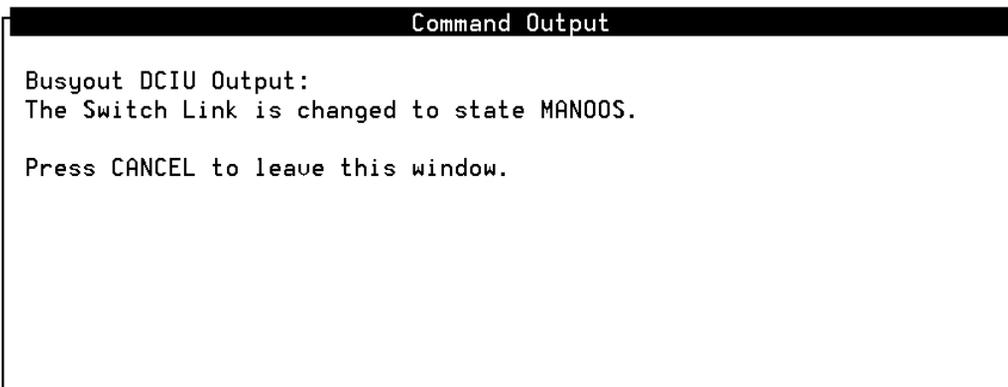


Figure 2-42. Busyout Command Output Window

Switch Integration Link Release Procedure

Releasing the switch link puts the link back in service so that it can accept and process data.

To release the switch link, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
> Diagnostics
> Switch Interface Diagnostics
```

The system displays the Diagnose Switch Link window ([Figure 2-38](#)).

2. Press **F8** (Chg-Keys).
3. Press **F3** (Release).

The system displays Release Command Output window ([Figure 2-43](#)).

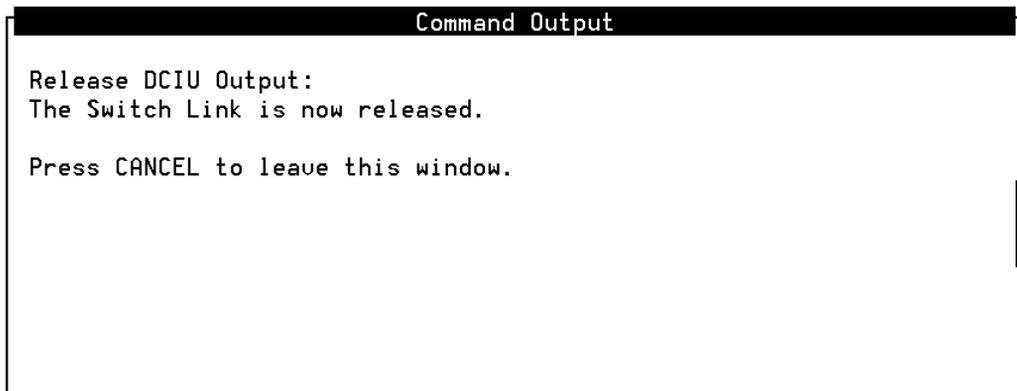


Figure 2-43. Release Command Output Window

TCP/IP Diagnostics

Use the TCP/IP diagnostics screens when subscribers are experiencing problems with:

- Lucent INTUITY Message Manager
- Internet Messaging for INTUITY AUDIX

- Digital Networking using TCP/IP
- HiCap

These screens can help diagnose TCP/IP problems and can determine if the Lucent INTUITY system is communicating properly with other machines.

You can use the TCP/IP diagnostics screens to do the following:

- Test the Lucent INTUITY system's TCP/IP software.
- Test the connection between the Lucent INTUITY system and a subscriber's PC.
- View the statistics for the LAN card.

For the two tests, test data (packets) are sent back and forth from the Lucent INTUITY system to a networked machine. If no problems exist, the data is returned exactly as it was sent.

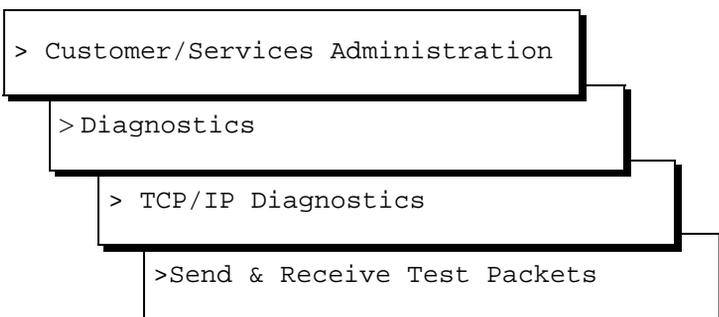
Testing the TCP/IP Software

If subscribers are experiencing difficulties, first ensure that the problem is not with the Lucent INTUITY system's UNIX TCP/IP software. For this procedure, run the diagnostic on the Lucent INTUITY system itself. This test does *not* involve the LAN card or the network.

Procedure

To test the TCP/IP software, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Send & Receive Test Packets From window ([Figure 2-44](#)).

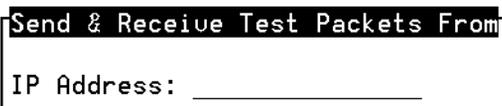


Figure 2-44. Send and Receive Test Packets Window

2. Enter the Internet Protocol (IP) address of the Lucent INTUITY system (*not* a PC address).

For this information, see the TCP/IP Administration screen.

3. Press **F3** (Save).

The system displays the message `working...` in the upper right corner of the screen. While the cursor flashes, the system is performing the test.

When finished, the system displays the Test Packets Results window ([Figure 2-45](#)). This screen shows the results of sending 10 test packets from the Lucent INTUITY system to itself.

Test Packets Results

```
72 bytes from xxx.xx.xx.xx: icmp_seq=0. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=1. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=2. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=3. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=4. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=5. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=6. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=7. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=8. time=0. ms
72 bytes from xxx.xx.xx.xx: icmp_seq=9. time=0. ms
```

---- xxx.xx.xx.xx PING Statistics----

```
10 packets transmitted, 10 packets received, 0% packet loss
round-trip (ms) min/avg/max = 0/0/0
```

Note: High packet loss, long round-trip time, or packets received out of order (icmp_seq) may indicate a network problem.

Press <HELP> for more information, <CANCEL> to continue.

Figure 2-45. Sample Test Packets Results Window

Results

Examine the packet loss field in the PING Statistics displayed on the Test Packets Results screen. The value for this field will be either 0% or 100%, as described below.

- If 0% packet loss is reported, the test is successful. This result indicates that the problem is *not* with the Lucent INTUITY system's TCP/IP software; however, the problem may be with the LAN card or the network. To further isolate the problem, test the connection between the Lucent INTUITY system and the troubled subscriber's PC. See "[Testing the Connection Between the Lucent Intuity System and a Subscriber's PC](#)" below for the procedure.
- If 100% packet loss is reported, the test failed. Check with your LAN administrator to ensure that you used the correct IP address for the system. This result may indicate a problem with the Lucent INTUITY system's UNIX TCP/IP software. Reboot the system, and repeat this test. If the test still fails, contact your remote services center. See "[Rebooting the System](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.

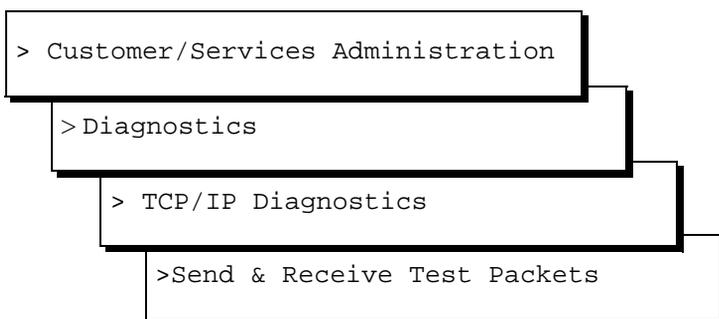
Testing the Connection Between the Lucent INTUITY System and a Subscriber's PC

Once it has been determined that the Lucent INTUITY system's TCP/IP software is functioning correctly (see "[Testing the TCP/IP Software](#)" above), it needs to be determined that the Lucent INTUITY system can properly communicate with the troubled subscriber's PC.

Procedure

To test the LAN card and the network, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Send & Receive Test Packets From window ([Figure 2-44](#)).

2. Enter the Internet Protocol (IP) address for the PC to which you want to have test packets sent and received.

3. Press **F3** (Save).

The system displays `working` and a flashing cursor at the upper right corner of the screen. While the cursor flashes, the system is performing the test.

The system displays the Sample Test Packets Results window ([Figure 2-45](#)) when the test is finished.

Results

The results for the LAN test are described below:

- ***icmp_seq***: **The sequence identifier of the packet. The packets are numbered from 0 to 9, in the order that they were sent, and are displayed on the screen in the order that they were returned.** If one or two packets are returned out-of-sequence, the condition is acceptable to the Lucent INTUITY system. However, if more than two packets are out-of-sequence (for example, 0, 2, 5, 3, 1...), inform the LAN or system administrator. Out-of-sequence packets may indicate network congestion or misrouting.
- ***time***: The round trip transmission time, in milliseconds (ms), of the packet. Round trip delays greater than 10,000 ms may indicate a network problem.
- ***packet loss***: The percentage of packets that were not returned during the test. The number of lost packets will vary from network to network. Percentage of loss depends upon the number of users, the number of machines, and the distance between machines.
 - Consider the test successful if the Lucent INTUITY system reports a packet loss percentage between 0 and 49%. Do, however, inform the LAN or system administrator if the loss is above 10%. Slow response time may be the result of such a loss.
 - Consider the test a failure if the Lucent INTUITY system reports a packet loss percentage between 50% and 99%. In this range, Lucent INTUITY Message Manager performance will be extremely slow or will completely fail.
 - A 100% packet loss indicates that the Lucent INTUITY system has not established communication to the test machine address. The test will not report if packets are being sent to an incorrect or non-existent machine. Verify that you used the correct IP address for the PC. To further isolate the problem, repeat the test for a PC *not* experiencing problems with Lucent INTUITY Message Manager. If this test succeeds, the problem is with the first test PC. If this test fails, the problem is likely with the Lucent INTUITY system's LAN card or the network connection to the Lucent INTUITY system.

Viewing LAN Circuit Card Packet Statistics

The Packet Statistics screen displays data concerning traffic on the LAN card. Use this screen to identify problems occurring with the LAN card and the network.

Procedure

To view the packet statistics, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
> Diagnostics
> TCP/IP Diagnostics
>View Packet Statistics
```

The system displays the Packet Statistics window ([Figure 2-46](#)).

Packet Statistics								
Name	Mtu	Network	Address	Ipkts	Ierrs	Opkts	Oerrs	Collis
lo0	8256	127	127.0.0.1	10661201	0	10661201	0	0
sme0	1500	135.9.181	135.9.181.76	0	0	22185759	77962	0

Note: The Ethernet board is named sme00. Abnormally high values in the "Ierrs", "Oerrs", or "Collis" columns may indicate a network problem.

Press <HELP> for more information, <CANCEL> to continue.

Figure 2-46. Packet Statistics Window

Interpreting the Packet Statistics Window

[Table 2-5](#) explains each field on the Packet Statistics window. Once the system is turned on, packets (data) are sent over the network as interactions occur.

To see the statistics for the LAN card, examine the data for the line beginning with "sme00." When the data on this screen indicates problems with the network, contact your LAN administrator.

Table 2-5. Fields on Packet Statistics Screen

Field	Description
Name	The name of the interface. The LAN card is "sme00." An asterisk (*) in the field indicates that the interface is not enabled.
Mtu	The maximum transmission unit in bytes. This field indicates the longest packet that can be transmitted without needing to be split.
Network	The network to which the interface provides access. For the LAN card (sme00), the value for this field is always "none."
Address	The IP address assigned to this interface. For the LAN card (sme00), the value for this field is always "none."
Ipkts	The number of packets received over the network since the Lucent INTUITY system was turned on.
Ierrs	The number of damaged packets received. A value for this field greater than 10% of the packets received (Ipkts) indicates that the network is too busy and performance is slow.
Opkts	The number of packets sent over the network since the Lucent INTUITY system was turned on.
Oerrs	The number of packets damaged while being sent. A value for this field greater than 10% of the packets sent (Opkts) indicates that the network is too busy and performance is slow.
Collis	The number of collisions occurring on the network. A collision occurs when two machines on the network attempt to transmit a packet at the same time. Packets will be sent again; however, too many collisions can slow down the network. A value for this field greater than 10% of the packets sent (Opkts) indicates that the network is too busy and performance is slow.

Voice Port Diagnostics

To diagnose a voice port without removing the voice card from service, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select

```
> Customer/Services Administration
> Diagnostics
> Voice Port Loop Around Test
```

The system displays the Voice Port Loop Around Test window ([Figure 2-47](#)).

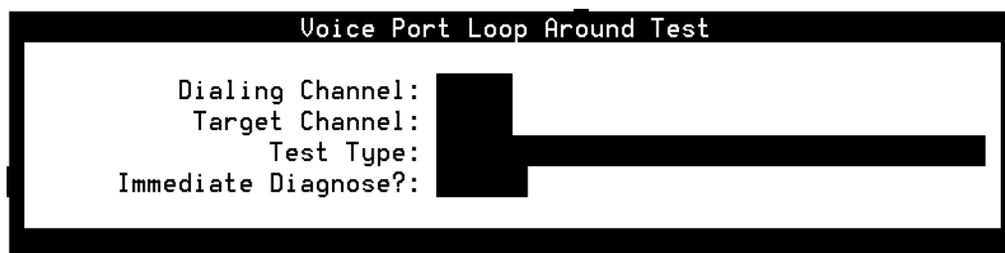


Figure 2-47. Voice Port Loop Around Test Window

2. Enter a channel number in the `Dialing Channel:` field.

The dialing channel is the channel which sends the signal used to diagnose the target channel.

3. Enter the number of the channel you want to diagnose in the `Target Channel:` field.
4. Enter a test type in the `Test Type:` field.

The following tests can be run on the voice port:

- all
- code
- fax receive
- fax transmit
- gain control
- loop current/dial tone detection
- manipulation of hook state
- play
- ring detection

- speed control
- touch tone receive
- touch tone transmit

⇒ NOTE:

The gain control, loop current/dial tone detection, manipulation of hook state, ring detection, speed control, touch tone receive, and touch tone transmit test types will be run during a voice port loop around test regardless of the entry in the `Test Type:` field.

5. Enter **no** in the `Immediate Diagnose?` field.

If you enter **yes** in this field the diagnosis will be performed immediately regardless of the current state of the dialing channel.

6. Press **F3** (Save).

The system completes the diagnostics and displays the Voice Port Loop Around Test Results screen ([Figure 2-48](#)).

Voice Port Loop Around Test Results

manipulation of hook state	pass
gain control	pass
speed control	pass
ring detection	pass
touch tone transmit	pass
play	pass
touch tone receive	pass
record	pass
fax receive	pass
fax transmit	pass
loop current/dial tone detection	pass

Press Enter to continue.

Figure 2-48. Voice Port Loop Around Test Results Screen

7. Press **ENTER**.

The system displays the Voice Port Loop Around Test window ([Figure 2-47](#)).

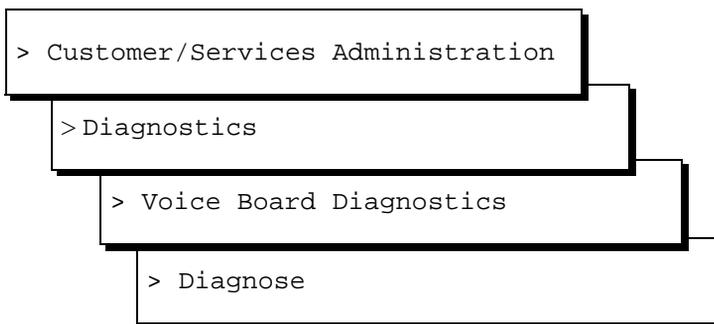
Tip/Ring Circuit Card Diagnostics

To determine which Tip/Ring circuit card is having a problem, look at the alarm log. See Chapter 1, "Getting Started," in *Lucent INTUITY Alarms and Log Messages* 585-310-566, for more information on the alarm log.

Procedure

To diagnose one or more Tip/Ring circuit cards, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Diagnose Equipment window ([Figure 2-49](#)).

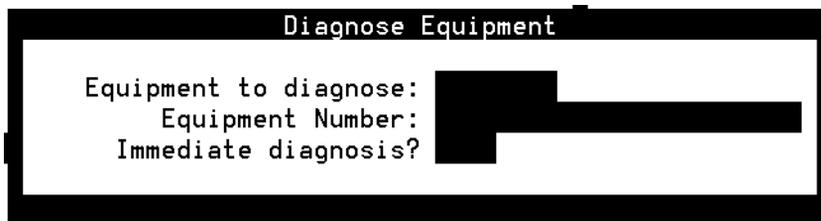


Figure 2-49. Diagnose Equipment Window

Each voice card has a number (0 through 2) which is determined by the card's address set by dip switches. A card's number is shown on the first line of its display.

2. Enter **card** in the `Equipment to diagnose:` field.
3. Enter the number of the card(s) you want to diagnose in the `Equipment Number:` field.



CAUTION:

Do not diagnose all of the voice cards at once. This may leave no channels available on the system to accept incoming calls.

You can enter card numbers in several forms:

- A single card number (for example: 1)
 - A range of card numbers (for example: 0-2)
 - A list of single card numbers (for example: 0,1,2)
 - A list of single cards and ranges (for example: 0-2)
4. Enter **n** in the `Immediate Diagnosis?` field so that the card will be diagnosed when it is free of calls.



CAUTION:

*Diagnosing voice cards immediately by entering **y** in the `Immediate Diagnosis?` field will disconnect calls in progress. Do not enter **y** unless call traffic is extremely low. Diagnosing voice cards only when they are free of calls may take longer, but no calls will be disconnected.*

5. Press `F3` (Save).

Depending on the number of cards selected, diagnosis can take several minutes. When the diagnosis is complete the system displays the following message:

```
Request to diagnose Tip/Ring card <number> is
completed.
```

```
Press Enter to continue.
```

6. Press `ENTER`.

Results

The voice card diagnostics progress through three main steps.

- Each channel (and as a result the entire card) is taken out of service by changing its state to MANOOS (manually out of service).
- Each channel is checked for loop current. Loop current is present on a channel when a live telephone line is physically connected between the IVC6 port and a properly administered switch port.
- Each channel (and as a result the entire card) is put back into service by changing their states to INSERV (in-service).

If a card and all of its channels pass diagnostics, each channel is returned to its previous state (prior to the diagnostic), and the following message is shown in the Diagnose Equipment Results screen.

```
Diag TR number, Passed.
```

The following messages are normal outputs of the diagnostic process and do not affect the operation of the card.

- Diag TR *number*, Not attempting dial tone training (/vs/switch/analog/noDTtrain exists)

For some switches, dial tone training is turned off because if the Lucent INTUITY system tries to get dial tone from many switch ports at one time, failures can occur on the switch side.

- Found Loop current on channel *number*

This message indicates that there is a working telephone line attached to the voice port.

- Request to diagnose Tip/Ring *number* completed

This message indicates that all requested tests have been completed.

The following list shows messages printed in the Diagnose Equipment Results screen that could signal problems.

- No loop current on channel *number*

OR

Channel number changed to state FOOS

The Lucent INTUITY system does not detect a working telephone line connected to the voice port. If this occurs, do the following:

1. Verify that the telephone line is securely connected to the voice card and the switch.
2. Verify that the analog line is set up properly on the switch. See the switch integration document included with your Lucent INTUITY system documentation set for more information.
3. Verify that the switch port has a dial tone, by removing the analog line, plugging in an analog telephone, and listening with the handset for dial tone. If there is dial tone, the voice card is likely the problem. If there is no dial tone, the problem is on the switch side. Verify switch wiring and administration.

- Diag TR *number*: No dial tone frequencies set

The Lucent INTUITY system did not detect dial tone, but it did detect loop current (phone line is attached). This could be a result of excessive load on the switch circuit pack. If this occurs, do the following:

1. Verify that Lucent INTUITY system analog lines are distributed over several switch circuit packs.
2. Verify that the switch administration for the ports is valid.

- Channel number changed to state BROKEN

OR

- Card number changed to state BROKEN

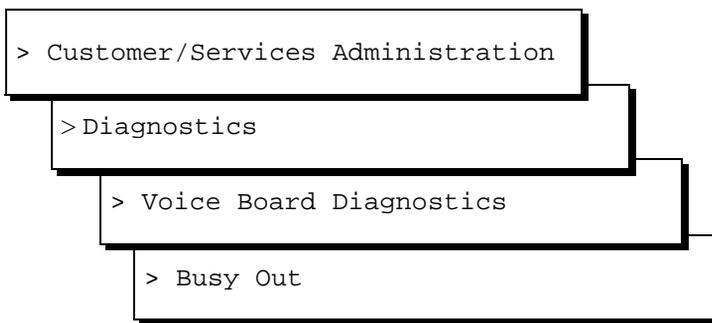
The channel or card is not working. Replace the Tip/Ring circuit card. See [“Tip/Ring Circuit Cards”](#) in [Chapter 5, “Replacing or Installing Circuit Cards”](#).

Busying out a Tip/Ring Circuit Card

Busying out a Tip/Ring circuit card takes all channels on that card out of service (MANOOS or manually out of service state) so that calls are not forwarded to those channels. You may also busy out one or more individual channels.

To busy out a Tip/Ring circuit card, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Busyout of Voice Equipment window ([Figure 2-50](#)).

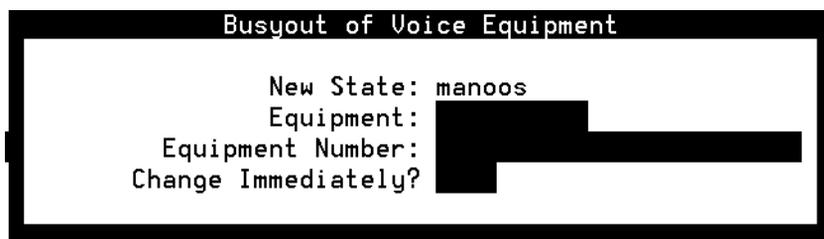


Figure 2-50. Busyout of Voice Equipment Window

The `New State:` field displays `manoos`. This is the state to which the cards or channels selected will be changed. This field cannot be changed.

2. Enter **card** or **channel** in the `Equipment:` field.
3. Enter the number of the card(s) or channel(s) you want to busyout in the `Equipment Number:` field.

 **CAUTION:**

Do not busyout all of the voice cards at once. This may leave no channels available on the system to accept incoming calls.

Card numbers range from 0 through 2, channel numbers range from 0 through 17. You can enter card and channel numbers in several forms.

- A single card number (for example: 1)
 - A range of card numbers (for example: 0-2)
 - A list of single card numbers (for example: 0,1,2)
 - A list of single cards and ranges (for example: 0-2)
4. Enter **n** in the Change Immediately? field so that the card or channel will busy out when it is free of calls.

 **CAUTION:**

*Busying out voice cards or channels immediately by entering **y** in the Change Immediately? field will disconnect calls in progress. Do not enter **y** unless call traffic is extremely low. If **n** is entered, the voice cards or channels will busy out when they are free of calls. Busying out voice cards and channels only when they are free of calls may take longer, but no calls will be disconnected.*

5. Press **F3** (Save).

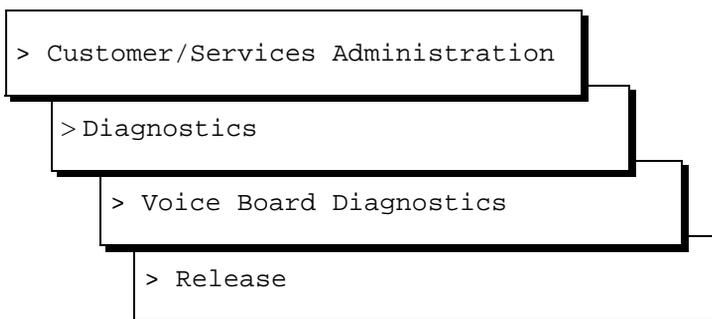
When the state change is complete, the system displays a Command Output screen.

Releasing a Tip/Ring Circuit Card

Releasing a Tip/Ring circuit card puts all channels on that card in service (INSERV) so that they can accept and process calls. You can also release one or more individual channels.

To release a Tip/Ring circuit card or channels, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 2-1](#)), select



The system displays the Release of Voice Equipment window ([Figure 2-51](#)).

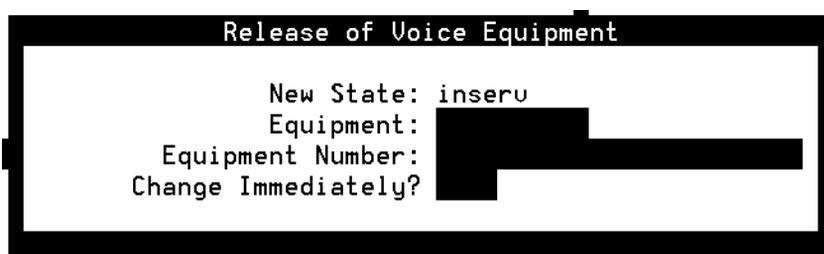


Figure 2-51. Release of Voice Equipment Window

The `New State:` field displays `inserv` (in service). This is the state that the cards or channels selected will be changed to. This field can not be changed.

2. Enter **card** or **channel** in the `Equipment:` field.
3. Enter the number of the card(s) or channel(s) you want to release in the `Equipment Number:` field.

Card numbers range from 0 through 10, channel numbers range from 0 through 63. The card and channel numbers can be entered in several forms.

- A single card number (for example: 1)
- A range of card numbers (for example: 0-2)
- A list of single card numbers (for example: 0,1,2)
- A list of single cards and ranges (for example: 0-2)

4. Enter **y** in the Change Immediately? field so that the card or channel will be released immediately.
5. Press **F3** (Save).

Common System Procedures

3

Overview

This chapter describes:

- Cartridge tape and diskette drive operating procedures
- Backup and restore procedures
- Voice system administration procedures

Purpose

The purpose of this chapter is to provide the procedures necessary to perform the most common procedures associated with the Lucent™ INTUITY™ system.

Accessing the Product ID

The product ID is a 10-digit number used to identify each Lucent INTUITY system. You must have the product ID when contacting your remote maintenance service center.

To access the product ID, do the following:

1. Start at the Lucent INTUITY Main menu ([Figure 3-1](#)).

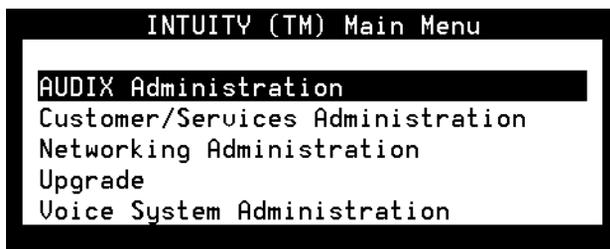
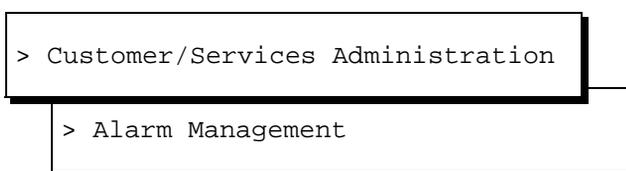


Figure 3-1. Lucent INTUITY Main Menu

2. Select



The system displays the Alarm Management window ([Figure 3-2](#)).

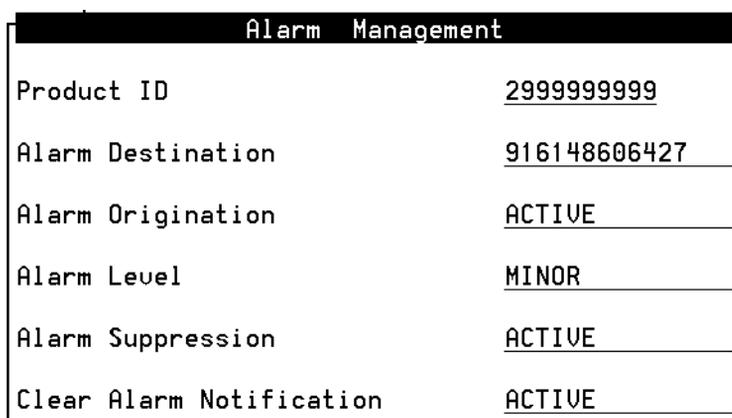


Figure 3-2. Alarm Management Window

3. Record the product ID for use with the remote maintenance center.

About Cartridge Drives and Tapes

Cartridge tapes provide for the storage of information used by the Lucent INTUITY system. The MAP/100P reads information from and writes information to cartridge tapes through the tape drive. The tape drive is located in Peripheral Bay 3.

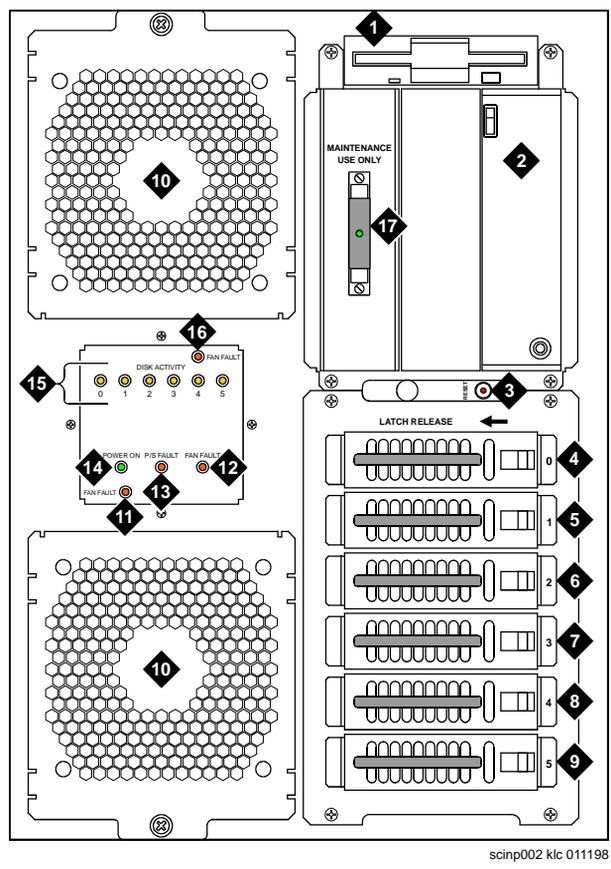
When to Change Cartridge Tapes

The manufacturers of the cartridge tapes recommend that you replace a tape after approximately 30 full-capacity write or read operations. For example, if two tapes are being alternated for the unattended nightly backup, replace both tapes every 2 months.

Inserting Cartridge Tapes

To insert a cartridge tape, do the following:

1. Locate the tape drive on the front of the MAP/100P ([Figure 3-3](#)).



- | | |
|-------------------------|-----------------------------------|
| 1. Diskette drive | 10. Circuit card cage fan |
| 2. Cartridge tape drive | 11. Fan fault LED |
| 3. Reset push button | 12. Fan fault LED |
| 4. Hard Disk Drive 0 | 13. Power supply fault LED |
| 5. Hard Disk Drive 1 | 14. Power On LED |
| 6. Hard Disk Drive 2 | 15. Hard disk drive activity LEDs |
| 7. Hard Disk Drive 3 | 16. Fan fault LED |
| 8. Hard Disk Drive 4 | 17. SCSI terminator |
| 9. Hard Disk Drive 5 | |

Figure 3-3. Front View of the MAP/100P

2. Check the read/write dial to make sure that the tape is not write-protected. The small dial on the front of the tape should be in the horizontal position.

3. Complete Steps a through c to insert the tape in the drive:
 - a. Press the button on the upper right corner of the drive to open the drive door.
 - b. Insert the tape ([Figure 3-4](#)).
 - c. Close the door to push in the tape.

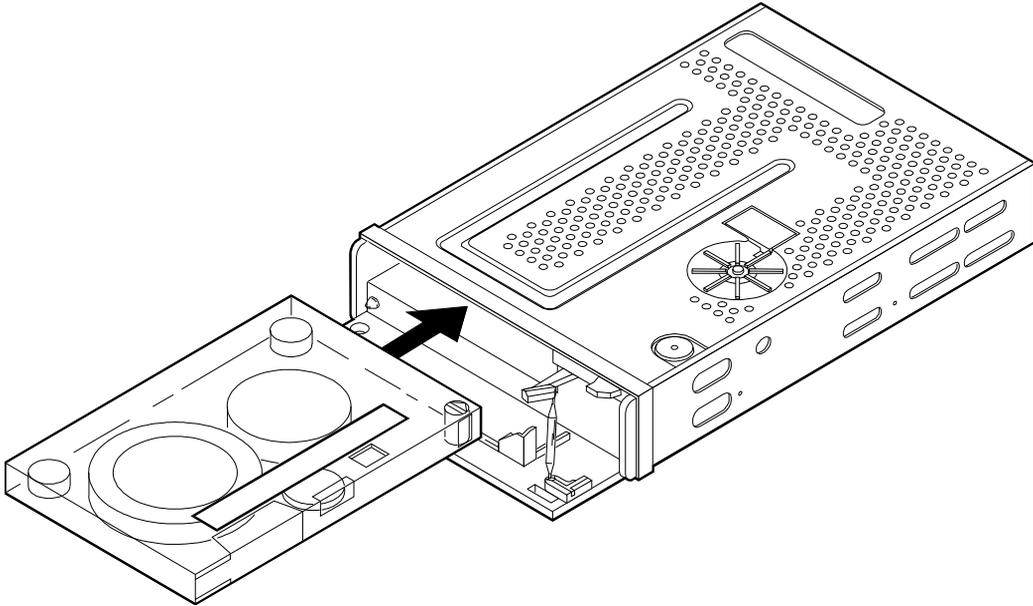


Figure 3-4. Tape Insertion with a 2-Gbyte Tape Drive



NOTE:

The light on the 2-Gbyte drive will blink when the drive is in use. If the light is lit and not blinking, the tape drive is idle.

Removing the Cartridge Tape

To remove a cartridge tape, do the following:



CAUTION:

You can only remove the tape when the drive is idle, that is, when the light is not blinking.

1. Press the button on the upper right corner of the drive to reveal part of the tape.
2. Pull out the tape.

Formatting Cartridge Tapes

Formatting prepares a cartridge tape to receive data. To format a cartridge tape, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)), select

```
> Customer/Services Administration
```

```
> System Management
```

```
> UNIX Management
```

```
>Format UNIX Floppy/Tape
```

The system displays the Format UNIX Floppy/Tape menu ([Figure 3-5](#)).

```
Format UNIX Floppy/Tape  
>Format 3.5 inch 1.44 Mbyte (High Density)  
Format 3.5 inch 720 Kbyte (Low Density)  
Format Cartridge Tape
```

Figure 3-5. Format UNIX Floppy/Tape Menu

2. Select Format Cartridge Tape.
3. Verify that the tape is not write-protected and insert the tape into the tape drive. See "[Inserting Cartridge Tapes](#)" below for more information.
4. Press **y**
The system displays a screen stating that the tape has been formatted.
5. Remove the tape from the tape drive.
6. Press **ENTER** to continue.

About Diskette Drives and Diskettes

Floppy disks can provide for the storage of information used by the Lucent INTUITY system. If information must be transferred from an Lucent INTUITY system without a LAN card, floppy disks must be used.

NOTE:

In the past, disks made of a soft pliable material were used, and hence were called “floppy” disks and their drives “floppy” drives. Diskettes are used exclusively now.

Types of Diskettes

The Lucent INTUITY system is not shipped with disks. If you need disks, obtain unformatted 3.5-inch disks. The disks can be either:

- High density (1.44-Mbyte)
- Low density (720-Kbyte)

Inserting and Removing Diskettes

Inserting the Diskette

To insert a diskette, do the following:

1. Locate the diskette drive on the front of the MAP/100P ([Figure 3-3](#)).
2. Check the read/write switch to make sure that the diskette is not write-protected. The small dial on the front of the tape should be in the horizontal position.
3. Insert the diskette in the drive.

NOTE:

The light on the diskette drive is on when the drive is in use. If the light is not on, the diskette drive is idle.

Removing the Diskette

To remove a diskette, do the following:

1. Press the button on the lower right corner of the diskette drive to reveal part of the diskette.
2. Pull out the diskette.

CAUTION:

You can only remove the diskette when the drive is idle, that is, when the light is not on.

Formatting Diskettes

Formatting prepares a diskette to receive data. To format a diskette, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)), select

```
> Customer/Services Administration
```

```
> System Management
```

```
> UNIX Management
```

```
>Format UNIX Floppy/Tape
```

The system displays the Format UNIX Floppy/Tape menu ([Figure 3-5](#)).

2. Select `Format 3.5 inch 1.44 Mbyte (High Density) Or Format 3.5 inch 720 Kbyte (Low Density)` depending on the type of diskette being used.
3. Verify that the diskette is not write-protected and insert the tape into the tape drive. See "[Inserting the Diskette](#)" above for more information.
4. Press `y`
The system displays a screen stating that the diskette has been formatted.
5. Remove the diskette from the diskette drive.
6. Press `(ENTER)` to continue.

Backing Up (Unattended)

The unattended backup contains all of the information necessary to bring the system back to an operational state after a service affecting event. However, the unattended backup alone cannot completely restore the system to its previous state. The unattended backup can only bring the system back to an operational state. Employ the disaster recovery procedures outlined in [Chapter 8, "Installing Base System Software"](#) to restore a system to the previous state.

Unattended backups do not require supervision and occur automatically. However, for the backup to be successful you must ensure that a cartridge tape is in the tape drive.

Unattended backups occur nightly at 3:00 a.m. and may take up to four hours. Unattended backups do not degrade service.

After verifying that the unattended backup was successful, remove the tape. Label it (with date and backup data type, for example, System Data), and store it. A second tape should then be inserted into the tape drive. See "[Verifying the Unattended Backup](#)" below for backup verification procedures.

How to Manage Tapes

CAUTION:

Do not leave the same tape in the tape drive day after day. Once the unattended backup begins, the previous day's data is overwritten and unretrievable. Should today's unattended backup fail, neither today's nor yesterday's data will be available.

In order to better manage the backed up data it is recommended that two tapes be used.

These two tapes can be alternated daily or additional tapes may be used to implement a longer cycle (for example, seven tapes labeled with the days of the week).

What Data Are Backed Up

An unattended backup saves:

- Detailed system data on shared memory, speech filesystem pointers, etc.
- Alarm management information
- A list of enabled features
- A list of installed software
- INTUITY AUDIX® Digital Networking connectivity and communication information
- INTUITY AUDIX Voice Messaging message headers, mailing lists, subscriber profiles (including automated attendant administration), and message-waiting indicator status
- Switch integration parameters
- Serial port assignments
- Hard disk configuration

[Table 3-1](#) lists the network information stored during an unattended backup.

Table 3-1. Network Information Stored During an Unattended Backup

Directory	Description
/netw/db/vexnet.dbd	Connectivity to other INTUITY, AUDIX R1, and AMIS Analog Networking machines in the network, local machine connectivity, and channel configurations
/netw/db/db_anet.dbd	Information regarding how to request and send remote updates of subscriber information
/netw/db/delta /netw/db/delta.txt	Subscriber administration change records (binary and ascii)
/netw/db/deltactl /netw/db/deltactl.txt	Control record for the delta table (binary and ascii)
/netw/db/kmach	Index file for the node data
/netw/db/kport	Index file for the port table
/netw/db/kdelta	Index file for the delta table
/netw/db/krmail	Index file for the rmail table
/netw/db/kupdstat	Index file for the updstat table
/netw/db/kvnq	Index file for the vnq table
/netw/db/mach /netw/db/node.txt	Data of machines in the network (binary and ascii)
/netw/db/nodeid /netw/db/nodeid.txt	Data used to allocate new node id's (binary and ascii)
/netw/db/port /netw/db/port.txt	Networking channel configuration on local machine (binary and ascii)
/netw/db/rmail /netw/db/rmail.txt	Table that keeps track of outgoing voice mail messages that have not been accessed (binary and ascii)

Table 3-1. Network Information Stored During an Unattended Backup

Directory	Description
/netw/db/rmailctl /netw/db/rmailctl.txt	Control record for the rmail table (binary and ascii)
/netw/db/updstat /netw/db/updstat.txt	Table containing update status of every remote machine (binary and ascii)
/netw/db/vnq /netw/db/vnq.txt	Temporary table used to identify which remote subscribers require voiced name updates (binary and ascii)

(2 of 2)

[Table 3-2](#) lists the voice mail information stored during and unattended backup.

Table 3-2. Voice Mail Information Stored During an Unattended Backup

Directory	Description
/vm/audix/md/mdata	Message headers, mailing lists, subscriber profiles, and message-waiting indicator status
/vm/audix/md/mdata/ocserv	Outgoing call queue status files
/vm/audix/md/config/hlrfile	High-level resource control file
/vm/audix/sd/mail/dr	Message delivery queue
/vm/audix/sd/mail/mb	Mailbox record (incoming and outgoing mailbox data)
/vm/audix/sd/mail/node	Mailbox node status file (for networking)
/vm/audix/sd/mail/xmq	Remote transmission queue
/vm/audix/sd/mesg/mh	Message headers (stores information per message such as original extension number, etc.)
/vm/audix/sd/mesg/vf	Voice file reference count (number of references per voice file)
/vm/audix/sd/sdata/attend	Automated attendant data
/vm/audix/sd/sdata/cls	Class-of-service data
/vm/audix/sd/sdata/netport	
/vm/audix/sd/sdata/netprof	
/vm/audix/sd/sdata/pdir	Personal directory data
/vm/audix/sd/sdata/rmatrix	Sending restriction matrix data
/vm/audix/sd/sdata/sdl	Mailing and delivery list file
/vm/audix/sd/sdata/sup	Subscriber profile file
/vm/audix/sd/sdata/syp	System-wide data

[Table 3-3](#) lists the voice platform information stored during an unattended backup.

Table 3-3. .Voice Platform Information Stored During an Unattended Backup

Directory	Description
/vs/data	Platform data files containing information such as performance parameters, text screens, and speech filesystem mount points
/vs/shmem	All files related to shared memory operations
/vs/switch	All files and directories related to switch integration

Verifying the Unattended Backup

The system administrator should check the administrator's log daily to ensure that a successful unattended backup occurred. There are two ways to check the log:

- Using the Log Administration menu
- Using the AUDIX Administration screen

Successful Backup Verification Using the Log Administration Menu

To verify a successful unattended backup from the Log Administration menu do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select

```
> Customer/Services Administration
> Log Administration
> Administrator's Log
```

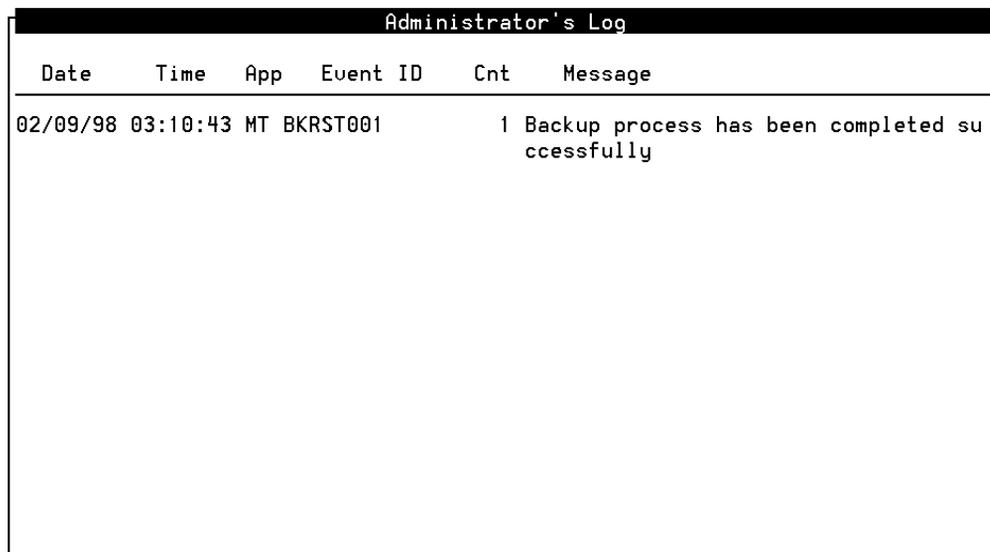
The system displays the Administrator's Log Display Selection window (Figure 3-6).

```
Administrator's Log Display Selection
Administrator's Log
The following options control which entries will be displayed.
Start Date: 9 /28/95      Time: 12:41:59
Application: __          Event ID: _____
Search String:
_____
```

Figure 3-6. Administrator's Log Display Selection Window

2. Place the cursor in the Event ID field.
3. Enter **BKRST001**
4. Press **F3** (Save).

The system displays the Administrator's Log window ([Figure 3-7](#)).



The screenshot shows a window titled "Administrator's Log" with a table containing one entry. The table has columns for Date, Time, App, Event ID, Cnt, and Message. The entry shows a backup process completed successfully on 02/09/98 at 03:10:43.

Date	Time	App	Event ID	Cnt	Message
02/09/98	03:10:43	MT	BKRST001	1	Backup process has been completed successfully

Figure 3-7. Administrator's Log Window

5. Verify that there is an entry with today's date and the following text:
Backup process has been completed successfully.
If an entry with today's date does not exist the unattended backup was not successful.

Successful Backup Verification using the AUDIX Administration Screen

To verify a successful unattended backup from the AUDIX Administration screen do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select

```
> AUDIX Administration
```

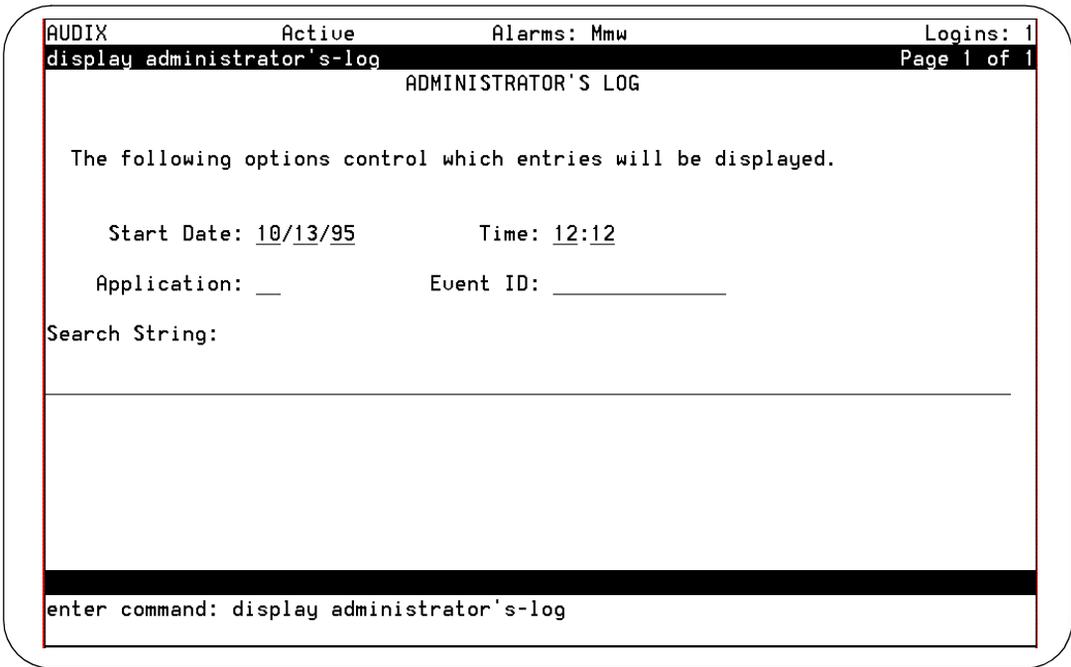



Figure 3-9. AUDIX Administrator's Log Display Selection Screen

3. Move the cursor to the Event ID field.
4. Enter **BKDONE001**
5. Press **F3** (Save).

The system displays the AUDIX Administrator's Log screen ([Figure 3-10](#)).

```

AUDIX           Active           Alarms: mw           Logins: 2
display administrator's-log           Page 1
ADMINISTRATOR'S LOG

Date   Time   App   Event ID   Cnt   Message
02/12/96 15:44 MT   AOMADM00001   1   Alarm Origination Level on Alarm Manage
02/12/96 15:44 MT   AOMADM00001   1   Clear Alarm Notification on Alarm Manag
02/12/96 15:44 MT   UDTADM00022   3   parcrypf1 creation passed
02/12/96 15:48 MT   UDTADM00022   1   parcrypf1 creation passed
02/12/96 15:49 MT   UDTADM00022   2   parcrypf1 creation passed
02/12/96 15:50 MT   UDTADM00022   3   parcrypf1 creation passed
02/12/96 15:52 MT   UDTADM00022   2   parcrypf1 creation passed
02/12/96 17:25 MT   UDTADM00022   1   parcrypf1 creation passed

Press [NextPage], [PreuPage] or [Cancel] to abort
enter command: display administrator's-log
    
```

Figure 3-10. AUDIX Administrator's Log Screen

Backing Up (Attended)

Unattended backups do not save everything, therefore you may want to copy other types of information for security and recovery purposes. The attended backup does not cause a degradation in service. However, for best results perform these backups at a time when the Lucent INTUITY system experiences low usage.

Data Types

You can manually backup any combination of the following data types at any time.

System Data

System data is automatically backed up nightly through the unattended backup commands. See "[Backing Up \(Unattended\)](#)" above for a list of the items included in system data. In addition to the unattended backup, you should also back up the system data manually whenever you make extensive changes to the subscriber profiles.

Announcements

Announcements are the prompts and phrases that guide the user through INTUITY AUDIX Voice Messaging. This data type does not require a backup unless the system has customized announcements that have just been changed. If customized announcements are not being used, a backup of announcements already exists on the original factory tape.

INTUITY AUDIX Greetings and Messages

INTUITY AUDIX voice messaging greetings include each subscriber's primary voice greeting, multiple personal greetings, automated attendant menus and messages, and bulletin board messages. INTUITY AUDIX voice messaging are all of the call answer and voice mail messages that subscribers send and receive every day.

INTUITY AUDIX Names

The INTUITY AUDIX names data type contains voiced subscriber names. After additional subscriber names have been recorded, you should conduct an attended backup of this filesystem.

Attended Backup

To perform an attended backup, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select

```
> Customer/Services Administration
```

```
> Backup/Restore
```

```
> Backup
```


Verify whole backup tape(s) will double the amount of backup time.

Do you really want to verify tape(s)?
(Strike y or n)

6. The Lucent INTUITY system verifies a backup tape by reading back the entire set of data it has just written on the tape.

⇒ NOTE:

Verifying the back-up tape increases the total time for backup from 1-1/2 hours to 3 hours. Verification is not necessary to ensure a good back-up tape.

To verify the back-up tape press **y**. If you do not want to verify the backup tape press **n**.

The system displays the following message:

```
please insert a tape into the tape drive to back up
tape 1
press <Enter> when tape is inserted
press <Esc> key to terminate the backup
```

7. Insert the first cartridge tape in the tape drive. See ["Inserting Cartridge Tapes"](#) above for this procedure.
8. Press when the tape drive is idle.

The system displays a series of messages indicating what is being stored on the backup tape.

⇒ NOTE:

The light on the 2-Gbyte drive will blink when the drive is in use. If the light is not blinking, the tape drive is idle. The light on the 525-Mbyte tape drive is on when the drive is in use. If the light is not on, the tape drive is idle.

9. If another tape is necessary:
 - a. Remove the current tape. See ["Inserting Cartridge Tapes"](#) above for this procedure.
 - b. Label the tape with the current date and back-up data type(s).
 - c. Insert the next tape. See ["Inserting Cartridge Tapes"](#) above for this procedure.

If another tape is not necessary, continue with Step 10.

When the backup is complete and the system displays the following message.

```
backup process has been completed successfully
press any key to continue
```

10. Press .
11. Press three times to return to the Lucent INTUITY Main menu ([Figure 3-1](#)).

Restoring Backups

The information stored on cartridge tapes during the unattended and attended backup procedures is used to restor the system to an operational state.

When to Do a Restore

If a system problem or failure occurs, backups can be invaluable in returning the system to an operational state. You will likely only restore backups when directed to do so by an alarm repair action.

When to Reinstall Software

Depending on the severity of the situation, Lucent INTUITY software may have to be reinstalled before restoring any backups. See [Chapter 9, "Installing Lucent Intuity System Software"](#) for these procedures.

How to Do a Restore

NOTE:

It takes approximately 2 hours to restore one tape.
This procedure works for both attended and unattended backups.

1. Stop the voice system. See ["Stopping the Voice System"](#) below for more information.
2. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select

```
> Customer/Services Administration
```

```
> Backup/Restore
```

```
> Restore
```

The system displays the following message.

```
please insert a tape into the tape drive to restore  
press <Enter> when tape is inserted  
press <Esc> key to terminate the restore
```

3. Insert the cartridge tape that contains the data to be restored into the tape drive. See "[Inserting Cartridge Tapes](#)" above for more information.
4. Press to continue.

The system displays the header information for the tape. That information includes:

- Tape label
- Date
- List of packages (with release and version) installed on the machine when the tape was made
- Data types

The following is an example of tape header information:

PRODUCT_ID=2299999999

DATE=09/11/93 09:51

PKG=VM:0:R1.1

PKG=mtce:1.0:1.0-4

PKG=netw:0:1.0-4.3

PKG=vs:1.0:1.0-4

TYPE=System Data:

Press <Enter> to select data type.

Press <Esc> to terminate the restore.

5. Check the data types listed under `TYPE=System Data` to verify that this tape contains the appropriate data.

If it does not:

- a. Press .
- b. Return to Step 3.
- c. Try another tape.

If it does, continue with Step 6.

6. Press to continue.

The system displays the Restore window.

7. Enter **y** in the fields that display the data types you want to restore.



NOTE:

The fields displayed on the Restore window are based on the data stored on the tape.

8. Enter **n** in all of the other fields.
9. Press (Save) to restore the data types selected.

10. Insert subsequent tapes if prompted.
11. Press `ENTER` when the restore is complete and the system displays the following message:

```
restore process has been completed successfully  
press any key to continue
```

If the restore fails, the system displays the following message:

```
Restore Failed.
```

Do the following:
 - a. Rewind the tape by removing it from the tape drive and then reinserting it.
 - b. Return to Step 4 and attempt the restore again.
 - c. If the restore fails a second time, access the alarm log. See Chapter 1, "Getting Started" in *INTUITY Alarms and Log Messages* and follow associated repair actions for any active alarms in the log.
12. Reboot the system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)" above for this procedure.

Administering Voice Messaging

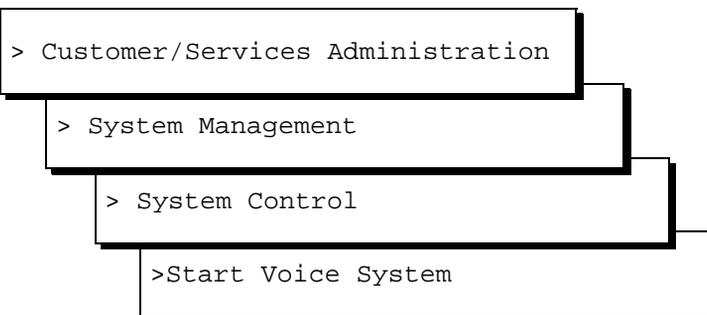
The voice system is the Lucent INTUITY system's base voice processing software.

Starting the voice system brings the software into a state where it can accept and process calls. Stopping the voice system brings the software into a lower level state in which it cannot accept calls.

Starting the Voice System

To start the voice system, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select



The system displays the following message:

```
The Voice System is starting.  
The Voice System is initializing cards.
```

Startup of the Voice System is complete.

Hit acknowledge key to continue.

2. Press **(F1)** (Acknowledge).

The system displays the System Control menu ([Figure 3-12](#)).

