Avaya Interchange

Release 5.4

MAP/100P System Installation

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Comcode 700223803
Issue 4
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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.

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

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EMC Directive	89/336/EEC
Low-Voltage Directive	73/23/EEC
CE	The "CE" mark affixed to the equipment means that it conforms to the above directives.

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

Acknowledgment
This document was prepared by Technical Publications, Avaya Inc., Columbus, OH and Milpitas, CA.

Contents

About This Book

Purpose

This book, *Avaya Interchange Release 5.4 MAP/100P System Installation*, 585-313-809, Issue 3, contains instructions for installing an Avaya Interchange voice messaging system that has been assembled, loaded, and tested (ALT) at the Avaya factory. It includes procedures for unpacking, setup, configuration, initial administration, acceptance testing, and cut to service. These procedures apply to the MAP/100P platform and the Avaya Interchange system and most of its optional features.

Intended Audiences

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

- Field support
- Helpline personnel
- Sales support
- Design support
- Factory ALT personnel
- Provisioning project managers

We assume that the primary users of this book have completed the Avaya Interchange hardware installation training course (see Related Resources).

Release History

This is the third release of this book.

How to Use This Book

Although this book is designed to step you through the complete installation process, you can also use it as a quick reference to obtain specific information you might need about a particular topic.

For Complete Installation Instructions

Read Chapter 1, Getting Started, before you begin for information about prerequisites, including site preparation and the tools and information you need to complete the installation successfully. Read and use each chapter in the order presented. The chapters will take you step by step through the procedures you must perform to install a factory ALT Avaya Interchange system.

For an Installation Checklist

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 the parts of this book where you will find the complete procedures.

For Troubleshooting Information

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

For Connectivity and Pinout Information

For Pinout Information

For supplemental pinout information, see Appendix C, Pinouts.

For Cable and Adapter Ordering Information

For information about connecting and ordering cables, see Appendix D, Cable Connectivity.

Modem Information

For modem information, see Appendix E, Modems.

To Locate Other Specific Topics

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

Conventions Used in This Book

The following terms are used in this book:

- 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 terms “subscriber” and “user” are interchangeable terms that describe a person administered on the Interchange system. The term “subscriber” is the preferred term in the text and is the command word you must type at the command line, for example, **change subscriber “Jane Doe.”**

- The Avaya Interchange system displays *screens*, *windows*, and *menus.* Screens make up the Interchange user interface through which you can enter data or commands or access windows or menus (Figure 1). Windows show and request system information (Figure 2). Menus present options from which you can choose to view another menu, screen or window (Figure 3).

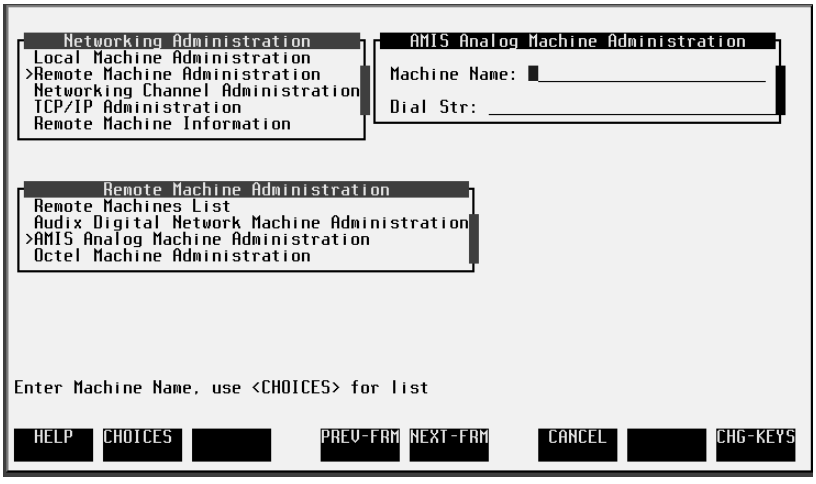

Figure 1. Example of an Avaya Interchange Screen

Feature Options (Read Only)

Feature Option	Current	Maximum
Aria Digital Ports	8	8
Call Detail Recording (CDR)	ON	N/A
Enterprise Lists Administration	ON	N/A
High speed digital ports	2	12
Low speed digital ports	2	12
Max Number of Octel Nodes	6	50
Maximum Number of AMIS Nodes	6	50
Maximum Number of Digital Nodes	20	50
SCSI Disk Mirroring	OFF	N/A
SNMP	ON	N/A
Serenade Digital Ports	8	8
TCP/IP Administration	ON	N/A
TCPIP digital ports	12	12
Text-to-Speech Sessions	0	30
VPIM Ports	5	10
hours_of_speech	200	1114
voice_ports	6	6

Figure 2. Example of an Avaya Interchange Window

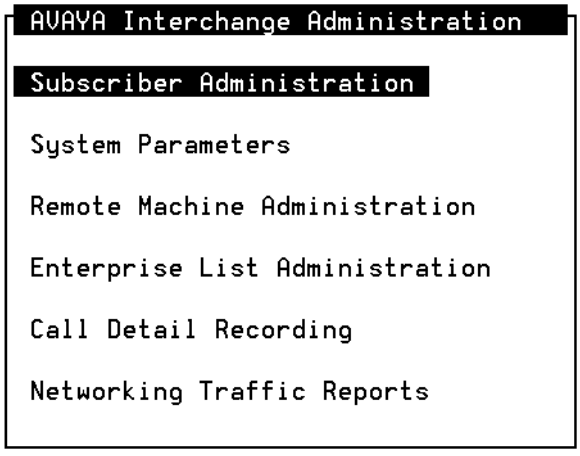

Figure 3. Example of an Avaya Interchange Menu

Terminal Keys

The following list identifies actions you perform on the computer keyboard:

- Keys that you press on the computer *keyboard* are shown 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 the computer *keyboard* (that is, you hold down the first key while pressing the second and third keys) are shown 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.

- A combination keystroke is a series of keystrokes that combines two key functions plus a third key. You press and hold down the first key, press the second key, and then release those keys and press a third key. A combination keystroke is represented as an equation. For example, an instruction to press and hold while typing the letter “d” and then typing the number “1” is shown as

  Press ALT– D 1.

- Function keys on the computer keyboard or system screens, also known as *soft keys*, are shown as round boxes followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 2 is shown as

  Press F2 (Choices).

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

  Press [1] to record a message.

Screen Displays

The following list identifies formats used in Interchange screens:

- 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 Avaya Interchange Main Menu and select

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

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

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

Data Entry Conventions

The following list identifies how bold and italic type are used:

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

  Example 1:

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

Example 2:

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

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

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

Safety and Security Alert Labels

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

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

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

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

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

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The following trademarked products are mentioned in books in the Interchange document set:

- 5ESS is a registered trademark of Lucent Technologies.
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- AUDIX is a registered trademark of Avaya Inc.
- cc:Mail is a registered trademark of cc:Mail, a subsidiary of Lotus Development Corporation.

- COMSPHERE is a registered trademark of Paradyne Corp.
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- NEC is a registered trademark of NEC Telephone, Inc.
- Netware is a registered trademark of Novell, Inc.
- Netware Loadable Module is a trademark of Novell, Inc.
- Northern Telecom is a registered trademark of Northern Telecom Limited.
- Novell is a registered trademark of Novell, Inc.
- Paradyne is a registered trademark of Paradyne Corporation.
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- SL-1 is a trademark of Northern Telecom Limited.
- softFAX is a registered trademark of VOXEM, Inc.
- SUPERSET is a trademark of Mitel Corporation.
- SX-100 is a trademark of Mitel Corporation.
- SX-200 is a trademark of Mitel Corporation.
- SX-2000 is a trademark of Mitel Corporation.

- Telephony OneStop is a trademark of Lotus Development Corporation.
- TMI is a trademark of Texas Micro Systems, Inc.
- UNIX is a registered trademark of UNIX System Laboratories, Inc.
- VB-PC is a trademark of Voice Technologies Group, Inc.
- VoiceBridge is a registered trademark of Voice Technologies Group, Inc.
- VOXEM is a registered tradesman of VOXEM, Inc.
- VT100 is a trademark of Digital Equipment Corporation.
- Windows is a trademark of Microsoft Corporation.

Related Resources

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

Documentation

NOTE:
Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an Avaya Interchange system. See the Avaya online catalog for more information on other books in the set.

Use the following books in conjunction with this installation book:

- *Avaya Interchange Release 5.4 MAP 100/P System Maintenance* for a detailed source of complete maintenance procedures
- *Avaya Interchange Release 5.4 Installation and System Recovery* for a source of procedures for installing RFUs and system recovery
- *Avaya Interchange Release 5.4 Administration* for a source of information about initial administration tasks

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

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

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

Training

For more information on Interchange training, call the Avaya University at one of the following numbers:

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

Technical Assistance

The following resources are available for technical assistance:

- Within the United States:
  - Call 1-800-242-2121, extension 85474.
- Within Canada:
  - For all systems, call 1-800-242-1234.
- Within any other country:
  - For all systems, call your local distributor.

How to Comment on This Book

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Avaya Inc.
Product Documentation
Room D1-B53
1300 W. 120th Avenue
Denver, Colorado 80234-2703 US

You may also fax your comments to the attention of the Avaya Interchange writing team at (303) 538-9625.

Product Support

If you have questions about how to use Avaya Interchange, contact one of the following resources:

- your Avaya Account Representative
- the Avaya Remote Support Center at + 800-242-2121

Getting Started

1

Overview

This chapter describes:

- Site preparation, including environmental, weight, and space considerations, and power requirements for the MAP/100P
- Installation prerequisites, including 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) Avaya Interchange system.

Purpose

The purpose of this chapter is to ensure that:

- The customer site meets the physical requirements for installation of the MAP/100P.
- You are prepared with the tools and information you need to complete the Avaya Interchange system installation successfully.

Site Preparation

This section describes physical requirements for the installation site, which include:

- Environmental considerations
- Installation area considerations
- Weight and space requirements
- Power requirements

Environmental Considerations

Place the MAP/100P 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 +38°C (+50 to +100°F)	5 to 80%, noncondensing
Nonoperating (when the MAP/100P is being shipped or stored)	-40 to +60°C (-40 to +140°F)	5 to 95%, noncondensing

Installation Area Considerations

Observe the following when determining where to place the MAP/100P:

- 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/100P is approximately 2000 BTU.

- Provide surge protection and power backup in areas with volatile power (brownouts 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.

Weight and Space Considerations

Table 1-2 lists the approximate weight, size, and depth of the primary MAP/100P hardware components. Note that the weight listed includes only the basic chassis, cartridge tape drive, diskette drive, four hard disks, and three circuit cards.

Table 1-2. Weight and Space Considerations

Equipment	Weight	Height	Width	Depth
Deskside MAP/100P	approx. 45.4 kg (approx. 100 lbs)	48.3 cm (19 in.)	30.5 cm (12 in.)	55.9 cm (22 in.)
Rack-mounted MAP/100P	approx. 36 kg (approx. 80 lbs)	30.5 cm (12 in.)	48.3 cm (19 in.)	55.9 cm (22 in.)
Monitor	6.7 kg (15 lbs)	34 cm (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.)

Power Requirements

The maximum power dissipation of a MAP/100P is 430 W.

Table 1-3 lists the power requirements for the MAP/100P and monitor.

Table 1-3. Power Requirements for MAP/100P and Monitor

Attribute	MAP/100P	Monitor
Volts AC (VAC) auto-sensing	100–240	110–240
Hertz (Hz)	50–60	50–87
Phase	Single	Single

(1 of 2)

Table 1-3. Power Requirements for MAP/100P and Monitor

Attribute	MAP/100P	Monitor
Amps		
■ U.S.	■ 12 (fused)	■ 3.0 (fused)
■ International	■ 6.3 (fused)	■ 1.5 (fused)
Input cords	NEMA[1] 5–15P plug; 3 m (9 ft) long	NEMA 5–15P 3 m (9 ft) long
Unit input receptacles	IEC-320 inlet	IEC-320 inlet

(2 of 2)

1. National Electrical Manufacturer's Association.

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

- Locate each unit within 2 meters (6 ft) 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).

CAUTION:
Use only shielded cables and equipment in conjunction with the MAP/100P 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.

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

Installation Prerequisites

This section lists the tools, system information, and documentation you must have to install and test the MAP/100P.

Tools

The following tools are recommended for installing the MAP/100P:

- 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 ballpoint pen

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

System Information

You need the following information to complete this installation:

- Installation information worksheets

  Your project manager or systems consultant will give you a series of worksheets prior to the installation. These worksheets need to have been completed with input from the customer.

  One of the worksheets that you will receive is the Installation Worksheet Inventory. This inventory lists the names of the individual worksheets that contain the information you need to complete this installation. If you do not receive a certain worksheet, verify the values that are needed and then use the system defaults for those particular values.

- Basic system procedures

  The installation procedures in this book assume that you know how to log on and off the system and how to navigate within the system using the Avaya Interchange system screens.

Documentation

Use the following documentation during installation of a MAP/100P:

- *Avaya Interchange Release 5.4 MAP/100P System Installation*, 585-313-809

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

- *Avaya Interchange Release 5.4 MAP 100/P System Maintenance*, 585-313-809

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

- *Avaya Interchange Release 5.4 Installation and System Recovery*, 585-313-809

  Use this book for a source of software installation procedures.

- *Avaya Interchange Release 5.4 Administration*, 585-313-809

  Use this book for a source of information about initial administration tasks.

- Avaya Interchange networking book

  Networking is an option on the Avaya Interchange system. If you are installing one of the optional networking features, you need one of the following corresponding networking books:

  — *AMIS Analog Networking,* 585-300-512

  — *INTUITY Digital Networking,* 585-310-567

Maintaining System Security

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

Password Security

To ensure password security:

- Change the passwords for the system administrator (sa), and craft logins before you begin the verification and acceptance of the Avaya Interchange system.
- While changing the passwords, follow exactly what is written on Worksheet 1: System Administration Initial Passwords.

NOTE:
Do not leave this worksheet unattended or allow anyone to see it.

- At the first opportunity, give this worksheet directly to the customer's designated representative.
- If you suspect that the security of any password has been compromised, notify your project manager or system administrator.

System Security

To ensure 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:

- Help screens located on the system
- Remote support center

System Help Screens

Online help is available for the Avaya Interchange system screens. To display Help screens or command choices, press F6 (Choices) from the field for which you want assistance. If valid entries can be specified, the system displays a list of options from which you can choose. Otherwise, the system displays general information about the field.

Remote Support Center

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

Unpacking the MAP/100P and Installing Nonassembled Hardware

2

Overview

This chapter describes:

- Unpacking and setting up the MAP/100P
- Saving packing materials
- Installing toroids
- Locating key components on the MAP/100P

Purpose

The purpose of this chapter is to:

- Facilitate unpacking and set up of the MAP/100P.
- Provide information about how to install toroids on the MAP/100P.
- Provide illustrations and descriptions of key components of the MAP/100P for reference during the installation.

Unpacking the MAP/100P

To unpack the MAP/100P:

1. Cut the bands that are holding the carton to the wooden pallet and that are around the box.
2. Remove the top of the box from the base.
3. Remove the accessory boxes and foam packing materials from the top.

   NOTE:
   Ensure that the MAP/100P is fully exposed and resting on the foam packing material of the base carton.

4. Remove the antistatic/vapor bag by peeling it as far as possible from around the sides of the MAP/100P.

   CAUTION:
   Do not attempt to lift the MAP/100P from the carton without the assistance of another person. You could injure yourself or damage the computer.

   CAUTION:
   Do not lift the chassis by the dress covers.

5. Lift the chassis from the bottom of the carton, using an appropriate lifting system.

Saving Packing Materials

Save the shipping carton and all packing materials to use in case you have to return the MAP/100P to the manufacturer. If you ordered multiple MAP/100Ps, saving one carton and packing materials should be sufficient. Also save the shipping cartons for the keyboard and monitor.l

Packing materials include:

- Antistatic bags
- Cardboard and foam inlays

  NOTE:
  The packing material also includes a plastic bag designed to protect the MAP/100P from moisture during shipment. Discard this bag. It is not reusable.

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

If you must return a MAP/100P to the manufacturer, complete the yellow BCS return repair tag and attach it to the unit. The factory information packet included in the MAP/100P carton contains the yellow return repair tag.

Installing Toroids

Before connecting peripherals or external devices, install ferrites to each interface cable. All installations require the use of ferrites to meet the individual country agency EMC (electromagnetic conductance) regulations. Installation of ferrites must be in accordance with these procedures to meet individual country compliances.

A toroid (Type A) is a 2.5-inch (6.4-cm) circular ferrite (comcode: 405853458). Toroids are made of a highly conductive carbon type of material that is very brittle. If a toroid ring fractures, replace it immediately.

A ferrite is a 1 inch (2.5 cm) rectangular device. Ferrites are made of a variable conductive carbon type material to reduce special EMC frequency band width. Available in split and solid ferrite forms, a special snap-back protective cover is used to install and keep the halves together.

Handle toroids and ferrites with care. Toroids and ferrites are easily fractured and broken. Immediately replace any fractured or broken toroids or ferrites as they are no longer effective for EMC control.

General Toroid and Ferrite Installation Guidelines

CAUTION:
Handle all toroids and ferrites with care. They are easily broken. Do not use any toroid or ferrite that is broken or fractured.

When installing toroids or ferrites:

- Place toroids or ferrites as close as possible to the computer chassis.
- Minimize the amount of cable between the toroids or ferrites and the chassis.

- Wrap cables as tightly as possible. Do not leave large amounts of slack in the loop(s).
- Use large cable ties behind the ferrites to help them to stay in place.

Installing a Toroid

The following is the general toroid installation procedure. Figure 2-1 shows an example of a paired toroid installation.

To install a toroid, do the following:

1. Wrap each modular cable tightly around the toroid.
2. Secure the cable(s) with a small cable tie to reduce cable movement.
3. Trim off any excess from the cable tie.

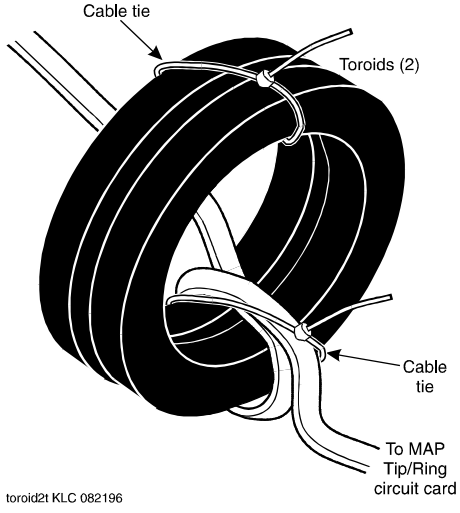


Figure 2-1. Example of Toroid Installation

Installing a Ferrite

To install a ferrite, do the following:

1. Open the ferrite by gently pulling the fastener away from the body of the ferrite.

2. Place the cord or cable in the groove inside the ferrite (Figure 2-2).

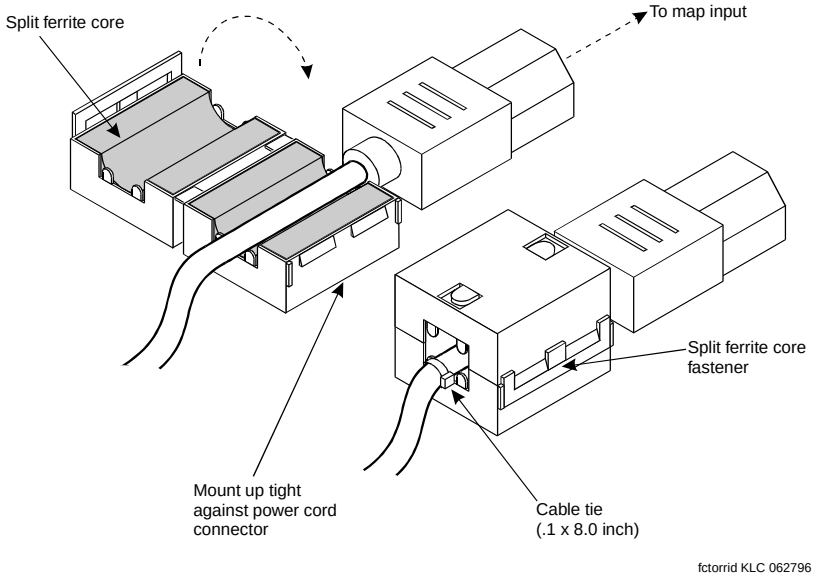


Figure 2-2. Example of Ferrite (Type B) Installation

3. If the cable is to be wrapped around the ferrite, wrap the cable tightly around half of the ferrite and place the cable in the groove (Figure 2-3).

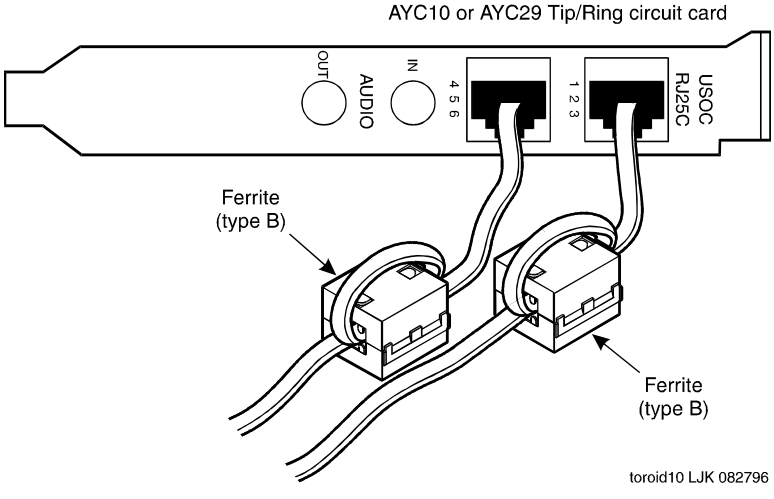


Figure 2-3. Example of Ferrite Installation

4. Gently snap the ferrite shut.
5. Attach a large cable tie directly behind the ferrite to secure it.

   NOTE:
   If the cable is wrapped around the ferrite, no cable tie is required.

6. Trim the cable tie.

MAP/100P Electromagnetic Conductance Reduction Components

Table 2-1 lists the ferrites to be installed on a MAP/100P system installed in North America and South America. Table 2-2 lists the ferrites to be installed on a MAP/100P system installed in Europe.

Table 2-1. North American and South American MAP/100P Ferrite Installation

Component	Location	Cabling
Tip/Ring circuit card (AYC10)	Place 1 ferrite on each modular cable.	Wrap the modular cable once around each ferrite.

Table 2-2. European MAP/100P Ferrite Installation

Component	Location	Cabling
LAN cable	Place 1 ferrite on each cable.	Wrap the cable once around each ferrite.
Multi-port serial circuit card	Place 1 ferrite on each cable.	Wrap the modular cord once around each ferrite.
Tip/Ring circuit card (AYC30)	Place 2 ferrites on each modular cable.	Wrap the modular cable once around each ferrite.
ACCX circuit card	Place 1 ferrite on the shielded serial cable.	Do not wrap the cable around the ferrite.

Installing a Deskside MAP/100P

If ordered with the MAP/100P, deskside kits are factory installed, and no additional assembly is needed.

Deskside units (Figure 2-4) are equipped with four casters that allow you to roll the chassis around as required. Once you position a unit, activate the locking mechanisms by pressing down on each caster lock to secure the MAP/100P in place.

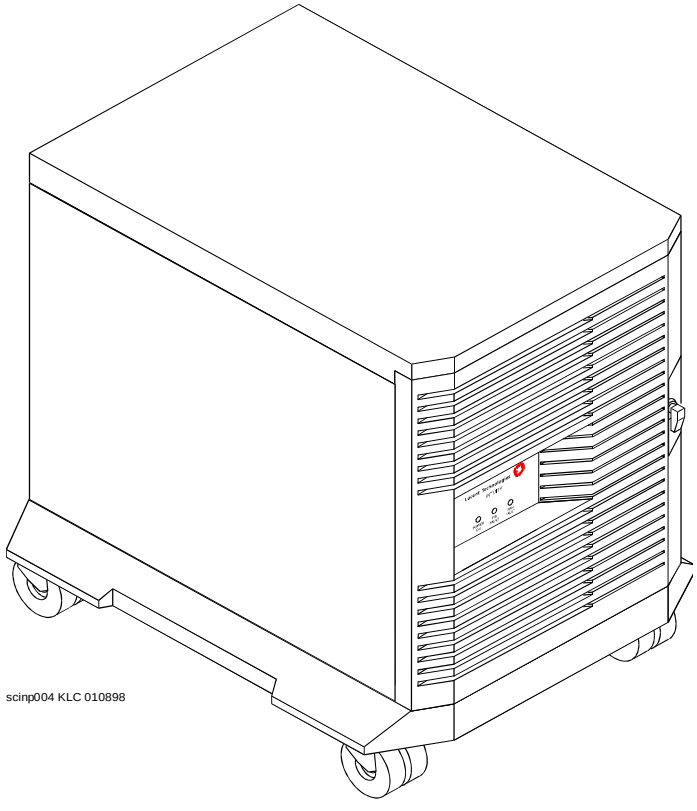


Figure 2-4. MAP/100P Deskside Unit

Installing a Rack-Mounted MAP/100P

Figure 2-5 shows a sample of a19-inch by 30-inch commercial cabinet with three rack-mount MAP/100P units. Each MAP/100P is shown with the front bezel removed.

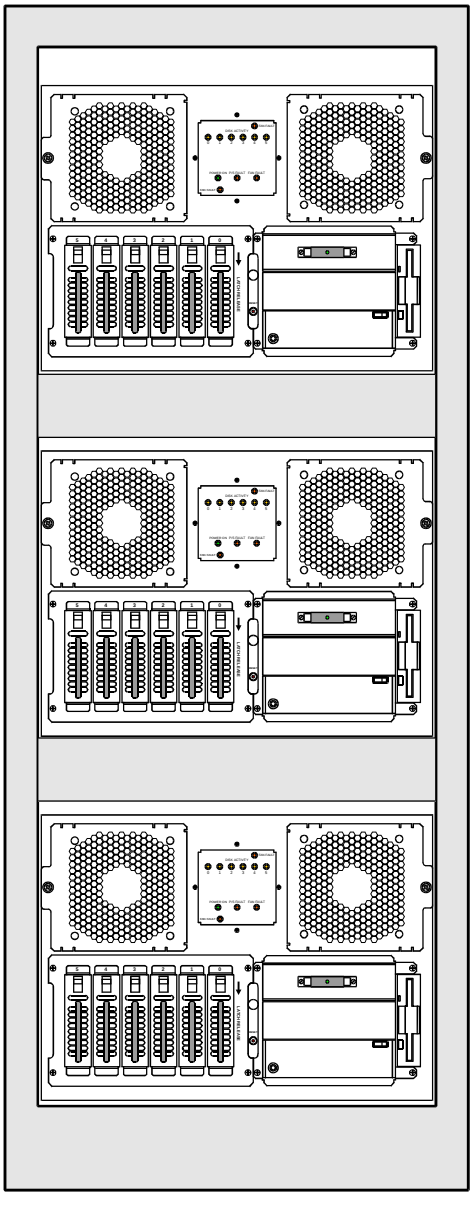


Figure 2-5. MAP/100P Sample Rack Mount with Front Bezels Removed

The MAP/100P Rack-Mount Kit

The MAP/100P mounts into a 19-inch commercial cabinet. Before beginning, verify that:

- At least two installers are present to mount the MAP/100P into the rack.
- The cabinet is between 28 and 30 inches deep.
- The cabinet height accommodates the number of units to be mounted.
- The commercial cabinet is secured to the floor before mounting the MAP/100P into the rack.

Table 2-3 lists the contents of the MAP/100P rack-mount kit. Item numbers correspond to those referred to in the procedure that follows.

Table 2-3. Contents of the MAP/100P Rack-Mount Kit

Part	Quantity	Factory Installed	Loose (technician installed)
Extension bracket	2		X
Right side unit support guide	1	X	
Left side unit support guide	1	X	
Front panel handle	1	X	
Rack bezel	1	X	
Miscellaneous screws, lock washers, clip nuts, and mounting hardware			X

Procedure

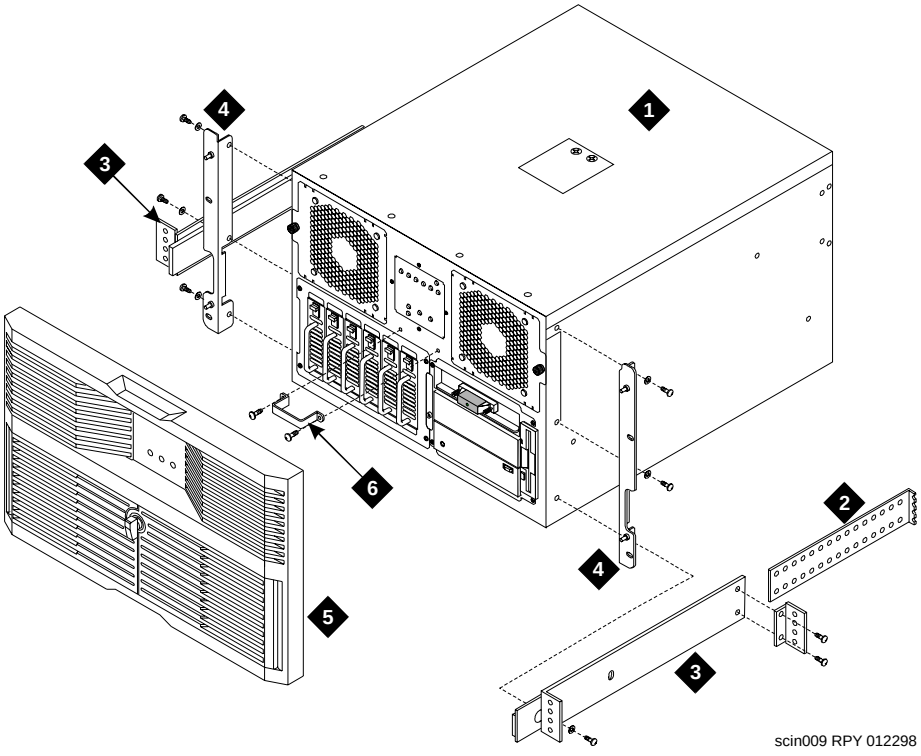
NOTE:
Use Figure 2-6 as a reference when you perform this procedure.

1. Ensure that you have the required tools:
   - Magnetic-tip Phillips screwdriver set
   - Open-end wrench (5/32-in.)
   - Open-end or box wrench (1/2-in.)
   - Socket set
2. Attach the handle to the front panel using two 8-32 5/15" screws.

3. Attach the extension bracket to the support guide using two 10-32 3/8" screws to allow the unit to slide in and out of the cabinet.
4. Attach support guides to the lower part of the unit using two 10-32 3/8" screws.

   NOTE:
   The support guides might have been attached before the unit shipped.

