Lucent Technologies
Bell Labs Innovations

INTUITY™ CONVERSANT® System

Version 6.0

MAP/40 New System Installation

585-310-178
Comcode 108037755
Issue 3.0
June 1997

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.

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Federal Communications Commission Statement
Part 15: Class B Statement. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving television or radio antenna where this may be done safely.
- To the extent possible, relocate the receiver with respect to the telephone equipment.
- Where the telephone equipment requires ac power, plug the telephone into a different ac outlet so that the telephone equipment and receiver are on different branch circuits.

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 FCC registration number AS593M-11185-MF-E.

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

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	Issue 3.0, June 1997	

For additional documents, refer to the section entitled, "Related Documents" in "About This Book."

You can be placed on a Standing Order list for this and other documents you may need. Standing Order will enable you to automatically receive updated versions of individual documents or document sets, billed to account information that you provide. For more information on Standing Orders, or to be put on a list to receive future issues of this document, please contact the Lucent Technologies Publications Center.

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 XXX 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.

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Any references within this text to American Telephone and Telegraph Corporation or AT&T should be interpreted as references to Lucent Technologies Incorporated. The exception is cross references to books published prior to December 31, 1996, which retain their original AT&T titles.

Heritage
Lucent Technologies - formed as a result of AT&T's planned restructuring - designs, builds, and delivers a wide range of public and private networks, communication systems and software, consumer and business telephone systems, and microelectronics components. The world-renowned Bell Laboratories is the research and development arm for the company.

Acknowledgment
This document was prepared by the Product Documentation Development group, Lucent Technologies, Denver, CO and Columbus, OH.

Contents

About This Book

Purpose

This book, *INTUITY™ CONVERSANT® System Version 6.0 MAP/40 New System Installation,* 585-310-178, contains instructions for installing an INTUITY CONVERSANT system that has been assembled, loaded, and tested (ALT) at the Lucent Technologies factory. It includes procedures for unpacking, setup, configuration, initial administration, acceptance testing, and cut to service. These procedures apply to the MAP/40 platform and the INTUITY CONVERSANT system and most of its optional features.

Intended Audiences

This book is intended primarily for the on-site technical personnel who are responsible for installing the system and performing initial administration and acceptance testing. Secondary audiences include the following from Lucent Technologies:

- Field support—Technical Service Organization (TSO) and International Technical Assistance Center (ITAC)
- Helpline personnel
- Factory assemble, load, and test (ALT) personnel
- Provisioning project managers—Sales and Technical Resource Center (STRC)

We assume that the primary users of this book have completed the INTUITY CONVERSANT hardware installation training course (see "Related Resources" below).

Release History

This is the third release of this book.

Trademarks

Lucent Technologies has made every effort to supply trademark information about company names, products, and services mentioned in the INTUITY CONVERSANT documentation library. Trademarks indicated below were derived from various sources.

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- VERITAS is a trademark of the Veritas Software Corporation.
- Netscape Navigator is a trademark of Netscape Communications Corporation
- QuickStart is a trademark of the Enhanced Software Technologies, Corporation.

How to Use This Book

This book is designed to step you through the entire installation process. You can also use it as a quick-reference to obtain specific information you may need on a particular topic.

For Complete Installation Instructions

Read Chapter 1, ‘‘Getting Started’’, before you begin for information on prerequisites, including site preparation and the tools and information you need to complete the installation successfully.From there, read and use each chapter in the order presented. This takes you step by step through the procedures you must perform to install a factory-assembled, -loaded, and -tested (ALT) Lucent INTUITY system.

NOTE:
If you are installing a non-ALT system, see Appendix C, “Building a System,” in *INTUITY™ CONVERSANT® System Version 6.0 MAP/40 Maintenance*, 585-310-181, for instructions.

For a Quick Reference

If you want a quick reference, Appendix A, ‘‘System Installation Checklist’’ contains a checklist of procedure titles. These titles are listed in the order in which you must perform them. Also included are references to where you will find the complete procedures in this book.

For Troubleshooting Information

Where troubleshooting information is available, notes in the text refer you to the appropriate place in Appendix B, ‘‘Troubleshooting Procedures’’, to look for help.

For Connectivity and Pinout Information

For supplemental pinout and connectivity information, see Appendix C, ‘‘Pinouts’’, and Appendix D, ‘‘Cable Connectivity’’, respectively.

To Locate Specific Topics

This book includes an alphabetical index at the end for quick access to specific topics.

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 INTUITY CONVERSANT system displays *windows, screens, and menus*. Windows and screens both show and request system information (Figure 1 through Figure 4). Menus (Figure 5) present options from which you can choose to view another menu, or a screen or window.

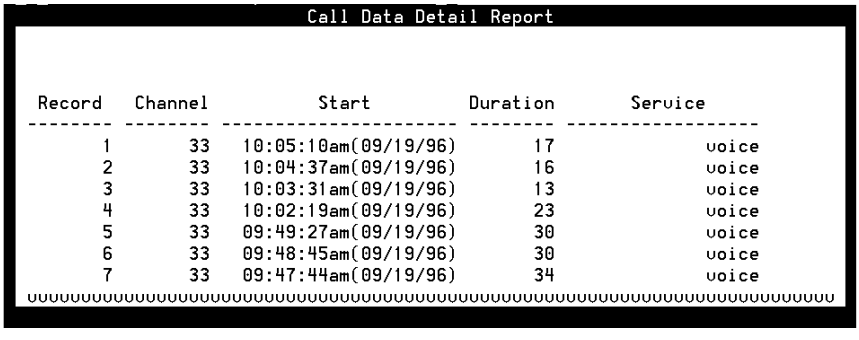

Figure 1. Example of an INTUITY CONVERSANT Window Showing Information

```
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.'
```

Figure 2. Example of an INTUITY CONVERSANT Screen Showing Information

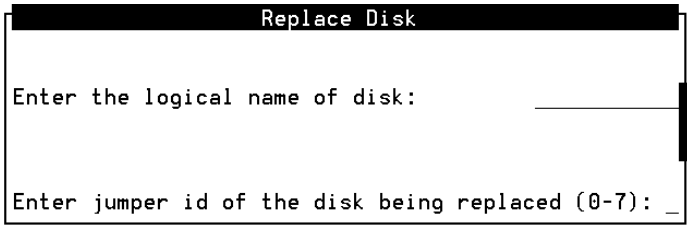

Figure 3. Example of an INTUITY CONVERSANT Window Requesting Information

```
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 4. Example of an INTUITY CONVERSANT Screen Requesting Information

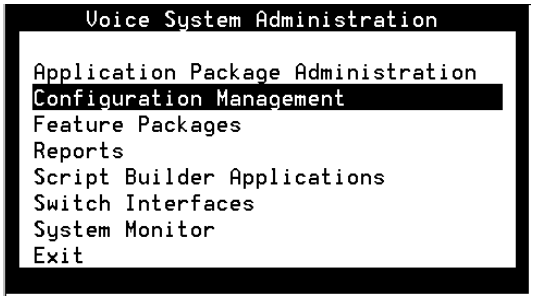

Figure 5. Example of an INTUITY CONVERSANT Menu

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 square 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 Voice System Administration Menu and select