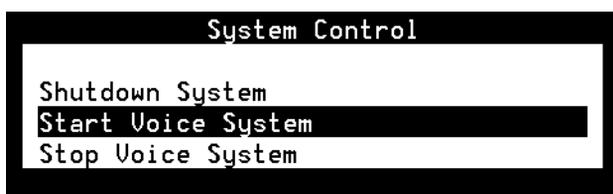


Figure 3-12. System Control Menu

3. You have completed this procedure.

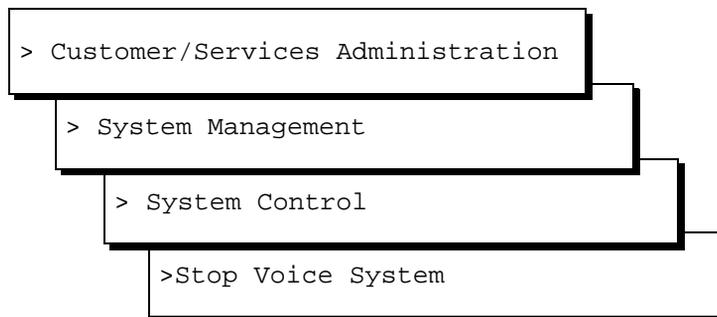
Stopping the Voice System

CAUTION:

Only stop the voice system when it is absolutely necessary. All calls in progress will be disconnected. Users calling AUDIX will hear a fast busy signal. Callers sent to AUDIX coverage will hear ringing with no answer.

To stop the voice system, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select



The system displays the Wait Time window ([Figure 3-13](#)).



Figure 3-13. Wait Time Window

2. Enter a number between 60 and 600 to designate how long the system will wait for calls in progress to finish before stopping the voice system.
3. Press **F3** (Save).

The system displays the following message:

The Voice System is now stopping.

Initiating request to clear all calls in the next 60 seconds.

Orderly idling of the system succeeded.

After the Voice System has completely stopped, use the "Start Voice System" choice from the System Control menu to restart the Voice System.

The Voice System has stopped.

Press Enter to Continue.

⇒ NOTE:

When the voice system is stopped, the user cannot access INTUITY AUDIX administration screens. AUDIX Administration still appears as an option on the Lucent INTUITY Main menu, but the user cannot select this option. To view INTUITY AUDIX administration screens, the user must restart the voice system. See "[Starting the Voice System](#)" above for the procedure.

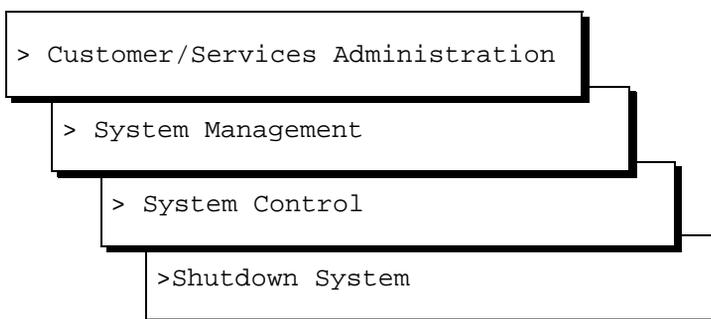
4. Press **ENTER**.

Shutting Down and Rebooting the Lucent INTUITY System

You must shut down the Lucent INTUITY system before you perform a reboot. This section describes both procedures.

Shutting Down the System

1. Stop the voice system. See [“Stopping the Voice System”](#) above for the procedure.
2. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select



The system displays the Wait Time window ([Figure 3-13](#)).

3. Enter a number between 0 and 60 to designate how long the system will wait for users to log off.
4. Press **F3** (Save).

The system displays the following message:

```
Shutdown started.
```

When the system is completely shut down, the system will display the following message.

```
The system is down.
```

```
Press Ctrl-Alt-Del to reboot your computer.
```

5. Continue with the next procedure [“Rebooting the System.”](#)

Rebooting the System

Rebooting the system can be done in two ways:

- A *warm reboot* (performed while the computer is on)
- A *cold reboot* (turning the computer off, then back on again)

Performing a Warm Reboot

1. Make sure that there is no diskette in the diskette drive or tape in the tape drive.
2. Press Ctrl-Alt-Del .

The system performs a power-on self test (POST). The screen lists various hardware components and the status of the tests performed on those components.

NOTE:

If the system displays the message:

```
WARNING ixfs:UX_unmounted root file system is busy  
and cannot be unmounted cleanly
```

ignore it. The reboot will continue normally.

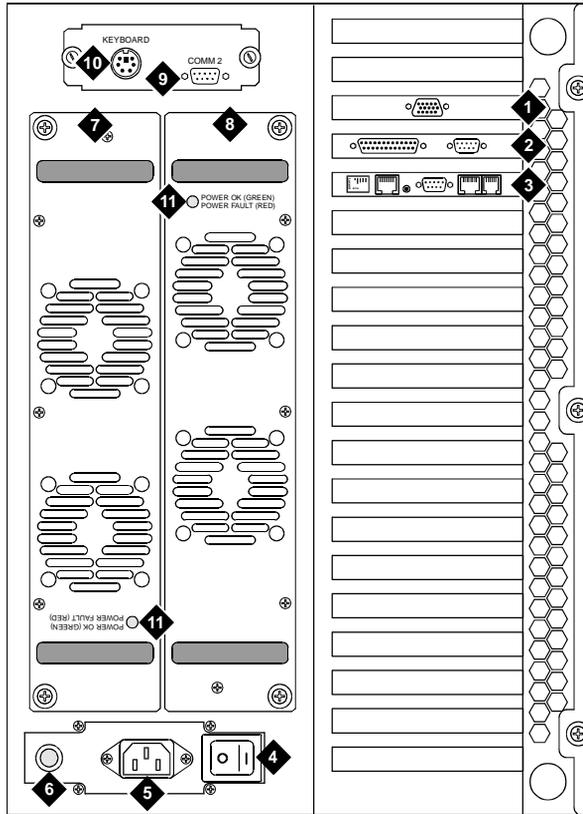
When the reboot is complete, the system displays the following prompt:

```
Startup of the Voice System is complete.  
Console Login:
```

3. If FAIL appears in the status column for any component do the following:
 - a. Record the component's name.
 - b. Access the alarm log to begin troubleshooting. See Chapter 1, "Getting Started," in *"Lucent INTUITY Alarms and Log Messages"* for this procedure.

Performing a Cold Reboot

1. Make sure that there is no diskette in the diskette drive.
2. To perform a cold reboot turn the MAP/100P off by pressing the power button on the rear of the unit ([Figure 3-14](#)).



scirp003 KLC 011398

- | | |
|----------------------------|----------------------|
| 1. Video circuit card | 7. Power Supply 1 |
| 2. P5 200 MHz CPU | 8. Power Supply 2 |
| 3. Remote maintenance card | 9. COM2 port |
| 4. ON/OFF power switch | 10. Keyboard port |
| 5. AC power input | 11. Power supply LED |
| 6. Fuse | |

Figure 3-14. Rear View of the MAP/100P

3. Wait 30 seconds to allow the drives to come to a complete stop.
4. Turn the power on by pressing the power button on the rear of the MAP/100P ([Figure 3-14](#)).

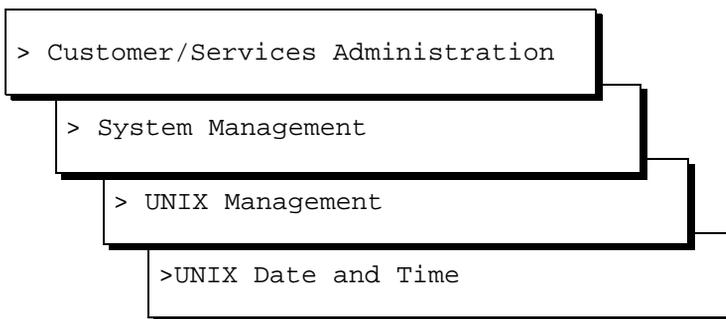
Verifying the Date and Time

This section details:

- Checking the UNIX Date and Time window
- Changing the UNIX Date and Time window

Checking the UNIX Date and Time Window

1. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select



The system displays the UNIX Date and Time window ([Figure 3-15](#)).

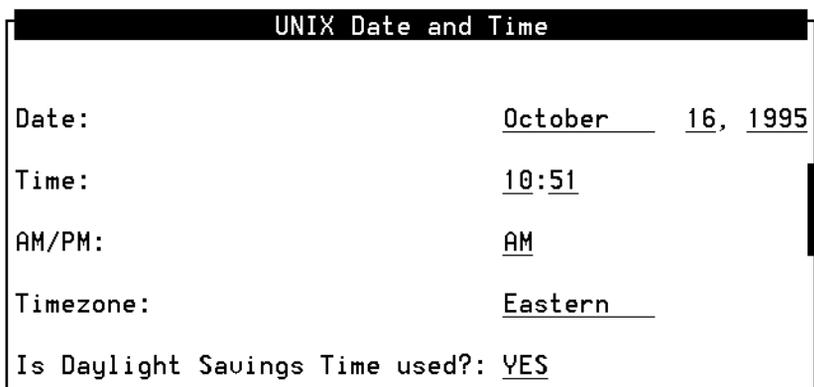


Figure 3-15. UNIX Date and Time Window

2. Check each of the fields under UNIX Date and Time.

If all of the fields are correct, press **F6** (Cancel).

If a field contains incorrect information, continue with the next procedure, [“Changing the UNIX Date and Time Window.”](#)

Changing the UNIX Date and Time Window

The user can change any of the displayed fields. To change one field in the Date and Time window, the user must either change or acknowledge the information in each field.

Changing the Date Field

The date field contains the month, day, and year.

Changing the Month

1. Place the cursor on the `Month` field in the UNIX Date and Time window.
2. If the month shown is not correct, complete Steps a through c:
 - a. Press `F2` (Choices) to display the months of the year ([Figure 3-16](#)).



Figure 3-16. UNIX Month Choices Menu

- b. Use `▲` or `▼` to move the cursor and highlight the correct month.
- c. Press `ENTER` to place the name of the correct month into the month field.



NOTE:

The user can also select the current month by entering the corresponding alphabetic abbreviation from this list: **Ja, F, Mar, Ap, May, Jun, Jul, Au, S, O, N, D.**

- d. Continue with the next procedure “Changing the Day.”

If the month shown is correct, press `ENTER` for no change and continue with the next procedure “[Changing the Day](#).”

Changing the Day

If the day of the month shown is not correct, enter the correct day as a number from 1 to 31 and continue with the next procedure "[Changing the Year.](#)"

If the day of the month shown is correct, press for no change and continue with the next procedure "[Changing the Year.](#)"

Changing the Year

If the year shown is not correct, enter the correct year as a number from 1996 to 2038 and continue with the next procedure "[Changing the Time Field.](#)"

If the year shown is correct, press for no change and continue with the next procedure "[Changing the Time Field.](#)"

Changing the Time Field

If the time shown is not correct, enter the correct time in the form of *hours:minutes* and continue with the next procedure "[Changing the AM/PM Field.](#)"

NOTE:

Use a 12-hour a.m./p.m. standard. Do not use the 24-hour military standard.

If the time shown is correct, press for no change and continue with the next procedure "[Changing the AM/PM Field.](#)"

Changing the AM/PM Field

If AM/PM is not correct as shown, type **a** for a.m. or **p** for p.m. and continue with the next procedure "[Changing the Time Zone Field.](#)"

If AM/PM is correct as shown, press for no change and continue with the next procedure "[Changing the Time Zone Field.](#)"

Changing the Time Zone Field

If the time zone shown is not correct, complete Steps 1 through 3 and continue with the next procedure "[Changing the Is Daylight Savings Time Used Field.](#)"

1. Press (Choices) to display the list of time zones ([Figure 3-17](#)).

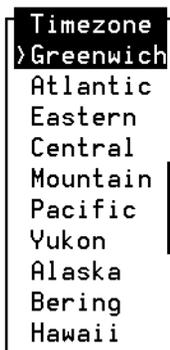


Figure 3-17. UNIX Time Zone Choices Menu

2. Use **▲** or **▼** to move the cursor and highlight the correct time zone.
3. Press **ENTER** to place the name of the correct time zone into the `Timezone` field.

If the time zone shown is correct, press **ENTER** for no change and continue with the next procedure [“Changing the Is Daylight Savings Time Used Field.”](#)

Changing the Is Daylight Savings Time Used Field

1. Type **y** for yes or **n** for no depending upon whether or not daylight savings time is used at any time during the year.
2. Press **F3** (Save) to save the changes and continue with the next procedure [“Acknowledging the Changes to the Date and Time Window.”](#)

Acknowledging the Changes to the Date and Time Window

After the changes have been made to the Date and Time window the user must ensure that the system recognizes the new information. To acknowledge the new information, do the following:

1. Reboot the Lucent INTUITY system. See [“Shutting Down and Rebooting the Lucent Intuity System”](#) for the procedure.

At this time the date and time changes will take affect.

2. Starting at the Lucent INTUITY Main menu ([Figure 3-1](#)) select

```
> Customer/Services Administration
> System Management
> UNIX Management
>UNIX Date and Time
```

The system displays the UNIX Date and Time window ([Figure 3-15](#)).

3. Check each of the fields under UNIX Date and Time to ensure that the changes have been recorded.

Getting Inside the Computer

4

Overview

This chapter describes:

- Proper electrostatic discharge protection procedures
- Power removal and restoration procedures
- Computer chassis access procedures

Purpose

The purpose of this chapter is to provide the correct procedures for accessing the internal components of the MAP/100P.

Protecting against Damage from Electrostatic Discharge

CAUTION:

*Read this section before unpacking the MAP/100P. You **must** observe proper grounding techniques to prevent the discharge of static electricity from your body into ESD-sensitive components.*

Circuit cards and packaging materials that contain ESD-sensitive components are usually marked with a yellow-and-black warning symbol ([Figure 4-1](#)).



Figure 4-1. ESD Warning Symbol

To avoid damaging ESD-sensitive components, follow these rules:

- Handle ESD-sensitive circuit cards only after attaching a wrist strap to the bare wrist. Attach the other end of the wrist strap to a ground that terminates at the system ground, such as any unpainted metallic chassis surface.
- Handle a circuit card by the faceplate or side edges only ([Figure 4-2](#) and [Figure 4-3](#)).

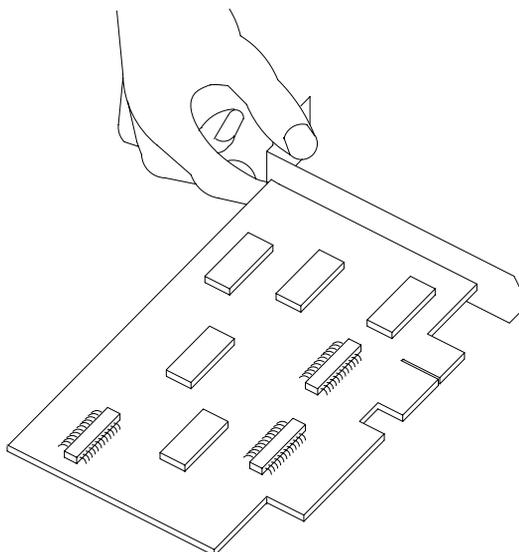


Figure 4-2. How to Hold a Small Circuit Card

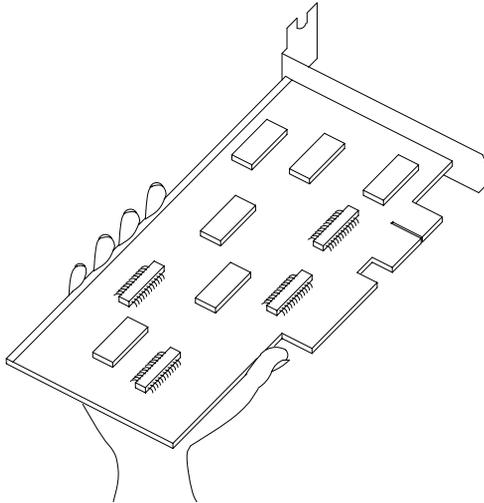


Figure 4-3. How to Hold a Large Circuit Card



CAUTION:

Ensure that your palm is not in contact with the non-component side of the board.

- Keep circuit cards away from plastics and other synthetic materials such as polyester clothing.
- Do not hand circuit cards to another person unless that person is grounded at the same potential level.
- Hold devices such as a hard disk, floppy drive, or streaming tape in the same manner as a large circuit card. The ESD-sensitive area of these components is located on the bottom surface ([Figure 4-4](#)).

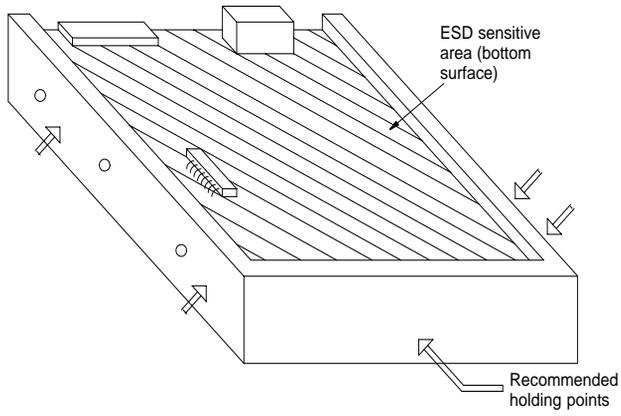
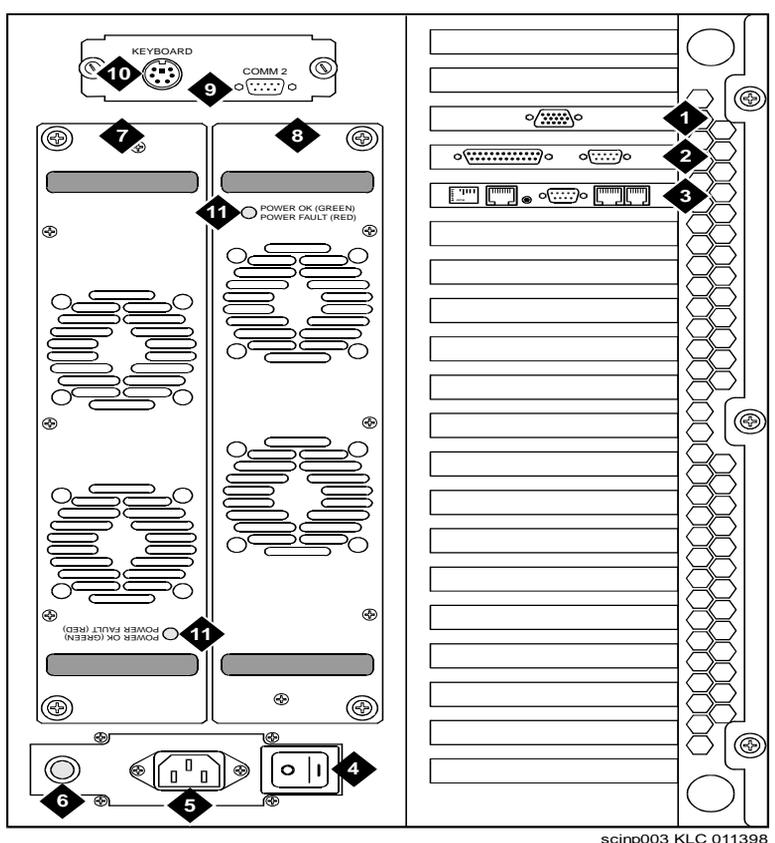


Figure 4-4. ESD-Sensitive Area of an Electronic Component

Removing Power from the MAP/100P

The MAP/100P requires a dedicated power line. The power cord connects to the rear of the MAP/100P at the point labeled AC power input receptacle (Figure 4-5). Before you begin any work in the MAP/100P you must disconnect the incoming power.



scinp003 KLC 011398

- | | | | |
|----|-------------------------|-----|-------------------|
| 1. | Video circuit card | 7. | Power Supply 1 |
| 2. | P5 200 MHz CPU | 8. | Power Supply 2 |
| 3. | Remote Maintenance card | 9. | COM2 port |
| 4. | ON/OFF power switch | 10. | Keyboard port |
| 5. | AC power input | 11. | Power supply LEDs |
| 6. | Fuse | | |

Figure 4-5. MAP/100P Rear View

To remove power from the MAP/100P, do the following:

1. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#).
2. Turn off the monitor's power switch.
The green or amber lamp on the front bottom of the monitor should be off.
3. Turn off the power switch on the lower back of the MAP/100P ([Figure 4-5](#)).
4. Unplug the MAP/100P from the power outlet.

Accessing the Circuit Card Cage

A dress cover provides protection for the internal components of the MAP/100P. You must remove the side dress cover to access the circuit card cage.

DANGER:

Shut power off before removing the dress cover. See "[Removing Power from the MAP/100P](#)" for the procedure.

To remove the side dress cover, do the following:

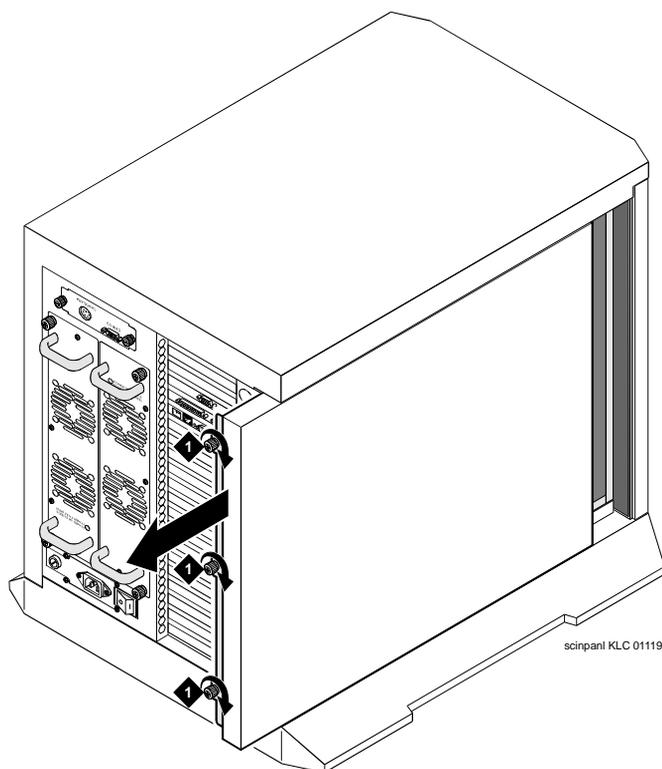
1. Loosen the three thumb screws in the back of the unit ([Figure 4-6](#)).



NOTE:

These are captive screws.

2. Slide the side dress cover toward the back of the MAP/100P.



1. Retaining thumb screw

Figure 4-6. Accessing the Circuit Card Cage

Replacing the Side Dress Cover

To replace the side dress cover, do the following:

1. Align the side dress cover with the MAP/100P chassis.
2. Slide the side dress cover back until it locks into place.



NOTE:

Make sure the tab on the front of the dress cover slides under the lip of the chassis.

3. Tighten the thumb screws on the back of the MAP/100P.

Restoring Power to the MAP/100P

To restore power to the MAP/100P, do the following:

1. Plug the MAP/100P power cord into the designated power outlet.
2. Turn on the power switch on the lower rear of the MAP/100P ([Figure 4-5](#)).
3. Turn on the monitor's power switch.

The green or amber lamp on the front bottom of the monitor should be lit.

Replacing or Installing Circuit Cards

5

Overview

This chapter describes:

- Configuring circuit cards in the MAP/100P
- Types of circuit cards
- General steps for circuit card installation
- Specific procedures for installation of standard and optional MAP/100P circuit cards
- Settings for resource options

Purpose

The purpose of this chapter is to ensure that:

- Circuit cards are installed correctly
- Resource options are set correctly

General Procedures

The general procedures include:

- Removing a circuit card
- Installing a circuit card

Removing a Circuit Card



WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#) in [Chapter 4, “Getting Inside the Computer”](#) for detailed electrostatic discharge precautions.

To remove a circuit card, do the following:

1. verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.



NOTE:

If the circuit card being replaced is defective, note all symptoms of failure and include this information with the circuit card when it is returned.

2. If the system is in service, perform the following steps.
 - a. Stop the voice system. See [““Stopping the Voice System””](#) in [Chapter 3, “Common System Procedures”](#) for voice system administration.
 - b. Shut down the voice system. See [“Shutting Down the System”](#) in [Chapter 3, “Common System Procedures”](#) for voice system administration.
3. Remove power from the MAP/100P. See [“Removing Power from the MAP/100P”](#) in [Chapter 4, “Getting Inside the Computer,”](#) for power removal procedures.
4. Remove the dress cover. See [“Accessing the Circuit Card Cage”](#) in [Chapter 4, “Getting Inside the Computer,”](#) for component removal procedures.
5. Locate the card to be replaced within the card cage. Disconnect any attached cables. Note the connectivity of each cable.
6. If there are ribbon cables attached to other cards which would impede the removal of the card, disconnect them and place them to the side. Note the connectivity of each cable.

7. Remove the retaining screw from the circuit card faceplate and save it.
8. Remove the circuit card from the backplane slot by gently pulling on each corner of the card.



NOTE:

The backplane connector slots are labeled 1 through 20. Make sure to install the replacement card in the same backplane slot.

9. Remove the circuit card from the MAP/100P chassis.

Installing a Circuit Card



WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#) in [Chapter 4, “Getting Inside the Computer”](#), for detailed electrostatic discharge precautions.

To install a circuit card, do the following:

1. Remove the new circuit card from its ESD protective wrapping.



NOTE:

Keep the package and all ESD protective wrapping. If you must return a card for repair, re-use of the replacement unit packaging is necessary to meet the manufacturer’s warranty.

2. Verify the circuit card switch and jumper settings. Ensure address switches and jumpers are set to match the old card.



NOTE:

See the specific instructions, listed later in this chapter, for each type of circuit card being installed then continue with [Step 3](#).

3. Holding the circuit card by its upper corners, slide the card into the backplane connector slot position from which you removed the damaged card. If necessary, refer to [Appendix A, “System Configuration”](#) to determine the correct slot in which to place the card.
4. Apply even pressure to both corners of the circuit card until it is locked into the backplane.
5. Secure the circuit card faceplate into position by replacing the retaining screw.
6. Replace all cables on the new card. Make sure these cables are attached to their proper terminations.

7. Replace all cables removed from other cards. Make sure these cables are attached to their proper terminations.
8. Replace the dress cover. See [“Replacing the Side Dress Cover”](#), in [Chapter 4, “Getting Inside the Computer”](#) for component replacement procedures.
9. Apply power to the unit. See [“Restoring Power to the MAP/100P”](#) in [Chapter 4, “Getting Inside the Computer”](#) for instructions on restoring power.
10. Reboot the voice system. See [“Shutting Down and Rebooting the Lucent Intuity System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.
11. Verify the installation of the circuit card by doing the following:



NOTE:

This procedure will only verify the installation of Tip/Ring and ACCX circuit cards.

- a. Start at the Lucent™ INTUITY™ Main menu ([Figure 5-1](#)).

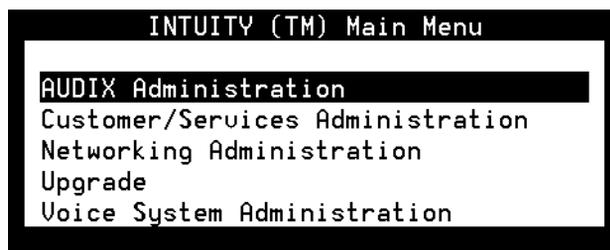


Figure 5-1. Lucent INTUITY Main Menu

- b. Select

> Customer/Services Administration

> System Verification

> View Installed Hardware

The system displays the View Installed Hardware window
 (Figure 5-2).

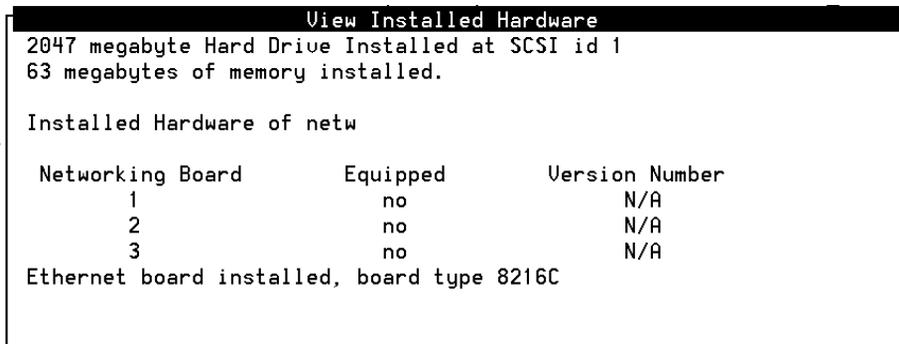


Figure 5-2. View Installed Hardware Window

- c. Verify that the system has identified the new circuit card.

Settings for Optional Circuit Cards

The following sections list the specific jumper and switch settings for optional circuit cards.

WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#) in [Chapter 4, “Getting Inside the Computer”](#) for detailed electrostatic discharge precautions.

This section provides the following information on the optional feature circuit cards:

- Switch and jumper settings
- Other installation requirements that are specific to the particular circuit card you are installing

In general, circuit cards are not preset at the factory. You must set the switches and jumpers (resource options) *before* you install the cards. When you set the switches according to the instructions in this book, remember that OFF is equivalent to open and ON is equivalent to closed.

Multi-Port Serial Circuit Card

The multi-port serial card for the MAP/100P (Figure 5-3) has eight serial ports. Each port is a 6-wire, RJ-11 modular jack.

Modular adapters convert the modular jacks to RS-232 connectors. You need one adapter for each device to be connected. All eight serial ports can be used for modem, terminal, or other DTE or DCE components, provided they are not being used for switch integration.

You can install only one multi-port serial card in the MAP/100P.

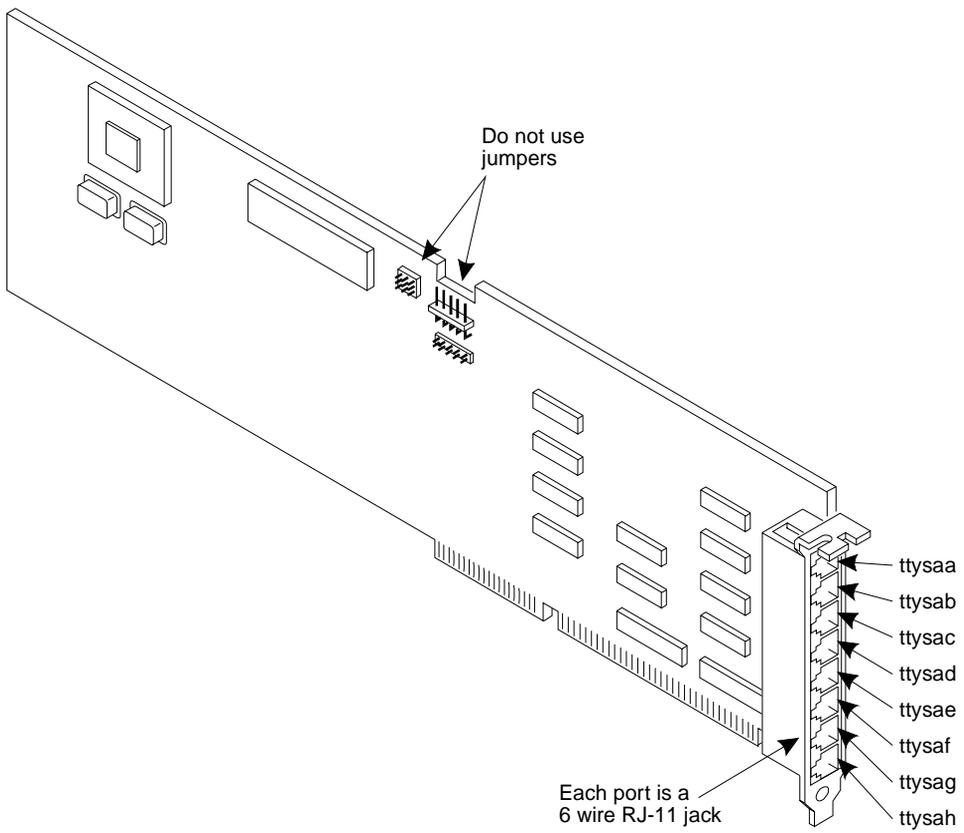


Figure 5-3. Multi-Port Serial Circuit Card

Setting the Resource Options

The multi-port serial circuit card requires no hardware configuration. Verify that no jumpers are set on this card.

Placing the Multi-port Serial Circuit Card in the MAP/100P

See "[General Procedures](#)" above for multi-port serial circuit card installation procedure.

ACCX (AYC22) Circuit Card

The Lucent INTUITY system supports up to eight networking channels on the MAP/100P via digital and analog remote connections using DCP and RS-232 links respectively from the ACCX circuit card ([Figure 5-4](#)). An ACCX circuit card terminates four data channels in one of the following combinations:

- Two DCP lines, each providing two I-channels for data. Depending on the version of the switch you are connecting to, you may only be able to use one of the two I-channels of each DCP circuit as shown in the following list:
 - System 75 R1V3, DEFINITY G1 R1V4, and DEFINITY G3i, G3s, or G3vs Version 1 only support one I-channel
 - DEFINITY G3i, G3s, and G3vs Version 2 can use both I-channels. The option must be purchased, installed, and administered on the switch before system administration is performed
- Four RS-232 ports
- One DCP line (two I-channels) and two RS-232 ports

You can install a maximum of three ACCX cards in the MAP/100P.

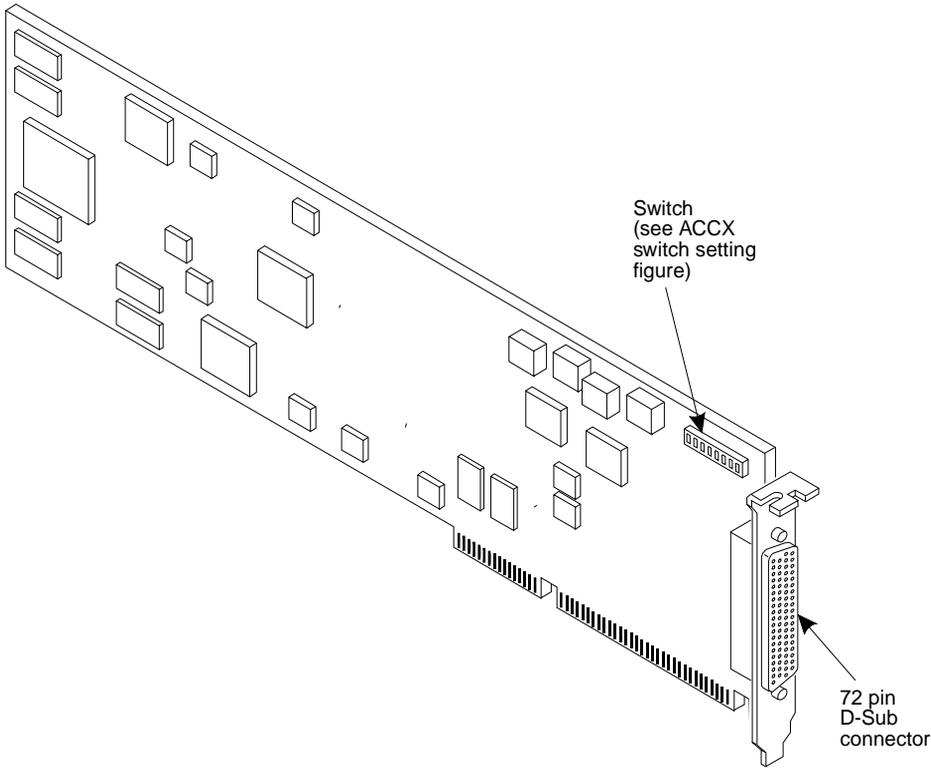
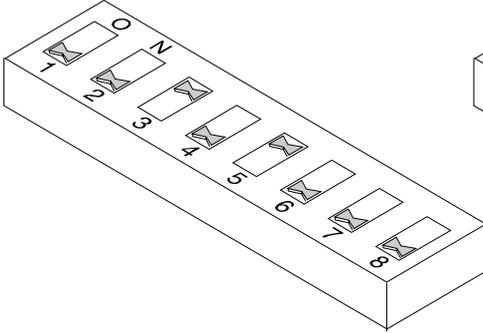


Figure 5-4. ACCX Networking Circuit Card

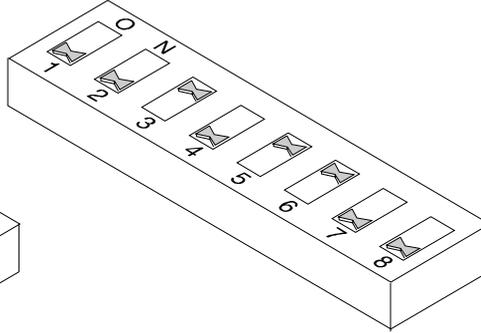
Setting the Resource Options

Each ACCX card includes eight dip switches. These switches represent SA4 through SA11 on the ISA Bus and are used to set the address of the card ([Figure 5-5](#)).

Base I/O address = 140 hex
ACCX (AYC22) Card #1



Base I/O address = 340 hex
ACCX (AYC22) Card #2



Base I/O address = 540 hex
ACCX (AYC22) Card #3

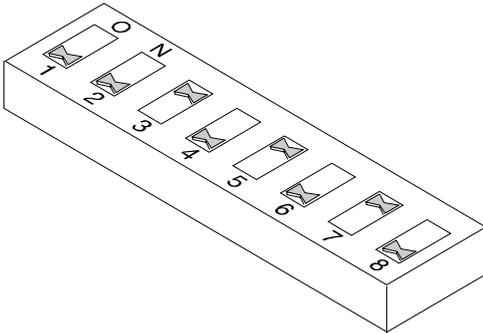


Figure 5-5. Switch Settings for the MAP/100P ACCX Card

Placing the ACCX Circuit Card in the MAP/100P

See "[General Procedures](#)" above for the ACCX circuit card installation procedure.

Switch Interface Circuit Cards

The Lucent INTUITY system interfaces with the customer switch through:

- DCIU circuit card
- VBPC circuit card

DCIU Circuit Card

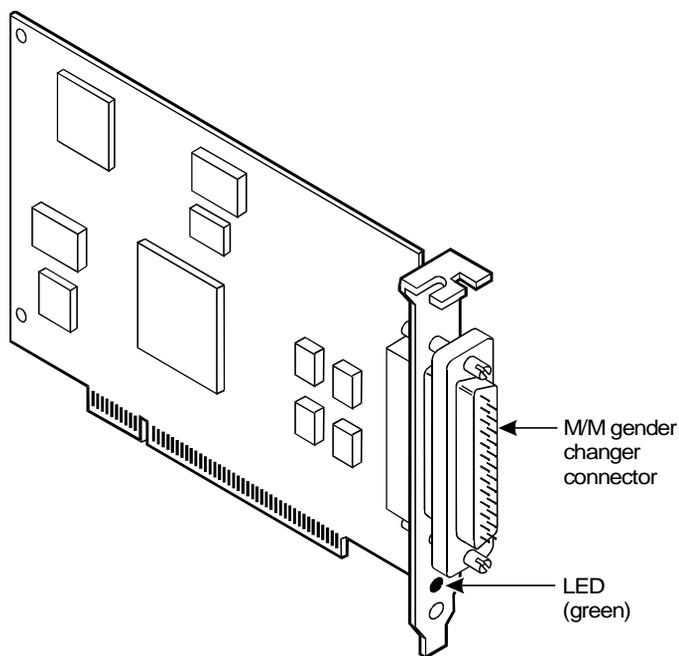
The DCIU circuit card ([Figure 5-6](#)) connects to Lucent switches through an X.25 link. Your system may interface with the link through this circuit card.



NOTE:

In order to use this circuit card the DCIU Switch Integration set must be installed on the Lucent INTUITY system. See [“Installing the DCIU Switch Integration Set”](#) in [Chapter 8, “Installing Base System Software”](#), for the procedure.

You can install only one DCIU circuit card in the MAP/100P.



dciau KLC 080696

Figure 5-6. DCIU Circuit Card

Setting the Resource Options

The DCIU circuit card contains no jumpers or switches that you must set before you install the circuit card.

Replacing a DCIU Circuit Card

See [“General Procedures”](#) for the DCIU circuit card removal and installation procedures.

Installing a DCIU Circuit Card

Use the following procedure to install a DCIU circuit card in a system which previously did not have a DCIU circuit card installed.

1. Stop the voice system. See "[Stopping the Voice System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
2. Install the Lucent INTUITY DCIU Switch Integration set. See "[Installing the DCIU Switch Integration Set](#)" in [Chapter 8, "Installing Base System Software"](#) for the procedure.
3. Install the DCIU circuit card. See "[Installing a Circuit Card](#)" for the procedure.
4. Reboot the Lucent INTUITY system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.

Digital Station Interface Circuit Card

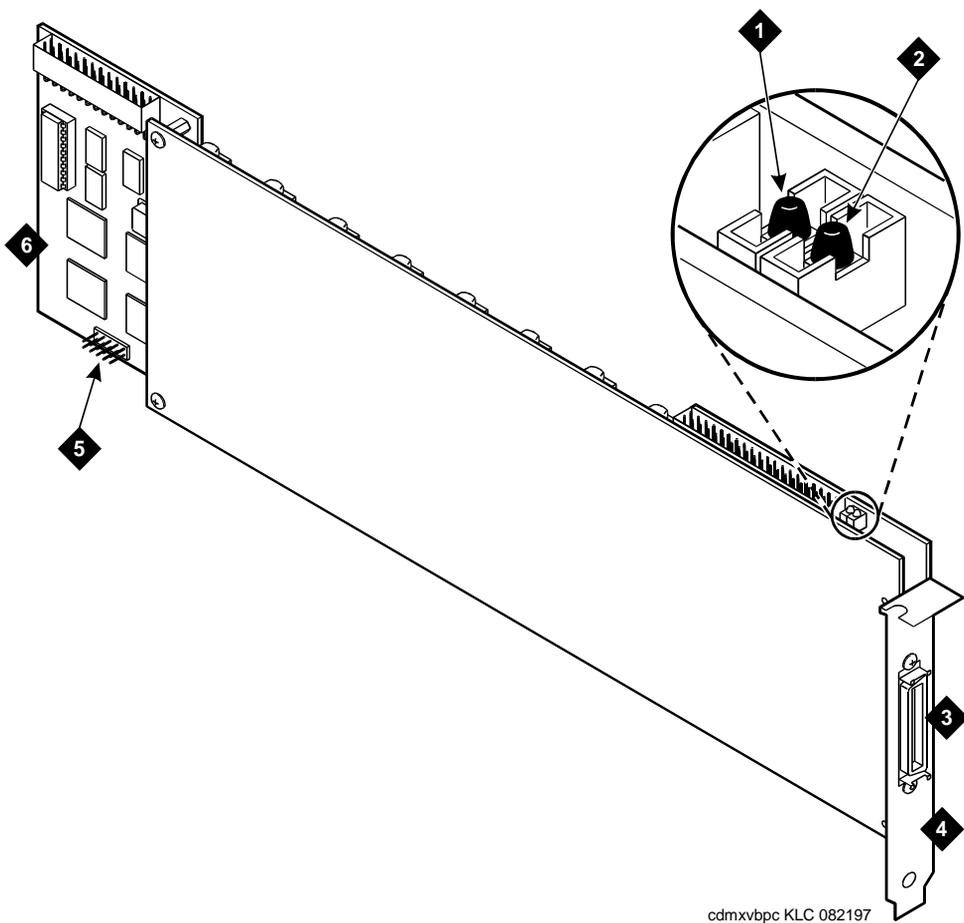
The digital station interface circuit card ([Figure 5-7](#)) connects to Lucent switches. Your system may interface with the switch through this circuit card.



NOTE:

In order to use this circuit card the Digital Station Interface Switch Integration set must be installed on the Lucent INTUITY system. See "[Installing the DCIU Switch Integration Set](#)" in [Chapter 8, "Installing Base System Software"](#), for the procedure.

You can install only one digital station interface circuit card in the MAP/100P.



- | | |
|---------------------|---------------------------|
| 1. Green LED | 4. Serial number location |
| 2. Red LED | 5. Jumpers |
| 3. Cable connection | 6. Serial number location |

Figure 5-7. Digital Station Interface Circuit Card

The digital station interface circuit card on jumper field which must be verified before you install the circuit card. There should be no jumpers placed on the jumper field.

Ethernet LAN Circuit Cards

There are two versions of the Ethernet LAN circuit card supported by the Lucent INTUITY system. Both versions allow you to connect the Lucent INTUITY system to your local area network.

Version 1

Version 1 of the Ethernet LAN circuit card is shown in [Figure 5-8](#).

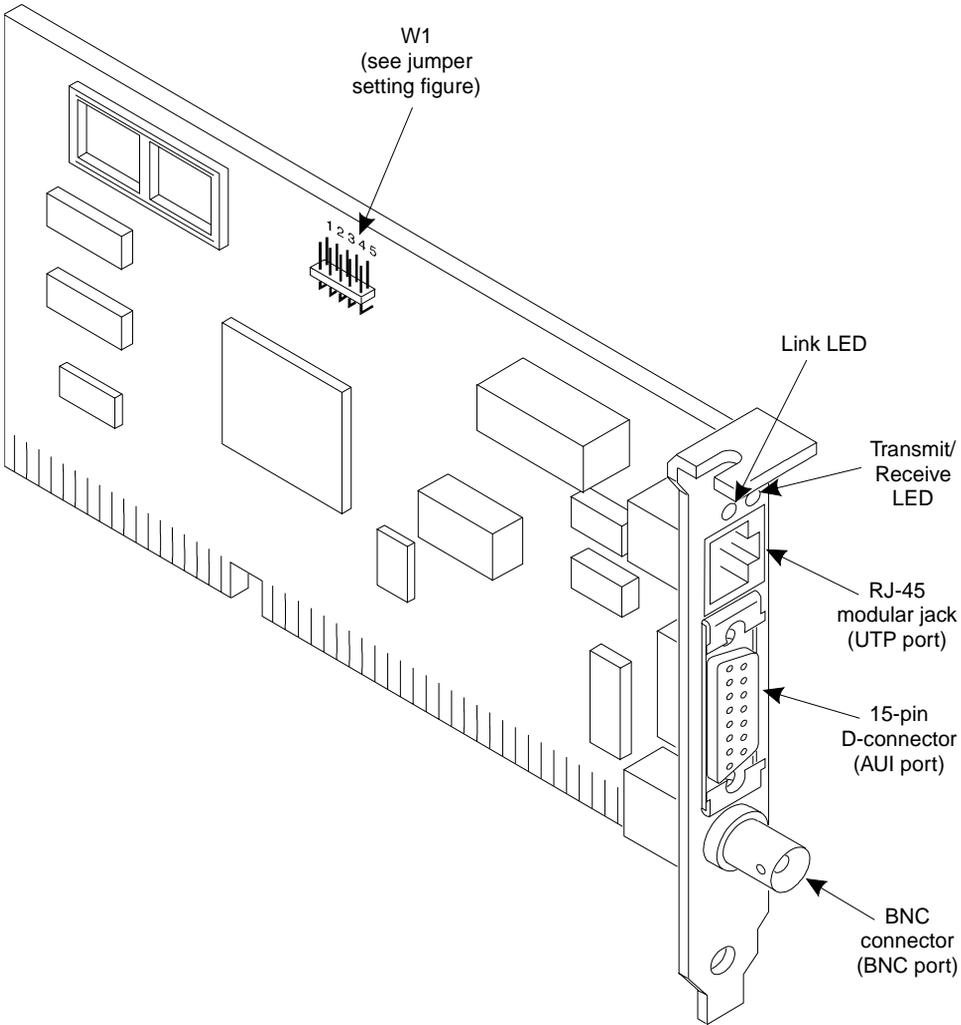


Figure 5-8. Ethernet LAN Circuit Card - Version 1

The default software configuration is as follows:

- IRQ - 10
- I/O base address - 280
- RAM base address - D8000

The default setting for the jumper on W1 is "1," ([Figure 5-9](#)). This position configures the card to be software programmable beginning at the default settings.

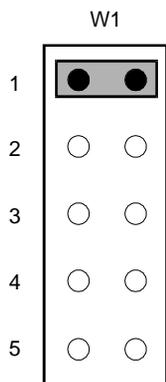


Figure 5-9. Ethernet LAN Circuit Card Software Programmable Jumper Setting

There are no switches to set on the Ethernet LAN circuit card.

Version 2

Version 2 of the Ethernet LAN circuit card is shown in [Figure 5-10](#).

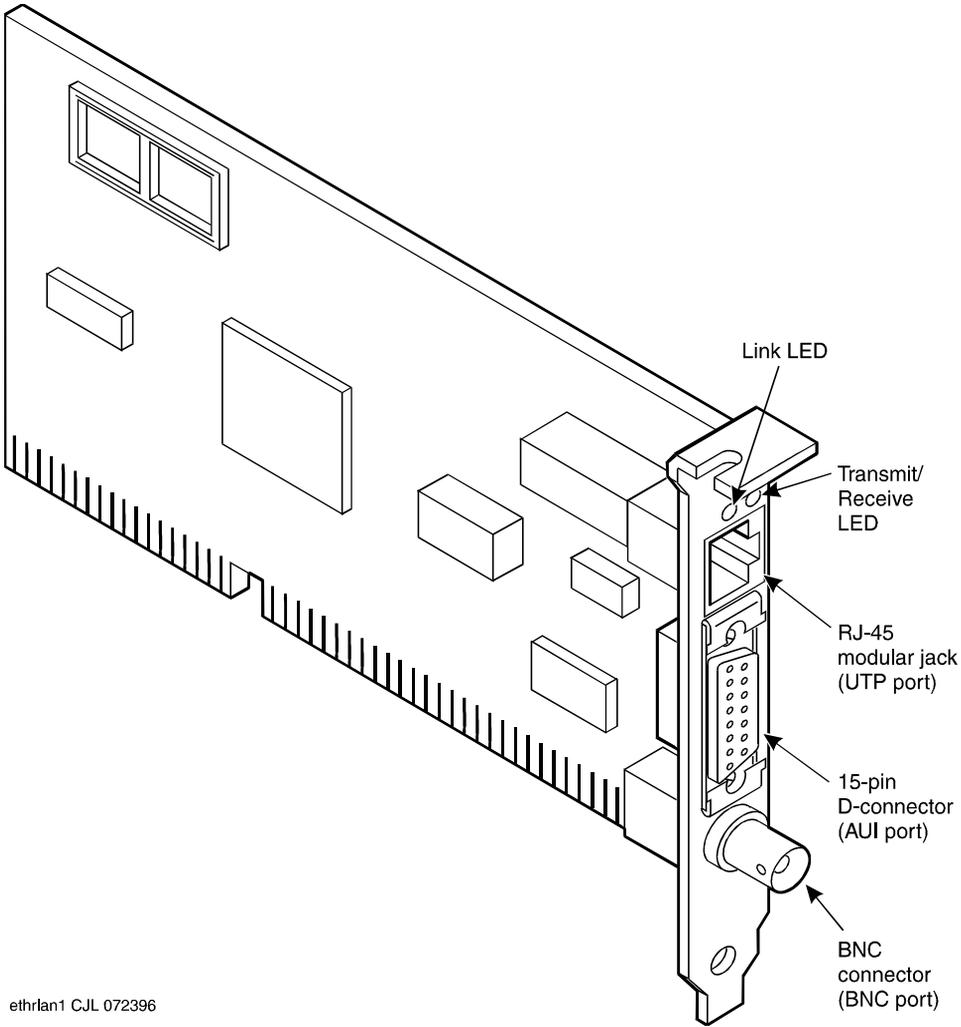


Figure 5-10. Ethernet LAN Circuit Card - Version 2

The default software configuration is as follows:

- IRQ - 10
- I/O base address - 280
- RAM base address - D8000

There are no jumpers or switches associated with Version 2 of the Ethernet LAN circuit card.

Placing the Ethernet LAN Circuit Card in the MAP/100P

See "[General Procedures](#)" above for the Ethernet LAN circuit card installation procedure.

CAUTION:

Do NOT cable the LAN circuit card until after the system has been powered up and TCP/IP administration has been completed. This will ensure that the customer's LAN is not disrupted. See [Chapter 8, "Initial Administration and Test for TCP/IP LAN Connectivity and Lucent Intuity Message Manager"](#) in "[INTUITY™ Interchange Release 5.3 MAP/100P System Installation](#)" for more information on cabling and TCP/IP administration.

Installation of the Ethernet LAN circuit card must include the following sequence of operation.

1. Install the Ethernet LAN circuit card in the MAP/100P.
2. Restore power to the system. See "[Restoring Power to the MAP/100P](#)" in [Chapter 4, "Getting Inside the Computer"](#) for the procedure.
3. Administer the TCP/IP. See [Chapter 8, "Initial Administration and Test for TCP/IP LAN Connectivity and Lucent Intuity Message Manager"](#) in "[INTUITY INTERCHANGE Release 5.3 MAP/100P System Installation](#)" for more information on TCP/IP administration.
4. Shut down the system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
5. Cable the Ethernet LAN circuit card. See the *EtherCard Elite Ultra Adapters Users Guide* packaged with the Ethernet LAN circuit card for cabling procedures.
6. Reboot the system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.

Configuring the LAN Circuit Card

To configure the LAN circuit card, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 5-1](#)), select

```
> Networking Administration
```

```
> TCP/IP Administration
```

The system displays the TCP/IP Administration window ([Figure 5-11](#)).

```
TCP/IP Administration
UNIX Machine Name: cbdoc2
IP Address: 135.7.13.112
Subnet Mask: 255.255.0.0
Default Gateway IP Address: _____
```

Figure 5-11. TCP/IP Administration Window

2. Press **F8** (Change Keys).
3. Press **F2** (Board Configuration).

The system displays the Ethernet Board Configuration window ([Figure 5-12](#)).

```
Ethernet Board Configuration
Network Interface Type: AUI or 10BASE-T
```

Figure 5-12. Ethernet Board Configuration Window

4. Press **F3** (Save).

The system displays the Ethernet Board Configuration Results window ([Figure 5-13](#)).

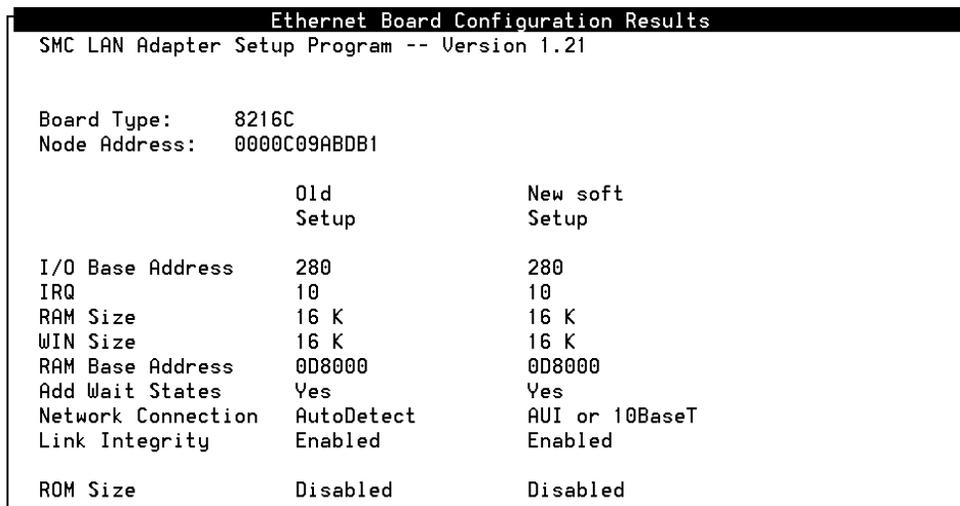


Figure 5-13. Ethernet Board Configuration Results Window

5. Make sure the values displayed are the same as those shown in [Table 5-1](#).

Table 5-1. Ethernet LAN Circuit Card Configuration

Parameter	Setting
I/O Base Address	280
IRQ	10
RAM Size	8 K
RAM Base Address	0D8000
Add Wait States	Yes
Network Connection	TwPr - No Link
Link Integrity	Disabled
ROM Size	Disabled
ROM Base Address	Disabled
Pnpboot	Disable

6. If the parameters are not the same as those shown in [Table 5-1](#), contact your remote maintenance service center.

Speech and Signal Processor (AYC43W) Circuit Card

The SSP circuit card ([Figure 5-14](#)) contains switches and jumpers that you must set before you install the circuit card in the MAP/100P. The MAP/100P requires two SSP cards.