5. Extend the cabinet slides to the locked-out position.
6. While supporting the unit, align the front mounting holes of the slide with the holes on the unit.
7. Attach the unit to the cabinet slide using three screws.
8. Repeat step 3 through Step 7 for the other side of the unit.
9. Unlock the cabinet slide and slide the unit in and out of the cabinet to check for smooth travel.
10. Push the unit completely into the rack, and then close and lock the latches.
11. Install the front bezel:
    a. Open the bezel door.
    b. Slip the front bezel springs over the four ball studs.
    c. Close and lock (optional) the bezel door.



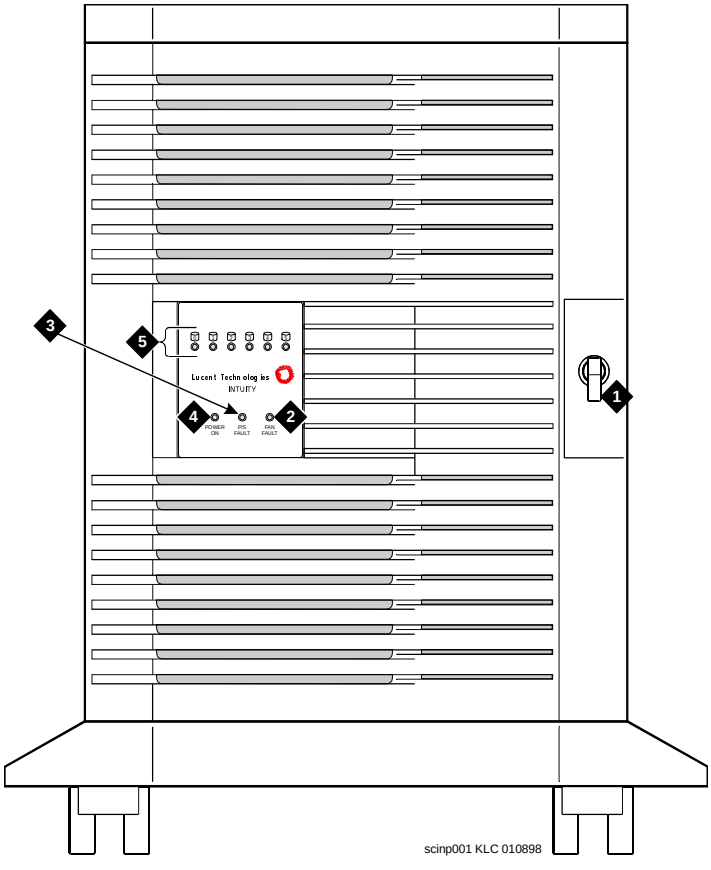
1. MAP/100P unit
2. Cabinet mounting bracket
3. Extension bracket support guide
4. Front bezel
5. Corner unit retaining bracket
6. Handle

Figure 2-6. Mounting the MAP/100P in a Rack

Locating Key Components on the MAP/100P

Use the following sections and diagrams to locate key components on the MAP/100P.

Figure 2-7 shows the deskside MAP/100P.

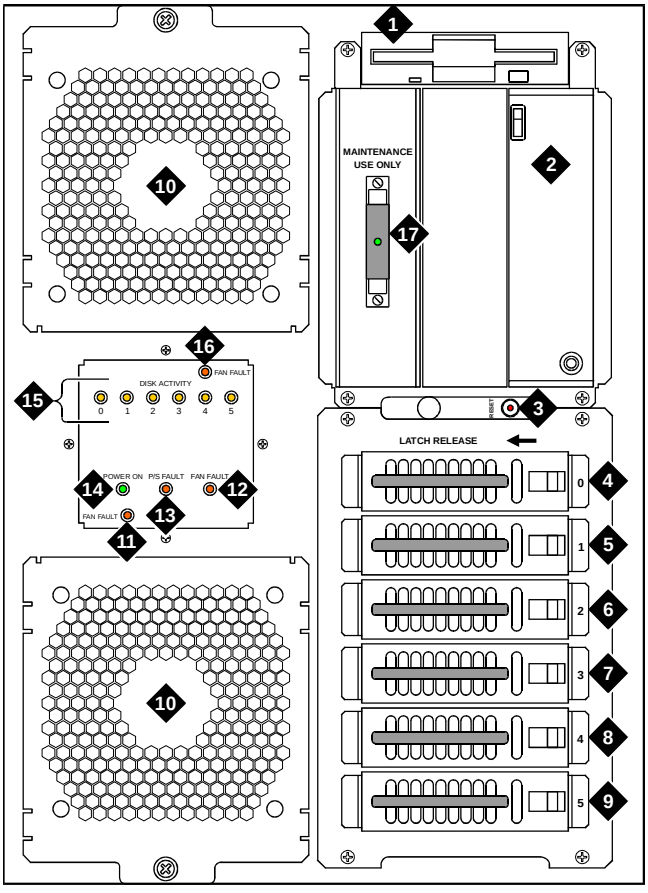


1. Open/close knob
2. Fan fault LED
3. Power supply fault LED
4. Power on LED
5. Disk activity indicator (per SCSI ID)

Figure 2-7. MAP/100P Deskside Unit with Front Bezel Closed

The Front of the Chassis

Figure 2-8 shows the front view of the MAP/100P with the front bezel (dress cover) removed. Table 2-4 provides a description of the components on the front of the MAP/100P.



1. Diskette drive
2. Cartridge tape drive
3. Reset push button
4. Hard disk drive 0
5. Hard disk drive 1
6. Hard disk drive 2
7. Hard disk drive 3
8. Hard disk drive 4
9. Hard disk drive 5
10. Circuit card cage fan
11. Fan fault LED
12. Fan fault LED
13. Power supply fault LED
14. Power on LED
15. Disk activity indicator (per SCSI ID)
16. Fan fault LED
17. SCSI terminator

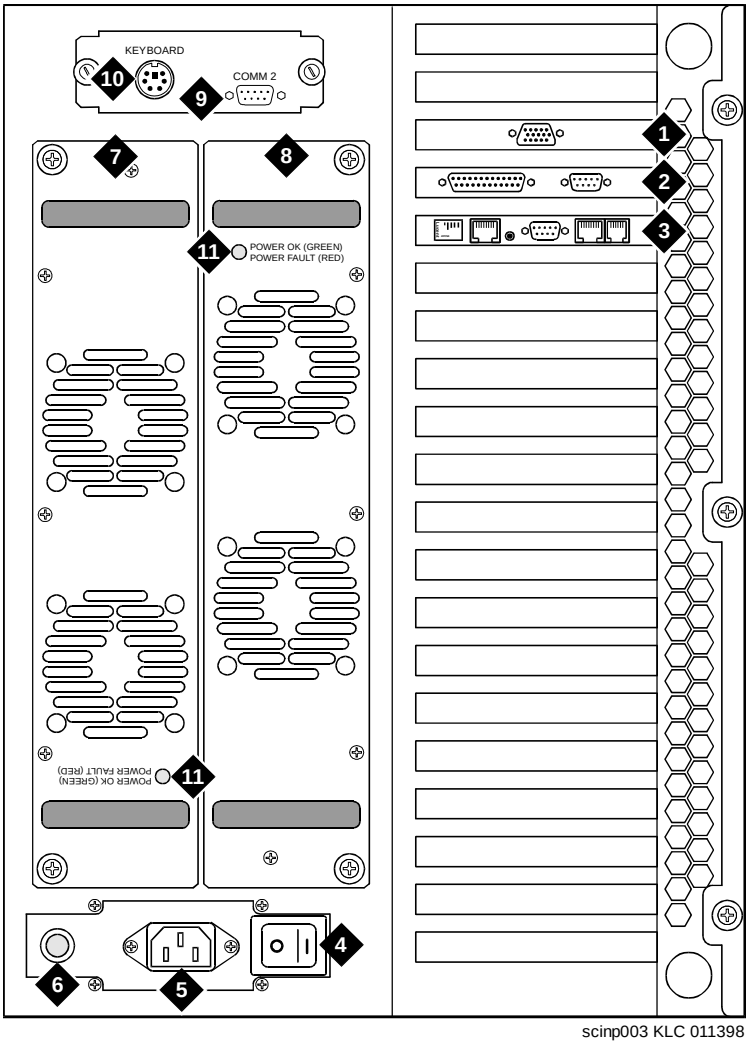
Figure 2-8. Front View of the MAP/100P with Dress Cover Removed

Table 2-4. Components on the Front of the Deskside MAP/100P

Component	Description	Callout Number
Diskette drive	3.5-inch, 1.44-Mbyte high density; system configuration; diagnostic testing	1
Cartridge tape drive	SCSI 2.0-GB; backup and restore; loading the system	2
Reset switch	Push button; resets the MAP/100P	3
Hard disk drive 0	2.0-GB SCSI	4
Hard disk drive 1	2.0-GB SCSI	5
Hard disk drive 2	2.0-GB SCSI	6
Hard disk drive 3	2.0-GB SCSI	7
Hard disk drive 4	2.0-GB SCSI	8
Hard disk drive 5	2.0-GB SCSI	9
Circuit card cage fan	Cooling system	10
Fan fault LED	LED; lights red for bottom fan trouble	11
Fan fault LED	LED; lights red for fan trouble	12
Power supply fault LED	LED; lights red when power removed	13
Power on LED	LED; lights red when power on	14
Disk activity indicator (per SCSI ID)	LED; intermittently lights amber when associated disk is accessed and active	15
Fan fault LED	LED; lights red for top fan trouble	16
SCSI terminator	Termination module with LED	17

The Back of the Chassis

Figure 2-9 shows the back view of the MAP/100P. Table 2-5 provides a description of the components on the back of the MAP/100P.



1. Video circuit card (PCI slot 1)
2. P5 200 MHz CPU (slot 17)
3. Remote maintenance circuit card (ISA slot 16)
4. ON/OFF power switch
5. AC power input
6. AC line Fuse
7. Power supply 1
8. Power supply 2
9. COM2 port
10. Keyboard connector
11. Power supply LED (status and fault)

Figure 2-9. Back View of the MAP/100P

Table 2-5. Components on the Rear of the Deskside MAP/100P

Component	Description	Callout Number
Video circuit card (PCI slot 1)	The connector on the card provides the interface between a monitor and the MAP/100P through a cable.	1
CPU (slot 17)	P5 200 MHz CPU with COM1 connector.	2
Remote maintenance circuit card (ISA slot 16)	Provides access for remote maintenance.	3
ON/OFF power switch	Rocker switch; turns power on or off to the MAP/100P.	4
AC power inlet receptacle	3-prong, 110V or 220V; connects the MAP/100P to the power source via a 9-ft power cord.	5
Fuse	AC line. 250V, 6 amp for U.S. 250V, 3.6 amp for international.	6
Power supply 1	110/220V autosensing, always required. Provides +5, -5, +12, and -12 volts requirements.	7
Power supply 2	110/220V auto-sensing, always required. Provides +5, -5, +12, and -12 volts requirements	8
Asynchronous port COM 2	9-pin male D subminiature; communicates with external devices	9
Keyboard connector	5-pin female circular DIN; connects *one keyboard only* to the MAP/100P	10
Power supply LED	LED, power supply status; lights green when OK, lights red when faulty.	11

Making Cable Connections

3

Overview

The MAP/100P can support up to 20 circuit cards that provide various functions for the system. These circuit cards include:

- Video controls
- Peripheral controls
- Communication controls
- CPU
- Analog Tip/Ring
- Remote maintenance

Circuit cards are placed in the MAP/100P in locations called *slots*. The MAP/100P slots are located in the circuit card cage in backplane positions 1 through 20. There are 16 ISA slots, three PCI slots (numbered PCI slot 1, 2, and 3), and one slot for the P5 200 MHz CPU circuit card.

This chapter serves as an introduction to connecting cables to the faceplates of circuit cards that are installed in the MAP/100P. This chapter also includes general steps for making cable connections, but additional steps can be required for some cable connections.

See Appendix D, Cable Connectivity, for connectivity and ordering information.

Purpose

The purpose of this chapter is to provide the information to make cable connections and complete the Avaya Interchange system installation successfully.

Connecting a Tip/Ring Circuit Card

You can connect the Tip/Ring circuit card to telephone lines in two ways:

- Cable connection from the circuit card through a line splitter or adapter and then to the telephone line
- Cable connection using a Tip/Ring distribution hardware to the telephone line

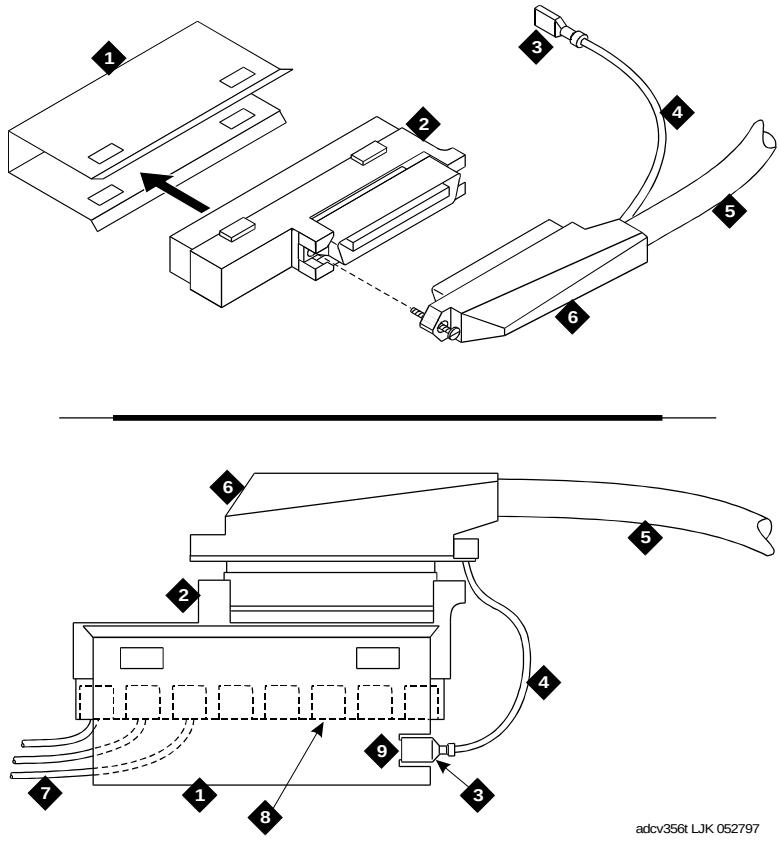
Cable Connection Using a Line Splitter or an Adapter

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

356B Adapter

Using the 356B adapter or line splitter (Figure 3-1) to connect the IVC6 Tip/Ring circuit card to the telephone line enables you to use eight 6-pin-conductor modular cords.

NOTE:
Record the circuit card slot number and telephone extension numbers on the adapter.



1. Adapter bracket
2. 356B adapter
3. Grounding plug
4. Grounding wire
5. 25-pin cable
6. Connector
7. Tip/Ring cords
8. Modular jacks (8)
9. Grounding tab

Figure 3-1. How to Use the 356B Adapter with a Tip/Ring Circuit Card

The Tip/Ring distribution hardware attaches to the rear bracket on the MAP/100P (Figure 3-2 and Figure 3-3).

Cable Connection Using the Tip/Ring Distribution Panel

The Tip/Ring distribution hardware is located on the back of the chassis. This hardware provides a simplified wiring scheme for connecting to the local customer-premise equipment or building connecting block provided by the central office. This hardware allows you to connect a maximum of 48 channels.

Figure 3-3 shows a MAP/100P in a deskside configuration. Figure 3-2 shows a MAP/100P in a rack-mounted configuration.

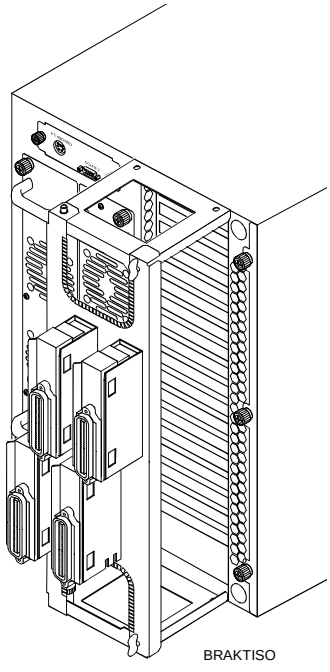


Figure 3-2. MAP/100P Tip/Ring Distribution Hardware — Deskside Configuration

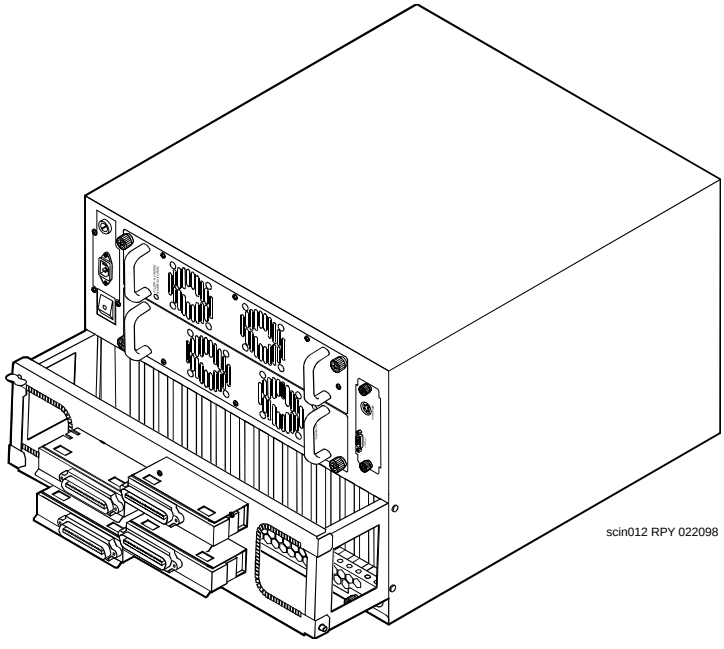


Figure 3-3. MAP/100P Tip/Ring Distribution Hardware — Rack-Mounted Configuration

Complete the following procedure to connect the hardware:

1. Plug the 18-inch, 6-pin modular cords from the Tip/Ring circuit cards into the 356B adapters. Each adapter can accommodate eight modular cords.
2. Using the connector provided, attach the 25-pair, high-density cable to the 356B adapter.
3. Snap the 356B adapters into the adapter bracket. Ensure that the modular cords are inside the adapter bracket.

NOTE:
The 356B adapters can be removed by spreading the bracket sides apart.

CAUTION:
In a deskside configuration, the 25-pair, high-density cables dress down from the adapter brackets. In a rack-mounted configuration, the cables dress across each other to either side of the MAP/100P. In the rack-mounted configuration, the cables must be tied back and up to the rear of the cabinet to reduce connector stress.

4. Connect the grounding wire and strap to the top of the adapter bracket.
5. Secure the 25-pin cable connector to the 356B adapter using the cable ties provided with the adapter kit.

Different cable lengths are available. These cables are listed in Appendix D, Cable Connectivity.

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

Connecting Asynchronous Devices

There are two ways to connect the MAP/100P to a terminal, modem, or other DTE or DCE devices through an asynchronous link:

- Using COM1, an asynchronous port on the rear of the MAP/100P
- Using the additional asynchronous ports on the optional multi-port serial circuit card

NOTE:
The MAP/100P provides two asynchronous ports, COM1 and COM2. However, COM2 is reserved for Avaya remote maintenance and is not available for use in making asynchronous connections.

Using COM1

A 9-pin D subminiature male connector is provided on the rear hardware of the MAP/100P for COM1. This connector connects internally to the CPU. See Appendix C, Pinouts, if you need pinout information for the COM1 connector.

NOTE:
Networking uses the ACCX circuit card, not COM1. For more information on the ACCX circuit card, see Connecting the ACCX Circuit Card.

Connecting the ACCX Circuit Card

The Avaya Interchange supports up to eight networking channels on the MAP/100P through digital and analog remote connections from the ACCX circuit card using DCP and RS-232 links, respectively. Up to three ACCX circuit cards can be installed in the MAP/100P. Each ACCX circuit card terminates four data channels in one of the following combinations:

- Two DCP lines, each providing two I-channels. Depending on the version of the switch to which you are connecting, you might be able to use only one of the two I-channels of each DCP circuit:
  - — System 75 R1V3, DEFINITY G1 R1V4, and DEFINITY G3i, G3s, or G3vs Version 1 support the use of one I-channel only.
  - — System 85, DEFINITY G2, and DEFINITY G3i, G3s, and G3vs Version 2 support the use of both of the I-channels.

    NOTE:
    For DEFINITY G3i, G3s, and G3vs, this option must be installed and administered on the switch before you perform Avaya Interchange system administration.

- Four RS-232 ports
- One DCP line (two I-channels) and two RS-232 ports

A breakout box and a cable are provided with each ACCX circuit card. Use the cable to connect from the circuit card to the breakout box. The RS-232 line then connects through a modem to the customer connecting block (Figure 3-4). The DCP line connects directly to the block (Figure 3-5).

Attach the breakout box to the wall. The cable length allows placement up to 3 m (10 ft) away from the MAP/100P.

See Appendix C, Pinouts, for pinout and signal information for RS-232 and DCP connections.

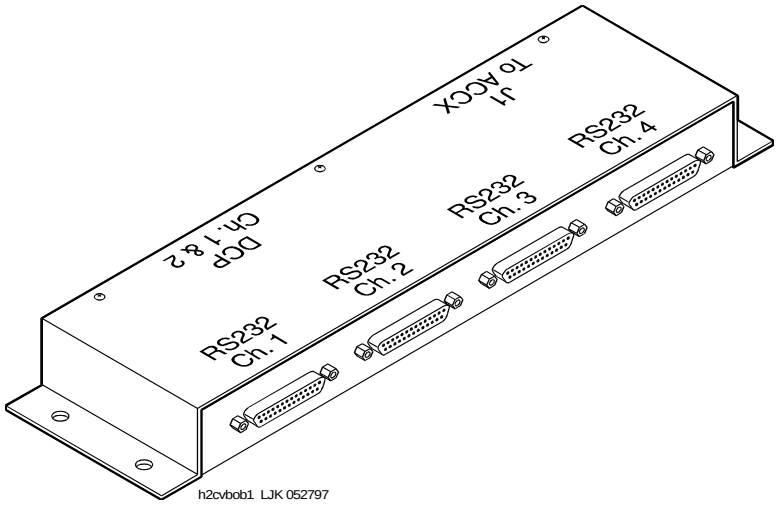


Figure 3-4. RS-232 Connections on a Breakout Box

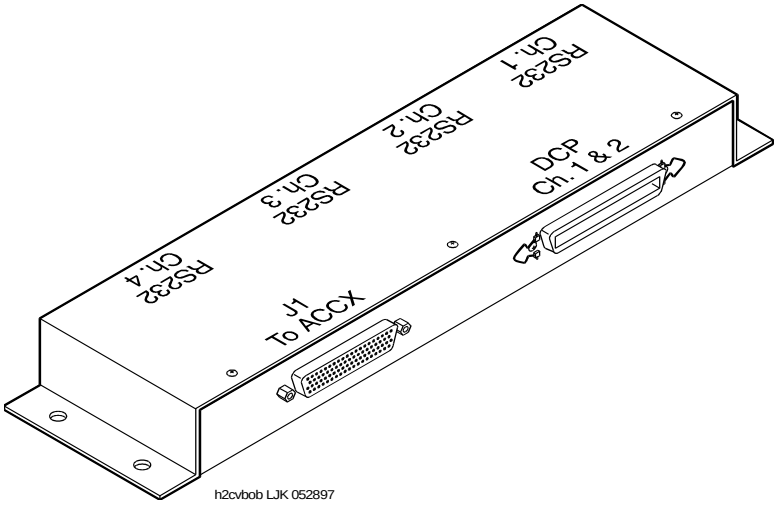


Figure 3-5. DCP Connections on a Breakout Box

Connecting the Remote Maintenance Circuit Card

The remote maintenance circuit card provides remote diagnostics of basic MAP/100P components. There is one remote maintenance circuit card installed on the system.

The system supports the following remote maintenance circuit cards:

- AYC54 (with an internal modem)
- AYC55 (without an internal modem)

Connecting the LAN Circuit Card

The type of cable you use to connect the LAN Ethernet 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. See Chapter 6, Initial Administration and Test for TCP/IP LAN Connectivity, for information about how and when to cable.

Connecting the SSP Circuit Card

The speech and signal processor circuit card (SSP – AYC43) provides speech support for various speech technologies. The SSP circuit card must be used with at least one Tip/Ring circuit card. Two SSP circuit cards must be installed in the MAP/100P.

NOTE:
Although no external cabling is required for the SSP circuit card, an internal bus cable must be installed.

Connecting Peripherals and Powering Up

4

Overview

This chapter contains procedures for connecting peripherals to and powering up the MAP/100P. These procedures include:

- Connecting the monitor
- Connecting the keyboard
- Connecting the printer
- Registering your system
- Powering up the system

Purpose

The purpose of this chapter is to ensure proper connectivity of the MAP/100P to all peripherals.

Connecting the Monitor

This section describes how to make the connections between the MAP/100P and a monitor.

Required Cabling for Monitor

Two cables connect the monitor to the MAP/100P:

- Video cable connector
- Power cable

Video Cable Connector

The video cable connector has a video input connector at one end. The other end of the cable is permanently attached to the monitor.

Power Cable

The power cable has a male plug at one end and a female plug at the other end.

Connecting Monitor Cables

To connect the monitor cables:

1. Plug the video cable connector from the monitor directly into the video connector located on the back of the MAP/100P video circuit card. See Figure 2-9 for the location of the video connector.
2. Tighten the thumbscrews on the video cable connector with your fingers or with a small flat-blade screwdriver.
3. Plug the female end of the power cable into the monitor.
4. Plug the male end of the power cable into a grounded AC outlet.

Connecting the Keyboard

A 6-pin female DIN receptacle is located on the back of the MAP/100P. The mating male plug is provided with the keyboard. Both of the connector assemblies are keyed to provide proper alignment. See Figure 2-9 for the location of the keyboard connector.

NOTE:
Do not use the keyboard receptacle for any other purpose than to connect the keyboard.

Figure 4-1 shows the receptacle and plug. See Appendix C, Pinouts, if you need pinout information.

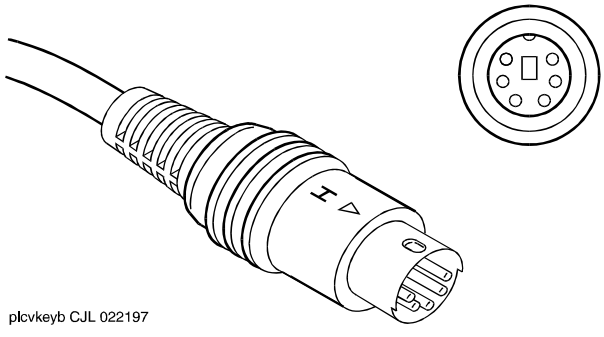


Figure 4-1. Circular DIN 6-Pin Connector for the Keyboard

Connecting the Printer

A 25-pin D-subminiature female receptacle, located on the back of the MAP/100P CPU circuit card, provides a parallel printer interface.

Use the instructions supplied in the manufacturer's manual, *Users' Guide 570 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.

To connect the printer:

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

   NOTE:
   The Avaya Interchange system works with the default settings for the 570 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 MAP/100P CPU circuit card. See Figure 2-9 for the location of the parallel port on the MAP/100P.
8. Tighten the thumbscrews with your fingers or with a small flat-blade screwdriver.
9. Insert the other end of your cable to the parallel port on your printer.
10. Depending on your type of printer connection, either tighten the thumbscrews or press the two wire-retaining clips together until you hear them click into the lock slots on either side of the plug.
11. Plug the AC power cable into a grounded wall outlet.

Registering Your System

Call your remote support center to register your system. When you call you, have the following information available:

- The serial number of your MAP/100P (from the chassis)
- Your order number information (from the factory work order)
- The telephone number you will use for your remote support center

Powering Up the System

The MAP/100P operates on either international (115 VAC, 60Hz) or U.S. (230 VAC, 50 Hz) power and auto-senses to set itself for the correct operating range.

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/100P.

1. Plug one end of the power cord into the AC power supply outlet on the back of the MAP/100P. See Figure 2-9 for the location of the AC power supply outlet.
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 green LED power indicator on the front of the unit lights up, and resident diagnostics are initiated on the monitor.

   A green or amber lamp on the front bottom, screen-base area of the monitor also lights up.
5. If the monitor lamp does not light up or if diagnostics do not initiate on the monitor screen, recheck the power connections.

   NOTE:
   If the MAP/100P power indicator LED or the monitor lamp does not light up, recheck the system power connections and requirements. For more information on the power supply requirements, see Appendix A, System Installation Checklist, and Power Requirements in Chapter 1, Getting Started.

Administering Passwords and Verifying Hardware and Feature Options

5

Overview

This chapter describes:

- Administering passwords
- Verifying the installed hardware
- Verifying the installed software
- Verifying Avaya Interchange feature options
- Verifying system status

Purpose

The purpose of this chapter is to provide procedures to:

- Change and assign passwords for logins to protect system security.
- Verify the MAP/100P installed hardware.
- Verify that the feature options that were purchased have been activated.

Administering Passwords

Use the default craft password to change the password for the sa and craft logins.

NOTE:
If you do not know the default password for the craft login, contact your remote support center.

1. Log in as **craft**.
2. Press ENTER.

   The system displays the Avaya Interchange Main Menu (Figure 5-1).

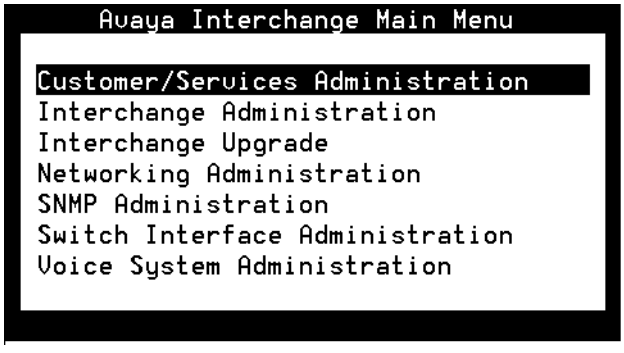
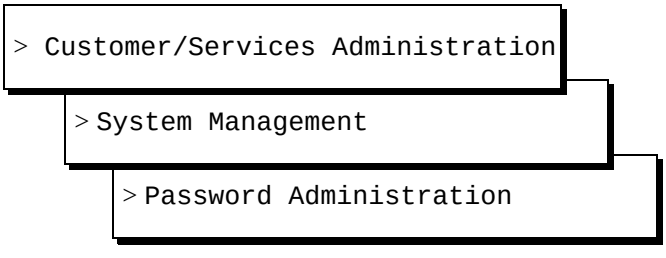


Figure 5-1. Avaya Interchange Main Menu

3. Select



The system displays the Password Administration menu (Figure 5-2).

Figure 5-2. Password Administration Menu

4. Select

```
> Assign/Change Password
```

The system displays the Assign/Change Password window (Figure 5-3).