```
> Customer/Services Administration
    > Alarm Management
```

In this example, you would access the Voice System Administration 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.

Related Resources

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

Documentation

NOTE:
The *INTUITY CONVERSANT System Version 6.0 System Description*, 585-310-241, contains a detailed description of all books included in V6.0 INTUITY CONVERSANT documentation library. Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an INTUITY CONVERSANT system.

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

- *INTUITY CONVERSANT System Version 6.0 MAP/40 Maintenance*, 585-310-181
- *BCS Products Security Handbook*, 555-025-600

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

Electronic Updates to This Book

The ACCESS Electronic News online bulletin board is available to provide you with additional information about the INTUITY CONVERSANT product, including updates and supplements to the information in this book. This free service is available 24 hours a day, 7 days a week. To register and receive a special offer on ACCESS Plus software, call 1-800-242-6005 and ask for Department 186.

Training

The following training class is recommended as a prerequisite to installing a INTUITY CONVERSANT system:

- Course No. B03620A, INTUITY CONVERSANT Installation and Maintenance (for domestic installations)
- Course No. GO3603A, CONVERSANT Installation and Maintenance (for international installations)

For more information on INTUITY CONVERSANT training, call the BCS Education and Training Center at one of the following numbers:

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

How to Comment on This Book

We are interested in your suggestions for improving this book. Please complete and return the reader comment card that is located behind the title page.

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You may also fax your comments to the attention of the Lucent INTUITY writing team at (303) 538-1741.

Please mention the name and order number of this book, *INTUITY™ CONVERSANT® System Version 6.0 MAP/40 New System Installation,* 585-310-178.

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Getting Started

1

Overview

This chapter describes:

- Site preparation, including environmental, space, and power requirements for the MAP/40
- Installation prerequisites; specifically, tools, test equipment, system information, documentation, and switch administration requirements
- Points of demarcation for installation and maintenance
- Your responsibility with regard to the security of the customer's system
- Technical assistance and other resources available to you during installation

NOTE:
The information in this book assumes that you are installing an assembled, loaded, and tested (ALT) INTUITY™ CONVERSANT® system. If this is not the case, see Appendix C, "How to Build a System," in *INTUITY CONVERSANT System Version 6.0 MAP/40 Maintenance,* 585-310-181*,* for additional instructions*.*

Purpose

The purpose of this chapter is to ensure that:

- The customer site meets the physical requirements for installation of the MAP/40
- You are prepared with the tools and information you need to complete the INTUITY CONVERSANT system installation successfully

Site Preparation

This section describes physical requirements for the installation site.

Environmental Considerations

Place the MAP/40 in an area where the environmental conditions shown in Table 1-1 are maintained.

Table 1-1. Environmental Considerations

Operating State	Temperature	Humidity
Operating	+10 to +32°C (+50 to +90°F)	20 to 80%, noncondensing
Nonoperating (when the MAP/40 is being shipped or stored)	-20 to +60°C (-4 to +140°F)	20 to 80%, noncondensing

Installation Area Considerations

Observe the following when determining where to place the MAP/40:

- *Do not* install the unit in an area with high-power electrical equipment.
- *Do not* install the unit in the same area as copier machines because of the paper particles created by such equipment.
- Install the unit in an area that provides protection from excessive sunlight, heat, cold, chemicals, static electricity, magnetic fields, vibration, dust, and grime.
- Maintain an air-distribution system that provides adequately cooled, filtered, and humidity-controlled air.

  NOTE:
  The maximum heat output of a MAP/40 is approximately 1100 BTU.

- Provide surge protection and power backup in areas with volatile power (brown-outs or frequent power surges).
- Provide additional grounding if necessary in a multiple-system installation to facilitate an environment that is free of radio-frequency noise.

Space Requirements

Table 1-2 lists the approximate weight, size, and depth of the primary MAP/40 hardware components. The weight listed includes the basic chassis, hard disk, floppy disk, streaming tape drive, and three circuit cards: P5 120-MHZ CPU, Video Controller, and SCSI Host Adapter Controller.

Table 1-2. Space Requirements

Equipment	Weight	Height	Width	Depth
MAP/40	23.2 kg (52 lbs)	44.6 cm (17.7 in.)	17.6 cm (7.0 in.) (12.6 with base)	53 cm (21 in.)
Monitor	6.7 kg (15 lbs)	34cm (13.5 in.)	33 cm (13 in.)	37 cm (14.5 in.)
Keyboard	2.3 kg (5 lbs)	6.4 cm (2.5 in.)	48 cm (19 in.)	20.5 cm (8 in.)
Printer	9 kg (20 lbs)	12.6 cm (5 in.)	40.3 cm (16 in.)	27.7 cm (11 in.)

Power Requirements

The MAP/40 powers the monitor through an interface cable. Note that a receptacle is provided on the rear of the unit to supply power for the monitor.

The maximum power dissipation of a MAP/40 is 325 W.

Table 1-3 lists the power requirements for the MAP/40.

Table 1-3. Power Requirements

Attribute	MAP/40	Printer	Monitor
Volts AC (VAC)	110 (U.S.) or 220 global	115 +/- 5%	110–240
Hertz (Hz)	60	50–60	50–87
Phase	Single	Single	Single
Amps (RMS)	8	2	1
Input cords	NEMA[1] 5–15P plug; 3 m (9 ft) long	NEMA 5–15P plug; 2 m (6 ft) long	Included with monitor; 1 m (3 ft) long
Unit input receptacles	IEC-320 inlet	IEC-320 inlet	N/A

1.National Electrical Manufacturer's Association.

In addition to the above power requirements, you must also:

- Locate each unit and printer within 2 meters (6 feet) of its power receptacle
- Keep the communication cables separate from the power cables
- Install communication and power cables in accordance with National Electrical Codes (NEC)
- Use the AC power output receptacle on the back of the unit for a video monitor only. Never plug any other device into this receptacle

CAUTION:
Use only shielded cables and equipment in conjunction with the MAP/40 to maintain safe levels of electromagnetic compatibility.

System Grounding Connections

To maintain electromagnetic interference (EMI) protection, personal protection, and immunity from circuit noise,customer-premise-provided outlets must be grounded in accordance with NEC and applicable local codes.

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 2, "Unpacking the MAP/40 and Installing Nonassembled Hardware".

CAUTION:
Use extreme care when you make power and ground connections.

Installation Prerequisites

This section:

- Lists the tools, test equipment, system information, and documentation you must have to install and test the MAP/40
- Describes the switch administration that must be done before you arrive on site

Tools

The following tools are recommended for installing the MAP/40:

- A medium-width flat-blade screwdriver
- A No. 2 Phillips screwdriver
- A small pair of needle-nose pliers
- A small pair of wire cutters
- A sharp, pointed instrument such as a ball-point pen

NOTE:
Do not use the point of a pencil. The graphite can damage a circuit card and cause problems such as electrical shorts.

Test Equipment

Lucent Technologies recommends that you use the following test equipment when installing a MAP/40:

- A volt/ohm meter
- Two telephones connected through the switch. These must be of the same type as the majority of telephones the customer will be using on the system. If the message waiting indicator (MWI) for the INTUITY CONVERSANT system is a lamp, the test telephones must be equipped with a lamp. If the MWI is a stutter tone, the telephones must be able to give the stutter notification.

  The two test telephones must be placed so that you can easily see the monitor while you are using them.
- If the system includes INTUITY CONVERSANT Script Builder FAX Actions, you must have access to a customer fax machine for testing.

System Information

The installation procedures in this book assume that you know how to log on and off the system and how to move around using the INTUITY CONVERSANT system screens.

Switch Administration

Before you begin the installation, the switch or PBX must be administered to support the following situations:

- Testing each channel connected to the system before assigning the channel(s) to the INTUITY CONVERSANT system or another application;
- Testing the INTUITY CONVERSANT system
- Performing cut-to-service procedures that provide the users with an active coverage path

Before you arrive on site, all of the initial switch or PBX administration should be complete unless otherwise specified by contract. Verify that this initial administration has been completed before you begin work on the INTUITY CONVERSANT system.

Documentation

Use the following documentation during installation of a MAP/40 INTUITY CONVERSANT system:

- *INTUITY™ CONVERSANT® System Version 6.0 MAP/40 New System Installation,* 585-310-178

  Use this book to familiarize yourself with installation prerequisites and to perform hardware installation, initial administration, and acceptance testing.

- *INTUITY™ CONVERSANT® System Version 6.0 MAP/40 Maintenance,* 585-310-181

  Use this book for troubleshooting, alarm retirement, or to correct errors in the factory assembly process.

Regulatory Agency Guidelines

Follow the installation procedures in this book to ensure compliance with the current FCC rules regarding radio-frequency devices (FCC Rules, Part 15) and the connection of terminal equipment to the telephone network (FCC Rules, Part 68).

FCC/CSA compliance label(s) for the MAP/40 system and individual network interface cards are located on the chassis or individual circuit card.

FCC Guidelines

The guidelines in this section will help you to comply with procedures as you connect to the public telephone network.

Before You Connect to the Public Telephone Network

Before you make any connections to the public telephone network, give the local service provider the following information:

- The telephone and circuit numbers of the lines to which the system will be connected
- The FCC registration number of the MAP/40, located on the faceplate of each Tip/Ring circuit card and visible at the rear of the unit
- The ringer equivalence number (REN) of the PC/PBX circuit card and the Tip/Ring circuit card, located on the faceplate of each circuit card and visible at the rear of the unit

Type of Telephone Lines Needed

Use your application on standard-device telephone line circuits and standard T1 trunks.

Do not connect to telephone company-provided coin service (central office implemented systems).

Connecting to party-line service is subject to state tariffs.

If you have any questions about the telephone line(s), such as how many pieces of equipment you can connect to a line, contact the service provider.

Telephone Service and Repair Problems

If the service provider notes a problem with customer equipment, the company may:

- Discontinue service to the customer temporarily
- Notify the customer prior to disconnecting service, if practicable

If advance notice is not feasible, the company may:

- Discontinue service to the customer temporarily
- Notify the customer as soon as possible
- Give the customer an opportunity to correct the problem
- Inform the customer of the right to file a complaint with the FCC

Remote Support Center

Your project manager or systems consultant is responsible for providing you with the telephone number of your remote maintenance center.

Equipment Attachment Limitations

NOTE:
This section applies to Canadian customers only.

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing the equipment, ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service can be extended by means of a certified connector assembly (telephone extension cord). Be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment must be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request that the user disconnect the equipment.

For your own protection, ensure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION:
Do not attempt to make such connections. Contact the appropriate electric inspection authority or electrician as appropriate.

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop that is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices, and is subject to only one requirement: the total of the Load Numbers of all devices cannot exceed 100.

NOTE:
The LN for the AYC28 Tip/Ring circuit card is 9.

Points of Demarcation

A *demarcation point* defines the extent of Lucent Technologies' responsibilities for a product. Beyond this point, the customer is responsible for providing overall service.

When installing an INTUITY CONVERSANT system, you must be aware of the following demarcations:

- Non-Lucent Technologies switches or PBXs
- Local area network (LAN) connectivity
- INTUITY CONVERSANT Script Builder FAX Actions demarcation

Non-Lucent Technologies Switch or PBX Demarcation

Lucent Technologies service technicians dispatched for INTUITY CONVERSANT system installation are not responsible for making any connections directly to a non-Lucent Technologies switch or PBX.

NOTE:
Lucent Technologies recommends joint acceptance testing for systems integrated with non-Lucent Technologies switches and PBXs.

For additional information concerning the extent of the installation, refer to the contract between the customer and Lucent Technologies.

LAN Connectivity Demarcation

The demarcation point for the INTUITY CONVERSANT system is the point of connection into the LAN circuit card. The customer is responsible for:

- The LAN cable
- The connector at the end of the cable for connection to the INTUITY CONVERSANT system
- LAN administration not performed on the INTUITY CONVERSANT system
- Maintaining the administration of the INTUITY CONVERSANT system after cutover, unless otherwise specified by contract

Lucent Technologies service technicians dispatched for INTUITY CONVERSANT system installation are not responsible for troubleshooting the customer's LAN.

INTUITY Script Builder FAX Actions Demarcation

INTUITY Script Builder FAX Actions uses the Brooktrout Fax circuit card. The point of demarcation for Script Builder Fax Actions is the same as the switch integration point of demarcation.

Lucent Technologies service technicians dispatched for INTUITY CONVERSANT system installation are not responsible for troubleshooting customer fax machines.

Maintaining System Security

During an installation, security of the customer's system is your responsiblity. You must take the following precautions to protect password and system security.

Password Security

If you suspect that the security of any password has been compromised, notify your project manager or system administrator.

System Security

Do not leave a logged-on terminal unattended. Always log off the system if you will be leaving it unattended, even for a short period of time.

Getting Help with the Installation

The following resources are available for help during an installation:

- System help screens
- Remote support center

System Help Screens

Online help is available for the INTUITY CONVERSANT system and administration screens. To display help screens or command choices, press CHOICES (F2) from the field for which you want the help. If valid entries can be specified, the system displays a list of options from which you can choose. Otherwise, it displays general information about the field.

Remote Support Center

The remote support center is available for help with your system installation. Your project manager or systems consultant is responsible for providing you with the telephone number of your remote support center.

Unpacking the MAP/40 and Installing Nonassembled Hardware

2

Overview

This chapter describes:

- How to unpack and set up the MAP/40
- The importance of saving packing materials
- How to install the support base
- Where to locate key components of the MAP/40

Purpose

The purpose of this chapter is to:

- Facilitate unpacking and set up of the MAP/40
- Provide descriptions and graphics of key components of the MAP/40 for reference during the installation

Protecting against Damage from Electrostatic Discharge

CAUTION:

*Read this section before unpacking the MAP/40. 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 2-1).

Figure 2-1. 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 2-2 and Figure 2-3).

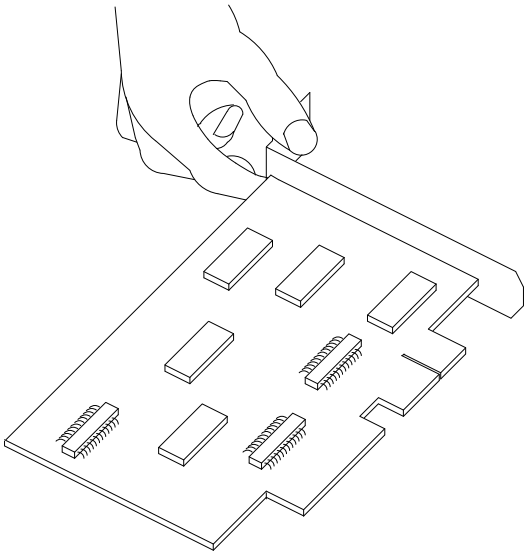


Figure 2-2. How to Hold a Small Circuit Card

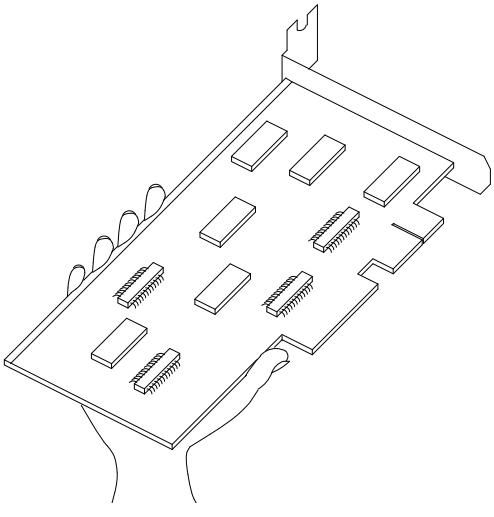


Figure 2-3. How to Hold a Large Circuit Card

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 2-4).

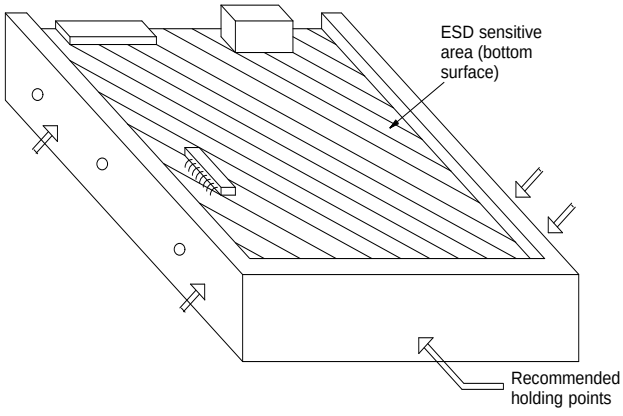


Figure 2-4. ESD-Sensitive Area of an Electronic Component

Unpacking the Unit

The MAP/40, keyboard, and monitor are shipped in individual cartons. The carton that contains the MAP/40 has cut-out handles on either end for lifting and moving.

CAUTION:
A boxed, fully-loaded MAP/40 weighs approximately 30 kg (60 lbs).

To unpack the unit, see Figure 2-5 and complete the following procedure:

1. Set up a work area that includes a work table at least 1- by 1.5-m (3- by 5-ft).
2. Place the MAP/40 carton on the floor.
3. Cut the carton top seam and the left and right end seams. Cut the seams so that you can reuse the carton. See "Saving Packing Materials" below.

4. The cardboard tray has three foam pockets. These pockets contain:
   - One support base (tower configuration) wrapped in bubble wrap with a bag of four mounting screws
   - One 3-m (9-ft) power cord
   - One plastic packet containing:
     - — 1 blank cartridge tape
     - — 1 diskette with the system configuration and software
     - — 1 diagnostic diskette
     - — Factory information regarding the system
     - — 1 yellow BCS return repair tag

   NOTE:
   If you must return a MAP/40 to the manufacturer, complete the yellow GBCS return repair tag and attach it to the unit.

   Remove all items contained in the top cardboard tray and set them aside.
5. Remove the top cardboard tray.
6. Locate the side of the MAP/40 that is resting against the cut-out piece of foam.

   NOTE:
   The foam at this end is easier to press inward than the foam backed by cardboard on the other end.

7. Press in on the foam and lift the end of the MAP/40.

   CAUTION:
   An antistatic bag that covers the chassis makes the MAP/40 slippery to handle.

   CAUTION:
   Do not use the bezel cover as a grip area to move or lift the MAP/40.

8. Lift the MAP/40 enough to drag it at an angle from the end of the box rather than lifting straight up.
9. Place both of your hands on the sides of the chassis, lift it out of the box, and place it on the work table.

Saving Packing Materials

In case you need to return the MAP/40 to the manufacturer, save the following shipping and packing materials:

- Shipping cartons (MAP/40, keyboard and monitor) and boxes
- Antistatic bags
- Bubble wrap
- Foam inlays

NOTE:
If you ordered multiple MAP/40 units, saving one set of cartons and packing materials should be sufficient.

CAUTION:
Lucent Technologies does not accept liability for a damaged unit if you do not return it in the original packing materials and carton. The carton has been designed to prevent damage and ensure product warranty.

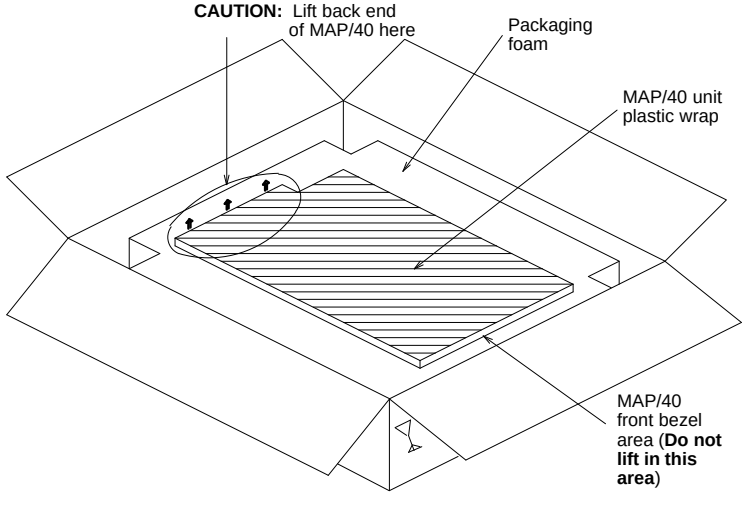


Figure 2-5. Unpacking the MAP/40

System Arrangement

The MAP/40 is a desk-side unit in a tower configuration (Figure 2-6). It sits vertically on a small support base, which you install as described in ''Attaching the Support Base'' below.

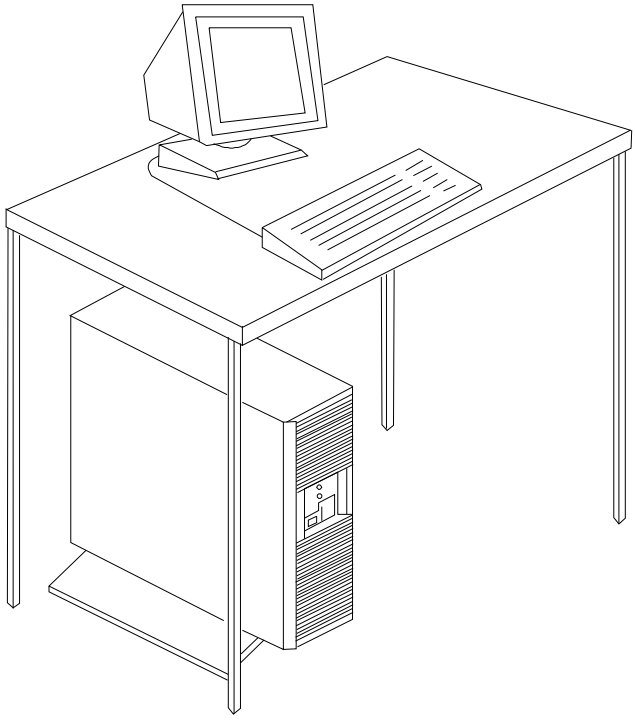


Figure 2-6. MAP/40 Desk-side Unit

Attaching the Support Base

The manufacturer attaches a plastic bag with four screws and four star washers to the bubble wrap surrounding the support base. Use a No. 2 Phillips screwdriver to attach the support base according to the following procedure:

1. Remove the small plastic bag from the bubble wrap and set it aside.
2. Remove the bubble wrap surrounding the support base.
3. Place the MAP/40 bottom up.

CAUTION:
Do not use the bezel cover as a grip area to move or lift the MAP/40.

4. Turn the support base upside down with wings up.
5. Align the wing folds of the support base with the edges of the MAP/40 and with the mounting holes.

   NOTE:
   There are ten mounting holes on the bottom of the MAP/40. These are arranged in two parallel rows of five holes each. Align the support base with the first two holes from the front.

6. Ensure that the base is centered over the length and width of the chassis (Figure 2-7).
7. Using the Phillips screwdriver, screw in the four binding-head screws, washer first, in each of four corners.
8. Tighten the screws snugly. There is no requirement for torque.
9. Grip opposite corners of the chassis and reset the MAP/40 in an upright position.

   NOTE:
   The final position of the MAP/40 must include a front-to-back clearance of at least 15 cm (6 in.) to provide for adequate air intake and exhaust.

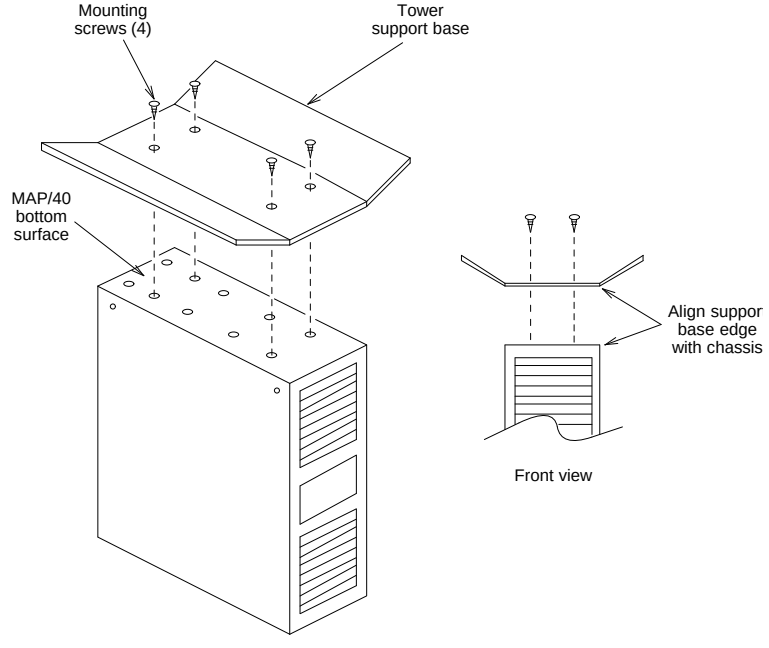


Figure 2-7. Attaching the Support Base

Locating Key Components on the MAP/40

Use the following sections and diagrams to locate key components on the MAP/40. For additional information describing the MAP/40 hardware, see *INTUITY™ CONVERSANT® System Version 6.0 System Description,* 585-310-241.

The Front of the Chassis

Table 2-1 describes the components on the front of the chassis. Figure 2-8 shows the front view of the MAP/40.

Table 2-1. Components on the Front of the MAP/40

Component	Location	Description	Function
Bezel cover	Upper	—	Covers the peripheral bay and disk drives
Keyboard receptacle[1]	Center control panel	5-pin circular DIN female	Connects the keyboard to the MAP/40
Power/reset switch	Center control panel	Rocker switch	Turns the MAP/40 on and off
Power-On indicator	Center control panel	LED	Lights green when the power is on
INT Drive indicator	Center control panel	LED	Lights green when the hard disk is active
Bezel cover	Lower	—	Covers the air intake fan and holds the air filter

1. There is a keyboard receptacle on the rear of the chassis, and a second receptacle on the front for ease of use.

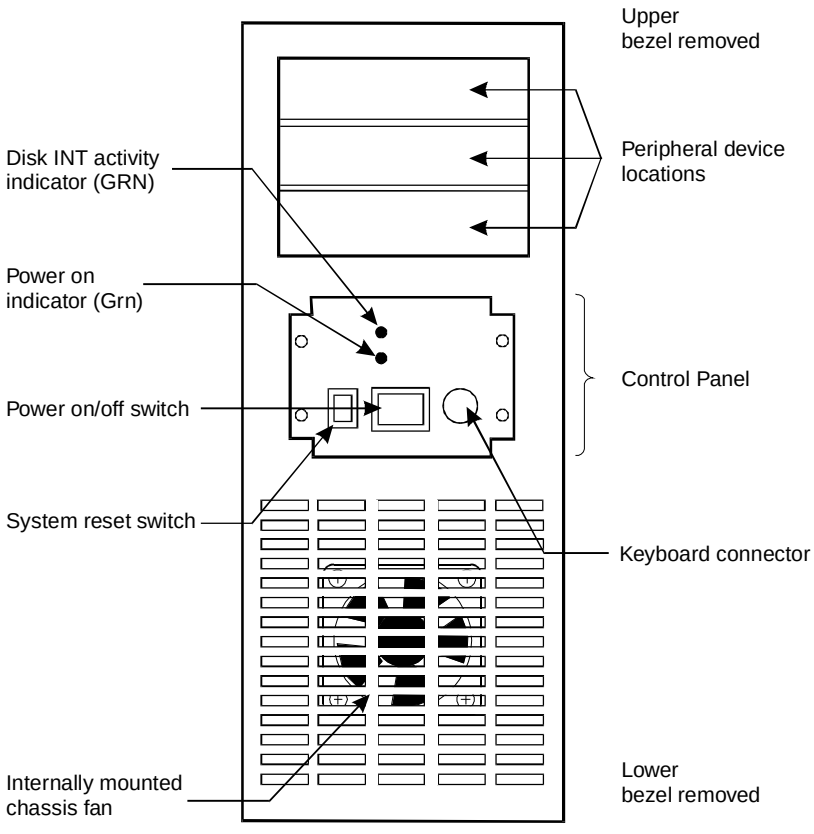


Figure 2-8. Front View of the MAP/40

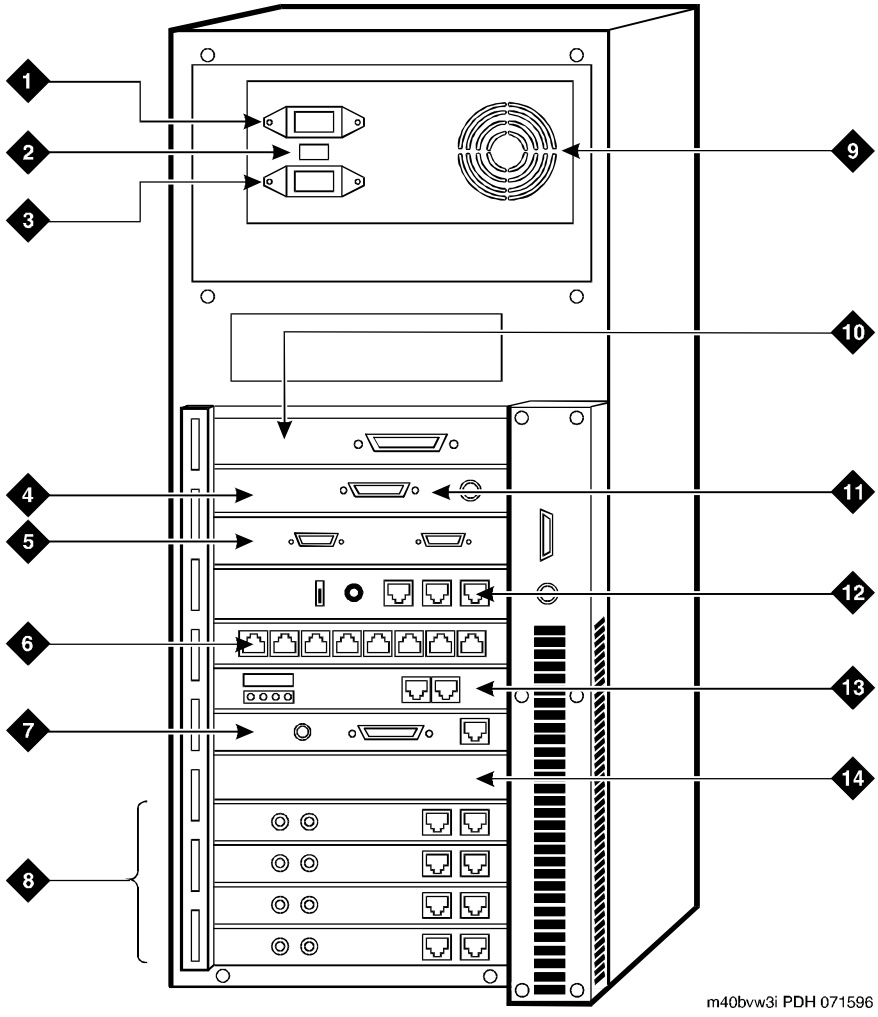
The Back of the Chassis

Table 2-2 describes the components on the back of the MAP/40 chassis. Figure 2-9 shows the back view of the MAP/40.

Table 2-2. Components on the Rear of the MAP/40

Component	Location	Description	Function
Asynchronous port COM1	CPU circuit card faceplate	9-pin male D subminiature	Communicates with the host computer
Parallel port	CPU circuit card faceplate; left of COM1	25-pin female	Communicates with the printer
Video connector[1]	Video circuit card faceplate; slot #12	15-pin female D subminiature	Connects the MAP/40 to the monitor
AC power outlet connector	Top left corner	3-prong,1/.5 A, 120/230 V	Connects the MAP/40 to the monitor via a 6-ft monitor power cord