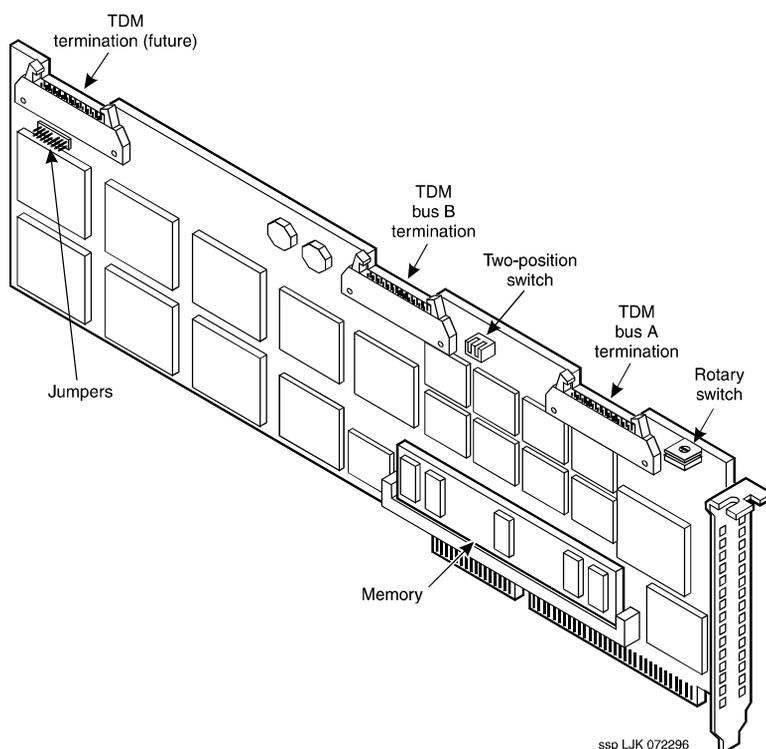


Figure 5-14. Speech and Signal Processor Circuit Card

Jumper Settings

[Figure 5-14](#) shows the location of the SSP circuit card jumpers. There should be no jumpers installed on the SSP circuit card.

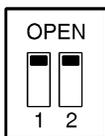
Switch Settings

There are two types of switches on the SSP circuit card:

- Two-position switches
- Rotary switch

Two-Position Switch Settings

[Figure 5-15](#) shows the location of the SSP circuit card two-position switches. If the SSP circuit card is not located at the end of the TDM bus, both switches should be set to open. The switches should be set to closed if the SSP circuit card is located at the end of the bus.



ssp-sw LJK 072296

Figure 5-15. SSP Circuit Card Two-Position Switches

Rotary Switch Settings

[Figure 5-16](#) shows the rotary switch which must be set at zero.

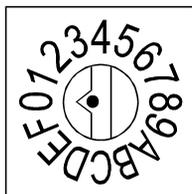


Figure 5-16. SSP Circuit Card Rotary Switch

Memory

The SSP circuit card is equipped with 16 Mbytes of memory contained on a dual in-line memory module (DIMM). The DIMM is located in the lower portion of the SSP circuit card ([Figure 5-14](#)).



CAUTION:

The DIMM is not field serviceable.

Replacing a Defective SSP Circuit Card

To replace a defective SSP circuit card, complete the procedures listed in [“General Procedures.”](#)

Adding an SSP Circuit Card

CAUTION:

Use this procedure when adding an SSP circuit card to a system which is not currently equipped with one. Do not use this procedure when replacing a defective circuit card.

NOTE:

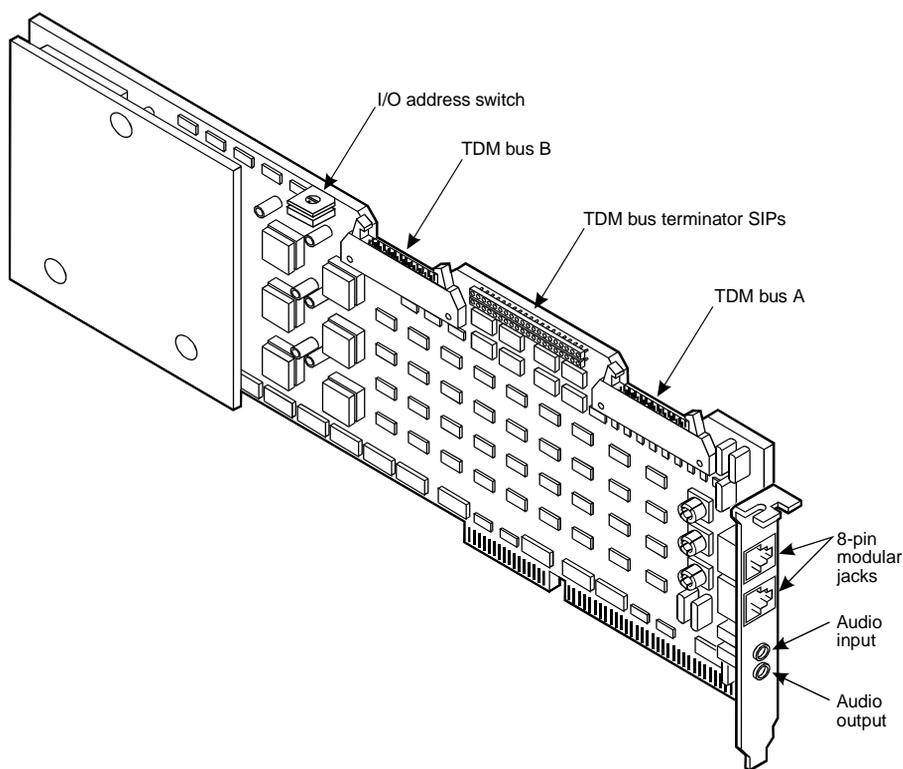
The Lucent INTUITY system supports only one SSP circuit card.

To add an SSP circuit card to a Lucent INTUITY system, do the following:

1. Make sure you have a TDM bus cable.
The TDM bus cable connects all of the Tip/Ring circuit cards as well as the SSP circuit card.
2. Remove the Tip/Ring circuit card from Slot 1. See [“Removing a Circuit Card,”](#) above for the procedure.
3. Verify that the TDM bus terminator SIPs have been installed on the Tip/Ring circuit card. See [“Replacing a Terminator SIP”](#) in [Chapter 7, “Replacing Other Components”](#).
4. Replace the Tip/Ring circuit card in Slot 1. See [“Installing a Circuit Card,”](#) above for the procedure.
5. Remove the remaining Tip/Ring circuit cards. See [“Removing a Circuit Card,”](#) above for the procedure.
6. Remove the TDM bus terminator SIPs from the Tip/Ring circuit cards. See [“Replacing a Terminator SIP”](#) in [Chapter 7, “Replacing Other Components”](#).
7. Replace the remaining Tip/Ring circuit cards. See [“Installing a Circuit Card,”](#) above for the procedure.
8. Verify the two-position selector switches, on the SSP circuit card, are set as shown in [Figure 5-15](#).
9. Install the SSP circuit card in Slot 12. See [“Installing a Circuit Card,”](#) above for the procedure.

10. Install the TDM bus cable.

Attach the TDM bus cable to the SSP circuit card or AYC30 Tip/Ring circuit cards using the TDM Bus A termination ([Figure 5-14](#) and [Figure 5-17](#)). Attach the TDM bus cable to AYC10 Tip/Ring circuit cards using the only TDM bus termination point ([Figure 5-18](#)).



ngr KLC 070296

Figure 5-17. AYC30 Tip/Ring Circuit Card

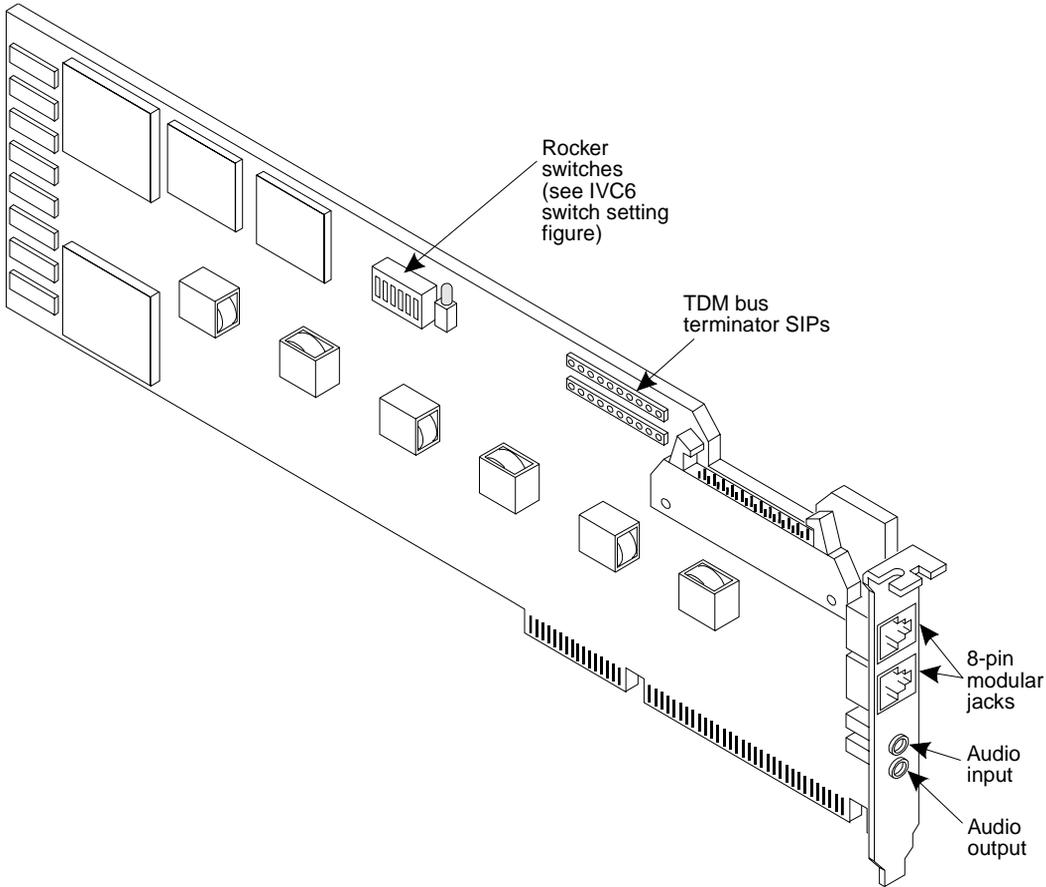


Figure 5-18. AYC10 Tip/Ring Circuit Card

Settings for Standard Circuit Cards



WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See "[Protecting against Damage from Electrostatic Discharge](#)," in [Chapter 4](#), "[Getting Inside the Computer](#)" for detailed electrostatic discharge precautions.

This section provides the following information on the standard circuit cards that are included with every MAP/100P:

- Switch and jumper settings
- Other installation requirements that are specific to the particular circuit card you are installing

Tip/Ring Circuit Cards

The Tip/Ring circuit cards provide the channels which are used by the Lucent INTUITY system. There are six channels on each Tip/Ring circuit card. The MAP/100P accommodates up to eleven Tip/Ring circuit cards. You will install either of the following Tip/Ring circuit cards:

- AYC10 (IVC6) ([Figure 5-18](#))
- AYC29 (IVC6IA)
- AYC30 (NGTR) ([Figure 5-17](#))

AYC10 (IVC6) Tip/Ring Circuit Card

Each of the possible eleven AYC10 Tip/Ring circuit cards in the MAP/100P has a unique address. The addresses are set on the card switch bank (Figure 5-19). There are no jumpers to set on the AYC10 Tip/Ring circuit card.

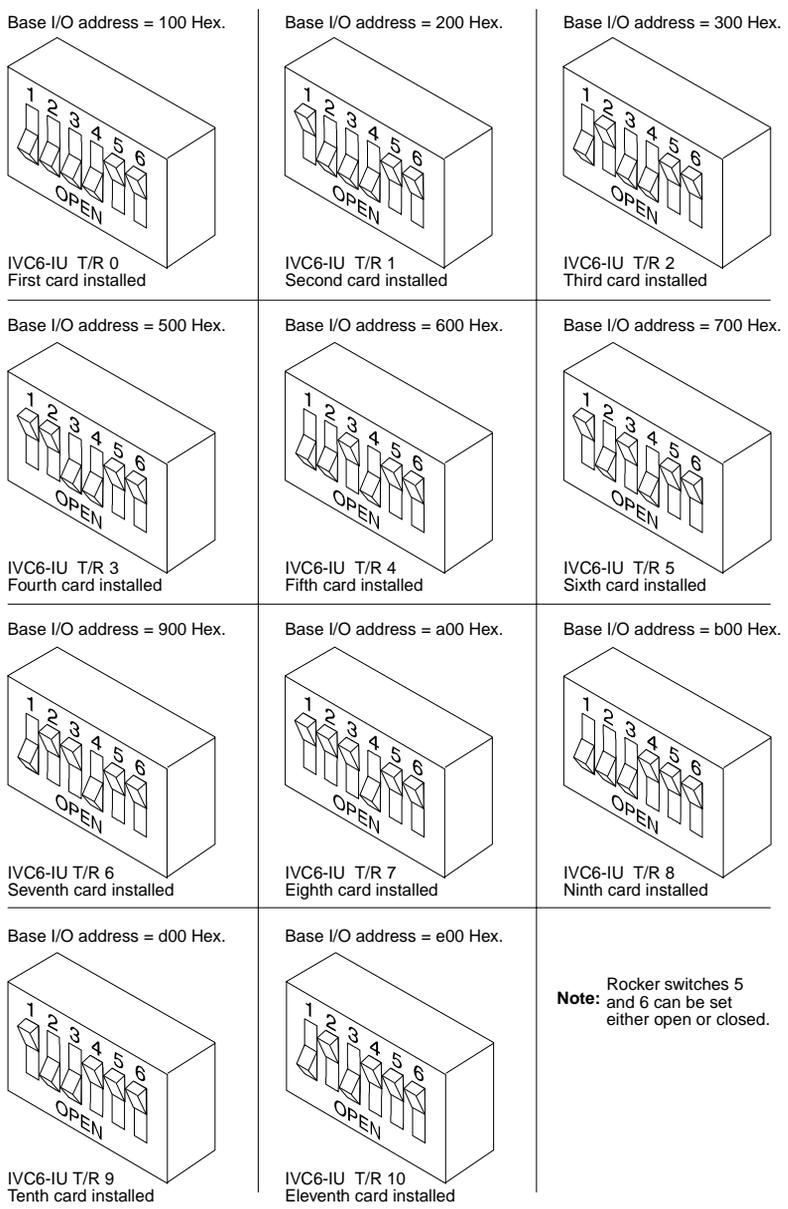


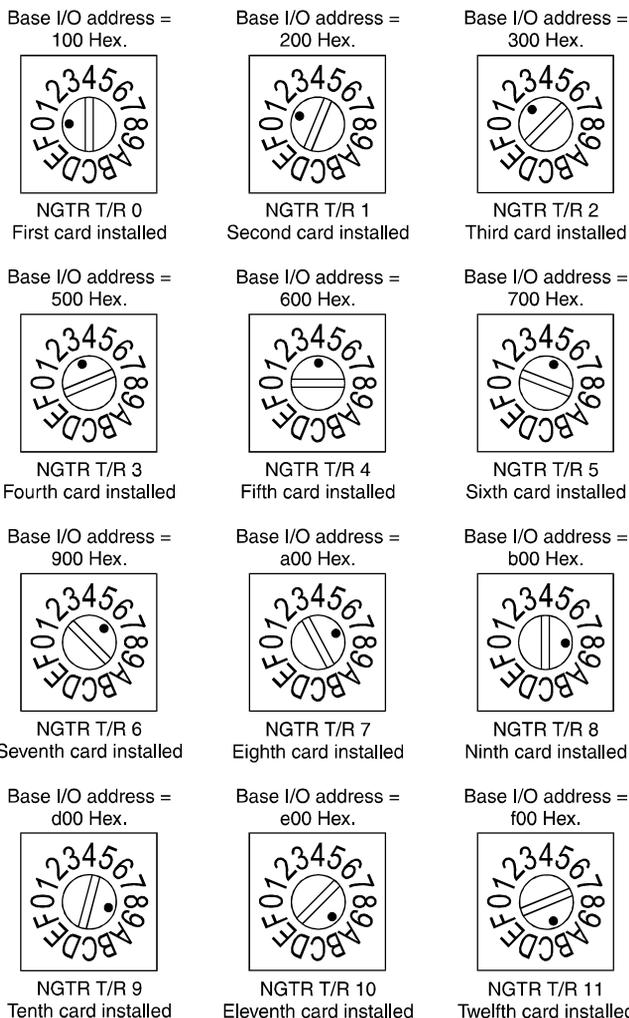
Figure 5-19. IVC6 (AYC10) Tip/Ring Switch Settings

AYC29 (IVC6IA) Tip/Ring Circuit Card

The AYC29 Tip/Ring circuit card is the Australian version of the AYC10 Tip/Ring circuit card. See [“AYC10 \(IVC6\) Tip/Ring Circuit Card”](#) above for jumper information.

AYC30 (NGTR) Tip/Ring Circuit Card

Each of the possible eleven AYC30 Tip/Ring circuit cards in the MAP/100P has a unique address. The addresses are set on the card switch bank ([Figure 5-20](#)). There are no jumpers to set on the AYC30 Tip/Ring circuit card.



swcvng3 KLC 091796

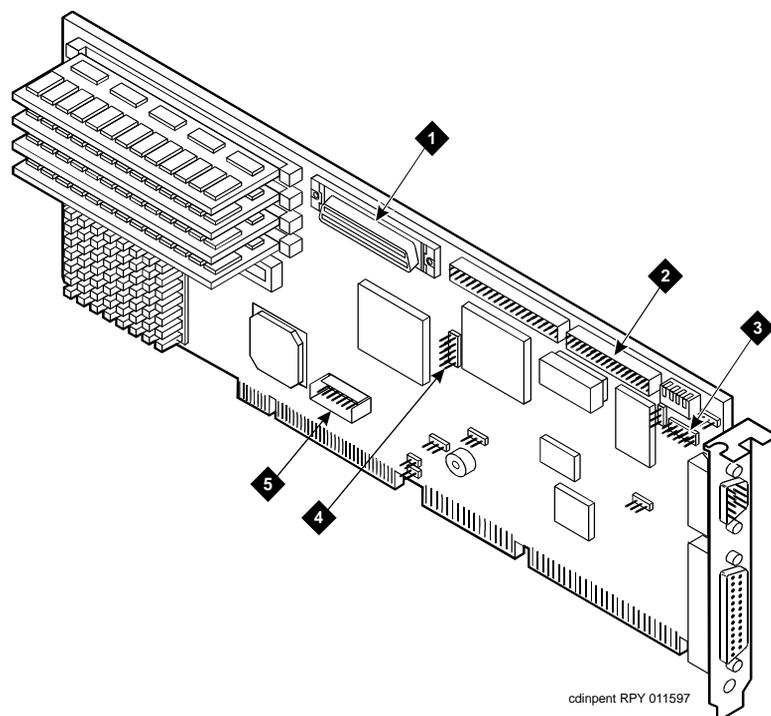
Figure 5-20. AYC30 Tip/Ring Circuit Card Switch Settings

Placing the Tip/Ring Circuit Card in the MAP/100P

See "[General Procedures](#)" above for the Tip/Ring circuit card installation procedure.

P5 200 MHz CPU Circuit Card

The P5 200 MHz CPU is packaged on a single PC/AT-compatible circuit card ([Figure 5-21](#)) that plugs into the backplane. There is one P5 200 MHz CPU circuit card installed in the MAP/100P.



- | | | | |
|----|--------------------------|----|---------------------------|
| 1. | SCSI cable connector | 4. | PS2 mouse cable connector |
| 2. | Diskette cable connector | 5. | Keyboard cable connector |
| 3. | COM2 cable connector | | |

Figure 5-21. P5 200 MHz CPU Circuit Card and Jumper Locations

Setting the Resource Options

The resource options for the P5 200 MHz CPU circuit card are set by jumpers and switches.

Jumper Settings

The P5 200 MHz CPU card has jumpers that you must verify before you install the circuit card ([Figure 5-22](#)).

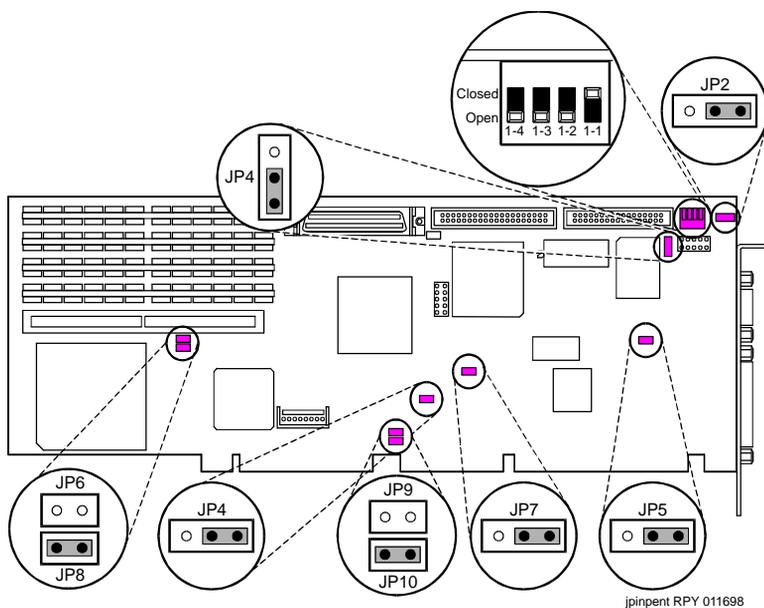


Figure 5-22. P5 200 MHz CPU Circuit Card Jumper and Switch Settings

Switch Settings

The P5 200 MHz CPU card has switches that you must set before you install the circuit card ([Figure 5-22](#)).

Placing the P5 200 MHz CPU Circuit Card in the MAP/100P

To place the P5 200 MHz CPU circuit card in the MAP/100P, do the following:

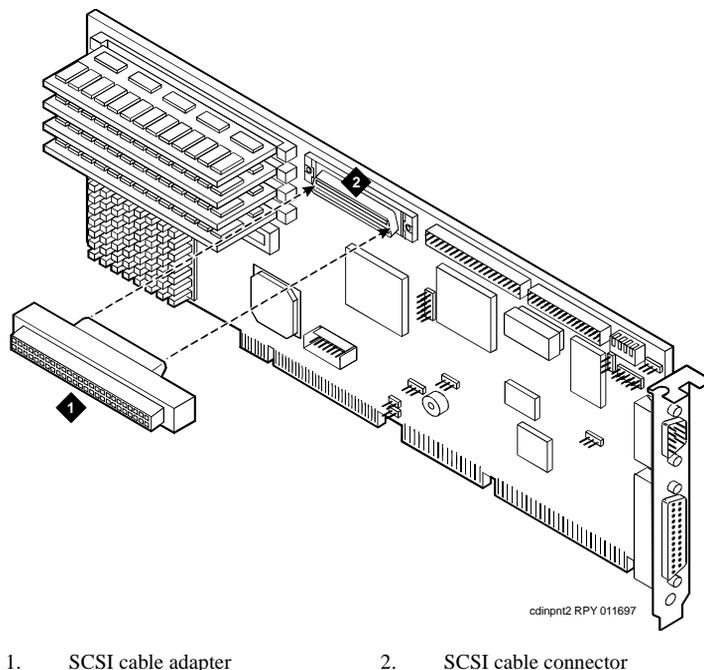
1. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
2. Access the circuit card cage. See [“Accessing the Circuit Card Cage”](#), in [Chapter 4, “Getting Inside the Computer”](#), for the procedure.
3. Remove the video controller card from PCI Slot 1. See [“Removing a Circuit Card”](#) above for the procedure.



NOTE:

PCI Slot 1 is the eighteenth slot from the bottom of the MAP/100P.

4. Attach the SCSI cable adapter to the P5 200 MHz CPU circuit card ([Figure 5-23](#)).



1. SCSI cable adapter
2. SCSI cable connector

Figure 5-23. Attaching the SCSI Cable Adapter

5. Complete [Step 1](#) and [Step 2](#) in "[Installing a Circuit Card](#)" above.
6. Attach the keyboard cable to the keyboard pins on the P5 200 MHz CPU circuit card.
7. Complete [Step 3](#) under "[Installing a Circuit Card](#)" above.



NOTE:

Place the P5 200 MHz CPU circuit card in Slot 17.

8. Attach the SCSI cable to the SCSI cable adapter on the P5 200 MHz CPU circuit card.



NOTE:

The SCSI cable has a label which contains the following message:

H600-449 6() ISS. ()
MAP/100P SCSI CA
(SCSI/() -P5/100)



NOTE:

The SCSI cable will be routed over top of the disk activity cable.

9. Attach the COM2 cable to the P5 200 MHz CPU circuit card.
10. Attach the diskette drive cable to the diskette drive cable pins on the P5 200 MHz CPU circuit card.



NOTE:

The diskette drive cable has a label which contains the following message:

H600-449 6() ISS. ()
MAP/100 Floppy CA
(Floppy/() -P5/100)

11. Replace the video controller circuit card in PCI Slot 1. See "[Installing a Circuit Card](#)" below for the procedure.



NOTE:

PCI Slot 1 is the eighteenth slot from the bottom of the MAP/100P.

12. Complete [Step 4](#) through [Step 11](#) in "[Installing a Circuit Card](#)".

Verifying the Parameter Settings

P5 200 MHz CPU circuit card parameter settings are pre-loaded into each card. To verify these settings, do the following.

Host Adapter Parameter Settings



CAUTION:

Do not change the settings if there is a mismatch. Contact your remote maintenance center for assistance.

1. Reboot the system. See "Shutting Down and Rebooting the Lucent INTUITY System" in Chapter 3, "Common System Procedures," for the procedure.
2. After the power on self test (POST) but before the system boots, press **CONTROL** + **A** when prompted.

The system displays the Host Adapter Configuration screen
([Figure 5-24](#)).

Would you like to configure the Host Adapter, or run the SCSI disk utilities? Select the option and press <Enter>. Press <F5> to switch between color and monochrome modes.

Options

Configure/View Host Adapter Settings
SCSI Disk Utilities

Figure 5-24. Host Adapter Configuration Screen

3. Place the cursor on Configure/View Host Adapter Settings. Use the up (▲) and down (▼) arrows to move the cursor.
4. Press (ENTER).
5. Compare the settings shown on the screen with the parameters listed in [Table 5-2](#)



NOTE:

These settings are shown for Version 1.2 only.

Table 5-2. SCSI Bus Interface Definitions

Option	Setting
Host Adapter SCSI ID	7
SCSI Parity Checking	Enabled
Host Adapter SCSI Termination	Low ON/High ON

6. Place the cursor on Boot Device Options. Use the up (▲) and down (▼) arrows to move the cursor.
7. Press (ENTER).

Compare the settings shown on the screen with the correct parameters listed in [Table 5-3](#).

Table 5-3. Boot Device Options

Option	Setting
Boot Target ID	0
Boot Lun Number	0

8. Press **(ESC)**.

The system displays the SCSI bus interface definitions screen.

9. Place the cursor on **SCSI Device Configuration**. Use the up **(▲)** and down **(▼)** arrows to move the cursor.
10. Press **(ENTER)**.

Compare the settings shown on the screen with the correct parameters listed in [Table 5-4](#).



NOTE:

These settings must be applied to all SCSI IDs (0 – 15) shown.

Table 5-4. SCSI Device Configuration

Option	Setting
Initiate Sync Negotiation	Yes
Maximum Sync Transfer Rate	20.0
Enable Disconnection	Yes
Initiate Wide Negotiation	Yes
Send Start Unit Command	No

11. Press **(ESC)**.

The system displays the SCSI bus interface definitions screen.

12. Place the cursor on **Advanced Configuration Options**. Use the up **(▲)** and down **(▼)** arrows to move the cursor.
13. Press **(ENTER)**.

Compare the settings shown on the screen with the correct parameters listed in [Table 5-5](#).

Table 5-5. Advanced Configuration Options

Option	Setting
Host Adapter BIOS	Enabled
Support Removable Disks	Boot Only
Extended BIOS Translation	Disabled
Display <Ctrl-A> Message	Enabled
Multiple Lun Support	Disabled
BIOS Support for More	Enabled

14. Press **[ESC]**.

The system displays the SCSI bus interface definitions screen.

15. Press **[ESC]**.

The system displays the following message:

```
Exit Utilities
  Yes
  No
```

16. Place the cursor on **Yes**. Use the up **[▲]** and down **[▼]** arrows to move the cursor.

17. Press **[ENTER]**.

The system displays the following message:

```
Please press any key to reboot.
```

18. Press **[ENTER]**.

The system reboots and responds with the UNIX prompt (#).

You have completed verifying the Host Adapter settings.

CMOS Parameter Settings



CAUTION:

Do not change the settings if there is a mismatch. Contact your local technical support representative for assistance.

1. Perform a hard reboot of the system. See "Rebooting the UNIX System" in Chapter 3, "Common System Procedures," for the procedure.

⇒ NOTE:
 You must perform a hard reboot to access the CMOS parameter settings.

2. During the POST, press **F2**.

The system displays the following message:

Please standby for SETUP Utility...

After the system has installed the BIOS it displays the CMOS basic options set-up menu.

3. Compare the P5 200 MHz CPU circuit card settings in the setup menu with the default parameters listed in [Table 5-6](#).

⇒ NOTE:
 The settings shown are for BIOS Version 4.05a.2.2 only.

⇒ NOTE:
 The settings in [Table 5-6](#) may differ from the default parameters due to other equipped feature circuit cards in your system.

Table 5-6. CMOS Basic Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Time and Date	
Set the time and date to the current time and date.	
Floppy Disks	
Floppy Controller	Enabled
Select Drive A: Type	3.5 Inch, 1.44 MB
Select Drive B: Type	Not Installed
Floppy Seek during POST	Enabled
Fixed Disks	
IDE Controller Setup	Disabled
Auto Detect IDE Drives	Enabled
Large Disk DOS Compatible	Disabled
Keyboard	
Keyboard Typematic Sound	Enabled
Keyboard Typematic Delay	500 msec
Keyboard Typematic Rate	15 chars/sec

Table 5-6. CMOS Basic Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Shadow RAM	
Shadow Select C000:0 32K	AVAILABLE
Shadow Select C800:0 14K	SHADOW
Shadow Select CC00:0	AVAILABLE
Shadow Select D000:0	AVAILABLE
Shadow Select D400:0 2K	ROM  NOTE: This line must be set to ROM if the system is equipped with a remote maintenance circuit card otherwise this line will appear as AVAILABLE.
Shadow Select D800:0	AVAILABLE
Shadow Select DC00:0	AVAILABLE
Shadow Select E000:0 64K	SHADOW
Shadow Select F000:0 64K	SHADOW
Boot Options	
101-Key Keyboard Numlock at Boot	Enabled
Set Boot Drive Sequence	Diskette, Hard, CD-ROM Drives
Report POST Errors	Enabled
Report Option ROM Errors	Disabled
Show F2 Message for Setup	Enabled
Quiet Boot Enable/Disable	Enabled
Password Edit	
Password Options	Disabled

(2 of 2)

4. To change the parameter settings, complete the following Steps a through d.
 - a. Place the cursor on the appropriate heading. Use the up  and down  arrows to move the cursor.
 - b. Press **ENTER**.
 - c. Change the parameters. Use the up  and down  arrows to move the cursor.
 - d. Press **ENTER**.

5. Place the cursor on Advanced Options.
6. Press **(ENTER)**.
 The system displays the CMOS advanced options set-up menu.
7. Compare the P5 200 MHz CPU circuit card settings in the set-up menu with the default parameters listed in [Table 5-7](#).

⇒ NOTE:
 The settings in [Table 5-7](#) may differ from the default parameters due to other equipped feature circuit cards in your system.

Table 5-7. CMOS Advanced Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Serial Ports	
16550 Compatible UART 1:	03F8h, IRQ4
16550 Compatible UART 2:	02F8h, IRQ3
	⇒ NOTE: Disable this port if the remote maintenance circuit card is installed.
Parallel Ports	
Select Parallel Port Address:	0378h IRQ 7
Parallel Port Mode	AT Compatible
Redirection	
Select Redirection Destination	Disabled
Memory Cache	
External Cache	Enabled
Advanced Chipset	
DRAM Speed	70ns
DMA Alias	Disabled
ECC/Parity Configuration	ECC
Memory Gap Block Size	Disabled
I/O Recovery	
8 bit I/O Recovery Time	6.5 SYSCLK
16 bit I/O Recovery Time	6.5 SYSCLK
ISA Guaranteed Access Time	Disabled

Table 5-7. CMOS Advanced Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Delayed Transactions	Enabled
Bus Speed	
ISA Bus Speed	8.25 MHz
Miscellaneous	
SPEAKER Configuration	Enabled
Watchdog Timer Delay:	1.2 sec
Allocate USB Resources	Disabled
PS2 Mouse	
PS2MOUSE Configuration	Disabled

(2 of 2)

8. To change the parameter settings, complete the following Steps a through d.
 - a. Place the cursor on the appropriate heading. Use the up  and down  arrows to move the cursor.
 - b. Press **ENTER**.
 - c. Change the parameters. Use the up  and down  arrows to move the cursor.
 - d. Press **ENTER**.
9. Place the cursor on **PCI Options**.
10. Press **ENTER**.
 The system displays the CMOS PCI options set-up menu.
11. Compare the P5 200 MHz CPU circuit card settings in the set-up menu with the default parameters listed in [Table 5-8](#).



NOTE:

The settings in [Table 5-8](#) may differ from the default parameters due to other equipped feature circuit cards in your system.

Table 5-8. CMOS PCI Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
IRQs Setup	
PCI IRQ Line1	IRQ14
PCI IRQ Line2	IRQ14
PCI IRQ Line3	IRQ10
PCI IRQ Line4	IRQ10
PCI Devices	
0x8086/0x1250 Bridge-Host	No IRQ
0x9004/0x7078 MassStorage-SCSI	INTA->IRQ14
0x8086/0x7000 Bridge-ISA	No IRQ
0x8086/0x7010 MassStorage-IDE	No IRQ
0x5333/0x8A01 Display-VGA	INTA->IRQ14
PCI Performance	
Delay for PCI Configuration	Disabled
PCI Latency for Bus 0 Device 13	Auto
PCI Latency for Bus 0 Device 14	Auto
PCI Latency for Bus 0 Device 15	Auto
PCI Latency for Bus 0 Device 16	Auto
PCI Latency for Bus 0 Device 17	Auto
PCI Latency for Bus 0 Device 18	Auto
PCI Latency for Bus 0 Device 19	Auto
PCI Latency for Bus 0 Device 20	Auto
PCI Cache Line Size	Auto
Onboard SCSI	
Onboard PCI SCSI	Enabled

12. Place the cursor on `Basic Options`.

13. Press `(ENTER)`.

The system displays the CMOS basic options set-up menu.

14. If you have changed any option from what is indicated in [Table 5-6](#), [Table 5-7](#), and [Table 5-8](#), press (ESC).

This will reboot the system using the values you entered without creating a Flash it backup. If you have entered any incorrect values you can still go back to the original CMOS settings.

If you are certain the CMOS settings are correct and that the system will operate properly, place the cursor on Flash It! and press (ENTER).

The system displays the following message.

```
Ready to Flash, Press the ESC key to Exit or ENTER  
to flash.
```

15. Press (ENTER).

The system displays the following message.

```
Erasing CPU BIOS  
Flash It Reset in progress.
```

After approximately three minutes, the system reboots and displays the UNIX prompt (#).

Video Controller Circuit Card

The video controller circuit card allows the MAP/100P to interface with a monitor. There is one video controller card installed on the system. [Figure 5-25](#) shows the PCI video controller circuit card.

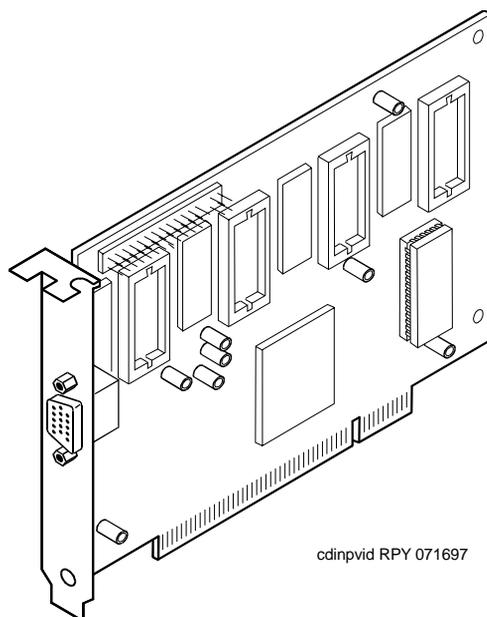


Figure 5-25. PCI Video Controller Circuit Card

There are no jumpers to set on the PCI video circuit card.

Remote Maintenance Circuit Cards

The remote maintenance circuit card provides remote diagnostics of basic components ([Figure 5-26](#)). There is one remote maintenance circuit card installed on the system.

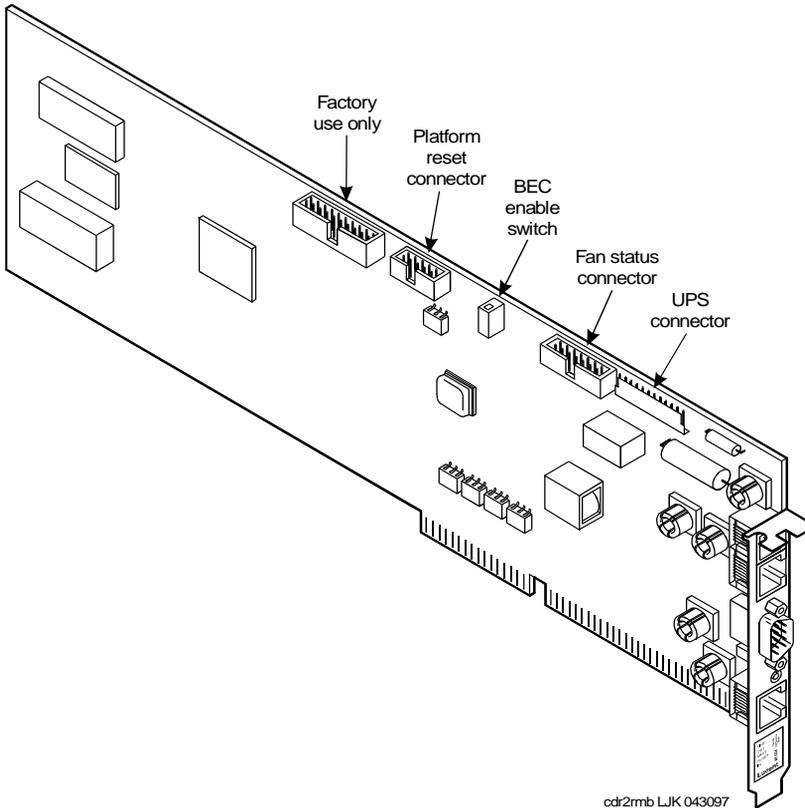


Figure 5-26. Remote Maintenance Circuit Card

Types of Remote Maintenance Circuit Cards

The Lucent INTUITY system supports remote maintenance circuit cards:

- With an internal modem (AYC54)
- Without an internal modem (AYC55)

You can determine the type of remote maintenance circuit card installed on your system by viewing the faceplate. [Figure 5-27](#) shows the faceplate of a remote maintenance circuit card with an internal modem (AYC54).

NOTE:

The AYC54 remote maintenance circuit card can be connected to an external modem.

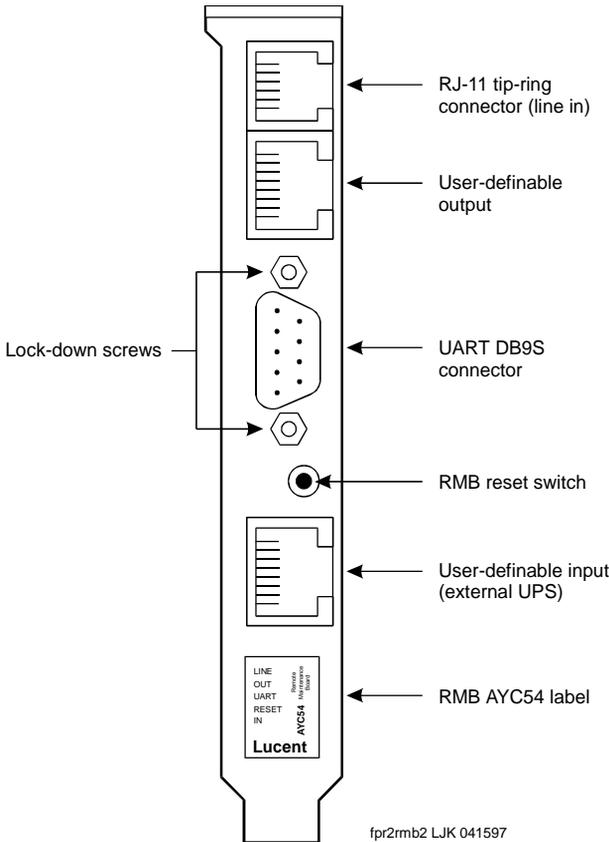


Figure 5-27. AYC54 Remote Maintenance Circuit Card Faceplate

[Figure 5-28](#) shows the faceplate of a remote maintenance circuit card without an internal modem (AYC55).

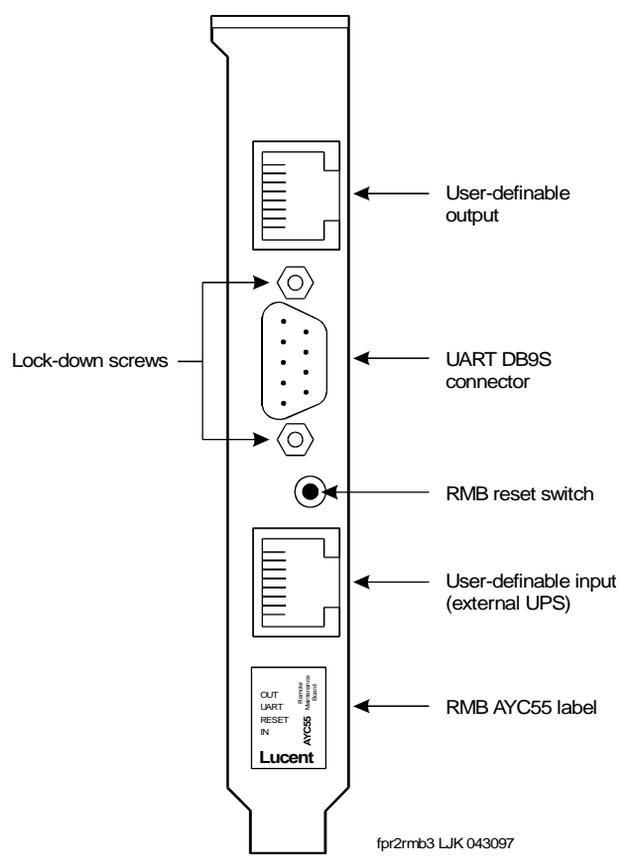


Figure 5-28. AYC55 Remote Maintenance Circuit Card Faceplate

Setting the Resource Options

The remote maintenance circuit card is equipped with a BEC enable switch ([Figure 5-26](#)). Ensure that this switch is set to the ON position ([Figure 5-29](#)).

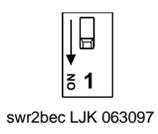


Figure 5-29. BEC Enable Switch

Installing the Remote Maintenance Circuit Card Software Package

To install the remote maintenance circuit card software package, do the following:

1. Stop the voice system.
2. Start at the Lucent™ INTUITY™ Main menu ([Figure 5-30](#)).

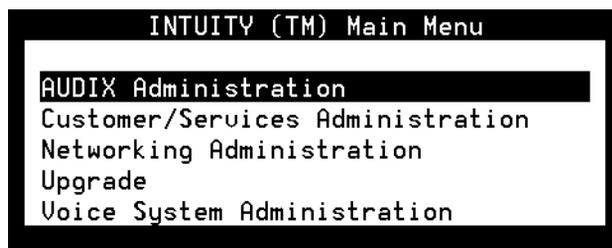
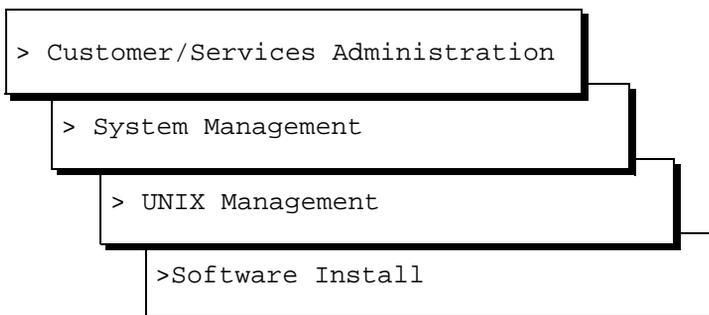


Figure 5-30. Lucent INTUITY Main Menu

3. Select



The system displays the Software Install menu ([Figure 5-31](#)).

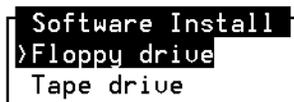


Figure 5-31. Software Install Menu

4. Select Tape drive.

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready,  
    or [q] to quit: (default:go)
```

5. Insert the tape labeled "RMB Software Set" into the tape drive.

6. Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge  
tape.
```

The following sets are available:

```
1      RMBset      INTUITY RMB V2 set  
                (i486) i.2.2
```

```
Select package(s) you wish to process (or 'all' to  
process all packages). (default: all) [?,??,q]
```

7. Press **ENTER**.

The system displays the following message:

```
Processing:
```

```
Set: RMB Software Set R2.0 (RMBset) from <ctapel>.
```

```
Intuity RMB Software Set R2.0  
(i486)
```

```
Using </> as the package base directory.
```

```
Please select the country code:
```

```
01 - United States  
02 - International
```

```
Country code [01]:
```

8. Enter the appropriate code.

The system displays the following message:

```
Please select the location of the UPS:
```

```
0 - MAP/100C with -48V central office power  
1 - Only MAP/100 with old internal supply  
2 - Any other configuration
```

```
UPS Location [2]:
```

9. Enter **2**

10. Remove the cartridge tape.

11. Reboot the voice system. See [“Shutting Down and Rebooting the Lucent Intuity System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.



CAUTION:

The voice system must be rebooted twice before the system will recognize the remote maintenance circuit card.

12. Reboot the voice system a second time. See [“Shutting Down and Rebooting the Lucent Intuity System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.
13. After memory check, enter CMOS setup.
14. Confirm the time and date fields.
This setting is located in the CMOS basic option settings for the CPU.
15. Disable COM2 by changing the Serial Ports 16550 Compatible UART 2 to DISABLED.
This setting is located in the CMOS advanced option settings for the CPU.
16. Exit CMOS Setup.
The system will begin booting. The UNIX kernel will be rebuilt to include the remote maintenance circuit card changes.
17. Make sure the system has returned to service.
18. Call the remote maintenance center and inform them that you have installed the remote maintenance circuit card.
The remote maintenance center will log in through the remote maintenance circuit card and:
 - Set the passwords
 - Verify the product ID
 - Verify the alarm destination
 - Configure the parameters as defined by the Services Organization.

Replacing a Defective Remote Maintenance Circuit Card

To replace a defective remote maintenance circuit card, you must:

- Remove the defective remote maintenance circuit card
- Install the new remote maintenance circuit card
- Attach external cables to the remote maintenance circuit card

Removing the Defective Remote Maintenance Circuit Card

To remove the defective remote maintenance circuit card, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.



NOTE:

Note all symptoms of failure and include this information with the remote maintenance circuit card when it is returned.

2. If the system is in service, perform the following steps.
 - a. Stop the voice system.
 - b. Shut down the voice system.
3. Remove power from the computer.
4. Access the circuit card cage.
5. Locate the remote maintenance circuit card.
6. If there are ribbon cables attached to other cards which would impede the removal of the card, disconnect them and place them to the side. Note the connectivity of each cable.
7. Remove the retaining screw from the circuit card faceplate and save it.
8. Remove the circuit card from the backplane slot by gently pulling on each corner of the card.



NOTE:

Make sure to install the replacement remote maintenance circuit card in the same backplane slot.

9. Remove the circuit card from the chassis.



CAUTION:

Hold the circuit card carefully by the edges and place it on a grounded mat.

Installing the New Remote Maintenance Circuit Card

To install the new remote maintenance circuit card, you must:

- Insert the circuit card
- Attach cables to the circuit card
- Restore the system
- Verify the installation

Inserting the Circuit Card. To insert the new remote maintenance circuit card, do the following:

1. Remove the new circuit card from its ESD protective wrapping.



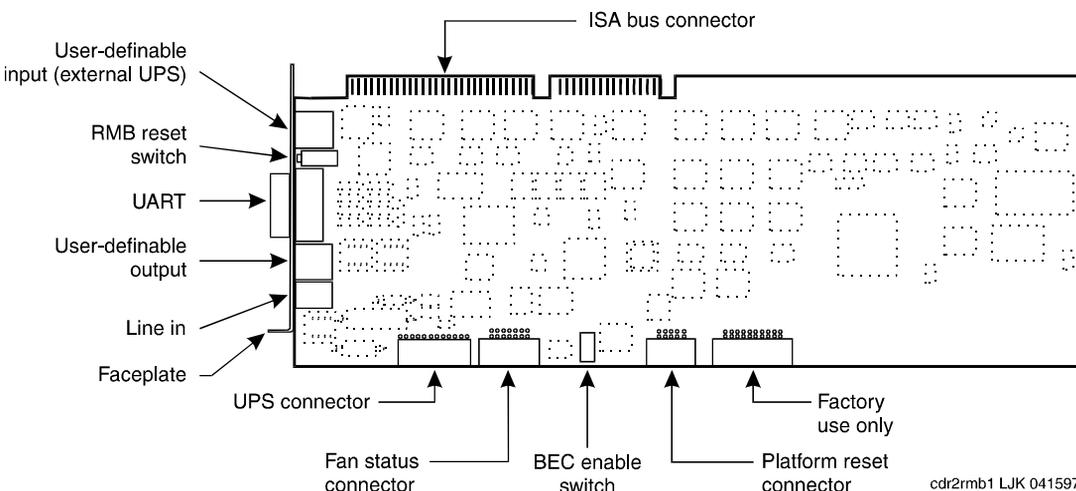
NOTE:

Keep the package and all ESD protective wrapping. If you must return a card for repair, re-use of the replacement unit packaging is necessary to meet the manufacturer's warranty.

2. Make sure the BEC enable switch on the remote maintenance circuit card is in the ON position ([Figure 5-29](#)).
3. Holding the circuit card by its upper corners, slide the card into Slot 16.
4. Apply even pressure to both corners of the circuit card until it is locked into the backplane.
5. Secure the circuit card faceplate into position by replacing the retaining screw.

Attaching Cables to the Circuit Card. [Figure 5-32](#) and [Figure 5-33](#) show the cable connectors on the remote maintenance circuit card.

To connect the remote maintenance circuit card to the other MAP/100P circuit cards, see "[Replacing the Remote Maintenance Circuit Card Interface Cable](#)" in [Chapter 7, "Replacing Other Components"](#).



cdr2rmb1 LJK 041597

Figure 5-32. Remote Maintenance Circuit Card Connectors (Side View) (AYC54 shown)

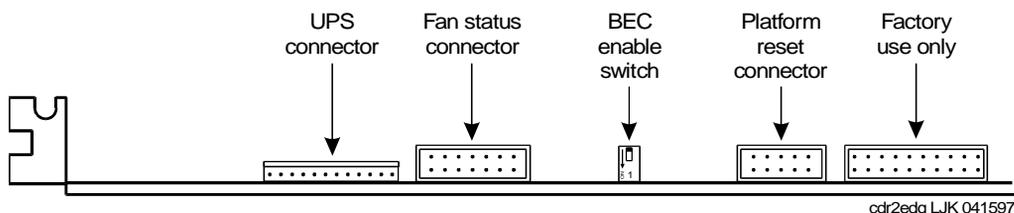


Figure 5-33. Remote Maintenance Circuit Card Connectors (Top View)

Restoring the System. To restore the system, do the following:

1. Replace all cables removed from other cards. Make sure these cables are attached to their proper terminations.
2. Close the computer.
3. Reboot the voice system. See [“Shutting Down and Rebooting the Lucent Intuity System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.



CAUTION:

The voice system must be rebooted twice before the system will recognize the remote maintenance circuit card.

4. Reboot the voice system a second time. See [“Shutting Down and Rebooting the Lucent Intuity System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.

Verifying the Installation. To verify the installation of the circuit card, do the following:

1. Starting at the Lucent™ INTUITY™ Main menu ([Figure 5-30](#)), select

```
> Customer/Services Administration
```

```
> System Verification
```

```
> View Installed Hardware
```

The system displays the View Installed Hardware window (Figure 5-34).

```
View Installed Hardware
2047 megabyte Hard Drive Installed at SCSI id 1
63 megabytes of memory installed.

Installed Hardware of netw

Networking Board      Equipped      Version Number
    1                  no            N/A
    2                  no            N/A
    3                  no            N/A
Ethernet board installed, board type 8216C
```

Figure 5-34. View Installed Hardware Window

2. Verify that the system has identified the new circuit card.

Attaching External Cables to the Remote Maintenance Circuit Card. To connect the remote maintenance circuit card, do the following:

1. If an external modem is used, connect the UART cable.
2. If an internal modem is used, connect the phone line to the RJ11 Line In connector.
3. If an external UPS is used, connect applicable connections to the User Definable Input connector.

Replacing the Hard Disk Drive

6

Overview

This chapter describes:

- Identifying a failed hard disk drive
- Software procedures for preparing the system for a new hard disk drive
- Hardware procedures for replacing a hard disk drive
- Software procedures for initializing a hard disk drive

Purpose

The purpose of this chapter is to ensure that hard disk drives are installed in the proper manner.

Identifying a Failed Hard Disk Drive

Before a hard disk drive can be replaced you must identify which drive has failed. This section details how to identify a failed hard disk drive in Lucent™ INTUITY™ systems.

⇒ NOTE:

If your system is configured with only one hard disk drive, see [“Recovering from a Hard Disk Drive 0 Failure \(Nonmirrored System\)”](#) for the procedure.

Hard Disk Drive Contents in Six Hard Disk Drive Systems

In order to determine which hard disk drive has failed it is necessary to know what type of information is stored on each drive. [Table 6-1](#) show the information contained on each hard disk drive in a nonmirrored system.

Table 6-1. Nonmirrored Hard Disk Drive Contents

Disk Identity	Information Contained on Disk
Hard Disk Drive 0 SCSI ID 0 Bay 0	UNIX operating system, all Lucent INTUITY software, system data, and speech/voice storage
Hard Disk Drive 1 SCSI ID 1 Bay 1	Speech/voice storage
Hard Disk Drive 2 SCSI ID 2 Bay 2	Speech/voice storage
Hard Disk Drive 3 audfs disk SCSI ID 3 Bay 3	User data
Hard Disk Drive 4 SCSI ID 4 Bay 4	Speech/voice storage
Hard Disk Drive 5 SCSI ID 5 Bay 5	Speech/voice storage

[Table 6-2](#) show the information contained on each hard disk drive in a mirrored system.



