585-310-150
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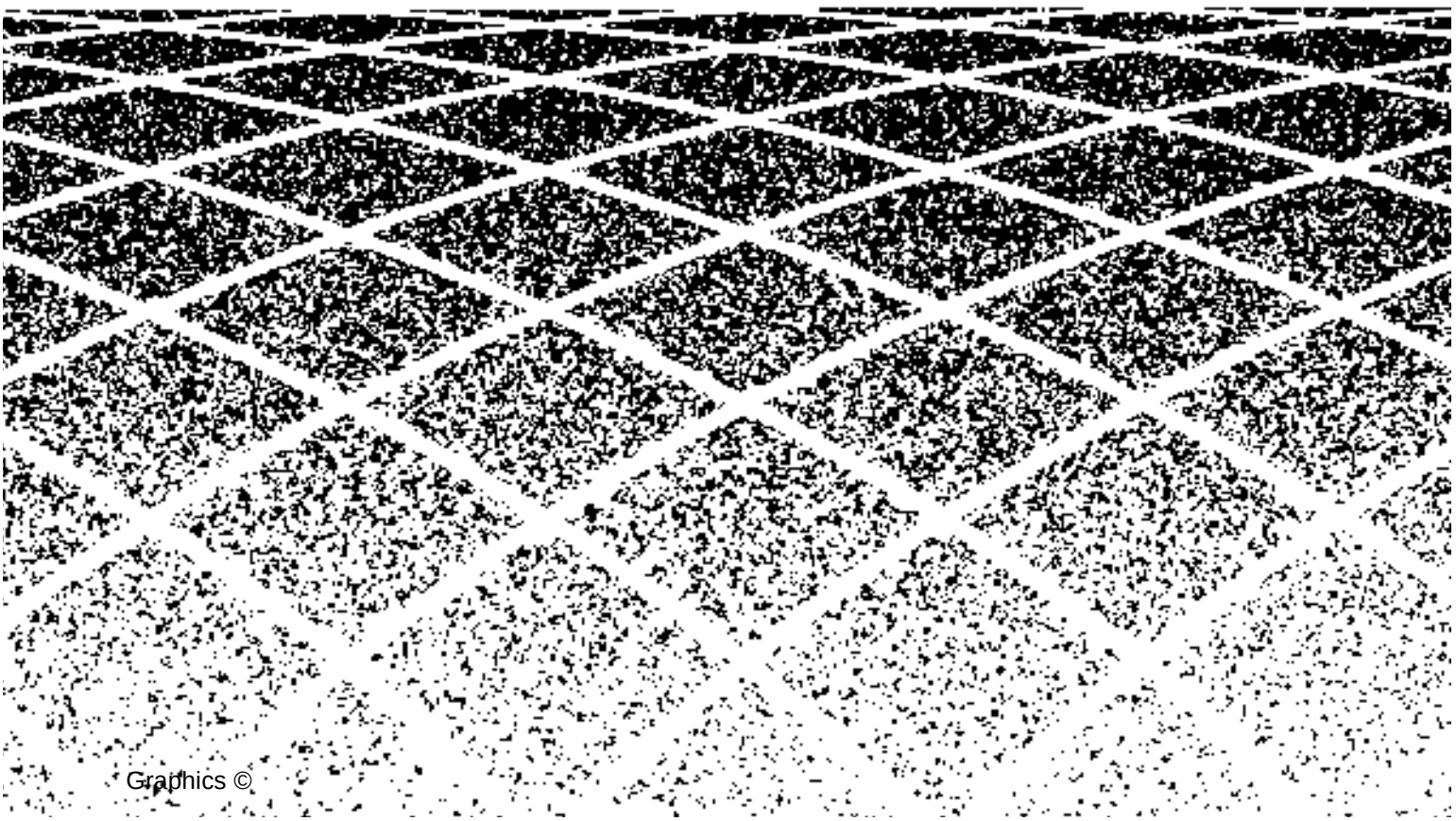
Conversant V5.0 Hardware Installation For Map 40



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About This Book

Purpose

This book, *Intuity CONVERSANT VIS MAP/40 Hardware Installation,* 585-310-150, describes the procedures for installing the Multi-Application Platform 40 (MAP/40) hardware. These procedures apply to AT&T Intuity CONVERSANT VIS Version 5.0 and later. For information on procedures and components from earlier versions, see *Intuity CONVERSANT V5.0 Upgrade*, 585-310-152, and *Intuity CONVERSANT V5.0 Maintenance*, 585-310-153.

Intended Audiences

This book is intended primarily for the on-site AT&T service technician and customer technical personnel as well as value-added resellers. Secondary audiences include the following from AT&T: field support, the Technical Service Organization (TSO); provisioning project managers, and factory assemble, load, and test (ALT) personnel.

Prerequisite Skills and Knowledge

We assume that the primary users of this book have completed the AT&T Hardware Installation training course.

Organization of This Book

This book is organized as follows:

- Chapter 1, "Preparing the Site", discusses environmental, space, and power requirements, how to prewire for pinouts, and how to work with the service provider.
- Chapter 2, "Getting Started", includes descriptions of the MAP/40 platform, hardware components, and peripheral bay features. It also discusses warnings pertaining to installing the system, required tools, how to unpack the MAP/40, factory information regarding the system, and how to install the support base.
- Chapter 3, "Connecting Peripherals and Powering Up", describes how to connect the monitor, keyboard, printer, and modem, and how to power up the system and correct the system setup.
- Chapter 4, "Running the Configuration Program", describes how to configure the system, that is, how to allocate system resources for additional circuit cards and hardware, etc., by using the Configuration Program developed for this purpose.
- Chapter 5, "Getting Inside the Chassis", describes how to remove and replace the dress covers and access the card cage.
- Chapter 6, "Installing Circuit Cards —Introduction and Types", lists and classifies the circuit cards used in the MAP/40. These groups are further detailed in later chapters. This chapter also describes the general procedure for installing all types of circuit cards.
- Chapter 7, "Installing VIS Circuit Cards", describes how to set jumpers and I/O addresses and connect cables for circuit cards associated with the Intuity CONVERSANT VIS software application.
- Chapter 8, "Installing Optional Feature Circuit Cards", describes how to set jumpers and I/O addresses and connect cables for circuit cards that are used for optional features.
- Chapter 9, "Installing Standard MAP/40 Circuit Cards", describes how to set jumpers and I/O addresses and connect cables for circuit cards that are standard with the MAP/40.
- Chapter 10, "Installing Optional Hardware", describes how to add or replace memory on the CPU circuit card and how to add a Tip/Ring distribution panel, mouse, and Graphical Speech Editor to the system.
- Chapter 11, "Finishing Up", describes how to troubleshoot the hardware should the MAP/40 not power up correctly after installation. This chapter also includes information on how to clean the equipment and the air filter and care for diskettes and cartridge tapes.
- Chapter 12, "Moving the MAP/40", describes how to safely pack and move the MAP/40 to a different location after it has been in operation.

- Appendix A, "Component Ordering Numbers", lists the MAP/40 standard and optional components and their comcode ordering numbers for spare or replacement parts.
- Appendix B, "Cable Connectivity", details the external connectivity and cabling for the MAP/40.

This book also includes a list of abbreviations, a glossary, and an index.

How to Use This Book

This book accommodates both the user who will install a system that has been assembled, loaded, and tested at the factory (this is known as an *ALT* system) and the user who will assemble, install, and load the system on site.

If you are installing an ALT system, follow the first three chapters to complete the installation. The remaining chapters are then available for reference.

If you are installing a non-ALT system, begin with the first chapter and follow the chapters consecutively through the book.

Use the information beginning with Chapter 4 and continuing through the end of the book if you need to add circuit cards or additional hardware to an ALT system.

Conventions Used in This Book

The following typographic conventions are used in this book:

- Terminal keys
  - — Terminal keys are shown in rounded boxes. For example, an instruction to press the enter key is shown as

    Press (ENTER).
  - — Function keys (also known as *soft* keys) are shown in rounded boxes followed by the function of that key in parentheses. For example, an instruction to press function key 3 is shown as

    Press (F3) (CHOICES).
  - — Two or three keys that you press at the same time (that is, you hold down the first key while pressing the second and/or third key) are shown as a series of rounded boxes. For example, an instruction to press and hold (ALT) while typing the letter **d** is shown as

    Press (ALT) (D).

- User input
  - The word *enter* means to type a value and press ENTER. For example, an instruction to type **y** and press ENTER is shown as

    Enter **y** to continue.

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

    Type **y** to continue.

    Do *not* press ENTER after you type the value specified.

  - The word *select* is used to mean the following: move to the desired menu item using the arrow keys and press ENTER. For example, an instruction to select an item from a menu and press ENTER is shown as

    Select Configuration Management from the Voice System Administration menu.

  - Information that you enter or type from your terminal keyboard is shown in a **bold** typeface; for example

    Enter **root** at the `Console Login` prompt.

  - Command and file names and their parameters are shown in a **bold** typeface. Variable parameters are shown in a ***bold italic*** typeface when they are part of a user input and in a *regular italic* typeface when they are not. All are illustrated in the following example:

    Use the **print** command to print your report. The command syntax is **print *reportname***, where *reportname* is the name of the report to be printed.

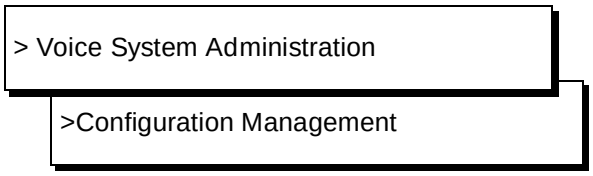
  - Select an item from a menu by typing the first character of the item, then press ENTER. As soon as you type a single letter, the first item beginning with that letter is highlighted. If more than one item begins with the same letter, you must type enough letters to identify the desired item uniquely.

- Screen displays
  - Information that is displayed on your terminal screen — including screen displays, prompts, script code, and system messages — is shown in a `typewriter-style` typeface; for example

    ```
    Installation is in progress -- do not remove
    the floppy disk.
    ```

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

Begin at the CONVERSANT Administration menu, and select the following sequence:



In this example, you would first access the CONVERSANT Administration menu. Then you would select the Voice System Administration option to display the Configuration Management menu. From that menu, you would select the Voice Equipment option to display the Voice Equipment screen.

— The screens shown in the Intuity CONVERSANT library are only examples. Your screens may not appear exactly as illustrated.

Technical Updates

Every effort was made to ensure that the information contained in these books is technically accurate and will guide readers in the normal operation of the system. There may be instances, however, when the Intuity CONVERSANT VIS V5.0 product behaves differently than is documented, or when hardware changes are made after these books have been published.