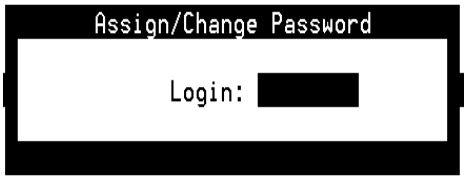


Figure 5-3. Assign/Change Password Window

5. Press F2 (Choices).

   The system displays a list of options.
6. Select the login for which you want to change the password.
7. Press ENTER.
8. Press F3 (Save).
9. The system displays the following message:

```
You are about to change the password for ‘sa’.
Press <y> to confirm.
Press <n> to cancel.
```

10. Enter **y** to change the password.

    The system displays the following message:

    ```
    Changing password command for sa

    New Password:
    ```

11. Enter the new password exactly as it is shown on Worksheet 1: System Administration Initial Passwords.

    The system displays the following message:

    ```
    Re-enter new password:
    ```

12. Enter the new password again.

    NOTE:
    If you make a mistake in typing the new password and the two password entries do not match, the system prompts you again for the new password.

13. Press F1 to `Acknowledge Message` and to continue.
14. Repeat Step 5 through Step 12 for each remaining login password you want to change.
15. Continue with the next procedure, Verifying Installed Hardware.

Verifying Installed Hardware

Complete this procedure using the customer order or factory printout to identify the hardware installed on the system. This hardware can include:

- A LAN circuit card
- An IVC6 (AYC10) Tip/Ring circuit card (AYC29 for Australia)
- An NGTR (Next Generation Tip/Ring) circuit card
- An ACCX digital networking circuit card (AYC22)
- A Remote maintenance circuit card (AYC54 or AYC55)
- One or more disk drives and memory

NOTE:
This procedure only indicates if a hard disk is present. It does not indicate if the disk has been added to the system through the software or if the disk is mirrored. For information on disk mirroring, see Verifying Avaya Interchange Feature Options in this chapter.

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

```
> Customer/Services Administration
    > System Verification
        > View Installed Hardware
```

The system displays the first page of the View Installed Hardware window (Figure 5-4).

NOTE:
It can take several seconds for this window to appear. This window consists of multiple pages. Figure 5-5 shows an example of a second page of this window.

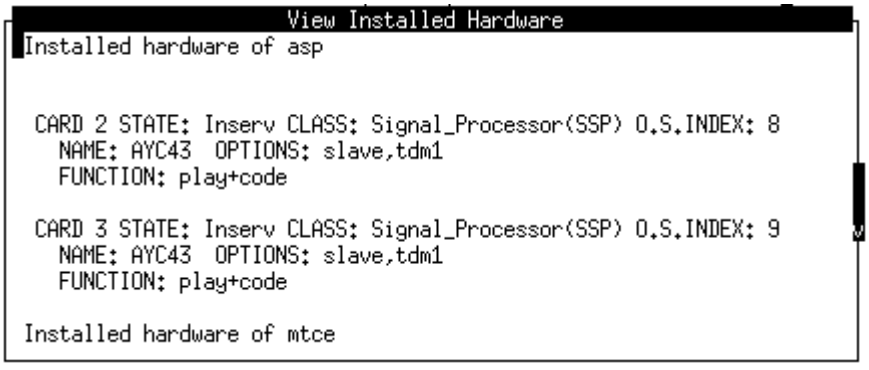


Figure 5-4. View Installed Hardware Window, Page 1

2. Press F3 (NextPage) to scroll down. Press F2 (PrevPage) to scroll up.

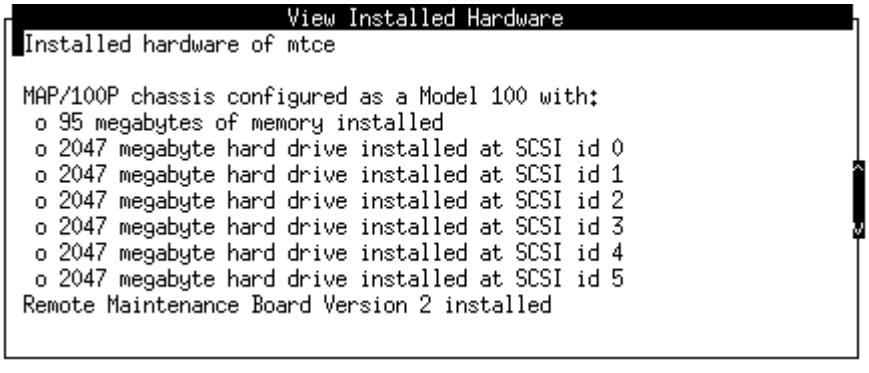


Figure 5-5. View Installed Hardware Window, Page 2

3. Compare the View Installed Hardware window on your system with Worksheet 3: Installation Features Selection and verify that all the circuit cards ordered are present. Scroll down as needed to see the complete list of installed hardware.
4. Physically check to see that the number of hard drives installed on the system matches the customer order.
5. Physically verify that the DCIU circuit card (if ordered) is installed. See Chapter 2, Unpacking the MAP/100P and Installing Nonassembled Hardware, for the physical locations.

6. If any of the hardware is missing, you must install it before proceeding. If a card is present but not detected by the system, check your options and circuit card seating. See Chapter 5, Replacing or Installing Circuit Cards, in *Avaya Interchange Release 5.4 MAP 100/P System Maintenance*, 585-313-809, for installation instructions.
7. Press F6 (Cancel) to return to the System Verification menu (Figure 5-6).

Figure 5-6. System Verification Menu

8. Continue with the next procedure, Verifying Avaya Interchange Feature Options.

NOTE:
Before the remote support center can dial in to the Avaya Interchange system, you must provision the remote maintenance modem. If the support center directs you to do this, see Administering the RMB in Appendix 7, Cut-to-Service Procedures, for instructions.

Verifying Avaya Interchange Feature Options

Complete this procedure to verify that customer-purchased features have been activated. These features can include disk mirroring, digital ports, hours of speech, voice ports, and/or networking options.

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

```
> Customer/Service Administration
    > Feature Options
```

The system displays the Feature Options (Read Only) window (Figure 5-7).

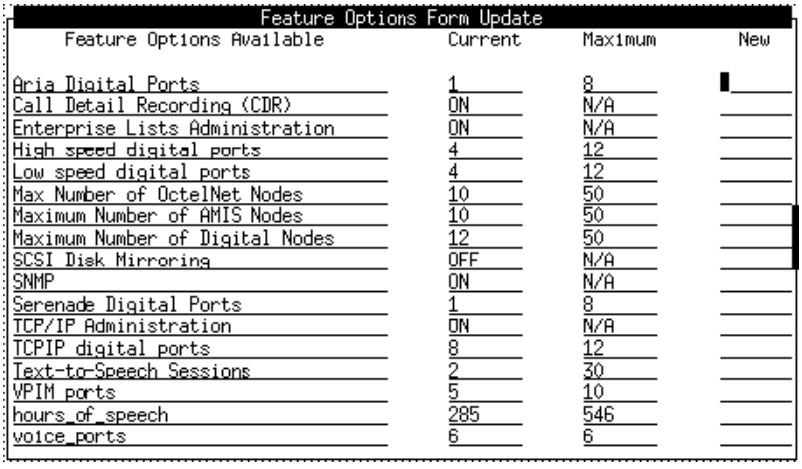


Figure 5-7. Feature Options (Read Only) Window

2. See Worksheet 3: Installation Features Selections and verify that all of the feature options the customer purchased are activated.

   NOTE:
   Identifying the feature as activated on the Avaya Interchange constitutes the ***only*** acceptance test for the SCSI Disk MIrroring option.

   Also verify that the `TCP/IP Administration` field is set to `ON`.

   If all required features are activated and parameters are set correctly, continue with Step 3.

   Do *not* continue with Step 3 if any of the:

   - Parameters in Step 2 above are not set correctly.
   - Customer-purchased features are not activated.

   Instead, contact your remote support center for instructions.

3. Press F6 (Cancel) to return to the System Verification menu (Figure 5-6).
4. Continue with Chapter 6, Initial Administration and Test for TCP/IP LAN Connectivity.

Initial Administration and Test for TCP/IP LAN Connectivity

6

Overview

This chapter describes how to:

- Perform initial administration for TCP/IP LAN connectivity.
- Attach the customer's LAN cable.

  NOTE:
  The customer's LAN representative needs to have connected the LAN or be present for the LAN connection. See LAN Administration for Avaya Interchange for more information on the responsibilities of the LAN administrator.

- Test the TCP/IP connection.

Purpose

This chapter provides the information you need to ensure that the customer's LAN is accessible to the Avaya Interchange system and to administer the system for basic operations.

Avaya is not responsible for the installation, administration, or test of communications between customer PCs and the LAN. Customers need to seek service as directed by their LAN administrator to resolve problems with their LAN.

Administering TCP/IP LAN Connectivity

Complete the procedures in this section to establish addresses for the Avaya Interchange system to use to send and receive information over the customer's LAN. Before you begin this procedure, however, you must determine if the LAN has been administered for the system.

LAN Administration for Avaya Interchange

Some LANs might be administered prior to your arrival on site. Other LANs require that the administration for a new machine be done at the time of installation because an open connection could cause the LAN to fail.

Verify if you need to notify the LAN administrator and arrange for administration of the LAN for the system.

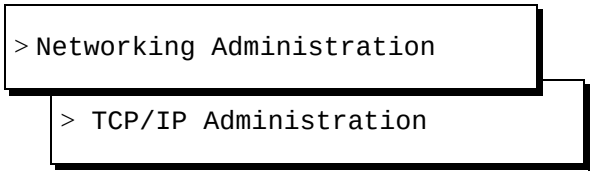
You must consult the customer for the following information:

- IP address
- Subnet mask
- Gateway information

When the LAN is administered for the system, continue with Establishing Network Addresses.

Establishing Network Addresses

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



The system displays the TCP/IP Administration window (Figure 6-1).

NOTE:
The fields in the following windows are examples only. Your windows might not match the current entries for the system that you are administering.

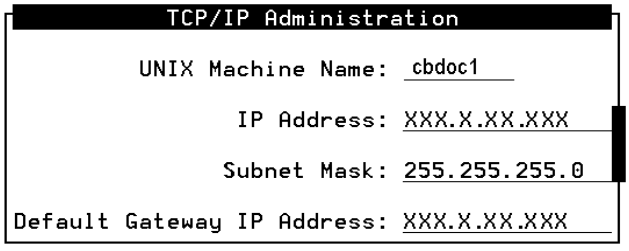


Figure 6-1. TCP/IP Administration Window

CAUTION:
If you are installing digital networking, the UNIX name needs to be the same as the local machine name specified on the Local Machine Administration window.

2. Enter the UNIX machine name in the `UNIX Machine Name:` field. This is a case-sensitive field. You must enter uppercase letters as uppercase (capitals), and lowercase letters as lowercase.

   NOTE:
   Saving the information on the TCP/IP Administration window applies the UNIX name to the Avaya Interchange machine. You do not have to administer this name anywhere else unless you are installing digital networking.

3. Enter the Internet Protocol (IP) address for the Avaya Interchange system into the `IP Address:` field.

   Enter the IP address, including the periods or dots, with the following exception:

   - Do not enter prefacing zeros. For example, if the IP address is 125.050.12, then you enter it in the `IP Address:` field as **125.50.12**.

4. Move the cursor to the `Subnet Mask:` field.
5. Enter the number of the subnet mask.
6. Move the cursor to the `Default Gateway IP Address:` field.
7. Enter the default gateway IP address.
8. Continue with the next procedure, Configuring the Ethernet LAN Circuit Card.

Configuring the Ethernet LAN Circuit Card

To configure the Ethernet LAN circuit card:

1. Start at the TCP/IP Administration window (Figure 6-1) and press F8 (Change Keys).

   The system displays the alternate set of function keys.

2. Press F2 (Board Configuration).

   The system displays the Ethernet Board Configuration window (Figure 6-2).

Figure 6-2. Ethernet Board Configuration Window

3. Press F2 (Choices).

   The system displays the Network Interface Types menu (Figure 6-3).

Figure 6-3. Network Interface Types Menu

4. Select the network interface type to be used on this system and press ENTER.

   The system displays your selection in the `Network Interface Type:` field.

5. Press F3 (Save).

The system displays the Ethernet Board Configuration Results window (Figure 6-4).

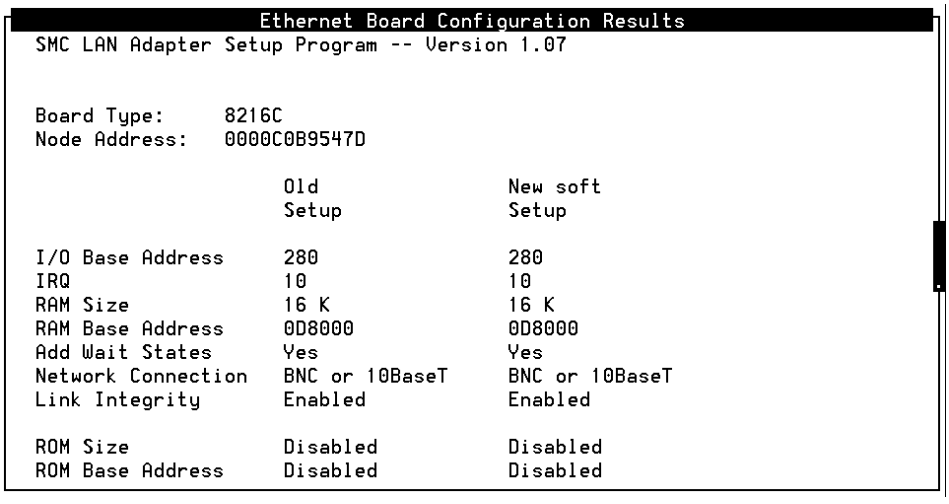


Figure 6-4. Ethernet Board Configuration Results Window

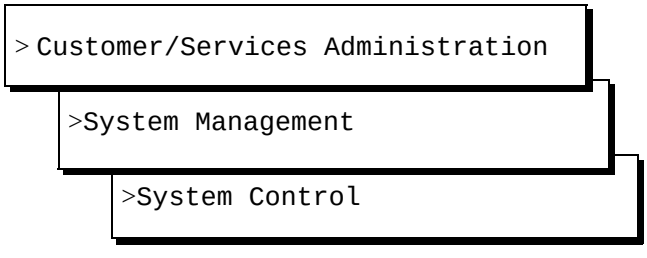
6. Press F6 (Cancel) until the system returns to the Avaya Interchange Main Menu (Figure 5-1).
7. Continue with Rebooting the System and Attaching the LAN Cable.

Rebooting the System and Attaching the LAN Cable

Complete this procedure to:

- Reboot the system and apply the newly entered LAN connectivity administration.
- Attach the LAN cable that the customer has provided and tested

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



2. The system displays the System Control menu (Figure 6-5).

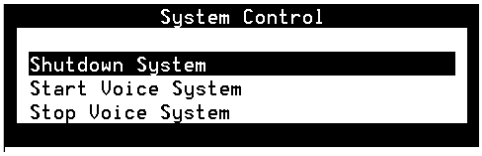


Figure 6-5. System Control Menu

3. Select

```
>Shutdown System
```

The system displays the Wait Time Menu (Figure 6-6).

Figure 6-6. Wait Time Menu

4. Enter a time between 60 and 600 seconds for the system to wait for calls in progress.
5. Press ENTER.

   The system displays the following message:

```
Shutdown started. Month date time year

INIT: New run level: 0
The system is coming down. Please wait.

The system is down.
Press CTRL-ALT-DEL to reboot your computer.
```

6. If you are installing the LAN cable, turn off the power switch on the front of the MAP/100P and continue with Step 7.

   If you are *not* installing the LAN cable, press the reset button or CONTROL ALT DELETE to reboot the system. Skip Step 7 and continue with Step 8.

7. Attach the LAN cable to the LAN circuit card. See Chapter 4, Connecting Peripherals and Powering Up, for this procedure.
8. Turn the power switch on the front of the MAP/100P on again.

   The system responds in two stages. The first, readying the system, displays copyright and address information and rebuilds the UNIX kernel.

   NOTE:
   Do not press ENTER or ESC during this process. The system automatically proceeds to the next step.

   This stage ends with the message:

   ```
   The system is ready.
   ```

   After this message, the system presents a console login, followed by the message:

   ```
   Automatically starting the voice system.
   ```

   This message signals the start of the second stage, the stage that starts the voice system. The last messages in this series are:

   ```
   Startup of the Voice System is complete.
   ```

9. Press ENTER one or more times to obtain a console login prompt.

   The system displays the following message:

   ```
   The systems's name is Intuity
   Welcome to USL UNIX system V Release 4.2 Version 1
   Console Login:
   ```

10. Continue with the next section, Testing the TCP/IP Connection.

Testing the TCP/IP Connection

Complete the procedures in this section to transmit test packets to the customer's LAN to make sure that the LAN is accessible to the Avaya Interchange system and any remote machines on the same LAN. These procedures also test the internal setup of the LAN to verify transmissions are taking place.

Entering the IP Address for Avaya Interchange

To enter the IP address, do the following:

1. Log in as **craft**.
2. Press ENTER.

3. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

```
> Customer/Services Administration
    > Diagnostics
        > TCP/IP Diagnostics
            >Send & Receive Test Packets
```

The system displays the Send & Receive Test Packets From window (Figure 6-7).

Figure 6-7. Send & Receive Test Packets From Window

4. Enter the Internet Protocol (IP) Address of this machine in the `IP Address:` field.
5. Press F3 (Save).
6. Continue with the next procedure, Transmitting the Test Packets.

Transmitting the Test Packets

1. From the Send & Receive Test Packets From window, press F3 (Save) to start the test.

   The system displays the word `working` in the upper right corner of the screen while it is performing this test. When the test is finished, the system displays the Test Packets Results window (Figure 6-8).

   NOTE:
   Figure 6-8 is an example only. The test results displayed for your system will not match those shown here.

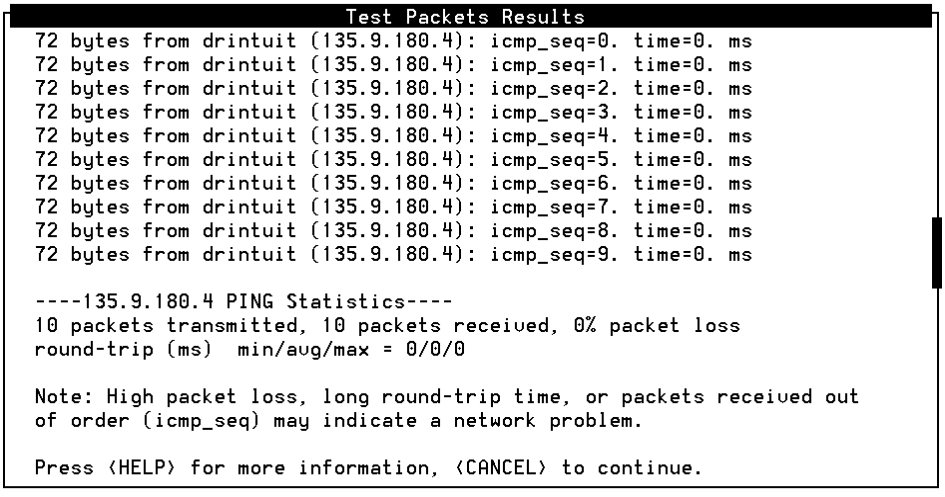


Figure 6-8. Test Packet Results Window — Internal Test

2. Examine the test results that are displayed around the midpoint of the window. In Figure 6-8, the sample results appear as:

   ```
   ----135.9.180.4 PING Statistics----
   10 packets transmitted, 10 packets received, 0% packet
   loss
   round-trip (ms) min/avg/max = 0/0/0
   ```

3. Evaluate the results and proceed as follows:

   - If the results show **0%** packet loss, skip the next procedure and continue with Verifying the I/P Address for Remote Machines.
   - If the results show **100%** packet loss, continue with the next procedure, Correcting Diagnostic Failures for the Avaya Interchange System.

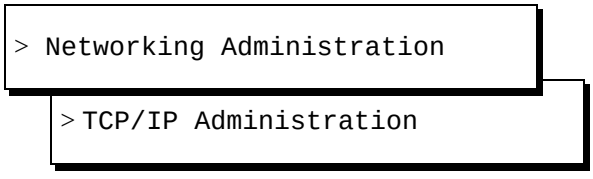
Correcting Diagnostic Failures for the Avaya Interchange System

To correct diagnostic failures, do the following:

1. From the Test Packet results window, press F6 (Cancel).

   The system displays the Send & Receive Test Packets From window (Figure 6-7).

2. Verify that the IP address you entered into the `IP Address:` field is correct:
   - If the IP address does *not* match, reenter the correct address and repeat the Transmitting the Test Packets procedure.
   - If the IP address matches, continue with Step 3.
3. Press F6 (Cancel) until you reach the Avaya Interchange Main Menu (Figure 5-1).
4. Select



   The system displays the TCP/IP Administration window (Figure 6-1).
5. Verify that the address entered in the `IP Address:` field matches the Internet Protocol (IP) Address:
   - If the IP address does *not* match, contact your remote support center. Once the problem is resolved, return to this procedure and repeat this test.
   - If the IP address does match, continue with Steps 6 through 8 to readminister the TCP/IP Administration window and reboot the system.
6. Begin with Step 2 of Establishing Network Addresses and complete that procedure.
7. Continue with the rebooting portion of Rebooting the System and Attaching the LAN Cable.
8. Return to this procedure and attempt the test again. If the test is successful, continue with the next section, Verifying the I/P Address for Remote Machines. If the test fails a second time, contact your remote support center.

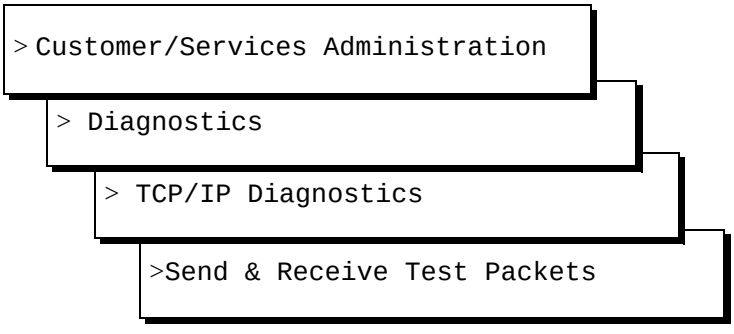
Verifying the I/P Address for Remote Machines

Complete the procedures in this section to test the ability of the system to communicate with other machines on the same LAN.

Entering the Test IP Address

To enter the test IP address, do the following:

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



   The system displays the Send & Receive Test Packets From window (Figure 6-7).

2. Type in the Test IP Address in the `IP Address:` field. This is the IP address of another machine on the same LAN.

Transmitting Test Packets to Remote Machines

To transmit test packets to remote machines, do the following:

1. From the Send & Receive Test Packets From window (Figure 6-7), press F3 (Save) to start the test.

   The system displays the word `working` in the upper right corner of the screen. When the system finishes the test, it displays the Test Packets Results window (Figure 6-8).

   NOTE:
   Figure 6-8 is an example only. The test results displayed on your window will not match those shown.

2. Examine the test results that are displayed around the midpoint of the window. In Figure 6-8, these results appear as:

```
----135.9.180.4 PING Statistics----
10 packets transmitted, 10 packets received, 0% packet
loss
round-trip (ms) min/avg/max = 0/0/0
```

The percentage displayed in the packet loss field on your window will range from 0 to 100%.

3. Evaluate the results and proceed as follows:
   - If the packet loss is from **0 to 49%, complete Steps a and b below and then** continue with Step 4 in this procedure:
     a. Contact the customer LAN or system administrator, *but only if the packet loss is from* **10** *to* **49***%.*
     b. Check for **packets out of sequence**. To do this, examine the `icmp_seq=` field. *If more than two packets are out-of-sequence* (for example, 0, 2, 5, 3, 1...), contact the customer administrator.
   - If the packet loss is from **50 to 99%,** press F6 (Cancel) and see the troubleshooting procedures below.
   - If the packet loss is **100%** (as shown in Figure 6-9), verify that you entered the correct Test IP Address.

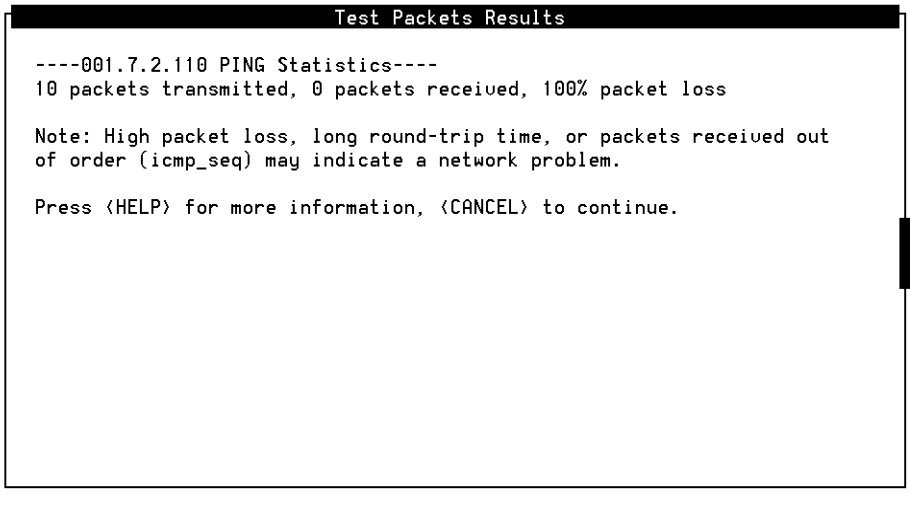


Figure 6-9. Test Packets Results Failure

If the address you entered was correct, return to Establishing Network Addresses and try this test again.

If the address you entered was *not* correct:

— Return to Verifying the I/P Address for Remote Machines and enter the correct address. Begin with Step 1 of Entering the Test IP Address.

— Return to Entering the Test IP Address and repeat the test using the Alternate Test IP Address. If this test also fails with the Alternate Test IP Address, see Appendix B, Troubleshooting Procedures.

4. Press F6 (Cancel) until you reach the Avaya Interchange Main Menu (Figure 5-1).
5. Continue with Chapter 7, Cut-to-Service Procedures.

Cut-to-Service Procedures

7

Overview

This chapter contains cut-to-service procedures that are required for:

- Activating alarm origination
- Administering voice ports using analog networking
- Hooking up the analog lines
- Administering the remote maintenance board (RMB) and establishing a dial tone
- Administering the modem (for international systems)
- Performing initial system administration tasks
- Making an attended backup tape

Purpose

This chapter provides the information and procedures to ensure that the system is fully operational.

Activating Alarm Origination

T0 activate alarm origination, complete the following tasks:

- Administering the Alarm Management window
- Testing alarm origination

Administering the Alarm Management Window

Complete the following procedure to administer the Alarm Management window:

1. Clear all alarms. See *Avaya Interchange Release 5.4 Alarm and Log Messages*, 585-313-809, for more information on alarms.
2. Check the cartridge tape drive for a tape. The light on the cartridge tape drive is on if the drive contains a cartridge tape.

   If the cartridge tape drive does not contain a cartridge tape for the nightly backup, insert a tape in the cartridge tape drive.

   CAUTION:
   Do not activate Alarm Origination unless the tape drive contains a backup tape.

3. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

   > Customer/Services Administration
   > Alarm Management

   The system displays the Alarm Management window (Figure 7-1).

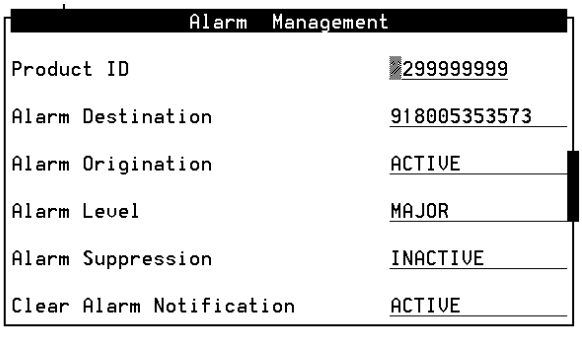


Figure 7-1. Alarm Management Window

4. 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.

5. Move the cursor to the `Alarm Origination:` field.
6. Press F2 (Choices).
7. Select

```
> ACTIVE
```

8. Press ENTER.

   NOTE:
   With alarm origination active, the system automatically sends out alarms to the remote support center.

9. 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.
10. Press F3 (Save).

    The system displays an information screen and the statement:

    ```
    Alarm Form Update was successful

    Press (Enter) to continue.
    ```

11. Press ENTER to exit the information screen.

    If you want to test the alarm origination or if a significant amount of time has lapsed since you last administered the Alarm Management screen, continue with the next procedure, Testing Alarm Origination.

    If you do not want to test the alarm origination, continue with Administering Voice Ports.

Testing Alarm Origination

Complete the following procedure to test alarm origination:

1. Press F8 (Change Keys).
2. Press F1 (Test Alarm).

   The system displays the Alarm Origination Test menu (Figure 7-2).

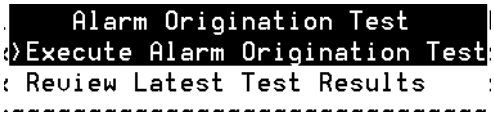


Figure 7-2. Alarm Origination Test Menu

3. Select

```
> Execute Alarm Origination Test
```

4. Press ENTER to begin the test.

   The system displays the following message:

```
Alarm Origination tests may take up to
5 minutes to complete. This test will
be run in the background.

Press <y> to confirm.
Press <n> to cancel.
```

5. Press **y**.
6. Wait approximately one minute.
7. Select

```
> Review Latest Test Results
```

8. Press ENTER.

   The system displays the Alarm Origination Test Results screen (Figure 7-3).

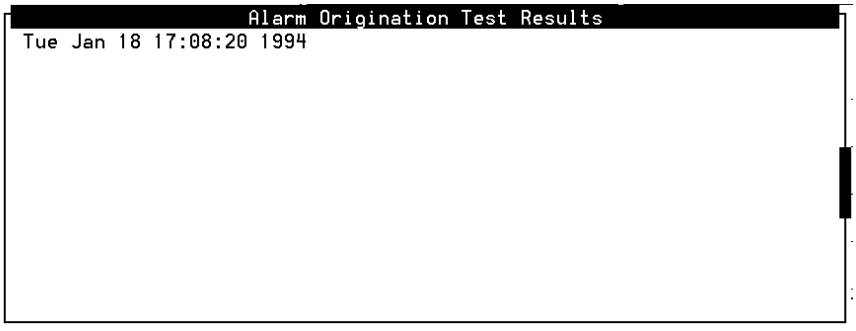


Figure 7-3. Alarm Origination Test Results Screen Showing a Test in Progress

9. Verify that there is no entry on the screen that corresponds with the time you sent the alarm.
10. Wait approximately four minutes.
11. Select

```
> Review Latest Test Results
```

12. Press ENTER.

    The system displays the Alarm Origination Test Results screen (Figure 7-4).