AC power inlet receptacle	Top left corner below the monitor outlet	3-prong, 5/10 A, 110/230 V	Connects the MAP/40 with a power cord
Keyboard receptacle[2]	Middle right edge of the chassis	5-pin female circular DIN	Connects keyboard to the MAP/40
Asynchronous port COM2	CPU circuit card faceplate	9-pin male D subminiature DB-9	Communicates with the host computer
Tip/Ring distribution panel (optional)	Center	Square panel	Allows up to 8 Tip/Ring cards to communicate with customer premise equipment
LAN (optional)	Circuit card faceplate; slot #6	—	Provides digital networking functionality
External SCSI Connector/ Termination Board	Circuit card faceplate; slot #11	50-pin	Connects the MAP/40 to external SCSI devices

1. Do not use the monitor and keyboard receptacles for any other purpose than to connect the monitor and the keyboard.
2. You can connect only one keyboard to the MAP/40.



1. Accessory power outlet
2. AC voltage selection switch
3. AC input outlet
4. External SCSI connector circuit card
5. P5 120 MHz CPU circuit card
6. Multi-port serial circuit card
7. Ethernet LAN circuit card
8. IVC6 (AYC10) Tip/Ring circuit cards
9. Power supply exhaust vent
10. Video controller circuit card
11. External SCSI connector circuit card I/O port (terminator not shown)
12. Remote maintenance circuit card
13. Fax circuit card
14. Signal processor circuit card

Figure 2-9. Back View of the MAP/40

Locations of Peripheral Drive Devices

Table 2-3 describes the locations of the various drives in the peripheral bay behind the upper bezel cover.

Table 2-3. Peripheral Bay Drives[1]

Drive	Description	Function	Peripheral Bay Position
Floppy	3.5-inch, 1.44-Mbyte high density	System configuration and diagnostic testing	1
Cartridge tape	SCSI	Backup and restore; load the system	2
Hard disk (if offered)	2-Gbyte SCSI	Mirroring or additional software storage	3
Hard disk	2-Gbyte SCSI	Stores operating system, application software, and speech data	4

1. The specifics regarding these devices are subject to change. Check the ACCESS Electronic News online bulletin board at 1-800-242-6005, Department 186, for updates on drives.

Chassis Cooling System

Air must circulate inside and around the MAP/40 chassis to prevent components from overheating, which can cause system malfunctions.

There are two ways to maintain proper temperatures within the MAP/40:

- Interior fans
- Proper clearance around the chassis

Interior Fans

The fans in the MAP/40 help maintain air flow in the unit to prevent components from overheating, which can cause components to malfunction.

The cooling system for the MAP/40 includes two fans:

- Circuit card cage fan
- Power supply fan

Circuit Card Cage Fan

The circuit card cage fan is located on the front of the MAP/40 under the diskette bays and behind the lower front bezel cover. Air flows through the circuit card cage fan and exits through vents in the back of the MAP/40.

Power Supply Fan

The power supply fan is located within the power supply. This fan exhausts air to the rear of the unit.

Proper Clearance Around the Chassis

You must also maintain clearance around the chassis so that air can circulate to prevent overheating. The final position of the MAP/40 must include a front-to-back clearance of at least 15 cm (6 in.) to provide for adequate air intake and exhaust.

Making Cable Connections

3

Overview

The MAP/40 supports up to 12 circuit cards that provide various functions for the system. These circuit cards include video controls, peripheral controls, communication controls, CPU, and Tip/Ring.

Circuit cards are placed in the MAP/40 in locations called *slots*.The slots are located in the circuit card cage in backplane positions 1 through 12.

This chapter serves as an introduction to connecting cables to the faceplates of circuit cards that are installed in the MAP/40. This chapter also includes general steps for making cable connections, but additional steps may be required for some cable connections.

See Appendix D, ‘‘Cable Connectivity’’, for more detailed information.

Purpose

The chapter provides the information to make cable connections and to complete the system installation successfully.

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.

Connecting the Tip/Ring Circuit Card

The Tip/Ring circuit cards provide the channels used by the INTUITY™ CONVERSANT® system. There are six channels on each Tip/Ring circuit card. The MAP/40 supports up to seven Tip/Ring circuit cards.

The system supports the following Tip/Ring circuit cards:

- IVP6 (AYC5B)
- IVP6-IU (AYC16)
- IVP6-IA (AYC26)
- IVP6-ID (AYC27)
- IVP6 (AYC28)
- IVC6 (AYC10)
- NGTR (AYC30)

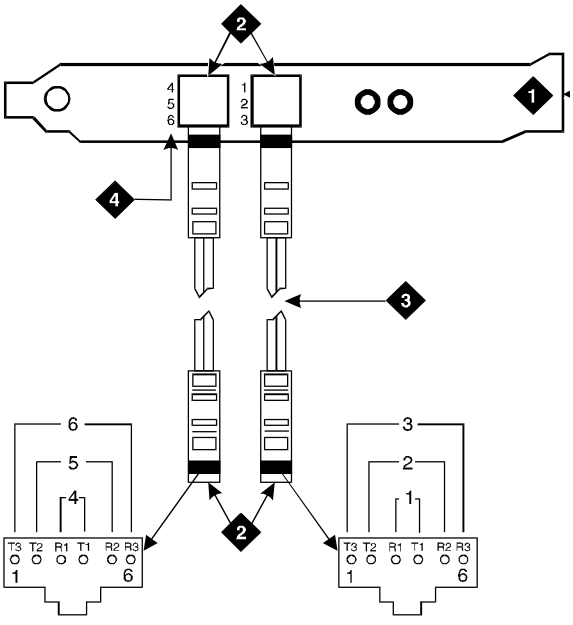
The Tip/Ring circuit cards use two 6-pin-conductor modular cords. These cords provide three lines for telephone hook-up. You can connect the Tip/Ring circuit card to telephone lines in one of three ways:

- Direct cable connection from the circuit card to the telephone line
- Cable connection from the circuit card through a line splitter and then to the telephone line
- Cable connection using a Tip/Ring distribution panel to the telephone line

Direct Cable Connection

When you use a two-conductor modular cord to make a direct connection from either of the two Tip/Ring circuit card jacks to the telephone line, only line 1 or line 4 of the three telephone lines is connected.

Figure 3-1 displays a typical direct Tip/Ring line connection for the AYC10 (IVC6) Tip/Ring circuit card. See Appendix C, "Pinouts", if you need pinout information.



1. Circuit card faceplate
2. RJ25C
3. 25 ft. modular cord (comcode number 103823195)
4. Board channel number

Figure 3-1. Direct Line Connection from AYC10 (IVC6) Tip/Ring Circuit Card

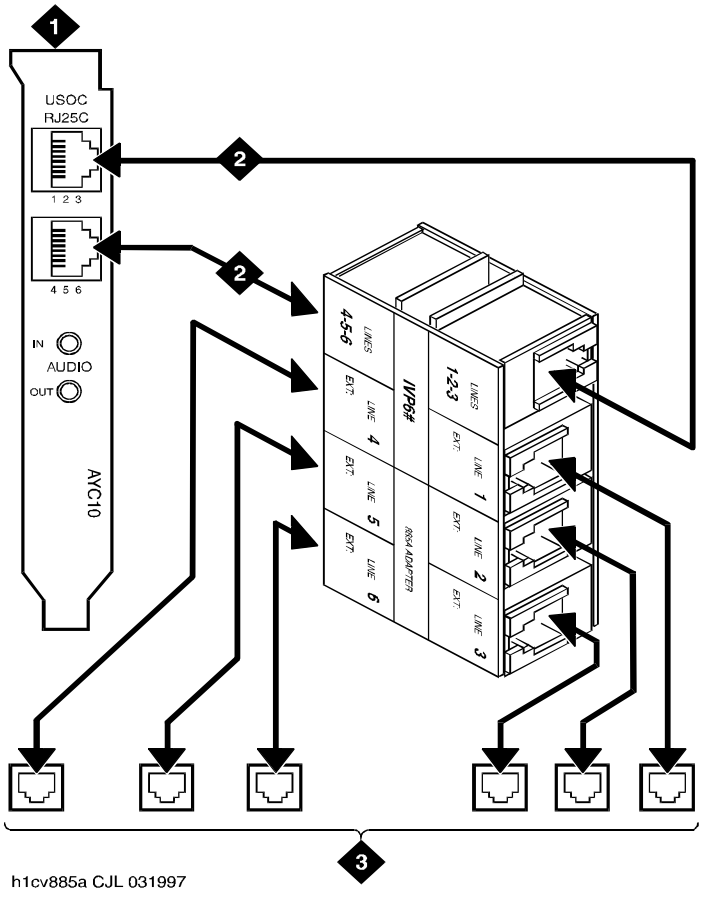
Cable Connection Using a Line Splitter

Adapters or line splitters enable you to use multiple channels in modular cords.

885A Adapter

Using the 885A adapter or line splitter (Figure 3-2) to connect the IVC6 Tip/Ring circuit card to the telephone line enables you to use all three channels in the 6-pin conductor modular cord.

NOTE:
Be sure to record the circuit card slot number and telephone extension numbers on the adapter.



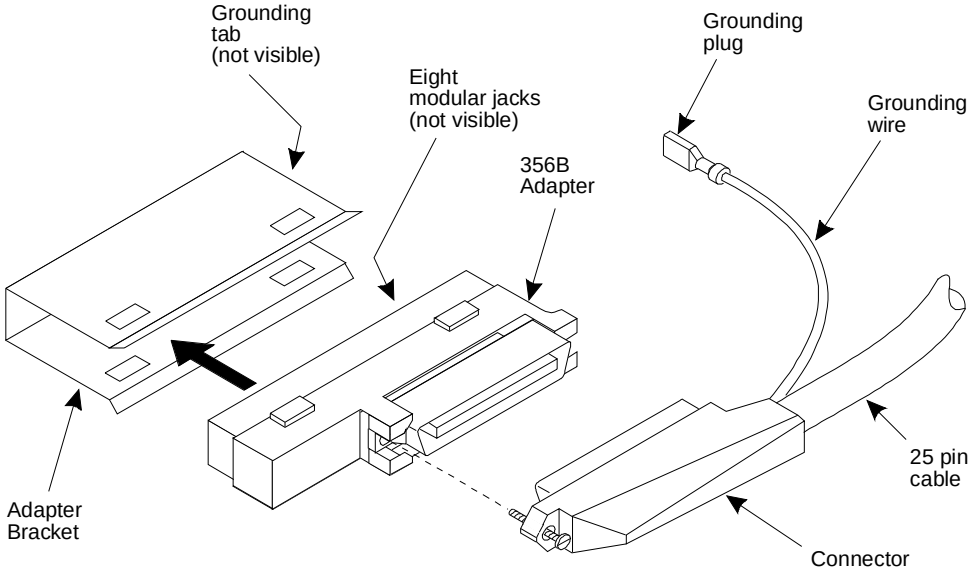
1. AYC10 faceplate
2. Interconnects RJ25C between AYC10 and 885A adapter
3. Connect to RJ11 on customer premise equipment

Figure 3-2. How to Use the 885A Adapter with a Tip/Ring Circuit Card

356B Adapter

Using the 356B adapter or line splitter (Figure 3-3) to connect the IVC6 Tip/Ring circuit card to the telephone line enables you to use eight 6-pin conductor modular cords.

NOTE:
Be sure to record the circuit card slot number and telephone extension numbers on the adapter.



- SIDE VIEW -

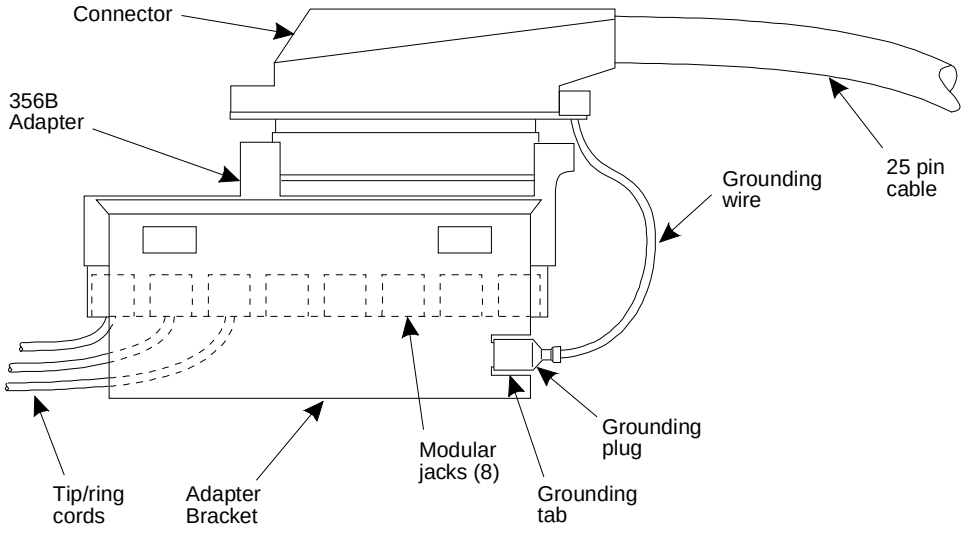


Figure 3-3. How to Use the 356B Adapter with a Tip/Ring Circuit Card

Cable Connection Using the Tip/Ring Distribution Panel

The MAP/40 Tip/Ring distribution panel (Figure 3-4) is located on the back of the chassis. This panel allows you to connect a maximum of 42 channels (up to seven Tip/Ring circuit cards).

Table 3-1 provides the numbering scheme for connecting the short modular cords provided with the Tip/Ring cards to the panel. Use this information, the channel numbers on the Tip/Ring circuit cards, and the number of Tip/Ring circuit cards in the system to connect the Tip/Ring circuit card modular jacks to the appropriate jacks on the Tip/Ring distribution panel.

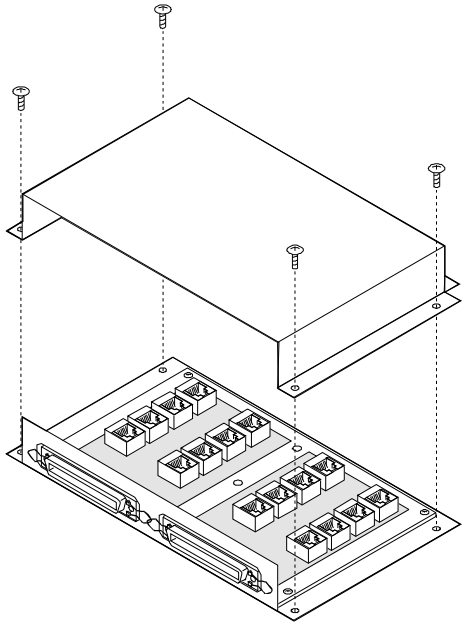


Figure 3-4. MAP/40 Tip/Ring Distribution Panel

To connect the panel:

1. Insert the modular cord into the appropriate jack.
2. Remove any slack in the cable on the back of the unit by dressing it so that it is stored in the area above the distribution panel.

NOTE:
Use cable ties, if necessary, to dress the cables neatly.

3. Make telephone line connections to the MAP/100 with the 25-foot 50-conductor shielded cable(s) equipped with USOC RJ21X connections.

See Appendix C, "Pinouts", if you need wiring and pinout connections for the Tip/Ring distribution panel.

Table 3-1. Connections from the MAP/40 Tip/Ring Circuit Cards to the Tip/Ring Distribution Panel

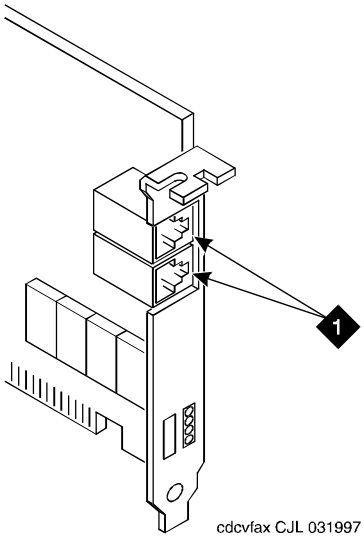
Tip/Ring Circuit Card	Channel Numbers on the Tip/Ring Circuit Card	Jack Numbers on the Panel
1st	1, 2, 3	J1
	4, 5, 6	J2
2nd	1, 2, 3	J3
	4, 5, 6	J4
3rd	1, 2, 3	J5
	4, 5, 6	J6
4th	1, 2, 3	J7
	4, 5, 6	J8
5th	1, 2, 3	J9
	4, 5, 6	J10
6th	1, 2, 3	J11
	4, 5, 6	J12
7th	1, 2, 3	J13
	4, 5, 6	J14
8th	1, 2, 3	J15
	4, 5, 6	J16

Connecting FAX Lines

The MAP/40 supports one Brooktrout TR114+14L fax circuit card. This fax circuit card provides four dedicated analog ports.

The fax circuit card includes two RJ-45 telephone jacks (Figure 3-5). The top jack accesses lines 0 and 1. The bottom jack accesses lines 2 and 3.

The cable splitters, which are included with the fax circuit card, connect the channels to single-pair wiring. To use only one or two lines of the circuit card, plug a single-pair RJ-11 cord into the top jack to access line 0. Plug a single-pair RJ-11 cord into the bottom jack to access line 2.



1. Modular jacks

Figure 3-5. Fax Circuit Card Connector

The pinouts for the top and bottom telephone jacks are identical and are configured as shown in Table 3-2.

Table 3-2. Telephone Jack Pinouts on the FAX Circuit Card

RJ-45 Pin	PJ1	PJ2
8	NC	NC
7	NC	NC
6	Ring 1	Ring 3
5	Ring 0	Ring 2
4	Tip 0	Tip 2
3	Tip 1	Tip 3
2	NC	NC
1	NC	NC

Digital Connections

A digital T1 (E&M) or E1 (CAS) circuit (trunk) allows the system to connect to digital network facilities such as a central office (CO) switch. Digital connections between a DEFINITY® switch and the system can be through PRI, T1 (E&M), E1 (CAS), line-side T1, or line-side E1.

E1 or LSE1 reduces the required hardware to only one E1 circuit card (and part of an SP or SSP circuit card). T1 or LST1 requires one T1 circuit card (and part of an SP or SSP circuit card) per 24 channels of digital service. Two T1 circuit cards and one SP circuit card provides 48 voice channels.

The AYC3B and AYC11 circuit cards are used only for T1 services.The AYC21 circuit card may be used for either E1 or T1 services.

Central Office Connection—T1 Circuit Cards

The system supports three T1/E1 circuit cards.

- AYC3B
- AYC11
- AYC21

You can connect the MAP/40 T1 circuit cards to the standard T1 carrier directly to a DS1 terminal block or through the following types of customer premise equipment:

- Channel Service Unit (CSU)
- Automatic call distributor (ACD)
- Private branch exchange (PBX)

You *must* use a CSU if any of the following situations applies to your MAP/40 setup:

- The system is more than 200 meters (655 ft.) from the signal source. The signal source may be a DSX or the last T1 repeater. In this case, the CSU regenerates the received signal and properly attenuates the transmitted signal to prevent crosstalk.
- The system is terminating the T1 trunk from outside the building. In this situation, the CSU provides the primary lightning and surge protection as required by FCC Part 68.
- The T1 loop is not dry (that is, is powered by either 110 VAC or +24 or -48 VDC sources).
- You want to use the remote loopback or extended super frame maintenance features. In this case, the CSU recognizes the in-band bit patterns that signal it to loop back the incoming signal or to perform other maintenance functions.

Connecting T1 Circuit Cards to a CSU

On some types of CSUs, the connector on the T1 cable plugs into the AYC3B, AYC11, or AYC21 circuit card and the cable terminates at a 15-pin D subminiature connector to the CSU.

On other types, you must cut off the CSU connector and slide latch and strip and connect the wires. Figure 3-12 displays the AYC21 circuit card connection. The information below applies to cables used to connect to the AYC11 and AYC3B circuit cards:

- Orange = our T1 = signals to the system and should connect to a CSU or Network “T”
- White/Orange = our R1 = signals to the system and should connect to a CSU or Network “R”
- Green = our T = signals from the system and should connect to a CSU or Network “T1”
- White/Green = our R= signals from the system and should connect to a CSU or Network “R1”

Connecting Asynchronous Devices

There are two types of asynchronous circuit cards:

- 8-Port IPC-900 or Gemini-1000 Asynchronous Serial circuit card
- EQUINOX Megaport 8C5 8-Port Serial I/O circuit card

There are two ways to connect the MAP/40 to a terminal, modem, or other DTE or DCE device via an asynchronous link:

- Using COM1, an asynchronous port on the rear of the MAP/40
- Using the additional asynchronous ports on the optional Multi-port Serial circuit card

NOTE:
The MAP/40 provides two asynchronous ports, COM1 and COM2. However, COM2 is reserved for remote maintenance by Lucent Technologies personnel and is not available for asynchronous connections.

Using COM1

A 9-pin D subminiature male connector is provided on the rear panel of the MAP/40 for COM1. This connector connects internally to the CPU. COM1 supports asynchronous host connections running at 300–19,200 baud. Networking modems typically use the 19,200 baud rate.

See Appendix C, ‘‘Pinouts’’, if you need pinout information for the COM1 connector.

Using the 8-Port Asynchronous Circuit Card

The optional 8-Port Asynchronous circuit card provides eight additional asynchronous ports for connecting to modems, terminals, or switch integration devices.

NOTE:
Each port has a maximum of 9600 Baud rate.

Asynchronous Circuit Card (EQUINOX Megaport 8C5 8-Port Serial I/O Board)

Figure 3-6 displays the EQUINOX Megaport 8C5 8-Port Asynchronous circuit card connector.

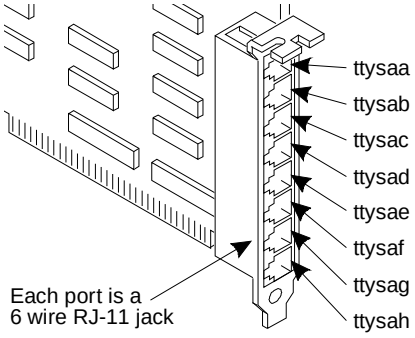


Figure 3-6. 8-Port Asynchronous Circuit Card Connector (EQUINOX Megaport 8C5 8-Port Serial I/O Circuit Card)

Follow the instructions provided with the device(s) you are installing for connection and setup. See Appendix D, ‘‘Cable Connectivity’’, to determine how to cable these devices between the system and the switches or other peripherals. See Appendix C, ‘‘Pinouts’’, if you need pinout information.

Connecting the MAP/40 to a Synchronous Host

There are two possible types of synchronous circuit cards:

- PC/XL Synchronous Input/Output Circuit Card (Revision D or newer)
- FIFO/SIB Synchronous Host Circuit Card

PC/XL Synchronous I/O Circuit Card

Only one PC/XL Synchronous Input/Output circuit card is supported (Revision D or newer).

FIFO/SIB Synchronous Host Circuit Card

The system supports up to two FIFO/SIB synchronous host circuit cards. Figure 3-7 displays the FIFO/SIB synchronous host circuit card connector.

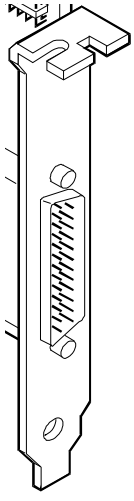


Figure 3-7. FIFO/SIB Synchronous Host Circuit Card Connector

Host Cable Specifications

Data links between the MAP/40 and the host computer are made using a shielded RS-232 cable. This cable extends from the Synchronous Host circuit card port on the rear of the MAP/40 and connects to host equipment.

NOTE:
All cables should be shielded. You should use limited-distance modems when data links exceed 100 ft.

Connecting the LAN Circuit Card

The INTUITY CONVERSANT system supports two types of Ethernet LAN circuit cards:

- ISA - Industry Standard Architecture
- PCI - Peripheral Component Interconnect

These cards allow you to connect the INTUITY CONVERSANT system to your local area network.

The type of cable you use to connect the Ethernet LAN circuit card to the customer's LAN depends on the connection already in use for the LAN. This cable connection can be one of three types:

- Thin Ethernet (BNC)
- Thick Ethernet (AUI)
- 8-pin modular connector (Tbase or twisted pair)

CAUTION:
Do NOT cable the Ethernet LAN circuit card before you power up. Doing so can disturb the customer's existing LAN.

ISA Ethernet LAN Circuit Cards

The system supports two versions of the ISA Ethernet LAN circuit card.

- SMC8216
- SMC8416

SMC8216 Circuit Card

Figure 3-8 displays the SMC8216 Ethernet LAN circuit card connector.

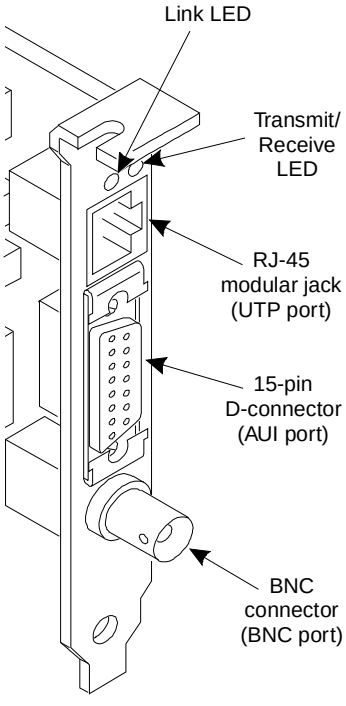


Figure 3-8. Ethernet LAN Circuit Card Connector - SMC8216

SMC8416 Circuit Card

Figure 3-9 displays the SMC8416 Ethernet LAN circuit card connector.

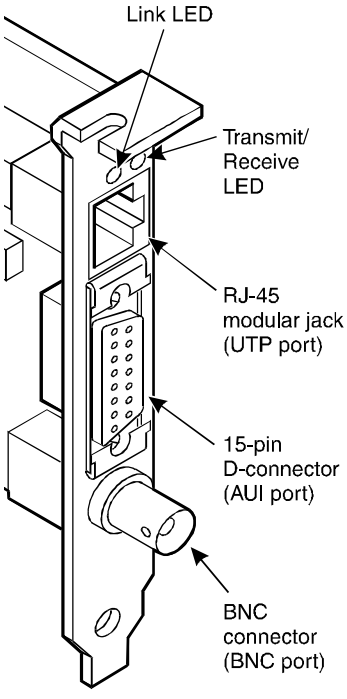


Figure 3-9. Ethernet LAN Circuit Card Connector - Version 2 (SMC8416)

PCI Ethernet LAN Circuit Cards

The system supports two versions of the PCI Ethernet LAN circuit card

- SMC8432
- SMC9332

SMC8432 Circuit Card

The SMC8432 Ethernet LAN circuit card is a 10-Mbps circuit card. Figure 3-10 displays the SMC8432 Ethernet LAN circuit card connector.

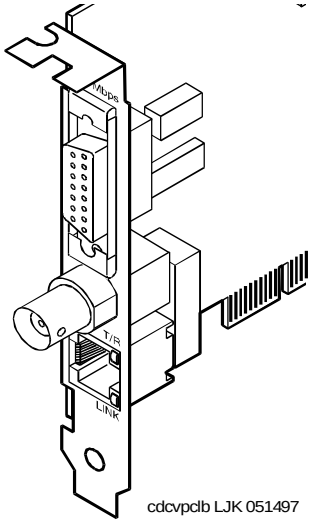


Figure 3-10. SMC8432 Ethernet LAN Circuit Card Connector

SMC9332 Circuit Card

The SMC9332 Ethernet LAN circuit card is a 10/100-Mbps circuit card. Figure 3-11 displays the SMC9332 Ethernet LAN circuit card connector.

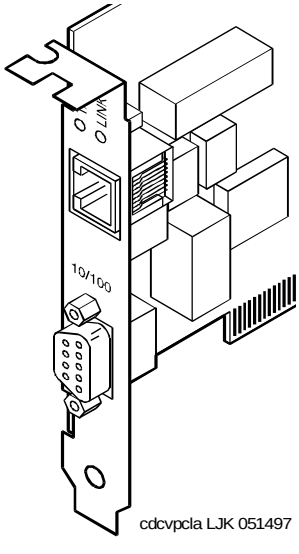


Figure 3-11. SMC9332 Ethernet LAN Circuit Card Connector

Connecting Standard Circuit Cards

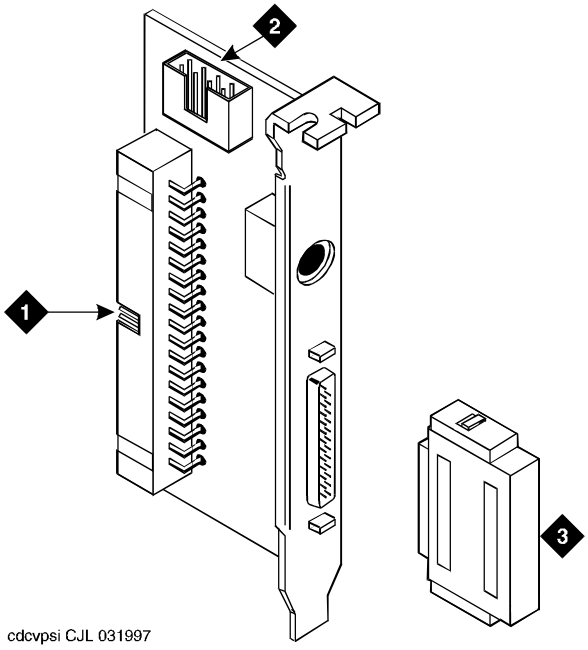
WARNING:

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.

This section provides the cable connectivity for the CPU circuit cards that are included with every MAP/40.

External SCSI Connector Circuit Card

The external SCSI connector circuit card (Figure 3-12) provides an external SCSI connector and an active termination for the SCSI bus. There is only one external SCSI connector circuit card installed on the system.



1. External SCSI interface connector
2. Mouse interface connector
3. External SCSI terminating resistor module

Figure 3-12. External SCSI Connector Circuit Card and Terminating Resistor Module

Once you install the external SCSI connector circuit card, you can attach the terminating resistor. The terminating resistor must remain on the external SCSI connector circuit card whenever the MAP/40 is in operation.

SCSI Host Adapter Controller Card

If your system supports the 486 CPU circuit card, you must use the SCSI host adapter controller circuit card

Video Controller Circuit Cards

There are four video controller circuit cards supported by the system.

- STB Horizon
- WDXLR831124
- WDXLR83160
- WDXLR833124

The video controller circuit cards allow the MAP/100 to interface with a monitor. There is one video controller circuit card installed on the system.

Models STB Horizon, WDXLR831124, WDXLR83160, and WDXLR833124

Figure 3-13 displays the connectors for the STB Horizon, WDXLR831124, WDXLR83160, and WDXLR83160 video controller circuit cards.

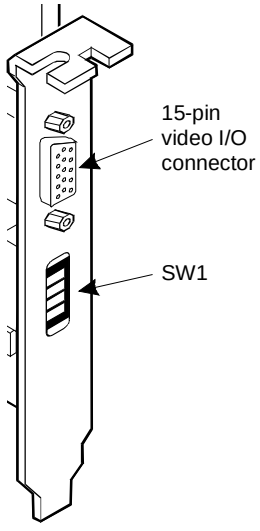


Figure 3-13. Video Controller Circuit Card Connector— Models STB Horizon, WDXLR831124, WDXLR83160, and WDXLR833124

Remote Maintenance Circuit Card

The remote maintenance circuit card enables remote diagnostics of basic MAP/40 components (Figure 3-14). There is one remote maintenance circuit card installed on the system.

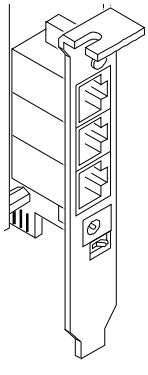


Figure 3-14. Remote Maintenance Circuit Card Connector

Connecting Peripherals and Powering Up

4

Overview

This chapter contains procedures for connecting peripherals and powering up. These procedures include:

- Connecting the monitor
- Connecting the keyboard
- Connecting a printer
- Registering a modem
- Connecting a modem
- Powering up the system

Purpose

The purpose of this chapter is to ensure proper connectivity of the MAP/40 to all peripherals.

Connecting the Monitor

This section describes how to make the connections between the MAP/40 and a monitor.

Required Cabling

A power cable and a signal cable connect the monitor to the MAP/40. The power cable has a male plug at one end and a female plug at the other end. One end of the signal cable has a video input connector and the other end is permanently attached to the monitor.

Use the 15-pin, high-density D-subminiature female connector located on the video circuit card faceplate (Figure 4-1) to connect to the monitor.

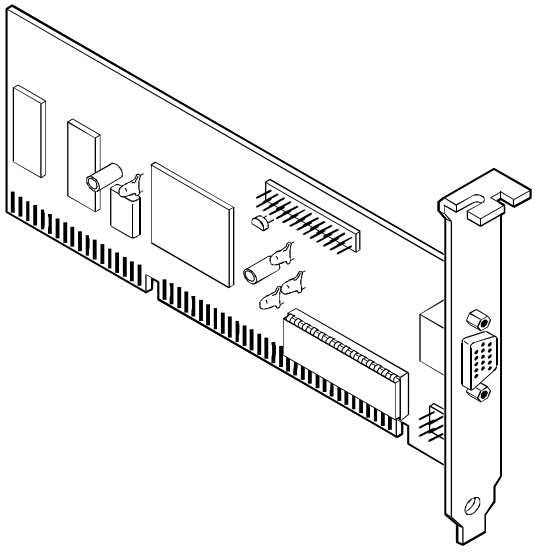


Figure 4-1. Video Circuit Card Cable Connector

Connecting Monitor Cables

Follow these steps to connect the cables:

1. Plug the video cable connector from the monitor directly into the video connector located on the faceplate of the video controller circuit card.

   NOTE:
   Access this faceplate from the rear of the MAP/40.

2. Tighten the thumb-screws on the video cable connector with your fingers or with a small flat-blade screw driver.
3. Match the ends of the power cable to the monitor first and then to a grounded outlet.
4. Plug the female end of the cable into the monitor and the male end into the grounded outlet.

Connecting the Keyboard

A 5-pin, female DIN receptacle is located in the rear of the MAP/40 and a second receptacle is provided on the front panel. The male plug is provided with the keyboard. Both of the connector assemblies are keyed to provide proper alignment.

Figure 4-2 shows the receptacle and plug. See Appendix C, ‘‘Pinouts’’, if you need pinout information.

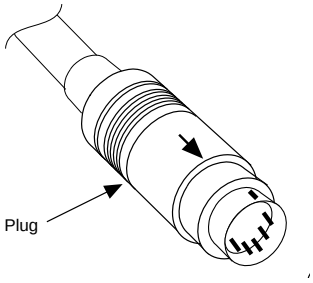


Figure 4-2. Circular DIN 5-Pin Connector for the Keyboard

Connecting the Printer

A 25-pin D-subminiature female receptacle located on faceplate of the CPU circuit card provides a parallel printer interface.

Lucent Technologies recommends and supports the Okidata 320 printer for connection to the system. Use the instructions supplied in the manufacturer's manual, *Users' Guide Okidata 320 Printer*, or the manual provided with your printer to unpack and install your printer. The following installation overview supplements the information provided in the printer guide. See Appendix C, "Pinouts", if you need pinout information.

1. Unpack your printer according to the steps provided in the printer guide.
2. Install the ribbon cassette and paper as shown in your printer guide.
3. Ensure that the ON-OFF switch of the printer is OFF.
4. Set the options as described in your printer guide.

   NOTE:
   The INTUITY CONVERSANT system works with the default settings for the 320 printer.

5. Connect the AC power cable to your printer.
6. If your printer has a self-test feature, plug the AC power cable into a grounded wall outlet and initiate the self test by following the instructions in the printer guide. When the self-test is completed, turn the printer off and disconnect the power cable from the wall outlet.

   If your printer does not have a self-test feature, skip this step. Continue with Step 7.
7. Insert the male end of your cable into the 25-pin female parallel port connector on the back of the CPU circuit card.
8. Fasten the screws.
9. Insert the other end of your cable to the parallel port on your printer. Press the two wire-retaining clips together until you hear them click into the lock slots on either side of the plug.
10. Connect the AC power cable of the MAP/40 to a grounded outlet.
11. Continue with the next procedure, "Registering Your Modem".

Configuring a Local Parallel Printer

Lucent Technologies supports the following two parallel printers for connection to the system:

- Okidata 320
- Okidata Laser

Contact your local Lucent Technologies representative if you want to connect a serial printer to the system.

Configuring the Okidata 320 Printer

To configure the Okidata 320 printer, do the following:

1. Log in as root.
2. Enter **cvis_mainmenu**

   The system displays the INTUITY™ CONVERSANT® V6.0 menu (Figure 4-3).

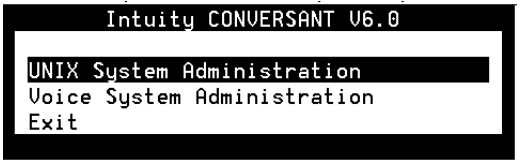


Figure 4-3. INTUITY CONVERSANT V6.0 Menu

3. Select