To help with this, an online bulletin board is available to all Intuity CONVERSANT VIS V5.0 customers that provides supplemental information about this product in an electronic-mail format. These updates include information on hardware changes, hints, tips, and exception conditions about all aspects of the Intuity CONVERSANT VIS V5.0 product that were discovered after the core library was published.

This service is called Access, and is available 24 hours-a-day, 7 days-a-week to anyone who subscribes to it. To begin receiving electronic Intuity CONVERSANT VIS V5.0 Access articles, call 1-800-242-6005, and ask for department 186.

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Preparing the Site

1

What's in This Chapter

This chapter describes how to prepare the site prior to installing the MAP/40. This includes

- Verifying environmental, space, and power requirements for the MAP/40
- Prewiring for pinout connections
- Reviewing FCC guidelines
- Reviewing service-provider requirements

System Arrangement

The MAP/40 is a deskside unit in a tower configuration. It sits vertically on a small support base (Figure 1-1).

NOTE:
See Chapter 2, "Getting Started", for how to attach the base.

Position the MAP/40 with approximately a 6-in. clearance from the back to the front to provide for adequate air intake and exhaust.

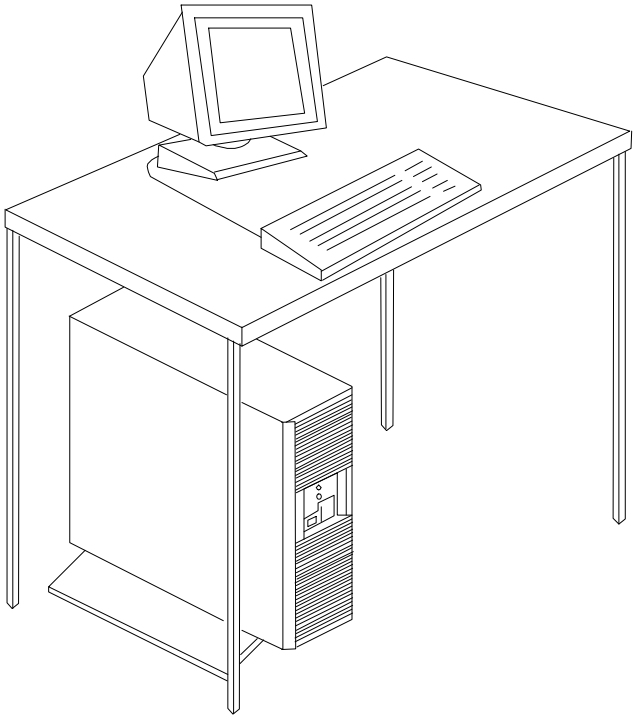

Figure 1-1. MAP/40 Deskside Unit

Environmental Considerations

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

Table 1-1. Environmental Considerations

Operating State	Temperature	Humidity
Operating	+10 to +32°C (+50 to +90°F)	—
Nonoperating (that is, when the MAP/40 is being shipped or stored)	-40 to +60°C (-40 to +140°F)	5 to 92%, noncondensing

Installation Area Considerations

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

- *Do not* install the MAP/40 in an area with high-power electrical equipment.
- *Do not* install the MAP/40 in the same area as copier machines because of the paper particles created by such equipment.
- Install the MAP/40 in an area that provides protection from excessive sunlight, heat, cold, chemicals, static electricity, magnetic fields, vibration, dust, and grime.
- Maintain an air-distribution system that provides adequately cooled, filtered, and humidity-controlled air.

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

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

Space Requirements

Table 1-2 lists the approximate weight, size, and depth of the primary MAP/40 hardware components. Note that the weight listed includes only the basic chassis, hard disk, floppy disk, streaming tape drive, and three circuit cards: 486 CPU, Video Controller, and SCSI Host Adapter Controller.

Table 1-2. Space Requirements

Equipment	Weight (lb.)	Height (in.)	Width (in.)	Depth (in.)
MAP/40	52	17.7	7.0 (12.6 with base)	21
Monitor	15	13.5	13	14.5
Keyboard	5	2.5	19	8
Printer	20	5	16	11

Power Requirements

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

The MAP/40 requires 8 A of power.

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

You must be able to meet the power requirements outlined in Table 1-3 before you install the MAP/40.

Table 1-3. Power Requirements

Attribute	MAP/40	Printer	Monitor
Volts AC (VAC)	90–130 or 200–250	115 +/- 5%	110–240
Hertz (Hz)	47–63	50–60	50–87
Phase	Single	Single	Single
Amps (RMS)	8	2	1
Input cords	NEMA* 5–15P plug; 3 m (9 ft) long	NEMA 5–15P plug; 2 m (6 ft) long	Included with monitor; 1 m (3 ft) long
Unit input receptacles	IEC-320 inlet	IEC-320 inlet	N/A

*National Electrical Manufacturer's Association.

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

- Locate each unit and printer within 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).
- Use the AC power output receptacle on the back of the unit for a video monitor only. Never plug any other device into this receptacle.

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

Site Prewiring for Pinout Connections

This section describes

- Analog (T/R) connections
- Digital (T1) connections
- Asynchronous and synchronous host connections

Analog Connections

Telephony Inputs to the MAP/40

Telephony inputs to the MAP/40 can be provided over analog telephone lines that come from either the local private branch exchange (PBX), some other customer-premise equipment, or the central office of the service provider. The customer must arrange with the local provider of telephone service to install the correct number and type of lines required for system operation.

NOTE:
Ensure that your telephone equipment is able to handle the volume of traffic the VIS will place on it. Specifically, if your applications require frequent flash-hook transfers, there must be adequate touch-tone registers available.

Connecting the Tip/Ring Lines

The MAP/40 IVP6 T/R (AYC28) circuit card uses two 6-pin conductor modular cords. These cords provide three lines for telephone hook-up. You can connect the T/R circuit card to telephone lines in one of three ways:

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

Direct Cable Connection

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

Figure 1-2 illustrates typical T/R line connection for the IVP6 T/R circuit card. Note that this is an example only. The slot numbers for T/R placement in your system may be different. Use the output from the Configuration Program to determine the card placement for the MAP/40 you are installing (see Chapter 4, "Running the Configuration Program", for more information). Figure 1-3 shows an exploded view of the RJ25C for use in U.S. markets.

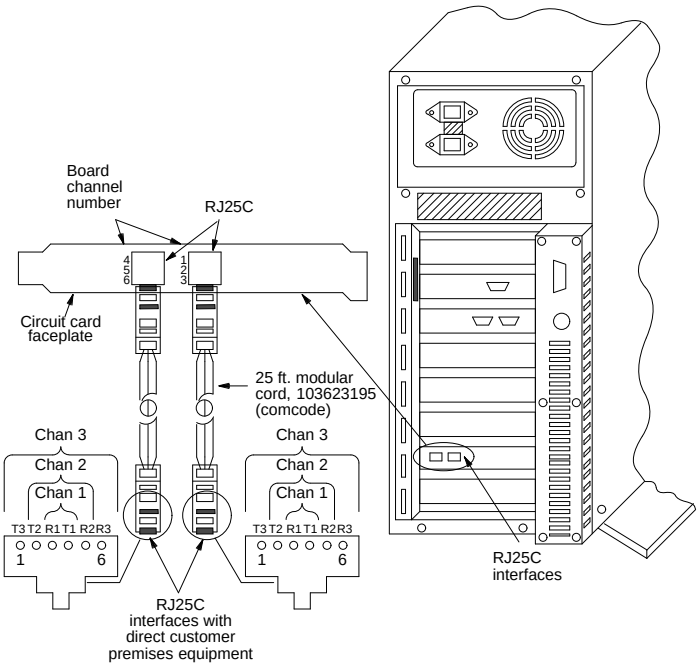

Figure 1-2. Direct Line Connection from an IVP6 Tip/Ring Circuit Card

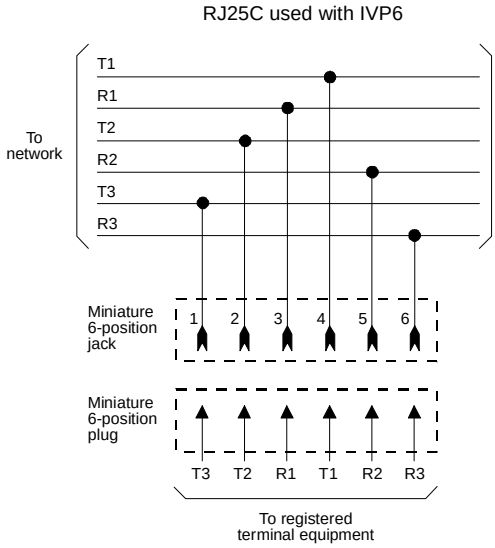

Figure 1-3. Pinouts for the IVP6 Tip/Ring Circuit Card

Cable Connection Using the 885A Adapter

Using the 885A adapter or line splitter (Figure 1-4) to connect the IVP6 T/R card to the telephone line enables you to use all three channels in the 6-pin conductor modular cord.

Figure 1-5 and Figure 1-6 show how to use the 885A adapter with a T/R circuit card.

NOTE:
Be sure to record the circuit card slot number and telephone extension numbers on whatever adapter you are using in the installation.

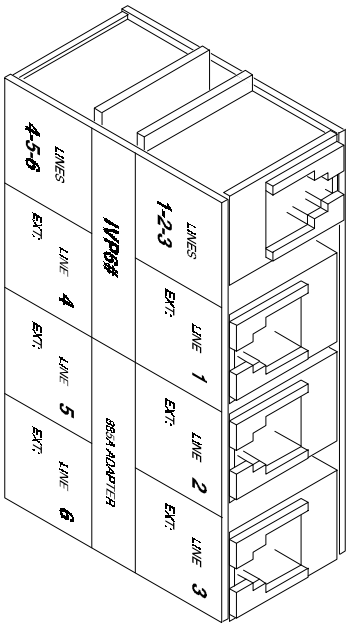

Figure 1-4. 885A Adapter /Line Splitter for an IVP6 Tip/Ring Circuit Card

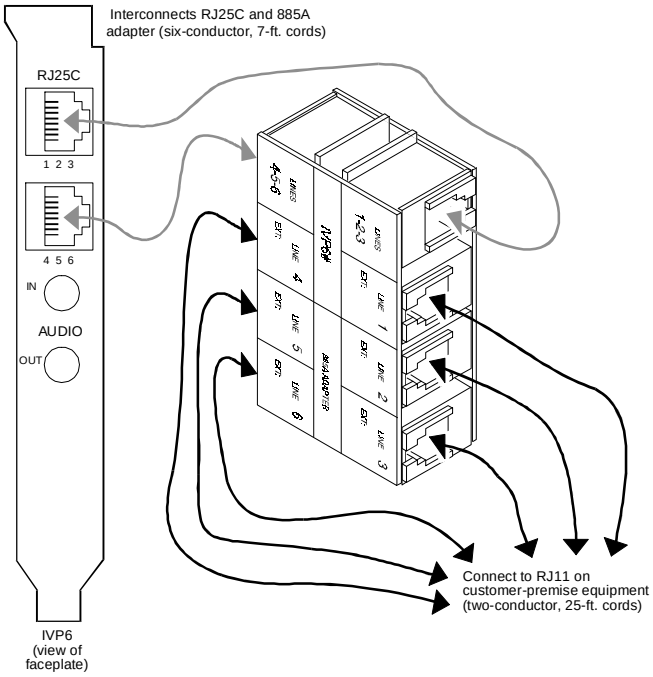

Figure 1-5. Cable Connection from an IVP6 Tip/Ring Circuit Card to an 885A Adapter