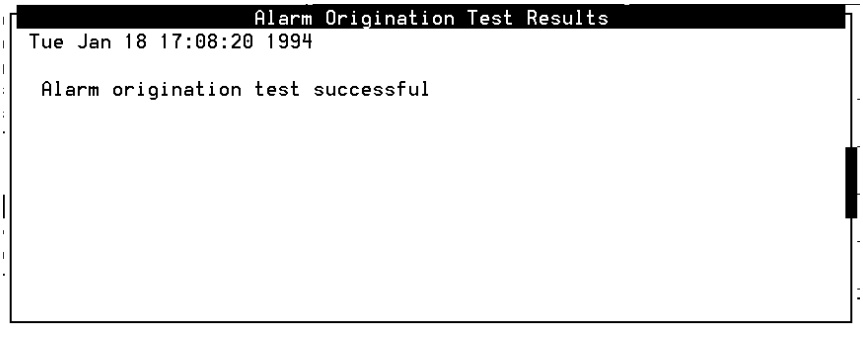


Figure 7-4. Alarm Origination Test Results Screen Showing Successful Test Results

13. Verify that the message on the screen reads:

    ```
    Day Date Time

    Alarm origination test successful.
    ```

14. Press F6 (Cancel) until you reach the Avaya Interchange Main Menu (Figure 5-1) if the test completed successfully.

    If you are finished with the installation, press F6 (Cancel) until you log out of the system.

Administering Voice Ports

This section describes how to administer voice ports using analog networking.

To administer voice ports using analog networking, do the following:

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

   ```
   > Voice System Administration
   ```

   ```
   > Voice Equipment
   ```

   The system displays the Display Voice Equipment window.

2. Press F8 (Actions).

   The system displays the Actions menu.

3. Select

   ```
   > Assign/Change
   ```

   The system displays the Assign/Change menu (Figure 7-5).

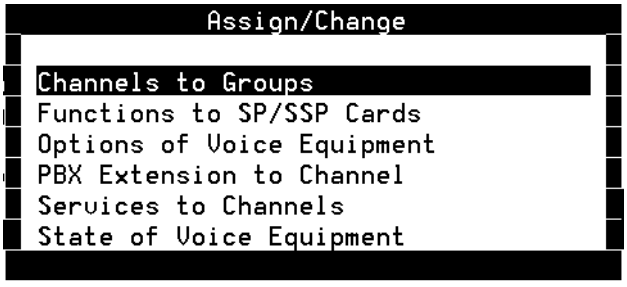


Figure 7-5. Assign/Change Menu

4. Select

```
> PBX Extension to Channel
```

   The system displays the PBX to Channel screen.

5. Enter the customer-assigned PBX extension to the assigned channel.

   NOTE:
   Extensions have to be assigned to the channel to match the assignment in the hunt group.

6. Press F3 (Save).
7. Press F6 (Cancel) to return to the Assign/Change menu.
8. Select

```
> Services to Channel
```

   The system displays the Services to Channel screen.

9. In the `Channel Numbers` field, type **all**.

   Type **all** in lowercase letters. This field is case sensitive.

10. In the `Service Name` field, type **acr**.

    Type **acr** in lowercase letters. This field is case sensitive.

11. Press F3 (Save).
12. Press F6 (Cancel) until you return to the Avaya Interchange Main Menu (Figure 5-1).

Hooking Up Analog Lines

Hook up the analog lines to the MAP/5P. See Chapter 3, Making Cable Connections and Appendix D, Cable Connectivity for additional information.

Administering the RMB

The remote maintenance board (RMB) is the device that enables the remote maintenance center to monitor the performance of you Interchange system. Ensure you have your system's order number. Use the Up ▲ arrow and Down ▼ arrow keys to move between fields.

To administer the RMB, do the following:

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

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

   The system displays the Alarm Management window (Figure 7-1).
2. Call the INADS registration group.

   The telephone number is on your order.
3. Provide the order number for your system.
4. Enter the value you are given in the `Product ID` field.
5. In the `Alarm Destination` field, enter **x18005333573** (United States).

   "x" represents any prefix required for your system to access an outside line. For example, if you need to dial "9" to get an outside line, the number you would enter in this field is **918005333573**.
6. In the `Alarm Origination` field, press F2 (Choices).
7. Select **Active**.
8. In the `Alarm Level` field, press F2 (Choices).
9. Select **Minor**.
10. In the `Alarm Suppression` field, press F2 (Choices).
11. Select **Inactive**.
12. In the `Clear Alarm Notification` field, press F2 (Choices).
13. Select **Active**.

14. Press F3 (Save).

    The system displays the following message:

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

15. Press ENTER.
16. Press F6 (Cancel) to return to the Avaya Interchange Main Menu (Figure 5-1).

Administering the Modem

You administer the modem for international Interchange systems. See Appendix E, Modems for information about connecting a modem.

Performing Initial Administration Tasks

See Chapter 1, Avaya Interchange Administration Checklists, in *Avaya Interchange Release 5.4 Administration* for a list of initial administration tasks you must perform.

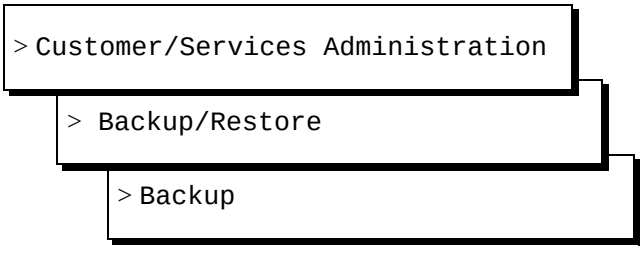
Making an Attended Backup Tape

This procedure creates a backup tape that contains a record of all of the administration you have performed on the system to this point. It is the same as the nightly backup that occurs at 3:00 a.m. every morning.

You might want to use the original installation backup tape to perform a second installation backup after you have administered all of the subscribers.

To make an attended backup tape, complete the following procedure:

1. Insert a tape into the tape drive.
2. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



The system displays the Backup Data Type screen (Figure 7-6).

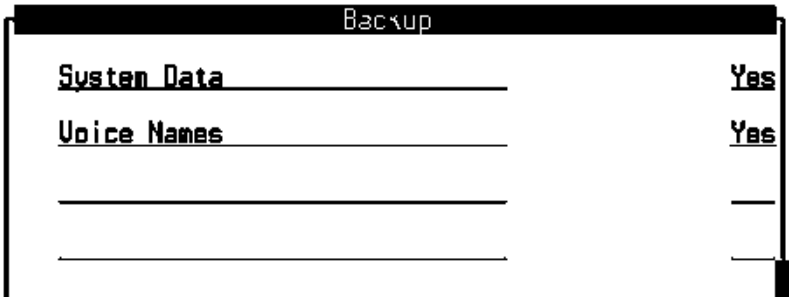


Figure 7-6. Backup Screen

NOTE:
The fields displayed on the Backup window are based on system configuration. Therefore, the screen you see might look different than the one shown above.

3. Enter **y** in the `System Data:` field to save the following information to tape:
   - Time zone setting
   - Serial port configuration
   - Channel configuration
   - Feature option configuration
   - Switch integration information
   - Subscriber administration
4. Press F3 (Save) to back up the selected data types.

   The system displays the following message:

```
***** calculating approximate number of tape(s)
required *****
please wait

The backup will need:
x 2GB cartridge tape(s).

verify whole backup tape(s) will double the amount of
backup
time. do you really want to verify tape(s)? (strike y or
n)
```

5. Enter **y**.

   The system displays the following message, where *x* is the number of tapes:

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

   CAUTION:
   Use only 2-GB tapes. Tapes of any other size cause the backup to fail.

6. Verify that you have enough tapes to perform the backup.
7. Press ENTER to begin the backup.

   The system responds with the following message:

   ```
   **** tape 1 pre-process started ****
   ```

   This message is followed by other messages indicating that the system is writing to the tape.
8. Label additional cartridge tapes if the system requires more than one tape.
9. Insert additional cartridge tapes if the system asks for them.

   When the attended backup is complete, the system responds with the following message:

   ```
   backup process has been completed successfully
   press any key to continue
   ```
10. Press ENTER.
11. Press F6 (Cancel) to return to the Avaya Interchange Main Menu (Figure 5-1).
12. Remove the backup tape from the tape drive.
13. Insert the tape to be used for the nightly backup.

    NOTE:
    If you leave the tape drive empty, the system alarms at 3:00 a.m. when it tries to perform the nightly backup. Do **not** leave the tape drive empty.

14. Press F6 (Cancel) to exit the system.

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) Avaya Interchange system. The Chapter or Section column refers 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 Books to Use with the Checklist to support the checklist.

Purpose

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

Books to Use with the Checklist

Use the following books to install an Avaya Interchange MAP/100P:

- *Avaya Interchange Release 5.4 MAP/100P System Installation*, *585-313-809*

  This is the primary reference book for installing a factory-assembled MAP/100P.

- *Avaya Interchange Release 5.4 MAP 100/P System Maintenance*, 585-313-809
- *Avaya Interchange Release 5.4 Installation and System Recovery*, 585-313-809
- *Avaya Interchange Release 5.4 Administration*, 585-313-809

If you are installing networking, you will also need one or more of the following:

- *Avaya INTUITY Digital Networking,* 585-310-567

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

- *AMIS Analog Networking,* 585-300-512

  Use this book along with the system installation book, if connecting to the AMIS analog network.

NOTE:
If you need to install a feature for the customer on 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 or Section column refers you to the appropriate chapter number and section title of the system installation book. If a specific section title is not provided for a task, refer to the chapter to determine the appropriate procedure.

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 weight and space requirements.		1	Weight and Space Considerations	
4	Verify site power requirements.		1	Power Requirements	
5	Verify site is prewired for all pinout connections.	Required for telephone lines and switch integration.	1		
6	Review all safety warnings before getting started.		1	System Grounding Connections	
7	Observe electrostatic discharge guidelines.	Required for all circuit cards and peripheral disk drives.	1	System Grounding Connections	
8	Gather the required tools.		1	Tools	
9	Unpack the MAP.	Open as instructed to reuse packing materials.	2	Unpacking the MAP/100P	
10	Locate key components on the MAP.		2	The Front of the Chassis and The Back of the Chassis	
11	Make cable connections.	Included are switch, network, and asynchronous connections. These *must* be made prior to powering up.	3 Appendix D		

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

Task	Task Description	Comments	Chapter	Section	✔
12	Connect the MAP to the power service and power up.		4		
13	Verify the system setup screen is correct, if necessary.		4		
14	Continue with the checklist if the system setup screen is correct.	If, at this point, the system does not seem to be working, see Appendix B, Troubleshooting Procedures to verify hardware connections or to clean equipment if necessary.			
15	Administer passwords.	All systems.	5	Administering Passwords	
16	View installed hardware.	All systems.	5	Verifying Installed Hardware	
17	Verify Avaya Interchange feature options.		5	Verifying Avaya Interchange Feature Options	
18	Administer and test alarm origination.		7	Activating Alarm Origination	
19	Administer voice ports.	All systems.	7	Administering Voice Ports	
20	Hook up analog lines.		7	Hooking Up Analog Lines	
21	Administer RMB.		7	Administering the RMB	

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

Task	Task Description	Comments	Chapter	Section	✔
22	Administer modem(s) on the Avaya Interchange system. Do *not* use these procedures on the remote *maintenance* modem connected to COM2.	Administer modems for systems, such as international systems, that use a modem for remote administration (ports other than COM2).	7 Appendix E	Administering the Modem	
23	Perform initial administration tasks.		7	Performing Initial Administration Tasks	
24	Make attended backup tape.	All systems.	7	Making an Attended Backup Tape	
25	Insert new tape for nightly backup. If you leave the tape drive empty, the system alarms at 3:00 a.m. when it tries to perform the nightly backup. Do **not** leave the tape drive empty.	All systems.	7	Making an Attended Backup Tape	

(3 of 3)

You are now ready to begin adding endpoints to the Avaya Interchange. See Administering Remote Machines in Chapter 2, Avaya Interchange Administration, in *Avaya Interchange Release 5.4 Administration*.

Troubleshooting Procedures

B

Overview

This chapter provides common procedures that are repeated throughout the installation process and troubleshooting procedures for TCP/IP connections.

See *Avaya Interchange Release 5.4 MAP/5P System Maintenance* for additional troubleshooting information.

Purpose

The purpose of this chapter is to provide the onsite technician or system administrator with repair procedures and references for the most common system problems. All of the troubleshooting procedures can be accomplished with a **craft** login.

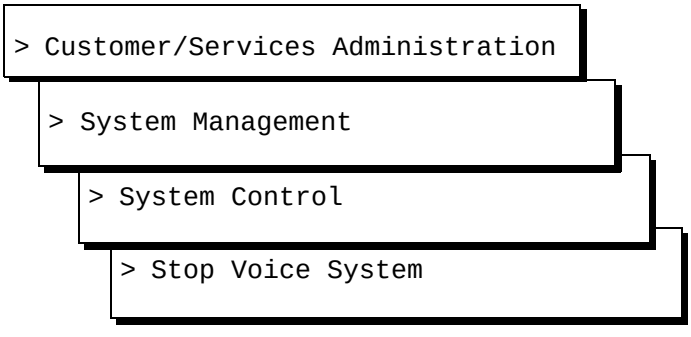
Stopping and Starting the Voice System

Complete the following procedures to stop and start the voice system to initiate changes made to the system.

Stopping the Voice System

To stop the voice system, do the following:

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



   The system displays the following message:

   ```
   Enter y to continue, n to quit.
   ```

2. Enter **y**.

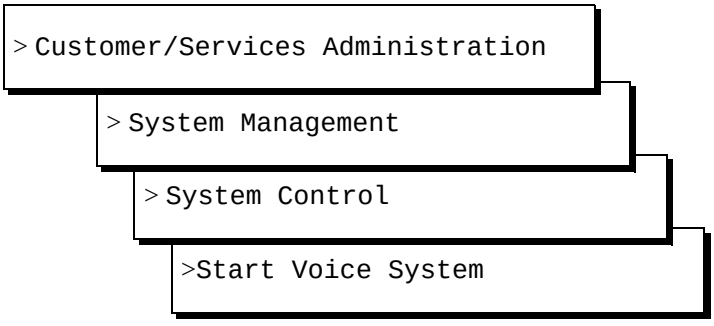
   The system displays the following message:

   ```
   The Voice System is now stopping.

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

   Orderly idling of system succeeded.
   Interchange Module shutdown in progress...
   Networking Module shutdown in progress...
   Networking Module shutdown.
   Interchange Module shutdown.

   After the Voice System has completely stopped, use the
   “Start Voice System” choice from the System Control
   menu to restart the voice system.

   The Voice System has stopped

   Press Enter to continue.
   ```

3. Press ENTER to return to the screen.

Starting the Voice System

1. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



   The system displays the following message:

   ```
   The Voice System is starting

   The Voice System is initializing cards

   Startup of the Voice System is complete
   ```

2. Press ENTER.
3. Press F6 (Choices) three times to return to the Avaya Interchange Main Menu (Figure 5-1).

TCP/IP Connection Troubleshooting Procedures

This section contains procedures you can use if the Avaya Interchange system fails the TCP/IP send-and-receive packets test.

Verifying the Physical Connection (Green LED)

To verify the physical connection, visually inspect the faceplate of the LAN circuit card. Ensure that the small green LED on the faceplate is lit. This LED lights up if either of the following conditions occurs:

- The interface type is twisted pair -— no link integrity.
- The interface type is 10BASE-T, and the hub device is up.

For 10BASE-2 or 10BASE-5 (coaxial), the green light does not necessarily light up. Do not consider this a failure if the green light is not lit for 10BASE-2 or 10BASE-5.

For twisted pair or 10BASE-T, if the LED is lit, continue with these procedures.

For 10BASE-T, if the green LED is flashing, the link is open or the LAN device is not optioned for the link integrity.

Troubleshooting Twisted Pair or 10BASE-T

For twisted pair or 10BASE-T, if the LED is not lit, do the following:

1. Verify that the circuit card configuration is correct. Return to Configuring the Ethernet LAN Circuit Card in Chapter 6, Initial Administration and Test for TCP/IP LAN Connectivity, and reenter the network interface type.

   NOTE:
   Reboot the system to reconfigure the network interface type. When you reboot the system, verify that the LAN circuit card is recognized. See Verifying Installed Hardware in Chapter 5, Administering Passwords and Verifying Hardware and Feature Options, for more information on verifying the LAN circuit card. Also verify that there are no TCP/IP error messages on the system.

   Check the condition of the small green LED after you have readministered the network interface type. If it is lit, retry the send-and-receive-packets test using the Test IP Address.

   If the LED on the LAN circuit card faceplate is not lit, continue with these procedures.

2. Check the LAN circuit card, cable, and hub device. If the cable is 10BASE-T and the LED is not on, the LAN circuit card, cable, or the hub device could be bad.

   If the connection is live, replace the LAN circuit card.

   If the cable to the LAN is dead, contact the customer LAN administrator or system administrator. It is the responsibility of the customer to provide you with a live cable with a suitable connector.

3. If the cable is twisted pair and the cable is tight, the LAN circuit card is bad. Contact your remote support center and replace the LAN circuit card.

Verifying Packet Sensing (Yellow LED)

To determine if the system is sending packets, visually inspect the faceplate of the LAN circuit card. For all interface types, the small yellow transmit/receive LED on the faceplate flashes if the LAN circuit card is sensing packets on the LAN. On Ethernet LAN networks, each machine reads all of the packets transmitted to and from other machines on the network, and ignores the packets not addressed directly to that machine. At this stage, the Avaya Interchange system should be sensing packets on the LAN.

NOTE:
If the yellow light is flashing, indicating that the Avaya Interchange system is sensing packet transmission on the LAN, continue with these procedures.

If the yellow light is not flashing, the card could be bad. Continue with the following steps. If the flashing light does not come on, contact your remote support center and replace the card.

1. Visually inspect the cable and the cable connection. Test the firmness of the connection.

   If the connection is tight, continue with these procedures.

   If the connection is loose, tighten the cable and retry the send and receive packets test. If the test fails again, continue with these steps.

2. Disconnect the cable and verify that the cable to the LAN is live.

   If the connection is live, continue with these steps.

   If the cable to the LAN is dead, contact the customer LAN or system administrator. It is the responsibility of the customer to provide you with a live cable and a suitable connector.

3. Verify the TCP/IP addressing and card configuration administration. Return to Administering TCP/IP LAN Connectivity in Chapter 6, Initial Administration and Test for TCP/IP LAN Connectivity, and use the procedure listed to display the windows.

   If the addressing is correct, press F6 (Choices) to exit from the windows without making any changes and continue with these steps.

   If the addressing or card configuration is not correct, readminister the Avaya Interchange TCP/IP networking using the procedures Establishing Network Addresses and Configuring the Ethernet LAN Circuit Card in Chapter 6, Initial Administration and Test for TCP/IP LAN Connectivity. Retry the send-and-receive-packets test. If this test fails again, continue with the next step.

4. Ask the LAN or the system administrator to verify that the LAN is correctly administered for the Avaya Interchange system. Ask the administrator to verify the Avaya Interchange:

   — UNIX name

   — Internet protocol (IP) address

   — Subnet mask

   — Default gateway

   If all of the information matches what you have administered on the Avaya Interchange system, continue with these procedures.

If the information for the Avaya Interchange system was not correctly administered for the LAN, readminister the Avaya Interchange TCP/IP networking window and reboot the system. Try the send and receive packets test again.

If the send and receive packets test fails after you have readministered and rebooted the Avaya Interchange system, ask the administrator to attempt a PING test to the Avaya Interchange system. If the administrator reports a failure to you but indicates that the customer LAN is operational, contact your remote maintenance center.

NOTE:
Avaya support services for the Avaya Interchange system do not troubleshoot a customer LAN. If the customer LAN is down, customers need to follow the service recommendations of their LAN provider.

Pinouts

C

Overview

This chapter provides the pinout information for the:

- Tip/Ring circuit card
- ACCX circuit card
- RS-232 null modem

The speech and signal processor circuit card (SSP - AYC43) provides speech support for various speech technologies. The SSP circuit card must be used with at least one Tip/Ring circuit card. One SSP circuit card can be installed in the MAP/100P.

NOTE:
No external cabling is required for the SSP circuit card.

Purpose

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

Pinouts for the Tip/Ring Circuit Card

Figure C-1 shows typical Tip/Ring line connection for the IVC6 circuit card.

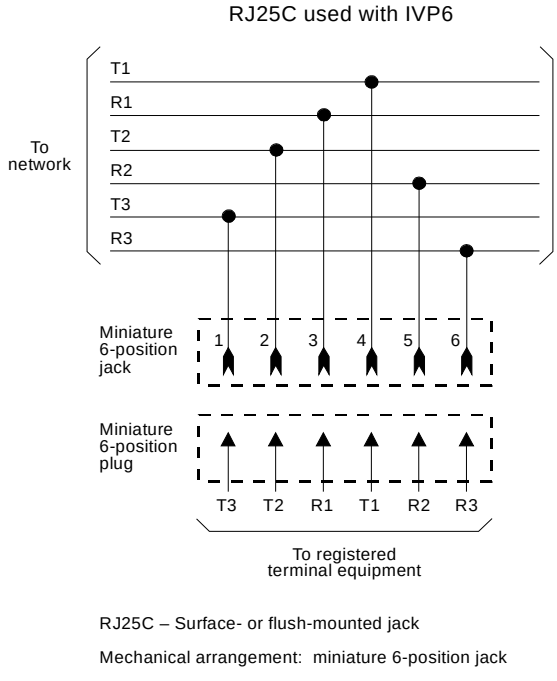


Figure C-1. Wiring and Pin Diagram for the IVC6 Tip/Ring Circuit Card

Pinouts for Connections from the ACCX Circuit Card

Table C-1 provides pinout and signal information for RS-232 connections from the ACCX circuit card. Table C-2 provides pinout and signal information for DCP connections from the ACCX circuit card.

Table C-1. RS-232 Signals, Connections, and Pinouts

Signal Name	Description	Pin No.	To or From ACCX Circuit Card
AA	Protective GND	1	—
BB	Signal GND	7	—
BA	Transmit Data	2	From
BB	Receive Data	3	To
CA	Request-to-Send	4	From
CB	Clear-to-Send	5	To
CC	Data-Set-Ready	6	To
CD	Data-Terminal-Ready	20	From
CE	Ring Indicator	22	To
CF	Carrier Detect	8	To
DA	Terminal Timing	24	From
DB	Transmit Timing	15	To
DD	Receive Timing	17	To

Table C-2. 50-Pin DCP Cable Termination Pin Assignments[1]

Pin No.	Lead	Description
27	TXR-0	DCP port 0 transmit signal ring side
28	RXR-0	DCP port 0 receive signal ring side
30	TXR-1	DCP port 1 transmit signal ring side
31	RXR-1	DCP port 1 receive signal ring side
2	TXT-0	DCP port 0 transmit signal tip side
3	RXT-0	DCP port 0 receive signal tip side
5	TXT-1	DCP port 1 transmit signal tip side
6	RXT-1	DCP port 1 receive signal tip side

1. Pins 1, 4, 7–25, 26, 29, and 32–50 are not used.

Pinouts for RS-232 Null Modem

Table C-3 provides pinout information for the RS-232 null modem.

Table C-3. RS-232 Null Modem Pin Assignments[1]

Pin Number	Lead	Corresponding Lead	Pin Number
1	PG	PG	1
7	SG	SG	7
2	TD	RD	3
3	RD	TD	2
20	DTR	DSR	6
6	DSR	DTR	20
4	RTS	CTS	5
8	CD	RTS	4
4	RTS	CTS	5
4	RTS	CD	8

1. Pins 9 through 19 are not used.

Cable Connectivity

D

Overview

This appendix provides information about external connectivity and cabling from the MAP/100P platform to the following:

- Switches:
  - System 25
  - System 75
  - System 85
  - MERLIN LEGEND®
  - Digital station interface
  - Inband and serial
  - Centrex
- Networks
- Terminals and distant modems

Table D-1 identifies where you can find more information for cable connectivity of switches to Avaya Interchange systems.

Table D-1. Switch Types and Document References for Cable Connectivity

For Switch Type	See Document
System 25 switches	*INTUITY Integration with System 25*, 585-310-254
System 75 switches or R6csi switches	*INTUITY Integration with System 75 and DEFINITY Communications System Generic 1 and Generic 3*, 585-310-257
System 85 switches	*INTUITY Integration with System 85 and DEFINITY Communications System Generic 2*, 585-310-256
MERLIN LEGEND switches	*INTUITY Integration with MERLIN LEGEND Communications System*, 585-310-255
Digital station interface switches	*INTUITY Switch Integration with a Digital Station Interface*, 585-310-251
Inband and serial switches	*INTUITY Inband and Serial Switch Integration,* 585-310-252
Centrex switches	*INTUITY Centrex Switch Integration*, 585-310-253

NOTE:
Tables that list cable ordering numbers and lengths are provided at the end of this appendix if you need to order cables.

Purpose

This appendix provides procedures and illustrations to help you make connections to the switch, network, or terminals.

Slot Assignments

Circuit cards are placed in the MAP/100P in locations called *slots*. The following sections detail the fixed and variable slot assignments for circuit cards installed in the MAP/100P.

Fixed Slot Assignments

The following circuit cards have fixed locations in the MAP/100P:

- Tip/Ring circuit cards — Slot 1 and Slot 2
- Remote maintenance circuit card — Slot 16
- P5 200 MHz CPU circuit card — Slot 17
- Video circuit card — Slot 18

Assignment Rules

The following rules apply to the placement of optional boards in the MAP/100P:

- A maximum of 15 ISA slots are available.
- A maximum of 11 Tip/Ring circuit cards is supported.
- A maximum of three ACCX circuit cards is supported.
- The system does not support both a digital station interface circuit card and a DCIU circuit card.
- All other circuit cards are supported as one per system with no mutual exclusions.
- Slots 3 through 15 are to be occupied by circuit cards in the following order, starting with Slot 3:
    1. Tip/Ring
    2. SSP
    3. ACCX
    4. Digital station interface or DCIU
    5. Multi-port serial
    6. LAN
- The LAN circuit card will always occupy Slot 15 if it is provided.
- The multi-port serial circuit card will occupy the highest available slot after the LAN circuit card, if provided, has been installed.

- A digital station interface or DCIU circuit card will occupy the highest available slot after the LAN circuit card and the multi-port serial circuit card, if provided, have been installed.
- ACCX circuit cards are assigned slots sequentially, starting with the highest available slot.

Connecting Cables from the Platform to the Switch

To begin switch connections from the MAP platform, you must connect to the DCIU circuit card. Verify the slot location. The DCIU circuit card has a 25-pin RS-232 connector and a green LED on the faceplate.

Using an IDI or MPDM for Switch Connections

Connections from the platform to the switch must be made through either an isolating data interface (IDI) or a modular processor data module (MPDM). Direct connections to the switch are not allowed.

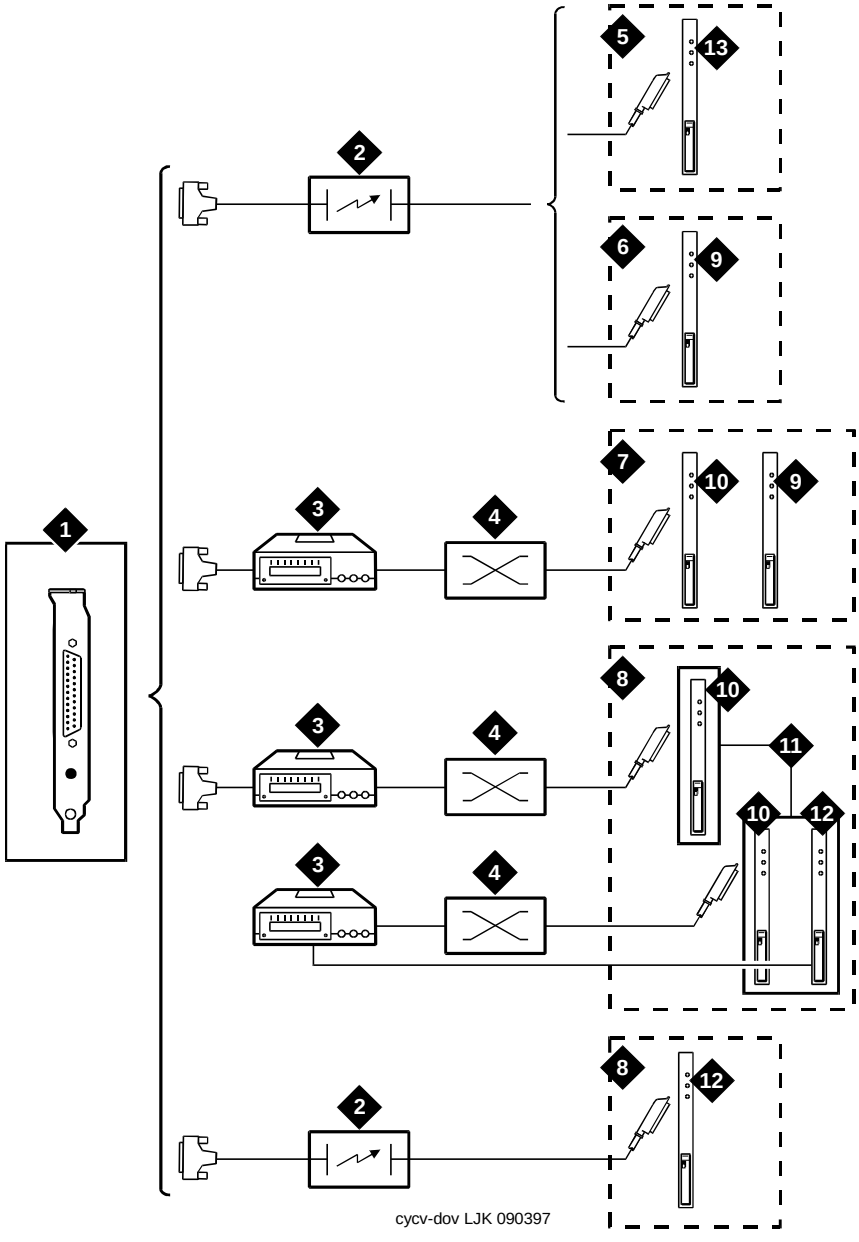
An IDI functions as a ground device (RS-449). The cable is RS-232 on one end for connection to the DCIU circuit card and RS-449 on the other end for connection to the IDI.

The MPDM provides a digital port connection to the switch from the DCIU circuit card. You must use an MPDM in the following situations:

- The connection from the platform to the switch is greater than 400 feet (122 meters).
- The switch to which you are connecting has duplicated common control.
- The switch has DC power.

The last two items do *not* apply to DEFINITY G3r or G2 and System 85 R2V4.

See Figure D-1 for an overview of the types of connections from the MAP/100P to various Avaya switches.