NOTE:

A mirrored MAP/100P system requires a minimum of 4 hard disk drives, because Hard Disk Drive 0 and Hard Disk Drive 3 must both be mirrored.

Table 6-2. Mirrored Hard Disk Drive Contents

Disk Identity	Information Contained on Disk
Hard Disk Drive 0 SCSI ID 0 Bay 0	UNIX operating system, all Lucent INTUITY software, system data, and speech/voice storage
Hard Disk Drive 1 SCSI ID 1 Bay 1	Identical copy of Hard Disk Drive 0 information
Hard Disk Drive 2 SCSI ID 2 Bay 2	Identical copy of Hard Disk Drive 3 (audfs disk) information
Hard Disk Drive 3 audfs disk SCSI ID 3 Bay 3	User data
Hard Disk Drive 4 SCSI ID 4 Bay 4	Speech/voice storage
Hard Disk Drive 5 SCSI ID 5 Bay 5	Identical copy of Hard Disk Drive 4 information

**Identifying a Hard Disk Drive 0 Failure
 in a Nonmirrored System**

Because Hard Disk Drive 0 contains the only copy of the operating software in a nonmirrored system, a failure of this drive will result in a complete failure of the system. If this occurs you will not be able to reboot the system. See [“Recovering from a Hard Disk Drive 0 Failure \(Nonmirrored System\)”](#) for the replacement procedure.

Identifying a Hard Disk Drive 3 (audfs) Failure in a Nonmirrored System

Hard Disk Drive 3 contains user data. If this hard disk drive fails:

- The Lucent INTUITY system may not accept calls.
- Subscribers may not be able to log in and hear the message: "Login incorrect. Try again."
- Users cannot access their mailboxes and messages.
- SM errors appear in the maintenance log.
- The following error message is displayed at the system console:

```
c0t3d0s0: get contents failed.  
disk device is offline.
```
- Hardware error messages are displayed on the screen during reboot.

To verify that Hard Disk Drive 3 has failed, do the following:

1. Start at the Lucent INTUITY Main menu ([Figure 6-1](#)).

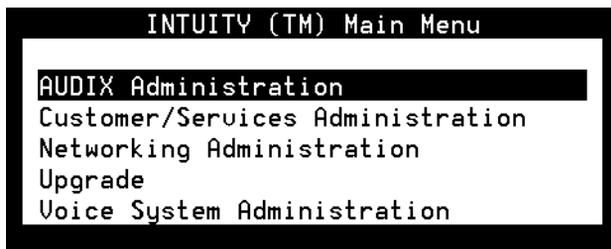
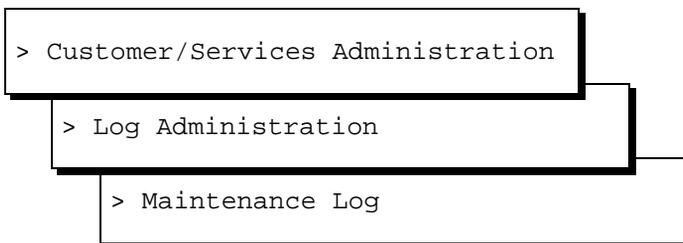


Figure 6-1. Lucent INTUITY Main Menu

2. Select



The system displays the Maintenance Log Display Selection window ([Figure 6-2](#)).

```
Maintenance Log Display Selection

Maintenance Log

The following options control which entries will be displayed.

Errors? Y           Resolutions? Y           Events? Y

Start Date: 7/24/95           Time: __:__:__

Application: __           Event ID: _____

Problem Resource:   Type: _____           Location: __ __ __

Reporting Resource: Type: _____           Source: _____

Search String:

_____
```

Figure 6-2. Maintenance Log Display Selection Window

3. Enter **MT** in the `Application` field and **FSY001** in the `Event ID` field.
4. Press **F3** (Save).

The system displays the appropriate Maintenance Log window ([Figure 6-3](#)).

Maintenance Log						
PROBLEM Type	RESOURCE Inst	Location	Msg Typ	REPORTING Type	RESOURCE Inst	Source
NIGHT_AUD	1		EVN	MPH	1	192
App: VM EventID:NIGHT_AUD0239 Date/Time Rec:04/01/96 01:01:48 Cnt: 1 aux1/2=45/0, Starting Audit AUD_NIGHTLY						
AUDIT	1		EVN	AUDIT	1	3
App: VM EventID:AUDIT0239 Date/Time Rec:04/01/96 01:01:48 Cnt: 1 aux1/2=0/0, file chk: recs=18						
AUDIT	1		EVN	AUDIT	1	2
App: VM EventID:AUDIT0239 Date/Time Rec:04/01/96 01:01:58 Cnt: 1 aux1/2=0/0, dsub: cleared SIDs=0 refs=0						
AUDIT	1		EVN	AUDIT	1	1
App: VM EventID:AUDIT0239 Date/Time Rec:04/01/96 01:02:09 Cnt: 1 aux1/2=0/0, age: msgs=0 rm=0 space=0 blks rm_out=0						
NIGHT_AUD	1		EVN	MPH	1	193

Figure 6-3. Maintenance Log Window

- Verify that there is an entry for a hard disk drive failure.

The hard disk drive will be identified by the name and jumper id.

The disk name is shown in the message text after the word `name:`. The jumper id is embedded in the string of numbers and letters that follow the word `id:`. The jumper id is the single digit number that follows the letter "t". For example, if the text reads `id: c0t3d0s0`, the jumper id is 3.

⇒ NOTE:

Note that the jumper ID is the same as both the SCSI ID and the Hard Disk Drive Bay number.

See ["Recovering from a Secondary Hard Disk Drive Failure"](#) for the replacement procedure.

⇒ NOTE:

A hard disk drive failure can also be identified by entering **MT** in the Application Code and **DISK** in the Resource Type of the alarm log. However, to identify the failed disk you must access the maintenance log. See Chapter 1, "Getting Started," in *INTUITY Interchange Release 5.3 Alarm and Log Messages* for the procedure to access the alarm log.

Identifying Other Hard Disk Drive Failures in a Nonmirrored System

Hard Disk Drives 1 through 5 contain voice storage. If one of these hard disk drives fails user information will be lost. Users will not be able to access there messages and may not be able to log in to the system.

To verify that one of these hard disk drives has failed, see [“Identifying a Hard Disk Drive 3 \(audfs\) Failure in a Nonmirrored System”](#) above for the procedure.

Identifying a Hard Disk Drive Failure in a Mirrored System

In a mirrored system every hard disk drive is paired with another hard disk drive which contains the same information. As a result, if either hard disk drive fails the other drive will continue to operate the system. There will be no noticeable difference in service. A hard disk drive failure will be identified by checking the maintenance log. See [“Identifying a Hard Disk Drive 3 \(audfs\) Failure in a Nonmirrored System”](#) above for the procedure.

If Hard Disk Drive 0 has failed, see [“Recovering from a Hard Disk Drive 0 Failure \(Mirrored System\)”](#) for the replacement procedure.

If Hard Disk Drive 1 has failed, see [“Recovering from a Secondary Hard Disk Drive Failure”](#) for the replacement procedure.

Replacing a Hard Disk Drive

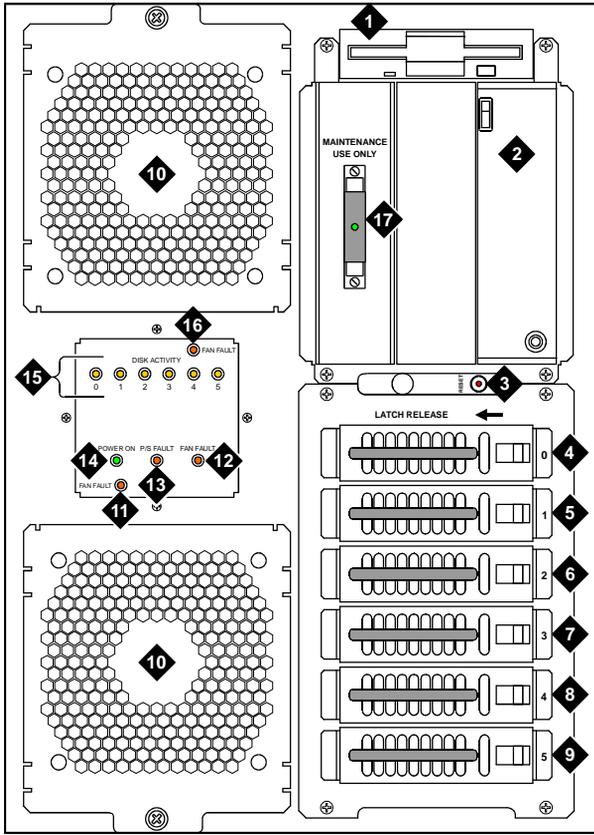
The following procedures detail removing and installing a hard disk drive in the MAP/100P. [Figure 6-4](#) shows the positions of the hard disk drives.



WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#) in [Chapter 4, “Getting Inside the Computer.”](#) for the procedure.

6 Replacing the Hard Disk Drive
Replacing a Hard Disk Drive



- | | |
|-------------------------|-----------------------------------|
| 1. Diskette drive | 10. Circuit card cage fan |
| 2. Cartridge tape drive | 11. Fan fault LED |
| 3. Reset push button | 12. Fan fault LED |
| 4. Hard Disk Drive 0 | 13. Power supply fault LED |
| 5. Hard Disk Drive 1 | 14. Power On LED |
| 6. Hard Disk Drive 2 | 15. Hard disk drive activity LEDs |
| 7. Hard Disk Drive 3 | 16. Fan fault LED |
| 8. Hard Disk Drive 4 | 17. SCSI active bus terminator |
| 9. Hard Disk Drive 5 | |

Figure 6-4. Front View of the MAP/100P

Removing a Hard Disk Drive

To remove a hard disk drive, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, complete the following Steps a through b:
 - a. Stop the voice system. See [“Stopping the Voice System”](#) in [Chapter 3, “Common System Procedures,”](#) for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System”](#) in [Chapter 3, “Common System Procedures,”](#) for the procedure.
3. Remove power from the MAP/100P. See [“Removing Power from the MAP/100P”](#) in [Chapter 4, “Getting Inside the Computer,”](#) for the procedure.
4. Open the front door of the MAP/100P ([Figure 6-5](#)).

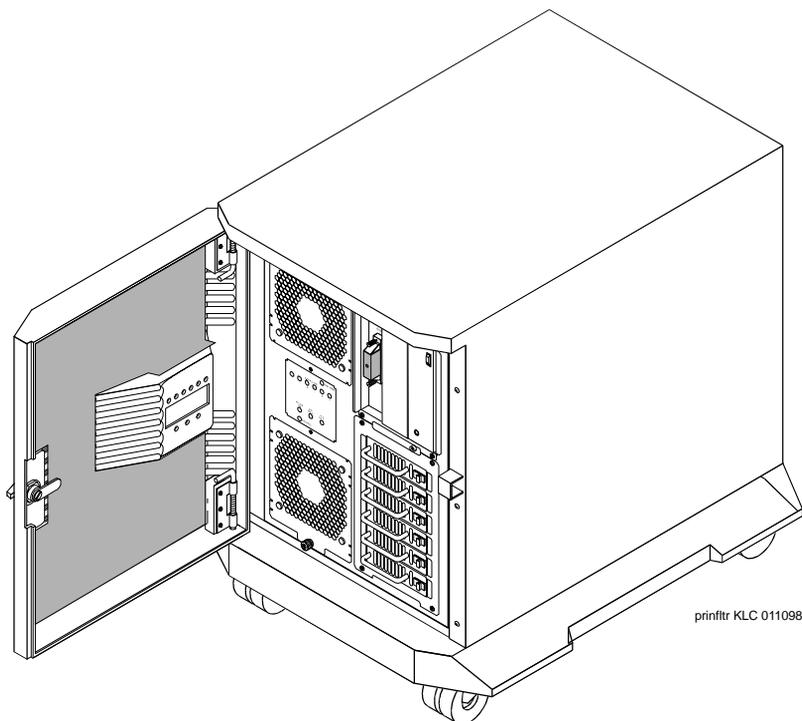


Figure 6-5. MAP/100P with Front Door Open

5. Remove the appropriate hard disk drive assembly by pressing the thumb tab toward the handle and pulling out on the assembly.

See [Table 6-1](#) and [Table 6-2](#) for the location of the hard disk drives.

6. Remove the hard disk drive from the assembly bracket ([Figure 6-6](#)).

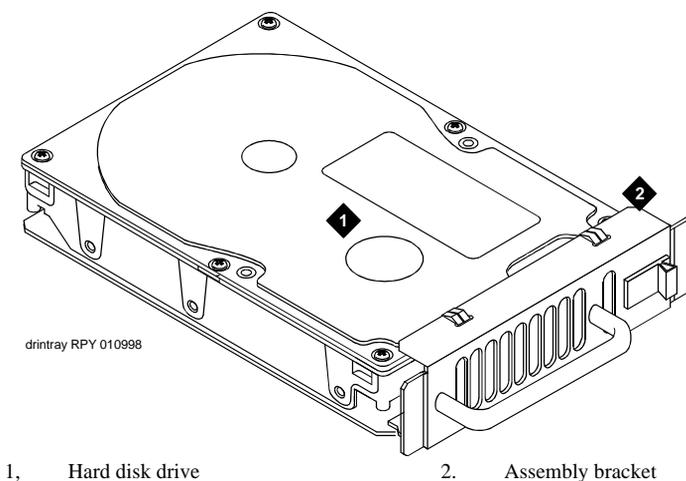


Figure 6-6. Hard Disk Drive Assembly

7. Remove the four screws that hold the hard disk drive to the assembly bracket.
8. Remove the hard disk drive from the assembly bracket.
9. Place the defective hard disk drive upside down, with the circuit board facing up, on an ESD-protected surface.

Installing a Hard Disk Drive in the MAP/100P

To mount the hard disk drive in the MAP/100P, do the following:



CAUTION:

Use only flat head screws to attach the hard disk drive to the drive assembly. The assembly will not fit in the MAP/100P with any other type of screw.

1. Attach the new hard disk drive to the assembly bracket using the four screws provided with the drive ([Figure 6-6](#)).
2. Align the hard disk drive assembly with the appropriate slot in the MAP/100P.



NOTE:

Place the Hard Disk Drive in the same slot from which it was removed.

3. Press the thumb tab on the assembly bracket toward the bracket handle.
4. Slide the hard disk drive assembly in the MAP/100P.
5. Release the thumb tab.
6. Close the front door of the MAP/100P.
7. Apply power to the unit. See "[Restoring Power to the MAP/100P](#)" in [Chapter 4, "Getting Inside the Computer,"](#) for the procedure.

Recovering from a Hard Disk Drive 0 Failure

The following sections list the procedures for recovering from a Hard Disk Drive 0 failure in either a mirrored or nonmirrored system.

Recovering from a Hard Disk Drive 0 Failure (Nonmirrored System)

Because Disk 0 contains the base system software, you must reinstall the entire Lucent INTUITY system if this disk fails on a nonmirrored system.

Replacing Hard Disk Drive 0

See "[Replacing a Hard Disk Drive](#)", above for the procedure.

Reinstalling the Lucent INTUITY System Software

To reinstall the Lucent INTUITY system software, do the following:

1. Reinstall the base system software. See "[Installing UnixWare](#)" and "[Installing the Platform Software](#)" in [Chapter 8, "Installing Base System Software"](#) for the procedure.
2. Reinstall the Lucent INTUITY system software. See [Chapter 9, "Installing Lucent Intuity System Software"](#) for the procedure.
3. Reinstall any optional feature software, if used. See [Chapter 10, "Installing the Optional Feature Software"](#) for the procedure.
4. If you are installing a system equipped with an internal remote maintenance circuit card, install the corresponding software. See "[Remote Maintenance Circuit Cards](#)" in [Chapter 5, "Replacing or Installing Circuit Cards"](#) for the procedure.

Restoring the Attended and Unattended Backups

To restore the backups, do the following:

1. Reboot the Lucent INTUITY system. See [“Rebooting the System”](#), in [Chapter 3, “Common System Procedures”](#) for the procedure.
2. Stop the voice system. See [“Stopping the Voice System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.
3. Restore the system using the unattended backup tape. See [“Restoring Backups”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.
4. Restore the system using the attended backup tape. See [“Restoring Backups”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.
5. Start the voice system. See [“Starting the Voice System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.

You have completed the procedure for replacing Hard Disk Drive 0 in a nonmirrored system.

Recovering from a Hard Disk Drive 0 Failure (Mirrored System)

The system is still up and running even if Hard Disk Drive 0 fails on a mirrored system. The following procedure explains how to replace Hard Disk Drive 0 on a mirrored system.

CAUTION:

This initial synchronization of data on a mirrored system can degrade service, depending on system load. Therefore, perform this procedure only during off-peak hours.

Performing an Attended Backup

See [“Backing Up \(Attended\)”](#) in [Chapter 3, “Common System Procedures”](#) for the attended back-up procedure. Continue with the next procedure “Activating Alarm Suppression.”

Activating Alarm Suppression

NOTE:

If your system has alarm origination perform this procedure before continuing with the next procedure “Hardware Procedures for Replacing a Hard Disk Drive.” If your system does not have alarm origination only perform an attended back-up.

To activate alarm suppression, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
```

```
> Alarm Management
```

The system displays the Alarm Management window ([Figure 6-7](#)).

Alarm Management	
Product ID	<u>2999999999</u>
Alarm Destination	<u>916148606427</u>
Alarm Origination	<u>ACTIVE</u>
Alarm Level	<u>MINOR</u>
Alarm Suppression	<u>ACTIVE</u>
Clear Alarm Notification	<u>ACTIVE</u>

Figure 6-7. Alarm Management Window

2. Move the cursor to the Alarm Suppression field and type **active**
3. Press **F3** (Save).

The system displays the Information window ([Figure 6-8](#)).

Information
Alarm Form Update was successful
Press <Enter> to continue.

Figure 6-8. Information Window

4. Press **ENTER**.

The system displays the Alarm Management window ([Figure 6-7](#)).

5. Continue with the next procedure "[Replacing a Hard Disk Drive](#)."

Replacing Hard Disk Drive 0

To replace Hard Disk Drive 0, do the following:

1. Shut down the system. See "[Shutting Down the System](#)", in [Chapter 3, "Common System Procedures"](#).
2. Remove Hard Disk Drive 0 from the MAP/100P. See "[Replacing a Hard Disk Drive](#)" above for the procedure.



NOTE:

Hard Disk Drive 0 is located in Hard Disk Drive Bay 0 ([Figure 6-4](#)).

3. Remove the hard disk drive from the mounting bracket. See "[Replacing a Hard Disk Drive](#)" above for the procedure.
4. Place the replacement hard disk drive on the mounting bracket. See "[Replacing a Hard Disk Drive](#)" above for the procedure.



CAUTION:

Do not remove Hard Disk Drive 1 from the mounting bracket.

5. Remove Hard Disk Drive 1 from the MAP/100P. See "[Replacing a Hard Disk Drive](#)" above for the procedure.



NOTE:

Hard Disk Drive 1 is located in Hard Disk Drive Bay 1 ([Figure 6-4](#)).

6. Place Hard Disk Drive 1 in Hard Disk Drive Bay 0 ([Figure 6-4](#)).



NOTE:

This is the hard disk drive bay from which you removed Hard Disk Drive 0 in [Step 2](#) above.

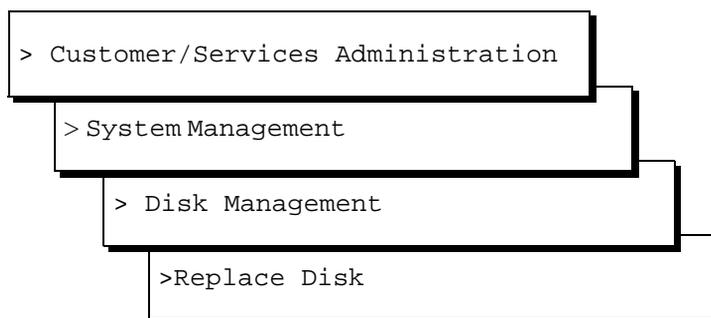
7. Place the new hard disk drive in Hard Disk Drive Bay 1. See "[Replacing a Hard Disk Drive](#)" above for the procedure.
8. Reboot the system.

Initializing the Hard Disk Drive

A hard disk drive that contains data cannot be initialized until the data is removed and the drive is cleaned. If the drive you are installing is not brand new, you must clean it before you can continue. See [“Cleaning a Hard Disk Drive”](#) below for the procedure. If you do not clean the drive now, you will be prompted to do so when you attempt to initialize the drive.

To initialize the hard disk drive, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select



The system displays the Replace Disk window ([Figure 6-9](#)).

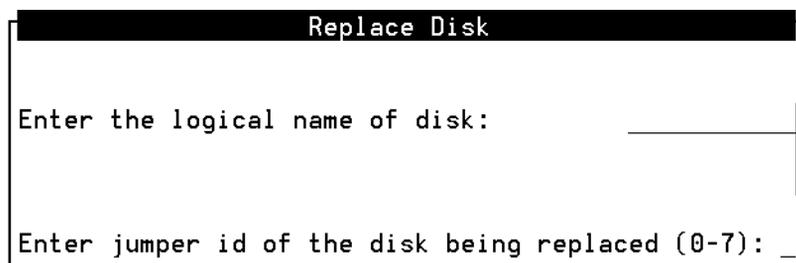


Figure 6-9. Replace Disk Window

2. Enter the Disk Name at the following prompt:
Enter the logical name of the disk:
The disk name is the name you copied from the Maintenance Log window.
3. Enter the jumper id at the following prompt:
Enter jumper id of the disk being added (0-1):
The disk jumper id is the id you copied from the Maintenance Log window.

4. Press **F3** (Save).

- If the disk name and jumper id you entered match those of the failed disk drive, the system displays the following message:

This operation will require approximately 10 minutes per gig to complete.

Continue with Step 5.

- If you entered a disk name and/or jumper id that does not exist on the system, the system displays the following message.

Error: disk at selected jumper id not found.
Make sure disk is physically installed properly.
Hit Enter to continue.

The disk name you enter must be the same as the old (failed) disk's name. The jumper id must match the jumper settings on the disk with the above specified name. Therefore, you entered either the disk name and/or jumper id incorrectly on the Replace Disk screen, or you incorrectly set the jumpers on the disk.

Press **ENTER**, return to the appropriate step in this procedure, and correct the mismatch.

Verify the hard disk drive installation was done correctly.

- If you entered a disk name and jumper id for a disk other than the one being replaced, the system displays the following message:

The selected disk appears to be ok. Make sure correct disk name and jumper id were entered on the disk replace screen.
Hit Enter to continue.

The disk name you enter must be the same as the old (failed) disk's name. The jumper id must match the jumper settings on the disk with the above specified name. Therefore, you incorrectly entered the disk name and/or jumper id on the Replace Disk screen.

Press **ENTER**, return to the appropriate step in this procedure, and correct the mismatch.

- If you entered the correct disk name and jumper id but the disk that was installed is not brand new, the system displays the following message.

```
The disk being installed at the selected jumper id
has been installed previously. It is recommended
that only new disks from the factory be installed
on this system. Any existing data on this disk
will be lost if you continue.
Do you wish to continue hit [y/n], and then hit
Enter.
```

Complete Steps a through c:

- a. Press **y**

The system displays the following message:

```
Option to auto clean disk not supported
in this version.
You must run the shell command fdisk
/dev/rdisk/c0t1d0s0 and delete any active
partitions.
Hit Enter to continue.
```

 **NOTE:**

If you were referred to this procedure from a procedure for a disk other than Disk Drive 0, the disk name in the fdisk command will differ.

- b. Press **ENTER**.
 - c. Clean the hard disk drive. See [“Cleaning a Hard Disk Drive”](#) below for the procedure.
 - d. Return to Step 1.
5. Press **ENTER** when the system displays the following message:

```
Disk replace was successful
Hit Enter to continue.
```

Inactivating Alarm Suppression

 **NOTE:**

This procedure only applies to systems with alarm origination. If your system does not have alarm origination, you have completed the procedure for replacing Hard Disk Drive 0 in a mirrored system.

To inactivate alarm suppression, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
```

```
> Alarm Management
```

The system displays the Alarm Management window ([Figure 6-7](#)).

2. Move the cursor to the Alarm Suppression field and type **inactive**
3. Press **F3** (Save).

The system displays the Information window ([Figure 6-8](#)).

4. Press **ENTER**.

Replacing Hard Disk Drive 3 (audfs)

CAUTION:

You must have either the root or tsc password to complete this procedure.

The following procedure explains how to Hard Disk Drive 3 on an existing Lucent INTUITY system. The procedures listed below apply to nonmirrored systems. For mirrored systems see [“Recovering from a Secondary Hard Disk Drive Failure”](#), below.

Performing an Attended Backup

See [“Backing Up \(Attended\)”](#) in [Chapter 3, “Common System Procedures”](#) for the attended back-up procedure. Continue with the next procedure [“Activating Alarm Suppression”](#).

Activating Alarm Suppression

NOTE:

If your system has alarm origination perform this procedure before continuing with the next procedure “Hardware Procedures for Replacing a Hard Disk Drive.” If your system does not have alarm origination only perform an attended back-up.

To activate alarm suppression, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
```

```
> Alarm Management
```

The system displays the Alarm Management window ([Figure 6-7](#)).

2. Move the cursor to the Alarm Suppression field and type **active**
3. Press **F3** (Save).

The system displays the Information window ([Figure 6-8](#)).

4. Press **ENTER**.

The system displays the Alarm Management window ([Figure 6-7](#)).

5. Continue with the next step "Hardware Procedures for Replacing the Hard Disk Drive."

Hardware Procedures for Replacing the Hard Disk Drive

See ["Replacing a Hard Disk Drive"](#) above for the procedure. Continue with the next step ["Initializing the New Hard Disk Drive."](#)

Initializing the New Hard Disk Drive

See ["Initializing the Hard Disk Drive"](#) in ["Recovering from a Hard Disk Drive 0 Failure \(Mirrored System\)"](#) for the procedure. Continue with the next step ["Inactivating Alarm Suppression"](#).

Installing the Default Voice Mail Database

The default voice mail database must be reinstalled prior to restoring the Lucent INTUITY system from the backup tapes.

To reinstall the default voice mail database, do the following:

1. Log in to the system as root.

⇒ NOTE:

If a message appears requesting the terminal type (TERM=AT386) press **ENTER** to accept this default.

2. Insert the AUDIX Platform Set cartridge tape into the tape drive. See ["Inserting Cartridge Tapes"](#), in [Chapter 3, "Common System Procedures"](#), for the procedure.

3. Enter **pkgadd -d ctape1 VM-dfltdb**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
    or [q] to quit: (default: go)
```

 **NOTE:**

For this step, **/VM/bin/cleardb** is required. If it is not on the disk, you will be prompted to load it.

4. Press **(ENTER)**.

The system displays the following message:

```
Installation of VM default database was successful.  
  
Insert a diskette into Floppy Drive 1.  
Type [go] when ready  
    or [q] to quit: (default: go)
```

5. Remove the AUDIX Platform Set cartridge tape from the tape drive. See [“Inserting Cartridge Tapes”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.

6. Enter **q**

Restoring the Lucent INTUITY System from the Backup Tapes

To restore the Lucent INTUITY system from the backup tape, do the following:

1. Restore all backups (attended and unattended), beginning with the oldest first. The last backup restored should be the previous night's automatic unattended backup. See [“Restoring Backups”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.

Inactivating Alarm Suppression

 **NOTE:**

This procedure only applies to systems with alarm origination. If your system does not have alarm origination, you have completed the procedure for replacing Hard Disk Drive 3.

To inactivate the alarm origination, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
```

```
> Alarm Management
```

The system displays the Alarm Management window ([Figure 6-7](#)).

2. Move the cursor to the Alarm Suppression field and type **inactive**.
3. Press **F3** (Save).

The system displays the Information window ([Figure 6-8](#)).

4. Press **ENTER**.

You have completed the procedure for replacing Hard Disk Drive 3.

Recovering from a Secondary Hard Disk Drive Failure

The following procedure explains how to replace a hard disk drive on an existing Lucent INTUITY system.

This procedure applies to:

- Hard Disk Drive 1
- Hard Disk Drive 2
- Hard Disk Drive 3 (mirrored systems only)
- Hard Disk Drive 4
- Hard Disk Drive 5

To replace Hard Disk Drive 0, see [“Recovering from a Hard Disk Drive 0 Failure”](#) above.

To replace Hard Disk Drive 3 (audfs) on a nonmirrored system, see [“Replacing Hard Disk Drive 3 \(audfs\)”](#), above.

NOTE:

These procedures apply to both mirrored and nonmirrored systems. The only difference between the two systems when replacing hard disk drives other than Hard Disk Drive 0 is the method by which data is restored to the new disk. This difference is clearly noted in this procedure.

Performing an Attended Backup

See [“Backing Up \(Attended\)”](#) in [Chapter 3, “Common System Procedures”](#) for the attended back-up procedure. Continue with the next procedure [“Activating Alarm Suppression”](#).

Activating Alarm Suppression

⇒ NOTE:

If your system has alarm origination perform this procedure before continuing with the next procedure “Hardware Procedures for Replacing a Hard Disk Drive.” If your system does not have alarm origination only perform an attended back-up.

To activate alarm suppression, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
```

```
> Alarm Management
```

The system displays the Alarm Management window ([Figure 6-7](#)).

2. Move the cursor to the Alarm Suppression field and type **active**
3. Press **F3** (Save).

The system displays the Information window ([Figure 6-8](#)).

4. Press **ENTER**.

The system displays the Alarm Management window ([Figure 6-7](#)).

5. Continue with the next step [“Replacing the Hard Disk Drive.”](#)

Replacing the Hard Disk Drive

See [“Replacing a Hard Disk Drive”](#), above for the procedure. Continue with the next step [“Initializing the New Hard Disk Drive.”](#)

Initializing the New Hard Disk Drive

See [“Initializing the Hard Disk Drive”](#) in [“Recovering from a Hard Disk Drive 0 Failure \(Mirrored System\)”](#) for the procedure. Continue with the next step [“Inactivating Alarm Suppression.”](#)

Inactivating Alarm Suppression

⇒ NOTE:

This procedure only applies to systems with alarm origination. If your system does not have alarm origination, you have completed the procedure for replacing Hard Disk Drive 1.

To inactivate the alarm origination, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
```

```
> Alarm Management
```

The system displays the Alarm Management window ([Figure 6-7](#)).

2. Move the cursor to the Alarm Suppression field and type **inactive**
3. Press **F3** (Save).

The system displays the Information window ([Figure 6-8](#)).

4. Press **ENTER**.
5. For nonmirrored systems restore all backups (attended and unattended), beginning with the oldest first. The last backup restored should be the previous night's automatic unattended backup. See "[Restoring Backups](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
6. For mirrored systems the Lucent INTUITY system automatically replenishes the data on the new disk once the disk is successfully replaced. No further action is necessary.

You have completed the procedure for replacing a hard disk drive.

Software and Hardware Procedures for Installing an Lucent INTUITY System with All New Hard Disk Drives

To install the Lucent INTUITY system in a MAP/100P with all new hard disk drives, do the following:

1. Install the hard disk drives. See "[Replacing a Hard Disk Drive](#)" above for the procedure.
2. Complete "[Installing UnixWare](#)" in [Chapter 8, "Installing Base System Software"](#).

3. Clean Hard Disk Drives 1 through 5. See "[Cleaning a Hard Disk Drive](#)" below for the procedure.
4. Reboot the Lucent INTUITY system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
5. Complete "[Installing the INTUNIX Software](#)", "[Running installit](#)", "[Installing the Platform Software](#)", and "[Installing the Switch Interface Software Packages](#)" in [Chapter 8, "Installing Base System Software"](#).
6. Initialize Hard Disk Drives 1 through 5. See "[Initializing the Hard Disk Drive](#)" above for the procedure.
7. From the UNIX prompt, enter **voledit rename disk03 audfsdisk**

This will rename Hard Disk Drive 3 the audfs disk.
8. Reinstall the Lucent INTUITY system software. See [Chapter 9, "Installing Lucent Intuity System Software"](#) for the procedure.
9. Reinstall any optional feature, if used. See [Chapter 10, "Installing the Optional Feature Software"](#) for the procedure.
10. If you are installing a system equipped with an internal remote maintenance circuit card, install the corresponding software. See "[Remote Maintenance Circuit Cards](#)" in [Chapter 5, "Replacing or Installing Circuit Cards"](#) for the procedure.
11. Reboot the Lucent INTUITY system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
12. Stop the voice system. See "[Stopping the Voice System](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
13. Restore the attended and unattended backup tapes, beginning with the oldest first. See "[Restoring Backups](#)" in [Chapter 3, "Common System Procedures"](#) for the procedure.
14. You have completed the procedure for installing the Lucent INTUITY system in a MAP/100P with two all hard disk drives.

Adding a Hard Disk Drive

This section details the procedures for adding another hard disk drive to an Lucent INTUITY system. If you are replacing an existing drive see "[Recovering from a Hard Disk Drive 0 Failure](#)" or "[Recovering from a Secondary Hard Disk Drive Failure](#)" or [Replacing Hard Disk Drive 3 \(audfs\)](#) for the procedure.

To add a hard disk drive, do the following:

NOTE:

This procedure only applies to adding a second hard disk drive to a system which originally had only one hard disk drive.

6 Replacing the Hard Disk Drive
Adding a Hard Disk Drive

1. Verify that the new hard disk drive is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#) for the procedure.
 - b. Shut down the voice system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)," in [Chapter 3, "Common System Procedures"](#) for the procedure.
3. Remove power from the MAP/100P. See "[Removing Power from the MAP/100P](#)" in [Chapter 4, "Getting Inside the Computer"](#) for the procedure.
4. Access the peripheral bay. See "[Accessing the Circuit Card Cage](#)," in [Chapter 4, "Getting Inside the Computer"](#) for the procedure.
5. Install the new hard disk drive. See "[Installing a Hard Disk Drive in the MAP/100P](#)" above for the procedure.
6. Reboot the Lucent INTUITY system. See "[Shutting Down and Rebooting the Lucent Intuity System](#)," in [Chapter 3, "Common System Procedures"](#) for the procedure.
7. Starting at the Lucent INTUITY Main menu ([Figure 6-1](#)), select

```
> Customer/Services Administration
> System Management
> Disk Management
> Install Disk
```

The system displays the Install Disk window ([Figure 6-10](#)).



Figure 6-10. Install Disk Window

6 Replacing the Hard Disk Drive
Adding a Hard Disk Drive

8. Enter the SCSI ID number of the disk you are installing. See "[Hard Disk Drive Contents in Six Hard Disk Drive Systems](#)," above for the SCSI ID.

9. Press **F3** (Save).

The system displays the following message:

```
clean
Install Disk Operation In Progress..
```

```
This operation will require approximately 10 minutes
per gig to complete.
```

```
The disk install was successful
Press Enter to continue.
```

If you entered a hard disk drive that was installed is not brand new, the system displays the following message.

```
The disk being installed at the selected jumper id has
been installed previously. It is recommended that only
new disks from the factory be installed on this system.
Any existing data on this disk will be lost if you
continue.
```

```
Do you wish to continue hit [y/n], and then hit Enter.
```

Complete Steps a through c:

- a. Press **y**

The system displays the following message:

```
Option to auto clean disk not supported in this
version.
You must run the shell command fdisk
/dev/rdisk/c0t1d0s0 and delete any active
partitions.
Hit Enter to continue.
```

- b. Press **ENTER**.

- c. Contact the remote maintenance center. Ask them to remotely log in to the system and clean the disk. Provide them with the jumper id. When the disk has been cleaned, return to Step 8.

10. Press **ENTER**.

The system displays the Disk Management menu ([Figure 6-11](#)).



Figure 6-11. Disk Management Menu

11. Reboot the Lucent INTUITY system. See [“Rebooting the System”](#) in [Chapter 3, “Common System Procedures”](#) for the procedure.
12. If the system is to be mirrored, contact the remote maintenance center and ask them to turn on mirroring.

If the system is not to be mirrored, contact the remote maintenance center and ask them to add voice hours to the system.

You have completed the procedure for adding a hard disk drive.

Cleaning a Hard Disk Drive

A hard disk drive which contains data cannot be installed in a Lucent INTUITY system. The hard disk drive must be cleaned before use. The hard disk drives can be cleaned:

- Using the **fdisk** command
- Performing a low-level format

Using the fdisk Command

To clean a hard disk drive using the **fdisk** command, do the following:

1. Log in to the system as root.
2. Enter **fdisk /dev/rdisk/c0t1d0s0**



CAUTION:

*The phrase **c0t1d0s0** is the name of the disk to be cleaned. The phrase **c0t1d0s0** is correct for Hard Disk Drive 1. Hard Disk Drive 0 is named **c0t0d0s0**.*

The system displays the Disk Cleaning screen ([Figure 6-12](#)).

Total disk size is 2048 cylinders (2048.0MB)

Partition	Status	Type	Start	End	Length	%	Approx MB
1	Active	UNIX System	0	2047	2048	100	2048.0

SELECT ONE OF THE FOLLOWING

- 0. Overwrite system master boot code
- 1. Create a partition
- 2. Change Active (Boot from) partition
- 3. Delete a partition
- 4. Update (Update disk configuration and exit)
- 5. Exit (Exit without updating disk configuration)

Enter selection:

Figure 6-12. Disk Cleaning Screen

3. Enter **3**

The system displays the following message:

Enter the number of the partition you want to delete
(or enter x to exit)

4. Enter the number of the partition.

For the example given in [Figure 6-12](#), you would enter **1**

The system displays the following message:

Do you want to delete partition X? This will erase all
files and programs in this partition (type "y" or "n").

5. Enter **y**

The system displays the following message:

Partition X has been deleted.

The system displays the Disk Cleaning screen ([Figure 6-12](#)).

6. Enter 4

The system displays the following message:

```
If you have created or altered a partition, you must
initialize the partition to reflect the new
configuration. For a UNIX System partition run the
disksetup(lm) command. For a DOS partition, run the DOS
format command. Changes limited to the "Active" status
field require no additional action.
```

You have completed the procedure for cleaning a hard disk drive.

Performing a Low-Level Format

To low-level format a hard disk drive, do the following:

1. Reboot the system. See ["Rebooting the System"](#) in [Chapter 3, "Common System Procedures"](#).
2. Press **CONTROL-A** when prompted.

The system displays the Host Adapter Configuration screen ([Figure 6-13](#)).

```
Would you like to configure the host adapter or run the SCSI disk
utilities? Select the option and press <Enter>. Press <F5> to switch
between color or monochrome.
```

```
Options
Configure/View Host Adapter Settings
SCSI Disk Utilities
```

Figure 6-13. Host Adapter Configuration Screen

3. Place the cursor on SCSI Disk Utilities. Use the up **▲** and down **▼** arrows to move the cursor.

4. Press **ENTER**.

The system displays the SCSI Disk Utilities screen ([Figure 6-14](#)).