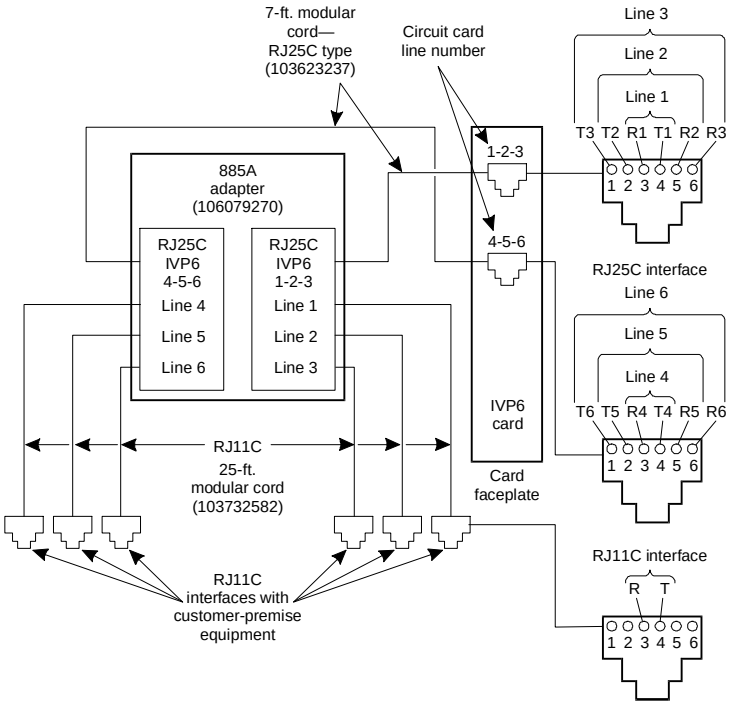

Figure 1-6. Wiring and Pin Diagram for an 885A Adapter and an IVP6 Tip/Ring Circuit Card

Cable Connection Using the Tip/Ring Distribution Panel

The MAP/40 T/R distribution panel is located on the back of the chassis. This panel provides a simplified wiring scheme for connecting to the local customer premise equipment or building connecting block provided by the central office. This panel, which is preassembled with new systems, allows you to connect either 24 or 48 channels (up to eight T/R circuit cards).

For information on how to install and connect the MAP/40 T/R distribution panel, see "Installing the Tip/Ring Distribution Panel" on page 10-16 in Chapter 10, "Installing Optional Hardware".

Connecting FAX Lines

The FAX circuit card includes two RJ-45 telephone jacks (see Figure 8-15 on page 8-18 for the location of these jacks). The top jack accesses lines 0 and 1. The bottom jack accesses lines 2 and 3. The cable splitters, which are included with the FAX circuit card, connect the channels to single-pair wiring. To use only one or two lines of the card, plug a single-pair RJ-11 cord into the top jack to access line 0. Plug a single-pair RJ-11 cord into the bottom jack to access line 2.

The pinouts for the top and bottom telephone jacks are identical and are configured as shown in Table 1-4.

Table 1-4. Telephone Jack Pinouts on the FAX Circuit Card

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

Digital Connections

Central Office Connection—T1 Circuit Cards

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

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

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

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

Connecting T1 Circuit Cards to a CSU

This section explains how to connect the MAP/40 T1 circuits to a CSU. It uses the AT&T Paradyne ACCULINK 3150 CSU (Figure 1-7) as an example.

Before You Begin

- Verify that the AT&T Paradyne ACCULINK 3150 CSU kit is on site and contains the following:
  - An ACCULINK 3150 CSU (comcode 107063828)
  - A 15-pin male-to-female slide latch adapter cable (comcode 107063711)
  - A T1 line interface cable (comcode 406941559)
  - A 75-ft Intuity CONVERSANT T1 extension cable (ED5P208-30-G1)
- With the addition of an optional DC power cable, the 3150 CSU can operate on either a +24 VDC power source, a -48 VDC single source battery, or -48 VDC redundant source batteries (for power backup). For more information, see the *ACCULINK 3150 Channel Service Unit Operator's Guide*.
- There is an extension cable included in the ACCULINK 3150 CSU kit. However, if you are locating the CSU over 75 ft away from the MAP/40, you will need another one or more of these 75-ft cables. Note that 655 ft is the maximum distance to which you can daisy-chain these cables.

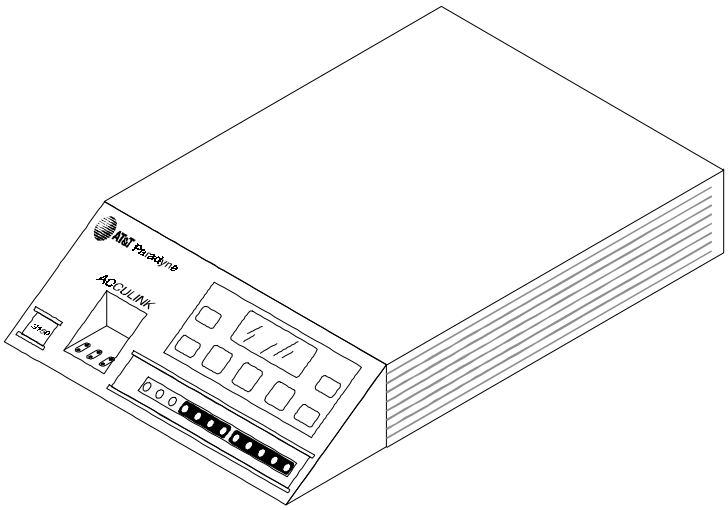

Figure 1-7. AT&T Paradyne ACCULINK 3150 Channel Service Unit for T1 Connections

Procedure

1. Connect the 15-pin slide latch adapter cable to the DTE port of the CSU rear panel (Figure 1-8).
2. Connect the other end of the adapter cable to the T1 extension cable. The slide latch on the cable ensures that the two cables are connected properly.
3. Plug the extension cable into the receptacle on the faceplate of the T1 circuit card. If the distance between the CSU and the MAP/40 is greater than 75 ft, use additional extension cables daisy-chained to a maximum of 655 ft.
4. Plug the appropriate end of the transformer into the POWER port of the CSU rear panel. Plug the other end of the transformer into a 110-VAC, 60-Hz grounded receptacle.
5. Connect the appropriate end of the T1 line interface cable to the NETWORK port on the rear panel of the CSU (Figure 1-8).

Figure 1-9 shows the equipment configuration for the ACCULINK 3150 CSU. Figure 1-10 shows a typical cable connection from a T1 circuit card to a CSU.