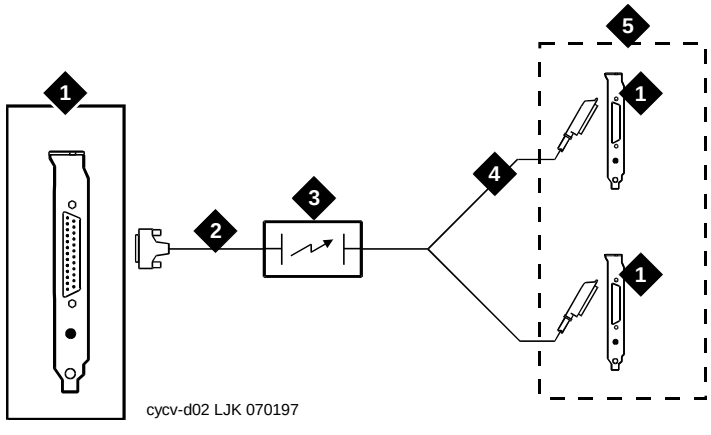
1. Avaya DCIU circuit card
2. IDI
3. MPDM
4. Cross-connect
5. G2 and System 85 R2V4
6. Most switches except G3r, G2, System 85
7. All switches except G3r, G2, System 85
8. G3r only
9. TN765 processor interface
10. TN754 digital line interface
11. Administered connection
12. TN577 packet gateway
13. System 85 DCIU circuit pack

Figure D-1. Overview of Platform Switch Cable Connections

Connecting the Avaya Interchange System to G2 and System85 R2V4 Using Duplicated Common Control Through an IDI

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

1. Attach one end of the ED1E43411-Grp 175 cable to the DCIU circuit card. The card has a 25-pin male connector on the faceplate.
2. Attach the other end of the ED1E43411-Grp 175 cable to the *out* RS-449 connector on the IDI).
3. Attach one end of the ED1E43411-Grp 342 cable to the *in* RS-449 connector on the IDI.
4. Though not shown in the figure below, attach an ED1E43411-Grp304 to the Grp 342 cable if the connection is more than 2.1 meters (7 ft) away (the length of the Grp 342 cable). The Grp 304 cable is 122 meters (400 feet) in length.
5. Attach the ED1E4311-Grp 342 or Grp 304 cable to both DCIU circuit cards in the G2 and System 85 R2V4 switch.



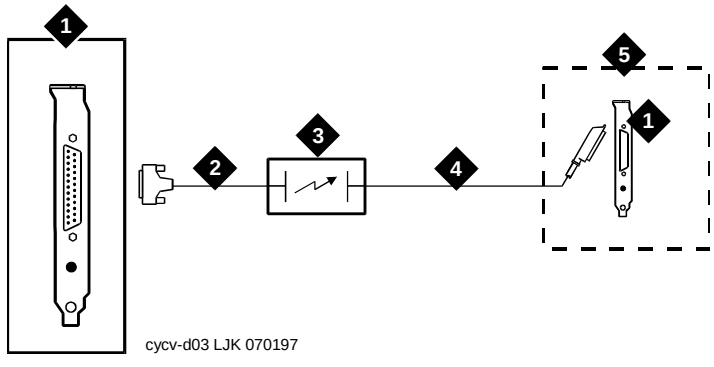
1. DCIU circuit card
2. ED1E43411- Grp 175 cable
3. IDI
4. ED1E43411-Grp 342 cable
5. G2 and System 85

Figure D-2. Connecting the Avaya Interchange System to G2 and System 85 R2V4 Using Duplicated Common Control Through an IDI

Connecting the Avaya Interchange System to G2 and System 85 R2V4 Through an IDI

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

1. Attach one end of the ED1E43411-Grp 175 cable to the DCIU circuit card The card has a 25-pin male connector on the faceplate.
2. Attach the other end of the ED1E43411-Grp 175 cable to the *out* RS-449 connector on the IDI.
3. Attach one end of the ED1E43411-Grp 304 cable to the *in* RS-449 connector on the IDI.
4. Attach the ED1E43411-Grp 304 cable to the DCIU circuit card in the G2 and System 85 R2V4 switch.



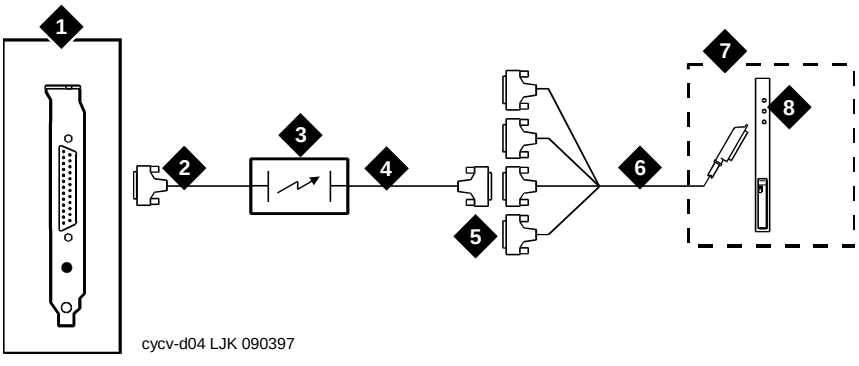
1. DCIU circuit card
2. ED1E43411-Grp 175 cable
3. IDI
4. ED1E43411-Grp 304 cable
5. G2 and System 85

Figure D-3. Connecting the Avaya Interchange System to G2 and System 85 R2V4 Through an IDI

Connecting the Avaya Interchange System to the G3r Through an IDI

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

1. Attach one end of the ED1E43411-Grp 175 cable to the DCIU circuit card. The card has a 25-pin male connector on the faceplate.
2. Attach the other end of the ED1E43411-Grp 175 cable to the *out* RS-449 connector on the IDI.
3. Attach one of the four RS-232 connectors on the H600-210 Grp *n* cable to the *in* RS-449 connector of the IDI.
4. Attach the other end of the H600-210 Grp *n* cable to an RS-232 connector on one end of the H600-347 cable.
5. Attach the other end of the H600-347 cable on the packet gateway card (TN577) on the G3r switch.



1. DCIU circuit card
2. ED1E43411-Grp 175 cable
3. IDI
4. H600-210-Grp *n* cable
5. RS-232 connector
6. H600-347 cable
7. G3r
8. TN577 packet gateway

Figure D-4. Connecting the Avaya Interchange System to the G3r Through IDI

Connecting the Avaya Interchange System to Most Avaya Switches Through an IDI

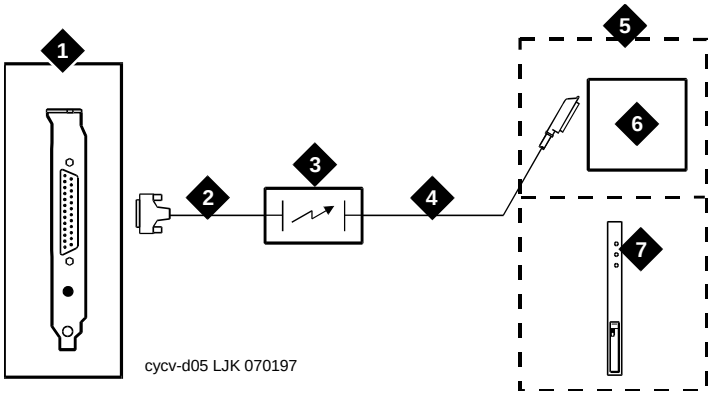
Use the following procedure and Figure D-5 to make these cable connections:

NOTE:
The following switches are excluded from this procedure:

- G3r, System 85 R2V4, G2
- G1/G3i, G3s, G3V5 that have:
  - DC power
  - Duplicated common control
  - Another adjunct system using the single PI/EIA port

Some early models of System 75 R1V3 do not have a PI/EIA port and, in some cases, might not be equipped with a PI circuit card.

1. Attach one end of the ED1E43411-Grp 175 cable to the DCIU circuit card. The card has a 25-pin male connector on the faceplate.
2. Attach the other end of the ED1E43411-Grp 175 cable to the *out* RS449 connector on the ID.
3. Attach the RS-449 end of the H600-210 Grp n cable to the *in* RS-449 connector on the IDI.
4. Attach the RS-232 end of the H600-210 cable to an EIA connector on the processor interface.



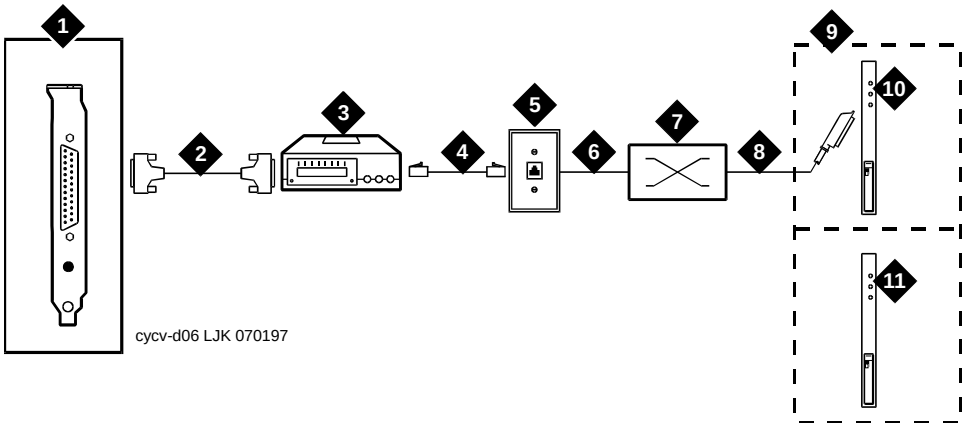
1. DCIU circuit card
2. ED1E43411-Grp 175 cable
3. IDI
4. H600-210 -Grp *n* cable
5. Most switches except G3r, G2, and System 85
6. EIA connector on the processor interface
7. TN765 processor interface

Figure D-5. Connecting the Avaya Interchange System to Most Avaya Switches Through an IDI

Connecting the Avaya Interchange System to Most Avaya Switches Through an MPDM — G3r or G2 and System 85 Excluded

Use the following procedure and Figure D-6 to complete these connections:

1. Attach one end of the RS-232 cable to the DCIU circuit card.
2. Attach the other end of the RS-232 cable to the RS-232 connector of the MPDM.
3. Attach one end of the D8W-87 (4-pair) modular cord to the modular jack on the MPDM.
4. Attach the other end of the D8W-87 modular cord to the 103A adapter modular jack.
5. Attach a 3-pair cord from the 103 A adapter to the cross-connect field.
6. Attach one end of a 25-pair I/O cable to the cross-connect field.
7. Attach the other end of the 25-pair I/O cable to the digital line interface card (TN754) on the switch.



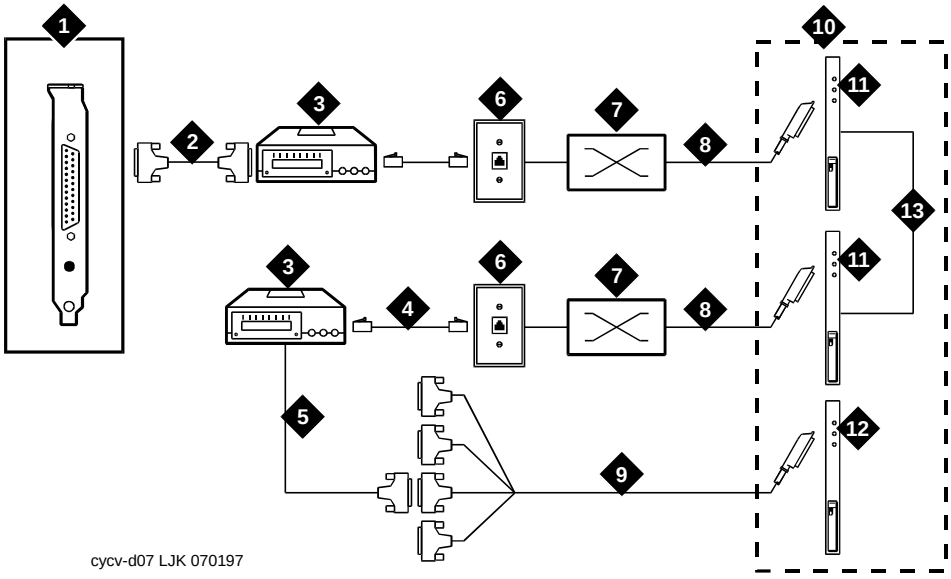
1. DCIU circuit card
2. RS-232 cable (524124658)
3. MPDM
4. D8W-87 (4-pair) modular cord
5. 103A adapter
6. 3-pair cord
7. Cross-connect field
8. 25-pair I/O cable
9. All switches except G3r
10. TN754 digital line interface
11. TN765 processor interface

Figure D-6. Connecting the Avaya Interchange System to Most Avaya Switches Through an MPDM -- G3r or G2 and System 85 Excluded

Connecting the Avaya Interchange System to the G3r Through MPDMs

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

1. Attach one end of the RS-232 cable to the DCIU circuit card.
2. Attach the other end of the RS-232 cable to the RS-232 connector of the MPDM.
3. Attach one end of the D8W-87 (4-pair) modular cord to the modular jack on the MPDM.
4. Attach the other end of the D8W-87 modular cord to the 103A adapter with a 3-pair cord.
5. Attach a 3-pair cord from the 103A adapter to the cross-connect field associated with the digital line interface (TN754).
6. Attach a 25-pair I/O cable between the cross-connect field and the digital line interface card (TN754) on the switch.
7. Attach a 25-pair I/O cable between the cross-connect field and a second digital line interface circuit card (TN754) or to a different port on the same circuit card on the switch.
8. Attach a 3-pair cord from the cross-connect field associated with the digital line interface (TN754) to the 103A adapter.
9. Attach one end of the D8W-87 modular cord to the 103A adapter.
10. Attach the other end of the D8W-87 (4-pair) modular cord to the modular jack on the MPDM.
11. Attach one end of the Group 110 cable to the RS-232 connector of the MPDM.
12. Attach the other end of the Group 110 cable to one of the four RS-232 connectors on the H600-347.
13. Attach the other end of the H600-347 - Grp 1 cable on the packet gateway circuit card (TN577) on the G3r switch.



1. DCIU circuit card
2. RS-232 cable (524124658)
3. MPDM
4. D8W-87 modular cord
5. Group 110 cable
6. 103A adapter
7. Cross-connect field
8. 25-pair I/O cable
9. H600-347-Grp 1 cable
10. G3r only
11. TN754 digital line interface
12. TN577 packet gateway
13. Administered connection

Figure D-7. Connecting the Avaya Interchange System to the G3r Through MPDMs

Connecting the Avaya Interchange System to the Network

The ACCX circuit card is used on the MAP platforms for connections to the network. Each card supports four networking channels through digital and/or analog remote connections using DCP and/or RS-232 links, respectively. The MAP/100P supports up to three ACCX circuit cards.

Each ACCX card terminates four data channels in one of the following combinations:

- Two DCP lines, each providing two I-channels. Depending on the version of the switch you are connecting to, you may only be able to use one of the two I-channels of each DCP circuit as shown in the following list.
  - — System 75 R1V3, DEFINITY G1 R1V4, and DEFINITY G3i, G3s, or G3vs Version 1 support only one I-channel.
  - — DEFINITY G2, G3, G3i, G3s, G3vs Version 2, and System 85 can use both of the I-channels. The option must be purchased, installed, and administered on the switch before Avaya Interchange system administration is performed.
- Four RS-232 ports.
- One DCP line (two I-channels) and two RS-232 ports.

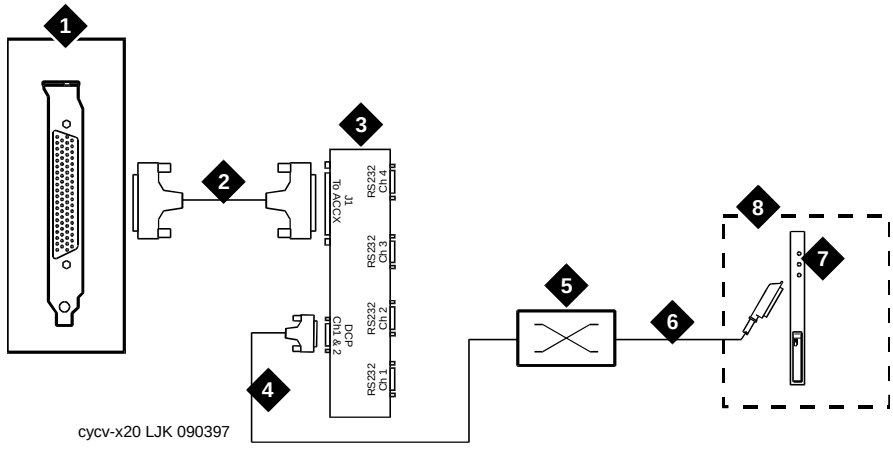
Each ACCX card includes a 10-foot cable and a breakout box for RS-232 or DCP connections. The ACCX card is located in varying locations on the MAP/100P. See Figure D-8 through Figure D-10 for your configuration.

Refer to Appendix C, Pinouts, for information on RS-232 and DCP cable pinouts and the breakout box. See *Avaya Interchange Release 5.4 MAP 100/P System Maintenance*, 585-313-809, Chapter 5, Replacing or Installing Circuit Cards, section ACCX (AYC22) Circuit Card, for information on how to install the ACCX card.

Connecting the Avaya Interchange System to the Network Through Two DCP Lines

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

1. Attach the provided 78-pin cable to the ACCX circuit card.
2. Attach the other end of the 78-pin cable to the J1 connector on the provided breakout box.
3. Attach one end of the ED5P208-Grp 30 cable to the DCP connector on the breakout box.
4. Attach the other end of the ED5P208-Grp 30 cable to the cross-connect field.
5. Attach one end of a 25-pair I/O cable to the cross-connect field.
6. Attach the other end of the 25-pair I/O cable to the digital line interface card (TN754) or SN270B (System 85).
7. Cross connect TN754 ports to the ED5P208G30 cable.



1. ACCX circuit card
2. 78-pin cable
3. 124A breakout box
4. ED5P20- Grp 30 cable
5. Cross-connect field
6. 25-pair I/O cable
7. TN754 digital line interface
8. DEFINITY switch

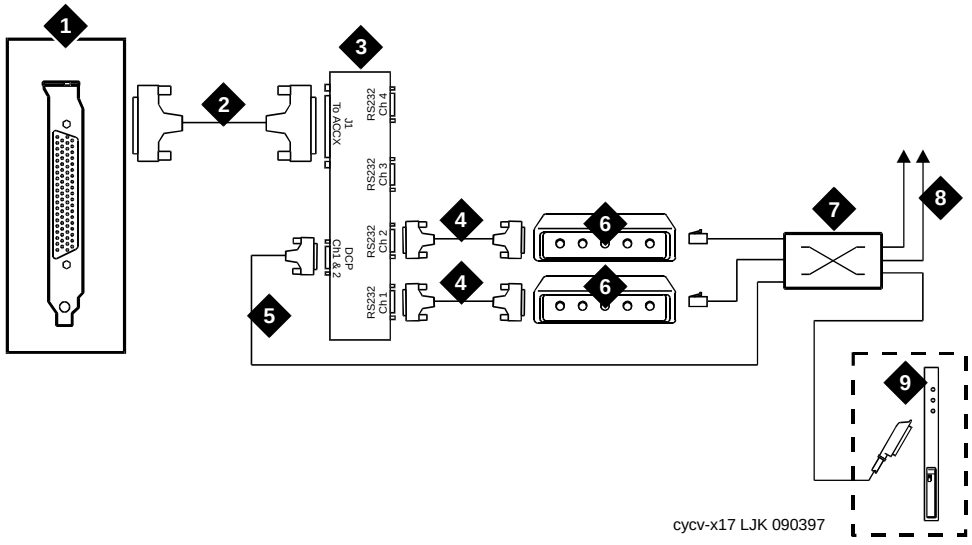
Figure D-8. Connecting the Avaya Interchange System to the Network Through Two DCP Lines

Connecting the Avaya Interchange System to the Network Through Two RS-232 and One DCP Lines

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

NOTE:
See Figure D-8 for specific information on DCP connections.

1. Attach the provided 78-pin cable to the ACCX circuit card.
2. Attach the end of the cable to the J1 connector on the provided breakout box.
3. Attach the ED5P208-Grp 30 cable to the DCP connector on the breakout box.
4. Attach the other end of the ED5P208-Grp 30 cable to the cross-connect field.
5. Attach one RS-232 cable to channel one on the breakout box and attach a second RS-232 cable to channel two on the breakout box.
6. Attach the other end of each RS-232 cable to a modem — one modem for each RS-232 cable.
7. Make the connections between the two modems and the cross-connect field.



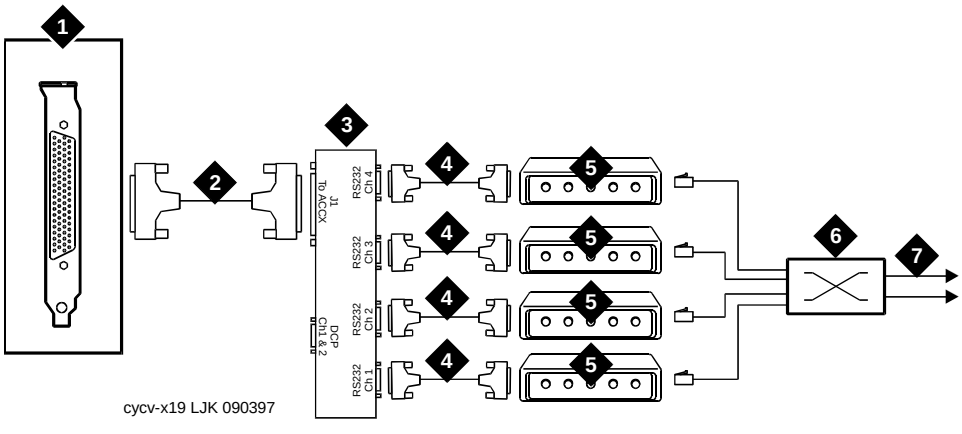
1. ACCX circuit card
2. 78-pin cable
3. 124A breakout box
4. RS-232 cable
5. ED5P208-Grp 30 cable
6. Modem
7. Cross-connect field
8. Analog lines
9. TN754 or SN270B interface card

Figure D-9. Connecting the Avaya Interchange System to the Network Through Two RS-232 and One DCP Lines

Connecting the Avaya Interchange System to the Network Through Four RS-232 Cables

Use the following procedure and Figure D-10 to make these connections:

1. Attach the provided 78-pin cable to the ACCX circuit card.
2. Attach the other end of the cable to J1 on the provided breakout box.
3. Attach each of the four RS-232 cables to one of the four RS-232 connectors on the breakout box.
4. Attach the other end of each of the four RS-232 cables to one of four modems. Each RS-232 cable must connect to a modem.
5. Cable each of the four modems to the cross-connect field.



1. ACCX circuit card
2. 78-pin cable
3. 124A breakout box
4. RS-232 cable
5. Modem
6. Cross-connect field
7. Analog lines

Figure D-10. Connecting the Avaya Interchange System to the Network Through Four RS-232 Cables

Overview of Avaya Interchange Serial Port Connections

Serial port connections from the Avaya Interchange system to terminals, distant modems, or other customer premise equipment can be made either from COM1 (Serial Port 1) on the back of the MAP/100P 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/100P. 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.

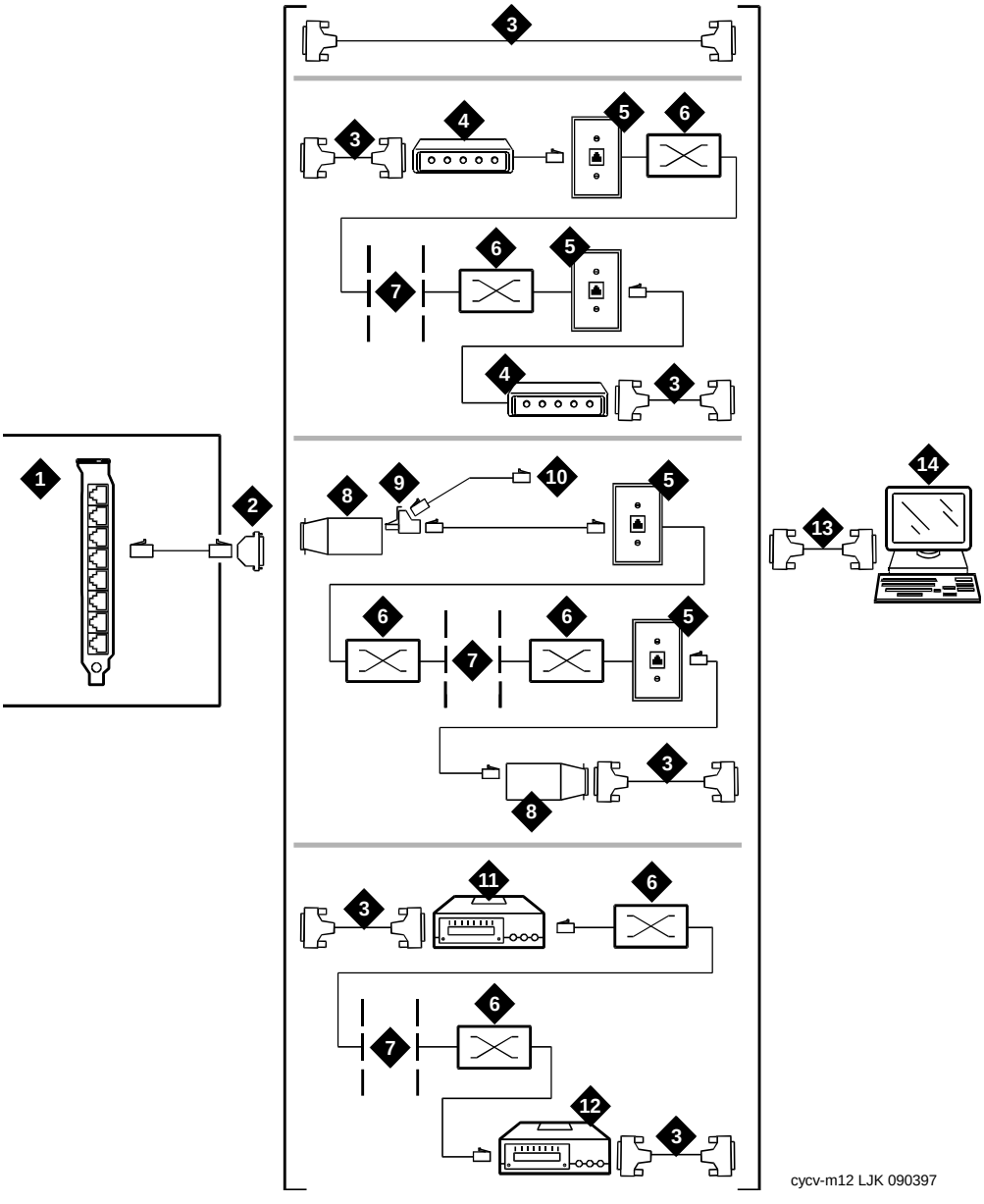
For MERLIN LEGEND-integrated systems without automatic Alarm Origination, COM2 is available, but COM1 is reserved for the System Programming and Maintenance Utility (SPM), a utility that allows you to administer the MERLIN LEGEND from the Avaya Interchange system.

For the System 25, COM1 is reserved for the Call Accounting System (CAS), if CAS is installed. System 25 Administration (AAS) and the remote maintenance modem share COM2 through a switch box. Use a multi-port serial circuit card for additional devices on the System 25.

NOTE:
COM2 is reserved for remote maintenance on systems using alarm origination. Do not use COM 2 for the Property Management Service (PMS) link.

See Chapter 3, Making Cable Connections, for more information on multi-port serial circuit card connections.

See Figure D-11 for an overview of serial port connections.



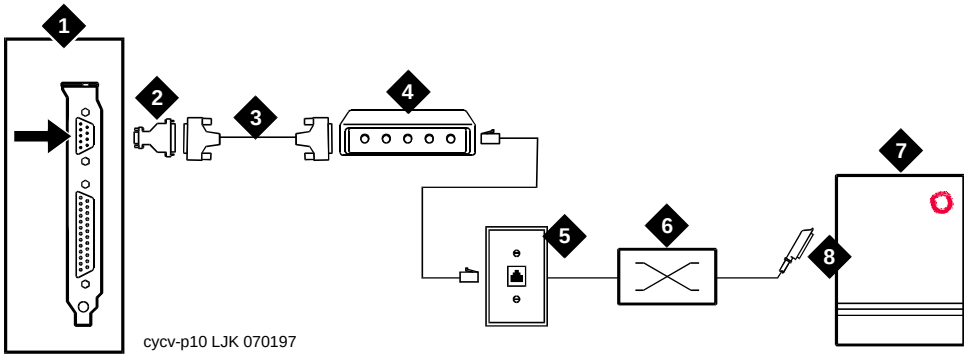
.1. Multi-port serial circuit card
2. Modular adapter (to 25-pin)
3. RS-232 cable
4. Modem
5. House Wiring
6. Cross-connect field
7. Public Switched Telephone Network (PSTN)
8. ADU
9. 400B2 adapter
10. To adjunct power 1151A
11. 7400A data module
12. 7400B distant data module
13. Null modem cable
14. Terminal

Figure D-11. Overview of Avaya Interchange Serial Port Connections

Connecting the Avaya Interchange COM1 to Customer Premise Equipment Through a Modem

Use the following procedure and Figure D-12 to make these connections:

1. Attach one end of an RS-232 cable to a 9-pin to 25-pin adapter.
2. Connect the other end of the 9-pin to 25-pin adapter to COM1 on the CPU circuit card on the back of the MAP/100P.
3. Attach the other end of the RS-232 cable to a modem.
4. Connect the modem to the house wiring.
5. Insure the house wiring is connected to the cross-connect field.
6. Connect one end of a 25-pair cable to the house wiring.
7. Connect the other end of the 25-pair cable to the switch.



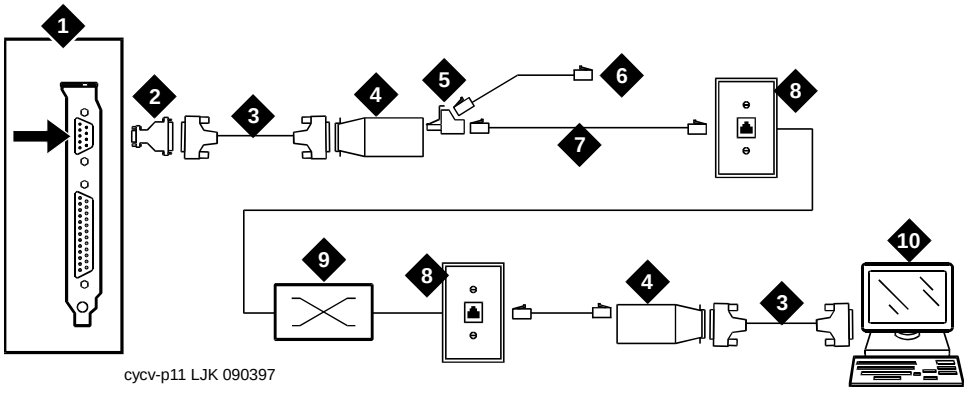
1. COM1 on CPU circuit card
2. 9-pin to 25-pin adapter
3. RS-232 cable
4. Modem
5. House wiring
6. Cross-connect field
7. Switch
8. 25-pair cable

Figure D-12. Connecting the Avaya Interchange COM1 to Customer Premise Equipment Through a Modem

Connecting the Avaya Interchange COM to a 715 Terminal DCE Port Through ADUs

Use the following procedure and Figure D-13 to make these connections.