```
> UNIX System Administration
    >UNIX Management
        >Printer Administration
            >Install Okidata 320 Printer Software
```

4. Press ENTER.
5. Press F3 (SAVE).
6. Press F6 (CANCEL) until you return to the INTUITY CONVERSANT V6.0 menu. (Figure 4-3).

Configuring the Okidata Laser Printer

To configure the Okidata Laser printer, do the following:

1. Log in as root.
2. Enter **cvis_mainmenu**

   The system displays the INTUITY™ CONVERSANT® V6.0 menu (Figure 4-3).
3. Select

```
> UNIX System Administration
    >UNIX Management
        >Printer Administration
            >Install Okidata Laser Printer Software
```

4. Press ENTER.
5. Press F3 (SAVE).
6. Press F6 (CANCEL) until you return to the INTUITY CONVERSANT V6.0 menu. (Figure 4-3).

Registering Your Modem

Before you connect and configure your modem, you should call your remote support center to register your system, database, and modem. When you call you should have the following information available:

- The serial number of your MAP/40 (from the chassis)
- Your order number information (from the factory work order)
- The telephone number you will use for your remote maintenance modem

Connecting a Modem

A modem connects:

- To the Multi-port Serial circuit card or COM1 on the CPU circuit card to enable remote access
- Between a remote terminal and the network at a remote site
- To the CPU circuit card if using COM2 to enable remote login for Lucent Technologies' maintenance

The Paradyne 3820 modem is the only modem supported for connection to the COM2 port. The COM2 port is reserved for Lucent Technologies' remote maintenance.

Connecting the 3820 Modem to the Platform

To connect the 3820 modem to the hardware platform:

1. Connect a 9-to 25-pin adapter to the 9-pin COM2 port on the CPU circuit card.
2. Use a 25-to 8-pin adapter to complete the connection between the 9-pin COM2 port and the 8-pin modular cable that comes with the 3820 modem. Connect the 9-to 25-pin adapter to the 25-8 pin adapter and then connect the 25-8 pin adapter to the 8-pin modular cable.
3. Plug the 8-pin modular cable into the 3820 modem.

   Once connected, RTS, CTS, and LSD on the 3820 modem should be on.

NOTE:
If you are using the modem for anything other than remote maintenance, use the RS-232 adapter marked as DTE and the six-pin cable to connect to the ports (ttysaa, etc.) on the Multi-port Serial circuit card and the 3820 modem.

Configuring the 3820 Modem

To set up a modem, do the following:

1. Log in as root.
2. Enter **cvis_mainmenu**

   The system displays the INTUITY CONVERSANT V6.0 main menu (Figure 4-3).
3. Select

```
> UNIX System Administration
    >UNIX Management
        >Modem/Terminal Administration
            >Install Modem/Terminal Software
```

4. Press ENTER.
5. The system displays the Install Modem/Terminal Window (Figure 4-4).

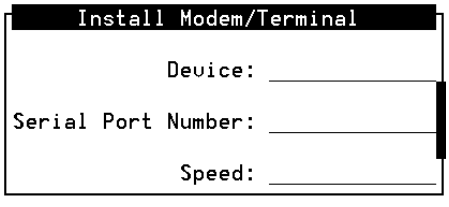


Figure 4-4. Install Modem/Terminal Window

6. Enter **modem** in the `Device:` field
7. Enter **/dev/tty00** in the `Serial Port Number:` field.
8. Enter **19200** in the `Speed:` field.
9. Press F3 (SAVE).
10. Press F6 (CANCEL) until you return to the INTUITY CONVERSANT V6.0 menu. (Figure 4-3).

Powering Up the System

Before you power up the system, verify that the MAP/40 is set to accommodate the appropriate intake voltage.

Verifying the Intake Voltage

The MAP/40 operates on either international (115 VAC) or U.S. (220 VAC) power, which is switch selectable. Lucent Technologies labels the platform to indicate which intake voltage the MAP/40 is set to accommodate. Check this label. If you must change the intake voltage or verify the setting, use the dual-position selector switch on the back of the MAP/40. This switch is located between the AC power supply outlet and AC power inlet receptacle.

Connecting the System to the AC Power Supply

Complete the following procedure to ensure that the system is connected properly to the power outlet and is receiving power.

NOTE:
You must provide a dedicated line for the MAP/40 chassis.

1. Plug one end of the power cord into the AC power supply input on the back panel of the MAP/40 unit.
2. Plug the other end of the power cord into the designated power outlet.
3. Place the power switch for the monitor in the ON position.
4. Turn on the power switch on the front of the unit.

   The system displays the following:

   - The green LED power indicator on the front of the unit comes on and resident diagnostics are initiated on the monitor.
   - A green or amber lamp on the front bottom, screen-base area of the monitor also comes on.

   NOTE:
   If the monitor lamp does not come on or if diagnostics do not initiate on the monitor screen, recheck the power connections. For more information on the power supply requirements, see Appendix A, "System Installation Checklist", and "Power Requirements" in Chapter 1, "Getting Started".

Verifying System Status

5

Overview

This chapter describes how to:

- View controlled applications
- Verify INTUITY™ CONVERSANT® feature options
- Activate alarm origination
- Back up the system

Purpose

The purpose of this chapter is to provide procedures to:

- View controlled applications
- Verify feature options installed on the MAP/40
- Ensure that the system is fully operational

Verifying Controlled Applications

Access to certain features is controlled by feature licensing limits. The voice system keeps track of the total number of licenses purchased and currently in use for an application.

NOTE:
Contact your remote support center to modify license values.

Viewing Feature License Values

To view all of the applications controlled by feature licensing:

1. Log in as root.
2. Enter **cvis_menu**

   The system displays the Voice System Administration menu (Figure 5-1).

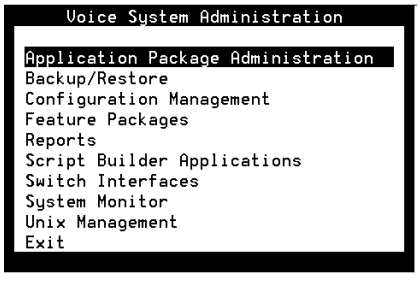
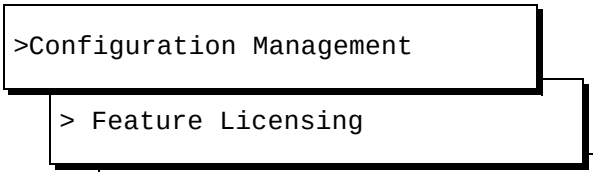


Figure 5-1. Voice System Administration Menu

3. Select



4. Press ENTER.

   The system displays the Display Feature Licensing screen (Figure 5-2).

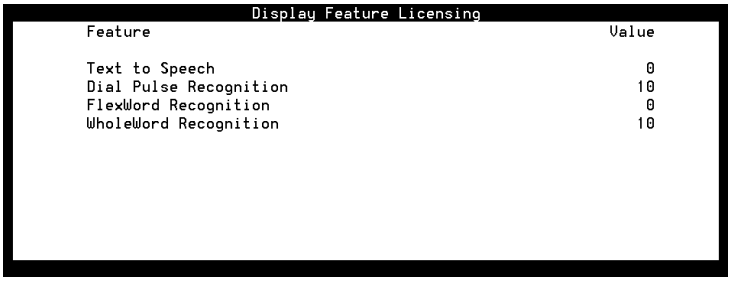


Figure 5-2. Display Feature Licensing Screen

5. To update the list of features, press F8 (ACTIONS).

   The system displays the Actions menu (Figure 5-3).

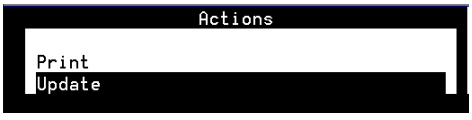


Figure 5-3. Actions Menu

6. Select

   >Update

7. Press ENTER.

   The system refreshes the Display Feature Licensing screen (Figure 5-2).

8. To print a copy of the Display Feature Licensing screen, press F8 (ACTIONS).

   The system displays the Actions Menu (Figure 5-3).

9. Select

```
>Print
```

10. Press ENTER.

    The systems prints a copy of the Display Feature Licensing screen (Figure 5-2).

Feature Test Script Package

Use the Feature Test Script package to verify the following features and capabilities of the voice system:

- Playback and coding
- Chantst
- Transfer test

This script works on Tip/Ring channels.

Feature Test Script Package Prerequisites

The required voice system and PBX configurations for testing features are listed below. All lines from the PBX must be configured and operational before running the script to test features. Playback and coding, chantst, and transfer test require at least one Tip/Ring channel.

- Playback and coding
  - — At least one Tip/Ring circuit card must be installed.
  - — Tip/Ring lines must be in the INSERV state.
  - — There must be room on the speech disk slice to store a 45-second phrase.
- Chantst
  - — At least one Tip/Ring circuit card must be installed.
  - — Tip/Ring lines must be in the INSERV state.
  - — Circuit cards can only have terminating resistors at each end of the bus ribbon cable. All Tip/Ring cards that are not on the bus ribbon cable must not contain terminating resistors.
- Transfer test
  - — At least one Tip/Ring circuit card must be installed.
  - — Tip/Ring lines must be in the INSERV state.

— Circuit cards can only have terminating resistors at each end of the bus ribbon cable. Any Tip/Ring cards that are not on the bus ribbon cable must not contain terminating resistors.

— The lines coming from the switch or PBX must be configured for both incoming and outgoing calls.

Setting Up the Feature Test Script Package

To set up the Feature Test Script package:

1. Start at the Voice System Administration Menu (Figure 5-1) and select

```
>Configuration Management
    > Voice Equipment
        > Display Voice Equipment
```

The system displays the Display Voice Equipment screen (Figure 5-4).

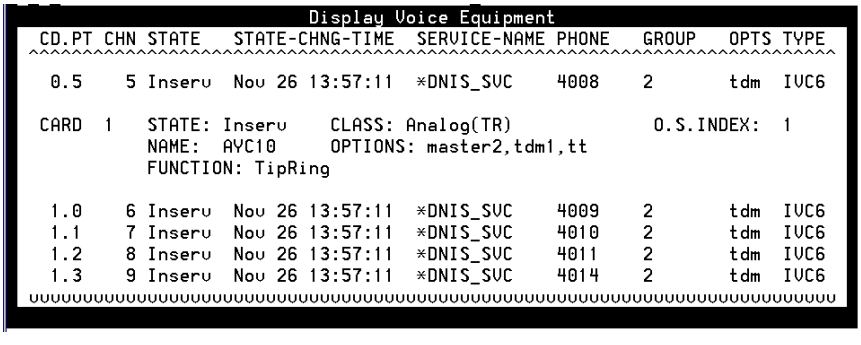


Figure 5-4. Display Voice Equipment Screen

2. Press F3 (NEXT PAGE) until you find a channel (in the CHN column) that has a state of INSERV.
3. Save the INSERV channel number to enter in Step 6 of this procedure.

NOTE:
If no channels are in the INSERV state, continue with "Changing the State of Voice Equipment" below.

4. Press F6 (CANCEL) twice to return to the Configuration Management menu (Figure 5-5).

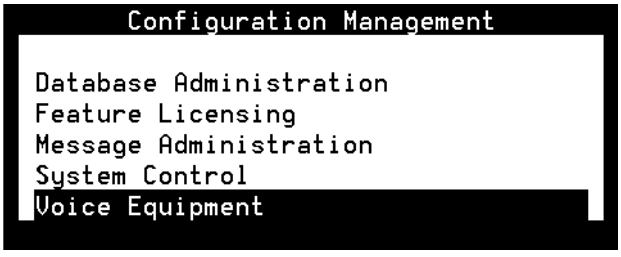
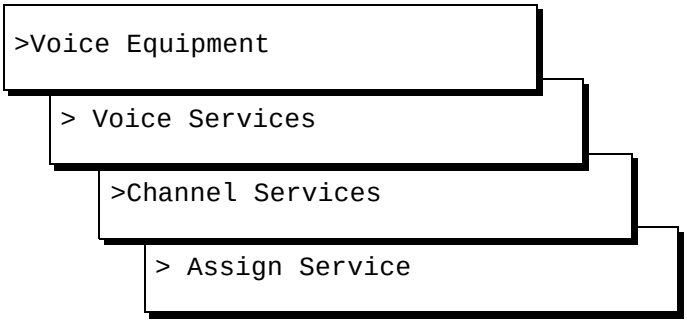


Figure 5-5. Configuration Management Menu

5. Select



The system displays the Assign Channel Service screen (Figure 5-6).

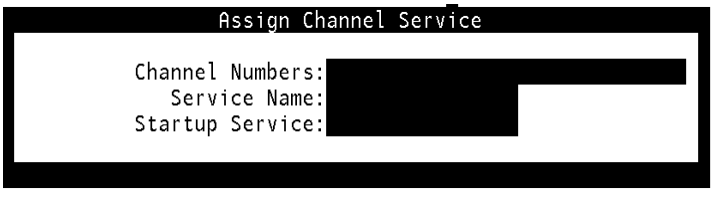


Figure 5-6. Assign Channel Service Screen

6. Enter the number of the INSERV channel, from Step 3 in "Setting Up the Feature Test Script Package" in the `Channel Numbers:` field.
7. Press ▼ to move to the `Service Name:` field.
8. Enter **feature_ts**
9. Press F3 (SAVE).

   The system displays a Command Output screen.

10. Press F6 (CANCEL) four times to return to the Configuration Management menu (Figure 5-5).
11. Select