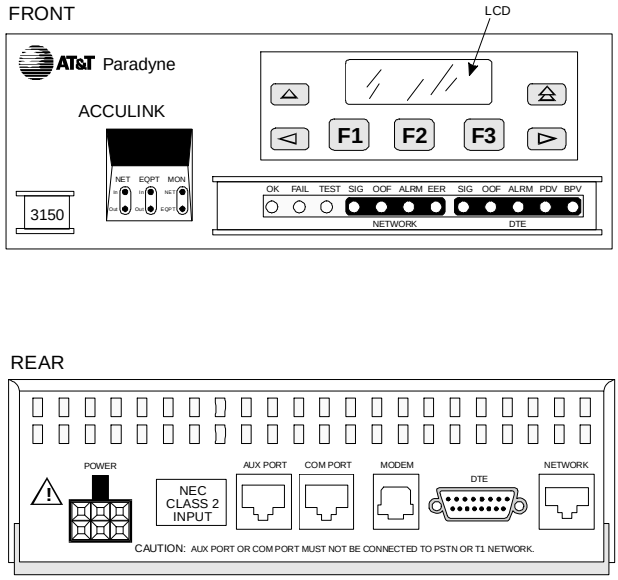

Figure 1-8. Front and Back Panel of the ACCULINK 3150 Channel Service Unit

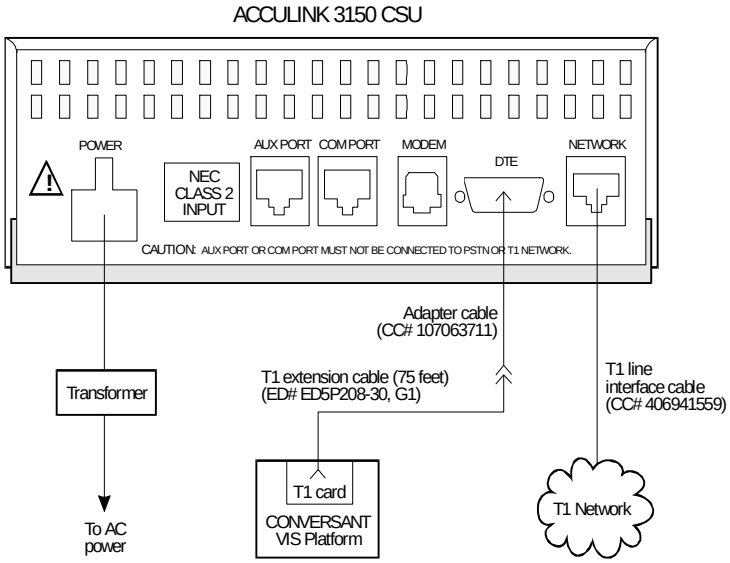

Figure 1-9. Equipment Configuration for the ACCULINK 3150 Channel Service Unit

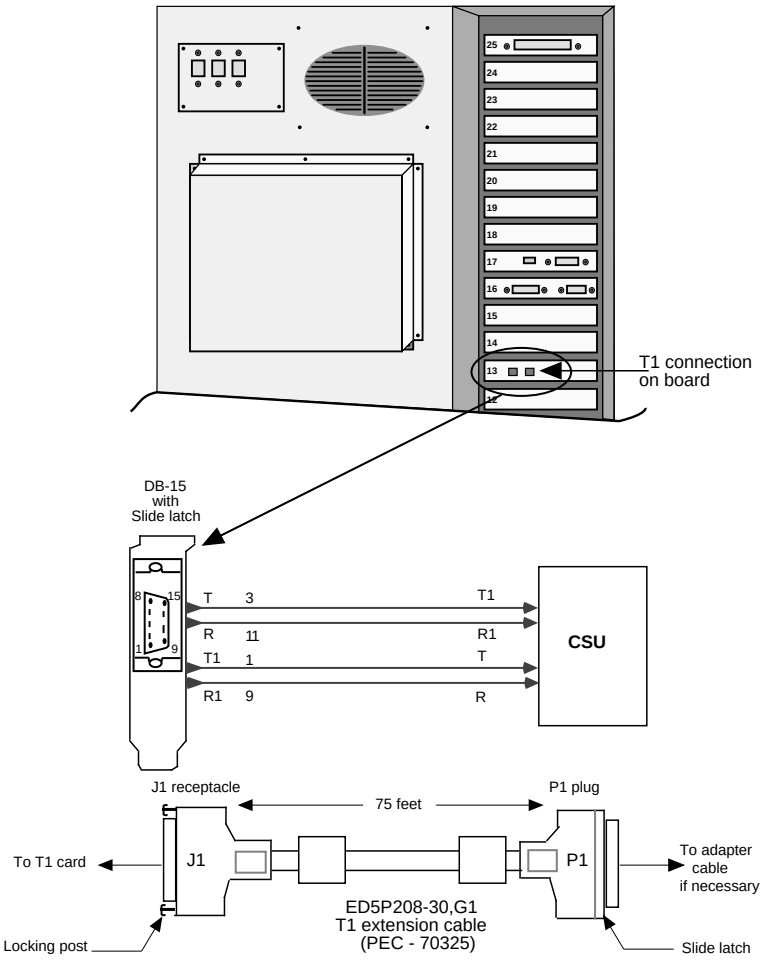

Figure 1-10. Typical Cable Connection from a Channel Service Unit to a T1 Circuit Card

Connecting T1 Circuit Cards to Devices Other than a CSU

The Intuity CONVERSANT T1 circuit card connector is a 15-pin, D subminiature male connector equipped with slide locks.

To connect the MAP/40 to the device, you need a 75-ft Intuity CONVERSANT T1 extension cable (ED5P208-30-G1). Plug the extension cable via the connector

into the receptacle on the faceplate of the T1 circuit card. This cable terminates via a 15-pin D subminiature connector to a CSU, PBX, etc.

NOTE:
If the distance between the CSU and the MAP/40 is greater than 75 ft, use additional extension cables daisy-chained to a maximum of 655 ft. The total number of cables daisy-chained together must be an odd number to maintain the cross-over connections intended in the cable design.

If you are connecting line-side T1 directly to a DS1 bank, use the female-to-female adapter cable that was selected as an attribute to the T1 circuit card price element code (PEC).

When connecting to certain devices, you may need to cut off the network end of the cable, strip the wires, and connect them using the information in Table 1-5.

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Table 1-5. T1 Extension Cable Internal Wire Connections

Wire Color	Pin No. of the J1 15-Pin D Subminiature Connector	Signal Connection Type*	Signals to/from the VIS	P1 Connects to
Orange/ white	1	T1	To	CSU or network T
White/ orange	9	R1	To	CSU or network R
Green/ white	3	T	From	CSU or network T1
White/ green	11	R	From	CSU or network R1

*Transmitter connections are identified as T or R. Receiver connections are identified as T1 or R1. You must reverse the connections to any equipment. This means that one equipment's references to T and R must connect to another equipment's references to T1 and R1, respectively.

Host Channels—Asynchronous/Synchronous

Any required host computer and its interface should be operational before you install the MAP/40 so you can perform the functional tests that have been developed for application scripts. This includes any data facilities that may be required.

Connecting the MAP/40 to an Asynchronous Host

There are two ways to connect the MAP/40 to a terminal, modem, or host computer via an asynchronous link:

- An asynchronous port, COM2, on the rear of the MAP/40
- Additional asynchronous ports on the optional 8-Port Asynchronous circuit card

NOTE:
The MAP/40 provides two asynchronous ports, COM1 and COM2. However, COM1 is reserved for AT&T remote maintenance and is not available to use for asynchronous connections.

Using COM2

A 9-pin D subminiature male connector is provided on the rear panel of the MAP/40 for COM2. This connector connects internally to the CPU. COM2 supports asynchronous host connections running at 300–19,200 baud. Networking modems typically use the 19,200 baud rate.

Table 1-6 shows the pinouts for the COM2 connector.

Table 1-6. COM2 Pinouts

Pin	Signal Name	Signal Flow
1	Data Carrier Detect (DCD)	Input
2	Receive Data (RX)	Input
3	Transmit Data (TX)	Output
4	Data Terminal Ready (DTR)	Output
5	Signal Ground (GND)	Bidirectional
6	Data Set Ready (DSR)	Output
7	Request to Send (RTS)	Output
8	Clear to Send (CTS)	Input
9	Ring Indicator (RI)	Input

Using the Optional 8-Port Asynchronous Circuit Card

The optional 8-Port Asynchronous circuit card provides eight additional asynchronous ports for connecting to modems, terminals, or other DTE or DCE devices. Each 8-Port card includes eight six-conductor 14-ft modular cords (D6AP-87; comcode 102937604) for connections to adapters. The faceplate of the card contains modular jacks. These jacks connect to one of two types of 25-pin D subminiature adapters:

- A terminal/printer adapter (PEC 70854) for connection to terminals, printers, or other DTE devices
- A modem adapter (PEC 70853) for connection to modems or other DCE devices

See Figure 1-11 for pinout connections for the modular jacks on the 8-Port Asynchronous circuit card. See Figure 1-12 for pinout connections for the adapters.

See Chapter 8, "Installing Optional Feature Circuit Cards", for information on how to install the 8-Port Asynchronous circuit card and set up asynchronous connections.

See Appendix B, "Cable Connectivity", for information on how to connect cables for asynchronous connections.

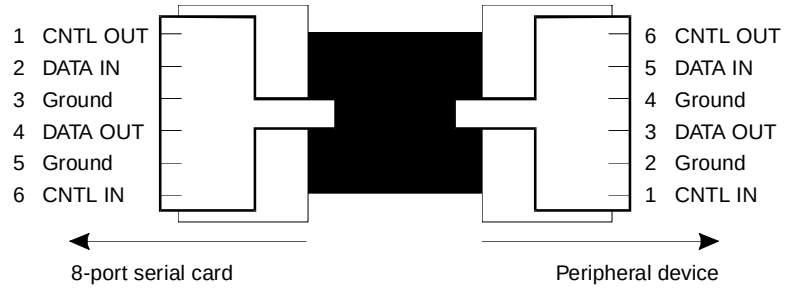

Figure 1-11. Pinout Connections for Modular Jacks on the 8-Port Asynchronous Circuit Card

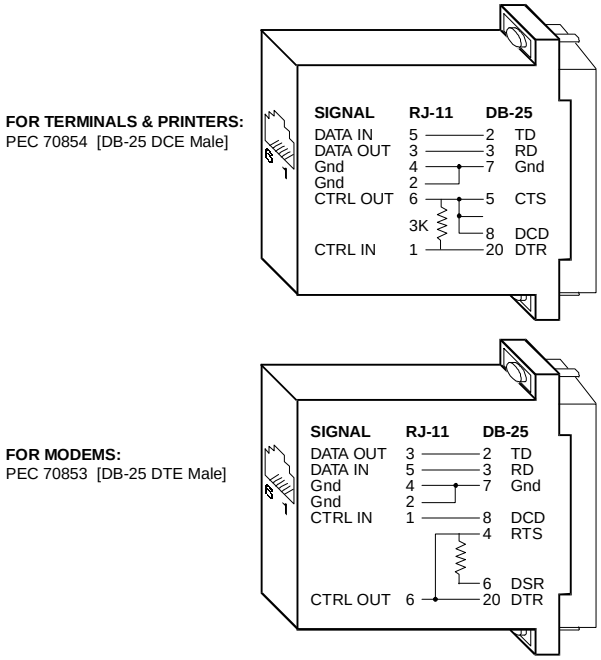

Figure 1-12. Pinout Connections for DTE or DCE Devices

Connecting the MAP/40 to a Synchronous Host

The MAP/40 synchronous card(s) supports an SDLC protocol line that connects to the host communication equipment with a male D subminiature RS-232 connector.

Host Cable Specifications

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

Data link cables provided with the MAP/40 are shielded cables to ensure compliance with FCC rules and regulations. The cabling is available in increments of 25 ft. A 25-ft foot cable is packaged with this feature.

Note that all cables should be shielded. Also note that you should use limited-distance modems when data links exceed 100 ft.

The data link cable layout or house wiring is engineered on a per-job basis. The exact arrangement is site dependent.

The customer order should specify the required number of data-link cables. For a direct connection to a host, you need a modem eliminator.

System Grounding Connections

Customer-premise-provided outlets should be grounded in accordance with NEC and applicable local codes.

To maintain electromagnetic interference (EMI) protection, personal protection, and immunity from circuit noise, you must ground each MAP/40 to a solid, stable single-point ground.

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

Regulatory Agency Guidelines

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

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

FCC Guidelines

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

Before You Connect to the Public Telephone Network

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

- The telephone and circuit numbers of the lines to which the VIS will be connected
- The FCC registration number of the MAP/40 (this is located on the faceplate of each T/R circuit card and visible at the rear of the unit)
- The ringer equivalence number (REN) of the PC/PBX circuit card (if AUDIX Voice Power is coresident) and the IVP6 (AYC28) T/R circuit card (this is located on the faceplate of each circuit card and visible at the rear of the unit).

Type of Telephone Lines Needed

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

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

Note that connecting to party-line service is subject to state tariffs.

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

Telephone Service and Repair Problems

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

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

If advance notice is not feasible, the company may

- Discontinue service to the customer temporarily
- Notify the customer as soon as possible

- Give the customer an opportunity to correct the problem
- Inform the customer of the right to file a complaint with the FCC

MAP/40 Repair Problems

CAUTION:
]*If any of the Intuity CONVERSANT equipment is not operating properly, remove it immediately from the telephone lines. Malfunctioning equipment can harm the telephone network.*

In the unlikely event that repairs are needed for the MAP/40, ensure that they are performed by an authorized representative. If you are a field service representative and cannot solve a problem, contact your maintenance provider. If your maintenance provider is AT&T GBCS and you are within

- The domestic U.S., call the Technical Service Organization (TSO) at 1-800-344-9670
- Canada, call the International Technical Assistance Center (ITAC) at 303-538-4666

When to Notify the Service Provider

CAUTION:
Notify the service provider immediately if you are permanently or temporarily disconnecting the VIS MAP/40 from its present line or trunk circuits. (This applies to digital circuits ONLY.)

CAUTION:
If you disconnect the MAP/40 from the telephone network on a continuing basis without advising the service provider, they can discontinue your service permanently. (This applies to digital circuits ONLY.)