1. Attach one end of an RS-232 cable to a 9-pin to 25-pin adapter.
2. Attach the other end of the 9-pin to 25-pin adapter to COM1 on the CPU circuit card on the back of the MAP/100P.
3. Attach the other end of the RS-232 cable to the ADU.
4. On the other end of the ADU, attach a 400B2 adapter.
5. Attach one end of a DW8 cable to one input of the 400B2 adapter. The other input goes to adjunct power 1151A.
6. Connect the other end of the DW8 cable to the house wiring.
7. At the other end of the house wiring, attach another ADU.
8. At the other end of that ADU, attach an RS-232 cable.
9. Attach the other end of this RS-232 cable to the 715 DCE terminal or other DCE device.



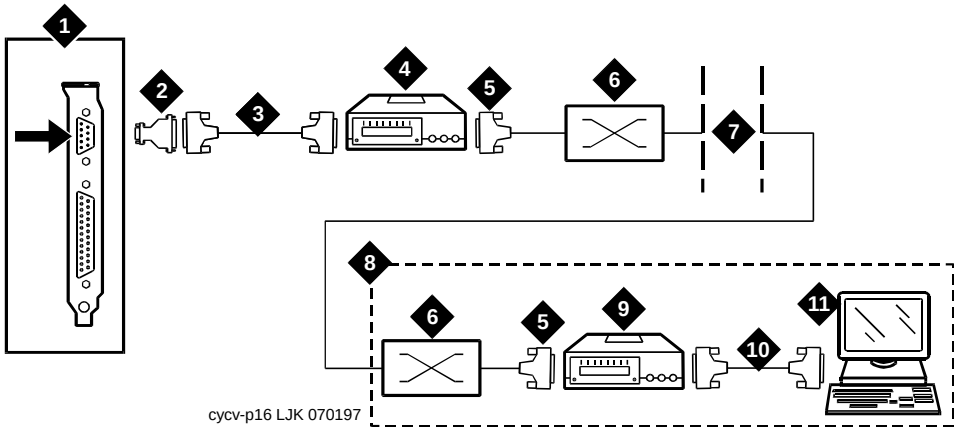
1. COM1 on CPU circuit card
2. 9-pin to 25-pin adapter
3. RS-232 cable
4. ADU
5. 400B2 adapter
6. To adjunct power 1151A
7. DW8 cable
8. House wiring
9. Cross-connect field
10. 715 Terminal

Figure D-13. Connecting the Avaya Interchange COM1 to a 715 Terminal DCE Port Through ADUs

Connecting the Avaya Interchange COM1 to a Distant Data Module Through a 7400A Data Module

Use the following procedure and Figure D-14 to make these connections.

1. Attach an RS-232 cable to one end of a 9-pin to 25-pin adapter.
2. Connect the other end of the 9-pin to 25-pin adapter to COM1 on the CPU circuit card on the back of the MAP/100P.
3. Attach the other end of the RS-232 cable to a 7400A data module.
4. Attach one end of a 25-pin cable to the 7400A data module.
5. Attach the other end of the 25-pin cable to the cross-connect field.
6. At the remote location, connect one end of a 25-pin cable to the cross-connect field.
7. Connect the other end of the 25-pin cable to a 7400B distant data module.
8. Connect one end of an RS-232 cable to the 7400B distant data module
9. Connect the other end of the RS-232 cable to the 715 terminal.



. COM1 on CPU circuit card
2. 9-pin to 25-pin adapter
3. RS-232 cable
4. 7400A data module
5. 25-pin cable
6. Customer wall field
7. Public Switched Telephone Network
8. Remote location
9. 7400B distant data module
10. RS-232 cable
11. 715 Terminal

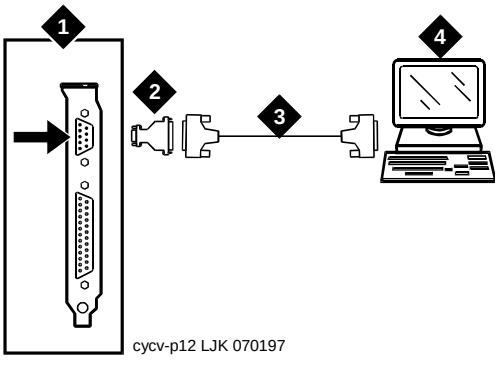
Figure D-14. Connecting the Avaya Interchange COM1 to a Distant Data Module Through a 7400A Data Module

Connecting the Avaya Interchange COM1 to a 615 Terminal or Other DTE Device Through a Null Modem

Use the following procedure and Figure D-15 to make these connections.

1. Attach a null modem cable to one end of a 9-pin to 25-pin adapter.
2. Connect the other end of the 9-pin to 25-pin adapter to COM1 on the CPU circuit card on the back of the MAP/100P.
3. Attach the other end of the null modem cable to the 615 terminal.

NOTE:
The null modem must be provided locally. If needed, it can be purchased from Avaya Inc.



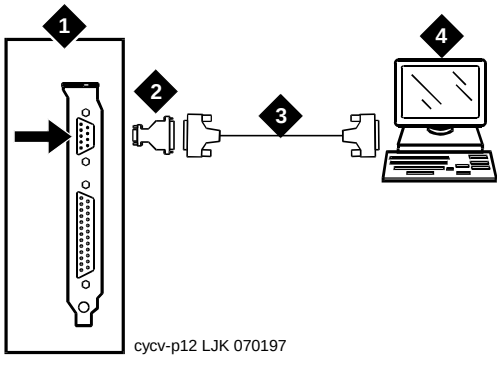
1. COM1 on CPU circuit card
2. 9-pin to 25-pin adapter
3. Null modem cable
4. 615 terminal

Figure D-15. Connecting the Avaya Interchange COM1 to a 615 Terminal Through a Null Modem

Making a Direct Connection from the Avaya Interchange COM1 to a 715 Terminal or Other DCE Device

Use the following procedure and Figure D-16 to make these connections.

1. Attach an RS-232 cable to one end of a 9-pin to 25-pin adapter.
2. Connect the other end of the 9-pin to 25-pin adapter to COM1 on the CPU circuit card on the back of the MAP/100P.
3. Attach the other end of the RS-232 cable to the 715 terminal or other DCE device.



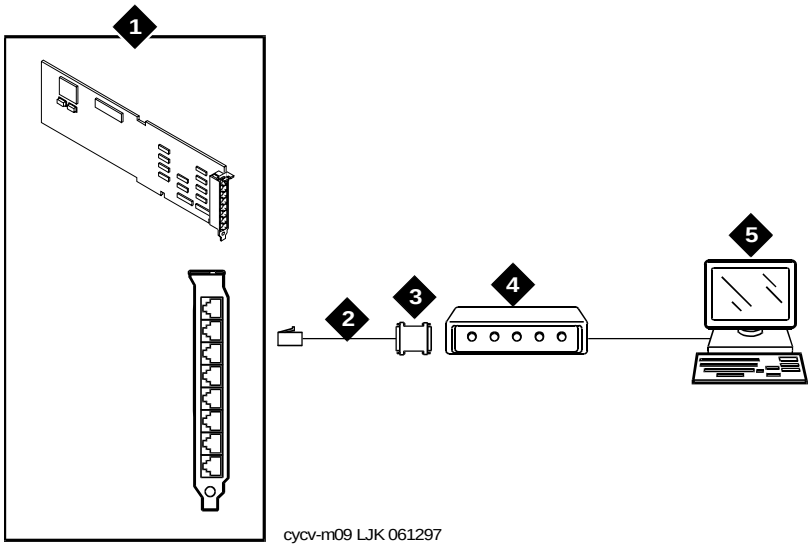
1. COM1 on CPU circuit card
2. 9-pin to 25-pin adapter
3. RS-232 cable
4. 715 terminal

Figure D-16. Making a Direct Connection from the Avaya Interchange COM1 to a 715 Terminal or Other DCE Device

Connecting the Avaya Interchange Multi-Port Serial Circuit Card to Customer Premise Equipment Through a Modem

Use the following procedure and Figure D-17 to make these connections:

1. Attach the 4.3-meter (14-foot) modular cable (provided with the card) to the multi-port serial circuit card.
2. Attach the other end of the 4.3-meter (14-foot) 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 premise equipment.



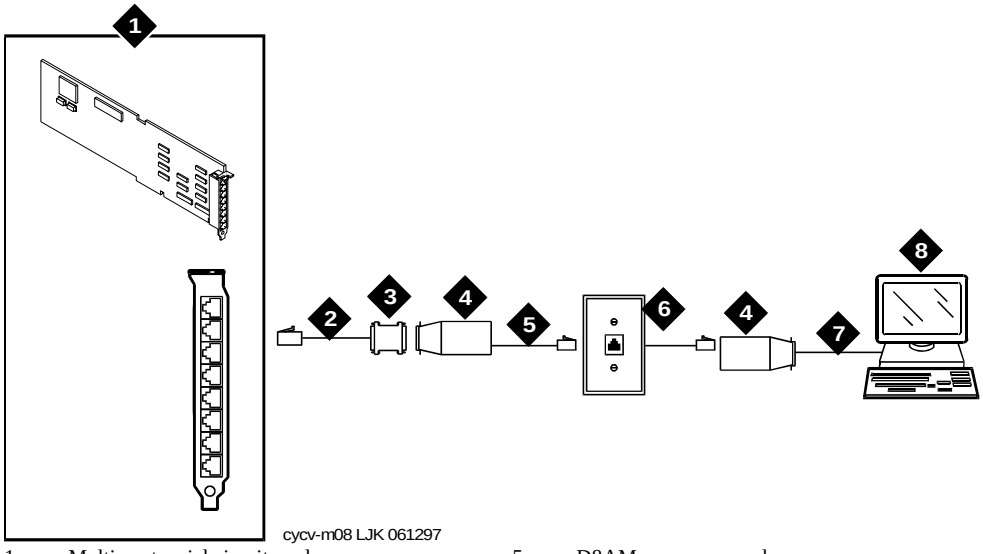
1. Multi-port serial circuit card
2. 4.3-m (14-ft) modular cable
3. DTE adapter
4. DCE modem
5. Customer premise equipment

Figure D-17. Connecting the Avaya Interchange Multi-Port Serial Circuit Card to Customer Equipment Through a Modem

Connecting the Avaya Interchange Multi-Port Serial Circuit Card to a Terminal Through ADUs

Use the following procedure and Figure D-18 to make these cable connections:

1. Attach one end of the 4.3-meter (14-foot) modular cable (provided with the card) to the multi-port serial circuit card.
2. Connect the other end of the 4.3-meter (14-foot) modular cable (provided with the multi-port serial circuit card) to the DTE adapter.
3. Connect the DTE adapter to the ADU.
4. Connect the ADU to one end of a D8AM crossover cord.
5. Attach the other end of the D8AM crossover cord to the house wiring.
6. Connect another ADU to the other end of the house wiring.
7. Attach one end of an RS-232 cable to the other end of this ADU.
8. Connect the other end of the RS-232 cable to the 715 terminal or other DCE device.



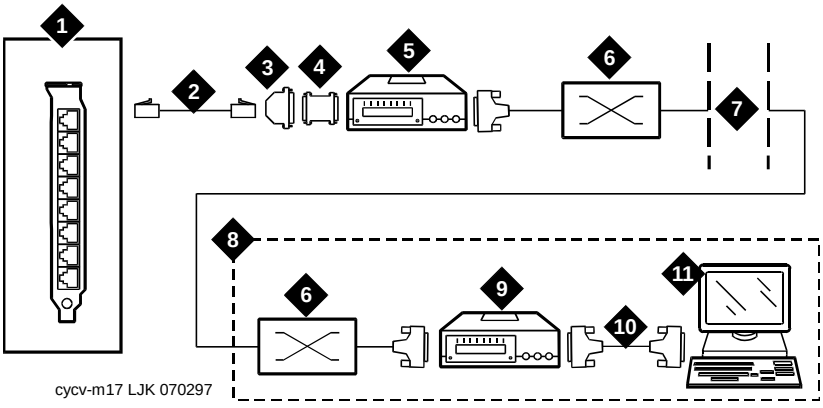
1. Multi-port serial circuit card
2. 4.3-m (14-ft) modular cable
3. DTE adapter
4. ADU
5. D8AM crossover cord
6. House wiring
7. ADU
8. 715 terminal or other DCE device

Figure D-18. Connecting the Avaya Interchange Multi-Port Serial Circuit Card to a Terminal Through ADUs

Connecting the Avaya Interchange Multi-Port Serial Circuit Card to a Distant Data Module Through a 7400A Data Module

Use the following procedure and Figure D-19 to make these cable connections:

1. Attach one end of the 4.3-meter (14-foot) modular cable (provided with the card) to the multi-port serial circuit card.
2. Attach the other end of the 4.3-meter (14-foot) modular cable (provided with the multi-port serial circuit card) to the DTE adapter using a 25-pin modular adapter.
3. Connect the DTE adapter to the 7400A data module.
4. Connect the 7400A data module to the cross-connect field.
5. At the remote location, connect the 7400B distant data module to the cross-connect field.
6. Connect the 7400B distant data module to the terminal using a null modem cable.



1. Multi-port serial circuit card
2. 4.3-m (14-ft) modular cable
3. 25-pin modular adapter
4. DTE adapter
5. 7400A data module
6. Cross-connect field
7. Public Switched Telephone Network (PSTN)
8. Remote location
9. 7400B distant data module
10. Null modem
11. Terminal

Figure D-19. Connecting the Avaya Interchange Multi-Port Serial Circuit Card to a Distant Data Module Through a 7400A Data Module

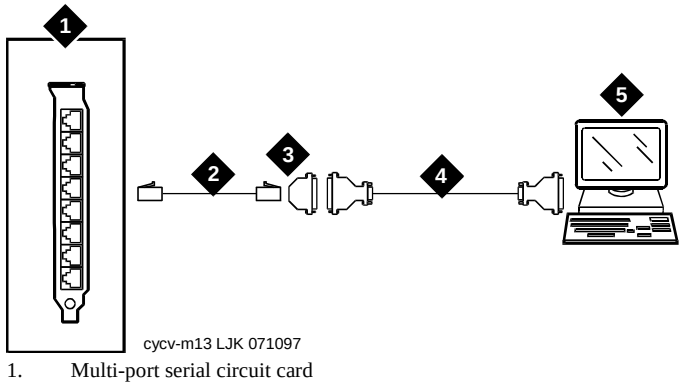
Making a Direct Connection from the Avaya Interchange Multi-Port Serial Circuit Card to a 615 Terminal or Other DTE Devices

Use the following procedure and Figure D-20 to make these cable connections:

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

   NOTE:
   The null modem must be provided locally. If needed, it can be purchased from Avaya Inc.

4. Connect the other end of the null modem cable to a 615 terminal or other DTE device.



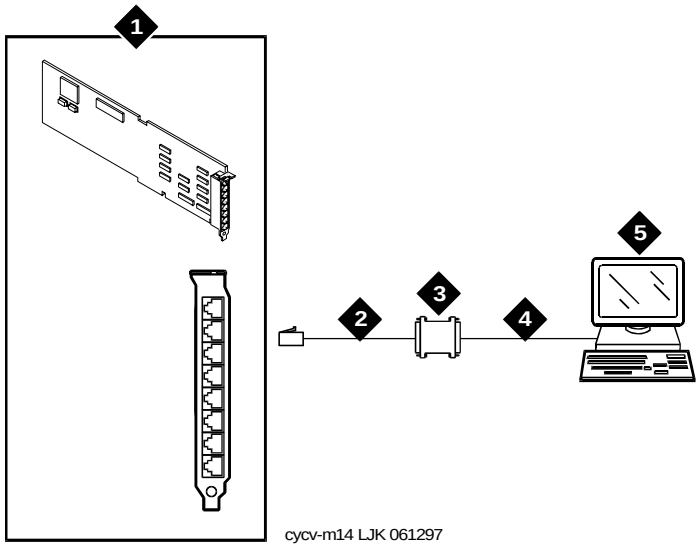
1. Multi-port serial circuit card
2. 4.3-m (14-ft) modular cable
3. DTE adapter
4. Null modem cable
5. 615 terminal or other DTE device

Figure D-20. Making a Direct Connection from the Avaya Interchange Multi-Port Serial Circuit Card to 615 Terminal or other DTE Device

Making a Direct Connection from the Avaya Interchange Multi-Port Serial Circuit Card to 715 Terminal or Other DCE Device

Use the following procedure and Figure D-21 to make these cable connections:

1. Attach one end of the 4.3-meter (14-foot) modular cable (provided with the card) to the multi-port serial circuit card.
2. Attach the other end of the 4.3-meter (14-foot) 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.



1. Multi-port serial circuit card
2. 4.3-m (14-ft) modular cable
3. DTE adapter
4. RS-232 cable
5. 715 terminal or other DCE device

Figure D-21. Making a Direct Connection from the Avaya Interchange Multi-Port Serial Circuit Card to a Terminal or other DCE Device

Making a Direct Connection from the Avaya Interchange Digital Station Interface Circuit Card to Customer Premise Equipment

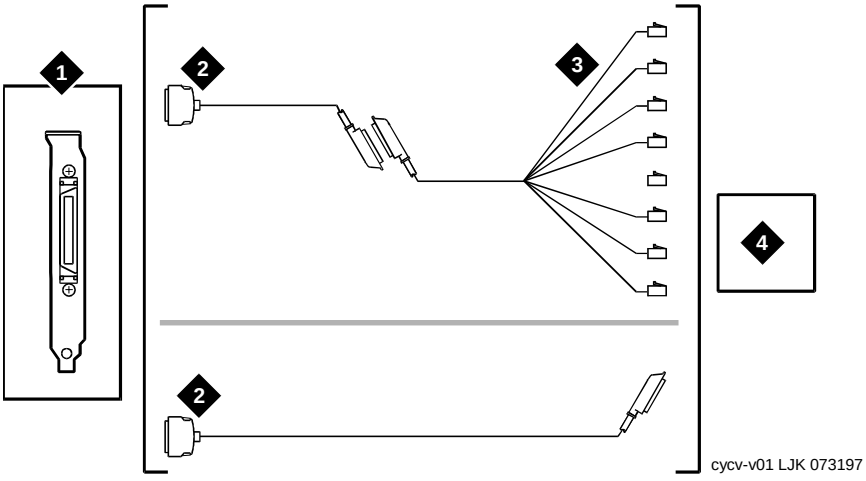
Use the following procedure and Figure D-22 to connect the Digital station interface circuit card to customer premise equipment.

1. Attach the 50-pin connector end of the connector cable to the faceplate of the Digital station interface circuit card.
2. Connect the 1-m (3-ft) octopus cable (provided with the circuit card) to the other end of the cable.

   NOTE:
   If you do not need to use the octopus cable, connect the end of the connector cable directly to the customer premise equipment.

3. Connect the RJ-45 connectors on the opposite end of the octopus cable to the customer premise equipment.

   NOTE:
   If customer use ROLM or Northern Telecom equipment, their station jacks are RJ-11, not RJ-45. You must use in-line adapters to convert the RJ-11 to RJ-45 to connect to this type of customer equipment.



1.Digital station interface card
2.50-pin connector
3.1-m (3-ft) octopus cable
4.Customer premise equipment

Figure D-22. Making a Direct Connection from the Avaya Interchange Digital Station Interface Circuit Card to Customer Premise Equipment

Cable and Adapter Ordering Numbers

Table D-2, Table D-3, and Table D-4 list the cables, adapters, and ordering numbers for the following types of connections:

- Tip/Ring (voice) connections
- ACCX (AYC22 circuit card) network

Table D-2. Port Line Customer Interface Cable Types and Lengths for Tip/Ring (Voice) Connections

Type	Length (m/ft)	ED Number
G37A, F-to-M	4.6/15	ED5P208-30
G37B, F-to-M	6.1/20	ED5P208-30
G37C, F-to-M	7.6/25	ED5P208-30
G37D, F-to-M	9.1/30	ED5P208-30
G37E, F-to-M	10.7/35	ED5P208-30
G37F, F-to-M	2.2/40	ED5P208-30
G37G, F-to-M	13.7/45	ED5P208-30
G37H, F-to-M	5.2/50	ED5P208-30
G37J, F-to-M	6.8/55	ED5P208-30
G37K, F-to-M	18.3/60	ED5P208-30
G37L, F-to-M	19.8/65	ED5P208-30
G37M, F-to-M	2.1/70	ED5P208-30
G37N, F-to-M	22.9/75	ED5P208-30
G37P, F-to-M	24.4/80	ED5P208-30
G37Q, F-to-M	25.9/85	ED5P208-30
G37R, F-to-M	27.4/90	ED5P208-30
G37S, F-to-M	29/95	ED5P208-30
G37T, F-to-M	30.5/100	ED5P208-30
G37U, F-to-M	38.1/125	ED5P208-30
G37V, F-to-M	45.7/150	ED5P208-30
G37W, F-to-M	53.3/175	ED5P208-30
G37X, F-to-M	61/200	ED5P208-30
G37Y, F-to-M	91.4/300	ED5P208-30

Table D-2. Port Line Customer Interface Cable Types and Lengths for Tip/Ring (Voice) Connections

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

Table D-3. Customer Interface Cable Types and Lengths for the ACCX Circuit Card

Type	Length m/ft	ED Number
G39A, M-to-M	4.6/15	ED5P208-30
G39B, M-to-M	6.1/20	ED5P208-30
G39C, M-to-M	7.6/25	ED5P208-30
G39D, M-to-M	9.1/30	ED5P208-30
G39E, M-to-M	10.7/35	ED5P208-30
G39F, M-to-M	12.2/40	ED5P208-30
G39G, M-to-M	13.7/45	ED5P208-30
G39H, M-to-M	15.2/50	ED5P208-30
G39J, M-to-M	16.8/55	ED5P208-30
G39K, M-to-M	18.3/60	ED5P208-30
G39L, M-to-M	19.8/65	ED5P208-30
G39M, M-to-M	21.3/70	ED5P208-30
G39N, M-to-M	22.9/75	ED5P208-30
G39P, M-to-M	24.4/80	ED5P208-30
G39Q, M-to-M	25.9/85	ED5P208-30
G39R, M-to-M	27.4/90	ED5P208-30
G39S, M-to-M	29/95	ED5P208-30
G39T, M-to-M	30.5/100	ED5P208-30
G39U, M-to-M	38.1/125	ED5P208-30
G39V, M-to-M	45.7/150	ED5P208-30
G39W, M-to-M	53.3/175	ED5P208-30
G39X, M-to-M	61/200	ED5P208-30
G39Y, M-to-M	91.4/300	ED5P208-30
G38A, M-to-F	4.6/15	ED5P208-30
G38B, M-to-F	6.1/20	ED5P208-30
G38C, M-to-F	7.6/25	ED5P208-30
G38D, M-to-F	9.1/30	ED5P208-30
G38E, M-to-F	10.7/35	ED5P208-30

Table D-3. Customer Interface Cable Types and Lengths for the ACCX Circuit Card

Type	Length m/ft	ED Number
G38F, M-to-F	12.2/40	ED5P208-30
G38G, M-to-F	13.7/45	ED5P208-30
G38H, M-to-F	15.2/50	ED5P208-30
G38J, M-to-F	16.8/55	ED5P208-30
G38K, M-to-F	18.3/60	ED5P208-30
G38L, M-to-F	19.8/65	ED5P208-30
G38M, M-to-F	21.3/70	ED5P208-30
G38N, M-to-F	22.9/75	ED5P208-30
G38P, M-to-F	24.4/80	ED5P208-30
G38Q, M-to-F	25.9/85	ED5P208-30
G38R, M-to-F	27.4/90	ED5P208-30
G38S, M-to-F	29/95	ED5P208-30
G38T, M-to-F	30.5/100	ED5P208-30
G38U, M-to-F	38.1/125	ED5P208-30
G38V, M-to-F	45.7/150	ED5P208-30
G38W M-to-F	53.3/175	ED5P208-30
G38X, M-to-F	61/200	ED5P208-30
G38Y, M-to-F	91.4/300	ED5P208-30

(2 of 2)

Table D-4. Cables, Adapters, Comcodes for Serial Configurations

Cable/Adapter	Length (m/ft)	Comcode
Modular cord (10 wires and terminated with RJ45 connectors)	3/10	846362705
	7.6/25	846362713
	15.2/50	846362721

(1 of 2)

Table D-4. Cables, Adapters, Comcodes for Serial Configurations

Modular cord (8 wires)	2.1/7	403600968
	4.3/14	403600976
	7.6/25	403600984
	15.2/50	403600992
Null modem cable (25-pin, male to male)	2.1/7	524565959
	4.3/14	524565967
	7.6/25	524565975
	15.2/50	524565975
Null modem cable (25-pin, male to female)	1.8/6	524163417
Modem extension cable (25-pin, male to male) M25A	2.1/7	524161742
	4.3/14	524161759
	7.6/25	524161767
	15.2/50	524161775
Modem extension cable (25-pin, male to female) M25B	2.1/7	524080652
	3.7/12	524080660
	7.6/25	524080678
	15.2/50	524080686
Parallel printer cable (25-pin male to 36-pin male)	2.1/7	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

SSP Circuit Card PEC 70841

Comcode: 601835820

ED number: ED5092030 G-1

Description: AYC 43W

Attribute MDL28 for TDB BUS Cable for MAP/100P

ED number: ED5P20830 G-7B

Modems

E

Overview

This appendix provides procedures for connecting modems. International Avaya Interchange systems require a modem.

Registering Your System

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

- The serial number of your MAP/100P (from the chassis)
- Your order number information (from the factory work order)
- The telephone number you will use for your remote support center

Connecting a Modem

A modem can be used for connection:

- To the multi-port serial circuit card or COM1 on the back of the MAP/100P CPU circuit card to enable remote access.
- Between a remote terminal and the network at a remote site
- To COM2 on the back of the MAP/100P to enable remote login for Avaya support

- To the ACCX circuit card and breakout box for administration and networking
- To the AYC55 (Remote maintenance circuit card) for remote login

The following sections outline how to connect and set-up the 7400A, the 3820, and US Robotics modems.

NOTE:
Before initializing any modem, confirm that a remote maintenance circuit card is not installed.

Connecting the 7400A Data Module

Use the 7400A data module for connections to a distant modem or terminal to establish a data call or for remote administration. You can connect the 7400A data module to either COM1 on the back of the MAP/100P or to any of the eight ports on the Multi-port serial circuit card.

Setting Up the Hardware on the 7400A Data Module

Configure the modem for DCE operation. See “DTE/DCE Hardware Set Up” in Chapter 2, “Installation,” in the *7400A Data Module User’s Manual*, 555-020-706.

NOTE:
Make sure the EIA connector circuit card (located under the top panel of the 7400A data module) is set to DCE. If it is not, unplug the circuit card and turn it to the DCE setting.

Connecting the 7400A to COM1

Use the following procedure to connect the 7400A data module to COM1. See Appendix D, Cable Connectivity, for illustrations and additional information.

1. Attach a 9-pin to 25-pin adapter to COM1 on the back of the MAP/100P CPU circuit card.
2. Attach an RS-232 cable to the adapter on COM1.
3. Attach the other end of the RS-232 cable to the 7400A data module.
4. Make the remaining connections.

Connecting the 7400A Data Module to the Multi-Port Serial Circuit Card

Use the following procedure to connect the 7400A data module to the multi-port serial circuit card. See Appendix D, Cable Connectivity, in the appropriate Avaya Interchange installation guide for illustrations and additional information.

1. Attach the 4.2 m (14 ft) modular cable (provided with the card) to the Multi-port serial circuit card.
2. Attach the other end of the 4.2 m (14 ft) modular cable to a DTE adapter.
3. Connect the DTE adapter to the 7400A data module.
4. Make the remaining connections.

Testing the Hardware Connections and Setup

To verify that you have the hardware connections and the setup completed correctly, perform the following test.

1. Power up the MAP/100P. See Powering Up the System for this procedure.
2. Plug an RS-232 mini-tester into the COM2 port on the back of the MAP/100P.
3. If the connections and set up are correct, DTR, RTS, and TD on the tester will light.
4. If the test fails, recheck the connections and setup.

Completing Setup on the 7400A Data Module

Set the options and interface baud rate on the 7400A data module. See Table E-1 and “Using the Front Panel” in the *7400A Data Module User’s Manual*, 555-020-706, for details.

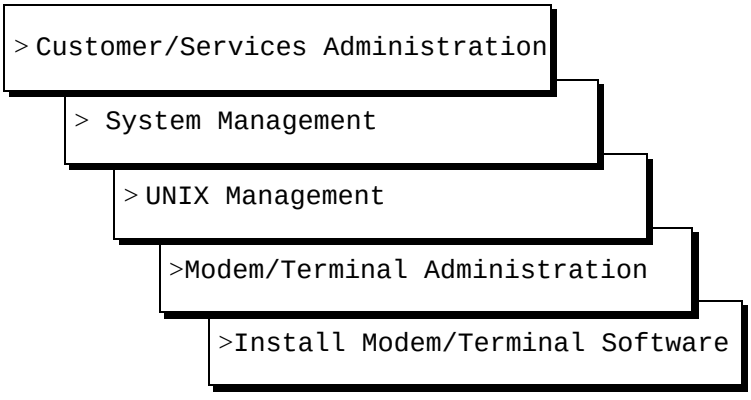
In the set interface option menu, set the ANS ONLY? option to YES. Then select the other options as listed in Table E-1.

Table E-1. 7400A Data Module Option Settings

Option	Setting
Baud rate	1200 and 9600
ANS	AUTO
BRK DISK	LONG
CI	OFF
CH	OFF
CTS	ON
DCD	Normal
DSR	ON
DTR	50 Msec
DTR	FOLLOW
LL	OFF
DTR	50 Msec
DTR	FOLLOW
LL	OFF
REMLOOP	GRANT
RI	ON
RL	OFF
SIGLS DISC	OFF
TM	OFF
DONE	YES

Installing the Modem in Avaya Interchange Software

1. Log in as **craft**.
2. Start at the Avaya Interchange Main Menu (Figure 5-1) and select



The system displays the Install Modem/Terminal screen (Figure E-1).

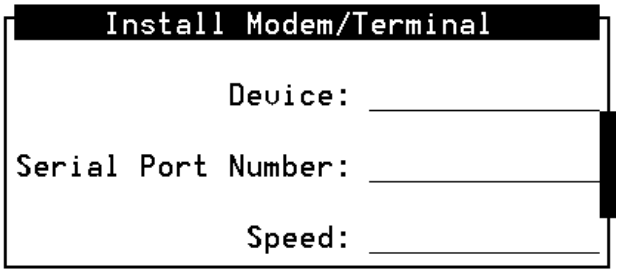


Figure E-1. Install Modem/Terminal Screen

3. Enter **modem** in the `Device:` field.
4. Enter the appropriate port name in the `Serial Port Number:` field, for example, **/dev/tty00** or **/dev/ttysaa**, ... **/dev/ttysah**, etc.
5. Enter the appropriate modem speed in the `Speed:` field, either **9600**, **4800**, **2400**, **1200**, or **19200**.