```
>Voice Equipment
```

The system displays the Display Voice Equipment screen (Figure 5-4).

12. Check the channel you just assigned. Verify that `feature_tst` appears in the `SERVICE-NAME` column.

NOTE:
If `feature_tst` is not displayed, repeat Step 4 through Step 12.

13. Press F6 (CANCEL) to return to the Voice System Administration menu (Figure 5-1).
14. If you need to change the state of voice equipment, go to "Changing the State of Voice Equipment", otherwise, continue with "Running the Feature Test Script Package".

Running the Feature Test Script Package

NOTE:
See "Feature Test Script Package Prerequisites" before using **feature_tst**.

To run the Feature Test Script package:

1. Start at the Voice System Administration Menu (Figure 5-1) and select

```
>System Monitor
```

The system displays the System Monitor-Voice Channels screen (Figure 5-7).

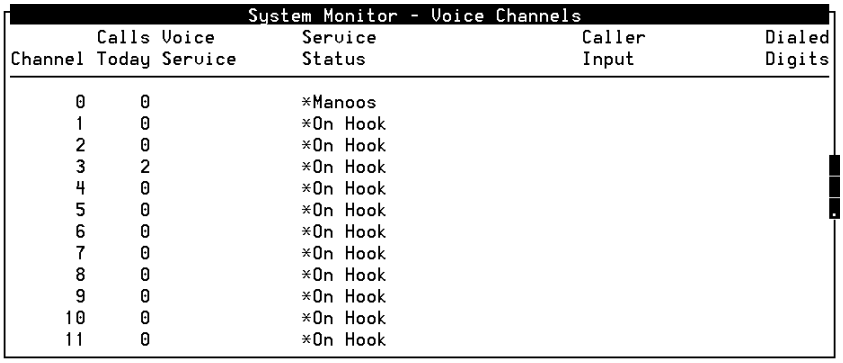


Figure 5-7. System Monitor-Voice Channels Screen

2. Dial the telephone number associated with the assigned channel.

   NOTE:
   The touch tones on the telephone are used to access **feature_tst**.

   The voice system plays the following:

   "Follow all touchtone entries with pound. Continue testing.
   To quit the script, enter 0 pound."

   The voice system then plays the list of features with the corresponding number to enter to test each feature.

3. Select a feature using the telephone's touch tone pad.
4. Press the number that corresponds to the feature you want to test and then press #.
5. Follow the prompts to complete the test for each selected feature.

Changing the State of Voice Equipment

To change the state of voice equipment:

1. Start at the Voice System Administration Menu (Figure 5-1) and select

   ```
   >Configuration Management
       > Voice Equipment
   ```

   The system displays the Voice Equipment screen (Figure 5-4).

2. Press F8 (CHG-KEYS).

3. Press F2 (CHGSTATE).

   The system displays the Change State of Voice Equipment screen (Figure 5-8).

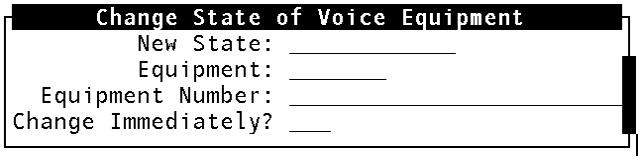


Figure 5-8. Change State of Voice Equipment Screen

4. Enter **i** in the `New State:` field.

   The system displays `inserv`.

5. Press ▼ to move to the `Equipment:` field.

6. Enter **ch**

   The system displays `channel`.

7. Press ▼ to move to the `Equipment Number:` field.

8. Enter the number of the channel that you want to change to INSERV.

9. Press ▼ to move to the `Change Immediately?` field.

10. Enter **y**

    The system displays `yes`.

11. Press F3 (SAVE).

    The system displays a Command Output screen.

12. Continue with Step 3, in the procedure, "Setting Up the Feature Test Script Package".

Activating Alarm Origination

Remote Alarming allows a technician in the Technical Support Organization (TSO) to receive notice that your voice system is experiencing difficulty. Alarms levels are categorized by their severity as Critical, Major and Minor. See *INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages,* 585-310-182, for information about remote alarming.

To activate alarm origination, do the following:

1. Clear all alarms. See Chapter 1, “Getting Started,” in *INTUITY CONVERSANT System Version 6.0 System Alarms and Log Messages,* 585-310-182, for details on clearing alarms.
2. Check the tape drive for a tape. The light on the tape drive is on if it contains a tape.

   ⚠ CAUTION:
   Do not activate Alarm Origination unless the tape drive contains a back-up tape.

   If the tape drive does not contain a tape for the nightly backup, locate a tape and insert it into the tape drive.
3. Log in as root.
4. Enter **cvis_menu**

   The system displays the Voice System Administration menu (Figure 5-1).
5. Select

```
> Configuration Management
    > Remote Alarming Administration
```

   The system displays the Alarm Management window (Figure 5-9).

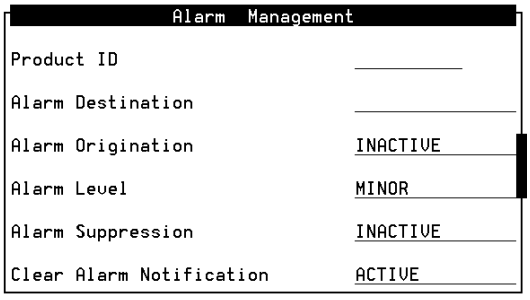


Figure 5-9. Alarm Management Window

6. Enter the product ID number in the `Product ID:` field.

   CAUTION:
   The product ID is always a 9-digit number beginning with the number 2. Do not continue without the correct product ID number.

7. Move ▼ to the `Alarm Origination:` field.
8. Press F2 (CHOICES).
9. Select

   ```
   > Active
   ```

10. Verify that the entry in the `Alarm Suppression:` field is `inactive`.

    If it is not, move the cursor to the `Alarm Suppression:` field, press F2 (CHOICES), and select `inactive` for the field.

11. Press F3 (SAVE).

    The system displays the following message:

    ```
    Alarm Form Update was successful

    Press (Enter) to continue.
    ```

12. Press ENTER.
13. Continue with the next procedure, "Testing Alarm Origination", if you want to test the alarm origination or if a significant amount of time has lapsed since administering the Alarm Management window.

    Continue with the procedure, "Performing a Root Backup", if you do not want to test the alarm origination.

Testing Alarm Origination

Use the following procedure to test remote alarm origination or if a significant amount of time has lapsed since administering the Alarm Management window.

1. Start at the Alarm Management window (Figure 5-9) and press F8 (CHGKEYS).
2. Press F1 (TEST-ALM).

   The system displays the Alarm Origination Test menu (Figure 5-10).

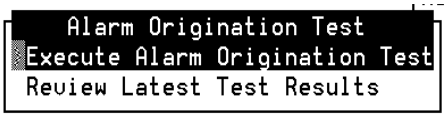
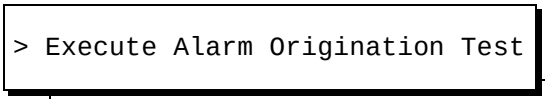


Figure 5-10. Alarm Origination Test Menu

3. Select



   The system displays the Confirm window (Figure 5-11).

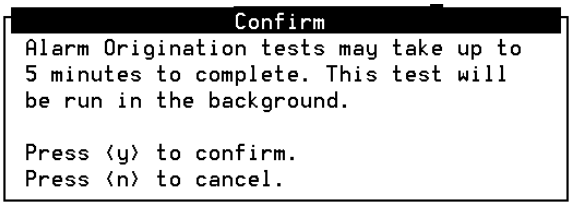


Figure 5-11. Confirm Window

4. Press Y.

NOTE:
Wait approximately 1 minute for the system to process the command.

5. Select

```
> Review Latest Test Results
```

The system displays the Alarm Origination Test Results window (Figure 5-12).

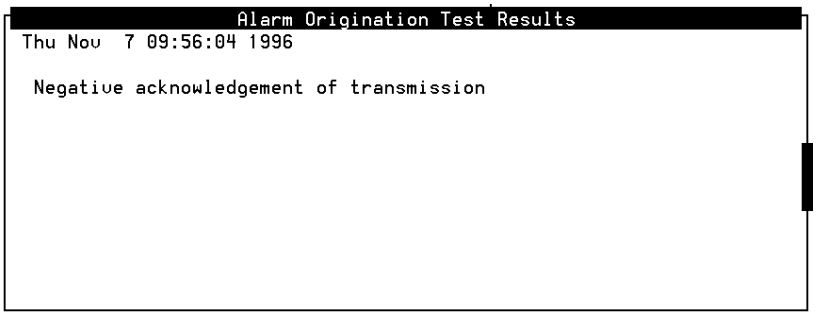


Figure 5-12. Alarm Origination Test Results Window

6. Verify that no entry on the screen corresponds with the time you sent the alarm.

NOTE:
Wait approximately 4 minutes for the test to complete.

7. Press F6 (CANCEL).

The system displays the Alarm Origination Test menu (Figure 5-10).

8. Select

```
> Review Latest Test Results
```

The system displays the Alarm Origination Test Results window (Figure 5-13).

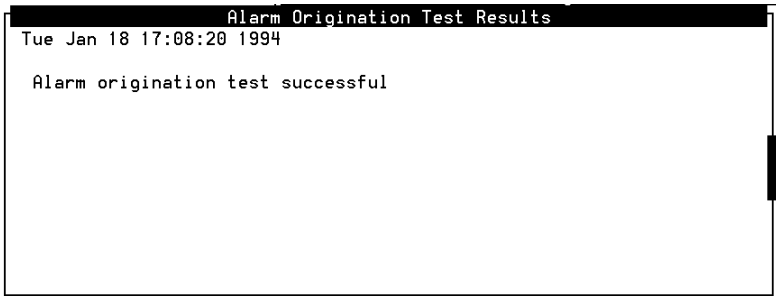


Figure 5-13. Alarm Origination Test Results Window

9. Verify that the message on the screen reads:

   ```
   Day Date Time

   Alarm origination test successful.
   ```

10. If the test completed successfully, press F6 (CANCEL) until you reach the Voice System Administration menu (Figure 5-1) and continue with the next procedure on your checklist. Press F6 (CANCEL) to log out of the system.
11. If the test did *not* complete successfully, contact your remote support center.

Backing up the INTUITY CONVERSANT System

Lucent Technologies suggests performing a root or full backup to baseline your system.

NOTE:
Use the backup mechanisms described here to back up and restore files on the same machine only.

There are two tools available for you to use to backup and restore your system:

- BRU (backup/restore utility)
- mkimage

Backing up the INTUITY CONVERSANT System Using BRU

The following section describes the procedure for backing up your INTUITY CONVERSANT system using the BRU.

Types of BRU

- Root, or disk-level, backup - This is used to save the entire contents of a hard disk and is good to perform to baseline your new system after initial load.
- Full, or UNIX-level - This is a backup of all files and file systems.

Performing a Root Backup

NOTE:
Verify that the INTUITY Backup/Restore Utility is loaded on the system before performing a disk backup.

Backup of the entire disk consists of two parts: copy disk to tape and checksum verification. Each part takes about 1 Hour/Gbyte to complete.

To perform a root backup using the BRU tool, do the following:

1. Log in as root.
2. Enter **shutdown -g0 -y**

   The system shuts down.
3. Insert the BRU Disk Backup diskette labeled “QuickStart” into the diskette drive.
4. Press the reset button on the lower front of the MAP/100 peripheral bay.

   The system boots from the BRU diskette. After a few minutes the system displays the BRU Main Menu (Figure 5-14).

```
                QuickStart - System Recovery Tool
     Copyright(c) 1997, Enhanced Software Technologies, Inc.



1. Select Recovery Archive Device.
2. Perform System Backup
3. Perform System Recover
4. Perform Archive Volume Verification
5. Recovery Help
9. Restart Native Operating System







Select Option >
```

Figure 5-14. BRU Main Menu

5. Enter **1**

   The system displays the BRU Select Recovery Device Type Menu Screen (Figure 5-15).

```
Please select the type of Backup Device to use.

1. Wangtek 525 MB QIC Tape Drive
2. Tandberg 2.5 GB QIC Tape Drive
Q. Quit


Select (1, 2, or Q)
```

Figure 5-15. BRU Select Recovery Device Type Menu Screen

6. Enter the number corresponding to your systems tape drive.

   The system displays the following message:

   ```
   Checking Device.
   ```

   The system displays the BRU Main Menu Screen (Figure 5-14).

7. Enter **2**

   The system displays the following message:

   ```
   Scanning system hardware for attached hard drives

   I found X hard drives attached to this system:

   1.  First SCSI Hard Drive Size = xxxxxxxxx
   Select Hard Drive to Backup;  Separate multiple entries
   with spaces [1]:
   ```

8. Enter the number of the hard disk drive to be backed up.

   The system displays the following message:

   ```
   Total backup size 2048 MBytes

   Make sure that the prepared tape is unchanged
   Press [ENTER] to continue.
   ```

9. Press ENTER

The system displays the following message:

```
Creating the recovery volume...

This operation can take from minutes to hours depending
upon the speed of the tape drive being used.

For example:

    Wangtek 525MB QIC drive - 12MB/min = 720MB/hr
    Tanberg 2.5GB QIC drive - 17MB/min = 1GB/hr

Backing up X hard drive.

System backup operation completed successfully.

QuickStart will now verify the backup.

While EST recommends that you verify each backup, this
is an optional process.

Enter V to verify or S to skip [V/S]:
```

⚠ CAUTION:
*Entering **v** will cause the system to verify the tape using the backup floppy. This procedure will take approximately two hours. During this time the system will be out of service.*

10. Enter **s**

    The system displays the following message:

    ```
    Verification Skipped!

    You may verify a QuickStart tape at any time by using
    option 4 from the main QS menu.

    Press [ENTER] to return to the main menu.
    ```

11. Press ENTER

    The system displays the BRU Main Menu Screen (Figure 5-14).

12. Remove the “QuickStart” boot diskette from the diskette drive.

13. Enter **9**

14. The system reboots to the INTUITY CONVERSANT system.

15. Verify the root backup tape while the system is in operation. See “Verifying a Root Backup Tape“ below for the procedure.

Performing a Full Backup

You can perform this procedure while your system is up and running.

A full UNIX-level backup consists of two components:

- Estimate - this determines how much has changed since the last backup.
- Backup - this is the actual backup performance.

NOTE:
The estimated time required to perform a full backup is 1 Gbyte/hour.

To perform a Full UNIX-level backup, do the following:

1. Starting at the Voice System Administration Menu (Figure 5-1), select

   ```
   > Backup/Restore
       > Full Backup
           > Estimate
   ```

   The system displays a message similar to the following message:

   ```
   Please be patient, depending on the size of the backup
   this could take several minutes

   Performing Full Backup estimate...

   bru:1volume xxxxx files, xxxxxx archive blocks xxxxxx
   Kbytes

   Please press <ENTER> to return to menu.
   ```

2. Make sure you have enough backup tapes available to store the system data.
3. Label each cartridge tape with “Full UNIX Backup Tape X.”
4. Press ENTER

   The system displays the Full Backup menu (Figure 5-16).

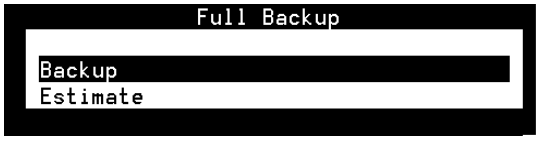


Figure 5-16. Full Backup Menu

5. Select

```
> Backup
```

   The system displays the following message:

   ```
   Please put a tape in the drive.

   Press <Enter> to continue or q to quit.
   ```

6. Insert the first tape into the cartridge tape drive.
7. Press ENTER

   The system displays the following message:

   ```
   The Full UNIX backup is now complete.  Please remove the
   tape and label it as “Full UNIX Backup, created
   [today’s date]”
   ```

8. Verify the backup tape. See “Verifying a Backup Tape” below for the procedure.

Verifying a Backup Tape

A backup tape can be verified using the INTUITY CONVERSANT windows or the backup utility boot floppy.

Using the INTUITY CONVERSANT Windows

Verify your backup tape using the BRU after the system is in operation. Perform the verification on the same INTUITY CONVERSANT system or another INTUITY CONVERSANT system that has the BRU loaded.

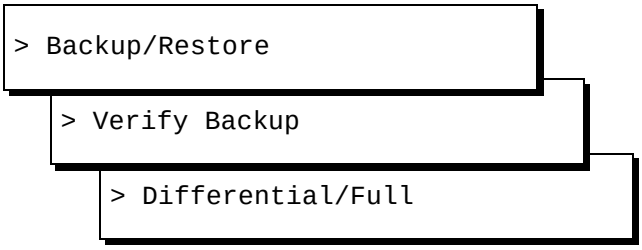
The BRU verifies:

- Full backup tapes
- Root backup tapes

Verifying a Full Backup Tape. To perform a verification, do the following:

1. Insert the backup tape into the tape drive.

2. Starting at the Voice System Administration Menu (Figure 5-1), select

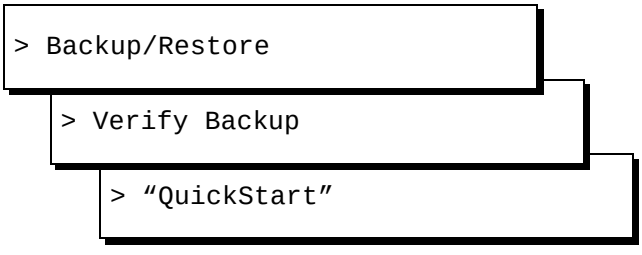


The system displays the following message:

```
The Backup Tape Verification is now complete. Please
remove the tape, check that the label reflects whether
the tape contains root, full, or differential backup
data, date and time it was created then store it.
```

Verifying a Root Backup Tape. To perform a verification, do the following:

1. Insert the backup tape into the tape drive.
2. Starting at the Voice System Administration Menu (Figure 5-1), select



The system displays the following message:

```
The Backup Tape Verification is now complete. Please
remove the tape, check that the label reflects whether
the tape contains root, full, or differential backup
data, date and time it was created then store it.
```

Backing Up the INTUITY CONVERSANT System Using mkimage

The following section describes the procedure for backing up your INTUITY CONVERSANT system using the **mkimage** command.

NOTE:
The backup mechanisms described here should be used for backing up and restoring files on the same machine only.

The **mkimage** command backs up all files and speech to cartridge tapes. Use the **mkimage** command after loading a new system

See Appendix A, "Summary of Commands," in *INTUITY™ CONVERSANT® V6.0 Administration*, 585-310-591, for additional information about the **mkimage** command.

Performing a System Backup

To conduct a full system backup using **mkimage**, do the following:

1. Log in as root.
2. Stop the voice system. See "Stopping the Voice System" in Chapter 3, "Common System Procedures," in *INTUITY CONVERSANT System Version 6.0 MAP/40 Maintenance*, 585-310-181.
3. Enter **mkimage**

   The system displays the following message:

   ```
   The UNIX kernel will be rebuilt now.  This will take
   some time.  Please wait.

   WARNING: This process will put the system in single
            user mode!!!

   Do you wish to continue (y/n)?
   ```

4. Enter **y**

   The system displays the following message:

   ```
   The system will now be put in single user mode.
   Re-login after the prompt and re-execute this command
   to continue the mkimage process.

   Console Login:
   ```

5. Continue with the next procedure, "Backing Up the Root File System."

Backing Up the Root File System

To back up the root file system, do the following:

1. Log in as root.

2. Enter **mkimage**

   The system displays the following message:

   ```
   Checking the system run level:  Please wait

   The system is in single user mode: Continuing

   The following are approximate tape counts required for
   this backup for various tape drive sizes

       150 Mbyte drive:        X tape(s)
       320 Mbyte drive:        X tape(s)
       525 Mbyte drive:        X tape(s)
       1.2 Gbyte drive:        X tape(s)
       2.0 Gbyte drive:        X tape(s)

   Be sure to number the cartridge tapes consecutively in
   the order they will be inserted.

   Label the tapes 'CONVERSANT Image Tape x' where x
   indicates the insertion sequence.  Also include the
   current date.

   Note: Very large files, such as database files, take
   several minutes to backup.  During this time you will
   not see any progress reported to the console.  If the
   tape drive is running and the system disk light is
   flashing, the operation is in progress.

   Please insert the first tape now.  Press 'ENTER' to
   start image tape creation.
   ```

3. Label the appropriate number of cartridge tapes.

   Label the tapes *CONVERSANT Image Tape x*, where x indicates the insertion sequence. Include the current date on the label.

4. Insert the cartridge tape labeled “CONVERSANT Image Tape 1” into the cartridge tape drive.

5. Press ENTER.

   The system takes approximately 30 minutes to load the information onto one cartridge tape.

   If your system backup requires more than one cartridge tape, the system displays the following message:

   ```
   End of medium on output
   Change to part 2 and press RETURN key. (q)
   ```

   If your backup requires more than one tape, complete Steps a through d:

   a. Remove the cartridge tape labeled “CONVERSANT Image Tape 1” from the cartridge tape drive.

   b. Insert the cartridge tape labeled “CONVERSANT Image Tape 2” into the cartridge tape drive.

c. Press ENTER.

d. Repeat Steps a through c for all necessary cartridge tapes.

If your backup does not require more than one tape, continue with Step 6.

6. When the system displays the following message, remove the last cartridge tape from the cartridge tape drive.