Equipment Attachment Limitations

NOTE:
This section applies to Canadian customers only.

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

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

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

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

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

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

NOTE:
The LN for the AYC28 T/R circuit card is 9**.**

Getting Started

2

What's in This Chapter

This chapter describes

- How to unpack the MAP/40
- The importance of saving packing materials
- How to use factory information regarding your system
- How to install the support base
- Where to find key components of the MAP/40

Heeding Caution Statements

Caution statements appear throughout this book. These Caution statements indicate when the actions you are about to perform can harm you or the equipment unless you follow procedure steps as listed.

The warnings that occur within this book are collected here and listed below for your information.

CAUTION:
Notify the service provider immediately if you are going to permanently or temporarily disconnect the MAP/40 from its present line/trunk circuits. (This applies to digital circuits ONLY.)

CAUTION:
If you are turning off the power to the MAP/40, you are disconnecting from the line/trunk circuits.

CAUTION:
If you disconnect the MAP/40 from the telephone network on a continuing basis without letting the telephone company know, they can discontinue your service permanently. (This applies to digital circuits ONLY.)

CAUTION:
If any of the Intuity CONVERSANT equipment is not operating properly, remove it immediately from the telephone lines. Malfunctioning equipment can harm the telephone network.

CAUTION:
If you are online, perform a ""soft" shutdown of the VIS operating system before you shut off power to the system. See ""Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for procedures.

CAUTION:
Shut the main power switch off only after you execute a "soft" system shutdown, and disconnect the power cord before you remove the dress cover or access panel and working within the MAP/40.

CAUTION:
When you lift the MAP/40 chassis, use proper handling practices to prevent back strain or hand injury.

CAUTION:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground.

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

CAUTION:
Do not use the edge of the chassis front bezel to lift the MAP/40. The bezel cover comes off easily.

Verifying Component Versions

Because manufacturers frequently change the design and appearance of hardware components, multiple versions of a single component can occur in the MAP/40. The functionality remains the same, but jumpers or switch settings may vary.

Before you install or replace any component, check the model numbers and the appearance of the component against the documentation. Ensure that the jumper or switch settings are correct for the version of the component you are using.

Protecting Against Electrostatic Discharge

The human body can collect thousands of volts of destructive static electricity from ordinary activities, for example, walking on a rug, handling synthetic materials, or wearing synthetic clothes. When this static electricity discharges onto another surface at a different voltage potential, it is called *electrostatic discharge* (ESD).

A person cannot feel ESD below approximately 3500 V. However, only 30 V can damage ESD-sensitive electronic components.

There is no quick method of testing for ESD damage. Components that are damaged may simply fail after a brief period of normal operation.

Circuit cards and packaging materials that contain ESD-sensitive components are often marked with a yellow-and-black warning symbol. You must observe proper grounding techniques to prevent the discharge of damaging static electricity from your body into these ESD-sensitive components.

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

- Handle ESD-sensitive circuit cards only after you have attached a wrist strap to the bare skin of your wrist. Attach the other end of the wrist strap to a ground that terminates at the system ground, such as any unpainted metallic chassis surface.
- Handle a circuit card by the faceplate or side edges only. *Do not touch* components, leads, or connector areas (gold finger pins). See Figure 2-1 and Figure 2-2 for examples of how to hold small and large circuit cards, respectively.
- Keep circuit cards away from plastics and other synthetic materials such as polyester clothing.
- Do not hand circuit cards to another person unless that person is grounded at the same potential level.

- Hold devices such as a hard disk, floppy drive, or streaming tape as you would a large circuit card. The ESD-sensitive area of these components is located on the bottom surface. Hold these drives as shown in Figure 2-3.

CAUTION:
Ensure that your palm is not in contact with the noncomponent side of the board.

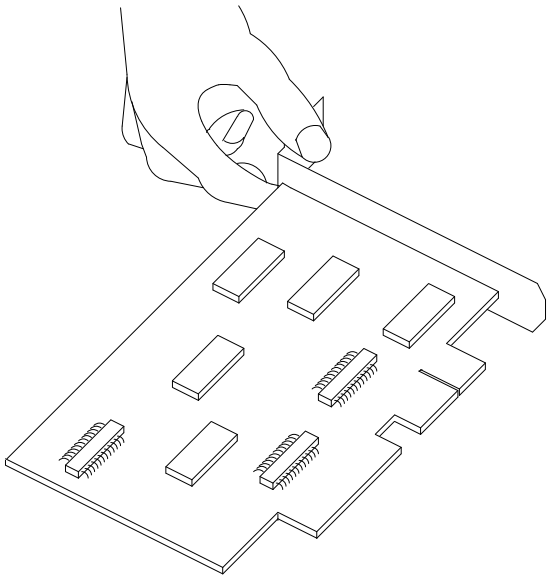

Figure 2-1. How to Hold a Small Circuit Card

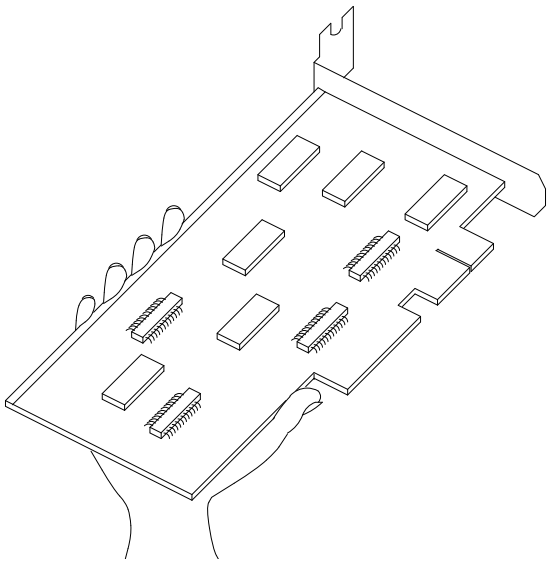

Figure 2-2. How to Hold a Large Circuit Card

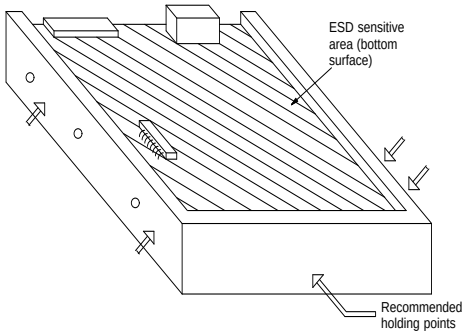

Figure 2-3. ESD-Sensitive Area of an Electronic Component

Ordering Spare Parts

Refer to Appendix A, "Component Ordering Numbers", for information on ordering spare parts.

Gathering Tools and Test Equipment

To assemble the MAP/40 hardware, you need the following tools:

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

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

- An antistatic grounded wrist strap
- An antistatic grounded work mat
- A volt/ohm meter

Unpacking the MAP/40

The MAP/40, keyboard, and monitor are shipped in individual cartons. A boxed, fully-loaded MAP/40 weighs approximately 60 lb. The carton has cut-out handles on either end for use in lifting and moving. To unpack the MAP/40, see Figure 2-4 and complete the following procedure:

NOTE:
Before you unpack the MAP/40, set up a work area that includes a work table at least 3 by 5 ft.

1. Place the MAP/40 carton on the floor to unpack.
2. Cut the carton top seam and the left and right end seams. Cut the seams so that you can reuse the carton. (See "Saving Packing Materials" on page 2-9.)
3. The cardboard tray has three foam pockets that contain
   - A support base (tower configuration) wrapped in bubble wrap with a bag of four mounting screws
   - A 9-ft power cord
   - A plastic packet containing a blank streaming tape cartridge, a floppy diskette with the system configuration and software, and factory information regarding the system

   Remove all items contained in the top cardboard tray.
4. Remove the top cardboard tray.
5. Locate the back end of the MAP/40 that is resting against the cut-out piece of foam. The foam at this end is easier to press inward than the foam backed by cardboard on the other end.
6. Press in on the foam and lift the end of the MAP/40.

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

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

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

Saving Packing Materials

Save the shipping carton and all packing materials to use in case you must return the MAP/40 to the manufacturer. (If you ordered multiple MAP/40s, saving one carton and packing materials should be sufficient.) Packing materials include antistatic bags and bubble wrap as well as cardboard and foam inlays. This also applies to shipping cartons for the keyboard and monitor.

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 carton has been designed to prevent damage and ensure product warranty.

Return Repair Tag

If you must return a MAP/40 to the manufacturer, complete the yellow GBCS return repair tag and attach it to the unit. The factory information packet included in the MAP/40 carton contains the yellow return repair tag.

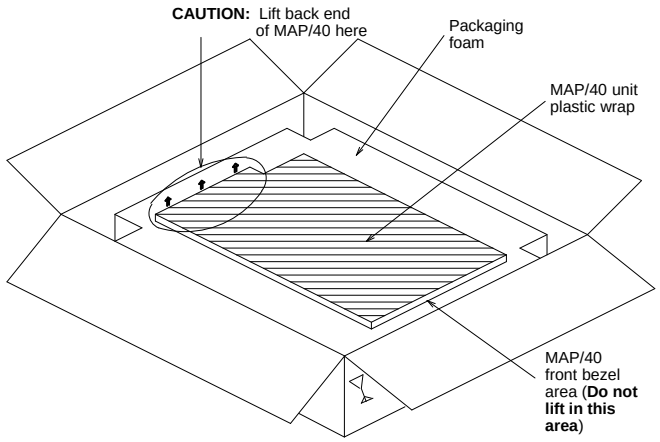

Figure 2-4. Unpacking the MAP/40

Factory Information Regarding Your System

The manufacturer ships MAP/40s from the factory in two different ways:

- Already assembled, loaded, and tested (this is known as an *ALT* system) according to customer specifications
- With just the generic features installed for assembly at the customer site

A plastic packet in the MAP/40 carton contains information that tells you how the manufacturer prepared the MAP/40 prior to shipping as well as other information about the system. In this packet you will find

- An explanation of which components have been assembled and loaded in your system. This information is in the form of a printout from a software program that the manufacturer ran on your MAP/40 prior to shipping (Figure 2-5).

  NOTE:
  See Chapter 4, "Running the Configuration Program", for more information on the Configuration Program.