NOTE:
The recommended speed for the 7400A data module is 19200.

Setting Up a Terminal to Log in Remotely to the Avaya Interchange System Through a 7400AData Module

Use the documentation associated with your terminal and the following procedure:

1. Set the terminal line to 8 bits, no parity, and 1 stop bit.
2. Set the terminal line speed to the same as that of the modem to which the terminal is connected.

Connecting the Paradyne 3820 Modem

The Paradyne 3820 modem is supported for connection to COM2. COM2 is reserved for Avaya remote maintenance. Complete the procedures in this section to install the modems.

NOTE:
Alarm is the name assigned to the COM2 serial port which is used for remote maintenance.

Connecting the 3820 Modem to the Platform

Complete the following procedure to connect the 3820 modem to the hardware platform:

1. Connect a 9-pin to 25-pin adapter to the 9-pin COM2 port on the back of the MAP/100P.
2. Use a 25-pin 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-pin to 25-pin adapter to the 25- to 8-pin adapter and then connect the 25-pin to 8-pin adapter to the 8-pin modular cable.
3. Plug the 8-pin modular cable into the 3820 modem.

   The system activates the RTS, CTS, and LSD indicators on the 3820 modem.

   NOTE:
   If you are using the modem for anything other than Avaya remote maintenance, use the RS-232 adapter marked as DTE and the 6-pin cable to connect to the ports (ttysaa, etc.) on the multi-port serial circuit card and the 3820 modem.

Configuring the 3820 Modem for Remote Maintenance

The 3820 modem can be configured in three ways:

- Powering up the MAP/100P and performing an alarm origination download

  NOTE:
  The alarm origination download occurs during software installation. It is not necessary to complete this procedure at this time.

- Using the control panel on the 3820 modem after powering up
- Connecting the modem to a terminal which acts as a DTE

Typically the first method is the easiest way to configure the 3820 modem. Select the method you want to use and follow the corresponding procedure.

Performing an Alarm Origination Download to Configure the 3820 Modem

CAUTION:
If you select this method, you must complete all connections to the MAP/100P before powering up.

1. Power up the MAP/100P. See Powering Up the System for the procedure.
2. Log in as **craft**.
3. Start at the Avaya Interchange Main Menu (Figure 5-1) and select

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

The system displays the Alarm Management screen (Figure E-2).

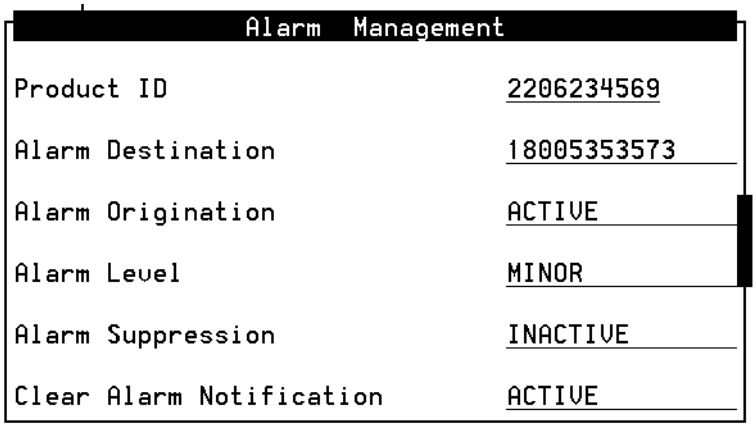


Figure E-2. Alarm Management Screen

4. Enter the appropriate information in the fields on the screen. Complete the fields as follows using Worksheet 2: “Remote Support Parameters: Alarm Origination” or as directed by the remote support center.

   `Product ID` — Enter the unique product ID for the MAP/100P.

   `Alarm Destination` — Enter the telephone number of the remote maintenance center or a number identified as the alarm destination.

   `Alarm Origination` — Enter **Active** or **Inactive**

   `Alarm Level` — Enter **Major** or **Minor**

   `Alarm Suppression` — Enter **Active** or **Inactive**

   `Clear Alarm Notification` — Enter **Active** or **Inactive**

5. Press F3 (Save) to save the alarm settings.
6. Press F8.

   The system displays the alternate set of function keys.

7. Press F1 to select the `Alarm Origination Test` window.

   The system displays the `Alarm Origination Test` window (Figure E-3).

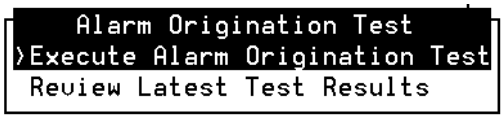


Figure E-3. Alarm Origination Test Window

8. Select `Execute Alarm Origination Test.`
9. Press ENTER.

   The system displays the Alarm Origination Confirmation window (Figure E-4).

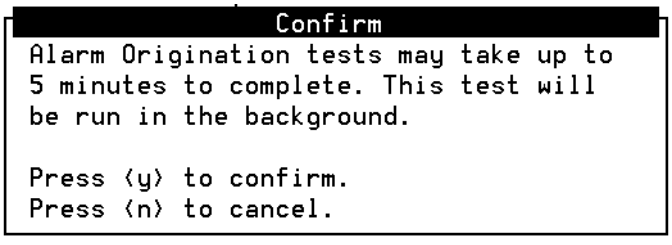


Figure E-4. Alarm Origination Confirmation Window

10. Enter **y** to begin `Alarm Origination` tests.
11. Press ENTER.

    The system begins the alarm origination download off screen which takes approximately 2 to 5 minutes to complete.

12. When the alarm origination download is complete, select `Review Latest Test Results.`

Configuring the 3820 Modem Using Its Control Panel

Use the procedures in the following sections to configure the 3820 modem using its control panel. Once your modem is configured, follow the instructions to save the configuration so that if the modem loses power, you will not need to repeat these configuration steps.

The configuration process can be divided into the following procedures:

- Selecting the UNIX dial default factory configuration
- Setting the Async DTE rate to the required speed
- Setting the DTR action and the DSR control to standard RS-232
- Setting the error control mode to buffer mode

Using the Diagnostic Control Panel on the 3820 Modem

The 3820 modem has a Diagnostic Control Panel (DCP) which is the user interface to the modem. Table E-2 shows how to use the keys on the DCP.

Table E-2. Key Functions on the 3820 Modem Diagnostic Control Panel

Key	Function
Up arrow	Moves up one level from the current display
Double up arrow	Returns the display to the top-level menu
Left Arrow	Moves the cursor or display to the left
Right Arrow	Moves the cursor or display to the right
F1, F2, F3	Selects items displayed directly above each key

Selecting the UNIX Dial Default Factory Configuration

NOTE:
Press the Right ► arrow key to scroll forward and the Left ◄ arrow key to scroll backward.

To select and save the `UNIX Dial` default factory setting to the `Active (Saved)` configuration area, complete the following procedure:

1. Turn the modem off and then back on.

2. Press the Left ◄ or Right ► arrow keys until `Configure` comes into view.
3. Press the function key below `Configure` to select the `Configure` branch of the menu.

   The LCD displays `Ld EditArea frm`.
4. Press the Left ◄ or Right ► arrow keys until `Factory` comes into view.
5. Press F1 to display the factory preset configuration.

   The LCD displays `Async Dial`.
6. Press the Left ◄ or Right ► arrow keys until `Unix Dial` comes into view.
7. Press the function key below `Unix Dial` to select the `Unix Dial` default factory setting.

   `Choose Function` appears and then `Edit and Save`.
8. Press F3 (Save) to save the selected `Unix Dial` default factory setting.

   The LCD displays `Sav EditArea to` and then `Active (Saved)`.
9. Press F1 to save the configuration to the `Active (Saved)` area.

   The LCD displays `Command Complete`.
10. Press the Double Up Arrow key to return to the top level menu.

Setting the Async DTE Rate to the Required Speed on the 3820 Modem

To set the Async DTE rate to the required speed, complete the following procedure:

1. Press the Left ◄ or Right ► arrow keys until `Configure` comes into view.
2. Press the function key below `Configure` to select the `Configure` branch of the menu.

   The LCD displays `Ld EditArea frm`.
3. Press the Left ◄ or Right ► arrow keys until `Active (Saved)` comes into view.
4. Press F1 to select the `Active (Saved)` configuration area.

   The LCD displays `Choose Function` and then `Edit and Save`.
5. Press F1 (Edit) to edit the `Active (Saved)` configuration area.

   The LCD displays `Edit StrapGroup` and then `DTE Interface`.
6. Press F1 to edit the DTE Interface.

   The LCD displays `Async/Sync Mode`.
7. Press F1 (Nxt) until `Async DTE Rate` comes into view.

8. Press the Left ◄ or Right ► arrow keys until the desired speed comes into view.

   NOTE:
   The desired speed for networking is 19,200 baud. The desired speed for administration is 9600 baud.

   When the desired speed comes into view, press F2 to set the Async DTE Rate.

9. Continue with the next procedure, Setting the DTR Action and DSR Control to Standard RS-232 on the 3820 Modem. *Do not* return to the top level menu.

Setting the DTR Action and DSR Control to Standard RS-232 on the 3820 Modem

To set the DTR action to standard RS-232 on the 3820 modem, begin Step 1 of this procedure directly after performing the last step of Setting the Async DTE Rate to the Required Speed on the 3820 Modem.

1. Press F1 (Nxt) until `DTR Action` comes into view.
2. Press the Left ◄ or Right ► arrow keys until `Stndrd_RS-232` comes into view.
3. Press F2 to set the DTR Action.
4. Press F1 (Nxt) until `DSR Control` comes into view.
5. Press the Left ◄ or Right ► arrow keys until `Stndrd_RS-232` comes into view.
6. Press F2 to set the DSR control.
7. Continue with the next procedure, Setting the Error Control Mode to Buffer Mode on the 3820 Modem. *Do not* return to the top level menu.

Setting the Error Control Mode to Buffer Mode on the 3820 Modem

To set the error control mode to buffer mode, begin Step 1 of this procedure directly after performing the last step of Setting the DTR Action and DSR Control to Standard RS-232 on the 3820 Modem.

1. Press the Up ▲ arrow key to move up one level from the current display.

   The LCD displays `Edit StrapGroup`.

2. Press the Left ◄ or Right ► arrow keys until `V42/MNP/Buffer` comes into view.
3. Press F1 to edit V42/MNP/Buffer.

   The LCD displays `Err Control Mode`.

4. Press the Left ◄ or Right ► arrow keys until `BufferMode` comes into view.
5. Press F2 to select `BufferMode`.
6. Press the Up ▲ arrow key to move up one level from the current display.

   The LCD displays `Edit StrapGroup`.
7. Press the Up ▲ arrow key to move up one level from the current display.

   The LCD displays `Choose Function` and then `Edit and Save`.
8. Press F3 (Save) to save the configuration you just edited to the "Active (Saved)" configuration area.

   The LCD displays `Sav EditArea to` and then `Active (Saved)`.
9. Press F1 to confirm the save request.

   The LCD displays `Command Complete`.
10. Press the Double Up Arrow key to return to the top level menu.

Configuring the 3820 Modem via a Terminal

Use the following procedure to configure the 3820 via a terminal rather than on the control panel of the modem:

1. Connect a terminal to the 3820 modem.
2. See the documentation provided with the terminal and make sure that the terminal is acting as a DTE.
3. Set the terminal line to 8 bits, no parity, and 1 stop bit.
4. Set the baud rate of the terminal line to the required modem speed.

   For example, for the 3820 modem attached to the remote maintenance port, set the terminal line to a baud rate of 9600.
5. Enter **AT** on the terminal.

   If the modem returns `OK`, it is ready to accept AT commands from the terminal. If the modem does not return `OK`, check the connection and the terminal setup.
6. Enter the following AT command:

   AT&T&F3L0&D2&S1\N0\Q3S41=<*dial line rate*>S2=128&W0

   where ***<dial line rate>*** is one of the following values:

   - 3=9600
   - 5=4800
   - 6=2400
   - 7=1200 (V.22)

- 8=1200 (212A)
- 20=19200

For example, to set the 3820 modem for COM2 use where the baud rate is 9600, enter **3** as the ***<dial line rate>*** as shown below:

AT&T&F3L0&D2&S1\N0\Q3S41=3S2=128&W0

The modem should return “OK.”

Connecting the US Robotics Modem

The US Robotics modem is supported for connection to COM2. COM2 is reserved for Avaya remote maintenance. Complete the procedures in this section to install the modem.

NOTE:
Alarm is the name assigned to the COM2 serial port which is used for remote maintenance.

Connecting the US Robotics Modem to the Platform

Complete the following procedure to connect the US Robotics modem to the hardware platform:

1. Connect a 9-pin to 25-pin cable to the 9-pin COM2 port on the back of the MAP/100P.
2. Connect the 25-pin end of the cable to the modem.

   The system activates the AA, TR, and CS indicators on the modem.

Configuring the US Robotics Modem via a Terminal

Use the following procedure to configure the modem via a terminal rather than on the control panel of the modem.

1. Connect a terminal to the modem.
2. See the documentation provided with the terminal and make sure that the terminal is acting as a DTE.
3. Set the terminal line to 8 bits, no parity, and 1 stop bit.
4. Set the baud rate of the terminal line to the required modem speed.

   For example, for the US Robotics modem attached to the remote maintenance port, set the terminal line to a baud rate of 9600.

5. Enter **AT** on the terminal.

   The modem displays the following

   OK

   NOTE:
   If the modem does not display OK, check the connection and the terminal setup.

6. Enter the following AT command:

   AT&T&F1&D2&B0&S1S0=*1S2=128&W0*

   The modem displays the following

   OK.

7. Disconnect the terminal.
8. Connect the modem to the communication port (COM1 or COM2).

   The system activates the RTS, CTS and LSD indicators on the modem.

Glossary

5ESS Switch
A central office switch manufactured by Lucent Technologies that can be integrated with the Avaya Interchange system.

A

accessed message
A message that was received and scanned (either the entire message or just the header).

ACA
See *automatic circuit assurance*.

ACD
See *automatic call distribution*.

activity menu
The list of options spoken to users when they first access a messaging system. Selecting an activity is the starting point for all user operations.

ADAP
See *administration and data acquisition package*.

address
INTUITY AUDIX user identification, containing the user's extension and machine, that indicates where the system needs to deliver a message. An address can include several users or mailing lists. Name or number addressing can be selected with the * A (Address) command.

adjunct
A separate system closely integrated with a switch, such as an Avaya Interchange system or a call management system (CMS).

administration
The process of setting up a system (such as a switch or a messaging system) to function as desired. Options and defaults are normally set up (translated) by the system administrator or service personnel.

administration and data acquisition package (ADAP)
A software package that allows the system administrator to transfer system user, maintenance, or traffic data from an INTUITY AUDIX system to a personal computer (PC).

ADU
See *asynchronous data unit*.

alarm log
A list of alarms that represent all of the active or resolved problems on an Avaya Interchange system. The alarm log is stored in a software file on disk and can be accessed either locally or remotely on a terminal connected to the system.

alarms
Hardware, software, or environmental problems that can affect system operation. Alarms are classified as *major*, *minor*, or *warning*.

alphanumeric
Consisting of alphabetic and numeric symbols or punctuation marks.

ALT
See *assemble, load, and test.*

American wire gauge (AWG)
A standard measuring gauge for nonferrous conductors.

AMIS
See *Audio Messaging Interchange Specification*.

AMIS prefix
A number added to the destination number to indicate that it is an AMIS analog networking number.

analog networking
A method of transferring a message from one messaging system to another whereby the message is played back (voiced) during the transfer.

analog signal
In teleprocessing usage, a communications path that usually refers to a voice-grade telephone line.

announcement
A placeholder within the Avaya Interchange system for playing fragments. Each event that may occur within AUDIX has one or more announcement numbers permanently assigned to it. Fragment numbers are then assigned to the announcement numbers.

announcement fragment
A numbered piece of spoken information that makes up a system message or prompt.

antistatic
A treatment for material to prevent the build-up of static electricity.

API
See *application programming interface.*

application
A computer software program.

application identifier
A two-letter code used in the administrator's log to identify the application or subsystem for which an alarm is being generated. There are eight application identifiers as follows: CA (Call Accounting), ML (MERLIN LEGEND), MT (Maintenance), NW (Digital Networking), SW (Switch Integration), VM (Voice Messaging), VP (Voice Processing), and VR (Voice Response).

application programming interface (API)
A set of formalized software calls and routines that an application program can reference to access underlying network services.

assemble, load, and test (ALT)
The Avaya factory process that preloads software, installs hardware, and tests the system prior to shipping.

ASP
advanced signal processor

asynchronous communication
A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than by time. See also *synchronous communication*.

asynchronous data unit (ADU)
An electronic communications device that can extend data transmission over asynchronous lines more than 50 feet in length. Recommended ADUs for use with the Avaya Interchange system include Z3A1 or Z3A4.

asynchronous transmission
A form of serial communications where each transmitted character is bracketed with a start bit and one or two stop bits. The Avaya Interchange system provides asynchronous EIA-232 capabilities for INTUITY AUDIX Digital Networking, if required.

attendant console
A special-purpose telephone with numerous lines and features usually located at the front desk of a business or other organization. The front desk attendant uses this telephone to answer and transfer calls.

Audio Messaging Interchange Specification (AMIS)
An analog networking protocol that allows users to exchange messages with any messaging system that also has AMIS Analog Networking capabilities. Messages can be exchanged with users on Avaya Interchange systems as well as with users on remote messaging systems made by vendors other than Avaya.

Audio Information Exchange (AUDIX)
A complete messaging system accessed and operated by touchtone telephones and integrated with a switch.

audit
A software program that resolves filesystem incompatibilities and updates restored filesystems to a workable level of service. Audits are done automatically on a periodic basis, or they can be performed on demand.

AUDIX
See *Audio Information Exchange*.

autodelete
An INTUITY AUDIX feature that allows users to designate that faxes be automatically deleted from their mailboxes after they are printed.

automated attendant
An Avaya Interchange system feature that allows users to set up a main extension number with a menu of options that routes callers to an appropriate department at the touch of a button.

automatic call distribution (ACD)
The System 85, Generic 2, or Generic 3 call-distribution group of analog ports that connects Avaya Interchange users to the system. See also *call-distribution group*.

automatic circuit assurance (ACA)
A feature of the switch that keeps records of both very long and very short calls and notifies the attendant when these calls exceed a certain parameter. The logic is that many very short calls or one very long one can suggest a trunk that is hung, broken, or out of order. The attendant can then physically dial into the trunk to check it.

automatic message scan
An INTUITY AUDIX feature that allows users to scan all message headers and messages at the touch of two buttons. With INTUITY FAX Messaging, this feature allows all new faxes to be bundled and transmitted over a single fax call delivery call. Also called *autoscan*.

autoprint
An INTUITY AUDIX feature that allows users to designate that faxes be automatically sent to a specified print destination.

autoscan
See *automatic message scan*.

AWG
See *American wire gauge.*

B

background testing
Testing that runs continuously when the system is not busy doing other tasks.

backplane
A centrally located device within a computer to which individual circuit cards are plugged for communication across an internal bus.

backup
A duplicate copy of files and directories saved on a removable medium such as a floppy diskette or a tape. The backed-up file system can be copied back (restored) if the active version is damaged (corrupted) or lost.

basic input/output system (BIOS)
A system that contains the buffers for sending information from a program to the actual hardware device for which the information is intended.

basic call transfer
The switch-hook flash method used to send the INTUITY AUDIX transfer command over analog voice ports.

basic rate access
See *basic rate interface*.

basic rate interface (BRI)
International standard protocol for connecting a station terminal to an integrated systems digital network (ISDN) switch. ISDN BRI supports two 64-Kbps information-bearer channels (B1 and B2), and one 16-Kbps call status and control (D) channel (a 2B + D format). Also called b*asic rate access*.

binary synchronous communications (BSC)
A character-oriented synchronous link protocol.

BIOS
See *basic input/output system*.

body
The part of an Avaya Interchange voice mail message that contains the actual spoken message. For a leave word calling (LWC) message, it is a standard system announcement.

boot
The operation to start a computer system by loading programs from disk to main memory (part of system initialization). Booting is typically accomplished by physically turning on or restarting the system. Also called *reboot*.

boot filesystem
The filesystem from which the system loads its initial programs.

BRI
See *basic rate interface*.

broadcast messaging
An INTUITY AUDIX feature that enables the system administrator and other designated users to send a message to all users automatically.

BSC
See *binary synchronous communications*.

buffer
A temporary storage area used to equalize or balance different operating speeds. A buffer can be used between a slow input device, such as a terminal keyboard, and the main computer, which operates at a very high speed.

bulletin board
An INTUITY AUDIX feature that allows a message to be played to callers who dial the bulletin board extension. Callers cannot leave a message since this service is a listen-only service. Also called *information service*.

bundling
Combining several calls and handling them as a single call. See also *automatic message scan*.

bus
An electrical connection/cable allowing two or more wires, lines, or peripherals to be connected together.

busy-out/release
To remove an Avaya Interchange device from service (make it appear busy or in use), and later restore it to service (release it). The Avaya Interchange switch data link, voice ports, or networking ports can be busied out when they appear faulty or when maintenance tests are run.

C

CA
Call accounting system application identifier. See *application identifier*.

call accounting system (CAS)
A software device that monitors and records information about a calling system.

call-answer
An INTUITY AUDIX feature that allows the system to answer a call and record a message when the user is unavailable. Callers can be redirected to the system through the call coverage or call forwarding switch features. INTUITY AUDIX users can record a personal greeting for these callers.

call-answer language choice
The capability of user mailboxes to accept messages in different languages. For the INTUITY AUDIX application, this capability exists when the multilingual feature is turned on.

callback number
In AMIS analog networking, the telephone number transmitted to the recipient machine to be used in returning messages that cannot be delivered.

call classification analysis (CCA)
A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls.

call coverage
A switch feature that defines a preselected path for calls to follow if the first (or second) coverage points are not answered. The Avaya Interchange system can be placed at the end of a coverage path to handle redirected calls through call coverage, send all calls, go to cover, and so on.

call data handler process (CDH)
A software process that accumulates generic call statistics and application events.

call detail recording (CDR)
A switch feature that uses software and hardware to record call data. See also *call detail recording utility*.

call detail recording utility (CDRU)
Applications software that collects, stores, optionally filters, and outputs call detail records for direct or polled output to peripheral devices. See also *call detail recording*.

call delivery
See *message delivery*.

call-distribution group
The set of analog port cards on the switch that connects switch users to the Avaya Interchange system by distributing new calls to idle ports. This group (or split) is called automatic call distribution (ACD) on System 85, Generic 2, and Generic 3 and uniform call distribution (UCD) on System 75, Generic 1, and Generic 3. See also *automatic call distribution* and *uniform call distribution*.

call management system (CMS)
An inbound call distribution and management reporting package.

called tone (CED tone)
The distinctive tone generated by a fax endpoint when it answers a call (a constant 2100-Hz tone).

called subscriber information (CSI)
The identifier for the answering fax endpoint. This identifier is sent in the T.30 protocol and is generally the telephone number of the fax endpoint.

calling tone (CNG tone)
The distinctive tone generated by a fax endpoint when placing a call (a constant 1100-Hz tone that is on for 1/2 second, off for 3 seconds).

call vectoring
A System 85 R2V4, Generic 2, and Generic 3 feature that uses a vector (switch program) to allow a switch administrator to customize the behavior of calls sent to an automatic call distribution (ACD) group.

card cage
An area within the Avaya Interchange hardware platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive
A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape is to be removed from the system and stored as a backup.

CAS
See *call accouting system*.

CCA
See *call classification analysis.*

CDH
See *call data handler process*.

CDR
See *call detail recording*.

CDRU
See *call detail recording utility (CDRU).*

CED tone
See *called tone*.

CELP
See *code excited linear prediction*.

central office (CO)
An office or location in which large telecommunication equipment such as telephone switches and network access facilities are maintained. In a CO, private customer lines are terminated and connected to the public network through common carriers.

central processing unit (CPU)
The component of the computer that manipulates data and processes instructions coming from software.

channel
A telecommunications transmission path for voice and/or data.

channel capacity
A measure of the maximum bit rate through a channel.

class of restriction (COR)
A feature that allows up to 64 classes of call-origination and call-termination restrictions for telephones, telephone groups, data modules, and trunk groups. See also *class of service*.

class of service (COS)
The standard set of INTUITY AUDIX features given to users when they are first administered (set up with a voice mailbox). See also *class of restriction*.

clear to send (CTS)
A function that is located on Pin 5 of the 25-conductor RS-232 interface. CTS is used in the transfer of data between the computer and a serial device.

client
A computer that not only sends, receives and uses data, but also shares a larger resource whose function is to do most data storage and processing. For INTUITY Message Manager, the user's PC running Message Manager is the client. See also *server*.

CMS
See *call management system*.

CNG tone
See *calling tone*.

CO
See *central office*.

COR
See *class of restriction*.

COS
See *class of service*.

code excited linear prediction (CELP)
An analog-to-digital voice coding scheme.

collocated
An Avaya Interchange system installed in the same physical location as the host switch. See also *local installation*.

collocated adjunct
Two or more adjuncts that are serving the same switch (that is, each has voice port connections to the switch) or that are serving different switches but can be networked through a direct RS-232 connection because of their proximity.

comcode
A numbering system for telecommunications equipment used by Avaya Inc. Each comcode is a 9-digit number that represents a specific piece of hardware, software, or documentation.

command
An instruction or request given by the user to the software to perform a particular function. An entire command consists of the command name and options. Also, one- or two-key touch tones that control a mailbox activity or function.

community
A group of telephone users administered with special send and receive messaging capabilities. A community is typically comprised of people who need full access to each other by telephone on a frequent basis. See also *default community*.

compound message
A message that combines a voice message and a fax message into one unit, which INTUITY AUDIX then handles as a single message.

configuration
The particular combination of hardware and software components selected for a system, including external connections, internal options, and peripheral equipment.

controller circuit card
A circuit card used on a computer system that controls its basic functionality and makes the system operational. The controller circuit card is used to control magnetic peripherals, video monitors, and basic system communications.

COS
See *class of service*.

coverage path
The sequence of alternate destinations to which a call to a user on an Avaya Interchange system is automatically sent when it is not answered by the user. This sequence is set up on the switch, normally with the Avaya Interchange system as the last or only destination.

CPU
See *central processing unit*.

cross connect
Distribution-system equipment used to terminate and administer communication circuits.

cross connection
The connection of one wire to another, usually by first anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made.

CSI
See *called subscriber information*.

CTS
See *clear to send*.

D

DAC
See *dial access code*.

database
A structured set of files, records, or tables. Also, a collection of filesystems and files in disk memory that store the voice and nonvoice (program data) necessary for Avaya Interchange system operation.

data communications equipment (DCE)
Standard type of data interface normally used to connect to data terminal equipment (DTE) devices. DCE devices include the data service unit (DSU), the isolating data interface (IDI), and the modular processor data module (MPDM).

data communications interface unit (DCIU)
A switch device that allows nonvoice (data) communication between an Avaya Interchange system and an Avaya switch. The DCIU is a high-speed synchronous data link that communicates with the common control switch processor over a direct memory access (DMA) channel that reads data directly from FP memory.

data link
A term used to describe the communications link used for data transmission from a source to a destination, for example, a telephone line for data transmission.

data service unit (DSU)
A device used to access digital data channels. DATAPHONE II 2500 DSUs are synchronous data communications equipment (DCE) devices used for extended-local Avaya Interchange system connections. The 2600 or 2700 series can also be used; these support diagnostic testing and the DATAPHONE II Service network system.

data set
Another term for a modem, although a data set usually includes the telephone. See also *modem*.

data terminal equipment (DTE)
Standard type of data interface normally used for the endpoints in a connection. Normally the Avaya Interchange system, most terminals, and the switch data link are DTE devices.

DBP
See *data base processor*.

DCE
See *data communications equipment*.

DCIU
See *data communications interface unit*.

DCP
See *digital communications protocol*.

DCS
See *distributed communications system*.

debug
See *troubleshooting*.

dedicated line
A communications path that does not go through a switch. A dedicated (hard-wired) path can be formed with directly connected cables. MPDMs, DSUs, or other devices can also be used to extend the distance that signals can travel directly through the building wiring.

default
A value that is automatically supplied by the system if no other value is specified.

default community
A group of telephone users administered with restrictions to prevent them from sending messages to or receiving messages from other communities. If a system is administered to use communities, the default community consists of all the users defined on that system.

default print number
The user-administered extension to which autoprinted faxes are redirected upon their receipt into the user's mailbox. This default print destination is also provided as a print option when the user is manually retrieving and printing faxes from the mailbox.

delivered message
A message that has been successfully transmitted to a recipient's incoming mailbox.

demand testing
Testing performed on request (usually by service personnel).

diagnostic testing
A program run for testing and determining faults in the system.

dial-ahead/dial-through
The act of interrupting or preceding INTUITY AUDIX system announcements by typing (buffering) touchtone commands in the order the system would normally prompt for them.

dial string
A series of numbers used to initiate a call to a remote AMIS machine. A dial string tells the switch what type of call is coming (local or long distance) and gives the switch time to obtain an outgoing port, if applicable

dialed number identification service (*DNIS_SVC)
An available channel service assignment on the Avaya Interchange system. Assigning this service to a channel permits the Avaya Interchange system to interpret information from the switch and operate the appropriate application for the incoming telephone call.

DID
See *direct inward dialing*.

digital communications protocol (DCP)
A 64-Kbps digital data transmission code with a 160-Kbps bipolar bit stream divided into two information (I) channels and one signaling (S) channel.

digital networking
A method of transferring messages between messaging systems in a digital format. See also *INTUITY AUDIX Digital Networking*.

digital signal processor (DSP)
A specialized digital microprocessor that performs calculations on digitized signals that were originally analog and then sends the results on.

DIP switch
See *dual in-line package switch*.

direct inward dialing (DID)
The ability for an outside caller to call an internal extension without having to pass through an operator or attendant.

direct memory access (DMA)
A quick method of moving data from a storage device directly to RAM, which speeds processing.

directory
1. An INTUITY AUDIX feature that allows you to hear a user's name and extension after pressing * * N at the activity menu. 2. A group of related files accessed by a common name in software.

display terminal
A data terminal with a screen and keyboard used for displaying Avaya Interchange screens and performing maintenance or administration activities.

distributed communications system (DCS)
A network of two or more switches that uses logical and physical data links to provide full or partial feature transparency. Voice links are made by using tie trunks.

distribution list
See *mailing list*.

DMA
See *direct memory access*.

DNIS
See *dialed number identification service*.

domain
An area where data processing resources are under common control. The INTUITY AUDIX system is one domain, and an e-mail system is another domain.

DSP
See *digital signal processor*.