```
The image tapes will be verified now.
Make sure the tapes are inserted in the order they are
made.

Press 'Enter' to start verification.
```

7. Press ENTER.

   The system displays the following message:

```
Please insert the first tape now.  Press 'Enter' to
continue.
```

8. Insert the cartridge tape labeled "CONVERSANT Image Tape 1" into the cartridge tape drive.

9. Press ENTER.

   The system takes as long to verify a cartridge tape as it did to create it.

   The system will prompt for additional tapes if necessary.

10. If your system has speech files located on a second disk, perform the next procedure, "Backing Up the Speech Files."

    If your system has only one disk, or is mirrored, continue with the procedure, "Verifying the Back Up."

Backing Up the Speech Files

If your system contains speech files on Hard Disk Drive 2, the system displays the following message:

```
The following are approximate tape counts required for
this backup for various tape drive sizes

    150 Mbyte drive:        X tape(s)
    320 Mbyte drive:        X tape(s)
    525 Mbyte drive:        X tape(s)
    1.2 Gbyte drive:        X tape(s)
    2.0 Gbyte drive:        X tape(s)

Be sure to number the cartridge tapes consecutively in
the order they will be inserted.

Label the tapes 'CONVERSANT Speech Tape x' where x
indicates the insertion sequence.  Also include the
current date.
```

```
Note: Very large files, such as database files, take
several minutes to backup.  During this time you will
not see any progress reported to the console.  If the
tape drive is running and the system disk light is
flashing, the operation is in progress.

Please insert the first tape now.  Press 'ENTER' to
start image tape creation.
```

To back up the speech files, using the **mkimage** command, do the following:

1. Label the appropriate number of cartridge tapes.

   Label the tapes 'CONVERSANT Speech Tape x' where x indicates the insertion sequence. Also include the current date on the label.

2. Insert the cartridge tape labeled "CONVERSANT Speech Tape 1" into the cartridge tape drive.

3. Press ENTER.

   The system takes approximately 30 minutes to load the information onto one cartridge tape.

   If your system backup requires more than one cartridge tape, the system displays the following message:

   ```
   End of medium on output
   Change to part 2 and press RETURN key. (q)
   ```

   If your backup requires more than one tape, complete Steps a through d:

   a. Remove the cartridge tape labeled "CONVERSANT Speech Tape 1" from the cartridge tape drive.

   b. Insert the cartridge tape labeled "CONVERSANT Speech Tape 2" into the cartridge tape drive.

   c. Press ENTER.

   d. Repeat Steps a through c for all necessary cartridge tapes.

   If your backup does not require more than one tape, continue with Step 4.

4. When the system displays the following message, remove the last cartridge tape from the cartridge tape drive.

   ```
   The speech tapes will be verified now.
   Make sure the tapes are inserted in the order they are
   made.

   Press 'Enter' to start verification.
   ```

5. Press ENTER.

   The system displays the following message:

   ```
   Please insert the first tape now.  Press 'Enter' to
   continue.
   ```

6. Insert the cartridge tape labeled “CONVERSANT Speech Tape 1” into the cartridge tape drive.
7. Press ENTER.

   The system takes as long to verify a cartridge tape as it did to create it.

   The system will prompt for additional tapes if necessary.
8. Continue with the procedure, “Verifying the Back Up.”

Verifying the Back Up

When the system is done verifying a cartridge tape it automatically reboots, returns to multi-user format, and displays the console login. To verify the back up, do the following:

1. Log in as root.
2. Enter **vi /SaveVsData/mkimage.log**

   If the system displays the following message, the mkimage back up was successful.

   ```
   Creation and verification of the CONVERSANT Image Tape
   is complete.
   ```

   If the system does not display this message, the mkimage back up was not successful. Repeat the procedure.

Performing Other Backups

See the *Novell UnixWare Backup and Restore Services* book, which is part of the *UnixWare Documentation Set*, 585-350-908, for information on:

- Establishing an automatic backup using **bkreg**
- Backing up the UnixWare system
- Performing a UnixWare incremental backup
- Copying files using **cpio**
- Backing up applications other than Script Builder applications
- Backing up a database

See *INTUITY CONVERSANT V6.0 Application Development with Script Builder*, 585-310-760, for information on backing up Script Builder applications

See *INTUITY CONVERSANT V6.0 Speech Development, Processing, and Recognition*, 585-310-762, for information on backing up speech files using **spsav**

System Installation Checklist

A

Overview

The checklist provides a description of the required procedures, in sequence, to use when installing an assembled, loaded, and tested (ALT) system. The "Chapter" and "Section" columns refer you to the appropriate document or chapter number and section title of the book that applies to the procedure and installation you are completing. Use the books listed on the next page to support the checklist.

Purpose

Using this checklist ensures that you complete the required procedures in the proper sequence.

Books to Use with the Checklists

Use the following books to install a Lucent Technologies' INTUITY™ CONVERSANT® system MAP/40:

- *INTUITY™ CONVERSANT® System Version 6.0 MAP/40 New System Installation,* 585-310-178

  This is the primary reference book for installing an ALT system.

- *INTUITY CONVERSANT System Version 6.0 MAP/40 Maintenance*, 585-310-181

You will also need one of the following switch integration documents:

- *INTUITY Integration with System 75 and DEFINITY® Communications System Generic 1 and Generic 3,* 585-310-214.

  Use this book along with the system installation book, if integrating with System 75 and DEFINITY G1 and G3.

- *INTUITY Integration with System 85 and DEFINITY Communications System Generic 2*, 585-310-215

  Use this book along with the system installation book, if integrating with System 85 and DEFINITY G2.

If you are installing networking, you will also need:

- *INTUITY CONVERSANT System Version 6.0 Administration,* 585-310-591

  Use this book along with the system installation book, if connecting to a digital network.

NOTE:
If you need to install a feature to an ALT system, contact your project manager to verify the requirement and contact your remote support center.

System Installation Checklist

The checklist (Table A-1) provides a description of the required procedures numbered in the sequence in which you must complete them. The "Chapter" and "Section" columns refer you to the appropriate chapter number and section title of this book or to a switch integration book.

As you complete a procedure, make a check mark in the "✔" column.

Table A-1. MAP Hardware Installation Checklist — Preassembled System

Task	Task Description	Comments	Chapter	Section	✔
1	Verify site environmental requirements.		1	"Environmental Considerations"	
2	Verify site installation requirements.		1	"Installation Area Considerations"	
3	Verify site space requirements.		1	"Space Requirements"	
4	Verify site power requirements.		1	"Power Requirements"	
5	Verify site is prewired for all pinout connections.	Required for telephone lines and switch integration.		Verify prewiring with system administrator.	
6	Review demarcation points	Demarcation points are application dependent.	1	"Points of Demarcation"	
7	Review all safety warnings before getting started.		1	"System Grounding Connections"	
8	Observe electrostatic discharge guidelines.	Required for all circuit cards and peripheral disk drives.	1	"System Grounding Connections"	
9	Gather the required tools.		1	"Tools" and "Test Equipment"	

Continued on next page

Table A-1. MAP Hardware Installation Checklist — Preassembled System — *Continued*

Task	Task Description	Comments	Chapter	Section	✔
10	Unpack the MAP.	Open as instructed to facilitate reuse of packing materials.	2	"Unpacking the Unit"	
11	Locate key components on the MAP.		2	‘‘The Front of the Chassis’’ and ‘‘The Back of the Chassis’’	
12	Make cable connections.	Switch, network, and asynchronous connections are included. These MUST be made prior to powering up.	3	"Making Cable Connections"	
13	Connect the MAP to the power service and power up.		4	‘‘Connecting Peripherals and Powering Up’’	
14	Verify the system setup screen is correct, if necessary.		4		
15	Administer the modem for remote administration.	Administer modem on systems using COM2 for remote administration.	4	‘‘Configuring the 3820 Modem’’	
16	Administer modem(s) on the system. *Do not use these procedures on the remote maintenance modem connected to COM2.*	Administer modem on systems *not* using COM2 port for remote administration.	4	‘‘Connecting the 3820 Modem to the Platform’’	
17	Administer the remote terminal.	Administer on systems using a remote terminal.	4	‘‘Configuring the 3820 Modem’’	

Continued on next page

Table A-1. MAP Hardware Installation Checklist — Preassembled System — *Continued*

Task	Task Description	Comments	Chapter	Section	✔
18	Administer the remote terminal on the INTUITY CONVERSANT system.	Administer on systems using a remote terminal.	4	"Configuring the 3820 Modem"	
19	Administer the printer on the system.	Administer on systems using a printer.	4	"Registering Your Modem"	
20	Continue with the checklist if the system setup screen is correct.	If at this point the system does not seem to be working, verify hardware connections or clean equipment if necessary.	B	Appendix B, "Troubleshooting Procedures"	
21	View feature license values.	Applicable to all systems.	5	"Viewing Feature License Values"	
24	Verify system status.		5	"Viewing Feature License Values"	
25	Map channels to switch extensions.	Applicable to all systems.	5	"Setting Up the Feature Test Script Package"	
26	Verify channel state.	Applicable to all systems.	5	"Setting Up the Feature Test Script Package"	
27	Assign service to channels for testing.	Applicable to all systems.	5	"Setting Up the Feature Test Script Package"	
28	Test each channel.	Applicable to all systems.	5	"Running the Feature Test Script Package"	

Continued on next page

Table A-1. MAP Hardware Installation Checklist — Preassembled System — *Continued*

Task	Task Description	Comments	Chapter	Section	✔
29	Map services to channels for operation.	Applicable to all systems.	5	"Running the Feature Test Script Package"	
30	Administer and test alarm origination or configure the remote maintenance modem.		5	"Activating Alarm Origination"	
31	Back up the system.	Applicable to all systems.	5	"Backing up the INTUITY CONVERSANT System"	

Troubleshooting Procedures

B

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.

The following assumptions are made in this chapter:

- You have checked the Message Log for any relevant messages. See Chapter 1, “Getting Started” in *INTUITY™ CONVERSANT® Version 6.0 Alarms and Log Messages*.
- The resolutions in the second column of the tables are intended to provide a starting point to isolate a problem and may not be exhaustive.
- The procedures in the second column assume general editing knowledge and script familiarity, as most of the commands and procedures are performed from the command line.
- You have already performed a visual inspection of the system.

Repairing Power-Up Troubles

Power-up troubles are experienced when you are first turning the system on. Table B-1 lists the indications related to power-up troubles:

Table B-1. Repairing Power Up Troubles

Indication	Corrective Action
The system will not power up.	1. Verify that the power toggle switch on the front is in the ON position. 2. Verify all external system connections (power cords and monitor cables) are correct (for example, the blue cable connects to the 3270 circuit card and not to the system parallel port). 3. Verify all external system connections are secure.
During startup, the system displays the following message: `"Shared memory is marked as invalid. cvis_menu exiting."`	1. Stop the voice system. See "Stopping the Voice System" in Chapter 3, "Common System Procedures," in your platform system maintenance book 2. Start the voice system. See "Starting the Voice System" in Chapter 3, "Common System Procedures," in your platform system maintenance book. 3. Enter **cvis_mainmenu** 4. If the problem persists: a. Stop the voice system. See "Stopping the Voice System" in Chapter 3, "Common System Procedures," in your platform system maintenance book b. Enter **cp /gendb/shmem/devtbl gendb/shmem/devtbl.old** c. Enter **rm /gendb/shmem/devtbl** d. Start the voice system. See Chapter 3, "Common System Procedures," in your platform system maintenance book.
The **start_vs** command takes a long time to initialize on a system with many analog lines.	1. Starting at the Switch Administration screen, set Dial-Tone Training to "No." See Chapter 5, "Switch Interface Administration," of *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591. **NOTE:** If dial-tone training is "no," you should specify that the dial-tone frequency to be used with a particular switch (350 and 440 is the default for DEFINITY®). 2. Verify that the transfers being performed in the application are still functioning properly.

Repairing Boot-Up Troubles

Boot-up troubles are experienced when the system crashes and reboots itself or when you reboot the system. Table B-2 lists the indications and possible repair procedures related to boot-up troubles.

Table B-2. Repairing Boot-Up Troubles

Indication	Corrective Action
Circuit cards are not recognized during boot up.	1. Enter **pkginfo** 2. Make sure the driver software is installed (SP, Tip/Ring, or T1). 3. Check the circuit cards. See "Circuit Card Diagnostics" in Chapter 2, "Diagnostics," in your platform system maintenance book. 4. Make sure that the circuit cards have the proper switch settings and correct placement of terminating resistors if attached to the TDM bus cable.
When the system boots, it displays messages in the message log report or on the console similar to the following message: `Unable to attach shared memory`, `Bad DEVTBL`, and/or `VROP respawning too rapidly`.	1. Stop the voice system. See Chapter 3, "Common System Procedures," in your platform system maintenance book. 2. Enter **cp /gendb/shmem/devtbl /gendb/shmem/devtbl.old** 3. Enter **rm /gendb/shmem/devtbl** 4. Start the voice system. See "Starting the Voice System" in Chapter 3, "Common System Procedures," in your platform system maintenance book.
The system displays the following message: `Non-system disk or disk error. Replace and hit any key to continue.`	1. Check the diskette drive and confirm that it is empty. 2. Check the cartridge tape drive and confirm that it is empty. 3. Check the power connections. 4. Reboot the system. See "Rebooting the UNIX System" in Chapter 3, "Common System Procedures," in your platform system maintenance book.

Continued on next page

Table B-2. Repairing Boot-Up Troubles — *Continued*

Indication	Corrective Action
The system passes run level four then reboots continuously (rolling reboot).	1. Power off the platform immediately after the system reboots. 2. Remove one optional circuit card (for example, SP, T1, Tip/Ring). 3. Reboot the system. See "Rebooting the UNIX System," in Chapter 3, "Common System Procedures," in your platform system maintenance book. 4. Repeat Steps 1–3 until the system reboots properly. 5. Replace the circuit cards.
The system exhibits rolling reboot when static kernel size exceeds 8-Mbyte.	1. Reboot the system. See "Rebooting the UNIX System," in Chapter 3, "Common System Procedures," in your platform system maintenance book. 2. While rebooting the system, hold down the ENTER key when the system displays the UnixWare graphics. 3. When the system prompts you for a previously saved kernel, enter **unix.old** or enter the name of a kernel that you saved manually at a previous time. This file is created automatically each time the kernel is rebuilt. 4. To prevent this problem from occurring again, remove those packages that affect the size of the static kernel from your configuration permanently. The UnixWare limitation of the size of the static kernel is maximum of 8Mbyte.

Continued on next page

Table B-2. Repairing Boot-Up Troubles — *Continued*

Indication	Corrective Action
A file system check shows a file system with 0 files, 0 blocks, or 0 free.	1. Verify the disk partition was adequate. See “Initializing the Hard Disk Drives” in Chapter 9, ‘‘Installing Base System Software,” in your platform system maintenance book. 2. Restore the system software from the mkimage backup tape. See “Performing a System Restoration” in Chapter 3, “Common System Procedures,” in your platform system maintenance book. If no backup is available, reload the system software. See “Chapter 9, “Installing Base System Software,” Chapter 10, ‘‘Installing the Intuity CONVERSANT System Software,” and Chapter 11, ‘‘Installing the Optional Feature Software,” in your platform system maintenance book.
The system hangs after a reboot and the screen is blank.	1. Check the diskette drive and confirm that it is empty. 2. Check the power connections. 3. Check the power supply by watching for hard disk access with the disk access light. 4. Reboot the system. See “Rebooting the UNIX System,” in Chapter 3, “Common System Procedures,” in your platform system maintenance book.

Repairing System Installation/Upgrade/Set-Up Troubles

These troubles are experienced during initial installation of the voice system, while upgrading either hardware or software, or when adding additional hardware or software. Table B-3 lists the indications and possible repair procedures related to these troubles.

Table B-3. Repairing System Installation/Upgrade/Set-Up Troubles

Indication	Corrective Action
The system cannot initialize the IPCI circuit card.	1. Check for possible conflict with memory and I/O addresses or interrupt conflicts. 2. Log in as **root**. 3. Enter **crash** 4. Enter **strstat** The system displays a message similar to the message shown in Figure B-1. a. Increase the values to slightly higher than what is listed under the `CONFIG` column. b. If there is anything other than 0's in the `FAIL` column, use the **/etc/conf/bin/idtune** command to increase the tunable parameter. The parameters to tune are NSTREAM, NQUEUE (should be 4 X NSTREAM), NBLK4, NBLK16, NBLK64,NBLK128, NBLK256, NBLK512, NBLK1024, NBLK2048, and NBLK4096. c. After you have changed the tunable parameters, use the **/etc/conf/bin/idbuild** command to rebuild the UNIX kernel. 5. Reboot the system. See "Rebooting the UNIX System," in Chapter 3, "Common System Procedures," in your platform system maintenance book.

```
) strstat
ITEM                    CONFIG     ALLOC      FREE       TOTAL       MAX      FAIL
streams                    106       106         0         592       109         0
queues                     522       522         0        1926       530         0
message blocks              75        57        18       24269        77         0
data blocks                 68        57        11       18271        68         0
link blocks                 16        16         0          16        16         0
stream events                6         4         2           6         6         0