- A floppy disk containing the Configuration Program and configuration data if you ordered an ALT system. Use this floppy disk to configure your system if the system has not already been factory assembled or if you later add hardware to the system.
- A comment sheet to return to the factory with your input regarding the system.
- A yellow GBCS return repair tag to attach to the MAP/40 if you must return it to the manufacturer.

```
Fri Nov 17 13:37:04 MDT 1995

ATT ORD NBR:
CUSTOMER:
DOSS:

PLATFORM: CONVERSANT MAP 40 Platform

TYPE: 5.0

PARTITION: STANDARD

PC SLOT ASSIGNMENT
-----------------------------------------------------

 SLOT   DEVICE                      INTRPT    IOADDR    RAMADDR     DMAC
    11  SCSI Hard Disk Ctrlr        14        IFO
    10  Video Display Ctrlr                   A000
                                              (128K)
     9  CPU Brd
        Parallel Port               7         378
        COM1                        4         2E8
        COM2                        3         2F8
     8
     7
     6
     5
     4
     3
     2
     1

OTHER EQUIPMENT
--------------------------------

1: 1.7 GB SCSI Disk Drive
2: 1.44 MB 3.5 inch Internal Floppy Drive
3: 525 MB Internal Tape Drive
4: TDM BUS CABLE

NOTES
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Figure 2-5. Example of a Printout from the Configuration Program

Attaching the Support Base

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

1. Remove the small plastic bag from the bubble wrap and set it aside.
2. Remove the bubble wrap surrounding the support base.
3. Place the MAP/40 bottom up. In a tower configuration, the bottom is not covered with a dress cover and bare metal shows.

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

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

   NOTE:
   There are ten mounting holes. These are arranged in two parallel rows of five holes each, though four sets of the holes are closer together than the rest. Align with the first two from the front.

6. Center the support base on the bottom of the MAP/40, that is, align the holes of the support base with the four sets of holes on the MAP/40. There should be even amounts of metal showing on the MAP/40 on either side of the support base.
7. Ensure that the base is centered over the length and width of the chassis (Figure 2-6).
8. Using the Phillips screwdriver, screw in the four binding-head screws, washer first, in each of four corners.
9. Tighten the screws snugly. There is no requirement for torque.
10. Grip opposite corners of the chassis and reset the MAP/40 in an upright position.

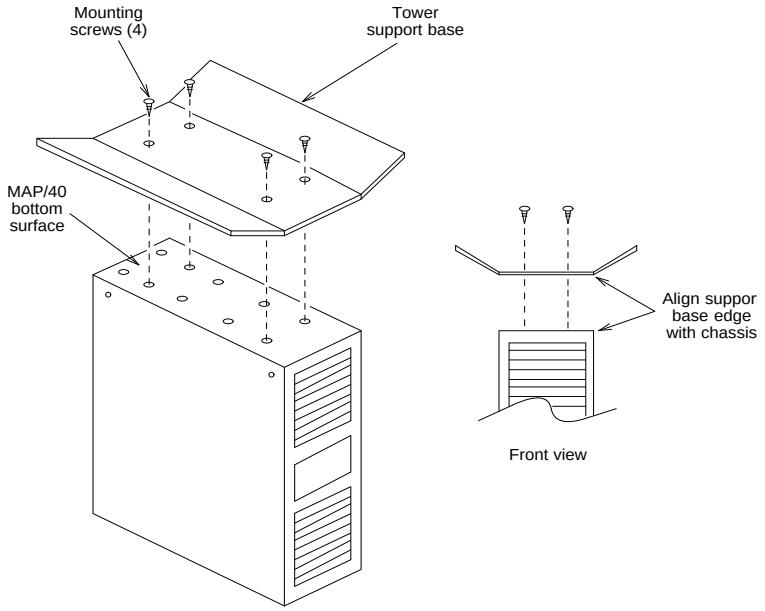


Figure 2-6. Attaching the Support Base

Locating Key Components on the MAP/40

Use the following sections and diagrams to locate key components on the MAP/40. For additional information describing the MAP/40 hardware, see the *Intuity CONVERSANT VIS V5.0 System Description,* 585-310-225.

The Front of the Chassis

Table 2-1 describes the components on the front of the chassis. Figure 2-7 shows the front view of the MAP/40.

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

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

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

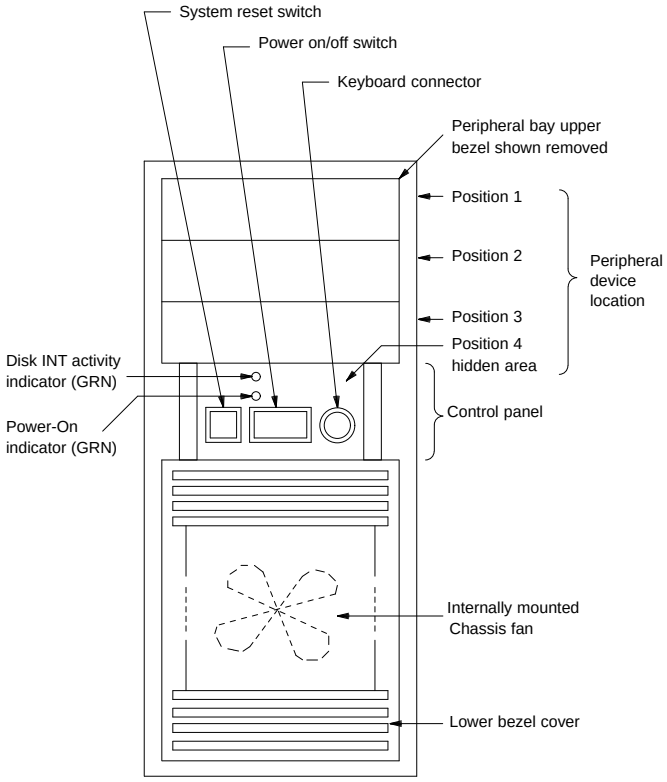


Figure 2-7. Front View of the MAP/40

Locations of Peripheral Drive Devices

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

Table 2-2. Peripheral Bay Drives*

Drive	Description	Function	Peripheral Bay Position
Cartridge tape	SCSI	Backup and restore; load the system	2
Floppy	3.5-inch, 1.44-Mbyte high density	System configuration and diagnostic testing	1
Hard disk (optional)	1.7-Gbyte SCSI	Mirroring	3
Hard disk	1.7-Gbyte SCSI	Stores operating system, application software, and speech data	4

*The specifics regarding these devices are subject to change. For the most current information on drives, call Access, the Intuity CONVERSANT online bulletin board, at 1-800-242-6005.

Chassis Cooling System

The cooling system for the MAP/40 includes two fans. One is located in front of the circuit card cage area behind the lower front bezel cover. An air filter sits inside the bezel cover. The second fan is located within the power supply. This fan exhausts air to the rear of the unit.

Air flows from the front through the vents of the bezel cover and exits through vents in the back of the unit. The fans maintain air flow in the unit to prevent components from overheating, which can cause components to malfunction. To prevent overheating, you must also maintain clearance around the unit so that air can circulate.

The Back of the Chassis

Table 2-3 describes the components on the back of the MAP/40 chassis. Figure 2-8 shows the back view of the MAP/40..

Table 2-3. Components on the Rear of the MAP/40

Component	Location	Description	Function
Asynchronous port COM1	CPU circuit card faceplate	9-pin male D subminiature	Communicates with the host computer
Parallel port	CPU circuit card faceplate; left of COM1	25-pin female	Communicates with the printer
Video connector*	Video circuit card faceplate; slot #10	15-pin female D subminiature	Connects the MAP/40 to the monitor
AC power outlet connector	Top left corner	3-prong,1/.5 A, 120/230 V	Connects the MAP/40 to the monitor via a 6-ft monitor power cord
AC power inlet receptacle	Top left corner below the monitor outlet	3-prong, 5/10 A, 110/230 V	Connects the MAP/40 with a power cord
Keyboard receptacle*†	Middle right edge of the chassis	5-pin female circular DIN	Connects *one keyboard only* to the MAP/40
Asynchronous port COM2	Middle right of the chassis above the keyboard inlet	9-pin male D subminiature DB-9	Communicates with the host computer
T/R distribution panel (optional)	Center	Square panel	Allows up to 8 T/R cards to communicate with customer premise equipment

*Do not use the monitor and keyboard receptacles for any other purpose than to connect the monitor and keyboard.

†You can connect only one keyboard to the MAP/40.

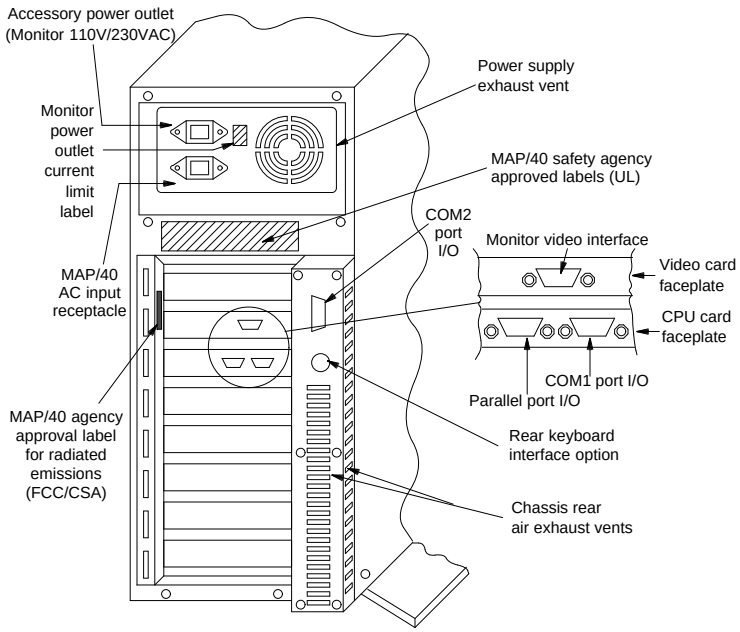


Figure 2-8. Back View of the MAP/40

Connecting Peripherals and Powering Up

3

What's in This Chapter

This chapter describes how to

- Connect the monitor
- Connect the keyboard
- Connect the printer
- Connect a modem
- Power up the system
- Access the CPU set-up screens

NOTE:
If you are installing this system outside of the U.S., verify with your local service or sales representative that the information provided in this chapter is applicable.

CAUTION:
For the software to function properly, you must make all cable connections to peripherals, switches, networks, etc. before you power up the system.

Connecting the Monitor

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

Required Cabling

The monitor is connected to the MAP/40 by a power cable and a VGA Port jumper cable (comcode 406664979). The power cable has a male plug at one end and a female plug at the other end. One end of the VGA Port jumper cable has a video input connector and the other end is permanently attached to the monitor.

Procedure