```
Select SCSI Disk and press <Enter>.
```

```
SCSI ID #0      IBM DORS-32160
SCSI ID #1      No Device
SCSI ID #2      No Device
SCSI ID #3      No Device
SCSI ID #4      No Device
SCSI ID #5      No Device
SCSI ID #6      TANDBERG TDC4200
SCSI ID #7      No Device
```

Figure 6-14. SCSI Disk Utilities Screen

5. Place the cursor on the SCSI Disk to be formatted. Use the up **▲** and down **▼** arrows to move the cursor.
6. Press **ENTER**.

The system displays the Configure/Format Disk screen ([Figure 6-15](#)).



Configure Disk
Format Disk

Figure 6-15. Configure/Format Disk Screen

7. Place the cursor on the `Format Disk`. Use the up  and down  arrows to move the cursor.
8. Press `ENTER`.
The system will ask you to confirm that the disk is to be formatted.
9. Enter **y**

Replacing Other Components

7

Overview

This chapter describes the procedures for replacing the:

- Backplanes
- Cables
- Cartridge tape drive
- Console alarm panel
- Diskette drive
- Fans
- Fan filter
- Fuse
- Hard disk drive carriage
- Memory modules
- Power supplies
- Remote maintenance circuit card interface board
- Terminator SIPs
- Tip/Ring distribution hardware

Purpose

The purpose of this chapter is to ensure that the correct procedures are used to replace the internal components of the MAP/100P. This chapter also provides information on the correct configuration and settings for the individual components.

Replacing Backplanes

This section details the replacement procedures for the following backplanes:

- Circuit card backplane
- Power supply backplane
- Hard disk drive carriage backplane

Replacing the Circuit Card Backplane

The circuit card backplane ([Figure 7-1](#)) is located in the back of the circuit card cage.

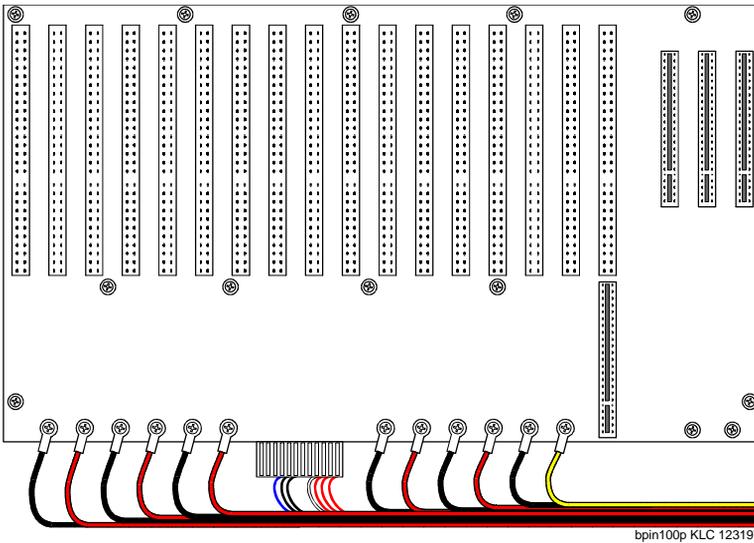


Figure 7-1. Circuit Card Backplane

Removing the Circuit Card Backplane

WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#), in [Chapter 4, “Getting Inside the Computer”](#).

To remove the circuit card backplane, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Access the circuit card cage. See [“Accessing the Circuit Card Cage”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
5. Remove the circuit cards. See [“Removing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
6. Remove the 12 screws which hold the power supply wires to the circuit card backplane ([Figure 7-1](#)).
7. Remove the two power supply wire slide connectors from the circuit card backplane ([Figure 7-1](#)).
8. Remove the thirteen screws which secure the circuit card backplane to the MAP/100P ([Figure 7-1](#)).
9. Remove the circuit card backplane.

Installing the Circuit Card Backplane

WARNING:

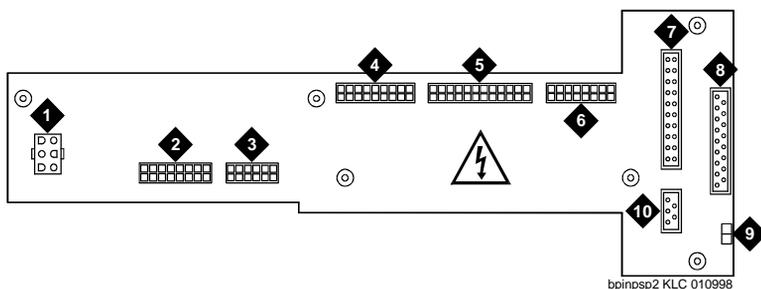
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#), in [Chapter 4, “Getting Inside the Computer”](#).

To install the circuit card backplane, do the following:

1. Place the circuit card backplane in the MAP/100P.
2. Secure the circuit card backplane using the thirteen screws removed in [Step 8](#) of [“Removing the Circuit Card Backplane”](#), above.
3. Attach the two power supply wire slide connectors to the circuit card backplane ([Figure 7-1](#)).
4. Attach the 12 power supply wires to the circuit card backplane using the screws you removed in [Step 6](#) of [“Removing the Circuit Card Backplane”](#), above.
5. Replace the circuit cards. See [“Installing a Circuit Card”](#), in [Chapter 5](#), [“Replacing or Installing Circuit Cards”](#), for the procedure.
6. Replace the side dress cover. See [“Replacing the Side Dress Cover”](#), in [Chapter 4](#), [“Getting Inside the Computer”](#), for the procedure.
7. Restore the incoming power. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4](#), [“Getting Inside the Computer”](#), for this procedure.

Replacing the Power Supply Backplane

The power supply backplane ([Figure 7-2](#) and [Figure 7-3](#)) is located between the power supply bay and the peripheral bay.



1. J1 - Power ON/OFF switch cable connection
2. J2 - Hard disk drive power cable connection
3. J3 - Circuit card backplane power cable connection
4. J4 - Future
5. J5 - Circuit card backplane power cable connection
6. J6 - Cartridge tape and diskette drive power supply cable connection
7. J8 - Console alarm cable connection
8. J9 - Remote maintenance circuit card interface cable connection
9. J10 - Reset cable connection
10. J7 - SCSI ID cable connection

Figure 7-2. Power Supply Backplane (showing peripheral bay connections)

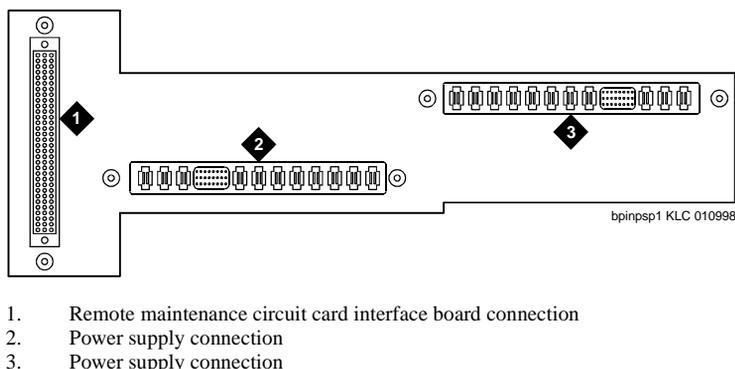


Figure 7-3. Power Supply Backplane (showing power supply connections)

Removing the Power Supply Backplane

⚠ WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#), in [Chapter 4, “Getting Inside the Computer”](#).

To remove the power supply backplane, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Remove the power supplies. See [“Removing a Power Supply”](#), for the procedure.
5. Remove the remote maintenance circuit card interface board. See [“Removing the Remote Maintenance Circuit Card Interface Board”](#), for the procedure.
6. Open the front door.

7. Remove the hard disk drive carriage. See [“Removing the Hard Disk Drive Carriage”](#), for the procedure.
8. Disconnect the following cables ([Figure 7-2](#)).
 - Power ON/OFF switch cable connection
 - Hard disk drive power cable connection
 - Circuit card backplane power cable connection
 - Diskette and tape drive power cable connection
 - Console alarm cable connection
 - SCSI cable connection
 - Reset cable connection
 - Hard disk drive SCSI ID cable connection
9. Remove the six screws that secure the power supply backplane to the MAP/100P.
10. Pull the power supply backplane from the MAP/100P.

Installing the Power Supply Backplane

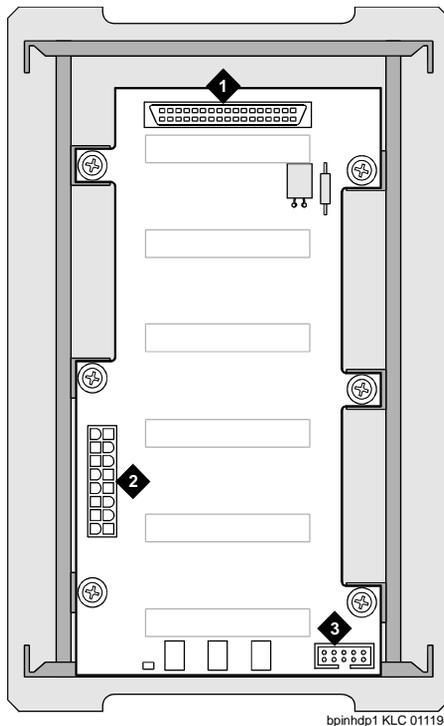
To install the power supply backplane, do the following:

1. Place the power supply backplane in the MAP/100P.
2. Secure the power supply backplane with the six screws you removed in [Step 9](#) of [“Removing the Power Supply Backplane”](#).
3. Connect the following cables ([Figure 7-2](#)):
 - Power ON/OFF switch cable connection
 - Hard disk drive power cable connection
 - Circuit card backplane power cable connection
 - Diskette and tape drive power cable connection
 - Console alarm cable connection
 - SCSI cable connection
 - Reset cable connection
 - Hard disk drive SCSI ID cable connection
4. Replace the hard disk drive carriage. See [“Installing the Hard Disk Drive Carriage”](#), for the procedure.
5. Replace the remote maintenance circuit card interface board. See [“Installing the Remote Maintenance Circuit Card Interface Board”](#) for the procedure.
6. Replace the power supplies. See [“Installing a Power Supply”](#) for the procedure.

7. Close the front door.
8. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

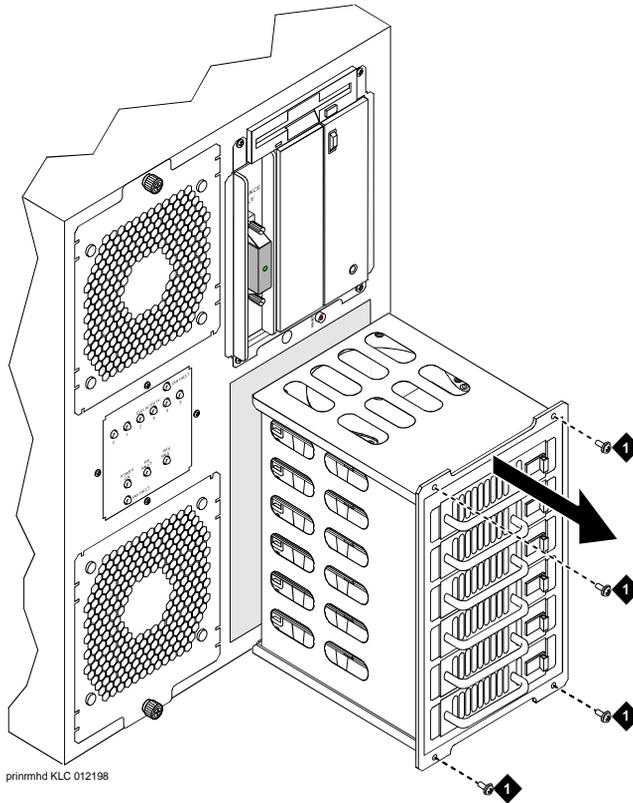
Replacing the Hard Disk Drive Carriage Backplane

The hard disk drive carriage backplane ([Figure 7-4](#)) is located in the back of the hard disk drive carriage ([Figure 7-5](#)).



1. SCSI bus cable connection
2. Hard disk drive power cable connection
3. SCSI ID cable connection

Figure 7-4. Hard Disk Drive Carriage Backplane



prinmhd KLC 012198

1. Hard disk drive carriage retaining screw

Figure 7-5. Hard Disk Drive Carriage

Removing the Hard Disk Drive Carriage Backplane

WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#), in [Chapter 4, “Getting Inside the Computer”](#).

To remove the hard disk drive carriage backplane, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.

2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Open the front door.
5. Remove the hard disk drive carriage. See [“Removing the Hard Disk Drive Carriage”](#), below for the procedure.
6. Remove the hard disk drive power cable from the hard disk drive carriage backplane ([Figure 7-4](#)).
7. Remove the SCSI bus cable from the hard disk drive carriage backplane ([Figure 7-4](#)).
8. Remove the SCSI ID cable from the hard disk drive carriage backplane ([Figure 7-4](#)).
9. Remove the six screws that secure the hard disk drive backplane to the hard disk drive carriage.
10. Remove the hard disk drive carriage backplane.

Installing the Hard Disk Drive Carriage Backplane

To install the hard disk drive carriage backplane, do the following:

1. Place the hard disk drive carriage backplane on the hard disk drive carriage.
2. Secure the hard disk drive backplane with the six screws you removed in [Step 9](#) of [“Removing the Hard Disk Drive Carriage Backplane”](#).
3. Connect the hard disk drive power cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
4. Connect the SCSI bus cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
5. Connect the SCSI ID cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
6. Replace the hard disk drive carriage. See [“Installing the Hard Disk Drive Carriage”](#), below for the procedure.
7. Close the front door.
8. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

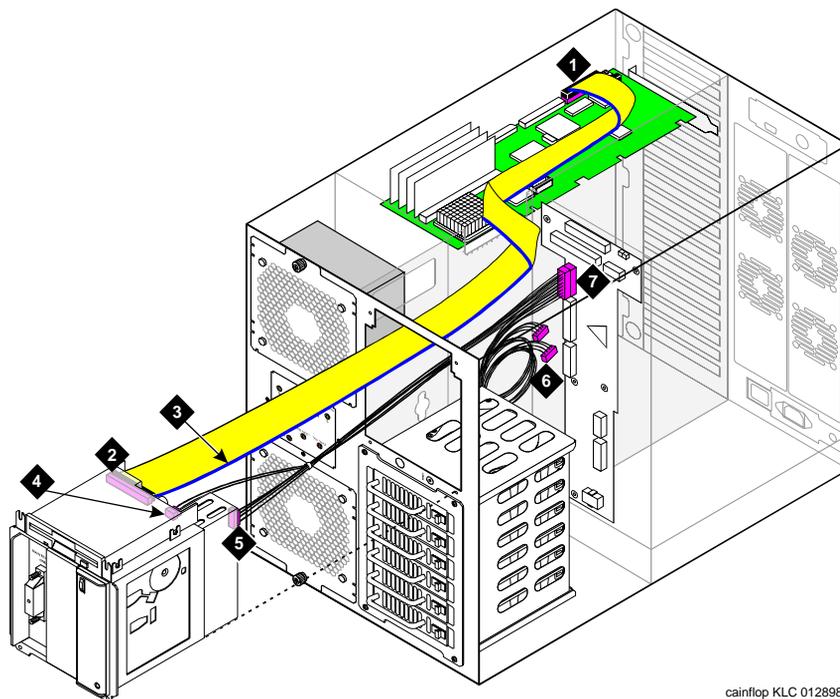
Replacing Cables

This section provides the procedures for replacing the following cables:

- Diskette
- Console alarm
- Power
- Remote maintenance circuit card interface
- Reset
- SCSI
- SCSI ID

Replacing the Diskette Cable

The diskette cable connects the diskette drive to the P5 200 MHz CPU circuit card ([Figure 7-6](#)).



1. Diskette cable attachment to P5 200 MHz CPU circuit card
2. Diskette cable attachment to diskette drive
3. Pin 1 tracer
4. Power cable attachment to diskette drive
5. Power cable attachment to the cartridge tape drive
6. Extra power cable attachments (future)

Figure 7-6. Diskette and Power Supply Cables

Removing the Diskette Cable

To remove the diskette cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.

5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Remove the diskette cable from the back of the diskette drive ([Figure 7-6](#)).
7. Access the circuit card cage. See [“Accessing the Circuit Card Cage”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
8. Remove the diskette cable from the P5 200 MHz CPU circuit card ([Figure 7-6](#)).
9. Gently feed the diskette cable through the MAP/100P chassis and out through the peripheral carriage hole.

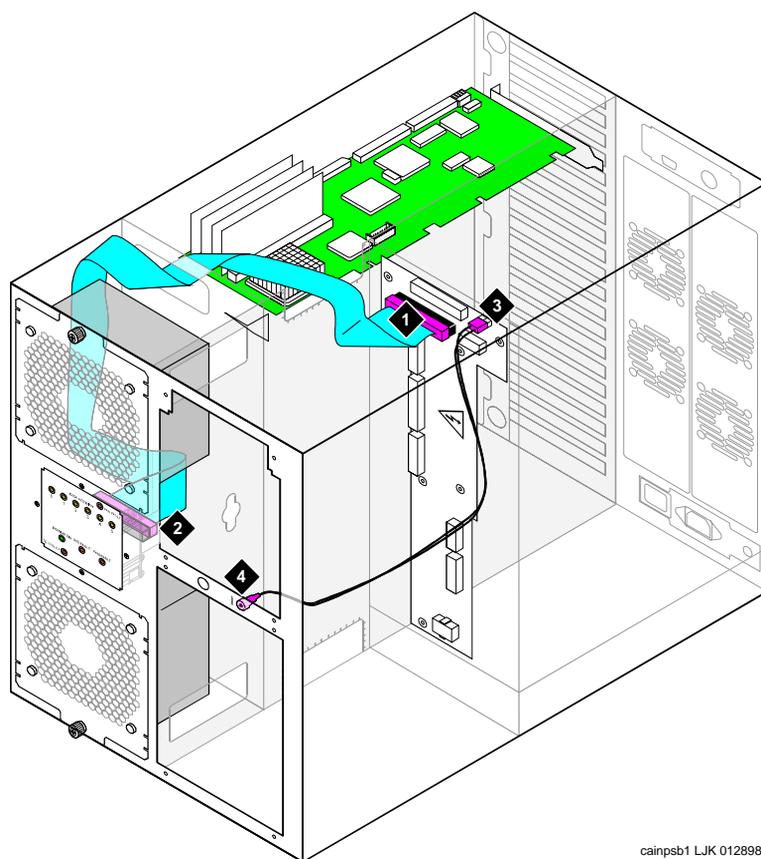
Installing the Diskette Cable

To install the diskette cable, do the following:

1. Feed the diskette cable through the MAP/100P chassis with one end in the peripheral carriage area and the other end near the P5 200 MHz CPU circuit card ([Figure 7-6](#)).
2. Attach the diskette cable to the P5 200 MHz CPU circuit card ([Figure 7-6](#)).
3. Attach the diskette cable to the diskette drive ([Figure 7-6](#)).
4. Slide the peripheral carriage into the MAP/100P.
5. Secure the peripheral carriage the four screws removed in Step [5](#) of [“Removing the Diskette Cable”](#).
6. Close the front door.
7. Close the circuit card cage. See [“Replacing the Side Dress Cover”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
8. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Replacing the Console Alarm Cable

The console alarm cable connects the remote maintenance circuit card interface board with the console alarm panel ([Figure 7-7](#)).



caainpsb1 LJK 012898

1. Console alarm cable attachment to the power supply backplane
2. Console alarm cable attachment to the console alarm panel
3. Reset cable attachment to the power supply backplane
4. Reset cable attachment to the reset switch

Figure 7-7. Console Alarm and Reset Cables

Removing the Console Alarm Cable

To remove the console alarm cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.

3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Remove the console alarm cable from the power supply backplane.
The console alarm cable attaches to connection point J8 on the power supply backplane ([Figure 7-2](#)).
7. Remove the console alarm panel. See [“Removing the Console Alarm Panel”](#) for the procedure.
8. Disconnect the console alarm cable from the back of the console alarm panel. See [“Removing the Console Alarm Panel”](#) for the procedure.
9. Remove the console alarm cable from the MAP/100P.

Installing the Console Alarm Cable

To install the console alarm cable, do the following:

1. Feed the console alarm cable through the MAP/100P chassis with one end in the peripheral carriage area and the other end near the console alarm panel.
2. Attach the console alarm cable to the console alarm panel ([Figure 7-7](#)).
3. Attach the console alarm cable to the power supply backplane ([Figure 7-2](#)).
4. Slide the peripheral carriage into the MAP/100P.
5. Secure the peripheral carriage the four screws removed in [Step 5](#) of [“Removing the Console Alarm Cable”](#).
6. Replace the console alarm panel. See [“Installing the Console Alarm Panel”](#) for the procedure.
7. Close the front door.
8. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Replacing the Power Cables

The MAP/100P has cables which supply power to the:

- Cartridge tape and diskette drive
- Hard disk drive carriage backplane
- Circuit card backplane

Replacing the Cartridge Tape and Diskette Drive Power Supply Cable

The cartridge tape and diskette drive power supply cable connects the power supply backplane and both the cartridge tape and diskette drives ([Figure 7-6](#)).

Removing the Cartridge Tape and Diskette Drive Power Supply Cable

To remove the cartridge tape and diskette drive power supply cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Remove the cartridge tape drive power supply cable from the back of the cartridge tape drive ([Figure 7-6](#)).
7. Remove the diskette drive mini power supply cable from the diskette drive ([Figure 7-6](#)).
8. Remove the cartridge tape and diskette drive power supply cable from the power supply backplane.

The cartridge tape and diskette drive power supply cable attaches to connection point J6 on the power supply backplane ([Figure 7-2](#)).

9. Remove the cartridge tape and diskette drive power supply cable from the MAP/100P.

Installing the Cartridge Tape and Diskette Drive Power Supply Cable

To install the cartridge tape and diskette drive power supply, do the following:

1. Attach the cartridge tape drive power supply cable to the back of the cartridge tape drive ([Figure 7-6](#)).
2. Attach the diskette drive mini power supply cable to the diskette drive ([Figure 7-6](#)).

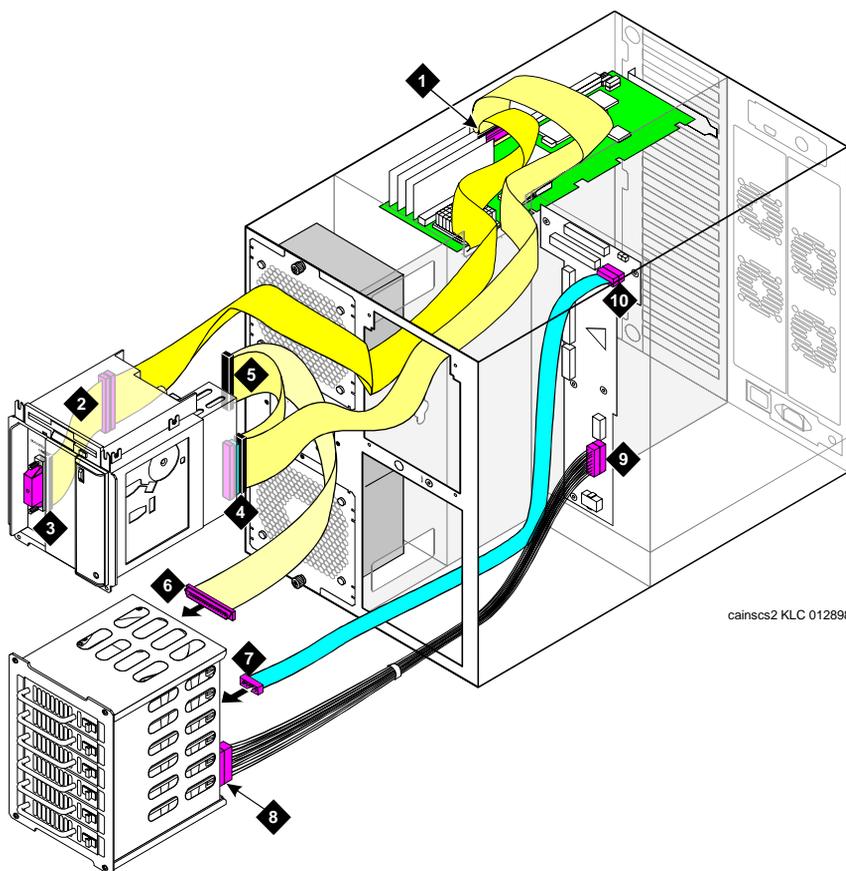
3. Attach the cartridge tape and diskette drive power supply cable to the power supply backplane.

The cartridge tape and diskette drive power supply cable attaches to connection point J6 on the power supply backplane ([Figure 7-2](#)).

4. Slide the peripheral carriage into the MAP/100P.
5. Secure the peripheral carriage the four screws removed in [Step 5](#) of [“Removing the Console Alarm Cable”](#).
6. Close the front door.
7. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Replacing the Hard Disk Drive Carriage Backplane Power Supply Cable

The hard disk drive power supply cable connects the power supply backplane and the hard disk drive carriage backplane ([Figure 7-8](#)). This is the cable that supplies power to all six hard disk drives.



cainscs2 KLC 012898

1. SCSI cable connection to P5 200 MHz CPU circuit card
2. SCSI cable connection to the mini SCSI cable extension
3. Mini SCSI cable extension connection to the external terminator
4. SCSI cable connection to the cartridge tape drive
5. Future SCSI connection
6. SCSI cable connection to the hard disk drive carriage backplane
7. SCSI ID cable connection to the hard disk drive carriage backplane
8. Power supply cable connection to the hard disk drive carriage backplane
9. Hard disk drive power supply cable connection to the power supply backplane
10. SCSI ID cable connection to the power supply backplane

Figure 7-8. SCSI and Hard Disk Drive Carriage Cables

Removing the Hard Disk Drive Carriage Power Supply Cable

To remove the hard disk drive carriage power supply cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.

2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the hard disk drive carriage. See "[Removing the Hard Disk Drive Carriage](#)" below for the procedure.
6. Remove the hard disk drive carriage power supply cable from the hard disk drive carriage ([Figure 7-8](#)).
7. Remove the hard disk drive carriage power supply cable from the power supply backplane ([Figure 7-8](#)).
8. Remove the hard disk drive carriage power supply cable from the MAP/100P.

Installing the Hard Disk Drive Carriage Power Supply Cable

To install the hard disk drive carriage power supply cable, do the following:

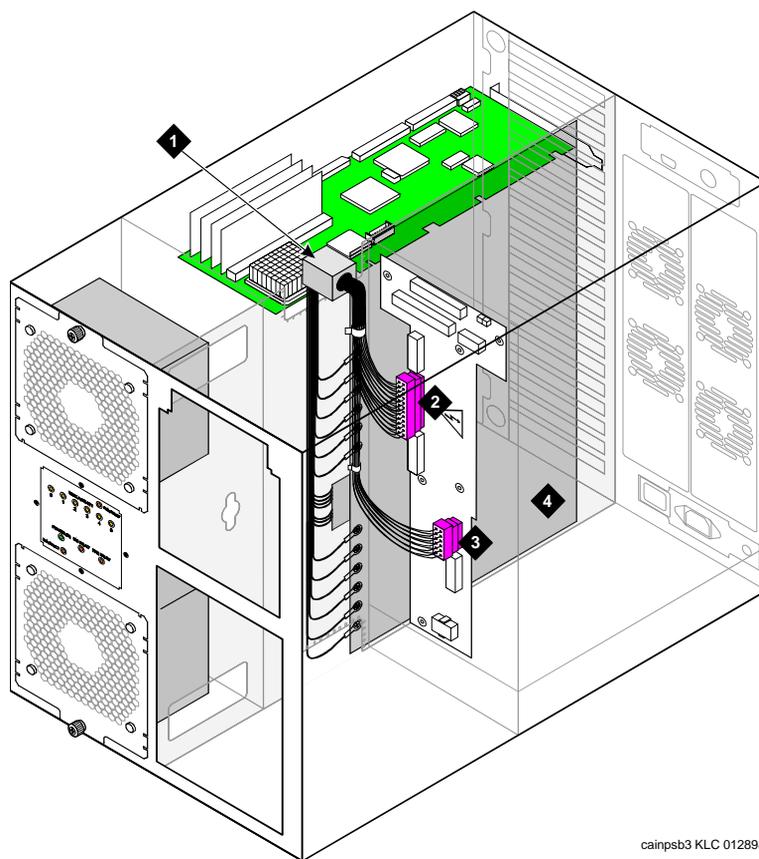
1. Attach the hard disk drive carriage power supply cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
2. Attach the hard disk drive carriage power supply cable to the power supply backplane.

The hard disk drive carriage power supply cable attaches to connection point J2 on the power supply backplane ([Figure 7-2](#)).

3. Install the hard disk drive carriage. See "[Installing the Hard Disk Drive Carriage](#)" below for the procedure.
4. Close the front door.
5. Apply power to the MAP/100P. See "[Restoring Power to the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Replacing the Circuit Card Backplane Power Supply Cable

The circuit card backplane power supply cable connects the power supply backplane and the circuit card backplane ([Figure 7-9](#)).



caimpsb3 KLC 012898

1. Toroid
2. Circuit card backplane power supply connection
3. Circuit card backplane power supply connection
4. Circuit card backplane

Figure 7-9. Circuit Card Backplane Power Supply Cables

Removing the Circuit Card Backplane Power Supply Cable

To remove the circuit card backplane power supply cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.

3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Remove the hard disk drive carriage. See [“Removing the Hard Disk Drive Carriage”](#) below for the procedure.
7. Remove the circuit card backplane power supply cable from the power supply backplane ([Figure 7-9](#)).
8. Remove all of the circuit cards. See [“Removing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
9. Remove the circuit card backplane power supply cable from the circuit card backplane ([Figure 7-1](#)).
10. Remove the circuit card backplane power supply cable from the MAP/100P.

Installing the Circuit Card Backplane Power Supply Cable

To install the circuit card backplane power supply cable, do the following:

1. Attach the circuit card backplane power supply cable to the power supply backplane.

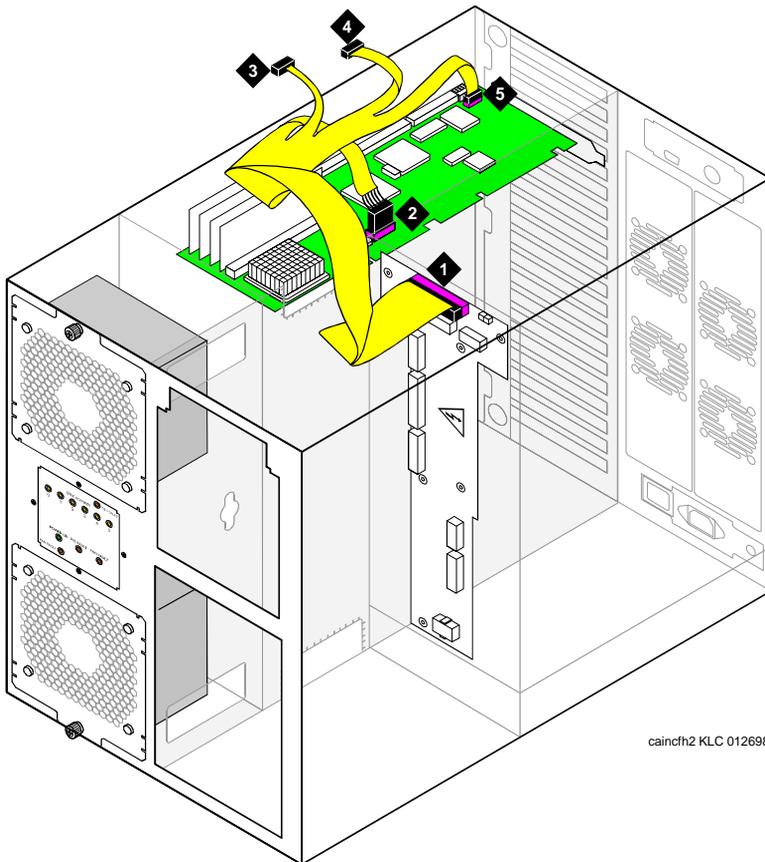
The circuit card backplane power supply cable attaches to connection points J3 and J5 on the power supply backplane ([Figure 7-2](#)).

2. Attach the circuit card backplane power cable to the circuit card backplane ([Figure 7-1](#)).
3. Replace all of the circuit cards. See [“Installing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
4. Install the hard disk drive carriage. See [“Installing the Hard Disk Drive Carriage”](#) below for the procedure.
5. Secure the peripheral carriage with the four screws removed in [Step 5](#) of [“Removing the Circuit Card Backplane Power Supply Cable”](#).
6. Close the front door.
7. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Replacing the Remote Maintenance Circuit Card Interface Cable

The remote maintenance circuit card interface cable ([Figure 7-10](#)) connects the:

- Remote maintenance circuit card
- Remote maintenance circuit card interface board
- P5 200 MHz CPU circuit card



cainch2 KLC 012698

1. Connection to the power supply backplane
2. Connection to the keyboard port on the P5 200 MHz CPU circuit card
3. Connection to the platform reset port on the remote maintenance circuit card
4. Connection to the fan status port on the remote maintenance circuit card
5. Connection to the COM2 port on the P5 200 MHz CPU circuit card

Figure 7-10. Remote Maintenance Circuit Card Interface Cable

Removing the Remote Maintenance Circuit Card Interface Cable

To remove the remote maintenance circuit card interface cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Disconnect the remote maintenance circuit card interface cable from the power supply backplane ([Figure 7-10](#)).
7. Disconnect the remote maintenance circuit card interface cable from the remote maintenance circuit card platform reset connection ([Figure 7-10](#)).
8. Disconnect the remote maintenance circuit card interface cable from the remote maintenance circuit card fan status connection ([Figure 7-10](#)).
9. Disconnect the remote maintenance circuit card interface cable from the P5 200 MHz CPU circuit card keyboard connection ([Figure 7-10](#)).
10. Disconnect the remote maintenance circuit card interface cable from the P5 200 MHz CPU circuit card COM2 port connection ([Figure 7-10](#)).
11. Remove the reset cable from the MAP/100P chassis.

Installing the Remote Maintenance Circuit Card Interface Cable

To install the remote maintenance circuit card interface cable, do the following:

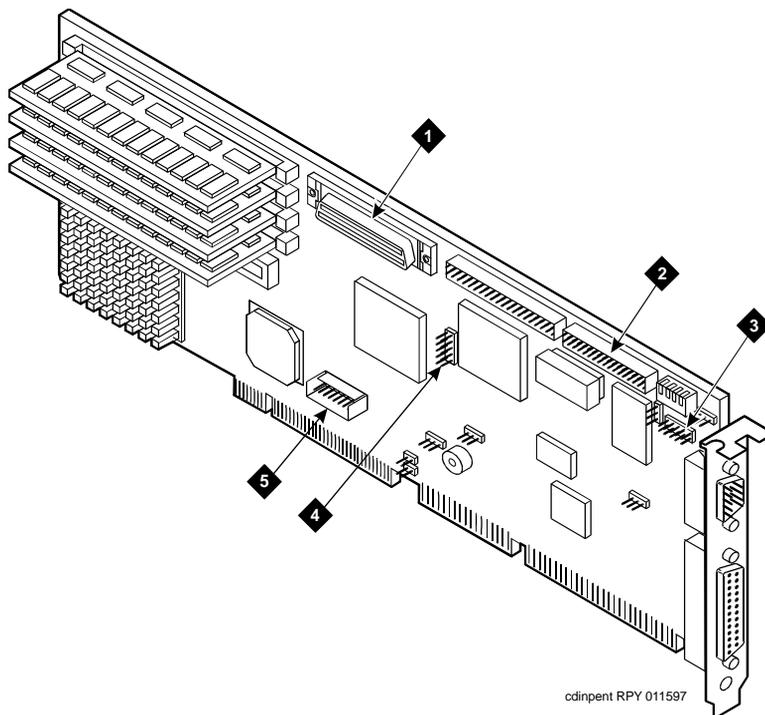
1. Connect the remote maintenance circuit card interface cable to the power supply backplane ([Figure 7-10](#)).

The remote maintenance circuit card interface cable attaches to connection point J9 on the power supply backplane ([Figure 7-2](#)).

2. Connect the remote maintenance circuit card interface cable to the P5 200 MHz CPU circuit card keyboard connection ([Figure 7-11](#)).

NOTE:

The P5 200 MHz CPU circuit card must be pulled partially out of the MAP/100P before the cable can be connected to the keyboard port.



- | | |
|-----------------------------|-----------------------------|
| 1. SCSI cable connector | 4. COM2 connector |
| 2. Diskette cable connector | 5. Keyboard cable connector |
| 3. COM2 cable connector | |

Figure 7-11. P5 200 MHz CPU Circuit Card

3. Connect the remote maintenance circuit card interface cable to the P5 200 MHz CPU circuit card COM2 port connection ([Figure 7-11](#)).
4. Connect the remote maintenance circuit card interface cable to the remote maintenance circuit card platform reset connection ([Figure 7-12](#)).

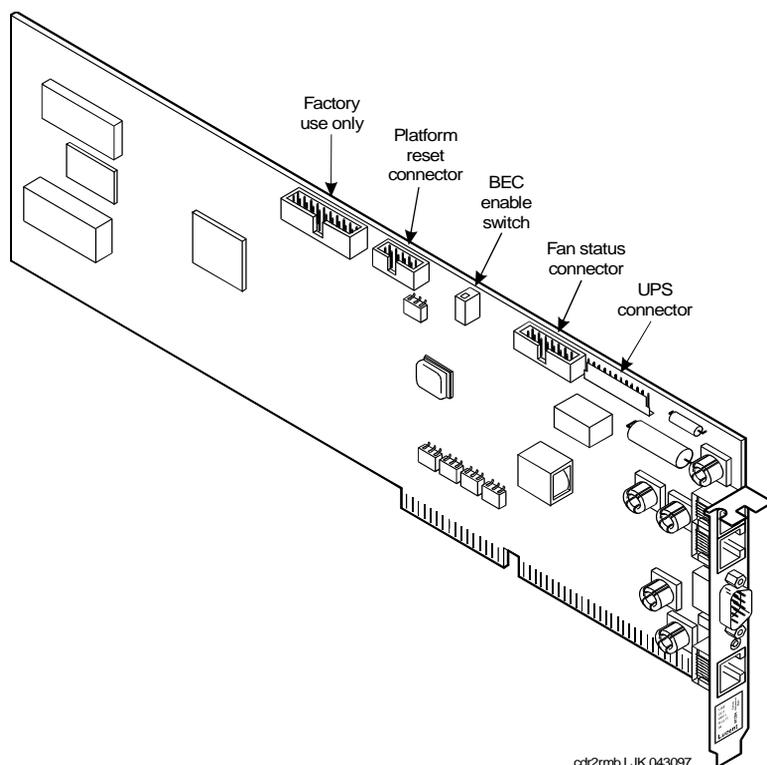


Figure 7-12. Remote Maintenance Circuit Card

5. Connect the remote maintenance circuit card interface cable to the remote maintenance circuit card fan status connection ([Figure 7-12](#)).
6. Slide the peripheral carriage into the MAP/100P.
7. Secure the peripheral carriage the four screws removed in [Step 5](#) of [“Removing the Remote Maintenance Circuit Card Interface Cable”](#).
8. Close the front door.
9. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Replacing the Reset Cable

The reset cable connects the reset switch on the front of the MAP/100P to the power supply backplane ([Figure 7-7](#)).

Removing the Reset Cable

To remove the reset cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Disconnect the reset cable from the reset switch ([Figure 7-7](#)).
7. Disconnect the reset cable from the power supply backplane ([Figure 7-7](#)).
8. Remove the reset cable from the MAP/100P chassis.

Installing the Reset Cable

To install the reset cable, do the following:

1. Place the reset cable in the MAP/100P chassis peripheral carriage area.
2. Attach the reset cable to the reset switch ([Figure 7-7](#)).
3. Attach the reset cable to the power supply backplane ([Figure 7-7](#)).

The reset cable attaches to connection point J10 on the power supply backplane ([Figure 7-2](#)).

4. Slide the peripheral carriage into the MAP/100P.
5. Secure the peripheral carriage the four screws removed in [Step 5](#) of "[Removing the Reset Cable](#)".
6. Close the front door.
7. Apply power to the MAP/100P. See "[Restoring Power to the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Installing the SCSI Cable

The SCSI cable ([Figure 7-8](#)) connects the:

- External SCSI terminator



NOTE:

The SCSI cable connects to external SCSI terminator through a mini SCSI extension cable ([Figure 7-8](#)).

- P5 200 MHz CPU circuit card
- Cartridge tape drive
- Hard disk drive carriage backplane

Removing the SCSI Cable

To remove the SCSI cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Remove the hard disk drive carriage. See "[Removing the Hard Disk Drive Carriage](#)" below for the procedure.
7. Remove the SCSI cable from the mini SCSI extension cable ([Figure 7-8](#)).



NOTE:

If the mini SCSI extension cable is to be replaced, remove it by loosening the two screws on the external SCSI connector.

8. Remove the SCSI cable from the cartridge tape drive ([Figure 7-8](#)).



NOTE:

The cartridge tape drive has an adapter attached to it that allows it to connect to the SCSI cable. Make sure the adapter remains attached to the cartridge tape drive.

9. Remove the SCSI cable from the P5 200 MHz CPU circuit card ([Figure 7-11](#)).
10. Remove the SCSI cable from the hard disk drive carriage backplane ([Figure 7-4](#)).
11. Remove the SCSI cable from the MAP/100P.

Installing the SCSI Cable

To install the SCSI cable, do the following:

1. Attach one end of the SCSI cable to the external SCSI terminator ([Figure 7-8](#)).
2. Attach the SCSI cable to the cartridge tape drive ([Figure 7-8](#)).



NOTE:

The cartridge tape drive has an adapter attached to it that allows it to connect to the SCSI cable. Make sure the adapter remains attached to the cartridge tape drive.

3. Attach the SCSI cable to the P5 200 MHz CPU circuit card ([Figure 7-11](#)).
4. Attach the SCSI cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
5. Slide the peripheral carriage into the MAP/100P.
6. Secure the peripheral carriage the four screws removed in [Step 5](#) of "[Removing the SCSI Cable](#)".
7. Install the hard disk drive carriage. See "[Installing the Hard Disk Drive Carriage](#)" below for the procedure.
8. Close the front door.
9. Apply power to the MAP/100P. See "[Restoring Power to the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Installing the SCSI ID Cable

The SCSI cable connects the power supply backplane and the hard disk drive carriage backplane ([Figure 7-8](#)). This cable sets the SCSI IDs on all six hard disk drives.

Removing the SCSI ID Cable

To remove the SCSI cable, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.

2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the hard disk drive carriage. See "[Removing the Hard Disk Drive Carriage](#)" below for the procedure.
6. Remove the SCSI ID cable from the hard disk drive carriage ([Figure 7-8](#)).
7. Remove the SCSI ID cable from the power supply backplane ([Figure 7-8](#)).
8. Remove the SCSI ID cable from the MAP/100P.

Installing the SCSI ID Cable

To install the SCSI ID cable, do the following:

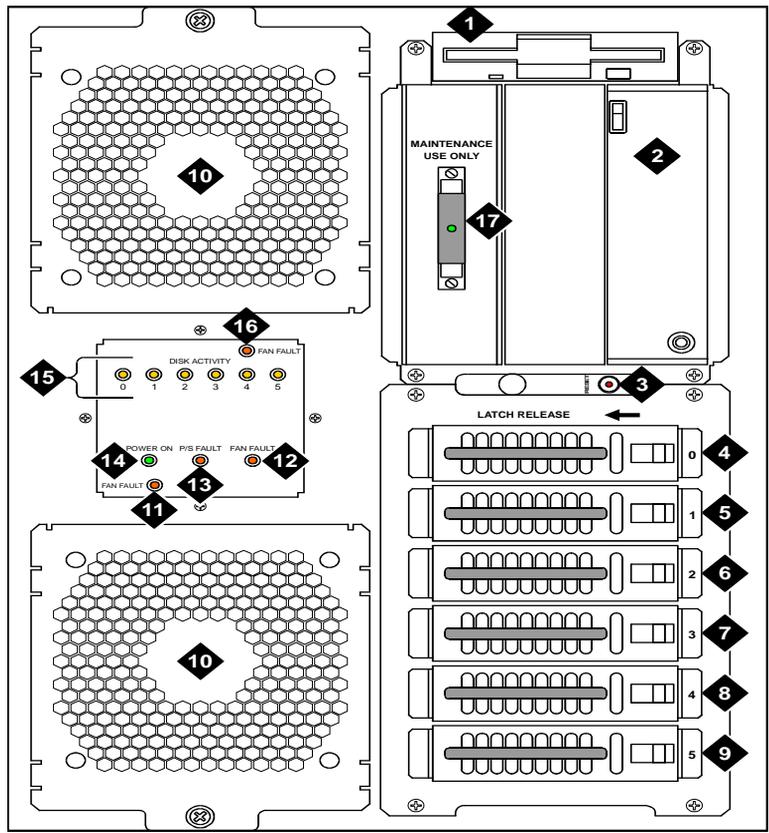
1. Attach the SCSI ID cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
2. Attach the SCSI ID cable to the power supply backplane.

The SCSI ID cable attaches to connection point J7 on the power supply backplane ([Figure 7-2](#)).

3. Install the hard disk drive carriage. See "[Installing the Hard Disk Drive Carriage](#)" below for the procedure.
4. Close the front door.
5. Apply power to the MAP/100P. See "[Restoring Power to the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Replacing the Cartridge Tape Drive

The cartridge tape drive is located in Peripheral Bay 3 ([Figure 7-13](#)). The following procedures detail removal and installation of the cartridge tape drive for the MAP/100P.



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- | | |
|-------------------------|-----------------------------------|
| 1. Diskette drive | 10. Circuit card cage fan |
| 2. Cartridge tape drive | 11. Fan fault LED |
| 3. Reset push button | 12. Fan fault LED |
| 4. Hard Disk Drive 0 | 13. Power supply fault LED |
| 5. Hard Disk Drive 1 | 14. Power On LED |
| 6. Hard Disk Drive 2 | 15. Hard disk drive activity LEDs |
| 7. Hard Disk Drive 3 | 16. Fan fault LED |
| 8. Hard Disk Drive 4 | 17. SCSI terminator |
| 9. Hard Disk Drive 5 | |

Figure 7-13. Front View of the MAP/100P

⚠ WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#), in [Chapter 4, “Getting Inside the Computer”](#).

Removing a Cartridge Tape Drive

To remove a cartridge tape drive, do the following:

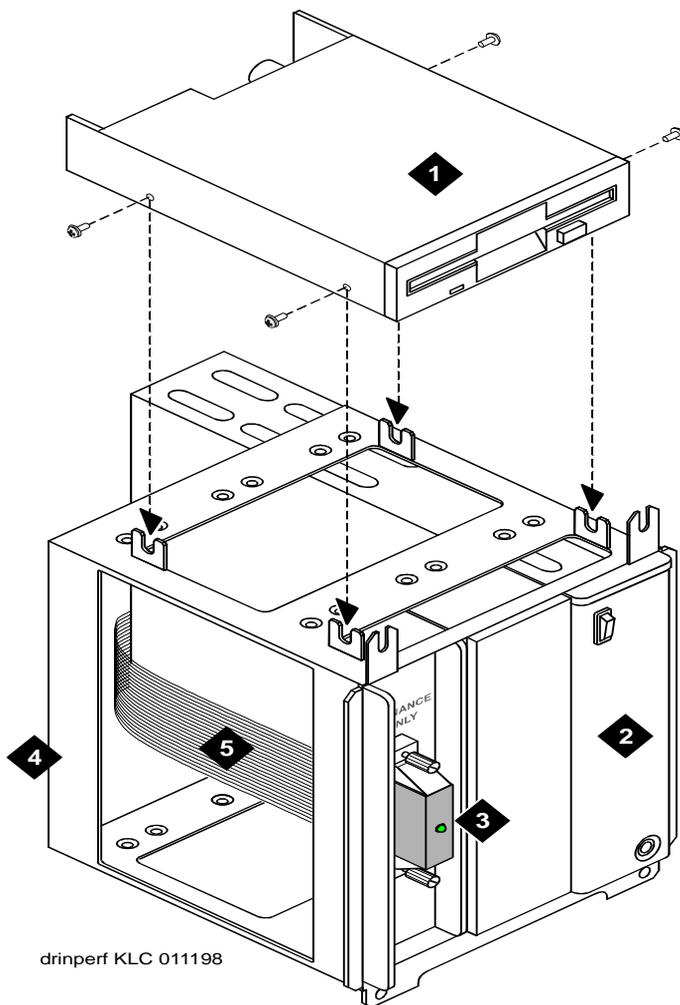
1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-6](#)).
6. Remove the power cord connector from the back of the cartridge tape drive.
7. Remove the SCSI cable assembly connection from the back of the cartridge tape drive. Move it to the side.



NOTE:

The SCSI cable has an adapter attached to it that allows it to connect to the cartridge tape drive. Make sure the adapter remains attached to the SCSI cable.

8. Remove the four screws securing the cartridge tape drive to the peripheral carriage ([Figure 7-14](#)).
9. Remove the cartridge tape drive from the peripheral carriage.



- | | | | |
|----|----------------------|----|---------------------|
| 1. | Diskette drive | 4. | Peripheral carriage |
| 2. | Cartridge tape drive | 5. | SCSI cable |
| 3. | SCSI terminator | | |

Figure 7-14. Peripheral Carriage



CAUTION:

Keep these four screws separate. These screws are metric. Using any of the other screws associated with the MAP/100P will damage the threads in the diskette drive mounting hardware.

Installing a Cartridge Tape Drive

To install a cartridge tape drive, do the following:

1. Remove the new cartridge tape unit from its ESD-protective wrapping.



NOTE:

Keep the package and all ESD-protective wrapping to return the defective unit. Re-use of the original replacement unit packaging is necessary to meet the manufacturer's warranty.

2. Verify that these settings are correct ([Figure 7-15](#)).

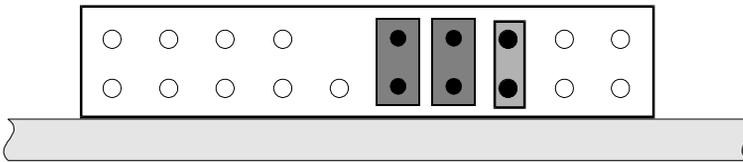
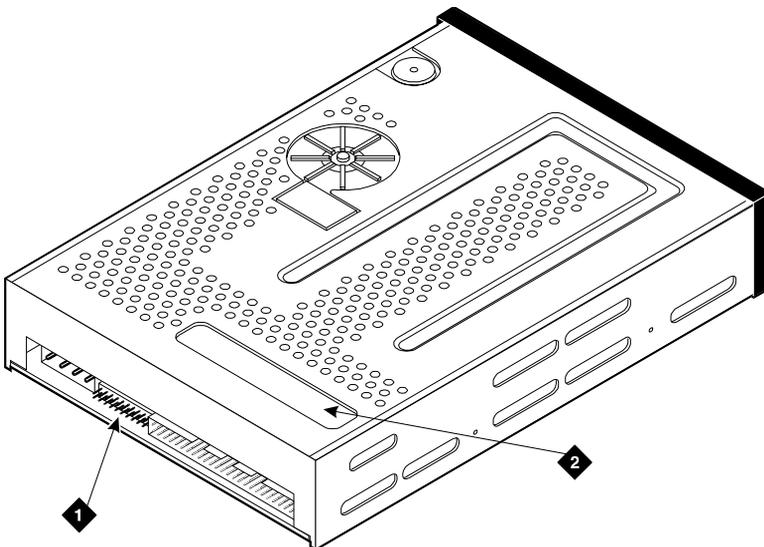


Figure 7-15. Jumper Settings for the Cartridge Tape Drive, SCSI ID = 6

3. Remove the three terminating resistors ([Figure 7-16](#)).



1. Jumpers

2. Terminating resistors

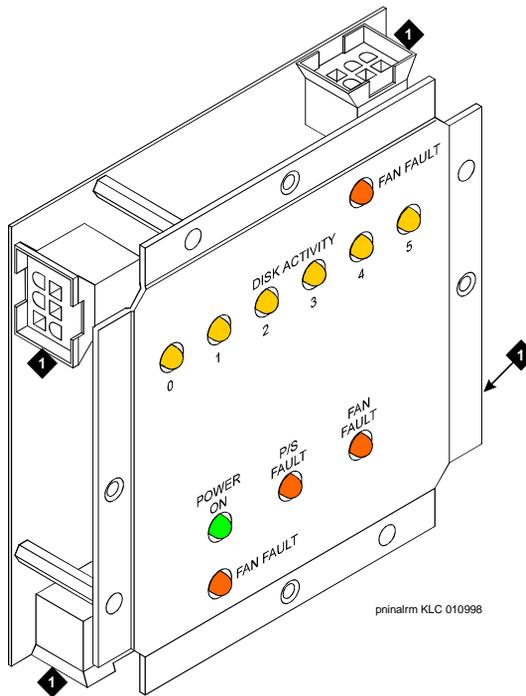
drcvipe1 CJL 020597

Figure 7-16. Cartridge Tape Drive

4. Secure the cartridge tape drive to the peripheral carriage using the four screws removed in [Step 8](#) of ["Removing a Cartridge Tape Drive"](#).
5. Attach the SCSI bus cable assembly.
6. Attach the power cable assembly.
7. Slide the peripheral carriage into the MAP/100P.
8. Secure the peripheral carriage with the four screws removed in [Step 5](#) of ["Removing a Cartridge Tape Drive"](#).
9. Close the front door.
10. Apply power to the MAP/100P. See ["Restoring Power to the MAP/100P"](#), in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Replacing the Console Alarm Panel

The console alarm panel ([Figure 7-17](#)) displays the status of the MAP/100P. The console alarm panel is located on the front of the MAP/100P ([Figure 7-13](#)).



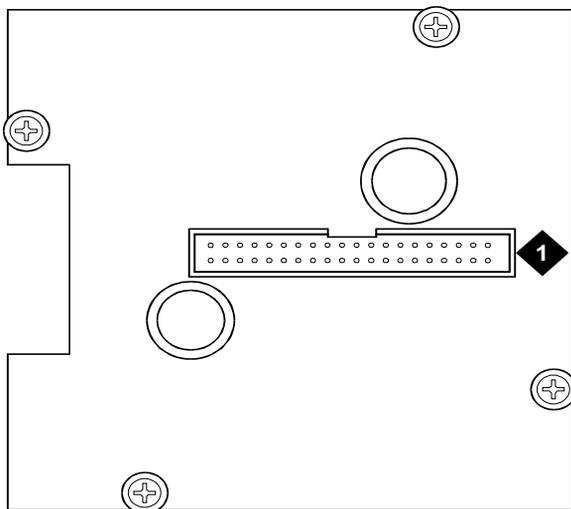
1. Circuit card cage fan connection

Figure 7-17. Console Alarm Panel

Removing the Console Alarm Panel

To remove the console alarm panel, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Remove both card cage fans. See "[Removing a Fan](#)", below for the procedure.
6. Remove the four screws that secure the console alarm panel to the MAP/100P ([Figure 7-13](#)).
7. Pull the console alarm panel gently out of the MAP/100P.
8. Remove the cable connected to the back of the console alarm panel ([Figure 7-18](#)).



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1. Alarm cable connection

Figure 7-18. Back View of the Console Alarm Panel

Installing the Console Alarm Panel

To install the console alarm panel, do the following:

1. Attach the alarm cable to the connection on the back of the console alarm panel ([Figure 7-18](#)).
2. Align the console alarm panel so that the display is oriented correctly.
3. Slide the console alarm panel into the MAP/100P.
4. Secure the console alarm panel with the four screws you removed in [Step 6](#) of [“Removing the Console Alarm Panel”](#), above.
5. Replace the fans. See [“Installing a Fan”](#), below for the procedure.
6. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
7. Verify the correct operation of the console alarm panel.
8. Close the front door.

Replacing the Diskette Drive

The 1.44 Mbyte, 3.5-inch diskette drive is assembled by the manufacturer with a mounting kit. The diskette drive is located in Peripheral Bay 4, as shown in [Figure 7-13](#).

WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See [“Protecting against Damage from Electrostatic Discharge”](#), in [Chapter 4, “Getting Inside the Computer”](#).

Removing the Diskette Drive

To remove the diskette drive, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

4. Open the front door.
5. Remove the peripheral carriage by removing the four screws that secure it to the MAP/100P chassis ([Figure 7-13](#)).
6. Remove the mini power cord connector from the back of the diskette drive.
7. Remove the diskette cable assembly connection from the back of the diskette drive. Move it to the side.



NOTE:

Make sure to note the position of the ribbon cable pin 1 indicator.

8. Remove the four screws securing the diskette drive to the peripheral carriage ([Figure 7-14](#)).



CAUTION:

Keep these four screws separate. These screws are metric. Using any of the other screws associated with the MAP/100P will damage the threads in the diskette drive mounting hardware.

9. Lift the diskette drive off of the peripheral carriage.



CAUTION:

Handle the diskette drive with care. The spindle motor, stepping motor, and printed circuit board are located on the bottom of the diskette drive. Do not place any force or strain on these components and do not touch the surface of the diskette drive printed circuit board.

10. Place the diskette drive upside down, with the printed circuit board facing up, on an ESD-protected surface.

Installing a Diskette Drive

To install a diskette drive, do the following:

1. Remove the new diskette drive unit from its ESD-protective wrapping.



NOTE:

Keep the package and all ESD-protective wrapping to return the defective unit. Re-use of the original replacement unit packaging is necessary to meet the manufacturer's warranty.

2. The MAP/100P supports six versions of the diskette drive:
 - FD-235HF-201
 - FD-235HF-3201

- FD-235HF-4429
- FD-235F-5429
- FD-235HF-6429
- FD-235HF-6529
- FD-235HF-7529

Identify the diskette drive you are installing.

3. Verify that the jumpers are set as shown in [Figure 7-19](#) and [Figure 7-20](#).

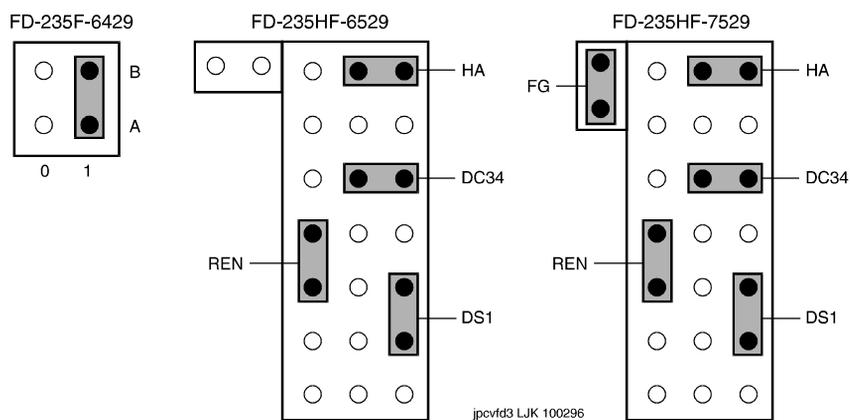


Figure 7-19. Diskette Drive Jumper Connections (6429 and 6529)

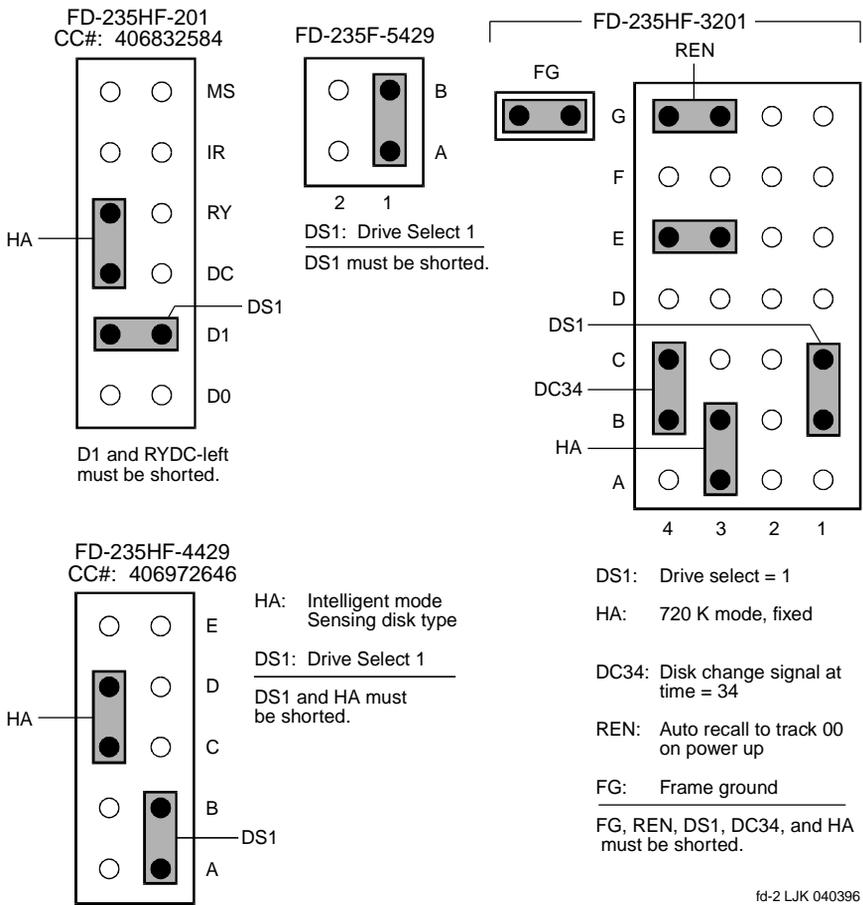


Figure 7-20. Diskette Drive Jumper Connections (201, 3201, 4429, and 5429)

4. Secure the diskette drive to the peripheral carriage using the four screws removed in [Step 8](#) of ["Removing the Diskette Drive"](#).
5. Attach the diskette drive cable assembly.
 Ensure that the diskette cable pin 1 indicator is towards the diskette drive spiral motor.
6. Attach the mini power-cable assembly.
7. Slide the peripheral carriage into the MAP/100P.
8. Secure the peripheral carriage the four screws removed in [Step 5](#) of ["Removing the Diskette Drive"](#).
9. Close the front door.
10. Apply power to the MAP/100P. See ["Restoring Power to the MAP/100P"](#), in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Replacing a Fan

The MAP/100P contains five fans that provide forced-air cooling for the unit. There are four circuit card cage fans and one power supply fan. The circuit card cage fans are serviceable. The power supply fan is *not* serviceable and repairs should *never* be attempted.

The circuit card cage fans are located behind the front door ([Figure 7-13](#)). The circuit card cage fans are attached to assemblies in matched pairs. If a fan is defective, the associated Fan Fault LED will be lit ([Figure 7-17](#)).

Removing a Fan

To remove a circuit card cage fan, do the following:

1. Locate the defective fan.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Open the front door.
5. Loosen the thumbscrew on the front of the circuit card cage fan assembly ([Figure 7-21](#)).

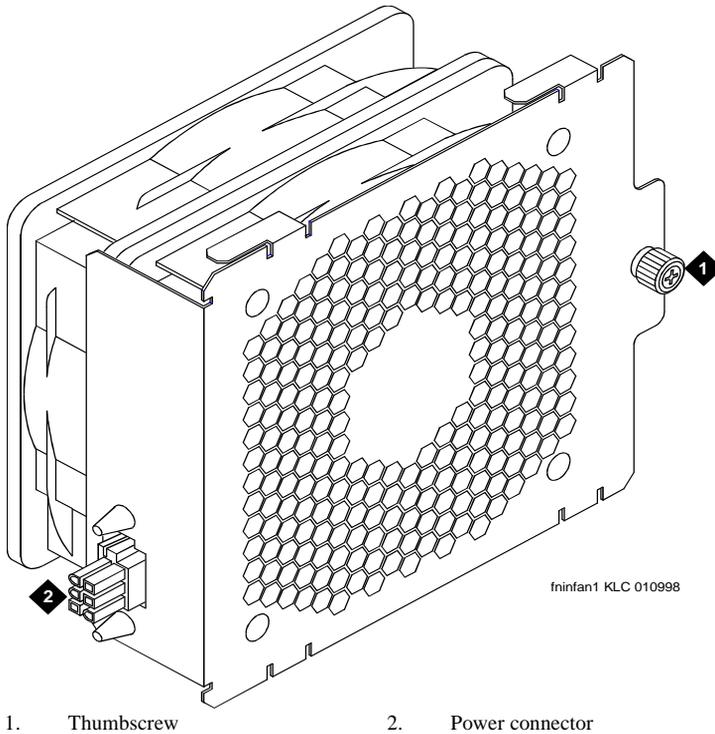


Figure 7-21. Circuit Card Cage Fan Assembly

6. Slide the circuit card cage fan assembly away from the console alarm panel in the center of the MAP/100P.

Installing a Fan

To install a fan assembly, do the following:

1. Place the circuit card cage fan assembly in the MAP/100P.
2. Slide the circuit card cage fan assembly toward the console alarm panel until the power connector is mated with the console alarm panel connection.
3. Tighten the locking thumbscrew.
4. Close the front door.

5. Apply power to the MAP/100. See "[Restoring Power to the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.



CAUTION:

Do not leave the MAP/100P powered up for any length of time until the circuit card cage fans are fully operational.

6. Verify that the fan is working by observing the MAP/100P console alarm panel ([Figure 7-17](#)).

Replacing the Fan Filter

The MAP/100P is equipped with a fan filter located behind the front door. The fan filter should be checked on a regular basis to determine the condition and cleaned if necessary.

Removing Fan Filters

The filters can be removed by opening the front doors and detaching the filter material ([Figure 7-22](#)).

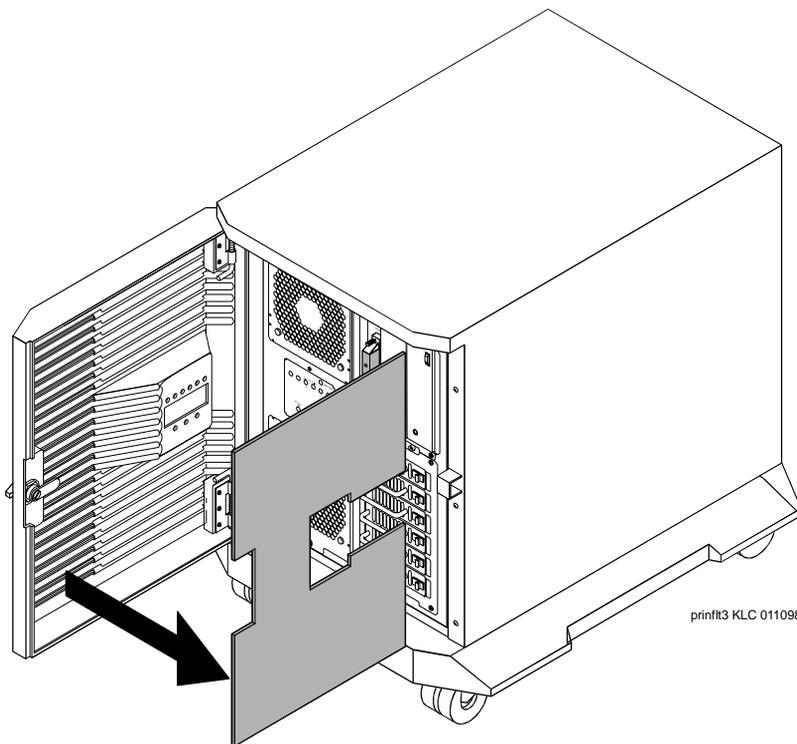


Figure 7-22. Removing the Fan Filter

Cleaning the Fan Filter

Clean the fan filter with mild soap and water. Allow the fan filter to thoroughly air dry before replacement.

⚠ CAUTION:

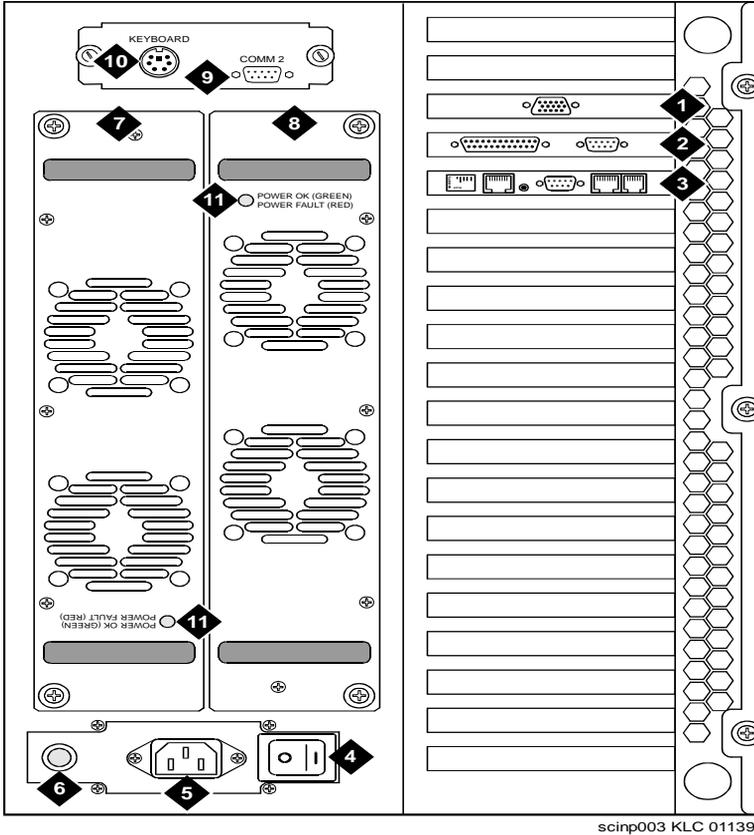
Do not use heat to dry the filter and do not place a wet or damp filter into the MAP/100P.

Installing Fan Filters

To install a filter, position it behind the doors and press it into place.

Replacing the Fuse

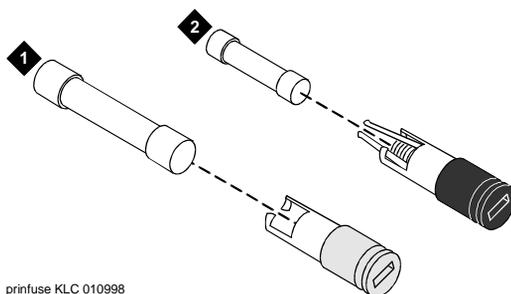
The fuse is located in the lower rear portion of the MAP/100P ([Figure 7-23](#)).



- | | | | |
|----|-------------------------|-----|---------------------|
| 1. | Video circuit card | 6. | Fuse |
| 2. | P5 200 MHz CPU | 7. | Power Supply 1 |
| 3. | Remote Maintenance card | 8. | Power Supply 2 |
| 4. | Power ON/OFF switch | 9. | COM2 port |
| 5. | AC power input | 10. | Keyboard connection |

Figure 7-23. Rear View of the MAP/100P

The MAP/100P is equipped with either a domestic fuse or an international fuse depending on the location ([Figure 7-24](#)).



1. Domestic fuse and holder
2. International fuse and holder

Figure 7-24. Fuse Types

Removing the Fuse

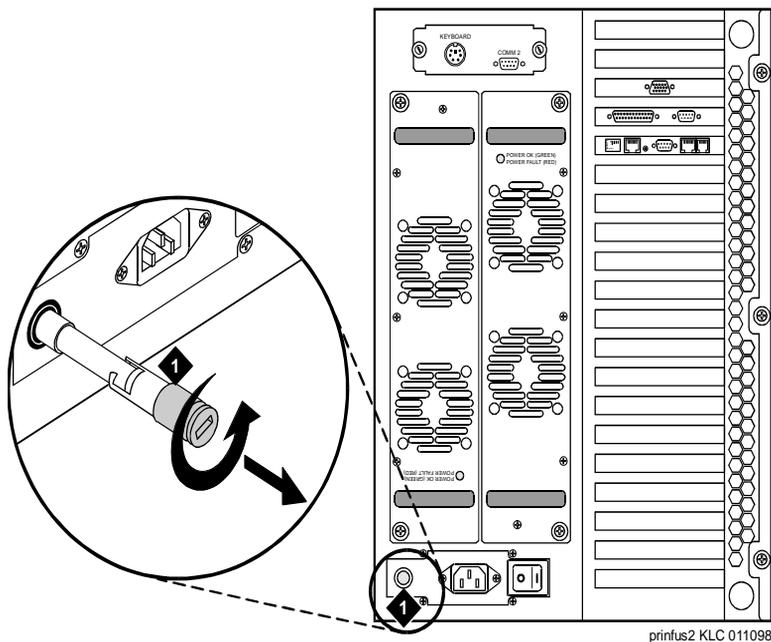
To remove the fuse, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

⚠ CAUTION:

Do not turn the fuse holder more than 1/8-turn in any direction.

4. Using a screw driver, gently turn the fuse holder 1/8-turn counter-clockwise ([Figure 7-25](#)).



1. Fuse

Figure 7-25. Removing a Fuse

5. Remove the fuse from the fuse holder ([Figure 7-24](#)).

Installing the Fuse

CAUTION:

Make sure to replace the defective fuse with a fuse of identical type and rating. The type and rating are displayed on the fuse endcap.

To install the fuse do the following:

1. Place the fuse in the holder.
2. Place the fuse and holder in the MAP/100P.
3. Push the fuse in gently until you feel it make contact with the rear of the fuse slot.



CAUTION:

Do not turn the fuse holder more than 1/8-turn in any direction.

4. Gently turn the fuse holder 1/8-turn clockwise.
5. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Replacing the Hard Disk Drive Carriage

The hard disk drive carriage ([Figure 7-5](#)) holds the individual hard disk drive bracket assemblies in the MAP/100P.



NOTE:

This is not a replaceable part.

Removing the Hard Disk Drive Carriage

To remove the hard disk drive carriage, do the following:

1. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
2. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
3. Open the front door.
4. Remove the four hard disk drive carriage retaining screws ([Figure 7-5](#)).
5. Gently pull the hard disk drive carriage from the MAP/100P.
6. Remove the hard disk drive power cable from the hard disk drive carriage backplane ([Figure 7-4](#)).
7. Remove the SCSI bus cable from the hard disk drive carriage backplane ([Figure 7-4](#)).
8. Remove the SCSI ID cable from the hard disk drive carriage backplane ([Figure 7-4](#)).

Installing the Hard Disk Drive Carriage

To install the hard disk drive carriage, do the following:

1. Connect the hard disk drive power cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
2. Connect the SCSI bus cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
3. Connect the SCSI ID cable to the hard disk drive carriage backplane ([Figure 7-4](#)).
4. Place the hard disk drive carriage in the MAP/100P.
5. Secure the hard disk drive carriage with the four screws you removed in [Step 4](#) of "[Removing the Hard Disk Drive Carriage](#)".
6. Close the front door.
7. Apply power to the MAP/100P. See "[Restoring Power to the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Replacing the Memory Modules

This section describes:

- The memory available with the MAP/100P
- How to determine if the memory modules are damaged
- How to replace the memory

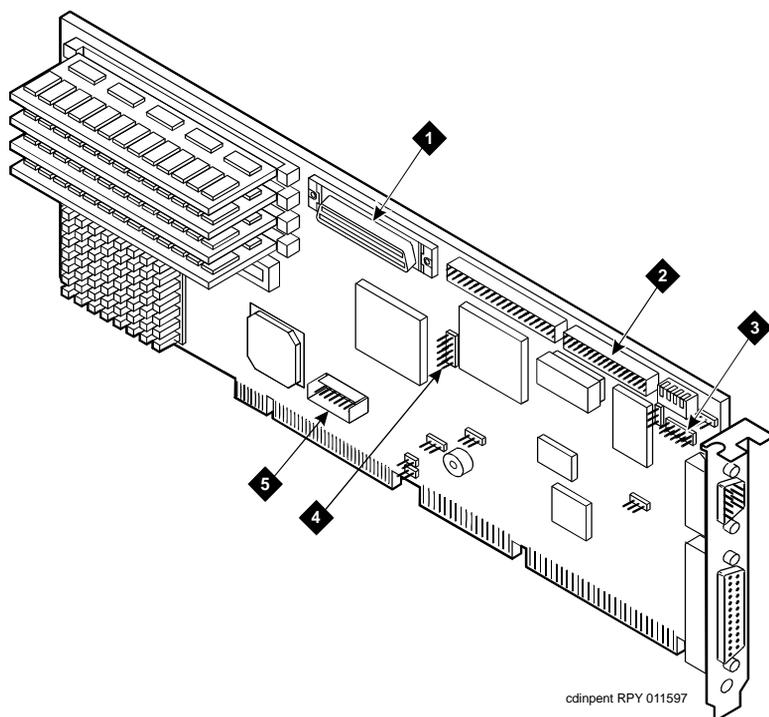


WARNING:

Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground. See "[Protecting against Damage from Electrostatic Discharge](#)", in [Chapter 4, "Getting Inside the Computer"](#).

Memory and SIMM Description

The MAP/100P supports 96 Mbytes of memory for the P5 200 MHz CPU circuit card. The memory is packaged on single in-line memory modules (SIMM). These modules are placed in sockets located in the top left corner of the CPU circuit card ([Figure 7-26](#)).



- | | |
|-----------------------------|------------------------------|
| 1. SCSI cable connector | 4. PS2 mouse cable connector |
| 2. Diskette cable connector | 5. Keyboard cable connector |
| 3. COM2 cable connector | |

Figure 7-26. CPU Circuit Card SIMM Location

The SIMMs must be installed on the CPU using the following rules.

- All SIMMs must be either -6, 60nS or -7, 70nS speed rating.
- SIMMs must be in matched pairs.

The SIMMs must be in the following configuration:

- 96 Mbytes consisting of 2 identical 32-Mbyte SIMMs located in the SIMM1 and SIMM2 sockets and 2 identical 16-Mbyte SIMMs located in the SIMM3 and SIMM4 sockets.



NOTE:

The Lucent INTUITY system will not boot if there is an odd number of SIMMs populated.

Identifying a Damaged SIMM

To determine which of the SIMMs is defective, you must test each pair. One pair of SIMMs must be removed and the system then rebooted using the remaining SIMMs to obtain a reading on the amount of memory available.

Checking for Proper SIMM Seating

To check for proper SIMM seating, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Access the circuit card cage. See "[Accessing the Circuit Card Cage](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
5. Carefully remove the CPU circuit card. See "[Removing a Circuit Card](#)," in [Chapter 5, "Replacing or Installing Circuit Cards"](#), for the procedure.
6. Verify that all SIMMs are properly seated in their slots. If all are properly seated, continue with the next procedure "Checking for Defective SIMMS."

NOTE:

A properly seated SIMM will be snapped into the socket with the small plastic tab through the hole in each end of the SIMM strip.

If one or more of the SIMMs are not properly installed or seated, do the following.

- a. Properly seat the SIMM.
- b. Replace the CPU circuit card. See "[Removing a Circuit Card](#)," in [Chapter 5, "Replacing or Installing Circuit Cards"](#), for the procedure.
- c. Reboot the system. See "[Rebooting the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.

If the system shows an amount of memory equal to that installed on the card, the problem has been corrected.

If the system shows an amount of memory less than that installed on the card, continue with the next procedure, "Checking for Defective SIMMS."

Checking for Defective SIMMs

To check for defective SIMMs, do the following:

1. Remove one pair of the SIMMs. See [“Removing SIMMs”](#), below for more information on removing the SIMMs.

If the CPU circuit card is equipped with only one pair of SIMMS the pair must be replaced. See [“Installing SIMMs”](#), below for more information on installing the new pair of SIMMs.

2. Reinstall the CPU circuit card. See [“Installing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
3. Restore power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Reboot the system. See [“Rebooting the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
5. Verify the amount of memory as the system reboots.
6. If the amount of memory shown by the system is not equal to the amount of memory still installed on the card, one of the remaining SIMMS is defective. Complete Steps a through c. If the memory is not correct continue with Step 7.
 - a. Remove power from the MAP/100P. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
 - b. Replace the SIMMs which were removed in Step 1. See [“Installing SIMMs”](#), below for more information on replacing the SIMM.
 - c. Return to Step 1 and continue, removing the second pair of SIMMs.
7. If the amount of memory shown by the system equals the amount of memory still installed on the card, one of the SIMMs you removed is defective. Replace the pair with a new pair of SIMMs. See [“Installing SIMMs”](#), below for more information.
8. Reinstall the CPU circuit card. See [“Installing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
9. Replace the dress covers. See [“Replacing the Side Dress Cover”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
10. Apply power to the unit. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.

Removing SIMMs

To remove a SIMM, do the following:

1. Verify that the new/replacement SIMMs are on site and appear to be in usable condition.

2. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Access the circuit card cage. See [“Accessing the Circuit Card Cage”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
5. Remove the CPU circuit card. See [“Removing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
6. Lay the CPU circuit card on a flat, clean, ESD-protected surface.
7. Release the metal snap locks gently at the edge of the SIMM connectors.
8. Rotate the SIMM back and downward to approximately a 60-degree angle.
9. Remove the SIMM.

Installing SIMMs

To install a SIMM, do the following:

1. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
2. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
3. Access the circuit card cage. See [“Accessing the Circuit Card Cage”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Remove the CPU circuit card. See [“Removing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
5. Install the SIMM by positioning the new SIMM at approximately a 60-degree angle with respect to the CPU circuit card.

All SIMMs are keyed to prevent them from being inserted incorrectly.

 **NOTE:**

Install the first SIMM in the slot adjacent to the CPU heat sink, near the bottom of the P5 200 MHz CPU circuit card.

 **NOTE:**

Install a new SIMM in the slot adjacent to the last SIMM installed. Do not leave any empty sockets between SIMMs.

6. Push down at that angle until the SIMM is reset into the SIMM carrier.
7. Snap the SIMM into place by rotating it to an upright position.

The metal snap lock on the ends of the connector for the SIMM will be forced open and then lock when in the upright position.

8. Ensure the connector guide pins are seated into the clearance holes provided at each end of the SIMM.

When properly seated, the guides should be fully extended into the circuit card clearance holes.
9. Reinstall the CPU circuit card. See [“Removing a Circuit Card”](#), in [Chapter 5, “Replacing or Installing Circuit Cards”](#), for the procedure.
10. Replace the dress covers. See [“Replacing the Side Dress Cover”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
11. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
12. Reboot the system. See [“Rebooting the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
13. Verify the amount of memory as the system reboots.

Replacing the Power Supply

CAUTION:

Do not operate the MAP/100P for extended periods without both positions, PS1 and PS2, being equipped with a power supply.

NOTE:

A power supply alarm fault will be generated, on the Console Alarm Panel, when a power supply is removed.

The MAP/100P has the power supplies located in positions Power Supply 1 and Power Supply 2 ([Figure 7-23](#)).

The power supplies installed in the MAP/100P automatically sense whether the incoming voltage is 110 or 220 VAC. There are no manual adjustments necessary to prepare the power supply for the incoming voltage.

The power supplies install into a power distribution backplane in the MAP/100P ([Figure 7-27](#)).

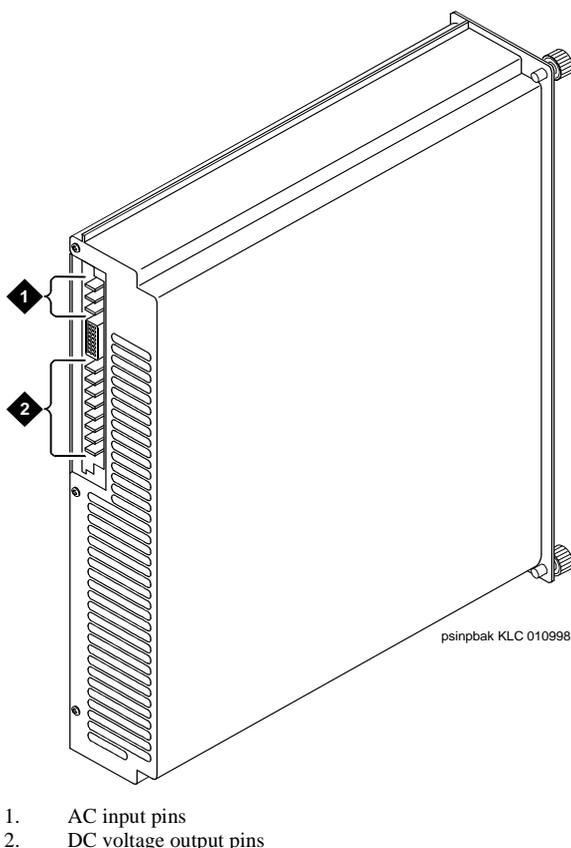
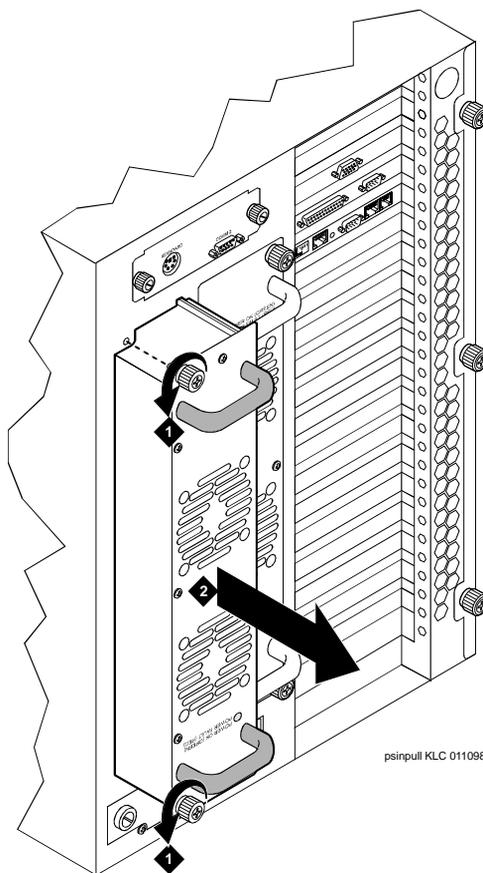


Figure 7-27. Power Supply Back View

Removing a Power Supply

To remove a power supply, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition, with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Remove the incoming power. See "[Removing Power from the MAP/100P](#)," in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.
4. Loosen the two thumbscrews that hold the power supply in the MAP/100P ([Figure 7-28](#)).



1. Retaining thumb screws

Figure 7-28. Removing a Power Supply

5. Grasp the power supply pull handles and pull the power supply from the MAP/100P.
6. Place the power supply to the side.



CAUTION:

It is important that the defective power supply be returned to the remote maintenance center in the same condition as it was in the Lucent INTUITY system. If the power supply is damaged during removal, packaging, or shipping an adequate failure analysis can not be conducted.

Installing a Power Supply

To install a power supply, do the following:

1. Align the power supply with the slot in the MAP/100P.
2. Slide the power supply into the MAP/100P.
3. Apply pressure to ensure that the power supply is completely seated.



CAUTION:

Make sure the power supply is completely seated. Do not use the thumbscrews to install or pull the power supply into the power supply distribution backplane.

4. Tighten the two thumbscrews on the power supply.



NOTE:

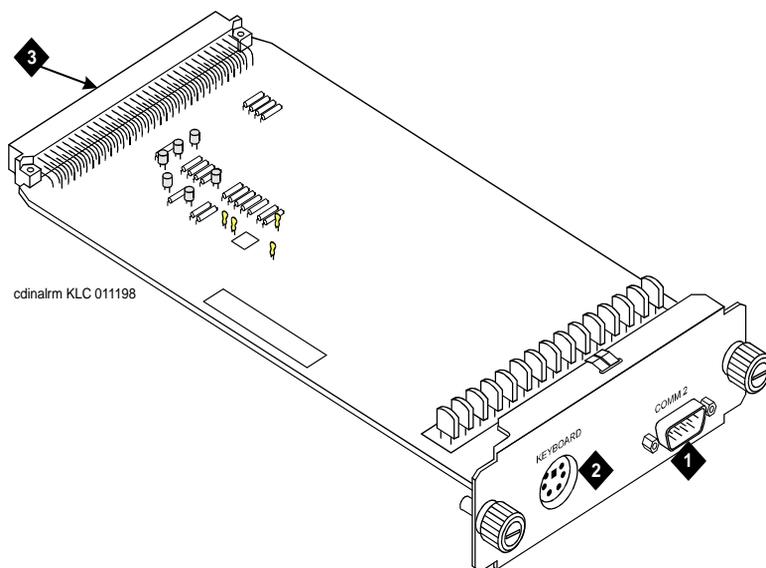
Use a screwdriver to ensure that the thumbscrews are tight enough to properly seat the power supply.

5. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
6. Make sure the power supply status indicator on the power supply is lit.

This indicates the power supply is operational.

Replacing the Remote Maintenance Circuit Card Interface Board

The remote maintenance circuit card interface board ([Figure 7-29](#)) consolidates internal MAP/100P alarm signals from each power supply and circuit card cage fan modules. The remote maintenance circuit card interface board contains a keyboard connection and the CPU COM2 port.



1. COM2 port
2. Keyboard connection
3. Power supply backplane connection

Figure 7-29. Remote Maintenance Circuit Card Interface Board

The remote maintenance circuit card interface board is located on the upper rear of the MAP/100P ([Figure 7-23](#)).

Removing the Remote Maintenance Circuit Card Interface Board

To remove the remote maintenance circuit card interface board, do the following:

1. Verify that the replacement equipment is on site and appears to be in usable condition with no obvious shipping damage.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Disconnect the keyboard cable from the MAP/100P.
5. Disconnect any cable attached to the CPU COM2 port.

6. Loosen the two thumbscrews on the remote maintenance circuit card interface board ([Figure 7-29](#)).
7. Pull the remote maintenance circuit card interface board out of the MAP/100P.

Installing the Remote Maintenance Circuit Card Interface Board

To install the remote maintenance circuit card interface board, do the following:

1. Align the remote maintenance circuit card interface board with the MAP/100P.
2. Gently slide the remote maintenance circuit card interface board into the MAP/100P until it ([Figure 7-29](#)) has properly mated with the power supply backplane.
3. Tighten the two thumbscrews on the remote maintenance circuit card interface board ([Figure 7-29](#)).

Use a screwdriver to tighten the thumbscrews. This ensures a proper connection.

4. Connect the cable you removed from the COM2 port in [Step 5](#) of "[Removing the Remote Maintenance Circuit Card Interface Board](#)", above if installed.
5. Connect the keyboard cable to the MAP/100P.
6. Apply power to the MAP/100P. See "[Restoring Power to the MAP/100P](#)", in [Chapter 4, "Getting Inside the Computer"](#), for this procedure.

Replacing a Terminator SIP

If the circuit card is the last circuit card connected to either end of the TDM bus, you must ensure that the TDM bus terminator single in-line packages (SIPs) are in place on the circuit card. If the circuit card is not the last circuit card on the bus, you must remove the SIPs.

NOTE:

"Last circuit card connected" means that there are no other cards between the circuit card and the end of the bus. There may, however, be empty connectors.

To replace a terminator SIP, do the following:

1. Align the terminator SIP with the SIP socket on the circuit card ([Figure 7-30](#)).

There are markings on both the terminator SIP and the circuit card which should be used to align the terminator SIP.

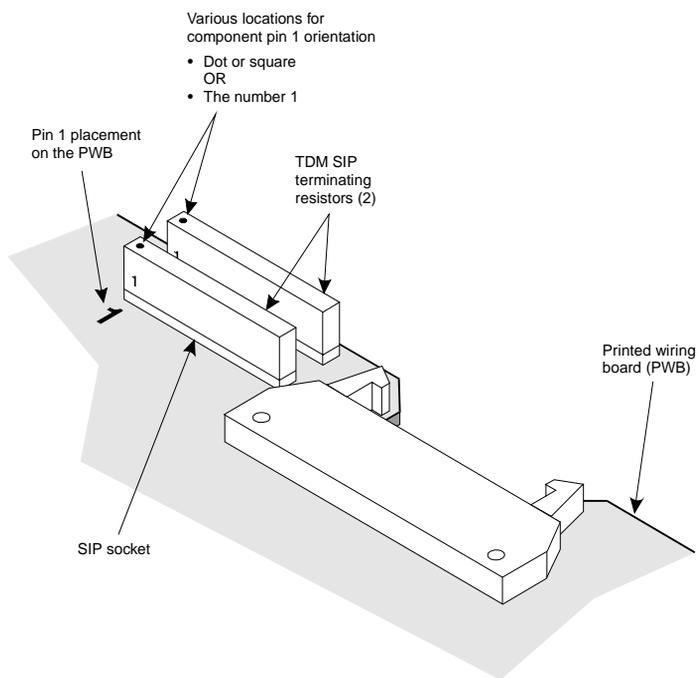


Figure 7-30. Replacing Terminator SIPs on the TDM Bus

2. Insert the terminator SIP.

You have completed this procedure.

Replacing the Tip/Ring Distribution Hardware

The Tip/Ring distribution hardware ([Figure 7-31](#)) comes in a kit which consists of:

- A 356B adapter
- Two 8-inch cable ties
- Four adapter brackets
- A 25-pair, high-density cable for the first 24 channels



NOTE:

Two additional 25-pair, high-density cables are required for the second and third 24 channels along with 356B adapters, cable ties, and adapter brackets all being supported by the distribution panel. Therefore, if you are connecting 66 channels, or 11 Tip/Ring circuit cards, you will need additional components.



NOTE:

The two 8-inch cable ties are used to secure each 25-pair cable connector to the 356B adapter.

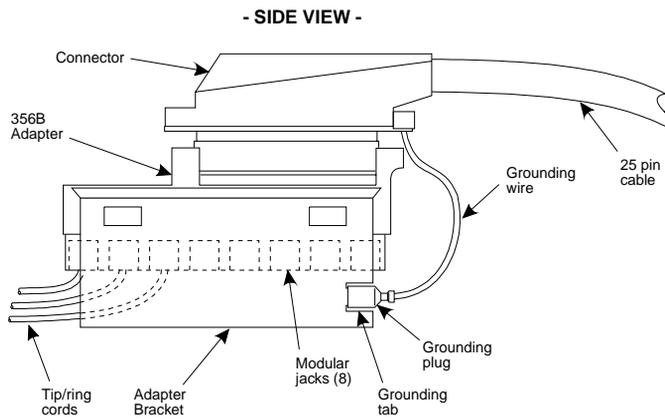
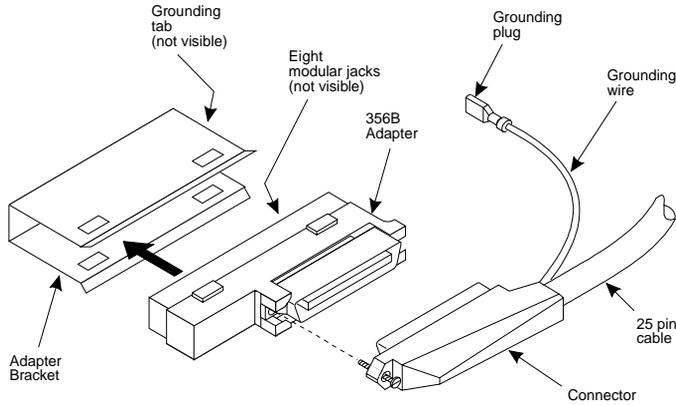


Figure 7-31. Tip/Ring Distribution Hardware Assembly

The Tip/Ring distribution hardware attaches to the rear bracket on the MAP/100P ([Figure 7-32](#)).

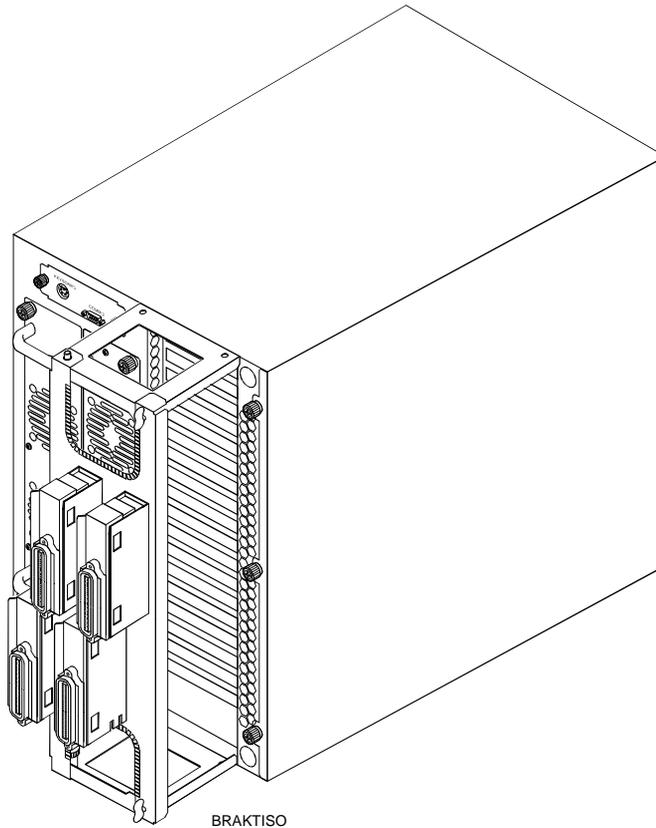


Figure 7-32. Tip/Ring Distribution Hardware on MAP/100P - Tower Configuration

⇒ NOTE:
The MAP/100P only uses 3 356B adapters.

Removing the Tip/Ring Distribution Hardware

To remove the Tip/Ring distribution hardware, do the following:

1. If the system is currently connected to the telephone network, notify the service provider that the system is about to be disconnected. The service provider will ask which extensions will be affected.
2. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See "[Stopping the Voice System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.
 - b. Shut down the voice system. See "[Shutting Down the System](#)," in [Chapter 3, "Common System Procedures"](#), for the procedure.

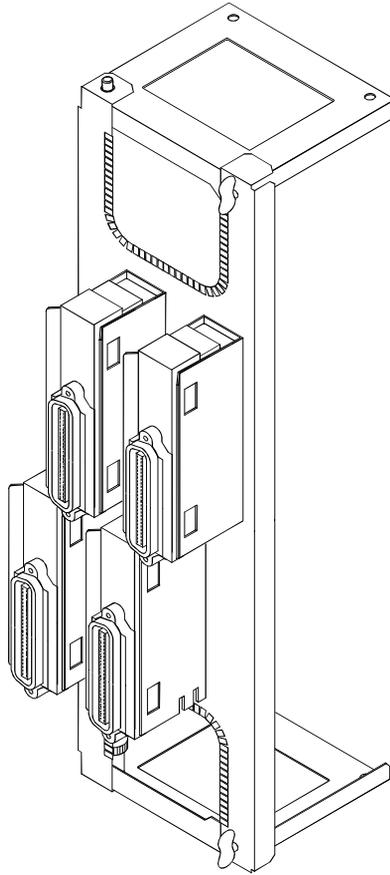
3. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
4. Loosen the screw that secures the 25-pin cable to the 356B adapter.
5. Cut the two cable ties securing the 25-pair cable connector hood to the 356B adapter mounting bracket.
6. Disconnect the 25-pin cable from the 356B adapter.
7. Pull the 356B adapter from the mounting bracket.
8. Disconnect the Tip/Ring cables from the 356B adapter.
9. If necessary, remove the two screws that secure the adapter bracket to the distribution hardware.

Installing the Tip/Ring Distribution Hardware

To install the Tip/Ring distribution hardware, do the following:

1. Verify that the distribution hardware is on site and appears to be in usable condition.
2. If the system is currently connected to the telephone network, notify the service provider that the system is about to be disconnected. The service provider will ask which extensions will be affected.
3. If the system is in service, perform the following Steps a and b:
 - a. Stop the voice system. See [“Stopping the Voice System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - b. Shut down the voice system. See [“Shutting Down the System,”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
4. Remove the incoming power. See [“Removing Power from the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
5. Verify that all of the necessary components are included ([Figure 7-31](#)).
6. Secure the u-shaped adapter brackets to the mounting plate on the rear of the MAP/100P with the screws provided ([Figure 7-32](#)).

The u-shape of the bracket is mounted differently on the tower configuration of the MAP/100P ([Figure 7-33](#)) than on the rack-mounted configuration ([Figure 7-34](#)).



CBLBRAKT

Figure 7-33. Tip/Ring Distribution Hardware - Tower Configuration

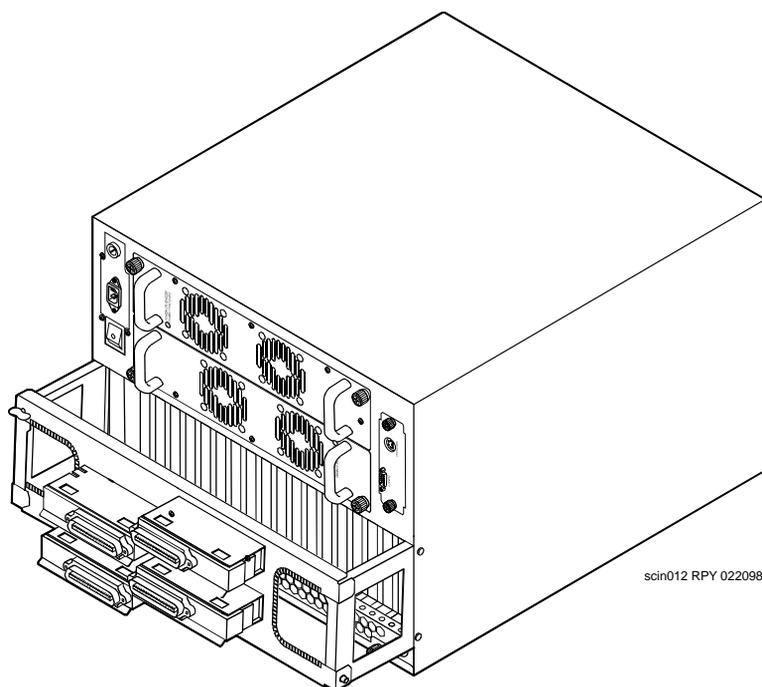


Figure 7-34. Tip/Ring Distribution Hardware - Rack-Mounted Configuration

7. Plug the 18-inch, 6-pin modular cords from the Tip/Ring cards into the 356B adapters. Each adapter can accommodate eight modular cords ([Figure 7-31](#)).
8. Using the connector provided, attach the 25-pair, high-density cable to the 356B adapter.
9. Snap the 356B adapters into the adapter bracket. Ensure the modular cords are inside the adapter bracket.



NOTE:

The 356B adapters can be removed by spreading the bracket sides apart.



CAUTION:

The 25-pair, high-density cables will dress down from the adapter brackets in a tower configuration. The cables will dress to either side of the MAP/100P in a rack-mounted configuration.

10. Secure the 25-pair cable connector hood to the adapter bracket using two 8-inch cable ties.
11. Connect the grounding wire on the end of the adapter bracket.

12. Apply power to the MAP/100P. See [“Restoring Power to the MAP/100P”](#), in [Chapter 4, “Getting Inside the Computer”](#), for this procedure.
13. Notify the service provider that the system is back on-line, if necessary.

Installing Base System Software

8

Overview

This chapter describes:

- Installation procedures for the Unixware software
- Installation procedures for the AUDIX® software

Purpose

This purpose of this chapter is to provide the information necessary to reload the operating system to a computer which has experienced a disk failure. This chapter should be used in conjunction with [Appendix D, "Disaster Recovery Checklists"](#).



NOTE:

The installer must have the root password to complete this procedure.

Installing UnixWare

Installing the UnixWare operating system unmounts file systems. The maintenance module in the Lucent™ INTUITY™ software has been designed to detect unmounted file systems and attempt to recover them. If the MTCE module does not detect any unmounted file systems, all of the software will load.

If this software is being loaded onto a system that has clean hard disks that have not been previously loaded, the system will not detect file systems.

If this is a recovery installation, the system will detect previously loaded file systems.

CAUTION:

*If you use the **DELETE** key to stop the UnixWare installation at any time during this process, you will have to restart the software installation process at Step 1.*

Preparing the System

To prepare the system, do the following:

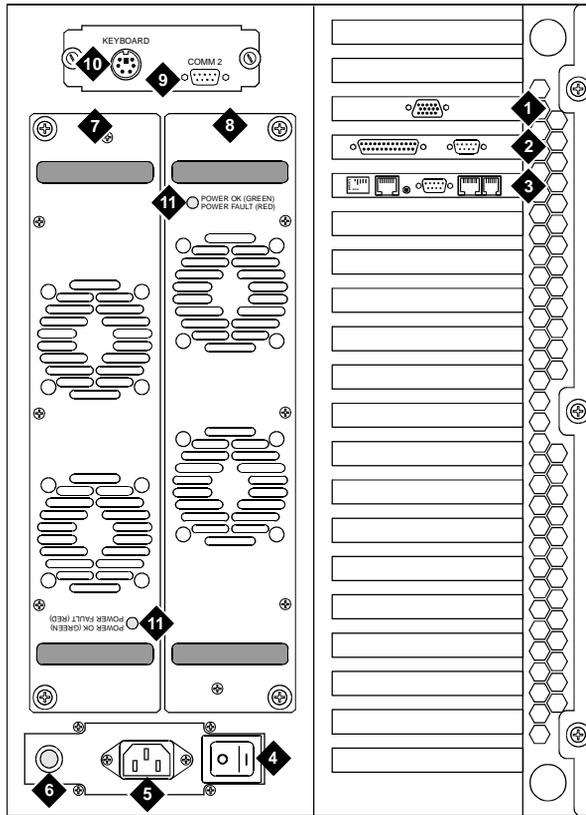
1. Verify the CMOS settings. See [“P5 200 MHz CPU Circuit Card”](#) in [Chapter 5, “Replacing or Installing Circuit Cards”](#).
2. Verify the SCSI adapter settings. See [“P5 200 MHz CPU Circuit Card”](#) in [Chapter 5, “Replacing or Installing Circuit Cards”](#).
3. Low level format Hard Disk Drive 0. See [“Performing a Low-Level Format”](#) in [Chapter 6, “Replacing the Hard Disk Drive”](#).
4. Continue with the next procedure, [“Starting the Unixware Installation.”](#)

Starting the Unixware Installation

To start the Unixware installation, do the following:

1. Insert the diskette labeled “Lucent INTUITY UNIX Boot Floppy 1 of 3” into the diskette drive.
2. If the system is off, turn it on using the power switch on the back of the MAP/100P ([Figure 8-1](#)).

If the system is on, reboot the system. See [“Rebooting the System”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.



- | | | | |
|----|-------------------------|-----|------------------|
| 1. | Video circuit card | 7. | Power Supply 1 |
| 2. | P5 200 MHz CPU | 8. | Power Supply 2 |
| 3. | Remote maintenance card | 9. | COM2 port |
| 4. | ON/OFF power switch | 10. | Keyboard port |
| 5. | AC power input | 11. | Power supply LED |
| 6. | Fuse | | |

Figure 8-1. Rear View of the MAP/100P

The system displays the UnixWare introduction screen as it begins to load the base system software. When the system is done with the first boot floppy it displays the following message:

Remove the diskette labeled 'Boot Floppy 1 of 3'.

If you have a diskette labeled 'Host Bus Adapter Drivers', insert that diskette now.

For more information on Host Bus Adapter diskettes, see the UnixWare Installation Handbook.

Otherwise, if you do not have (or do not need to use) a Host Bus Adapter diskette, insert the diskette labeled 'Boot Floppy 2 of 3' now.

Press 'ENTER' to continue.

3. Remove Lucent INTUITY UNIX Boot Floppy 1 of 3 from the diskette drive.
4. Continue with the next procedure, "[Loading the Host Bus Adapter.](#)"

Loading the Host Bus Adapter

To load the host bus adapter, do the following:

1. Insert the diskette labeled "Pentium HBA Floppy" into the diskette drive.
2. Press .

The system displays the following message:

```
Loading the Host Bus Adapter drivers. This will take a few moments...
```

```
The Host Bus Adapter driver(s) on the Host Bus Adapter diskette have been loaded and you can now remove the diskette.
```

If you have another Host Bus Adapter diskette (for different adapters) insert that disk now.

For more information, see the UnixWare Installation Handbook.

Otherwise, if you do not have (or do not need to use) another Host Bus Adapter diskette, insert the diskette labeled 'Boot Floppy 2 of 3' now.

3. Remove the diskette labeled "Pentium HBA Floppy" from the diskette drive.
4. Continue with the next procedure, "[Continuing the UnixWare Installation.](#)"

Continuing the UnixWare Installation

To continue the UnixWare installation, do the following:

1. Insert the diskette labeled "Unixware for INTUITY Boot Floppy 2 of 3" into the diskette drive.
2. Press .

The system displays the Introduction screen ([Figure 8-2](#)).

NOTE:

If the system displays a message that the system must have at least 60 MBytes of space in the hard disk drive to install UNIX, the hard

disk drive is experiencing problems. The cable may not be connected, or the hard disk drive may be damaged. Power down the system and check the hard disk drive cables. See "[Removing Power from the MAP/100P](#)" in [Chapter 4, "Getting Inside the Computer"](#), for the procedure.

Unixware Installation

Introduction

Welcome to the UnixWare installation process!

If you have never installed UnixWare before, it is recommended that you press the 'F1' (or '?') key now to learn more about the installation process and the hardware requirements of UnixWare.

-Pressing the 'F1' (or '?') key at any time during installation will display more information or help.

-Pressing the 'Del' key at any time cancels the installation.

Press the 'F1' (or '?') key for more information or 'ENTER' to continue.

Figure 8-2. Introduction Screen

3. Press .

If Hard Disk Drive 0 has been replaced with a new hard disk drive, the system displays the UnixWare Installation Files Deleted Warning screen ([Figure 8-3](#)).

If the system does not display the UnixWare Installation Files Deleted Warning, continue with the next procedure, "[Setting Up the Keyboard](#)."

WARNING: Files have been detected in the active partition(s) of your hard disk(s).

In order to install the operating system, you must have an active UNIX partition occupying 100% of your hard disk. No other partitions may share the disk.

You have the option of removing the existing partitions at this point and creating a new UNIX partition. You should only remove the existing partitions if you don't want to save any files on your disk.

If you elect to abort the installation, the existing partitions will not be removed and installation will be halted.

1. Destroy existing partitions and create a new UNIX partition.
2. Abort the installation, leaving existing partitions untouched.

Type '1' or '2' followed by 'ENTER':1

Figure 8-3. UnixWare Installation Files Deleted Warning Screen

Setting Up the Keyboard

To setup the keyboard, do the following:

1. Starting at the UnixWare Installation Files Deleted Warning screen ([Figure 8-3](#)), press `ENTER`.

The system displays the Keyboard Setup screen ([Figure 8-4](#)).

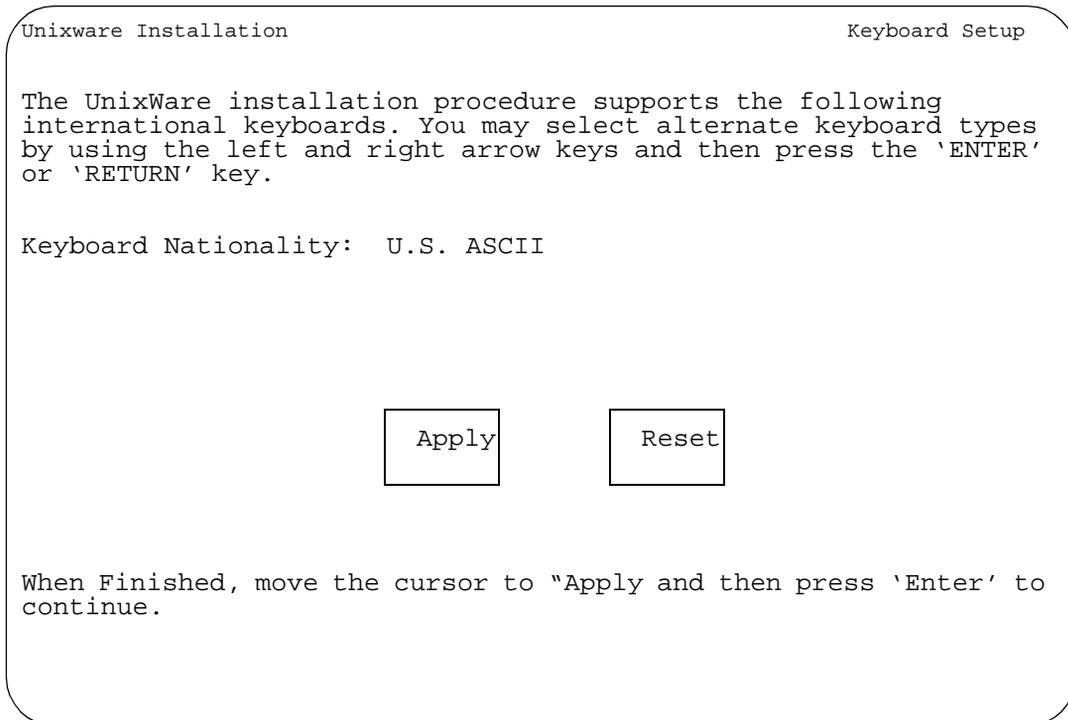


Figure 8-4. Keyboard Setup Screen

2. Use the left (◀) and right (▶) arrows on your keyboard to move through the field selections.
3. Select U.S. ASCII.
4. Press the down (▼) arrow to move to the Apply field and press .
The system displays the Configure Date and Time screen ([Figure 8-5](#)).
5. Continue with the next procedure, "[Configuring the System Date and Time](#)."

Unixware Installation Configure Date and Time
On this screen, you will check the current date and time that is set on your computer and change them if necessary. You also select what timezone configuration you require. Either set a continent(s) which will lead you onto a further screen with locations or manual entry for a custom timezone.

The current date:
The current Time:
Enter the current year:
Enter the month of the year:
Enter the day of the month:
Enter the hour of the day:
Enter the minute of the hour:
Timezone configuration:

Apply

Reset

Press 'TAB' to move the cursor between fields. When finished, move the cursor to 'APPLY' and then press 'ENTER' to continue.

Figure 8-5. Configure Date and Time Screen

Configuring the System Date and Time

To configure the system date and time, do the following:

1. Starting at the Configure Date and Time screen ([Figure 8-5](#)), use the left and right arrows on your keyboard to move through the field selections. Use the down arrow to move to the next field.
 2. Select the appropriate data for each field.
 3. Press the down arrow to move to the Apply field and press .
- The system displays the Continent Location Choice screen ([Figure 8-6](#)).
4. Continue with the next procedure, "[Choosing the Continent Location.](#)"

UnixWare Installation Continent Location Choice Screen

On this screen you choose the country/location you are in, having already selected the continent. To go back to the continent screen select 'BACK ONE SCREEN'. Use the left and right arrow keys.

Location:

Apply

Reset

Press 'TAB' to move the cursor between fields. When finished, move the cursor to 'APPLY' and then press 'ENTER' to continue.

Figure 8-6. Continent Location Choice Screen

Choosing the Continent Location

To choose the continent location, do the following:

1. Starting at the Continent Location Choice screen ([Figure 8-6](#)), use the left  and right  arrows on your keyboard to move through the field selections.



CAUTION:

If you are outside the United States, choose US/Eastern for this field.

2. Select the appropriate data for each field.
3. Press the down  arrow to move to the Apply field and press .

The system displays the Primary Hard Disk Partitioning screen ([Figure 8-7](#)).

4. Continue with the next procedure, "[Partitioning Hard Disk Drive 0.](#)"

Unixware Installation Primary Hard Disk Partitioning

In order to install UnixWare, you must reserve a partition (a portion of your hard disk's space) on your primary hard disk for the UNIX System. After you press 'ENTER' you will be shown a screen that will allow you to create new partitions, delete existing partitions or change the active partition of your primary hard disk (the partition that your computer will boot from).

WARNING: All files in any partition(s) you delete will be destroyed. If you wish to attempt to preserve any files from an existing UNIX System, do not delete its partition(s).

The UNIX System partition that you intend to use on the primary hard disk must be at least 120 MBs and labeled 'ACTIVE.'

Press 'ENTER' to continue.

Figure 8-7. Primary Hard Disk Partitioning Screen

Partitioning Hard Disk Drive 0

To partition Hard Disk Drive 0, do the following:

1. Starting at the Primary Hard Disk Partitioning screen ([Figure 8-7](#)), press .

The system displays the Partition Creation screen ([Figure 8-8](#)).

```
Unixware Installation          Hard Disk Partitioning - Disk 1
Total disk size is 2063 cylinders (2063.0MB)

Partition | Status | Type | Start | End | Length | % | Approx
-----|-----|-----|-----|-----|-----|---|-----
MB

1. Overwrite system master boot code
2. Create a partition
3. Change Active (Boot from) partition
4. Cancel (Exit without updating disk configuration)

Enter Selection
```

Figure 8-8. Partition Creation Screen

- 2. Enter 2

The system displays the Partition Configuration screen ([Figure 8-9](#)).

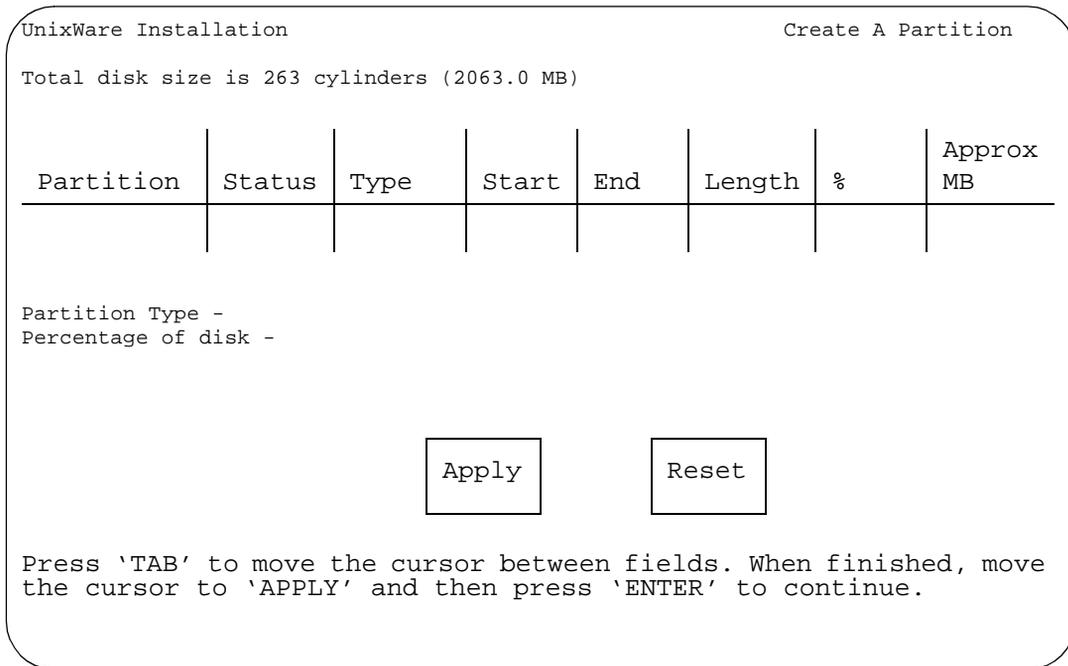


Figure 8-9. Partition Configuration Screen

3. Use the left (◀) and right (▶) arrows on your keyboard to move through the field selections.
 4. Select UNIX system for the Partition Type field.
 5. Enter **100** in the Percentage of disk field.
 6. Press the down (▼) arrow to move to the Apply field and press .
- The system displays the Partition Confirmation screen ([Figure 8-10](#)).

Total disk size is 2048 cylinders (2048.0MB)

Partition	Status	Type	Start	End	Length	%	Approx MB
1	Active	UNIX System	0	2047	2048	100	2048.0

1. Overwrite system master code
2. Delete a partition
3. Exit (Update disk configuration and exit)
4. Cancel (Exit without updating disk configuration)

Enter Selection:

Figure 8-10. Partition Confirmation Screen

7. Enter **3**

The system displays the Secondary Hard Drive Partitioning screen ([Figure 8-11](#)).

8. Continue with the next procedure, "[Partitioning Hard Disk Drive 0.](#)"

You may use a partition of your secondary hard disk. If you choose to use a partition of your secondary hard disk you will be shown a screen that will allow you to partition your secondary hard disk.

WARNING: All files in any partition(s) you delete will be destroyed.

If you choose to create a UNIX System partition on your secondary hard disk, it must be at least 40 MBs.

Your Options are:

1. Do not use a partition of the secondary hard disk for the UNIX System.
2. Use a partition of the secondary hard disk for the UNIX System.

Press '1' or '2' followed by 'ENTER'.

Figure 8-11. Secondary Hard Disk Partitioning Screen

Partitioning Hard Disk Drive 0

NOTE:

This screen will not appear if you do not have a second hard disk drive. Continue with the next procedure, "[Choosing the Installation Type.](#)"

To partition Hard Disk Drive 0, do the following:

1. Starting at the Secondary Hard Disk Partitioning screen ([Figure 8-11](#)), select "1".

2. Press .

The system displays the Installation Type Selection screen ([Figure 8-12](#)).

3. Continue with the next procedure, "[Choosing the Installation Type.](#)"

Unix System Installation Installation Type Selection

You must choose a system type. The system type you choose will determine the default file system sizes you will specify on the next screen.

Press the 'F1' or '?' key to see more information about these different system types.

Platform Type: MAP/100P
CPU Type: Pentium - 200
Offer Type: INTUITY AUDIX

Apply

Reset

Press 'TAB' to move between fields. Press 'ENTER' to apply fields.

Figure 8-12. Installation Type Selection Screen

Choosing the Installation Type

To choose the installation type, do the following:

1. Starting at the Installation Type Selection screen ([Figure 8-12](#)), use the left  and right  arrows on your keyboard to move through the field selections. Use the down  arrow to move to the next field.
2. Select MAP/100P for the Platform Type field.
3. Select Pentium-200 for the CPU Type field.
4. Select INTUITY AUDIX for the Offer Type field.
5. Press the down  arrow to move to the Apply field.
6. Press .

The system displays the UnixWare Installation Set Slice Sizes screen ([Figure 8-13](#)).

7. Continue with the next procedure, "[Setting the Slice Sizes.](#)"

```
UNIX System Installation                               Set Slice Sizes

You have selected the MAP/100P system. Now you must specify the
sizes of the filesystem slices. The recommended sizes for a
MAP/100P system are provided as defaults on this screen. Press the
'F1' or '?' key to see more information about these different system
types.

      Size of /stand in MB: xx
      Size of /dev/dump in MB: xx
      Size of /dev/swap in MB: xx
      Size of / in MB: xx
```

Apply

Reset

Press 'TAB' to move the cursor between fields. When finished, move the cursor to 'Apply' and then press 'ENTER' to continue.

Figure 8-13. UnixWare Installation Set Slice Sizes Screen

Setting the Slice Sizes

To set the slice sizes, do the following:

1. Starting at the UnixWare Installation Set Slice Sizes screen ([Figure 8-13](#)), use the left  and right  arrows on your keyboard to move through the field selections. Use the down  arrow to move to the next field.
2. Enter the appropriate number of megabytes of space needed for each slice as specified in [Table 8-1](#).

Table 8-1. Space Requirements for the MAP/100P

Slice	Space Requirements (MBytes)
/stand	10
/dev/dump	96
/dev/swap	197
/	200

3. Press the down (▼) arrow to move to the Apply field.
4. Press (ENTER).

The system displays the Hard Disk Surface Analysis screen ([Figure 8-14](#)).

5. Continue with the next procedure, "[Performing a Hard Disk Drive Surface Analysis](#)."

```
UNIX System Installation                               Hard Disk Surface Analysis
Surface analysis is recommended but not required.   Here you must
choose to skip or perform surface analysis.

Press the 'F1' or '?' key to see more information about these
different system types.

You choices are:

1. Perform surface analysis
2. Skip surface analysis

Press '1' or '2' followed by 'ENTER':1
```

Figure 8-14. Hard Disk Surface Analysis Screen

Performing a Hard Disk Drive Surface Analysis



CAUTION:

Surface analysis is required for all systems because it makes a configuration change to the disk. Failure to perform surface analysis may cause the Lucent INTUITY system to fail.

To perform a hard disk drive surface analysis, do the following:

1. Starting at the Hard Disk Surface Analysis screen ([Figure 8-14](#)), press (ENTER).

This will accept the default of 1 and perform the surface analysis. The system displays the following message:

Checking the hard disk for defects and creating file systems. This will take a few minutes. Please wait.

The system displays the UnixWare Installation screen ([Figure 8-15](#)).

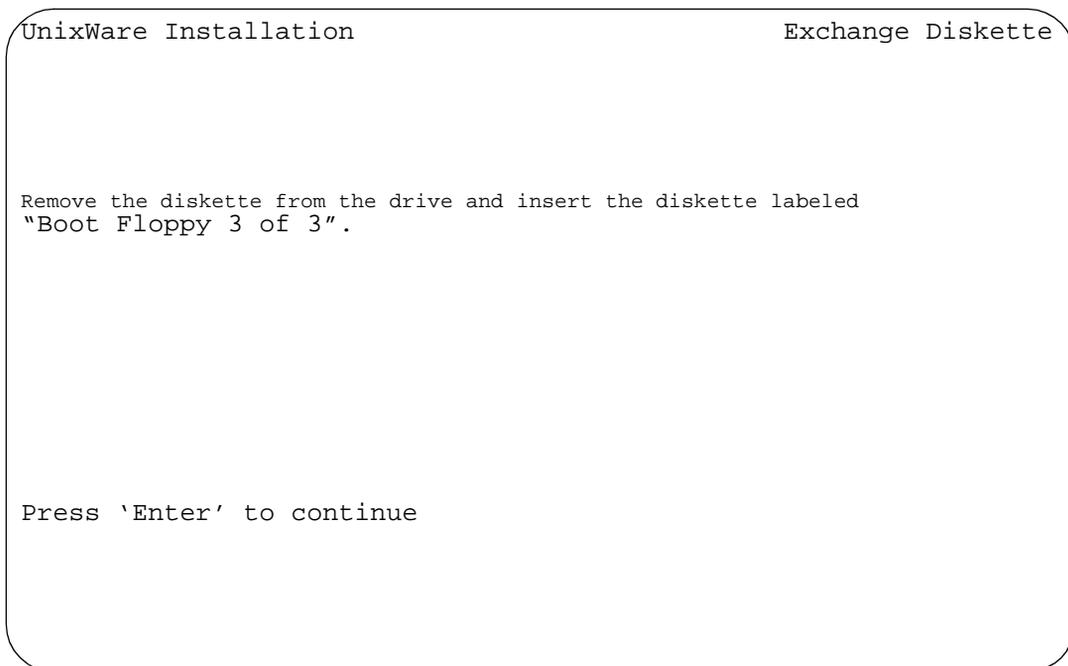


Figure 8-15. Hard Disk Surface Analysis Screen

Remove boot floppy 3 of 3 from the drive now.

2. Remove the Lucent INTUITY UNIX Boot Floppy 2 of 3 from the diskette drive.
3. Continue with the next procedure, "[Copying the Unix System Files](#)."

Copying the Unix System Files

To copy the Unix system files, do the following:

1. Insert the diskette labeled "Lucent INTUITY UNIX Boot Floppy 3 of 3" into the diskette drive.
2. Press `(ENTER)`.

The system displays the following message:

```
Copying Unix System files from the diskette onto you
hard drive. This will take a few minutes. Please wait.
```

The system then displays the following message:

```
Making file systems on your hard disk. This will take a
few minutes. Please wait
```

The system displays the Remove Diskette screen ([Figure 8-16](#)).

UnixWare Installation

Remove Diskette 3

Remove boot floppy 3 of 3 from the drive now.

Press 'Enter' to continue.

Figure 8-16. Remove Diskette Screen

3. Remove the "Lucent INTUITY UNIX Boot Floppy 3 of 3" from the diskette drive.
 4. Press .
- The system displays the Application Server Media Type screen ([Figure 8-17](#)).
5. Continue with the next procedure, "[Loading the Application Server Software](#)."

```
UnixWare Installation                Application Server Media Type
```

```
The Application Server software is available on diskette or tape  
or network server. You must select the source you will use to  
install the software.
```

```
Your choices are:
```

1. Diskette Drive 1
2. Cartridge Tape Drive
3. Network Install Server
4. INTUITY Image/Snap Tape

```
Press a number between '1' and '4'  
followed by 'ENTER':
```

Figure 8-17. Application Server Media Type Screen

Loading the Application Server Software

To load the application server software, do the following:

1. Insert the cartridge tape labeled "Lucent INTUITY R4.0 UnixWare Image Tape" into the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
2. Enter **4**

The system displays the Insert Lucent INTUITY Tape screen ([Figure 8-18](#)).

```
UnixWare Installation                Insert Intuity Image Tape

Please insert the INTUITY Image cartridge tape into the tape drive
and press 'ENTER'.