DSU
See *data service unit*.

DTE
See *data terminal equipment*.

DTMF
See *dual tone multifrequency*.

dual in-line package (DIP) switch
A small switch, usually attached to a printed circuit card, in which there are only two settings: on or off (or 0 or 1). DIP switches are used to configure the card in a semipermanent way.

dual language greetings
The capability of INTUITY AUDIX users to create personal greetings in two different languages — one in a primary language and one in a secondary language. This capability exists when the multilingual feature is turned on and the prompts for user mailboxes can be in either of the two languages.

dual tone multifrequency (DTMF)
A way of signaling consisting of a pushbutton or touchtone dial that sends out a sound consisting of two discrete tones that can be picked up and interpreted by telephone switches.

E

EIA interface
A set of standards developed by the Electrical Industries Association (EIA) that specifies various electrical and mechanical characteristics for interfaces between electronic devices such as computers, terminals, and modems. Also known as *RS-232*.

ELA
Enhanced-List Application

electrostatic discharge (ESD)
Discharge of a static charge on a surface or body through a conductive path to ground. ESD can be damaging to integrated circuits.

electronic mail
See *e-mail*.

electrostatic discharge (ESD)
The discharge of a static charge on a surface or body through a conductive path to ground, ESD can damage integrated circuits.

e-mail
The transfer of a wide variety of message types across a computer network (LAN or WAN). E-mail messages can be text messages containing only ASCII or can be complex multimedia messages containing embedded voice messages, software files, and images.

enabled/disabled
The state of a hardware device that indicates whether it is available for use by the Avaya Interchange system. Devices must be equipped before they can be enabled (made active). See also *equipped/unequipped*.

endpoint
See *fax endpoint*.

enhanced call transfer
An INTUITY AUDIX feature that allows compatible switches to transmit messages digitally over the BX.25 (data) link. This feature is used for quick call transfers and requires a fully integrated digital switch. Callers can transfer only to other extensions in the switch dial plan.

enhanced serial data interface (ESDI)
A software- and hardware-controlled method used to store data on magnetic peripherals.

equipped/unequipped
The state of a networking channel that indicates whether Avaya Interchange software has recognized it. Devices must be equipped before they can be enabled (made active). See also *enabled/disabled*.

error message
A message on the screen indicating that something is wrong with the system and possibly suggesting how to correct it.

errors
Problems detected by the system during operation and recorded in the maintenance log. Errors can produce alarms if they exceed a threshold.

escape from reply
The ability to quickly return to getting messages for a user who encounters a problem trying to respond to a message. To escape, the user presses #.

escape to attendant
A feature that allows users with the call answer feature to have a personal attendant or operator administered to pick up their unanswered calls. A system-wide extension could also be used to send callers to a live agent.

ESD
See *electrostatic discharge*.

ESDI
See *enhanced serial data interface*.

event
An informational messages about the system's activities. For example, an event is logged when the system is rebooted. Events may or may not be related to errors and alarms.

F

facilities restriction level (FRL)
A value that determines which types of calls the users of a switch are allowed to make.

facility out-of-service (FOOS)
State of operation during which the current channel is not receiving a dial tone and is not functioning.

facsimile
1. A digitized version of written, typed, or drawn material transmitted over telephone lines and printed out elsewhere. 2. Computer-generated text or graphics transmitted over computer networks. A computer-generated fax is typically printed to a fax machine, but can remain stored electronically.

fax
See *facsimile*.

fax addressing prefix
Unique prefix that identifies a particular fax nodepoint to the Avaya Interchange system. This prefix is used by the system as a template to differentiate all call-delivery machines on the network from each other.

fax endpoint
Any device capable of receiving fax calls. Fax endpoints include fax machines, individual PC fax modems, fax ports on LAN fax servers, and ports on fax-enabled messaging systems.

fax print destination prefix
A dial string that the Avaya Interchange system adds to the fax telephone number the user enters to print a fax. The system takes the full number (fax print destination prefix + fax telephone extension) and hunts through the machine translation numbers until it finds the specific fax endpoint.

field
An area on a screen, menu, or report where information can be typed or displayed.

FIFO
See *first-in/first-out*.

file
A collection of data treated as a basic unit of storage.

filename
Alphanumeric characters used to identify a particular file.

file redundancy
See *mirroring*.

file system
A collection of related files (programs or data) stored on disk that are required to initialize an Avaya Interchange system.

first-in/first-out (FIFO)
A method of processing telephone calls or data in which the first call or data to be received is the first call or data to be processed.

F key
See *function key*.

FNPAC
See *foreign numbering-plan area code*.

FOOS
See *facility out-of-service*.

foreign exchange (FX)
A central office (CO) other than the one providing local access to the public telephone network.

foreign numbering-plan area code (FNPAC)
An area code other than the local area code that must be dialed to call outside the local geographical area.

format
To set up a disk, floppy diskette, or tape with a predetermined arrangement of characters so that the system can read the information on it.

FRL
See *facilities restriction level*.

function
Individual steps or procedures within a mailbox activity.

function key (F key)
A key on a computer keyboard programmed to perform a defined function when pressed. The user interface for the Avaya Interchange system defines keys F1 through F8.

FX
See *foreign exchange*.

G

Generic 1, 2, or 3
Switch system software releases, designed for serving large communities of System 75 and System 85 users.

generic tape
A copy of the standard software and stand-alone tape utilities that is shipped with a new Avaya Interchange system.

GOS
See *grade of service*.

grade of service (GOS)
A parameter that describes the delays in accessing a port on the Avaya Interchange system. For example, if the GOS is P05, 95% of the callers hear the system answer, and 5% hear ringing until a port becomes available to answer the call.

guaranteed fax
A feature of INTUITY FAX Messaging that temporarily stores faxes sent to a fax machine. In cases where the fax machine is busy or does not answer a call, the call is sent to an INTUITY AUDIX mailbox.

guest password
A feature that allows callers who are not INTUITY AUDIX users to leave messages on the system by dialing a user's extension and entering a systemwide guest password.

H

hard disk drive
A high-capacity data-storage and -retrieval device that is located inside a computer. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware
The physical components of a computer system. The central processing unit, disks, tape, and floppy drives are all hardware.

header
Information that the system creates to identify a message. A message header includes the originator or recipient, type of message, creation time, and delivery time.

help
A command run by pressing HELP or CTRL ? on an Avaya Interchange display terminal to show the options available at your current screen position. In the INTUITY AUDIX system, press * H on the telephone keypad to get a list of options. See also *online Help*.

host switch
The switch directly connected to the Avaya Interchange system over the data link. Also, the physical link connecting an Avaya Interchange system to a distributed communications system (DCS) network.

hunt group
A group of analog ports on a switch usually administered to search for available ports in a circular pattern.

I

I/O
Input/output.

IDI
See *isolating data interface*.

IMAPI
See *INTUITY messaging application programming interface*.

INADS
See *initialization and administration system*.

information service
See *bulletin board*.

initialization
The process of bringing a system to a predetermined operational state. The startup procedure tests hardware; loads the boot filesystem programs; locates, mounts, and opens other required filesystems; and starts normal service.

initialization and administration system (INADS)
A computer-aided maintenance system used by remote technicians to track alarms.

initialize
To start up the system for the first time.

input
A signal fed into a circuit or channel.

integrated services digital network (ISDN)
A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

integrated voice processing CELP (IVC6) card
A computer circuit card that supports both fax processing and voice processing capabilities. It provides two analog ports to support six analog channels. All telephone calls to and from the Avaya Interchange system are processed through the IVC6 card.

interface
The device or software that forms the boundary between two devices or parts of a system, allowing them to work together. See also *user interface*.

internal e-mail
Software on a PC that provides messaging capability between users on the same AUDIX system or to administered remote AUDIX systems and users. Users can create, send, and receive a message that contains multiple media types, specifically, voice, fax, text, or file attachments (software files, such as word processing or spreadsheet files).

interrupt request (IRQ)
Within a PC, a signal sent from a device to the CPU to temporarily suspend normal processing and transfer control to an interrupt handling routine.

INTUITY AUDIX Digital Networking
An Avaya Interchange feature that allows customers to link together up to 500 remote Avaya Interchange machines for a total of up to 500,000 remote users. See also *digital networking*.

INTUITY Message Manager
A Windows-based software product that allows INTUITY AUDIX users to receive, store, and send their voice/FAX messages from a PC. The software also enables users to create and send multimedia messages that include voice, fax, file attachments, and text.

INTUITY messaging application programming interface (IMAPI)
A software function-call interface that allows INTUITY AUDIX to interact with Avaya Interchange Message Manager.

IRQ
See *interrupt request*.

ISDN
See *integrated services digital network*.

isolating data interface (IDI)
A synchronous, full duplex data device used for cable connections between an Avaya Interchange GPSC-AT/E card and the switch data communications interface unit (DCIU).

IVC6
See *integrated voice processing CELP (IVC6) card.*

J

jumpers
Pairs or sets of small prongs or pins on circuit cards and mother boards the placement of which determines the particular operation the computer selects. When two pins are covered, an electrical circuit is completed. When the jumper is uncovered, the connection is not made. The computer interprets these electrical connections as configuration information.

L

label
The name assigned to a disk device (either a removable tape cartridge or permanent drive) through software. Cartridge labels can have a generic name (such as “3.3”) to show the software release, or a descriptive name if for backup copies (such as “back01”). Disk drive labels usually indicate the disk position (such as disk00 or disk02).

LAN
See *local area network*.

last-in/first-out (LIFO)
A method of processing telephone calls or data in which the last call (or data) received is the first call (or data) to be processed.

LCD
See *liquid crystal display*.

leave word calling (LWC)
A switch feature that allows the calling party to leave a standard (nonvoice) message for the called party using a feature button or dial access code.

LED
See *light emitting diode*.

LIFO
See *last-in/first-out*.

light emitting diode (LED)
A light on the hardware platform that shows the status of operations.

liquid crystal display (LCD)
The 10-character alphanumeric display that shows the status of the system, including alarms.

load
The process of reading software from external storage (such as disk) and placing a copy in system memory.

local area network (LAN)
A network of PCs that communicate with each other and that normally share the resources of one or more servers. Operation of INTUITY Message Manager requires that the INTUITY AUDIX system and the users' PCs be on a LAN.

local AUDIX machine
The Avaya Interchange system where a user's INTUITY AUDIX mailbox is located. All users on this home machine are called *local users*.

local installation
A switch, adjunct, or peripheral device installed physically near the host switch or system. See also *collocated*.

local network
A network in which all Avaya Interchange systems are connected to the same switch.

login
A unique code a user must enter to gain approved access to the Avaya Interchange system. See also *password*.

login announcement
A feature enabling the system administrator and other designated users to create a mail message that is automatically played to all INTUITY AUDIX users every time they log in to the system.

Lotus Notes
Information management software for work groups that allows individuals to share and manipulate information over a local or wide area network

LWC
See *leave word calling*.

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

mailbox
A portion of disk memory allotted to each Avaya Interchange system user for creating and storing outgoing and incoming messages.

mailing list
A group of user addresses assigned a list ID# and public or private status. A mailing list can be used to simplify the sending of messages to several users.

maintenance
The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.

major alarm
An alarm detected by Avaya Interchange software that affects at least one fourth of the Avaya Interchange ports in service. Often a major alarm indicates that service is affected.

MANOOS
See *manually out-of-service*.

manually out-of-service
State of operation during which a unit has been intentionally taken out of service.

MAP
See *multi-application platform*.

mean time between failures
The average time a manufacturer estimates will elapse before a failure occurs in a component or system.

media type
The form a message takes. The media types supported by the Avaya Interchange system are voice, text, file attachments, and fax.

memory
A device that stores logic states such that data can be accessed and retrieved. Memory can be temporary (such as system RAM) or permanent (such as disk).

menu
A list of options displayed on a computer terminal screen or spoken by a voice processing system. Users choose the option that reflects what action they want the system to take.

menu tree
The way in which nested automated attendants are set up.

message categories
Groups of messages in INTUITY AUDIX users' mailboxes. Categories include *new*, *unopened*, and *old* for the incoming mailbox and *delivered*, *accessed*, *undelivered*, *undeliverable* (not deliverable), and *file cabinet* for the outgoing mailbox.

message component
A media type included in a multimedia message. These types include voice, text, file attachments, and fax messages.

message delivery
An optional INTUITY feature that permits users to send messages to any touchtone telephone, as long as the telephone number is in the range of allowable numbers. This feature is an extension of the AMIS analog networking feature and is automatically available when the AMIS feature is activated.

Message Manager
See *INTUITY Message Manager*.

message-waiting indicator (MWI)
An indicator that alerts Avaya Interchange users that they have received new mail messages. An MWI can be an LED or neon lamp, or an audio tone (stutter dial tone).

message waiting lamp (MWL)
See *message-waiting indicator*.

migration
An installation that moves data to the Avaya Interchange system from another type of Avaya messaging system, for example, from AUDIX R1, DEFINITY AUDIX, or AUDIX Voice Power.

minor alarm
An alarm detected by maintenance software that affects less than one-fourth of the Avaya Interchange ports in service but has exceeded error thresholds or may impact service.

mirroring
An Avaya Interchange system feature that allows data from crucial filesystems to be continuously copied to backed-up (mirror) file systems while the system is running. If the system has some problem in which an original filesystem cannot be used, the backup filesystem is placed in service automatically.

ML
MERLIN LEGEND application identifier. See *application identifier*.

mode code
A string of touchtones from a MERLIN LEGEND switch. A mode code may send the INTUITY AUDIX system information such as call type, calling party, called party, and on/off signals for message waiting indicators.

modem
A device that converts data from a form that is compatible with data processing equipment (digital) to a form compatible with transmission facilities (analog), and vice versa.

modular
A term that describes equipment made of plug-in units that can be added together to make the system larger, improve its capabilities, or expand its size.

modular processor data module (MPDM)
A data device that converts RS-232C or RS-449 protocol signals to digital communications protocol (DCP) used by System 75/85, Generic1, and Generic 3 switches. MPDMs can connect the Avaya Interchange system to a switch DCIU or SCI link or connect terminals to a switch port card.

MPDM
See *modular processor data module*.

MT
Maintenance application identifier. See *application identifier*.

MTBF
See *mean time between failures*.

multiapplication platform (MAP)
The computer hardware platform used by the Avaya Interchange system.

multilingual feature
A feature that allows announcement sets to be active simultaneously on the system in more than one language. Mailboxes can be administered so that users can hear prompts in the language of their choice.

MWI
See *message-waiting indicator*.

MWL
See *message-waiting lamp*.

N

networking
See *INTUITY AUDIX Digital Networking*.

networking prefix
A set of digits that identifies an Avaya Interchange machine.

night attendant
The automated attendant created on a MERLIN LEGEND switch that automatically becomes active during off-hours. The night attendant substitutes for one or more daytime attendants.

not deliverable message
A message that could not be delivered after a specified number of attempts, usually indicating that the user's mailbox is full.

NPA
See *numbering plan area*.

NT
Networking application identifier. See *application identifier*.

MWL
See *message waiting lamp*.

Numbering plan area
Formal name for 3-digit telephone area codes in North America. Within an area code, no two telephone lines may have the same 7-digit phone number. The code is often designated as NXX, to indicate the three digits.

O

off-hook
See *switch hook*.

on-hook
See *switch hook*.

online Help
An Avaya Interchange system feature that provides information about user interface windows, screens, and menus by pressing a predetermined key. See also *help*.

open systems interconnection (OSI)
An internationally accepted framework of standards for communication between systems made by different vendors.

operating system (OS)
The set of software programs that runs the hardware and interprets software commands.

option
A choice selected from a menu or an argument used in a command line to specify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

OS
See *operating system*.

OSI
See *open systems interconnection*.

outcalling
An Avaya Interchange system feature that allows the system to dial users' numbers to inform them that they have new messages.

outgoing mailbox
A storage area on the Avaya Interchange system where users can keep copies of messages for future reference or action.

P

parallel transmission
The transmission of several bits of data at the same time over different wires. Parallel transmission of data is usually faster than serial transmission.

password
1. A word or character string recognized automatically by the Avaya Interchange system that allows a user access to his- or /her mailbox or a system administrator access to the system database. 2. An alphanumeric string assigned to local and remote networked machines to identify the machines or the network. See also *login.*

password aging
An INTUITY AUDIX feature that allows administrators to set a length of time after which a user's AUDIX password or the administrator's system password expires. The user or administrator must then change the password.

PBX
See *private branch exchange*.

PC
See *power converter*.

PDM (processor data module)
See *modular processor data module (MPDM)*.

peripheral device
Equipment such as a printer or terminal that is external to the Avaya Interchange cabinet but necessary for full operation and maintenance of the system. Also called a *peripheral*.

personal directory
An INTUITY AUDIX feature that allows each user to create a private list of customized names.

personal fax extension
See *secondary extension*.

PI
See *processor interface*.

PIB
See *processor interface*.

pinouts
The signal description per pin number for a particular connector.

PMS
See *property management system*.

port
A connection or link between two devices that allows information to travel to a desired location. For example, a switch port connects to an Avaya Interchange voice port to allow a caller to leave a message.

POST
See *power-on self -est*.

power-on self-test (POST)
A set of diagnostics stored in ROM that tests components such as disk drives, keyboard, and memory each time the system is booted. If problems are identified, a message is sent to the screen.

priority call answer
An INTUITY AUDIX feature that allows users to designate a call answer message as a priority message. To make a message a priority message, the caller presses 2 after recording.

priority messaging
An INTUITY AUDIX feature that allows some users to send messages that are specially marked and preferentially presented to recipients. See also *priority outcalling*.

priority outcalling
An INTUITY AUDIX feature that works with the priority messaging feature by allowing the message recipient to elect to be notified by outcalling only when a priority message has been received. See also *priority messaging*.

private branch exchange (PBX)
An analog, digital, or electronic telephone switching system where data and voice transmissions are not confined to fixed communications paths but are routed among available ports or channels. See also *switch*.

private mailing list
A list of addresses that only the Avaya Interchange system user who owns it can access.

private messaging
A feature of INTUITY AUDIX that allows a user to send a message that cannot be forwarded by the recipient.

processor data module (PDM)
See *modular processor data module (MPDM)*.

processor interface (PI)
A System 75, Generic 1, Generic 3i, Generic 3s, and Generic 3vs switch data link. Also called *processor interface board (PIB)*.

programmed function key
See *function key*.

property management system (PMS)
A product used by lodging establishments to automate the management of guest records, reservations, room assignments, and billing. In an integrated PMS environment, special software links the PMS to the INTUITY Lodging system so that both systems share a common set of messages and commands.

protocol
A set of conventions or rules governing the format and timing of message exchanges (signals) to control data movement and the detection and possible correction of errors.

public mailing list
A list of addresses that any INTUITY AUDIX user can use if that user knows the owner's list ID number and extension number. Only the owner can modify a public mailing list.

pulse-to-tone converter
A device connected to the switch that converts signals from a rotary pulses to touchtone signals. This device allows callers to use rotary telephones to access options in an Avaya Interchange user's mailbox or in an automated attendant.

R

RAM
See *random access memory*.

random access memory (RAM)
The memory used in most computers to store the results of ongoing work and to provide space to store the operating system and applications that are actually running at any given moment.

read-only memory (ROM)
A form of computer memory that allows values to be stored only once. After the data is initially recorded, the computer can only read the contents. ROM is used to supply constant code elements such as bootstrap loaders, network addresses, and other more or less unvarying programs or instructions.

reboot
See *boot*.

remote access
Sending and receiving data to and from a computer or controlling a computer with terminals or PCs connected through communications (that is, telephone) links.

remote installation
A system, site, or piece of peripheral equipment that is installed in a different location from the host switch or system.

remote maintenance
The ability of Avaya personnel to interact with a remote computer through a telephone line or LAN connection to perform diagnostics and some system repairs. See also *remote service center*.

remote network
A network in which the systems are integrated with more than one switch.

remote service center
An Avaya or Avaya-certified organization that provides remote support to Avaya Interchange customers. Depending upon the terms of the maintenance contract, your remote service center could be notified of all major and minor alarms and could have the ability to remotely log in to your system and remedy problems. See also *remote maintenance.*

remote terminal
A terminal connected to a computer over a telephone line.

remote users
INTUITY AUDIX users whose mailboxes reside on a remote INTUITY AUDIX Digital Networking machine.

REN
See *ringer equivalence number*.

reply loop escape
An INTUITY AUDIX feature that allows a user the option of continuing to respond to a message after trying to reply to a nonuser message.

reply to sender
An INTUITY AUDIX feature that allows users to immediately place a call to the originator of an incoming message if that person is in the switch's dial plan.

request to send (RTS)
One of the control signals on an EIA-232 connector that places the modem in the originate mode so that it can begin to send.

restart
1. An Avaya Interchange feature that allows users who have reached the system through the call answer feature to access their own mailboxes by entering the * R (Restart) command. This feature is especially useful for long distance calls or for users who want to access the Avaya Interchange system when all the ports are busy. 2. The reinitialization of certain software, for example, *restarting* the messaging system.

restore
The process of recovering lost or damaged files by retrieving them from available backup tapes, floppy diskettes, or other disk devices.

retention time
The amount of time messages are saved on disk before being automatically deleted from a user's mailbox.

reusable upgrade kit (RUK)
A package shipped to the customer's site prior to an upgrade that contains materials the technician needs to complete the installation. This package includes an A/B switch box, a keyboard, a 25-foot coaxial cable, two T adapters, and terminations to a LAN circuit card. It remains the property of Avaya once the installation is finished.

right-to-use (RTU) fee
A charge to the customer to access certain functions or capacities that are otherwise restricted, for example, additional voice or networking ports or hours of speech storage. Avaya personnel can update RTU parameters either at the customer's site or remotely via a modem.

ringer equivalence number (REN)
A number required in the United States for registering your telephone equipment with a service provider.

ROM
See *read-only memory*.

RS-232
See *EIA interface.*

RTS
See *request to send*.

RUK
See *reusable upgrade kit*.

S

SCA
See *switch communications adapter.*

scan
To automatically play mail messages, headers, or both.

scheduled delivery time
A time and/or date that an INTUITY AUDIX user can assign to a message that tells the system when to deliver it. If a delivery time is omitted, the system sends the message immediately.

screen
That portion of the Avaya Interchange user interface through which most administrative tasks are performed. Avaya Interchange screens request user input in the form of a command from the `enter command:` prompt.

SCSI
See *small computer system interface*.

secondary extension
A second, fax-dedicated extension that directs incoming faxes directly into a user's mailbox without ringing the telephone. The secondary extension shares the same mailbox as the voice extension but acts like a fax machine. Also called *personal fax extension*.

serial transmission
The transmission of one bit at a time over a single wire.

server
A computer that processes and stores data that is used by other smaller computers. See also *client*.

shielded cables
Cables that are protected from interference with metallic braid or foil.

SID
See *switch integration device*.

SIMM
See *single in-line memory module*.

simplified message service interface (SMSI)
Type of data link connection to an integrated 1A ESS or 5ESS switch in the Avaya Interchange system.

simplified message desk interface (SMDI)
Also known as station message desk interface. Type of data link from the central office that contains information and instructions for the Avaya Interchange system. With SMDI, the caller need not re-enter the called number once the call terminates to the Avaya Interchange system. See also *simplified message service interface*.

single in-line memory module (SIMM)
A method of containing random access memory (RAM) chips on narrow strips that attach directly to sockets on the CPU circuit card. Multiple Sums are sometimes installed on a single CPU circuit card.

small computer systems interface (SCSI)
An interface standard defining the physical, logical, and electrical connections to computer system peripherals such as tape and disk drives.

SMDI
See *station message desk interface*.

SMDR
See *station message detail recording*.

SMSI
See *simplified message service interface*.

SP
signal processor

SSP
scaleable signal processor

station message desk interface (SMDI
See *simplified message desk interface*.

station message detail recording
See *call detail recording (CDR)*.

subscriber
An Avaya Interchange user who has been assigned the ability to access the INTUITY AUDIX Voice Messaging system.

surge
A sudden rise and fall of voltage in an electrical circuit.

surge protector
A device that plugs into the telephone system and the commercial AC power outlet to protect the telephone system from damaging high-voltage surges.

SW
Switch integration application identifier. See *application identifier*.

switch
An automatic telephone exchange that allows the transmission of calls to and from the public telephone network. See also *private branch exchange (PBX)*.

switched access
A connection made from one endpoint to another through switch port cards. This allows the endpoint (such as a terminal) to be used for several applications.

switch hook
The device at the top of most telephones that is depressed when the handset is resting in the cradle (that is, when the telephone is *on hook*). This device is raised when the handset is picked up (that is, when the telephone is *off hook*).

switch-hook flash
A signaling technique in which the signal is originated by momentarily depressing the switch hook.

switch integration
Sharing of information between a messaging system and a switch to provide a seamless interface to callers and system users. A fully integrated INTUITY AUDIX system, for example, answers each incoming telephone call with information taken directly from the switch. Such information includes the number being called and the circumstances under which the call was sent to it, for example, covered from a busy or unanswered extension.

switch integration device (SID)
A combination of hardware and software that passes information from the switch to the Avaya Interchange system, thus allowing it to share information with non-Avaya switches. The operation of a SID is unique to the particular switch with which it interfaces.

switch network
Two or more interconnected switching systems.

synchronized mailbox
A mailbox that is paired with a corresponding mailbox in another domain and linked via software that keeps track of changes to either mailbox. When the contents of one mailbox change, the software replicates that change in the other mailbox.

synchronizer
The name given to the trusted server by the e-mail vendor, Lotus Notes.

synchronous communication
A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. See also *asynchronous communication*.

synchronous transmission
A type of data transmission where the data characters and bits are exchanged at a fixed rate with the transmitter and receiver synchronized. This allows greater efficiency and supports more powerful protocols.

System 75
An advanced digital switch that supports up to 800 lines for voice and data communications.

System 85
An advanced digital switch manufactured that supports up to 3000 lines for voice and data communications.

system configuration
See *configuration*.

T

T.30
The standard for Group III fax machines that covers the protocol used to manage a fax session and negotiate the capabilities supported by each fax endpoint.

tape cartridge
One or more spare removable cartridges required to back up system information.

tape drive
The physical unit that holds, reads, and writes to magnetic tape.

TCP/IP
See *transmission control protocol/internet protocol*.

TDD
See *telecommunications device for the deaf*.

TDM
See *time division multiplexing*.

telecommunications device for the deaf (TDD)
A device with a keyboard and display unit that connects to or substitutes for a telephone. The TDD allows a deaf or hearing-impaired person to communicate over the telephone lines with other people who have TDDs. It also allows a deaf person to communicate with the INTUITY AUDIX system.

terminal
See *display terminal*.

terminal type
A number indicating the type of terminal from which a user is logging in to the Avaya Interchange system. Terminal type is the last required entry before gaining access to the Avaya Interchange display screens.

terminating resistor
A grounding resistor placed at the end of a bus, line, or cable to prevent signals from being reflected or echoed.

time division multiplexing (TDM)
A method of serving multiple channels simultaneously over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

tip/ring
A term used to denote the analog telecommunications interface.

tone generator
A device acoustically coupled to a rotary telephone used to produce touchtone signals.

traffic
The flow of attempts, calls, and messages across a telecommunications network.

translations
Software assignments that tell a system what to expect on a certain voice port or the data link, or how to handle incoming data. Translations customize the Avaya Interchange system and switch features for users.

transmission control protocol/internet protocol (TCP/IP)
A suite of protocols that allow disparate hosts to connect over a network. Transmission control protocol (TCP) organizes data on both ends of a connection and ensures that the data that arrives matches that the data that was sent. Internet protocol (IP) ensures that a message passes through all the necessary routers to the proper destination.

T/R
See *tip/ring*.

troubleshooting
The process of locating and correcting errors in computer programs or systems. Also called *debugging*.

trusted server
A server that uses IMAPI to access an INTUITY AUDIX mailbox on behalf of a user and is empowered to do everything to a user's message that INTUITY AUDIX can do.

TTS
Text-to-Speech

U

UCD
See *uniform call distribution*.

Undelete
An INTUITY AUDIX feature that allows users to restore the last message deleted by pressing * U.

undelivered message
A message that has not yet been sent to an INTUITY AUDIX user's incoming mailbox. The message resides in the sender's outgoing mailbox and can be modified or redirected by the sender.

unequipped
See *equipped/unequipped*.

unfinished message
A message that was recorded but not approved or addressed, usually as the result of an interrupted INTUITY AUDIX session. Also called *working message*.

uniform call distribution (UCD)
The type of call-distribution group (or hunt group) of analog port cards on some switches that connects users to the INTUITY AUDIX system. System 75, Generic 1, Generic 3, and some central office switches use UCD groups. See also *call-distribution group*.

uninterruptable power supply (UPS)
An auxiliary power unit that provides continuous to provide power in cases in which commercial power is lost.

UNIX operating system
A multiuser, multitasking computer operating system.

upgrade
An installation that moves an Avaya Interchange system to a newer release.

untouched message
An INTUITY AUDIX feature that allows a user to keep a message in its current category by using the * * H (Hold) command. If the message is in the new category, message-waiting indication remains active (for example, the message-waiting lamp remains lit).

UPS
See *uninterruptable power supply*.

U. S. 123
An alternate announcement set in U. S. English whose prompts use numbers, not letters, to identify telephone keypad presses. For example, a prompt might say "*Press star three*" instead of "*Press star D*."

user interface
The devices by which users access their mailboxes, manage mailing lists, administer personal greetings, and use other messaging capabilities. Types of user interfaces include a touchtone telephone keypad.

user population
A combination of different types of users on which Avaya Interchange configuration guidelines are based.

V

vector
A customized program in the switch for processing incoming calls.

VM
Voice messaging application identifier. See *application identifier*.

voice link
The Avaya Interchange analog connection(s) to a call-distribution group (or hunt group) of analog ports on the switch.

voice mail
See *voice message*.

voice mailbox
See *mailbox*.

voice message
Digitized information stored by the Avaya Interchange system on disk memory. Also called *voice mail*.

voice port
The IVC6 port that provides the interface between the Avaya Interchange system and the analog ports on the switch.

VPIM
Voice Profile for Internet Mail (VPIM) protocol; internationally accepted standard profile of SMTP/MIME that allows the interexchange of voice and fax messages between voice messaging systems. VPIM protocol also allows interexchange with non-voice messaging MIME compatible e-mail systems, establishment of a directory service to support lookup of the routable address, and establishment of a defined mapping specification with other voice messaging applications.

voice terminal
A telephone used for spoken communications with the Avaya Interchange system. A touchtone telephone with a message-waiting indicator is recommended for INTUITY AUDIX users.

voicing
1. Speaking a message into the Avaya Interchange system during recording. 2. Having the system play back a message or prompt to a user.

VP
Voice platform application identifier. See *application identifier*.

VR
Voice response application identifier. See *application identifier*.

W

WAN
See *wide area network*.

wide area network (WAN)
A data network typically extending a local area network (LAN) over telephone lines to link with LANS in other buildings and/or geographic locations.

window
That portion of the Avaya Interchange user interface through which you can view system information or status.

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