1. Locate the Video Controller circuit card. This card is in slot #17 of the card cage and is accessible from the rear of the MAP/40.
2. Plug the signal cable connector from the monitor directly into the video connector on the Video Controller card. This is a 15-pin, high-density D subminiature female connector that is located on the faceplate (Figure 3-1).
3. Tighten the thumbscrews on the signal cable connector by hand or with a small screw driver.
4. Match the ends of the power cable to the monitor first and to the MAP/40 second.
5. Plug the female end of the cable into the monitor and the male end into the rear of the MAP/40 (see Figure 2-8 on page 2-18).

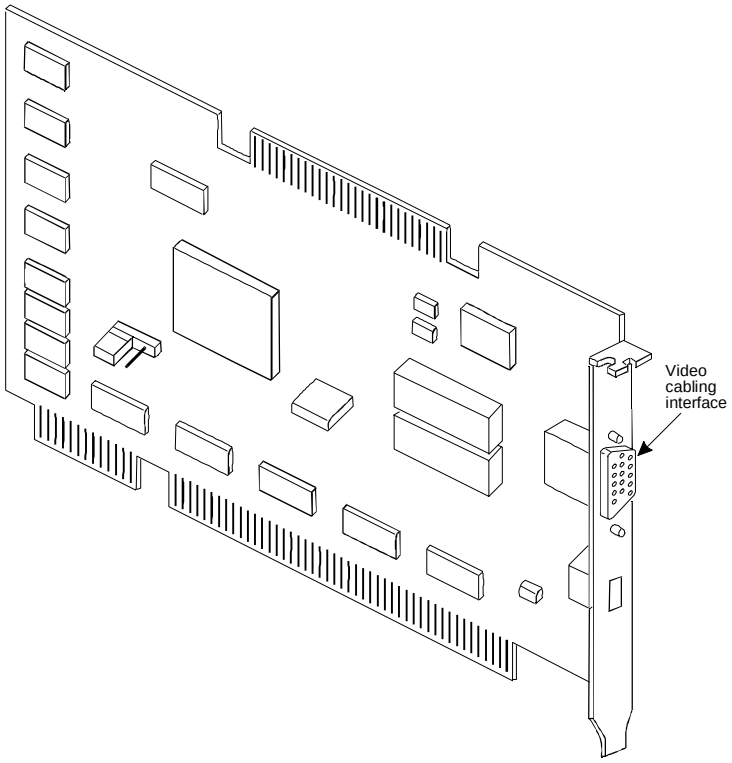
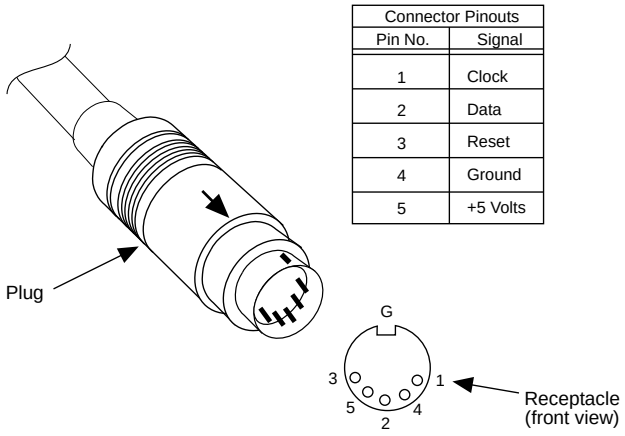


Figure 3-1. Location of the Video Cabling Interface on the Video Controller Circuit Card

Connecting the Keyboard

There is a 5-pin, female DIN connector in the rear, upper left corner of the MAP/40. Use this connector for the keyboard connection. Figure 3-2 shows the pinouts for this connector receptacle.



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

Figure 3-2. Pinout Connections for Keyboard—Circular DIN

Connecting the Printer

A 25-pin D subminiature female receptacle located on the faceplate of the CPU circuit card (slot #16) provides a parallel printer interface.

Unpacking and Installation

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 procedure supplements the information provided in the printer document.

1. Unpack your printer according to the steps provided in the printer document.
2. Install the ribbon cassette and paper as shown in the printer document.
3. Set up the printer as described in the printer document.
4. Set up the printer I/O address as described below in the section, "The 486 Set-up Utility."

Pinouts

Table 3-1 details the pin number and corresponding functional description of the printer connector.

Table 3-1. Printer Pinouts

Pin	Description
1	- Strobe
2	+ Data bit 0
3	+ Data bit 1
4	+ Data bit 2
5	+ Data bit 3
6	+ Data bit 4
7	+ Data bit 5
8	+ Data bit 6
9	+ Data bit 7
10	- Acknowledge
11	+ Busy
12	+ Paper feed
13	+ Select
14	- Auto feed
15	- Error
16	- Init. printer
17	- Select input
18-25	Ground

Connecting a Modem

To enable remote access for customer use, you must connect a modem to the unit. A modem is also required at the remote location for connection between the remote terminal and the network. The customer must provide the modems.

Use the manufacturer's documentation provided with the modems to set the jumpers and make connections.

Powering Up the System

This section explains how to connect the MAP/40 to the power source.

Before You Begin

You must provide a dedicated circuit for the MAP/40. The AC power output receptacle on the back of the unit is to be used for the video monitor only. *Do not* plug any other devices into this receptacle.

Procedure

Complete the folowing procedure to ensure that the system is connected properly to the power outlet and is receiving power:

1. Plug one end of the MAP/40 power cord into the input AC on the rear of the chassis (Figure 2-8).
2. Plug the other end of the MAP/40 power cord into the designated 115-V, 15-A power outlet or the 200- to 250-V power outlet if so configured.
3. Place the monitor power switch in the ON position.
4. Ensure that circuit breaker on the rear panel is ON.
5. Place the power switch on the front of the unit in the ON position.

   The green light labeled "MAIN POWER" on the front of the main unit should light and resident diagnostics should be initiated on the monitor.
6. If the light does not come on or if diagnostics are not initiated, check the power connections.

The 486 CPU Set-Up Utility

The 486 CPU Set-up Utility includes two primary menus:

- The Main Menu
  - — Appears when you first enter 486 set-up mode
  - — Shows you the defaults that have been set at the factory for your system
- The Advanced System Configuration Options Menu
  - — Is accessed from the Main Menu using the function keys
  - — Shows you a list of submenus and the function keys to use to access those submenus

This section describes how to access the primary menus and when and how to change them.

When to Change the Set-Up Utility Menus

CAUTION:
Do not *change the 486 Set-up Utility menus for any other reasons than those listed below.*

When to Change the Main Menu

Change the Main Menu *only* when you

- Install or remove the keyboard
- Observe at any time that the actual system settings do not agree with the default settings shown on the menu

When to Change the Advanced Menu

Change the Advanced System Configuration Options Menu *only* when you

- Install a printer or remove a printer from a parallel port
- Reconfigure the system and the output of the Configuration Program indicates that interrupts must change
- Observe at any time that the actual settings do not agree with the default settings shown on the menu

What to Change on the Set-Up Utility Menus

What to Change on the Main Menu

See Table 3-2 to determine what changes, if any, to make to the 486 CPU Set-up Utility Main Menu.

Table 3-2. What to Change on the 486 Set-Up Utility Main Menu

If you are . . .	Change set-up entry . . .	To . . .
removing the keyboard	Keyboard	Not Installed*
installing a keyboard to a system that did not previously have one	Keyboard	Installed

*Setting the keyboard value to "Not Installed" when you remove the keyboard allows the CPU to ignore keyboard errors at start-up. If you set the value to "Installed," an error message prints before memory is tested and the system boots.

What to Change on the Advanced Menu

If you elect to reconfigure the system and use UART Number 2 (COM2) and also connect a printer to the parallel port, change the Serial/Parallel Port Configuration Submenu of the Advanced System Configuration Options Menu as shown in Figure 3-3.

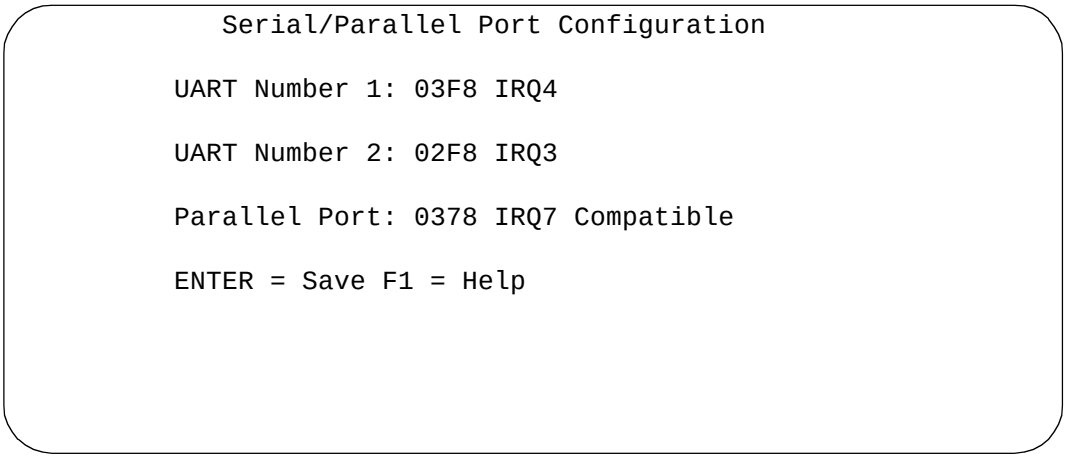


Figure 3-3. How to Change the Serial/Parallel Port Configuration Submenu

How to Access the 486 CPU Set-Up Utility Menus

How to Access the Main Menu

Complete the following procedure to enter the 486 CPU Set-up Utility Main Menu:

1. Perform a graceful shutdown of the MAP/40. See "Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for the procedure.

1. Reset the system by pressing CONTROL ALT DELETE simultaneously or by pressing the RESET button on the front of the chassis.

2. When the memory test information comes on the screen, look for this message in the bottom center of the screen:

   ```
   Press <ESC> to enter Set-Up
   ```

3. Press ESC once.

   NOTE:
   If you press ESC more than once, the system exits set-up mode and you must begin the process again.

   System response:

   The message at the bottom of the screen blanks out and the memory test continues. After memory diagnostics have completed during power-up, the set-up screen showing factory defaults for the system appears (Figure 3-4).

   NOTE:
   Figure 3-4 reflects the installation of the 50-MHz version of the 486 CPU circuit card. If you are using the 25-MHz version of the 486 CPU circuit card, “Not Installed” appears in the CPU Identifier field.