Your choices are:

1. The tape has been inserted in the tape drive.
2. Go back to previous menu.

Press '1' or '2' followed by 'ENTER':
```

Figure 8-18. Insert Lucent INTUITY Tape Screen

3. Press **ENTER**.

This will accept the default of 1 to indicate the tape has been inserted and is ready for access.

The system displays the following message:

```
Installation in progress. This will take several
minutes. Please do not remove the tape.
```

The system displays a series of informational messages.

When all files are loaded, the system reboots displays the following message:

```
The system is ready.
```

```
The system's name is Lucent Intuity.
```

```
Welcome to USL UnixWare System V Release 4.2 Version 1
Console Login:
```

⇒ NOTE:

Ignore the following message, if it is displayed:

```
Error: IRQ chosen for driver does not match adapter
configuration XXXXXX Equinox Megaport STREAMS
Device Driver.
```

4. Remove the cartridge tape labeled "Lucent INTUITY UnixWare Image" from the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
5. Continue with the next procedure, "[Running installit.](#)"

Installing the INTUNIX Software

⇒ NOTE:

Make sure you are installing the INTUNIX+f or later version of the software.

To install the INTUNIX software, do the following:

1. Verify that the diskette drive is empty.

⚠ CAUTION:

If the diskette drive contains a diskette, the system reboot will fail. If this happens, remove the floppy from the diskette drive and press

`Ctrl-Alt-Del`.

⇒ NOTE:

If you are installing the operating system onto a machine that is not equipped with a LAN circuit card, the system may display a message that states that an invalid check sum occurred. Ignore this message.

2. Log in to the system as root.
3. Press `ENTER` at the password prompt.

⇒ NOTE:

If the current password has expired, enter **Intuity1** for the password. Use this password instead of pressing `ENTER` for the remainder of the procedure. As soon as the Lucent INTUITY system tape is reloaded, you will change this password.

The system displays with the UNIX prompt (#).

4. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

5. Insert the Lucent INTUITY INTUNIX+f cartridge tape into the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.

6. Press **ENTER**.

The system displays the following message:

The following sets are available:

1. INTUNIX+f INTUITY UnixWare 1.1.2 Enhancement Set
 - Update F
 (i486)

Select package(s) you wish to process (or 'all' to process all packages).
(default: all) [?,??,q]:

7. Press **ENTER**.

The system displays the following message:

PROCESSING:

Set: INTUITY UnixWare 1.1.2 Enhancement Set - Update F (INTUNIX+f)
from (ctape1)

INTUITY UnixWare 1.1.2 Enhancement Set - Update F
(486)1.1.3

Using </> as the package base directory

The following packages are available:

1. year2000 Year 2000 updates for UnixWare
2. ezsetup SMC LAN Adapter Setup Program
3. smcUW11 SMC Ethernet Device Driver ISA
4. audfs AUDIX File System
5. rpcfix Remote Procedure Calls fix
6. installit Installit utility for INTUITY
7. adslodvr
8. iboltfix

Select package(s) you wish to process (or 'all' to process all packages).
(default: all) [?,??,q]:

8. Press **ENTER**.

The system displays a series of messages and then the following message:

A version of the LAN driver is already installed.

Do you want to overlay that driver and re-use the kernel options for the driver? The overlay option, which is often used during field upgrades, will preserve the network environment.

y) to overlay

q) to quit (default: quit)

Do you want to overlay the driver:

9. Enter **y**

The system displays the following message:

```
The board currently installed in the system is the 8416
LAN adapter.
```

```
1) 8216 LAN adapter
2) 8416 LAN adapter
q) to abort installation
```

Please enter the board type you wish to use:

10. Enter **2**

 **NOTE:**

Ignore any warning messages displayed by the system.

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready,
      or [q] to quit: (default: go)
```

11. Enter **q**

The system displays the following message:

```
*** IMPORTANT NOTICE ***
```

```
If installation of all desired packages is
complete the machine should be rebooted in order
to ensure sane operation. Execute the shutdown
command with the appropriate options and wait for
the "Console Login:" prompt.
```

12. Remove the Lucent INTUITY INTUNIX+f cartridge tape from the tape drive. See ["Inserting Cartridge Tapes"](#) in [Chapter 3, "Common System Procedures"](#), for the procedure.
13. If your system is using a LAN circuit card, configure the LAN circuit card. See ["Configuring the LAN Circuit Card"](#) in [Chapter 5, "Replacing or Installing Circuit Cards"](#), for the procedure.

Running *installit*

To run *installit*, do the following:

1. Clean all hard disk drive other than Hard Disk Drive 0.
2. Enter **installit**

 **CAUTION:**

*Make sure the **installit** command and the associated reboots have been completed prior to continuing with any other procedure.*

The system displays the following message:

```
Installit execution started: <date>
```

The system will attempt to perform a new installation

```
Press <ENTER> to continue the Volume Manager  
installation
```

3. Press **(ENTER)**.

The system is rebooted and then displays the following message:

```
The UNIX Operating system kernel will be rebuilt now.
```

```
The system must now be rebooted to continue the  
reconfiguration
```

```
Hit RETURN to continue.
```

4. Press **(ENTER)**.

The system is rebooted and then displays the following message:

```
The system must now be rebooted.
```

```
Hit RETURN to continue.
```

5. Press **(ENTER)**.

The system is rebooted and then displays the following message:

```
Console Login:
```

6. Continue with the next procedure, "[Installing the Platform Software](#)."

Installing the Platform Software

To install the platform software, do the following:

1. Log in to the system as root.
2. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.
```

```
Type [go] when ready
```

```
or [q] to quit: (default: go)
```

3. Insert the Lucent INTUITY Platform AUDIX Set cartridge tape into the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
4. Press **(ENTER)**.

NOTE:

Ignore any messages which indicate that the base ORACLE package has not been loaded and gives installation procedures.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge.
```

```
The following sets are available:
```

```
1      AUDIXset      INTUITY Platform AUDIX Set  
                        (i486)i.2.3
```

```
Select package(s) you wish to process (or 'all' to  
process all packages). (default: all) [?,??,q]
```

5. Press **ENTER**.

The system displays the following message:

```
Processing:
```

```
Set: Lucent Intuity Platform AUDIX Set (AUDIXset) from  
<ctapel>.
```

```
Lucent Intuity Platform AUDIX Set  
(i486)1.2.3
```

```
Using </> as the package base directory.
```

```
Do you want to run default set installation? (default:  
y)
```

6. Press **ENTER**.

The system displays the following message:

```
Enter password for craft:  
New password
```

7. Enter the password you want to set for the craft login.

The system displays the following message:

```
Re-enter new password:
```

8. Enter the password you want to set for the craft login a second time.

The system displays the following message:

```
Enter password for tsc:  
New password
```

9. Enter the password you want to set for the tsc login.

The system displays the following message:

```
Re-enter new password:
```

10. Enter the password you want to set for the tsc login a second time.

After the system has loaded the Platform package, the system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

11. Enter **q**
12. Enter **cd /**
13. Enter **shutdown -y -g0 -i6**

The system displays the following message:

```
Shutdown started. Date
```

```
INIT: New run level: 6
```

```
The UNIX Operating kernel will be rebuilt now.  
This will take some time. Please wait.
```

The system responds with a series of memory check displays and copyright notices. These messages also note that the system is fine and coming up, the system is ready, and that the voice system is automatically being started.

This reboot is finished when the system displays the following message:

```
Startup of the Voice System is complete
```

14. Press **(ENTER)**.

Installing the Switch Interface Software Packages

There are three switch interface software packages available with the Lucent INTUITY system:

- DCIU Switch Integration set
- Serial-Inband Switch Integration set
- Digital Station Interface Switch Integration set

Installing the DCIU Switch Integration Set

To install the DCIU Switch Integration set, do the following:

1. Log in to the system as root.
2. Stop the voice system.
3. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

4. Insert the Lucent INTUITY DCIU Switch Integration Set cartridge tape into the tape drive. See [“Inserting Cartridge Tapes”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.

5. Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge.
```

```
The following sets are available:
```

```
1      DCIUset      INTUITY Platform DCIU set (V2)
                        (i486)
```

```
Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]
```

6. Press **ENTER**.

The system displays the following message:

```
Processing:
```

```
Set: INTUITY Platform DCIU set (DCIUset) from <ctapel>.
```

```
INTUITY Platform DCIU set
(i486)
```

```
Using </> as the package base directory.
```

```
Select your Intuity DCIU card type:
```

- 1) DCIU (Eicon) card [this card has a green LED
on the faceplate]
- 2) GPSynch card

```
Enter 1 or 2: [1]
```

7. Press **ENTER**.

The system displays several status messages, then the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready
or [q] to quit: (default: go)
```

8. Enter **q**

9. Enter **cd /**

10. Enter **shutdown -y -g0 -i6**

The system displays the following message:

```
Shutdown started. Date
```

```
INIT: New run level: 6
```

```
The UNIX Operating kernel will be rebuilt now.
This will take some time. Please wait.
```

The system responds with a series of memory check displays and copyright notices. These messages also note that the system is fine and coming up, the system is ready, and that the voice system is automatically

being started.

This reboot is finished when the system displays the following message:

```
Startup of the Voice System is complete
```

Installing the Serial-Inband Switch Integration Set

To install the Serial-Inband Switch Integration set, do the following:

1. Log in to the system as root.
2. Stop the voice system. See [“Stopping the Voice System”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.

3. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

4. Insert the Lucent INTUITY Serial-Inband Switch Integration Set cartridge tape into the tape drive. See [“Inserting Cartridge Tapes”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.

5. Press **(ENTER)**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge.
```

```
The following sets are available:
```

```
1      SWINset      Serial-Inband Switch Integration  
                          Set  
                          (i486)
```

```
Select package(s) you wish to process (or 'all' to  
process all packages). (default: all) [?,??,q]
```

6. Press **(ENTER)**.

The system displays the following message:

```
Processing:
```

```
Set: Serial-Inband Switch Integration Set (SWINset)  
from <ctape1>.
```

```
Serial-Inband Switch Integration Set  
(i486)
```

```
Using </> as the package base directory.
```

The following types of host switches are available. They are:

- 1) NEC NEAX
- 2) Siemens HICOM
- 3) Ericsson MD110
- 4) Merlin Legend
- 5) DMS100
- 6) Intecom
- 7) Norstar
- 8) System 25
- 9) 5ESS
- 10) Definity Mode Code

The system displays several status messages, then the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

7. Enter **q**
8. Enter **cd /**
9. Start the voice system. See [“Starting the Voice System”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.

Installing the Digital Station Interface Switch Integration Set

To install the Digital Station Interface Switch Integration set, do the following:

1. Log in to the system as root.
2. Stop the voice system.
3. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

4. Insert the Lucent INTUITY Digital Station Interface Switch Integration Set cartridge tape into the tape drive. See [“Inserting Cartridge Tapes”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
5. Press **(ENTER)**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge.
```

The following sets are available:

- | | | |
|---|---------|------------------------------|
| 1 | VBPCset | VB-PC Switch Integration Set |
| | | (i486) |

Select package(s) you wish to process (or 'all' to process all packages). (default: all) [?,??,q]

6. Press **ENTER**.

The system displays the following message:

Processing:

Set: VB-PC Switch Integration Set (VBPCset) from <ctapel>.

VB-PC Switch Integration Set
(i486)

Using </> as the package base directory.

The following types of host switches are available. They are:

- 1) NORTEL MERIDIAN 1

The system displays several status messages, then the following message:

Insert a cartridge into Tape Drive 1.

Type [go] when ready

or [q] to quit: (default: go)

7. Enter **q**
8. Enter **cd /**
9. Enter **shutdown -y -g0 -i6**

The system displays the following message:

Shutdown started. Date

INIT: New run level: 6

The UNIX Operating kernel will be rebuilt now.

This will take some time. Please wait.

The system responds with a series of memory check displays and copyright notices. These messages also note that the system is fine and coming up, the system is ready, and that the voice system is automatically being started.

This reboot is finished when the system displays the following message:

Startup of the Voice System is complete

10. Press **ENTER**.

Installing Lucent INTUITY System Software

9

Overview

This chapter details installation procedures for the following packages:

- INTUITY™ AUDIX® Voice Messaging System R4.0
- Lucent INTUITY Announcement sets

Purpose

This purpose of this chapter is to provide the information necessary to reload the Lucent INTUITY system to a computer which has experienced a disk failure. This chapter should be used in conjunction with [Appendix D, “Disaster Recovery Checklists”](#).

Installing Lucent INTUITY System Software



NOTE:

The voice system should be stopped to load all the packages except for the INTUITY AUDIX Voice Messaging R4.0 software.

Installing the INTUITY AUDIX Voice Messaging System

The INTUITY AUDIX Voice Messaging System software includes:

- Disk mirroring
- Lucent INTUITY Message Manager (IMAPI)
- Lucent INTUITY FAX messaging
- AMIS analog networking
- Digital networking



NOTE:

It is necessary to contact the remote maintenance center to have these features activated.

Use the following procedure to load the INTUITY AUDIX Voice Messaging System software.

1. Login as either tsc or root.
2. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready,  
or [q] to quit: (default:go)
```

3. Insert the cartridge tape labeled "INTUITY AUDIX Voice Messaging System" into the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
4. Press **(ENTER)**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge.
```

The following sets are available:

```
1      APPLset      AUDIX (R) Application Set  
                (AUDIX) 4.4-2
```

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Installing the Lucent INTUITY System Default Announcement Set and/or Optional

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```
Select package(s) you wish to process (or 'all' to  
process  
    all packages). (default: all) [?,??,q]
```

5. Press **ENTER**.

The system displays a series of messages, then the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
    or [q] to quit: (default: go)
```

6. Enter **q**

Installing the Lucent INTUITY System Default Announcement Set and/or Optional Language Package Announcement Sets

Use the following procedure to install both the system default announcement set and any optional language (announcement set) packages.

CAUTION:

Do not install optional language announcement sets from earlier or later Lucent INTUITY releases. All optional language tapes used with the Lucent INTUITY system R4.0 should be labeled 4.0 and installed with INTUITY AUDIX R4.0.

1. Enter **pkgadd -d ctape1**

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready,  
    or [q] to quit: (default:go)
```

2. Insert the cartridge tape labeled "System Announcements" into the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.

3. Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge.
```

```
The following sets are available:
```

```
1   language x   Language Name System Announcements  
                    (AUDIX) R3.x
```

```
Select package(s) you wish to process (or 'all' to  
process all packages). (default: all) [?,??,q]
```

4. Press **ENTER**.

The system displays following message:

```
Processing:
(Language Name) System Announcements
(AUDIX) R3.x
Using</> as the package base directory.
Lucent Bell Laboratories

Is this to be the default language set?
(default: y) [y,n,?,q]
```

5. If you are installing the default language set, enter **y**

⇒ NOTE:

If you are installing an optional or secondary language set, enter **n**

The system displays the following message:

```
Installation of <optional language name> System
Announcements (VM-<optional language abbreviation>) was
successful.
```

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready,
    or [q] to quit: (default:go)
```

6. Enter **q**
7. Remove the cartridge tape labeled "System Announcements" from the tape drive. See "[Inserting Cartridge Tapes](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
8. Reboot the system. See "[Rebooting the System](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.

Installing the Optional Feature Software

10

Overview

This chapter provides installation procedures for the:

- INTUITY Lodging software
- Enhanced List Administration software

Purpose

This purpose of this chapter is to provide the information necessary to reload the optional feature software to a computer which has experienced a disk failure.

Installing INTUITY Lodging Software Packages

To install the INTUITY Lodging Software packages, you must install the:

- INTUITY Lodging Software Set
- Optional Lodging Language package

Installing INTUITY Lodging Software Set

To install the INTUITY Lodging Software set, do the following:

1. Stop the voice system. See [“Stopping the Voice System”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
2. Start at the Lucent INTUITY Main menu ([Figure 10-1](#)).

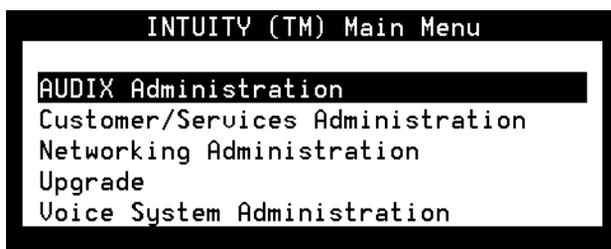
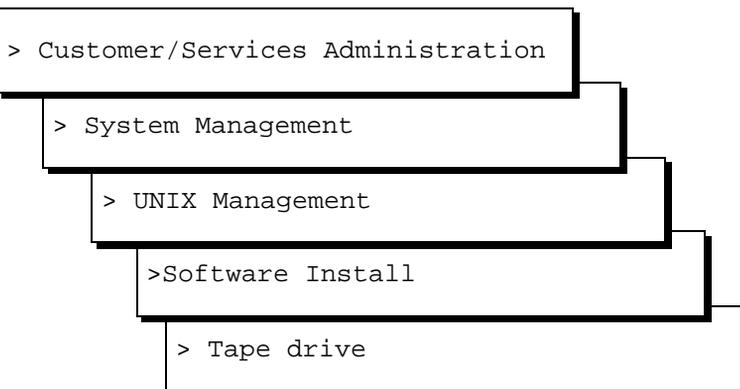


Figure 10-1. Lucent INTUITY Main Menu

3. Select



The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready,  
    or [q] to quit: (default:go)
```

4. Insert the tape labeled "INTUITY Lodging Software Set" into the tape drive.
5. Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the cartridge  
tape.
```

The following sets are available:

```
1    LODGING    Intuity Lodging Software Set R2.0  
                (586) 2.0-1
```

```
Select package(s) you wish to process (or 'all' to  
process all packages). (default: all) [?,?,q]
```

6. Press **ENTER**.

The system displays the following message:

```
Processing:
```

```
Set: Intuity Lodging Software Set R2.0 (LODGING) from  
<ctapel>.
```

```
Intuity Lodging Software Set R2.0  
(i486)
```

```
Using </> as the package base directory.
```

The following types of installations are available. They are:

- 1 - All Lodging software with GuestWorks Server PMS interface
- 2 - All Lodging software with stand-alone PMS interface
- 3 - Custom - Installs one or more packages selected by the installer

Select type of installation:

- 1) Software with GuestWorks Server PMS interface
- 2) Software with stand-alone PMS interface
- 3) Custom installation

Enter Selection

7. To install all Lodging software with GuestWorks Server PMS, complete the following Step a through [Step d](#):
 - a. Enter **1**

The system displays the following message:

```
Confirm: You selected option 1. (y/n)
```
 - b. Enter **y**

The system installs the package and displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
    or [q] to quit: (default: go)
```
 - c. Enter **q**
 - d. Remove the cartridge tape.
8. To install all Lodging software with stand-alone PMS, complete the following Step a through [Step d](#):
 - a. Enter **2**

The system displays the following message:

```
Confirm: You selected option 2. (y/n)
```
 - b. Enter **y**

The system installs the package and displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
    or [q] to quit: (default: go)
```
 - c. Enter **q**
 - d. Remove the cartridge tape.
9. To perform a custom installation, complete the following Step a through [Step h](#):
 - a. Enter **3**

The system displays the following message:

```
Confirm: You selected option 3. (y/n)
```
 - b. Enter **y**

The system displays the following message:

```
Install vlodg? (default:n)
```

- c. If you want to install Lodging, enter **y**
If you do not want to install Lodging, enter **n**
The system displays the following message:

```
Install vfax? (default:n)
```

- d. If you want to install fax, enter **y**
If you do not want to install fax, enter **n**
The system displays the following message:

```
Install vpms? (default:n)
```

- e. If you want to install PMS, enter **y**
If you do not want to install PMS, enter **n**

⇒ NOTE:

You can not install both Guest Works PMS and PMS on the same system.

The system displays the following message:

```
Install gwpms? (default:n)
```

- f. If you want to install Guest Works PMS, enter **y**
If you do not want to install Guest Works PMS, enter **n**

⇒ NOTE:

You can not install both Guest Works PMS and PMS on the same system.

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.  
Type [go] when ready  
or [q] to quit: (default: go)
```

- g. Enter **q**
- h. Remove the cartridge tape.

Installing the Optional Lodging Language Package

To install the optional Lodging Language package, do the following:

1. Start at the Software Install menu ([Figure 10-2](#)).

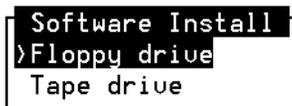


Figure 10-2. Software Install Menu

2. Select



```
> Floppy drive
```

The system displays the following message:

```
Insert a floppy disk into the diskette drive
Type [go] when ready
    or [q] to quit: (default: go)
```

3. Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the diskette.
```

```
The following sets are available:
```

```
1    useng    Intuity Lodging Language Package
                (586) 2.0-1
```

```
Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]
```

4. Press **ENTER**.

The system displays the following message:

```
Processing:
```

```
Set: Intuity Lodging Language Package (useng) from
<ctapel>.
```

```
Intuity Lodging Language Package
(i486)
```

```
Using </> as the package base directory.
```

When the process is finished, the system displays the following message:

```
Installation of <useng> is completed.
```

```
Insert a into Floppy Drive 1.
Type [go] when ready,
    or [q] to quit: (default:go)
```

5. Enter **q**
6. Start the voice system. See "[Starting the Voice System](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
7. The Fax for Lodging feature option must be activated. Contact your remote maintenance service center.

Installing the Enhanced List Administration Package

To install the Enhanced List Administration (ELA) package, do the following:

1. Log in to the Lucent INTUITY system using `craft` or `tsc`.
2. Stop the voice system. See "[Stopping the Voice System](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.
3. Starting at the Lucent INTUITY Main menu ([Figure 10-1](#)), select

```
> Customer/Services Administration
```

```
> System Management
```

```
> UNIX Management
```

```
>Software Install
```

The system displays the Software Install menu ([Figure 10-2](#)).

4. Insert the tape labeled "Enhanced-List Application" into the tape drive.
5. Select

```
> Tape drive
```

The system displays the following message:

```
Insert a diskette into Floppy Drive 1.  
Type [go] when ready,  
or [q] to quit: (default:go)
```

6. Press **ENTER**.

The system displays the following message:

```
Installation in progress. Do not remove the tape.
```

```
The following packages are available:
```

```
1 ELA          Enhanced List Application Package
```

```
Select package(s) you wish to process (or 'all' to  
process all packages). (default: all) [?, ??, q].
```

7. Press **ENTER**.

The system installs the software and displays several status messages. When the software installation is complete, the system displays the following message:

```
Installation of Enhanced List Application Package  
was successful.
```

```
Insert a tape into the Tape Drive.
```

```
Type [go] when ready
```

```
or [q] to quit: (default: go)
```

8. Remove the tape from the cartridge tape drive.
9. Enter **q**
10. Reboot the system. See "[Rebooting the System](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.

Installing an RFU

11

Overview

This chapter describes the procedures for installing an Remote Field Update (RFU) on the customers site. There may be more than one RFU per system.

Purpose

The purpose of this chapter is to ensure that if the RFU needs to be loaded on site, it is done correctly.

Installing an RFU

The Lucent™ INTUITY™ system uses two procedures for loading a RFU:

1. On-site installation
2. Remote download

Remote downloads of an RFU are done by your remote maintenance center. If the remote maintenance center downloads an RFU, it will not be necessary to install the RFU on-site. RFUs contain updates to the basic system software.

⇒ NOTE:

If Lucent INTUITY system software (operating system and base software) is being installed, see [Installing UnixWare](#), in [Chapter 8, "Installing Base System Software"](#).

⚠ CAUTION:

Always verify with the remote maintenance center that the RFU is the most recent RFU available before loading.

The following procedures are to be used for installing an RFU to an existing system that requires a new RFU. Do not use these procedures to load an RFU to an ALT (assembled, loaded, and tested) system which already has the RFU installed. Contact the remote maintenance center with questions about RFU identity and procedures.

⇒ NOTE:

The letter x's that appear in the examples represent the IP load number for the software and the letter designation (a, b, c,...) for the RFU.

1. Start at the Lucent INTUITY Main menu ([Figure 11-1](#)).

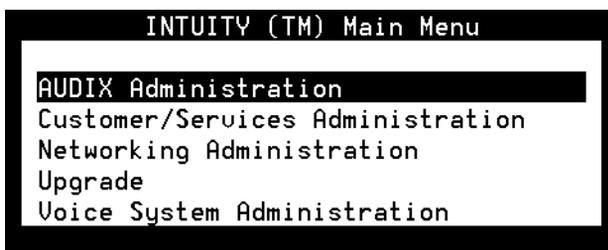


Figure 11-1. Lucent INTUITY Main Menu

2. Select

```
> Customer/Services Administration
> System Management
> UNIX Management
>Software Install
```

The system displays the Software Install menu ([Figure 11-2](#)).

```
Software Install
>Floppy drive
Tape drive
```

Figure 11-2. Software Install Menu

3. Insert the tape labeled “Lucent INTUITY RFU Software” into the tape drive. See [“Inserting Cartridge Tapes”](#), in [Chapter 3, “Common System Procedures”](#), for this procedure.
4. Select Tape drive.

The system displays the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready
or [q] to quit: (default: go)
```

5. Press **ENTER**.

The system displays the following message:

Installation in progress. Do not remove the cartridge.

The following pkgs are available:

```
1      IXXrfu+X   Remote Field Update X for IPXX
              (486) 3.0-xx
```

Select package(s) you wish to process (or 'all' to process all packages). (default: all) [?,??, q]



CAUTION:

RFUs apply to a particular software load. Lucent INTUITY software loads are labeled with the release number such as 2.0-x or 3.0-x,

where *x* is a number such as 15 or 16. The RFU software cartridge tape will list *x* as IP15 or IP16.

If the RFU does not match the software loaded onto the Lucent INTUITY system, do not load the RFU. Contact the remote maintenance center for assistance if there is a question about whether or not the RFU matches the system's software load.

6. Press `ENTER`.

The system displays:

```
Processing of <Remote Field Update X for IPXX> is
completed.
```

```
Insert a cartridge into Tape Drive 1.
```

```
Type [go] when ready
```

```
or [q] to quit: (default: go)
```

7. Enter `q`
8. Remove the tape labeled "Lucent INTUITY RFU Software Update" from the tape drive. See ["Inserting Cartridge Tapes"](#), in [Chapter 3, "Common System Procedures"](#), for this procedure.
9. Shut down and reboot the system. See ["Inserting Cartridge Tapes"](#), in [Chapter 3, "Common System Procedures"](#), for this procedure.

Verifying the RFU Installation

To verify the RFU installation, do the following:

1. Starting at the Lucent INTUITY Main menu ([Figure 11-1](#)), select

```
> Customer/Services Administration
```

```
> System Verification
```

```
> View Installed Software
```

The system displays the View Installed Software window ([Figure 11-3](#) and [Figure 11-4](#)).

```
View Installed Software

Displaying pkginfo (long version) for only the application
packages...

Displaying pkginfo for package AUDIXtune

  PKGINST:  AUDIXtune
  NAME:     INTUITY Platform AUDIX Tuning
  CATEGORY: intuity
  ARCH:    i486
  VERSION: i.2.2
  VENDOR:  Lucent Technologies Inc.
```

Figure 11-3. Sample View Installed Software Window (Detailed Version)

```
View Installed Software

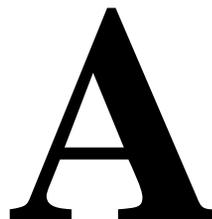
Displaying pkginfo for all packages installed on this system...

application IVC6DI      AT&T Intuity IVC6 Device Interface for
softFAX 2.0
intuity      OSmods      Intuity Operating System Modifications
Module
application VM          AUDIX(R) Module marker file
intuity      VM-dfltdb    AUDIX(R) Default db
intuity      VM-files     AUDIX(R) Files
intuity      VM-sw       AUDIX(R) Software
system       acp         Enhanced Application Compatibility
```

Figure 11-4. Sample View Installed Software Window (Abbreviated Version)

2. Locate the RFU title.

System Configuration



Memory Configuration

The MAP/100P supports 96-Mbytes of memory packaged on two 32-Mbyte plus two 16-Mbyte single in-line memory modules (SIMM). These modules are placed in sockets located in the bottom left corner of the CPU circuit card.

The CPU circuit card must be equipped with SIMMs in matched pairs and the SIMMs must be in the following configuration:

- Two identical 32-Mbyte SIMMs located in the SIMM1 and SIMM2 sockets plus two identical 16-Mbyte SIMMs located in the SIMM3, and SIMM4 sockets

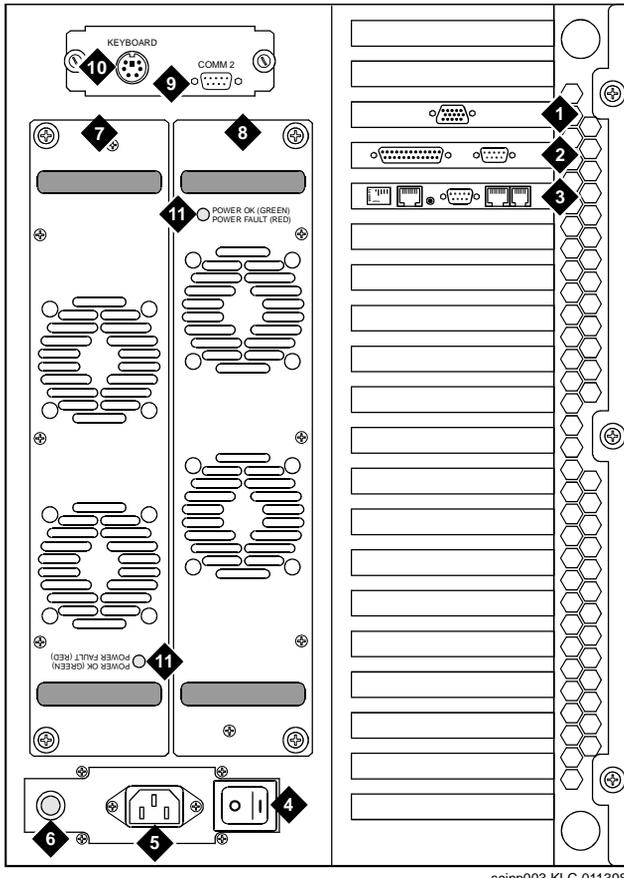
Component Assignments

The following hardware components are discussed in this section:

- Circuit cards
- Operating hardware

Circuit Cards

Circuit cards are placed in the MAP/100P in locations called *slots*. Slots are numbered Slot 1 through Slot 20 from the bottom of the MAP/100P to the top in a tower configuration and left to right in a rack-mounted configuration. Circuit card connections are accessible from the back of the MAP/100P ([Figure A-1](#)).



- | | | | |
|----|-------------------------|-----|------------------|
| 1. | Video circuit card | 6. | Fuse |
| 2. | P5 200 MHz CPU | 7. | Power Supply 1 |
| 3. | Remote maintenance card | 8. | Power Supply 2 |
| 4. | ON/OFF power switch | 9. | COM2 port |
| 5. | AC power input | 10. | Keyboard port |
| | | 11. | Power supply LED |

Figure A-1. Back View of the MAP/100P

Fixed Circuit Card Locations

The following circuit cards have fixed locations in the MAP/100P (Figure A-1):

- Tip/Ring circuit cards — ISA Slot 1 and ISA Slot 2
- Remote maintenance circuit card — Slot 16
- P5 200 MHz CPU circuit card — Slot 17
- Video circuit card — Slot 18

Assignment Rules

The following rules apply to the placement of optional boards in the MAP/100P:

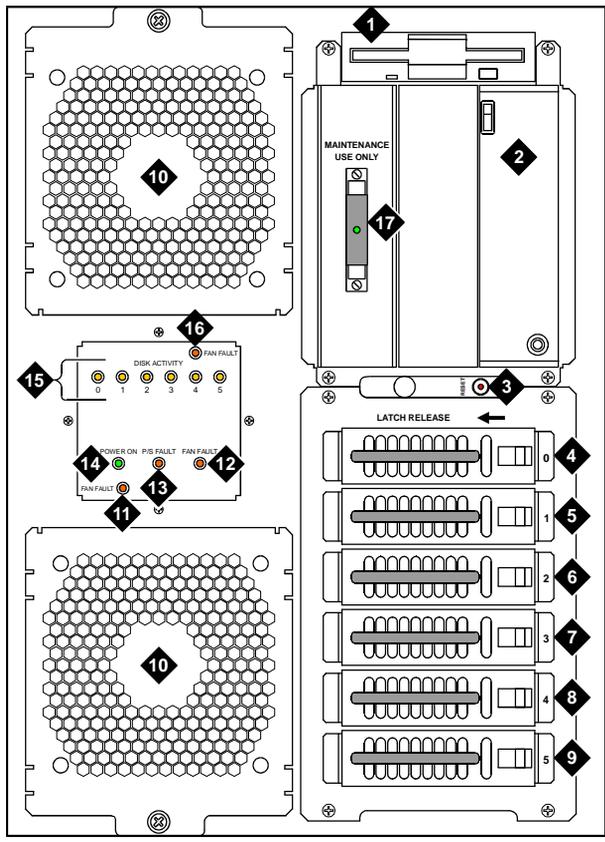
- A maximum of 15 ISA slots are available.
- A maximum of 11 Tip/Ring circuit cards is supported.
- A maximum of 3 ACCX circuit cards is supported.
- The system does not support both a digital station interface circuit card and a DCIU circuit card.
- All other circuit cards are supported as one per system with no mutual exclusions.
- Slots 3 through 15 will be occupied by circuit cards in the following order starting with Slot 3:
 1. Tip/Ring
 2. SSP
 3. ACCX
 4. Digital station interface or DCIU
 5. Multi-Port serial
 6. LAN
- The LAN circuit card will always occupy Slot 15 if it is provided.
- The Multi-Port serial circuit card will occupy the highest available slot after the LAN circuit card, if provided, has been installed.
- A digital station interface or DCIU circuit card will occupy the highest available slot after the LAN circuit card and the Multi-Port serial circuit card, if provided, have been installed.
- ACCX circuit cards are assigned slots sequentially, starting with the highest available slot.

Operating Hardware

Operating hardware is placed in the MAP/100P in locations called *bays*. The MAP/100P has two types of bays:

- Peripheral bays
- Hard disk drive bays

The peripheral bays are numbered 1 through 4. Hard disk drive bays are numbered 0 through 5. Bays are accessible from the front of the MAP/100P ([Figure A-2](#)).



scinp002 klc 011198

- | | |
|-------------------------|-----------------------------------|
| 1. Diskette drive | 10. Circuit card cage fan |
| 2. Cartridge tape drive | 11. Fan fault LED |
| 3. Reset push button | 12. Fan fault LED |
| 4. Hard Disk Drive 0 | 13. Power supply fault LED |
| 5. Hard Disk Drive 1 | 14. Power On LED |
| 6. Hard Disk Drive 2 | 15. Hard disk drive activity LEDs |
| 7. Hard Disk Drive 3 | 16. Fan fault LED |
| 8. Hard Disk Drive 4 | 17. SCSI terminating resistor |
| 9. Hard Disk Drive 5 | |

Figure A-2. Front View of the MAP/100P

The following peripheral bay assignments are fixed in the MAP/100P:

- Bay 1 — External SCSI connector
- Bay 2 — Empty
- Bay 3 — Cartridge tape drive
- Bay 4 — Diskette drive

The following hard disk drive bay assignments are fixed in the MAP/100P.

- Bay 0 — Hard Disk Drive 0
- Bay 1 — Hard Disk Drive 1
- Bay 2 — Hard Disk Drive 2
- Bay 3 — Hard Disk Drive 3
- Bay 4 — Hard Disk Drive 4
- Bay 5 — Hard Disk Drive 5

Resource Allocation

[Table A-1](#) lists the resource assignments for all devices in the MAP/100. It includes the circuit cards as well as devices which are included on the CPU circuit card.

Table A-1. Resource Allocation

Device	IRQ	I/O Address	RAM Address	Notes
PCI VGA video controller circuit card	14	3B0-3DF	A0000-BFFFF C0000-C7FFF	128K Video RAM, required 32K Video BIOS, required
System BIOS	-	-	E0000-FFFF	Located on CPU, required
CPU watchdog register	-	370	-	Located on CPU, required, not used
LPT1 port	7	378-37F	-	Located on CPU, required
COM1 port	4	3F8-3FF	-	Located on CPU, required
COM2 port	3	2F8-2FF	-	Located on CPU, disable for RMB
PCI SCSI	14	Plug & Play	C8000-CBFFF	Located on CPU, SCSI ID 7, required
2-Gbyte SCSI disk	-	-	-	2 required, 4 optional
2-Gbyte SCSI tape	-	-	-	1 required, SCSI ID 6

Table A-1. Resource Allocation

Device	IRQ	I/O Address	RAM Address	Notes
Diskette drive	6	3F0-3F7	-	DMA 2, controller located on CPU, required
LAN circuit card	10	280-29F	D8000-D9FFF	optional
Multi-port circuit card	-	-	D0000-D3FFF	1 optional
Tip/Ring circuit card	2	x00-x1F	-	x=1-3,5-7,9,A,B,D,E, 2 required 9 optional
ACCX circuit card	5	x40-x4F	-	x=1,3,5 3 optional
Digital station interface circuit card or DCIU interface circuit card	12	240-24F	D4000-D7FFF	1 optional
Remote maintenance circuit card	3	180-187	DC000-DCFFF	Disable COM2 port on the CPU
SSP circuit card	11	d20-d27	-	1 optional

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Component Ordering Numbers

B

Component Ordering Numbers

Table B-1. Component Ordering Numbers

Basic Component Description	Order Number
Adapter, 356A	104158829
Adapter, 356B	105197297
Adapter, electrical, DCE female	407345776
Adapter, electrical, DCE male (wyse trm, prntrs)	407050111
Adapter, electrical, DTE female	407345768
Adapter, electrical, DTE male (modems)	407050095
Adapter, electrical, jack to jack	407005255
Adapter, electrical, external SCSI	407524073
Adapter, SCSI, 68-50 pin, F/F, custom label	407846229
Adapter, T1-to-551 Paradyne CSU	407665884
Backplane, hard disk drives	407869908
Backplane, 20-slot	407869924
Backplane, power supply	407872829
Board assembly, PCA console interface	407872837
Board assembly, alarm card	407869890

Table B-1. Component Ordering Numbers

Basic Component Description	Order Number
Bracket, cable	406667519
Brackets, PC filter (20)	406798686
Cable assembly kit, hard disk	406664912
Cable assembly, TDM bus	ED5P20830 G-7B
Cable assembly, audio input/output	407667757
Cable assembly, console	407868199
Cable assembly, CPU/Keyboard interface	406664938
Cable assembly, DC backplane power	407868157
Cable assembly, DC media power	407868165
Cable assembly, diskette drive	407868116
Cable assembly, disk power	406664946
Cable assembly, drive bay DC power	407868173
Cable assembly, EMI suppression (RMB)	407265529
Cable assembly, internal fan status	601436108
Cable assembly, keyboard/reset	407868124
Cable assembly, M/F RS232	405119355
Cable assembly, modular T/R, 16-inch	601875040
Cable assembly, reset switch	407868181
Cable assembly, SCSI drive indicators	407868140
Cable assembly, SCSI jumper	407873660
Cable assembly, SCSI peripheral control, wide	407869601
Cable assembly, Tip/Ring trunk	601386907
Cable assembly, telephone cord, 3-ft.	601448632
Cable assembly, VGA port jumper	406664979
Circuit card, Multi-port serial	406618538
Circuit card, Multi-port serial	407009046
Circuit card, CPU, P5 200 MHz processor	407877018
Circuit card, Ethernet LAN interface, 10MB/PCI	407553254
Circuit card, remote maintenance, with modem	
Circuit card, remote maintenance, without modem	406969238

Table B-1. Component Ordering Numbers

Basic Component Description	Order Number
Circuit card, Speech and Signal Processor (SSP)	601835820
Circuit card, Tip/Ring (IVC6)	106406580
Circuit card, Tip/Ring (IVC6-1A)	107213944
Circuit card, Tip/Ring, (AYC30)	107224586
Circuit card, video controller, PCI	407783620
Cord, 10-pin modular, 10 ft.	846362705
Cord, 10-pin modular, 10 ft	846983039
Cord, 6-pin modular, 14-ft	102937604
Cord, AC power, 9-ft	406900092
Cord, AC power, Australia, 8-ft.	407051630
Cord, AC power, Chile (Italy-style), 6-ft	407515196
Cord, AC power, Germany, 6-ft	407051648
Cord, AC power, India, 8-ft	407406735
Cord, AC power, Israel, 8-ft	407879790
Cord, AC power, Japan, 8-ft	407406727
Cord, AC Power, Switzerland, 8-ft	407879782
Cord, AC power, United Kingdom, 6-ft	406999243
Cord, power, monitor (PC style)	407115591
Cord, power, monitor (wall outlet)	406666263
Cord, telephone, 25-ft	103623195
Cord, telephone, DW8A-SE, 25 ft	103848800
Coupler, E1, F/F (BNC Coaxial)	407617901
Disk drive, floppy, 1.44-Mbyte	406664573
Disk drive, floppy, 1.44-Mbyte	406832584
Disk drive, hard, SCSI, 2.0-Gbyte	407876358
Fan, 2-unit module	407869916
Filter, air, bezel, rack door	407869874
Filter, air, bezel, rack inlay	407869882
Filter, air, bezel, tower door	407869866
Fuse and holder, 110V/60Hz	407876341

Table B-1. Component Ordering Numbers

Basic Component Description	Order Number
Fuse and holder, 220V/50Hz	407876333
IC, 16-Mbyte SIMM	407701747
IC, 32-Mbyte SIMM	407700285
Keyboard (GIS gray)	407104066
Main power distribution board	406798231
Module, voice workstation	601459621
Monitor, color, VGA	407773316
Power supply 430W	407858976
Resistor SIP, TDM terminator	403789167
Switch, power	407870476
Tape drive, SCSI streaming, 2-Gbyte	407334507
Terminator, single-ended active, SCSI	407874429
Toroid, ring type	405853458
Toroid, split type	407616846

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How to Build a System Using This Book



Checklist for Building a System

The following checklist assumes that you are starting with a MAP/100P shell which has only the power supply and the backplanes.

If your system does not have a power supply or a 12-slot backplane included, see [Chapter 7, "Replacing Other Components"](#), for the installation procedures.

Task	Description	Comments	Refer to	Done
1	Acquire all of the components necessary to build your system.		Appendix B, "Component Ordering Numbers"	
2	Determine the slot and bay locations for the equipment.		Appendix A, "System Configuration"	
3	Install the hard disk drive(s).		Chapter 6, "Replacing the Hard Disk Drive"	
4	Install the tape drive.		Chapter 7, "Replacing Other Components"	
5	Install the diskette drive.		Chapter 7, "Replacing Other Components"	

Task	Description	Comments	Refer to	Done
6	Install the circuit cards.		Chapter 5, "Replacing or Installing Circuit Cards"	
7	Apply power to the unit.		Chapter 4, "Getting Inside the Computer"	
8	Install the base system software.		Chapter 8, "Installing Base System Software"	
9	Install the Lucent™ INTUITY™ system software.		Chapter 9, "Installing Lucent Intuity System Software"	
10	Install the UNIX multi-user software.	This is an optional feature software.	Chapter 10, "Installing the Optional Feature Software"	
11	Install the INTUITY Lodging software.	This is an optional feature software.	Chapter 10, "Installing the Optional Feature Software"	
12	Install the Enhanced List Administration software.	This is an optional feature software.	Chapter 10, "Installing the Optional Feature Software"	
13	Perform initial administration and test on the system.		Lucent INTUITY Messaging Solutions Release 4.0 MAP/100 System Installation	

Disaster Recovery Checklists

D

Disaster Recovery Checklists

The following checklists are included in this section:

- Checklist for Software Reloading on Nonmirrored Lucent™ INTUITY™ Systems with Existing Hard Disk Drives
- Checklist for Lucent INTUITY Systems with All New Hard Disk Drives
- Checklist for Nonmirrored Lucent INTUITY Systems With a New Hard Disk Drive 0 and Existing Other Hard Disk Drives
- Checklist for Nonmirrored Lucent INTUITY Systems With an Existing Hard Disk Drive 0 and Other New Hard Disk Drive
- Checklist for Mirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives
- Checklist for Mirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drive
- Checklist for Replacing Hard Disk Drive 6 (audfs) on a Nonmirrored System

Checklist for Software Reloading on Nonmirrored Lucent INTUITY Systems with Existing Hard Disk Drives

The procedures in this checklist should be conducted when your Lucent INTUITY system experiences a software disaster. This checklist should not be used if hard disk drives are being replaced.

Table D-1. Checklist for Software Reloading for Nonmirrored Lucent INTUITY Systems with Existing Hard Disk Drives

3	Task	Reference Documentation
	<p>Locate the most recent full attended backup tape. You will also need to use the nightly unattended backup tape which should be located in the cartridge tape drive.</p> <p>⚠ WARNING: <i>The attended backup tape contains subscriber data. If you do not have the attended backup tape, the Lucent INTUITY system will lose some subscriber data and messages, and you will need to re-administer all subscribers. Contact your remote maintenance center and inform them of the condition.</i></p>	
	<p>Shutdown the Lucent INTUITY system.</p>	<p>“Shutting Down and Rebooting the Lucent Intuity System”, in Chapter 3, “Common System Procedures”</p>
	<p>Leave all hard disks connected to the SCSI bus.</p>	
	<p>Install UnixWare.</p>	<p>“Installing UnixWare” in Chapter 8, “Installing Base System Software”</p>
	<p>Install the INTUNIX update package.</p>	<p>“Installing the INTUNIX Software” in Chapter 8, “Installing Base System Software”</p>
	<p>Install the platform software.</p>	<p>“Installing the Platform Software” in Chapter 8, “Installing Base System Software”</p>
	<p>Install the switch interface software package.</p>	<p>“Installing the Switch Interface Software Packages” in Chapter 8, “Installing Base System Software”</p>
	<p>Install the Lucent INTUITY System software.</p>	<p>Chapter 9, “Installing Lucent Intuity System Software”</p>

Table D-1. Checklist for Software Reloading for Nonmirrored Lucent INTUITY Systems with Existing Hard Disk Drives

3	Task	Reference Documentation
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”
	Stop the voice system.	“Stopping the Voice System” , in Chapter 3, “Common System Procedures”
	Load optional software packages such as CAS or UNIX Multi-User software.	Chapter 10, “Installing the Optional Feature Software” or The appropriate feature option documentation.
	Load RFU software update if any. Contact the remote maintenance center for the identity of the current RFU.	Chapter 11, “Installing an RFU”
	If you are restoring a system equipped with an internal remote maintenance circuit card, install the corresponding software.	“Remote Maintenance Circuit Cards” , in Chapter 5, “Replacing or Installing Circuit Cards”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”
	Restore the backup tape(s) (attended and unattended).	“Restoring Backups” , in Chapter 3, “Common System Procedures”
	View the features option screen to verify that all of the customer features purchased are activated. Contact your remote maintenance center if there are any discrepancies.	

Table D-1. Checklist for Software Reloading for Nonmirrored Lucent INTUITY Systems with Existing Hard Disk Drives

3	Task	Reference Documentation
	Check the system date and time.	"Verifying the Date and Time" , in Chapter 3 , "Common System Procedures"
	Place test calls to the system to verify installation.	
	Perform alarm origination test or ask your remote maintenance center to dial in to ensure that they can connect.	"Recovering from a Hard Disk Drive 0 Failure" in Chapter 6 , "Replacing the Hard Disk Drive"

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Checklist for Lucent INTUITY Systems with All New Hard Disk Drives

The procedures in this checklist should be conducted when you are replacing all of the hard disk drives on your Lucent INTUITY system. There are no provisions in this checklist for recovering existing file system. As a result, this checklist should not be used if any hard disk drive has been previously used in your Lucent INTUITY system.

Table D-2. Checklist for Lucent INTUITY Systems with All New Hard Disk Drives

3	Task	Reference Documentation
	<p>Locate the most recent full attended backup tape. You will also need to use the nightly unattended backup tape which should be located in the cartridge tape drive.</p> <p>⚠ WARNING: <i>The attended backup tape contains subscriber data. If you do not have the attended backup tape, the Lucent INTUITY system will loose some subscriber data and messages, and you will need to re-administer all subscribers. Contact your remote maintenance center and inform them of the condition.</i></p>	
	Install the hard disk drives.	“Replacing the Hard Disk Drive” in Chapter 6, “Replacing the Hard Disk Drive”
	Install UnixWare.	“Installing UnixWare” in Chapter 8, “Installing Base System Software”
	Install the INTUNIX update package.	“Installing the INTUNIX Software” in Chapter 8, “Installing Base System Software”
	Install the platform software.	“Installing the Platform Software” in Chapter 8, “Installing Base System Software”

Table D-2. Checklist for Lucent INTUITY Systems with All New Hard Disk Drives

3	Task	Reference Documentation
	Install the switch interface software package.	“Installing the Switch Interface Software Packages” in Chapter 8, “Installing Base System Software”
	Clean the Hard Disk Drives 1 through 6.	“Cleaning a Hard Disk Drive” , in Chapter 6, “Replacing the Hard Disk Drive”
	Run installit	“Running installit” in Chapter 8, “Installing Base System Software”
	Install the Lucent INTUITY system software.	Chapter 9, “Installing Lucent Intuity System Software”
	Complete the software procedures to add Hard Disk Drives 1 through 5.	“Adding a Hard Disk Drive” , in Chapter 6, “Replacing the Hard Disk Drive”
	Rename Hard Disk Drive 3 as audfsdisk	“Adding a Hard Disk Drive” , in Chapter 6, “Replacing the Hard Disk Drive”
	Stop the voice system.	“Stopping the Voice System” in Chapter 3, “Common System Procedures”
	Load optional software packages such as CAS or UNIX® Multi-User software.	Chapter 10, “Installing the Optional Feature Software” or The appropriate feature option documentation.
	Load RFU software update if any. Contact the remote maintenance center for the identity of the current RFU.	Chapter 11, “Installing an RFU”

Table D-2. Checklist for Lucent INTUITY Systems with All New Hard Disk Drives

3	Task	Reference Documentation
	If you are restoring a system equipped with a remote maintenance circuit card, install the corresponding software.	“Remote Maintenance Circuit Cards” , in Chapter 5, “Replacing or Installing Circuit Cards”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”
	Stop the voice system.	“Stopping the Voice System” in Chapter 3, “Common System Procedures”
	Restore the system from the backup tape(s) (attended and unattended).	“Restoring Backups” , in Chapter 3, “Common System Procedures”
	View the features option screen to verify that all of the customer features purchased are activated Contact your remote maintenance center if there are any discrepancies.	
	Check the system date and time.	“Verifying the Date and Time” , in Chapter 3, “Common System Procedures”
	Place test calls to the system to verify installation.	
	Perform alarm origination test or ask your remote maintenance center to dial in to ensure that they can connect.	“Recovering from a Hard Disk Drive 0 Failure” , in Chapter 6, “Replacing the Hard Disk Drive”

Checklist for Nonmirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

The procedures in this checklist should be conducted on a nonmirrored Lucent INTUITY system in which Hard Disk Drive 0 has failed. This checklist should not be used if Hard Disk Drive 6 or any other hard disk drive has also failed.

Table D-3. Checklist for Nonmirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

3	Task	Reference Documentation
	<p>Locate the most recent full attended backup tape. You will also need to use the nightly unattended backup tape which should be located in the cartridge tape drive.</p> <p>⚠ WARNING: <i>The attended backup tape contains subscriber data. If you do not have the attended backup tape, the Lucent INTUITY system will lose some subscriber data and messages, and you will need to re-administer all subscribers. Contact your remote maintenance center and inform them of the condition.</i></p>	
	Remove the hard disk drive.	“Removing a Hard Disk Drive” , in Chapter 6 , “Replacing the Hard Disk Drive”
	Install the hard disk drive.	“Installing a Hard Disk Drive in the MAP/100P” , in Chapter 6 , “Replacing the Hard Disk Drive”
	Install UnixWare.	“Installing UnixWare” in Chapter 8 , “Installing Base System Software”
	Install the INTUNIX update package.	“Installing the INTUNIX Software” in Chapter 8 , “Installing Base System Software”

Table D-3. Checklist for Nonmirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

3	Task	Reference Documentation
	Install the platform software.	“Installing the Platform Software” in Chapter 8 , “Installing Base System Software”
	Install the switch interface software package.	“Installing the Switch Interface Software Packages” in Chapter 8 , “Installing Base System Software”
	Load optional software packages such as CAS or Lodging software.	Chapter 10, “Installing the Optional Feature Software” or The appropriate feature option documentation.
	Load RFU software update if any. Contact the remote maintenance center for the identity of the current RFU.	Chapter 11, “Installing an RFU”
	If you are restoring a system equipped with a remote maintenance circuit card, install the corresponding software.	“Remote Maintenance Circuit Cards” , in Chapter 5 , “Replacing or Installing Circuit Cards”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3 , “Common System Procedures”
	Stop the voice system.	“Stopping the Voice System” , in Chapter 3 , “Common System Procedures”
	Restore the unattended backup tape.  NOTE: Only restore the unattended backup at this time.	“Restoring Backups” , in Chapter 3, “Common System Procedures”
	Login as tsc.	

Table D-3. Checklist for Nonmirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

3	Task	Reference Documentation
	Restore the attended backup from the UNIX prompt.	“Restoring the Attended and Unattended Backups” , in Chapter 6, “Replacing the Hard Disk Drive”
	Remove the system from the disaster recovery state.	“Restoring the Attended and Unattended Backups” , in Chapter 6, “Replacing the Hard Disk Drive”
	Login as craft.	
	Start the voice system.	“Starting the Voice System” , in Chapter 3, “Common System Procedures”
	View the features option screen to verify that all of the customer features purchased are activated Contact your remote maintenance center if there are any discrepancies.	
	Check the system date and time.	“Verifying the Date and Time” , in Chapter 3, “Common System Procedures”
	Place test calls to the system to verify installation.	
	Perform alarm origination test or ask your remote maintenance center to dial in to ensure that they can connect. ⇒ NOTE: If your system is not equipped with alarm origination, skip this procedure.	
	Complete the initial administration and test of the Lucent INTUITY system.	“INTUITY™ Interchange Release 5.3 MAP/100P System Installation” or “INTUITY™ Interchange Release 5.3 MAP/100P System Installation”

Checklist for Nonmirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drives

The procedures in this checklist should be conducted on a nonmirrored Lucent INTUITY system in which a hard disk drive other than Hard Disk Drive 0 has failed. This checklist should not be used if Hard Disk Drive 0 has also failed.

Table D-4. Checklist for Nonmirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drives

3	Task	Reference Documentation
	Locate the most recent full attended backup or nightly unattended backup tape which should be located in the cartridge tape drive.  NOTE: Use the most recent backup tape available.	
	Activate alarm suppression.  NOTE: If your system does not have alarm origination, skip this procedure.	“Activating Alarm Suppression” , in Chapter 6 , “Replacing the Hard Disk Drive”
	Install Hard Disk Drive 1 in Bay 3.	“Recovering from a Secondary Hard Disk Drive Failure” , in Chapter 6 , “Replacing the Hard Disk Drive”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3 , “Common System Procedures”
	Initialize Hard Disk Drive 1.	“Initializing the New Hard Disk Drive” , in Chapter 6 , “Replacing the Hard Disk Drive”
	Inactivate alarm suppression.  NOTE: If your system does not have alarm origination, skip this procedure.	“Inactivating Alarm Suppression” , in Chapter 6 , “Replacing the Hard Disk Drive”

Table D-4. Checklist for Nonmirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drives

3	Task	Reference Documentation
	Stop the voice system.	“Stopping the Voice System” in Chapter 3, “Common System Procedures”
	Restore the backup tape.	“Restoring Backups” , in Chapter 3, “Common System Procedures”
	Start the voice system.	“Starting the Voice System” , in Chapter 3, “Common System Procedures”

(2 of 2)

Checklist for Mirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

The procedures in this checklist should be conducted on a mirrored Lucent INTUITY system in which Hard Disk Drive 0 has failed. This checklist should not be used if Hard Disk Drive 1 has also failed.