Count of scheduled queues:   0
```

Figure B-1. strstat Sample Output

Pinouts

C

Overview

This chapter provides the pinout information for the:

- Tip/Ring circuit card
- Asynchronous connections
- Peripheral drives

Purpose

The purpose of this chapter is to provide the pinout information to ensure proper connectivity and complete the system installation sucessfully.

Pinouts for the Tip/Ring Circuit Card

Figure C-1 shows typical Tip/Ring line connection for the IVC6 circuit card. Table C-1 shows the numbering scheme for connecting the short modular cords provided with the Tip/Ring cards to the Tip/Ring distribution panel.

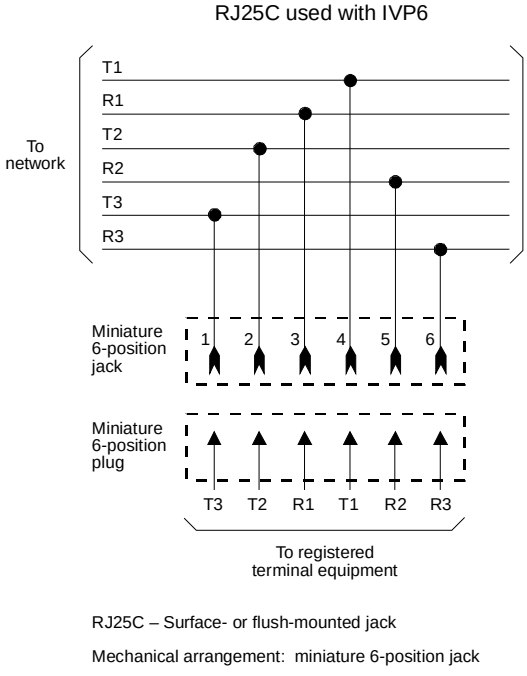


Figure C-1. Wiring and Pin Diagram for the IVC6 Tip/Ring Card

Table C-1. MAP/40 Tip/Ring Consolidation Wiring and Pinouts

From				To			
						50-Pin Connector	
Channel No.	IVC6 Card No.	Jack No.	Pin No.	Jack No.	PinNo.	T or R	Pin No.
1	1	1	3	1	4	R1	1
	1	1	4	1	5	T1	26
2	1	1	2	1	3	T2	27
	1	1	5	1	6	R2	2
3	1	1	1	1	2	T3	28
	1	1	6	1	7	R3	3
4	1	2	3	2	4	R4	4
	1	2	4	2	5	T4	29
5	1	2	2	2	3	T5	30
	1	2	5	2	6	R5	5
6	1	2	1	2	2	T6	31
	1	2	6	2	7	R6	6
7	2	1	3	3	4	R7	7
	2	1	4	3	5	T7	32
8	2	1	2	3	3	T8	33
	2	1	5	3	6	R8	8
9	2	1	1	3	2	T9	34
	2	1	6	3	7	R9	9
10	2	2	3	4	4	R10	10
	2	2	4	4	5	T10	35
11	2	2	2	4	3	T11	36
	2	2	5	4	6	R11	
12	2	2	1	4	2	T12	37
	2	2	6	4	7	R12	12

Continued on next page

Table C-1. MAP/40 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To			
						50-Pin Connector	
Channel No.	IVC6 Card No.	Jack No.	Pin No.	Jack No.	PinNo.	T or R	Pin No.
13	3	1	3	5	4	R13	13
	3	1	4	5	5	T13	38
14	3	1	2	5	3	T14	39
	3	1	5	5	6	R14	14
15	3	1	1	5	2	T15	40
	3	1	6	5	7	R15	15
16	3	2	3	6	4	R16	16
	3	2	4	6	5	T16	41
17	3	2	2	6	3	T17	42
	3	2	5	6	6	R17	17
18	3	2	1	6	2	T18	43
	3	2	6	6	7	R18	18
19	4	1	3	7	4	R19	19
	4	1	4	7	5	T19	44
20	4	1	2	7	3	T20	45
	4	1	5	7	6	R20	20
21	4	1	1	7	2	T21	46
	4	1	6	7	7	R21	21
22	4	2	3	8	4	R22	22
	4	2	4	8	5	T22	47
23	4	2	2	8	3	T23	48
	4	2	5	8	6	R23	23
24	4	2	1	8	2	T24	49
	4	2	6	8	7	R24	24
25	5	1	3	1	4	R25	1
	5	1	4	1	5	T25	26

Continued on next page

Table C-1. MAP/40 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To			
						50-Pin Connector	
Channel No.	IVC6 Card No.	Jack No.	Pin No.	Jack No.	PinNo.	T or R	Pin No.
26	5	1	2	1	3	T26	27
	5	1	5	1	6	R26	2
27	5	1	1	1	2	T27	28
	5	1	6	1	7	R27	3
28	5	2	3	2	4	R28	4
	5	2	4	2	5	T28	29
29	5	2	2	2	3	T29	30
	5	2	5	2	6	R29	5
30	5	2	1	2	2	T30	31
	5	2	6	2	7	R30	6
31	6	1	3	3	4	R31	7
	6	1	4	3	5	T31	32
32	6	1	2	3	3	T32	33
	6	1	5	3	6	R32	8
33	6	1	1	3	2	T33	34
	6	1	6	3	7	R33	9
34	6	2	3	4	4	R34	10
	6	2	4	4	5	T34	35
35	6	2	2	4	3	T35	36
	6	2	5	4	6	R35	11
36	6	2	1	4	2	T36	37
	6	2	6	4	7	R36	12
37	7	1	3	5	4	R37	13
	7	1	4	5	5	T37	38
38	7	1	2	5	3	T38	39
	7	1	5	5	6	R38	14

Continued on next page

Table C-1. MAP/40 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To			
						50-Pin Connector	
Channel No.	**IVC6 Card No.**	**Jack No.**	**Pin No.**	**Jack No.**	**PinNo.**	**T or R**	**Pin No.**
39	7	1	1	5	2	T39	40
	7	1	6	5	7	R39	15
40	7	2	3	6	4	R40	16
	7	2	4	6	5	T40	41
41	7	2	2	6	3	T41	42
	7	2	5	6	6	R41	17
42	7	2	1	6	2	T42	43
	7	2	6	6	7	R42	18

Pinouts for Asynchronous Connections

Table C-2 lists the pinouts for the COM1 asynchronous port on the rear of the MAP/40. Figure C-2 shows pinouts for the modular jacks on the 8-port asynchronous card. Figure C-3 shows pinouts for the terminal/printer or modem adapters.

Table C-2. COM1 Pinouts

Pin No.	Signal	Signal
1	Data Carrier Detect (DCD)	Input
2	Receive Data (RX)	Input
3	Transmit Data (TX)	Output
4	Data Terminal Ready (DTR)	Output
5	Signal Ground (GND)	Bidirectional
6	Data Set Ready (DSR)	Output
7	Request to Send (RTS)	Output
8	Clear to Send (CTS)	Input
9	Ring Indicator (RI)	Input

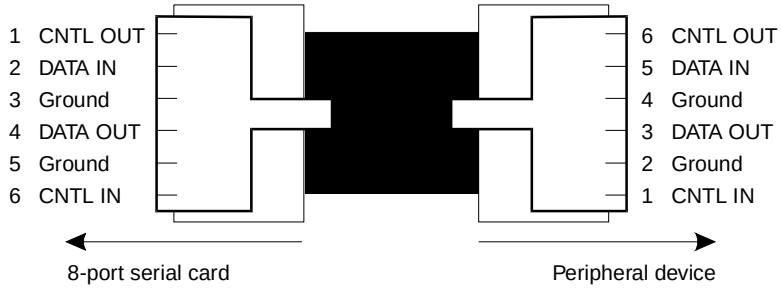


Figure C-2. Pinout Connections for Modular Jacks on the 8-Port Asynchronous Circuit Card

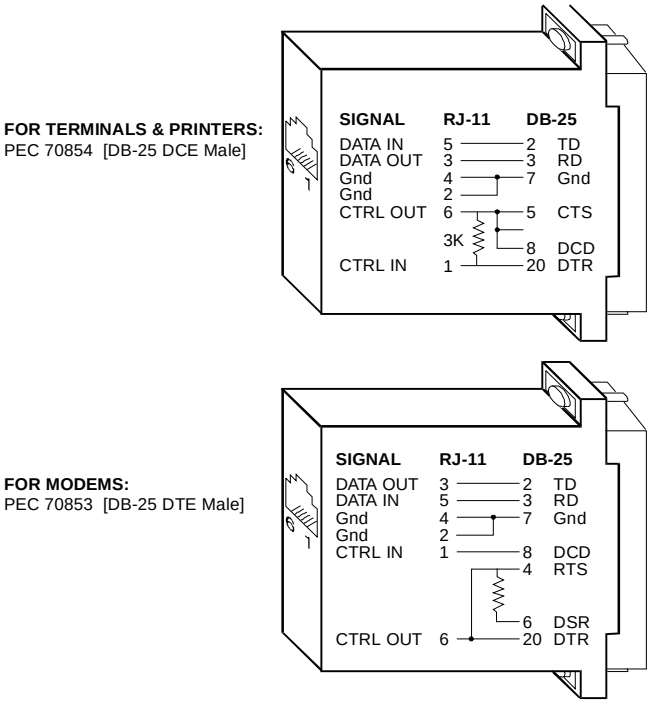


Figure C-3. Pinout Connections for DTE or DCE Devices

Pinouts for Peripheral Devices

Table C-3 shows pinouts for the DIN receptacles for keyboard connection. These receptacles are on the front and rear of the MAP/40. Table C-4 shows pinouts for the 25-pin D-subminiature connector for printer connection. This connector is on the faceplate of the Pentium card.

Table C-3. Pinout Connections for the Keyboard

Pin No.	Signal
1	Clock
1	Data
3	Reset
4	Ground
5	+5 Volts

Table C-4. Pinout Connections for a Printer

Pin No.	Description	Pin No.	Description
1	- Strobe	10	- Acknowledge
2	+ Data Bit 0	11	+ Busy
3	+ Data Bit 1	12	+ Paper Feed
4	+ Data Bit 2	13	+ Select
5	+ Data Bit 3	14	- Auto Feed
6	+ Data Bit 4	15	- Error
7	+ Data Bit 5	16	- Init. Printer
8	+ Data Bit 6	17	- Select Printer
9	+ Data Bit 7	18	Ground

Cable Connectivity

D

Overview

This appendix details external connectivity and cabling from the MAP/40 platform to the following:

- Lucent Technologies switches:
  - — DEFINITY® G1, G3 and System 74 R1V3
  - — DEFINITY G2 and System 85 R2V4
- Networks
- Terminals and distant modems

NOTE:
For switches such as the 5ESS® and DMS-100, see the individual documents associated with those switches for cable connectivity information.

Tables which list cable ordering numbers and lengths are provided at the end of this appendix should you need to order cables.

Purpose

This appendix provides procedures and illustrations for connections to the switch, network, or terminals to help you make the connections made at those devices.

Slot Locations

MAP/40 Circuit Cards

The following sections detail the fixed and variable assignments for circuit cards installed in the MAP/40.

Fixed Assignments

Table D-1 idenifies the slot assignments in the MAP/40 that are not variable in their arrangement

Table D-1. Fixed Slot Locations of MAP/40

Slot Number	Circuit Card	Required?
12	VGA Controller Card	Yes
11	External SCSI Connector	Yes
10	P5 CPU with on-board SCSI	Yes
9	Remote Maintenance Circuit Card	No

Variable Assignments

The IVC6, LAN, and Multi-port Serial circuit cards have variable assignments in the MAP/40. These assignments depend on how many circuit cards have been installed. The following rules apply to the placement of optional circuit cards in the MAP/40. These rules presume that the required circuit cards are placed in the MAP/40 as specified in “Fixed Assignments” above.

- A maximum of seven IVC6 circuit cards is supported.
- All other circuit cards are supported as one per system.
- IVC6 circuit cards are assigned slots sequentially, starting with slot 1.
- The Multi-port Serial circuit card, if provided, goes in the highest available slot.
- The LAN circuit card, if provided, goes in the highest available slot after the Multi-port Serial circuit card, if provided, is installed.

The following tables outline the variable slot locations for optional circuit cards when all of the available slots are to be filled. Each column, with the addition of the required circuit cards listed in "Fixed Assignments" above, is a configuration. In Table D-2, for example, the first column represents a configuration that includes seven IVC6 circuit cards in slots 1 through 7, one LAN circuit card in slot 8, and no Multi-port Serial circuit cards.

Table D-2 lists the variable slot locations for configurations where the number of IVC6 circuit cards installed leaves the MAP/40 with only one slot available to accommodate either the LAN or Multi-port Serial circuit card.

Table D-2. Variable Slot Assignments When LAN and Multi-port Serial Circuit Cards are Mutually Exclusive

Circuit Card	Slots	Slots	Slots	Slots	Slots	Slots	Slots	Slots	Slots
IVC-6 (AYC10)	1-7	1-6	1-5	1-7	1-6	1-5	1-7	1-6	1-5
LAN	8	8	8	-	-	-	-	-	-
Multi-port Serial	-	-	-	8	8	-	-	-	-

Table D-2 lists the variable slot locations for configurations where the LAN circuit card and Multi-port serial circuit cards are mutually exclusive. The pairings are mutually exclusive when the number of IVC6 circuit cards installed leaves the MAP/40 with only two slots open.

Table D-3. Variable Slot Assignments When LAN + Multi-Port Serial Circuit Card Pairings are Mutually Exclusive

Circuit Card	Slots	Slots	Slots	Slots	Slots	Slots	Slots	Slots	Slots
IVC-6 (AYC10)	1-6	1-5	1-4	1-6	1-5	1-4	1-6	1-5	1-4
LAN	7	7	7	7	7	7	-	-	-
Multi-Port Serial	8	8	8	-	-	-	8	8	8

Table D-2 lists the variable slot locations for configurations where the LAN and Multi-port serial circuit cards are both included or excluded.

Table D-4. Variable Slot Assignments When LAN and Multi-Port Serial Circuit Cards are Both Included or Excluded

Circuit Card	Slots	Slots	Slots	Slots	Slots	Slots
IVC-6 (AYC10)	1-5	1-4	1-3	1-7	1-6	1-5
LAN	6	6	6	-	-	-
Multi-Port Serial	8	8	8	-	-	-

Overview of INTUITY CONVERSANT Serial Port Connections

Serial port connections from the INTUITY™ CONVERSANT® system to terminals, distant modems, or other customer equipment can be made either from COM1 (Serial Port 1) on the back of the MAP/40 or from the Multi-port Serial circuit card.

If there is only one serial connection to be made, use COM1 (Serial Port 1) on the back of the MAP/40. If more than one serial connection is to be made, use the Multi-port Serial circuit card first (up to eight connections) and then use COM1.

See Table D-5 for circuit card slot locations on the platform. See Figure D-1 for an overview of serial port connections.

Table D-5. Serial Port Platform Locations

Circuit Card	Location
COM 1 (Serial Port 1)	Back of MAP/40
Multi-port Serial Card	See Table D-2, Table D-2, and Table D-2

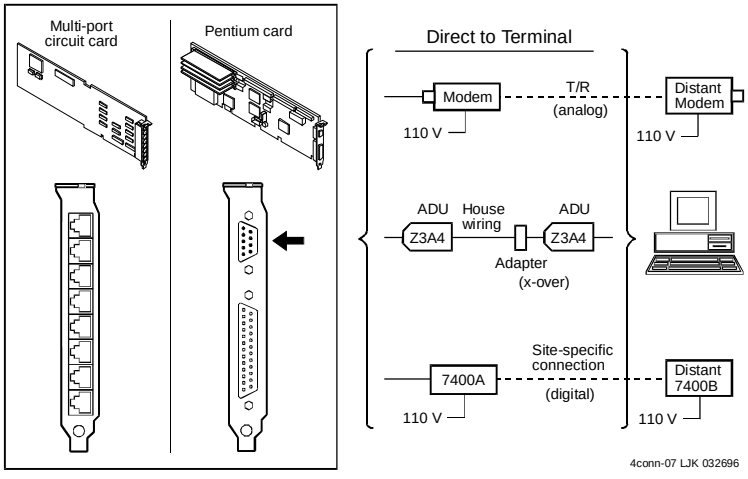


Figure D-1. Overview of Lucent INTUITY Serial Port Connections

Connecting Lucent INTUITY COM1 to Customer Equipment via a Modem

Use the following procedure and Figure D-2 to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/40.
2. Attach the other end of the RS-232 cable to a modem.