Table D-5. Checklist for Mirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

3	Task	Reference Documentation
	Perform an attended backup.	“Backing Up (Attended)” , in Chapter 3, “Common System Procedures”
	Shutdown the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”
	Activate alarm suppression.  NOTE: If your system does not have alarm origination, skip this procedure.	“Inactivating Alarm Suppression” , in Chapter 6, “Replacing the Hard Disk Drive”
	Remove Hard Disk Drive 0 and Hard Disk Drive 1.	“Removing a Hard Disk Drive” , in Chapter 6, “Replacing the Hard Disk Drive”
	Place the Hard Disk Drive 1 in Bay 0 and the new hard disk drive in Bay 1.	“Installing a Hard Disk Drive in the MAP/100P” , in Chapter 6, “Replacing the Hard Disk Drive”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”

Table D-5. Checklist for Mirrored Lucent INTUITY Systems with a New Hard Disk Drive 0 and Existing Other Hard Disk Drives

3	Task	Reference Documentation
	Initialize the new hard disk drive to reflect the correct settings for Hard Disk Drive 1.	“Initializing the Hard Disk Drive” , in Chapter 6 , “Replacing the Hard Disk Drive”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3 , “Common System Procedures”
	Inactivate alarm suppression.  NOTE: If your system does not have alarm origination, skip this procedure.	“Inactivating Alarm Suppression” , in Chapter 6 , “Replacing the Hard Disk Drive”

Checklist for Mirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drives

The procedures in this checklist should be conducted on a mirrored Lucent INTUITY system in which a hard disk drive other than Hard Disk Drive 0 has failed. This checklist should not be used if Hard Disk Drive 0 has also failed.

Table D-6. Checklist for Mirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drives

3	Task	Reference Documentation
	Perform an attended backup.	“Backing Up (Attended)” in Chapter 3, “Common System Procedures”
	Identify the failed hard disk drive.	“Identifying a Failed Hard Disk Drive” in Chapter 6, “Replacing the Hard Disk Drive”
	Activate alarm suppression.	“Activating Alarm Suppression” in Chapter 6, “Replacing the Hard Disk Drive”
	 NOTE: If your system does not have alarm origination, skip this procedure.	
	Shutdown the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” in Chapter 3, “Common System Procedures”
	Remove the failed hard disk drive.	“Removing a Hard Disk Drive” in Chapter 6, “Replacing the Hard Disk Drive”
	Set the jumpers on the new hard disk drive to reflect the correct hard disk drive number.	“Initializing the New Hard Disk Drive” in Chapter 6, “Replacing the Hard Disk Drive”
	Install the new hard disk drive.	“Installing a Hard Disk Drive in the MAP/100P” in Chapter 6, “Replacing the Hard Disk Drive”

Table D-6. Checklist for Mirrored Lucent INTUITY Systems with an Existing Hard Disk Drive 0 and Other New Hard Disk Drives

3	Task	Reference Documentation
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” in Chapter 3, “Common System Procedures”
	Initialize the new hard disk drive to reflect the correct settings.	Chapter 6, “Initializing the New Hard Disk Drive” in Chapter 6, “Replacing the Hard Disk Drive”
	Inactivate alarm suppression.	“Inactivating Alarm Suppression” in Chapter 6, “Replacing the Hard Disk Drive”
	 NOTE: If your system does not have alarm origination, skip this procedure.	

Checklist for Replacing Hard Disk Drive 3 (audfs) on a Nonmirrored Lucent INTUITY System

The procedures in this checklist should be conducted on a nonmirrored Lucent INTUITY system in which a Hard Disk Drive 3 has failed.

Table D-7. Checklist for Hard Disk Drives 3 (audfs) on a Nonmirrored Lucent INTUITY System

3	Task	Reference Documentation
	Perform an attended backup.	“Backing Up (Attended)” , in Chapter 3, “Common System Procedures”
	Activate alarm suppression.  NOTE: If your system does not have alarm origination, skip this procedure.	“Activating Alarm Suppression” , in Chapter 6, “Replacing the Hard Disk Drive”
	Shutdown the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”
	Remove the failed hard disk drive.	“Removing a Hard Disk Drive” , in Chapter 6, “Replacing the Hard Disk Drive”
	Install the new hard disk drive.	“Installing a Hard Disk Drive in the MAP/100P” , in Chapter 6, “Replacing the Hard Disk Drive”
	Reboot the Lucent INTUITY system.	“Shutting Down and Rebooting the Lucent Intuity System” , in Chapter 3, “Common System Procedures”
	Initialize the new hard disk drive to reflect the correct settings.	“Initializing the Hard Disk Drive” , in Chapter 6, “Replacing the Hard Disk Drive”

Table D-7. Checklist for Hard Disk Drives 3 (audfs) on a Nonmirrored Lucent INTUITY System

3	Task	Reference Documentation
	Install the default voice mail database.	“Installing the Default Voice Mail Database” , in Chapter 6, “Replacing the Hard Disk Drive”
	Restore the Lucent INTUITY system using the back-up tapes.	“Restoring the Lucent Intuity System from the Backup Tapes” , in Chapter 6, “Replacing the Hard Disk Drive”
	Inactivate alarm suppression.  NOTE: If your system does not have alarm origination, skip this procedure.	“Inactivating Alarm Suppression” , in Chapter 6, “Replacing the Hard Disk Drive”

Checklist for Field Reloading a Lodging Only System

Table D-8. Checklist for Field Reloading a Lodging Only Systems

3	Task	Source
	<p>Locate the most recent full attended backup tape. You will also need to use the nightly backup tape which should be located in the cartridge tape drive.</p> <p>⚠ WARNING: <i>The attended backup tape contains subscriber data. If you do not have the attended backup tape, the system will loose some subscriber data and messages, and you will need to re-administer all subscribers. Contact your remote support center and inform them of the condition.</i></p>	
	<p>Shutdown the system if the system is responding to commands.</p> <p>⇒ NOTE: If the system is not responding to commands, then continue with the procedures in this checklist.</p>	<p>“Shutting Down the System” in Chapter 3, “Common System Procedures”</p>
	<p>Leave Hard Disk Drive 0 connected to the SCSI bus.</p>	
	<p>Verify the CMOS settings.</p>	<p>“P5 200 MHz CPU Circuit Card” in Chapter 5, “Replacing or Installing Circuit Cards”</p>
	<p>Verify the SCSI host adapter settings.</p>	<p>“P5 200 MHz CPU Circuit Card” in Chapter 5, “Replacing or Installing Circuit Cards”</p>
	<p>Low level format the hard disk drive.</p>	<p>“Performing a Low-Level Format” in Chapter 6, “Replacing the Hard Disk Drive”</p>

Table D-8. Checklist for Field Reloading a Lodging Only Systems

3	Task	Source
	Install UnixWare.	“Installing UnixWare” in Chapter 8, “Installing Base System Software”
	Install the INTUNIX update package.	“Installing the INTUNIX Software” in Chapter 8, “Installing Base System Software”
	Install the platform software.	“Installing the Platform Software” in Chapter 8, “Installing Base System Software”
	Install the switch interface software package.	“Installing the Switch Interface Software Packages” in Chapter 8, “Installing Base System Software”
	Load RFU Software Update cartridge tape if any. Contact the remote maintenance center for the identity of the current RFU.	Chapter 11, “Installing an RFU”
	Install the Lodging software package.	“Installing Intuity Lodging Software Packages” in Chapter 10, “Installing the Optional Feature Software”
	Install the optional Lodging language packages.	“Installing Intuity Lodging Software Packages” in Chapter 10, “Installing the Optional Feature Software”
	Reboot the system.	“Rebooting the System” in Chapter 3, “Common System Procedures”
	Restore the system from the backup tape(s) (attended and nightly).	“Restoring Backups” in Chapter 3, “Common System Procedures”
	Place test calls to the system to verify installation.	
	Perform alarm origination test or ask your remote maintenance center to dial in to ensure that they can connect.	

Glossary

5ESS Switch

A central office switch manufactured by Lucent Technologies that can be integrated with the Lucent INTUITY system.

A

accessed message

A message that was received and scanned (either the entire message or just the header).

ACA

See *automatic circuit assurance*.

ACD

See *automatic call distribution*.

activity menu

The list of options spoken to users when they first access a messaging system. Selecting an activity is the starting point for all user operations.

ADAP

See *administration and data acquisition package*.

address

INTUITY AUDIX user identification, containing the user's extension and machine, that indicates where the system needs to deliver a message. An address may include several users or mailing lists. Name or number addressing can be selected with the * A (Address) command.

adjunct

A separate system closely integrated with a switch, such as a Lucent INTUITY system or a call management system (CMS).

administration

The process of setting up a system (such as a switch or a messaging system) to function as desired. Options and defaults are normally set up (translated) by the system administrator or service personnel.

administration and data acquisition package (ADAP)

A software package that allows the system administrator to transfer system user, maintenance, or traffic data from an INTUITY AUDIX system to a personal computer (PC).

ADU

See *asynchronous data unit*.

alarm log

A list of alarms that represent all of the active or resolved problems on a Lucent INTUITY system. The alarm log is stored in a software file on disk and can be accessed either locally or remotely on a terminal connected to the system.

alarms

Hardware, software, or environmental problems that may affect system operation. Alarms are classified as *major*, *minor*, or *warning*.

alphanumeric

Consisting of alphabetic and numeric symbols or punctuation marks.

ALT

See *assemble, load, and test*.

American wire gauge (AWG)

A standard measuring gauge for nonferrous conductors.

AMIS

See *Audio Messaging Interchange Specification*.

AMIS prefix

A number added to the destination number to indicate that it is an AMIS analog networking number.

analog networking

A method of transferring a message from one messaging system to another whereby the message is played back (voiced) during the transfer.

analog signal

In teleprocessing usage, a communications path that usually refers to a voice-grade telephone line.

announcement

A placeholder within the Lucent INTUITY system for playing fragments. Each event that may occur within AUDIX has one or more announcement numbers permanently assigned to it. Fragment numbers are then assigned to the announcement numbers.

announcement fragment

A numbered piece of spoken information that makes up a system message or prompt.

antistatic

A treatment for material to prevent the build-up of static electricity.

API

See *application programming interface*.

application

A computer software program.

application identifier

A two-letter code used in the administrator's log to identify the application or subsystem for which an alarm is being generated. There are eight application identifiers as follows: CA (Call Accounting), ML (MERLIN LEGEND), MT (Maintenance), NW (Digital Networking), SW (Switch Integration), VM (Voice Messaging), VP (Voice Processing), and VR (Voice Response).

application programming interface (API)

A set of formalized software calls and routines that an application program can reference to access underlying network services.

assemble, load, and test (ALT)

The Lucent factory process that preloads software, installs hardware, and tests the system prior to shipping.

ASP

advanced signal processor

asynchronous communication

A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than time. See also *synchronous communication*.

asynchronous data unit (ADU)

An electronic communications device that can extend data transmission over asynchronous lines more than 50 feet in length. Recommended ADUs for use with the Lucent INTUITY system include Z3A1 or Z3A4.

asynchronous transmission

A form of serial communications where each transmitted character is bracketed with a start bit and one or two stop bits. The Lucent INTUITY system provides asynchronous EIA-232 capabilities for INTUITY AUDIX Digital Networking, if required.

attendant console

A special-purpose telephone with numerous lines and features usually located at the front desk of a business or other organization. The front desk attendant uses this telephone to answer and transfer calls.

Audio Messaging Interchange Specification (AMIS)

An analog networking protocol that allows users to exchange messages with any messaging system that also has AMIS Analog Networking capabilities. Messages can be exchanged with users on Lucent INTUITY systems as well as with users on remote messaging systems made by vendors other than Lucent.

Audio Information Exchange (AUDIX)

A complete messaging system accessed and operated by touch-tone telephones and integrated with a switch.

audit

A software program that resolves filesystem incompatibilities and updates restored filesystems to a workable level of service. Audits are done automatically on a periodic basis, or can be performed on demand.

AUDIX

See *Audio Information Exchange*.

autodelete

An INTUITY AUDIX feature that allows users to designate that faxes be automatically deleted from their mailboxes after they are printed.

automated attendant

A Lucent INTUITY system feature that allows users to set up a main extension number with a menu of options that routes callers to an appropriate department at the touch of a button.

automatic call distribution (ACD)

The System 85, Generic 2, or Generic 3 call-distribution group of analog ports that connects Lucent INTUITY users to the system. See also *call-distribution group*.

automatic circuit assurance (ACA)

A feature of the switch that keeps records of both very long and very short calls and notifies the attendant when these calls exceed a certain parameter. The logic is that many very short calls or one very long one may suggest a trunk that is hung, broken, or out of order. The attendant can then physically dial into the trunk to check it.

automatic message scan

An INTUITY AUDIX feature that allows users to scan all message headers and messages at the touch of two buttons. With Lucent INTUITY FAX Messaging, this feature allows all new faxes to be bundled and transmitted over a single fax call delivery call. Also called *autoscan*.

autoprint

An INTUITY AUDIX feature that allows users to designate that faxes be automatically sent to a specified print destination.

autoscan

See *automatic message scan*.

AWG

See *American wire gauge*.

B

background testing

Testing that runs continuously when the system is not busy doing other tasks.

backplane

A centrally located device within a computer to which individual circuit cards are plugged for communication across an internal bus.

backup

A duplicate copy of files and directories saved on a removable medium such as floppy diskette or tape. The back-up filesystem can be copied back (restored) if the active version is damaged (corrupted) or lost.

basic input/output system (BIOS)

A system that contains the buffers for sending information from a program to the actual hardware device for which the information is intended.

basic call transfer

The switch-hook flash method used to send the INTUITY AUDIX transfer command over analog voice ports.

basic rate access

See *basic rate interface*.

basic rate interface (BRI)

International standard protocol for connecting a station terminal to an integrated systems digital network (ISDN) switch. ISDN BRI supports two 64-Kbps information-bearer channels (B1 and B2), and one 16-Kbps call status and control (D) channel (a 2B + D format). Also called *basic rate access*.

binary synchronous communications (BSC)

A character-oriented synchronous link protocol.

BIOS

See *basic input/output system*.

body

The part of a Lucent INTUITY voice mail that contains the actual spoken message. For a leave word calling (LWC) message, it is a standard system announcement.

boot

The operation to start a computer system by loading programs from disk to main memory (part of system initialization). Booting is typically accomplished by physically turning on or restarting the system. Also called *reboot*.

boot filesystem

The filesystem from which the system loads its initial programs.

BRI

See *basic rate interface*.

broadcast messaging

An INTUITY AUDIX feature that enables the system administrator and other designated users to send a message to all users automatically.

BSC

See *binary synchronous communications*.

buffer

A temporary storage area used to equalize or balance different operating speeds. A buffer can be used between a slow input device, such as a terminal keyboard, and the main computer, which operates at a very high speed.

bulletin board

An INTUITY AUDIX feature that allows a message to be played to callers who dial the bulletin board extension. Callers cannot leave a message since it is a listen-only service. Also called *information service*.

bundling

Combining several calls and handling them as a single call. See also *automatic message scan*.

bus

An electrical connection/cable allowing two or more wires, lines, or peripherals to be connected together.

busy-out/release

To remove a Lucent INTUITY device from service (make it appear busy or in use), and later restore it to service (release it). The Lucent INTUITY switch data link, voice ports, or networking ports can be busied out if they appear faulty or when maintenance tests are run.

C

CA

Call accounting system application identifier. See *application identifier*.

call accounting system (CAS)

A software device that monitors and records information about a calling system.

call-answer

An INTUITY AUDIX feature that allows the system to answer a call and record a message when the user is unavailable. Callers can be redirected to the system through the call coverage or call forwarding switch features. INTUITY AUDIX users can record a personal greeting for these callers.

call-answer language choice

The capability of user mailboxes to accept messages in different languages. For the INTUITY AUDIX application, this capability exists when the multilingual feature is turned on.

callback number

In AMIS analog networking, the telephone number transmitted to the recipient machine to be used in returning messages that cannot be delivered.

call classification analysis (CCA)

A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls.

call coverage

A switch feature that defines a preselected path for calls to follow if the first (or second) coverage points are not answered. The Lucent INTUITY system can be placed at the end of a coverage path to handle redirected calls through call coverage, send all calls, go to cover, etc.

call data handler process (CDH)

A software process that accumulates generic call statistics and application events.

call detail recording (CDR)

A switch feature that uses software and hardware to record call data. See also *call detail recording utility*.

call detail recording utility (CDRU)

Applications software that collects, stores, optionally filters, and outputs call detail records for direct or polled output to peripheral devices. See also *call detail recording*.

call delivery

See *message delivery*.

call-distribution group

The set of analog port cards on the switch that connects switch users to the Lucent INTUITY system by distributing new calls to idle ports. This group (or split) is called automatic call distribution (ACD) on System 85, Generic 2, and Generic 3 and uniform call distribution (UCD) on System 75, Generic 1, and Generic 3. See also *automatic call distribution* and *uniform call distribution*.

call management system (CMS)

An inbound call distribution and management reporting package.

called tone (CED tone)

The distinctive tone generated by a fax endpoint when it answers a call (a constant 2100-Hz tone).

called subscriber information (CSI)

The identifier for the answering fax endpoint. This identifier is sent in the T.30 protocol and is generally the telephone number of the fax endpoint.

calling tone (CNG tone)

The distinctive tone generated by a fax endpoint when placing a call (a constant 1100-Hz tone that is on for 1/2 second, off for 3 seconds).

call vectoring

A System 85 R2V4, Generic 2, and Generic 3 feature that uses a vector (switch program) to allow a switch administrator to customize the behavior of calls sent to an automatic call distribution (ACD) group.

card cage

An area within the Lucent INTUITY hardware platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive

A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape is to be removed from the system and stored as a backup.

CAS

See *call accounting system*.

CCA

See *call classification analysis*.

CDH

See *call data handler process*.

CDR

See *call detail recording*.

CDRU

See *call detail recording utility (CDRU)*.

CED tone

See *called tone*.

CELP

See *code excited linear prediction*.

central office (CO)

An office or location in which large telecommunication equipment such as telephone switches and network access facilities are maintained. In a CO, private customer lines are terminated and connected to the public network through common carriers.

central processing unit (CPU)

The component of the computer that manipulates data and processes instructions coming from software.

channel

A telecommunications transmission path for voice and/or data.

channel capacity

A measure of the maximum bit rate through a channel.

class of restriction (COR)

A feature that allows up to 64 classes of call-origination and call-termination restrictions for telephones, telephone groups, data modules, and trunk groups. See also *class of service*.

class of service (COS)

The standard set of INTUITY AUDIX features given to users when they are first administered (set up with a voice mailbox). See also *class of restriction*.

clear to send (CTS)

Located on Pin 5 of the 25-conductor RS-232 interface, CTS is used in the transfer of data between the computer and a serial device.

client

A computer that sends, receives and uses data, but that also shares a larger resource whose function is to do most data storage and processing. For Lucent INTUITY Message Manager, the user's PC running Message Manager is the client. See also *server*.

CMS

See *call management system*.

CNG tone

See *calling tone*.

CO

See *central office*.

COR

See *class of restriction*.

COS

See *class of service*.

code excited linear prediction (CELP)

An analog-to-digital voice coding scheme.

collocated

A Lucent INTUITY system installed in the same physical location as the host switch. See also *local installation*.

collocated adjunct

Two or more adjuncts that are serving the same switch (that is, each has voice port connections to the switch) or that are serving different switches but can be networked through a direct RS-232 connection due to their proximity.

comcode

A numbering system for telecommunications equipment used by Lucent Technologies. Each comcode is a 9-digit number that represents a specific piece of hardware, software, or documentation.

command

An instruction or request given by the user to the software to perform a particular function. An entire command consists of the command name and options. Also, one- or two-key touch tones that control a mailbox activity or function.

community

A group of telephone users administered with special send and receive messaging capabilities. A community is typically comprised of people who need full access to each other by telephone on a frequent basis. See also *default community*.

compound message

A message that combines a voice message and a fax message into one unit, which INTUITY AUDIX then handles as a single message.

configuration

The particular combination of hardware and software components selected for a system, including external connections, internal options, and peripheral equipment.

controller circuit card

A circuit card used on a computer system that controls its basic functionality and makes the system operational. These cards are used to control magnetic peripherals, video monitors, and basic system communications.

COS

See *class of service*.

coverage path

The sequence of alternate destinations to which a call to a user on a Lucent INTUITY system is automatically sent when it is not answered by the user. This sequence is set up on the switch, normally with the Lucent INTUITY system as the last or only destination.

CPU

See *central processing unit*.

cross connect

Distribution-system equipment used to terminate and administer communication circuits.

cross connection

The connection of one wire to another, usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made.

CSI

See *called subscriber information*.

CTS

See *clear to send*.

D

DAC

See *dial access code*.

database

A structured set of files, records, or tables. Also, a collection of filesystems and files in disk memory that store the voice and nonvoice (program data) necessary for Lucent INTUITY system operation.

data communications equipment (DCE)

Standard type of data interface normally used to connect to data terminal equipment (DTE) devices. DCE devices include the data service unit (DSU), the isolating data interface (IDI), and the modular processor data module (MPDM).

data communications interface unit (DCIU)

A switch device that allows nonvoice (data) communication between a Lucent INTUITY system and a Lucent switch. The DCIU is a high-speed synchronous data link that communicates with the common control switch processor over a direct memory access (DMA) channel that reads data directly from FP memory.

data link

A term used to describe the communications link used for data transmission from a source to a destination, for example, a telephone line for data transmission.

data service unit (DSU)

A device used to access digital data channels. DATAPHONE II 2500 DSUs are synchronous data communications equipment (DCE) devices used for extended-local Lucent INTUITY system connections. The 2600 or 2700 series may also be used; these support diagnostic testing and the DATAPHONE II Service network system.

data set

Another term for a modem, although a data set usually includes the telephone. See also *modem*.

data terminal equipment (DTE)

Standard type of data interface normally used for the endpoints in a connection. Normally the Lucent INTUITY system, most terminals, and the switch data link are DTE devices.

DBP

See *data base processor*.

DCE

See *data communications equipment*.

DCIU

See *data communications interface unit*.

DCP

See *digital communications protocol*.

DCS

See *distributed communications system*.

debug

See *troubleshooting*.

dedicated line

A communications path that does not go through a switch. A dedicated (hard-wired) path can be formed with directly connected cables. MPDMs, DSUs, or other devices can also be used to extend the distance that signals can travel directly through the building wiring.

default

A value that is automatically supplied by the system if no other value is specified.

default community

A group of telephone users administered with restrictions to prevent them from sending messages to or receiving messages from other communities. If a system is administered to use communities, the default community is comprised of all the AUDIX users defined on that system.

default print number

The user-administered extension to which autoprinted faxes are redirected upon their receipt into the user's mailbox. This default print destination is also provided as a print option when the user is manually retrieving and printing faxes from the mailbox.

delivered message

A message that has been successfully transmitted to a recipient's incoming mailbox.

demand testing

Testing performed on request (usually by service personnel).

diagnostic testing

A program run for testing and determining faults in the system.

dial-ahead/dial-through

The act of interrupting or preceding INTUITY AUDIX system announcements by typing (buffering) touch-tone commands in the order the system would normally prompt for them.

dial string

A series of numbers used to initiate a call to a remote AMIS machine. A dial string tells the switch what type of call is coming (local or long distance) and gives the switch time to obtain an outgoing port, if applicable

dialed number identification service (*DNIS_SVC)

An available channel service assignment on the Lucent INTUITY system. Assigning this service to a channel permits the Lucent INTUITY system to interpret information from the switch and operate the appropriate application for the incoming telephone call.

DID

See *direct inward dialing*.

digital communications protocol (DCP)

A 64-Kbps digital data transmission code with a 160-Kbps bipolar bit stream divided into two information (I) channels and one signaling (S) channel.

digital networking

A method of transferring messages between messaging systems in a digital format. See also *INTUITY AUDIX Digital Networking*.

digital signal processor (DSP)

A specialized digital microprocessor that performs calculations on digitized signals that were originally analog and then sends the results on.

DIP switch

See *dual in-line package switch*.

direct inward dialing (DID)

The ability for an outside caller to call an internal extension without having to pass through an operator or attendant.

direct memory access (DMA)

A quick method of moving data from a storage device directly to RAM, which speeds processing.

directory

1. A Lucent INTUITY AUDIX feature that allows you to hear a user's name and extension after pressing [*] [*] [N] at the activity menu. 2. A group of related files accessed by a common name in software.

display terminal

A data terminal with a screen and keyboard used for displaying Lucent INTUITY screens and performing maintenance or administration activities.

distributed communications system (DCS)

A network of two or more switches that uses logical and physical data links to provide full or partial feature transparency. Voice links are made using tie trunks.

distribution list

See *mailing list*.

DMA

See *direct memory access*.

DNIS

See *dialed number identification service*.

domain

An area where data processing resources are under common control. The INTUITY AUDIX system is one domain and an e-mail system is another domain.

DSP

See *digital signal processor*.

DSU

See *data service unit*.

DTE

See *data terminal equipment*.

DTMF

See *dual tone multifrequency*.

dual in-line package (DIP) switch

A small switch, usually attached to a printed circuit card, in which there are only two settings: on or off (or 0 or 1). DIP switches are used to configure the card in a semipermanent way.

dual language greetings

The capability of INTUITY AUDIX users to create personal greetings in two different languages— one in a primary language and one in a secondary language. This capability exists when the multilingual feature is turned on and the prompts for user mailboxes can be in either of the two languages.

dual tone multifrequency (DTMF)

A way of signaling consisting of a pushbutton or touch-tone dial that sends out a sound consisting of two discrete tones that can be picked up and interpreted by telephone switches.

E

EIA interface

A set of standards developed by the Electrical Industries Association (EIA) that specifies various electrical and mechanical characteristics for interfaces between electronic devices such as computers, terminals, and modems. Also known as *RS-232*.

ELA

Enhanced-List Application

electrostatic discharge (ESD)

Discharge of a static charge on a surface or body through a conductive path to ground. ESD can be damaging to integrated circuits.

electronic mail

See *e-mail*.

electrostatic discharge (ESD)

The discharge of a static charge on a surface or body through a conductive path to ground, ESD can damage integrated circuits.

e-mail

The transfer of a wide variety of message types across a computer network (LAN or WAN). E-mail messages may be text messages containing only ASCII or may be complex multimedia messages containing embedded voice messages, software files, and images.

enabled/disabled

The state of a hardware device that indicates whether it is available for use by the Lucent INTUITY system. Devices must be equipped before they can be enabled (made active). See also *equipped/unequipped*.

endpoint

See *fax endpoint*.

enhanced call transfer

An INTUITY AUDIX feature that allows compatible switches to transmit messages digitally over the BX.25 (data) link. This feature is used for quick call transfers and requires a fully integrated digital switch. Callers can only transfer to other extensions in the switch dial plan.

enhanced serial data interface (ESDI)

A software- and hardware-controlled method used to store data on magnetic peripherals.

equipped/unequipped

The state of a networking channel that indicates whether Lucent INTUITY software has recognized it. Devices must be equipped before they can be enabled (made active). See also *enabled/disabled*.

error message

A message on the screen indicating that something is wrong and possibly suggesting how to correct it.

errors

Problems detected by the system during operation and recorded in the maintenance log. Errors can produce an alarm if they exceed a threshold.

escape from reply

The ability to quickly return to getting messages for a user who encounters a problem trying to respond to a message. To escape, the user presses **#**.

escape to attendant

An INTUITY AUDIX feature that allows users with the call answer feature to have a personal attendant or operator administered to pick up their unanswered calls. A system-wide extension could also be used to send callers to a live agent.

ESD

See *electrostatic discharge*.

ESDI

See *enhanced serial data interface*.

event

An informational messages about the system's activities. For example, an event is logged when the system is rebooted. Events may or may not be related to errors and alarms.

F

facilities restriction level (FRL)

A value that determines which types of calls the users of a switch are allowed to make.

facility out-of-service (FOOS)

State of operation during which the current channel is not receiving a dial tone and is not functioning.

facsimile

1. A digitized version of written, typed, or drawn material transmitted over telephone lines and printed out elsewhere. 2. Computer-generated text or graphics transmitted over computer networks. A computer-generated fax is typically printed to a fax machine, but can remain stored electronically.

fax

See *facsimile*.

fax addressing prefix

Uniquely identifies a particular fax nodepoint to the Lucent INTUITY system. Used by the system as a "template" to differentiate all call-delivery machines on the network from each other.

fax endpoint

Any device capable of receiving fax calls. Fax endpoints include fax machines, individual PC fax modems, fax ports on LAN fax servers, and ports on fax-enabled messaging systems.

fax print destination prefix

A dial string that the Lucent INTUITY system adds to the fax telephone number the user enters to print a fax. The system takes the full number (fax print destination prefix + fax telephone extension) and hunts through the machine translation numbers until it finds the specific fax endpoint.

field

An area on a screen, menu, or report where information can be typed or displayed.

FIFO

See *first-in/first-out*.

file

A collection of data treated as a basic unit of storage.

filename

Alphanumeric characters used to identify a particular file.

file redundancy

See *mirroring*.

file system

A collection of related files (programs or data) stored on disk that are required to initialize a Lucent INTUITY system.

first-in/first-out (FIFO)

A method of processing telephone calls or data in which the first call or data to be received is the first call or data to be processed.

F key

See *function key*.

FNPAC

See *foreign numbering-plan area code*.

FOOS

See *facility out-of-service*.

foreign exchange (FX)

A central office (CO) other than the one providing local access to the public telephone network.

foreign numbering-plan area code (FNPAC)

An area code other than the local area code that must be dialed to call outside the local geographical area.

format

To set up a disk, floppy diskette, or tape with a predetermined arrangement of characters so that the system can read the information on it.

FRL

See *facilities restriction level*.

function

Individual steps or procedures within a mailbox activity.

function key (F key)

A key on a computer keyboard programmed to perform a defined function when pressed. The user interface for the Lucent INTUITY system defines keys F1 through F8.

FX

See *foreign exchange*.

G

Generic 1, 2, or 3

Lucent switch system software releases, designed for serving large communities of System 75 and System 85 users.

generic tape

A copy of the standard software and stand-alone tape utilities that is shipped with a new Lucent INTUITY system.

GOS

See *grade of service*.

grade of service (GOS)

A parameter that describes the delays in accessing a port on the Lucent INTUITY system. For example, if the GOS is P05, 95% of the callers hear the system answer and 5% hear ringing until a port becomes available to answer the call.

guaranteed fax

A feature of Lucent INTUITY FAX Messaging that temporarily stores faxes sent to a fax machine. In cases where the fax machine is busy or does not answer a call, the call is sent to an INTUITY AUDIX mailbox.

guest password

A feature that allows callers who are not INTUITY AUDIX users to leave messages on the system by dialing a user's extension and entering a system-wide guest password.

H

hard disk drive

A high-capacity data-storage and -retrieval device that is located inside a computer. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware

The physical components of a computer system. The central processing unit, disks, tape, and floppy drives are all hardware.

header

Information that the system creates to identify a message. A message header includes the originator or recipient, type of message, creation time, and delivery time.

help

A command run by pressing (HELP) or (CTRL) (?) on a Lucent INTUITY display terminal to show the options available at your current screen position. In the INTUITY AUDIX system, press (*) (H) on the telephone keypad to get a list of options. See also *on-line help*.

host switch

The switch directly connected to the Lucent INTUITY system over the data link. Also, the physical link connecting a Lucent INTUITY system to a distributed communications system (DCS) network.

hunt group

A group of analog ports on a switch usually administered to search for available ports in a circular pattern.

I

I/O

Input/output.

IDI

See *isolating data interface*.

IMAPI

See *INTUITY messaging application programming interface*.

INADS

See *initialization and administration system*.

information service

See *bulletin board*.

initialization

The process of bringing a system to a predetermined operational state. The start-up procedure tests hardware; loads the boot filesystem programs; locates, mounts, and opens other required file-systems; and starts normal service.

initialization and administration system (INADS)

A computer-aided maintenance system used by remote technicians to track alarms.

initialize

To start up the system for the first time.

input

A signal fed into a circuit or channel.

integrated services digital network (ISDN)

A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

integrated voice processing CELP (IVC6) card

A computer circuit card that supports both fax processing and voice processing capabilities. It provides two analog ports to support six analog channels. All telephone calls to and from the Lucent INTUITY system are processed through the IVC6 card.

interface

The device or software that forms the boundary between two devices or parts of a system, allowing them to work together. See also *user interface*.

internal e-mail

Software on a PC that provides messaging capability between users on the same AUDIX system, or to administered remote AUDIX systems and users. Users can create, send, and receive a message that contains multiple media types; specifically, voice, fax, text, or file attachments (software files, such as a word processing or spreadsheet file).

interrupt request (IRQ)

Within a PC, a signal sent from a device to the CPU to temporarily suspend normal processing and transfer control to an interrupt handling routine.

INTUITY AUDIX Digital Networking

A Lucent INTUITY feature that allows customers to link together up to 500 remote Lucent INTUITY machines for a total of up to 500,000 remote users. See also *digital networking*.

INTUITY Message Manager

A Windows-based software product that allows INTUITY AUDIX users to receive, store, and send their voice/FAX messages from a PC. The software also enables users to create and send multimedia messages that include voice, fax, file attachments, and text.

INTUITY messaging application programming interface (IMAPI)

A software function-call interface that allows INTUITY AUDIX to interact with Lucent INTUITY Message Manager.

IRQ

See *interrupt request*.

ISDN

See *integrated services digital network*.

isolating data interface (IDI)

A synchronous, full duplex data device used for cable connections between a Lucent INTUITY GPSC-AT/E card and the switch data communications interface unit (DCIU).

IVC6

See *integrated voice processing CELP (IVC6) card*.

J

jumper

Pairs or sets of small prongs or pins on circuit cards and mother boards the placement of which determines the particular operation the computer selects. When two pins are covered, an electrical circuit is completed. When the jumper is uncovered, the connection is not made. The computer interprets these electrical connections as configuration information.

K

L

label

The name assigned to a disk device (either a removable tape cartridge or permanent drive) through software. Cartridge labels may have a generic name (such as 3.3) to show the software release, or a descriptive name if for back-up copies (such as back01). Disk drive labels usually indicate the disk position (such as disk00 or disk02).

LAN

See *local area network*.

last-in/first-out (LIFO)

A method of processing telephone calls or data in which the last call (or data) received is the first call (or data) to be processed.

LCD

See *liquid crystal display*.

leave word calling (LWC)

A switch feature that allows the calling party to leave a standard (nonvoice) message for the called party using a feature button or dial access code.

LED

See *light emitting diode*.

LIFO

See *last-in/first-out*.

light emitting diode (LED)

A light on the hardware platform that shows the status of operations.

liquid crystal display (LCD)

The 10-character alphanumeric display that shows the status of the system, including alarms.

load

The process of reading software from external storage (such as disk) and placing a copy in system memory.

local area network (LAN)

A network of PCs that communicate with each other and that normally share the resources of one or more servers. Operation of Lucent INTUITY Message Manager requires that the INTUITY AUDIX system and the users' PCs be on a LAN.

local AUDIX machine

The Lucent INTUITY system where a user's INTUITY AUDIX mailbox is located. All users on this home machine are called *local users*.

local installation

A switch, adjunct, or peripheral device installed physically near the host switch or system. See also *collocated*.

local network

An INTUITY AUDIX Digital Network in which all Lucent INTUITY systems are connected to the same switch.

login

A unique code a user must enter to gain approved access to the Lucent INTUITY system. See also *password*.

login announcement

A feature enabling the system administrator and other designated users to create a mail message that is automatically played to all INTUITY AUDIX users every time they log in to the system.

Lotus Notes

Information management software for work groups that allows individuals to share and manipulate information over a local or wide area network

LWC

See *leave word calling*.

M

magnetic peripherals

Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

mailbox

A portion of disk memory allotted to each Lucent INTUITY system user for creating and storing outgoing and incoming messages.

mailing list

A group of user addresses assigned a list ID# and public or private status. A mailing list may be used to simplify the sending of messages to several users.

maintenance

The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.

major alarm

An alarm detected by Lucent INTUITY software that affects at least one fourth of the Lucent INTUITY ports in service. Often a major alarm indicates that service is affected.

MANOOS

See *manually out-of-service*.

manually out-of-service

State of operation during which a unit has been intentionally taken out of service.

MAP

See *multi-application platform*.

mean time between failures

The average time a manufacturer estimates will elapse before a failure occurs in a component or system.

media type

The form a message takes. The media types supported by the Lucent INTUITY system are voice, text, file attachments, and fax.

memory

A device that stores logic states such that data can be accessed and retrieved. Memory may be temporary (such as system RAM) or permanent (such as disk).

menu

A list of options displayed on a computer terminal screen or spoken by a voice processing system. Users choose the option that reflects what action they want the system to take.

menu tree

The way in which nested automated attendants are set up.

message categories

Groups of messages in INTUITY AUDIX users' mailboxes. Categories include *new*, *unopened*, and *old* for the incoming mailbox and *delivered*, *accessed*, *undelivered*, *undeliverable* (not deliverable), and *file cabinet* for the outgoing mailbox.

message component

A media type included in a multimedia message. These types include voice, text, file attachments, and fax messages.

message delivery

An optional Lucent INTUITY feature that permits users to send messages to any touch-tone telephone, as long as the telephone number is in the range of allowable numbers. This feature is an extension of the AMIS analog networking feature and is automatically available when the AMIS feature is activated.

Message Manager

See *INTUITY Message Manager*.

message waiting indicator (MWI)

An indicator that alerts Lucent INTUITY users that they have received new mail messages. An MWI can be an LED or neon lamp, or an audio tone (stutter dial tone).

message waiting lamp (MWL)

See *message-waiting indicator*.

migration

An installation that moves data to the Lucent INTUITY system from another type of Lucent messaging system, for example, from AUDIX R1, DEFINITY AUDIX, or AUDIX Voice Power.

minor alarm

An alarm detected by maintenance software that affects less than one fourth of the Lucent INTUITY ports in service, but has exceeded error thresholds or may impact service.

mirroring

A Lucent INTUITY system feature that allows data from crucial filesystems to be continuously copied to back-up (mirror) filesystems while the system is running. If the system has some problem where an original filesystem cannot be used, the backup filesystem is placed in service automatically.

ML

MERLIN LEGEND application identifier. See *application identifier*.

mode code

A string of touch-tones from a MERLIN LEGEND switch. A mode code may send the INTUITY AUDIX system information such as call type, calling party, called party, and on/off signals for message waiting indicators.

modem

A device that converts data from a form that is compatible with data processing equipment (digital) to a form compatible with transmission facilities (analog), and vice-versa.

modular

A term that describes equipment made of plug-in units that can be added together to make the system larger, improve its capabilities, or expand its size.

modular processor data module (MPDM)

A data device that converts RS-232C or RS-449 protocol signals to digital communications protocol (DCP) used by System 75/85, Generic1, and Generic 3 switches. MPDMs can connect the Lucent INTUITY system to a switch DCIU or SCI link or connect terminals to a switch port card.

MPDM

See *modular processor data module*.

MT

Maintenance application identifier. See *application identifier*.

MTBF

See *mean time between failures*.

multi-application platform (MAP)

The computer hardware platform used by the Lucent INTUITY system.

multilingual feature

A feature that allows announcement sets to be active simultaneously in more than one language on the system. Mailboxes can be administered so that users can hear prompts in the language of their choice.

MWI

See *message waiting indicator*.

N

networking

See *INTUITY AUDIX Digital Networking*.

networking prefix

A set of digits that identifies a Lucent INTUITY machine.

night attendant

The automated attendant created on a MERLIN LEGEND switch that automatically becomes active during off-hours. The night attendant substitutes for one or more daytime attendants.

not deliverable message

A message that could not be delivered after a specified number of attempts. This usually means that the user's mailbox is full.

NPA

See *numbering plan area*.

NT

Networking application identifier. See *application identifier*.

MWL

See *message waiting lamp*.

Numbering plan area

Formal name for 3-digit telephone area codes in North America. Within an area code, no two telephone lines may have the same 7-digit phone number. The code is often designated as NXX, to indicate the three digits.

O

off-hook

See *switch hook*.

on-hook

See *switch hook*.

on-line help

A Lucent INTUITY system feature that provides information about user interface windows, screens, and menus by pressing a predetermined key. See also *help*.

open systems interconnection (OSI)

An internationally accepted framework of standards for communication between systems made by different vendors.

operating system (OS)

The set of software programs that runs the hardware and interprets software commands.

option

A choice selected from a menu, or an argument used in a command line to specify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

OS

See *operating system*.

OSI

See *open systems interconnection*.

outcalling

A Lucent INTUITY system feature that allows the system to dial users' numbers to inform them they have new messages.

outgoing mailbox

A storage area on the Lucent INTUITY system where users can keep copies of messages for future reference or action.

P

parallel transmission

The transmission of several bits of data at the same time over different wires. Parallel transmission of data is usually faster than serial transmission.

password

1. A word or character string recognized automatically by the Lucent INTUITY system that allows a user access to his/her mailbox or a system administrator access to the system data base. 2. An alphanumeric string assigned to local and remote networked machines to identify the machines or the network. See also *login*.

password aging

An INTUITY AUDIX feature that allows administrators to set a length of time after which a user's AUDIX password or the administrator's system password expires. The user or administrator must then change the password.

PBX

See *private branch exchange*.

PC

See *power converter*.

PDM (processor data module)

See *modular processor data module (MPDM)*.

peripheral device

Equipment such as a printer or terminal that is external to the Lucent INTUITY cabinet but necessary for full operation and maintenance of the system. Also called a *peripheral*.

personal directory

An INTUITY AUDIX feature that allows each user to create a private list of customized names.

personal fax extension

See *secondary extension*.

PI

See *processor interface*.

PIB

See *processor interface*.

pinouts

The signal description per pin number for a particular connector.

PMS

See *property management system*.

port

A connection or link between two devices that allows information to travel to a desired location. For example, a switch port connects to a Lucent INTUITY voice port to allow a caller to leave a message.

POST

See *power-on self test*.

power on self test (POST)

A set of diagnostics stored in ROM that tests components such as disk drives, keyboard, and memory each time the system is booted. If problems are identified, a message is sent to the screen.

priority call answer

An INTUITY AUDIX feature that allows users to designate a call answer message as a priority message. To make a message a priority message, the caller presses (2) after recording.

priority messaging

An INTUITY AUDIX feature that allows some users to send messages that are specially marked and preferentially presented to recipients. See also *priority outcalling*.

priority outcalling

An INTUITY AUDIX feature that works with the priority messaging feature by allowing the message recipient to elect to be notified by outcalling only when a priority message has been received. See also *priority messaging*.

private branch exchange (PBX)

An analog, digital, or electronic telephone switching system where data and voice transmissions are not confined to fixed communications paths, but are routed among available ports or channels. See also *switch*.

private mailing list

A list of addresses that only the Lucent INTUITY system user who owns it can access.

private messaging

A feature of INTUITY AUDIX that allows a user to send a message that cannot be forwarded by the recipient.

processor data module (PDM)

See *modular processor data module (MPDM)*.

processor interface (PI)

A System 75, Generic 1, Generic 3i, Generic 3s, and Generic 3vs switch data link. Also called *processor interface board (PIB)*.

programmed function key

See *function key*.

property management system (PMS)

A product used by lodging establishments to automate the management of guest records, reservations, room assignments, and billing. In an integrated PMS environment, special software links the PMS to the Lucent INTUITY Lodging system so that both systems share a common set of messages and commands.

protocol

A set of conventions or rules governing the format and timing of message exchanges (signals) to control data movement and the detection and possible correction of errors.

public mailing list

A list of addresses that any INTUITY AUDIX user can use if that user knows the owner's list ID number and extension number. Only the owner can modify a public mailing list.

pulse-to-tone converter

A device connected to the switch that converts signals from a rotary pulses to touch tones. This device allows callers to use rotary telephones to access options in a Lucent INTUITY user's mailbox or in an automated attendant.

R

RAM

See *random access memory*.

random access memory (RAM)

The memory used in most computers to store the results of ongoing work and to provide space to store the operating system and applications that are actually running at any given moment.

read-only memory (ROM)

A form of computer memory that allows values to be stored only once; after the data is initially recorded, the computer can only read the contents. ROM is used to supply constant code elements such as bootstrap loaders, network addresses, and other more or less unvarying programs or instructions.

reboot

See *boot*.

remote access

Sending and receiving data to and from a computer or controlling a computer with terminals or PCs connected through communications (that is, telephone) links.

remote installation

A system, site, or piece of peripheral equipment that is installed in a different location from the host switch or system.

remote maintenance

The ability of Lucent personnel to interact with a remote computer through a telephone line or LAN connection to perform diagnostics and some system repairs. See also *remote service center*.

remote network

A network in which the systems are integrated with more than one switch.

remote service center

A Lucent or Lucent-certified organization that provides remote support to Lucent INTUITY customers. Depending upon the terms of the maintenance contract, your remote service center may be notified of all major and minor alarms and have the ability to remotely log in to your system and remedy problems. See also *remote maintenance*.

remote terminal

A terminal connected to a computer over a telephone line.

remote users

INTUITY AUDIX users whose mailboxes reside on a remote INTUITY AUDIX Digital Networking machine.

REN

See *ringer equivalence number*.

reply loop escape

An INTUITY AUDIX feature that allows a user the option of continuing to respond to a message after trying to reply to a nonuser message.

reply to sender

An INTUITY AUDIX feature that allows users to immediately place a call to the originator of an incoming message if that person is in the switch's dial plan.

request to send (RTS)

One of the control signals on an EIA-232 connector that places the modem in the originate mode so that it can begin to send.

restart

1. A Lucent INTUITY feature that allows INTUITY AUDIX users who have reached the system through the call answer feature to access their own mailboxes by entering the ***R** (Restart) command. This feature is especially useful for long-distance calls or for users who want to access the Lucent INTUITY system when all the ports are busy. 2. The reinitialization of certain software, for example, *restarting* the messaging system.

restore

The process of recovering lost or damaged files by retrieving them from available back-up tapes, floppy diskette, or another disk device.

retention time

The amount of time messages are saved on disk before being automatically deleted from a user's mailbox.

reusable upgrade kit (RUK)

A package shipped to the customer's site prior to an upgrade that contains materials the technician needs to complete the installation. This package includes an A/B switch box, a keyboard, a 25-foot coaxial cable, two T adapters, and terminations to a LAN circuit card. It remains the property of Lucent once the installation is finished.

right-to-use (RTU) fee

A charge to the customer to access certain functions or capacities that are otherwise restricted, for example, additional voice or networking ports or hours of speech storage. Lucent personnel can update RTU parameters either at the customer's site or remotely via a modem.

ringer equivalence number (REN)

A number required in the United States for registering your telephone equipment with a service provider.

ROM

See *read-only memory*.

RS-232

See *EIA interface*.

RTS

See *request to send*.

RUK

See *reusable upgrade kit*.

S

SCA

See *switch communications adapter*.

scan

To automatically play mail messages, headers, or both.

scheduled delivery time

A time and/or date that an INTUITY AUDIX user can assign to a message that tells the system when to deliver it. If a delivery time is omitted, the system sends the message immediately.

screen

That portion of the Lucent INTUITY user interface through which most administrative tasks are performed. Lucent INTUITY screens request user input in the form of a command from the `enter` command: prompt.

SCSI

See *small computer system interface*.

secondary extension

A second, fax-dedicated extension that directs incoming faxes directly into a user's mailbox without ringing the telephone. The secondary extension shares the same mailbox as the voice extension, but acts like a fax machine. Also called *personal fax extension*.

serial transmission

The transmission of one bit at a time over a single wire.

server

A computer that processes and stores data that is used by other smaller computers. For Lucent INTUITY Message Manager, INTUITY AUDIX is the server. See also *client*.

shielded cables

Cables that are protected from interference with metallic braid or foil.

SID

See *switch integration device*.

SIMM

See *single in-line memory module*.

simplified message service interface (SMSI)

Type of data link connection to an integrated 1A ESS or 5ESS switch in the Lucent INTUITY system.

simplified message desk interface (SMDI)

Also known as station message desk interface. Type of data link from the central office that contains information and instructions for the Lucent INTUITY system. With SMDI, the caller need not re-enter the called number once the call terminates to the Lucent INTUITY system. See also *simplified message service interface*.

single in-line memory module (SIMM)

A method of containing random access memory (RAM) chips on narrow strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

small computer systems interface (SCSI)

An interface standard defining the physical, logical, and electrical connections to computer system peripherals such as tape and disk drives.

SMDI

See *station message desk interface*.

SMDR

See *station message detail recording*.

SMSI

See *simplified message service interface*.

SP

signal processor

SSP

scaleable signal processor

station message desk interface (SMDI)

See *simplified message desk interface*.

station message detail recording

See *call detail recording (CDR)*.

subscriber

A Lucent INTUITY user who has been assigned the ability to access the INTUITY AUDIX Voice Messaging system.

surge

A sudden rise and fall of voltage in an electrical circuit.

surge protector

A device that plugs into the telephone system and the commercial AC power outlet to protect the telephone system from damaging high-voltage surges.

SW

Switch integration application identifier. See *application identifier*.

switch

An automatic telephone exchange that allows the transmission of calls to and from the public telephone network. See also *private branch exchange (PBX)*.

switched access

A connection made from one endpoint to another through switch port cards. This allows the endpoint (such as a terminal) to be used for several applications.

switch hook

The device at the top of most telephones which is depressed when the handset is resting in the cradle (that is, when the telephone is *on hook*). This device is raised when the handset is picked up (that is, when the telephone is *off hook*).

switch-hook flash

A signaling technique in which the signal is originated by momentarily depressing the switch hook.

switch integration

Sharing of information between a messaging system and a switch to provide a seamless interface to callers and system users. A fully integrated INTUITY AUDIX system, for example, answers each incoming telephone call with information taken directly from the switch. Such information includes the number being called and the circumstances under which the call was sent to it, for example, covered from a busy or unanswered extension.

switch integration device (SID)

A combination of hardware and software that passes information from the switch to the Lucent INTUITY system thus allowing it to share information with non-Lucent switches. The operation of a SID is unique to the particular switch with which it interfaces.

switch network

Two or more interconnected switching systems.

synchronized mailbox

A mailbox that is paired with a corresponding mailbox in another domain and linked via software that keeps track of changes to either mailbox. When the contents of one mailbox change, the software replicates that change in the other mailbox.

synchronizer

The name given to the trusted server by the e-mail vendor, Lotus Notes.

synchronous communication

A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. See also *asynchronous communication*.

synchronous transmission

A type of data transmission where the data characters and bits are exchanged at a fixed rate with the transmitter and receiver synchronized. This allows greater efficiency and supports more powerful protocols.

System 75

An advanced digital switch manufactured by Lucent Technologies that supports up to 800 lines for voice and data communications.

System 75

An advanced digital switch manufactured by Lucent Technologies that supports up to 3000 lines for voice and data communications.

system configuration

See *configuration*.

T

T.30

The standard for Group III fax machines that covers the protocol used to manage a fax session and negotiate the capabilities supported by each fax endpoint.

tape cartridge

One or more spare removable cartridges required to back up system information.

tape drive

The physical unit that holds, reads, and writes to magnetic tape.

TCP/IP

See *transmission control protocol/internet protocol*.

TDD

See *telecommunications device for the deaf*.

TDM

See *time division multiplexing*.

telecommunications device for the deaf (TDD)

A device with a keyboard and display unit that connects to or substitutes for a telephone. The TDD allows a deaf or hearing-impaired person to communicate over the telephone lines with other people who have TDDs. It also allows a deaf person to communicate with the INTUITY AUDIX system.

terminal

See *display terminal*.

terminal type

A number indicating the type of terminal from which a user is logging in to the Lucent INTUITY system. Terminal type is the last required entry before gaining access to the Lucent INTUITY display screens.

terminating resistor

A grounding resistor placed at the end of a bus, line, or cable to prevent signals from being reflected or echoed.

time division multiplexing (TDM)

A method of serving multiple channels simultaneously over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

tip/ring

A term used to denote the analog telecommunications interface.

tone generator

A device acoustically coupled to a rotary telephone used to produce touch-tone sounds.

traffic

The flow of attempts, calls, and messages across a telecommunications network.

translations

Software assignments that tell a system what to expect on a certain voice port or the data link, or how to handle incoming data. Translations customize the Lucent INTUITY system and switch features for users.

transmission control protocol/internet protocol (TCP/IP)

A suite of protocols that allow disparate hosts to connect over a network. Transmission control protocol (TCP) organizes data on both ends of a connection and ensures that the data that arrives matches that which was sent. Internet protocol (IP) ensures that a message passes through all the necessary routers to the proper destination.

T/R

See *tip/ring*.

troubleshooting

The process of locating and correcting errors in computer programs (also called *debugging*) or systems.

trusted server

A server that uses IMAPI to access an INTUITY AUDIX mailbox on behalf of a user and is empowered to do everything to a user message that INTUITY AUDIX can do.

TTS

Text-to-Speech

U

UCD

See *uniform call distribution*.

Undelete

An INTUITY AUDIX feature that allows users to restore the last message deleted by pressing * .

undelivered message

A message that has not yet been sent to an INTUITY AUDIX user's incoming mailbox. The message resides in the sender's outgoing mailbox and may be modified or redirected by the sender.

unequipped

See *equipped/unequipped*.

unfinished message

A message that was recorded but not approved or addressed, usually as the result of an interrupted INTUITY AUDIX session. Also called *working message*.

uniform call distribution (UCD)

The type of call-distribution group (or hunt group) of analog port cards on some switches that connects users to the INTUITY AUDIX system. System 75, Generic 1, Generic 3, and some central office switches use UCD groups. See also *call-distribution group*.

uninterruptable power supply (UPS)

An auxiliary power unit that provides continuous power in cases where commercial power is lost.

UNIX operating system

A multi-user, multi-tasking computer operating system.

upgrade

An installation that moves a Lucent INTUITY system to a newer release.

untouched message

An INTUITY AUDIX feature that allows a user to keep a message in its current category by using the *** * H** (Hold) command. If the message is in the new category, message-waiting indication remains active (for example, the message-waiting lamp remains lit).

UPS

See *uninterruptable power supply*.

U. S. 123

An alternate announcement set in U. S. English whose prompts use numbers, not letters, to identify telephone keypad presses. For example, a prompt might say, "Press star three," instead of, "Press star D."

user interface

The devices by which users access their mailboxes, manage mailing lists, administer personal greetings, and use other messaging capabilities. Types of user interfaces include a touch-tone telephone keypad and a PC equipped with Lucent INTUITY Message Manager.

user population

A combination of different types of users on which Lucent INTUITY configuration guidelines are based.

V

vector

A customized program in the switch for processing incoming calls.

VM

Voice messaging application identifier. See *application identifier*.

voice link

The Lucent INTUITY analog connection(s) to a call-distribution group (or hunt group) of analog ports on the switch.

voice mail

See *voice message*.

voice mailbox

See *mailbox*.

voice message

Digitized information stored by the Lucent INTUITY system on disk memory. Also called *voice mail*.

voice port

The IVC6 port that provides the interface between the Lucent INTUITY system and the analog ports on the switch.

voice terminal

A telephone used for spoken communications with the Lucent INTUITY system. A touch-tone telephone with a message-waiting indicator is recommended for INTUITY AUDIX users.

voicing

1. Speaking a message into the Lucent INTUITY system during recording. 2. Having the system play back a message or prompt to a user.

VP

Voice platform application identifier. See *application identifier*.

VR

Voice response application identifier. See *application identifier*.

W

WAN

See *wide area network*.

wide area network (WAN)

A data network typically extending a local area network (LAN) over telephone lines to link with LANS in other buildings and/or geographic locations.

window

That portion of the Lucent INTUITY user interface through which you can view system information or status.

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