3. Make cable connections between the modem and the customer equipment.

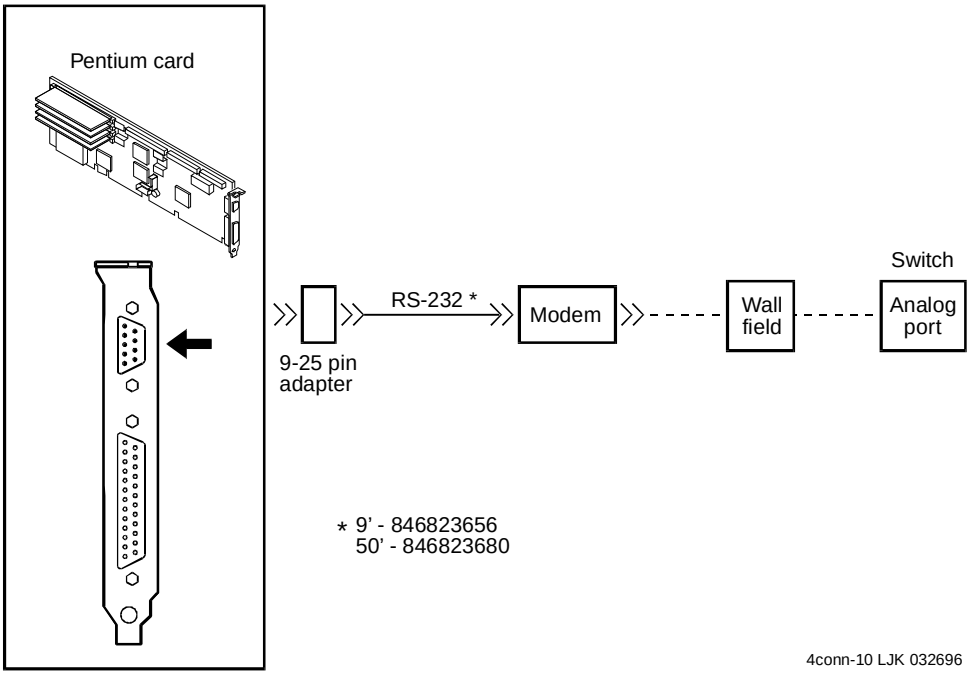


Figure D-2. Connecting Lucent INTUITY COM1 to Customer Equipment via a Modem

Connecting Lucent INTUITY COM1 to a 715 Terminal DCE Port via ADUs

Use the following procedure and Figure D-3 to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/40.
2. Attach the other end of the RS-232 cable to the ADU.
3. On the other end of the ADU, attach a D8AM crossover cord.
4. Connect the D8AM crossover cord to customer premises wiring.
5. At the other end of the customer premises wiring, attach the customer wiring to another ADU.
6. At the other end of that ADU, attach an RS-232 cable.
7. Attach the other end of this RS-232 cable to the 715 DCE port or other DCE device.

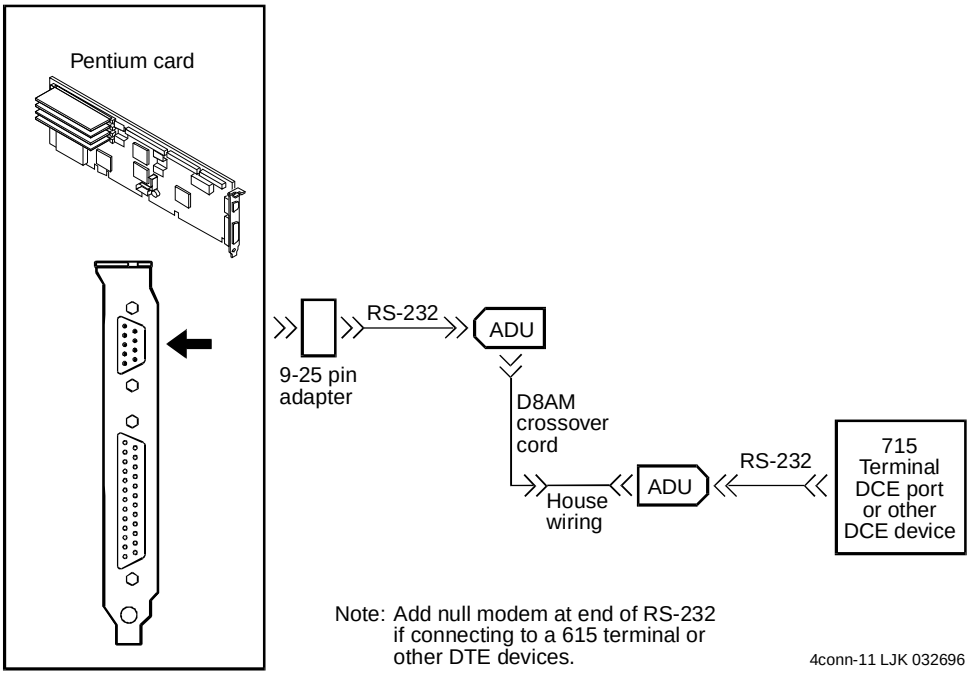


Figure D-3. Connecting Lucent INTUITY COM1 to a 715 Terminal DCE Port via ADUs

Connecting Lucent INTUITY COM1 to a Distant Data Module via a 7400A Data Module

Use the following procedure and Figure D-4 to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/40.
2. Attach the other end of the RS-232 cable to a 7400A data module.
3. Cable between the 7400A data module and the distant 7400B data module.

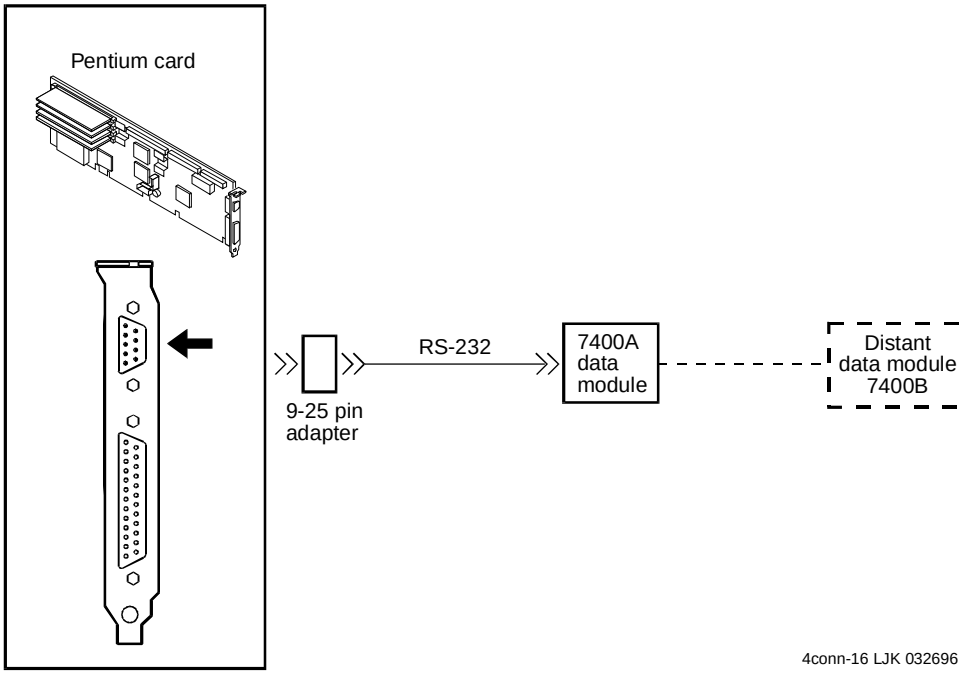


Figure D-4. Connecting Lucent INTUITY COM1 to a Distant Data Module via a 7400A Data Module

Connecting Lucent INTUITY COM1 to a 615 Terminal or Other DTE Device via a Null Modem

Use the following procedure and Figure D-5 to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/40.
2. Attach the other end of the RS-232 cable to the NULL modem.

   NOTE:
   The NULL modem must be provided locally.

3. On the other end of the NULL modem, attach another RS-232 cable.
4. Attach the other end of this RS-232 cable to the 615 terminal or other DTE device.

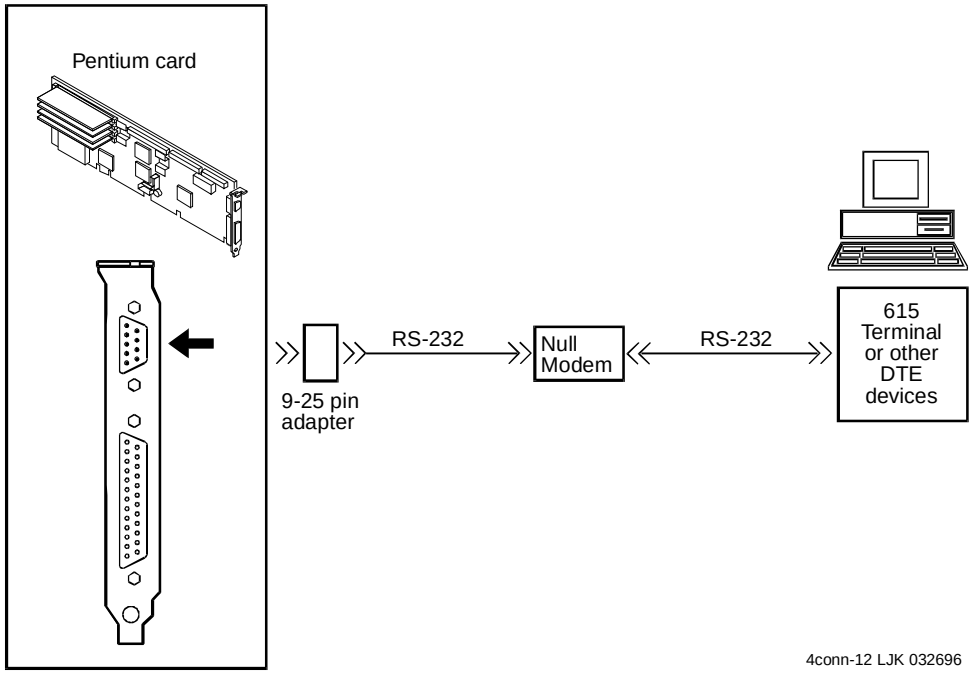


Figure D-5. Connecting Lucent INTUITY COM1 to a 615 Terminal via a Null Modem

Making a Direct Connection from Lucent INTUITY COM1 to a 715 Terminal or Other DCE Device

Use the following procedure and Figure D-6 to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/40 platform.
2. Attach the other end of the RS-232 cable to the 715 terminal DCE port or other DCE device.

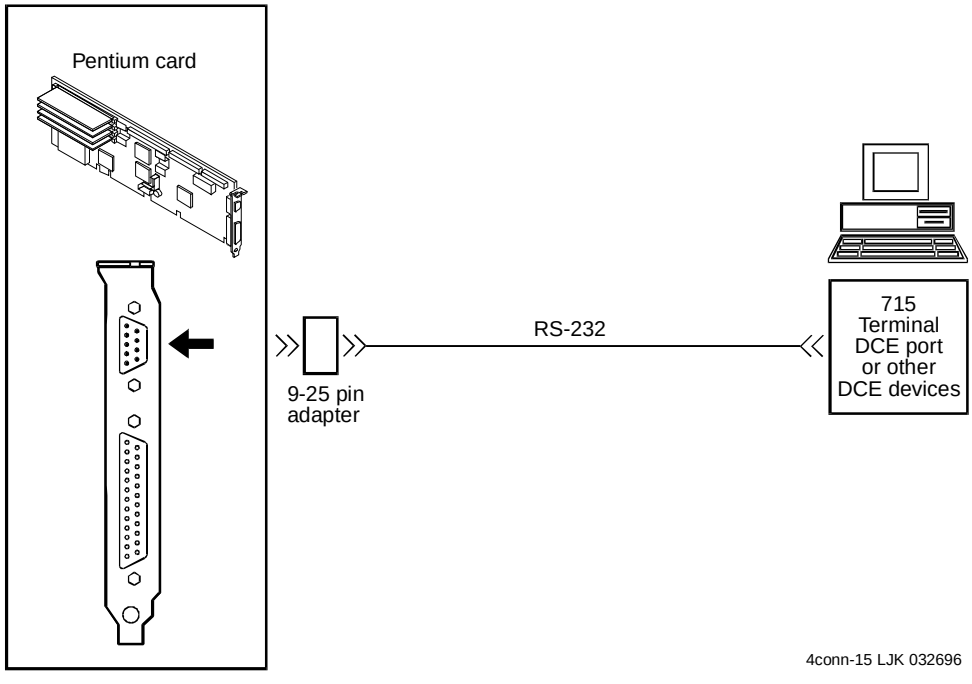


Figure D-6. Making a Direct Connection from Lucent INTUITY COM1 to a 715 Terminal or Other DCE Device

Connecting the Lucent INTUITY Multi-Port Serial Circuit Card to Customer Equipment via a Modem

Use the following procedure and Figure D-7 to make these connections.

1. Attach the 14-foot (4.3-meter) modular cable (provided with the circuit card) to the multi-port serial circuit card.
2. Attach the other end of the 14-foot (4.3-meter) modular cable (provided with the Multi-port Serial circuit card) to the DTE adapter.
3. Connect the DTE adapter to the DCE modem.
4. Connect the DCE modem to customer equipment.

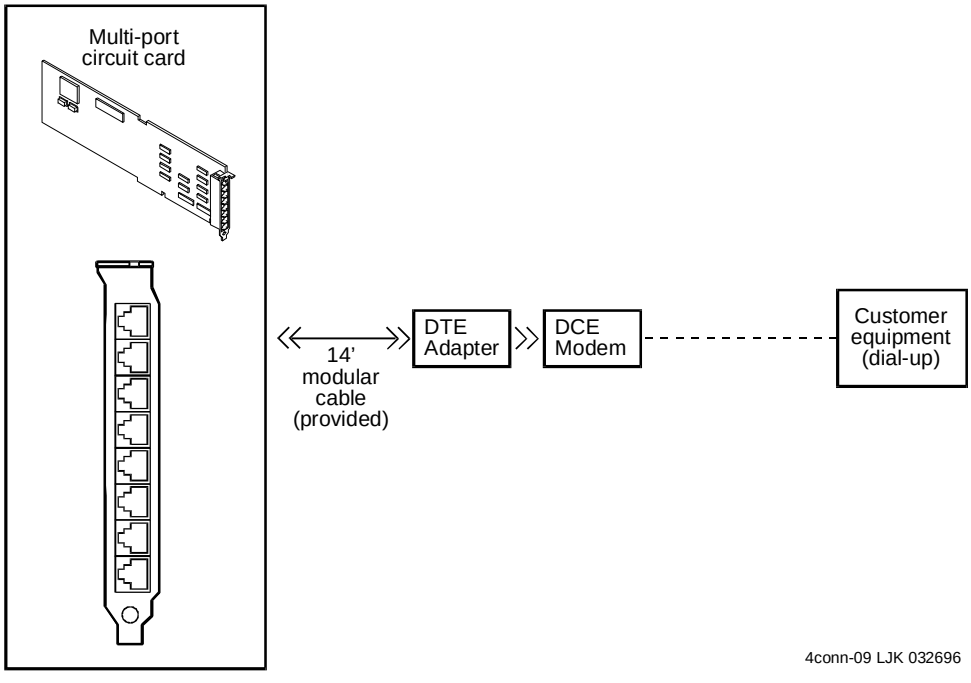


Figure D-7. Connecting the Lucent INTUITY Multi-Port Serial Circuit Card to Customer Equipment via a Modem

Connecting the INTUITY Multi-Port Circuit Card to a Terminal via ADUs

Use the following procedure and Figure D-8 to make these cable connections.

1. Attach the 14-foot (4.3-meter) modular cable (provided with the circuit card) to the Multi-port Serial circuit card.
2. Connect the other end of the 14-foot (4.3-meter) modular cable (provided with the Multi-port Serial circuit card) to the DTE adapter.

   DTE adapters are described in Chapter 1, ''Getting Started''.
3. Connect the DTE adapter to a 400D auxiliary power adapter if necessary. The MAP/40 may not have the needed power for the ADU connection.
4. Connect the 400D auxiliary power adapter to the ADU.
5. Attach a D8AM crossover cord to the other end of the ADU.
6. Connect the D8AM crossover cord to house wiring.
7. Connect another ADU to the other end of the house wiring.
8. Attach an RS-232 cable to the other end of this ADU.
9. Connect the other end of the RS-232 cable to the 715 terminal or other DCE device.

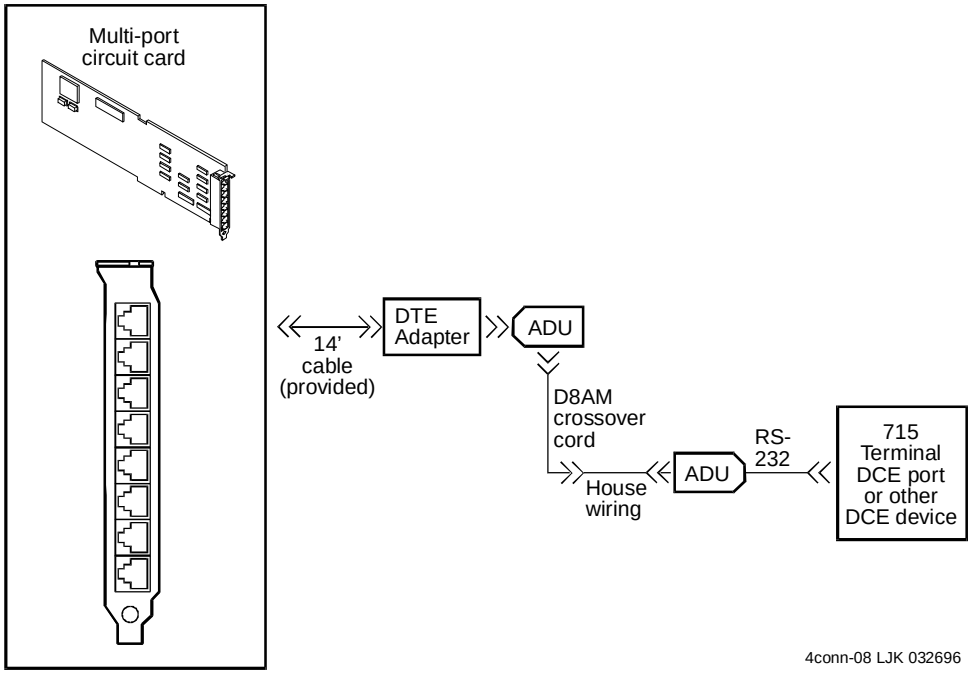


Figure D-8. Connecting the Lucent INTUITY Multi-port Serial Circuit Card to a Terminal via ADUs

Connecting the Lucent INTUITY Multi-Port Serial Circuit Card to a Distant Data Module via a 7400A Data Module

Use the following procedure and Figure D-9 to make these cable connections.

1. Attach the 14-foot (4.3-meter) modular cable (provided with the circuit card) to the Multi-port Serial circuit card.
2. Attach the other end of the 14-foot (4.3-meter) modular cable (provided with the Multi-port Serial circuit card) to the DTE adapter.
3. Connect the DTE adapter to the 7400A data module.
4. Make the connections between the 7400A data module and the 7400B data module.

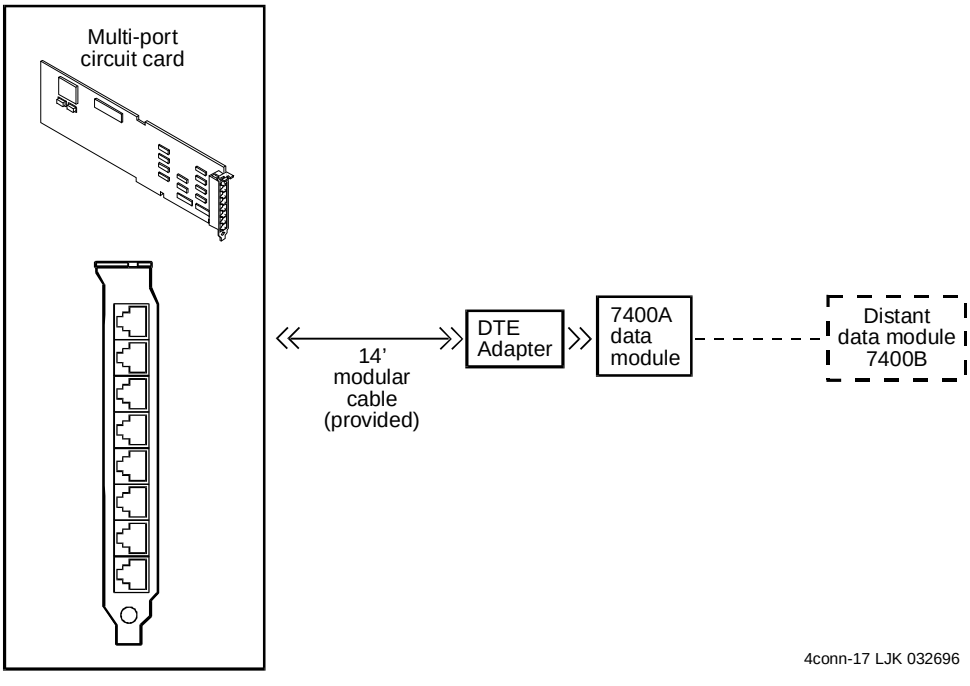


Figure D-9. Connecting the Lucent INTUITY Multi-port Serial Circuit Card to a Distant Data Module via a 7400A Data Module

Making a Direct Connection from the Lucent INTUITY Multi-port Serial Circuit Card to a 615 Terminal or Other DTE Devices

Use the following procedure and Figure D-11 to make these cable connections.

1. Attach the 14-foot (4.3-meter) modular cable (provided with the circuit card) to the Multi-port Serial circuit card.
2. Attach the other end of the 14-foot (4.3-meter) modular cable (provided with the Multi-port Serial circuit card) to the DTE adapter.
3. Connect the DTE adapter to the NULL modem.

   NOTE:
   The NULL modem must be provided locally.

4. Connect an RS-232 cable to the NULL modem.
5. Connect the other end of the RS-232 cable to a 615 terminal or other DTE device.

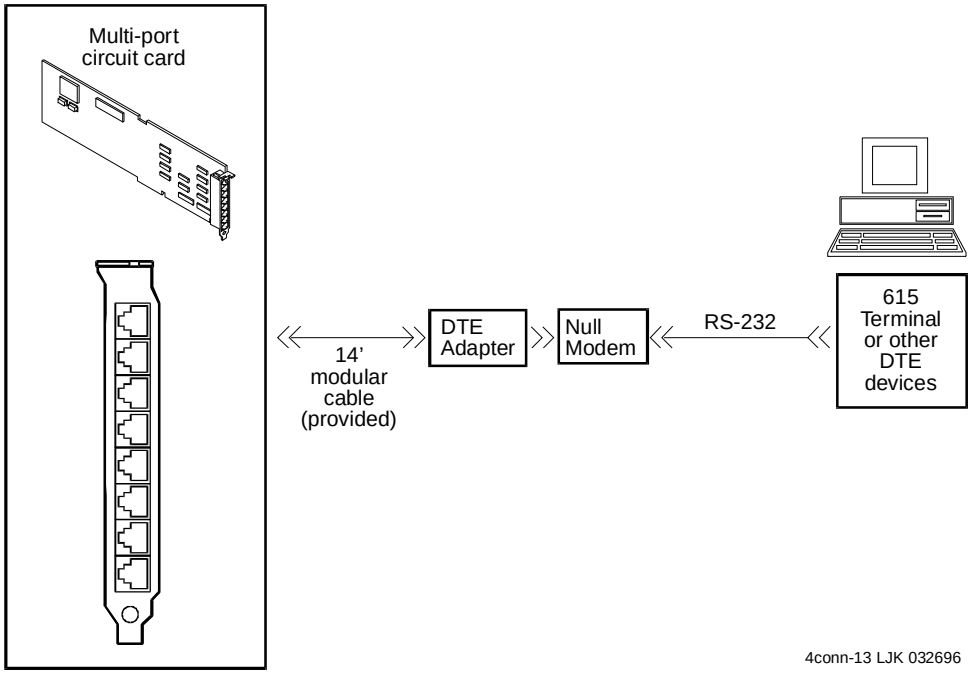


Figure D-10. Making a Direct Connection from Lucent INTUITY Multi-port Serial Circuit Card to 615 Terminal or other DTE Devices

Making a Direct Connection from the Lucent INTUITY Multi-port Serial Circuit Card to 715 Terminal or Other DCE Devices

Use the following procedure and Figure D-11 to make these cable connections.

1. Attach the 14-foot (4.3-meter) modular cable (provided with the circuit card) to the Multi-port Serial circuit card.
2. Attach the other end of the 14-foot (4.3-meter) modular cable (provided with the Multi-port Serial circuit card) to the DTE adapter.
3. Connect an RS-232 cable to the other end of the DTE adapter.
4. Connect the other end of the RS-232 cable to the 715 terminal DCE port or other DCE devices.

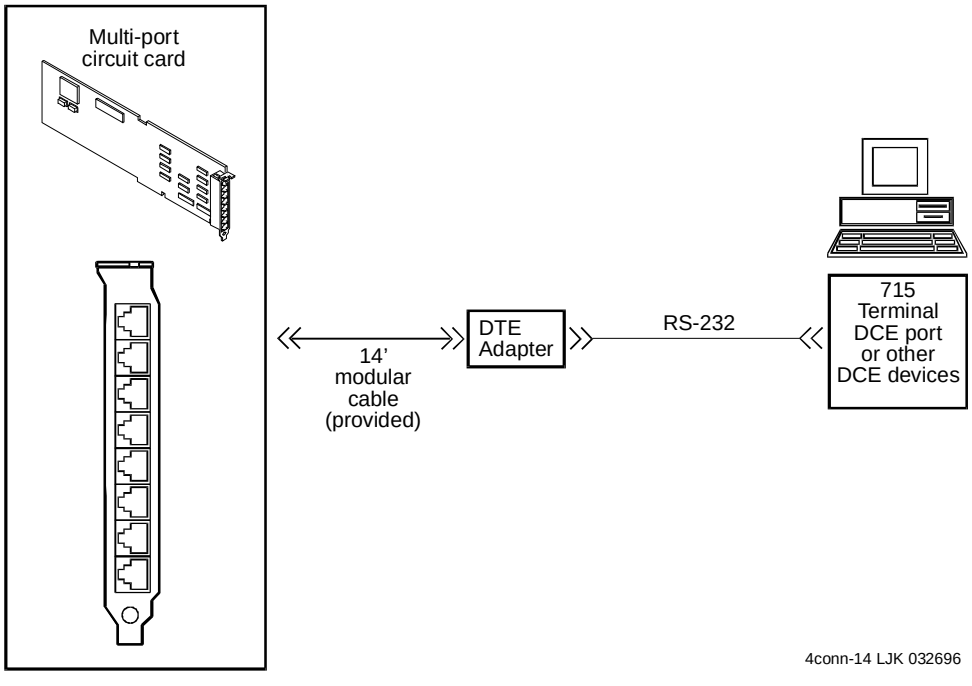


Figure D-11. Making a Direct Connection from Lucent INTUITY Multi-Port Serial Circuit Card to a Terminal or other DCE Devices

Cable and Adapter Ordering Numbers

Table D-6 and Table D-7 list cables, adapters, and ordering numbers for the following types of connections:

- Tip/Ring (voice) connections

  NOTE:
  The AYC29 circuit card is used for Australian installations.

- Serial (Multi-port Serial circuit card

Table D-6. Port Line Customer Interface Cable Types and Lengths for Tip/Ring – (Voice) Connections

Type	Length (feet/meter)	ED Number
G37A, F-to-M	15/4.6	ED5P208-30
G37B, F-to-M	20/6.1	ED5P208-30
G37C, F-to-M	25/7.6	ED5P208-30
G37D, F-to-M	30/9.1	ED5P208-30
G37E, F-to-M	35/10.7	ED5P208-30
G37F, F-to-M	40/ 2.2	ED5P208-30
G37G, F-to-M	45/13.7	ED5P208-30
G37H, F-to-M	50/ 5.2	ED5P208-30
G37J, F-to-M	55/ 6.8	ED5P208-30
G37K, F-to-M	60/18.3	ED5P208-30
G37L, F-to-M	65/19.8	ED5P208-30
G37M, F-to-M	70/21.3	ED5P208-30
G37N F-to-M	75/22.9	ED5P208-30
G37P, F-to-M	80/24.4	ED5P208-30
G37Q, F-to-M	85/25.9	ED5P208-30
G37R, F-to-M	90/27.4	ED5P208-30
G37S, F-to-M	95/29	ED5P208-30
G37T, F-to-M	100/30.5	ED5P208-30
G37U, F-to-M	125/38.1	ED5P208-30
G37V, F-to-M	150/45.7	ED5P208-30
G37W, F-to-M	175/53.3	ED5P208-30
G37X, F-to-M	200/61	ED5P208-30
G37Y,F-to-M	300/91.4	ED5P208-30

Continued on next page

Table D-6. Port Line Customer Interface Cable Types and Lengths for Tip/Ring – (Voice) Connections — *Continued*

G36A, F-to-F	15/4.6	ED5P208-30
G36B, F-to-F	20/6.1	ED5P208-30
G36C, F-to-F	25/7.6	ED5P208-30
G36D, F-to-F	30/9.1	ED5P208-30
G36E, F-to-F	35/10.7	ED5P208-30
G36F F-to-F	40/12.2	ED5P208-30
G36G, F-to-F	45/13.7	ED5P208-30
G36H, F-to-F	50/15.2	ED5P208-30
G36J, F-to-F	55/16.8	ED5P208-30
G36K, F-to-F	60/18.3	ED5P208-30
G36L, F-to-F	65/19.8	ED5P208-30
G36M, F-to-F	70/21.3	ED5P208-30
G36N, F-to-F	75/22.9	ED5P208-30
G36P, F-to-F	80/24.4	ED5P208-30
G36Q, F-to-F	85/25.9	ED5P208-30
G36R, F-to-F	90/27.4	ED5P208-30
G36S, F-to-F	95/29	ED5P208-30
G36T, F-to-F	100/30.5	ED5P208-30
G36U, F-to-F	125/38.1	ED5P208-30
G36V, F-to-F	150/45.7	ED5P208-30
G36W F-to-F	175/53.3	ED5P208-30
G36X, F-to-F	200/61	ED5P208-30
G36Y, F-to-F	300/91.4	ED5P208-30

Table D-7. Cables (Length), Adapters, Comcodes – Serial Configurations

Cable/Adapter	**Length** feet / meters	**Comcode**
Modular cord with 10 wires and terminated with RJ45 connectors	10/3	846362705
	25/7.6	846362713
	50/15.2	846362721
Modular cord with 8 wires	7/2.1	403600968
	14/4.3	403600976
	25/7.6	403600984
	50/15.2	403600992
Null modem cable 25-pin, male to male	7/2.1	524565959
	14/4.3	524565967
	25/7.6	524565975
	50/15.2	524565975
Null modem cable, 25-pin, male to female	6/1.8	524163417
Modem extension cable 25-pin, male to male M25A	7/2.1	524161742
	14/4.3	524161759
	25/7.6	524161767
	50/15.2	524161775
Modem extension cable 25-pin, male to female M25B	7/2.1	524080652
	12/3.7	524080660
	25/7.6	524080678
	50/15.2	524080686
Parallel printer cable, 25-pin male to 36-pin male	7/ 2.1	524305000
Terminal/Printer 10-pin, modular to 25-pin male	Adapter	846362739
Modem 10-pin modular to 25-pin male	Adapter	846362754
Modem 10-pin modular to 25-pin female	Adapter	846362762
Terminal/printer 8-pin modular to 25-pin male	Adapter	403602717
Modem 8-pin modular to 25-pin male	Adapter	403417538

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