4. Adjust the Keyboard options (Table 3-2) or any other settings that do not agree with the default settings shown in Figure 3-4.

   See Table 3-3 for the keys to use to make your changes.

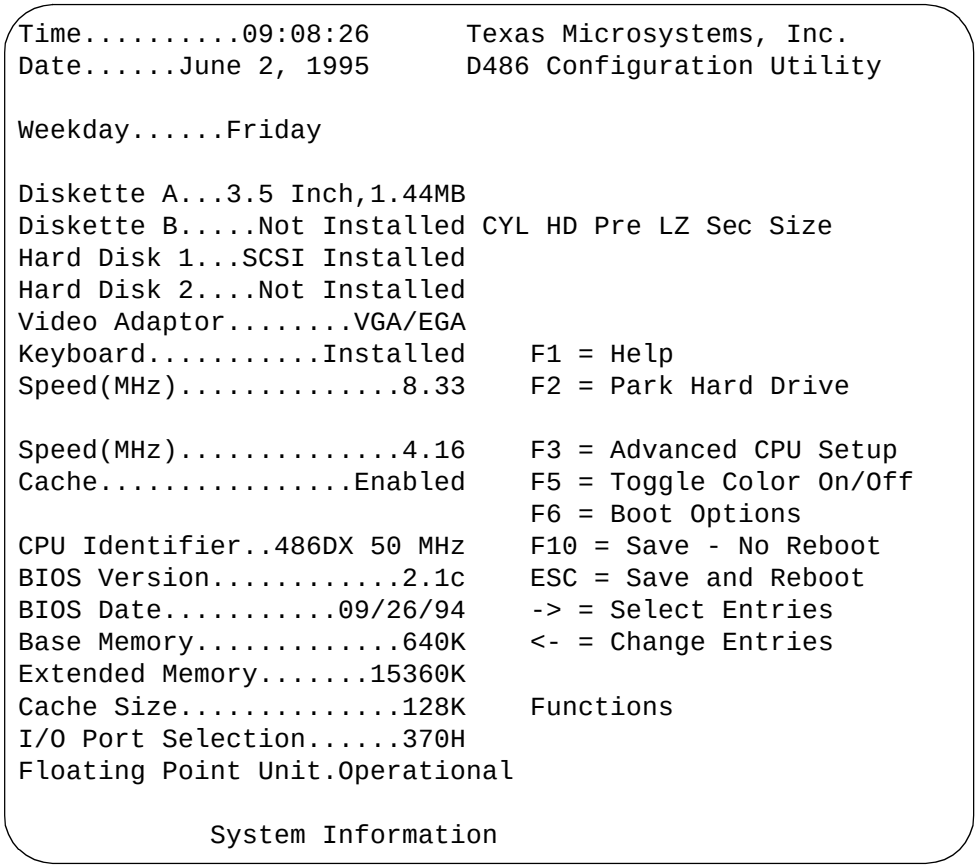


Figure 3-4. The 486 CPU Setup Utility Main Menu Showing Factory Defaults

How to Access the Advanced Menu

CAUTION:
*Complete the following procedure **only** if you have added a printer to or removed one from a parallel port or you reconfigure the system and the output of the Configuration Program indicates that you must change the interrupts.*

1. Complete the above procedure, “How to Access the Main Menu.”
2. Press F3 to access the Advanced System Configuration Options Menu.

   System response:

   The system shows you the Advanced System Configuration Options menu (Figure 3-5).
3. Press F3 to access the Serial/Parallel Port Assignments screen.

   System response:

   The system shows you the factory-set defaults for the serial/parallel port configuration (Figure 3-6).

   NOTE:
   These port configurations may be different on ALT systems.
4. Make the appropriate changes and press ENTER to return to the Main Menu.

   See Table 3-3 for the keys to use to make your changes.

   CAUTION:
   ***Do not** attempt to change any other screens.*

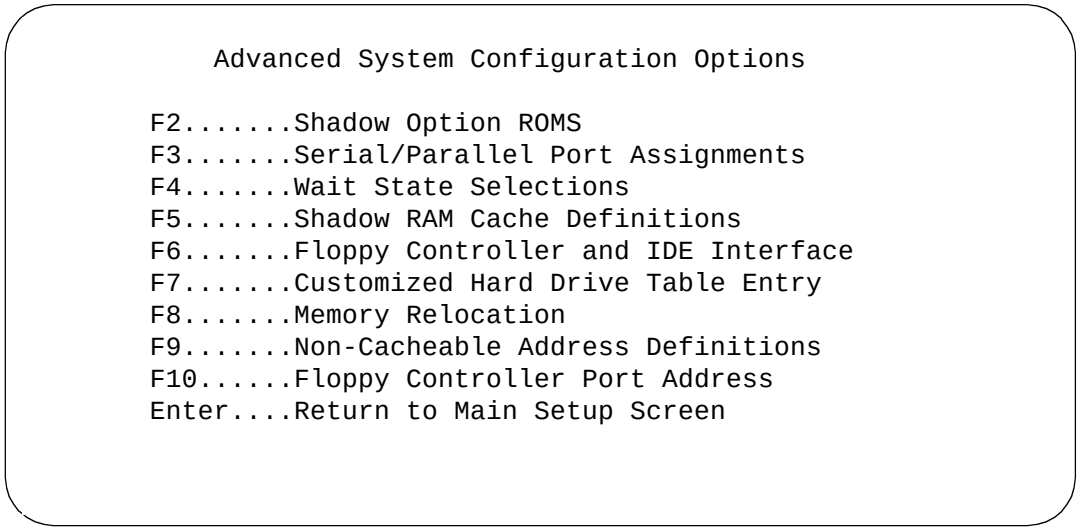


Figure 3-5. Advanced System Configuration Options Menu

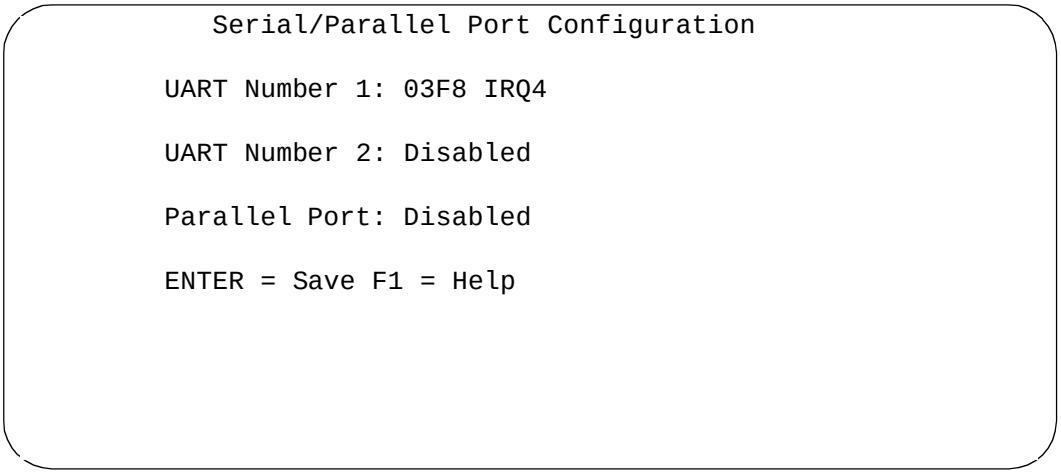


Figure 3-6. Serial/Parallel Port Configuration Submenu Showing Factory Defaults

How to Move Around on the Set-Up Utility Menus

Table 3-3 shows the keys to use to enter the set-up menus and make entries.

Table 3-3. Keys to Use in the 486 Set-up Utility Menus

Key	Used to	When to Use
ESC	Enter the 486 setup main menu	While the memory test is in progress
▲	Tab through the menu fields	When within the setup menus
▼	Tab through the menu fields	When within the setup menus
►	Change the value of a field	When cursor is on that field
◄	Change the value of a field	When cursor is on that field
ESC	Save values and reboot	After making configuration changes required)
F2	Park a SCSI hard drive	When moving a system with a SCSI hard drive (required)
F3	Enter Advanced CPU Setup from the main menu	When changing the serial/parallel port assignments

Running the Configuration Program

4

What's in This Chapter

A Configuration Program package is available with the MAP/40. This chapter supplies detailed information on how to use that program to determine your system's hardware and software resource allocations.

The Configuration Program

This section provides an overview of the Configuration Program.

What Is the Configuration Program?

The Configuration Program is a single package disk that you install as part of the overall generic software installation for the system. It contains the software program and all associated commands and files. A "CONFIGURATION DATA" disk on which to store your system's existing configuration is also provided.

What Does the Configuration Program Do?

The Configuration Program enables you to determine the allocation of resources for all devices to be included in your configuration. This menu-driven program provides an automatic solution to the problem of allocating a finite set of consumable CPU resources to a given set of devices. It also includes some feature-related checking regarding maximum numbers of devices, prerequisites for devices, etc.

Specifically, the Configuration Program helps you select the following resource allocation information for your software and hardware application:

- System platform
- System memory
- System devices and their attributes including
  - Slot number
  - Interrupt level
  - DMA channel
  - I/O address
  - RAM address
  - Serial port usage
  - Parallel port usage

NOTE:
The Configuration Program does not guarantee that every configuration it resolves is a valid configuration. It simply ensures that for the allocation of resources to the group of selected devices, no conflicts will exist for the parameters mentioned above.

Who Uses the Configuration Program?

The Configuration Program can be used to upgrade an existing configuration or to create a new configuration. Factory installers also use the Configuration Program to determine the initial hardware configuration and resource assignments. The Configuration Program works with any supported hardware platform.

CAUTION:
Only those persons familiar with the configurations and hardware platforms should run the Configuration Program.

The Configuration Data Disk

A floppy disk labeled "CONFIGURATION DATA" accompanies the hardware platform when it is shipped from the factory. This floppy disk contains the initial configuration information for your hardware, which you must load into the system.

Whenever you make a change to the current configuration, you must store that information on the "CONFIGURATION DATA" disk so that the disk always contains the latest configuration information. By using the “CONFIGURATION DATA” disk in this manner, you will always have the correct configuration data on which to base subsequent changes to the system.

See "Configuration Commands" on page 4-4 in this chapter for a description of the commands you will need to retrieve and save the configuration information using the "CONFIGURATION DATA" floppy disk.

NOTE:
Be sure to store the "CONFIGURATION DATA" floppy disk in a safe place.

Configuration Data Files

The following data files are associated with the Configuration Program. These files reside in the **/vs/data** directory. Any reference to data files assume this prefix.

- The **conf_data** file represents a successful configuration. This file is also stored on the "CONFIGURATION DATA" floppy disk after it has been read into the system.
- The **fail_data** file represents an unsuccessful configuration, to be viewed for resource allocation conflicts.

- The **conf_MMDDYY** file contains a copy of the current configuration file (**conf_data**) saved by the Configuration Program before it creates a new configuration. This allows for an historical reference by date of previous configurations. The argument in this file represents
  - MM = month
  - DD = day
  - YY = year
- The **device_data** file stores the table of devices available for use in updating or creating new configurations.

CAUTION:
Do not alter the contents of any of the above data files.

Configuration Commands

This section describes the commands you need to retrieve and save configuration information using the “CONFIGURATION DATA” floppy disk.

NOTE:
All of the configuration commands are interactive and menu-driven.

Command Descriptions

- The **configure** command determines the allocation of resources for all devices to be included in a system configuration. You can use this command with or without an argument (for example, **configure** or **configure new**). Upon completion of the **configure** command, the program creates a (new) **conf_data** file.
- The **get_config** command retrieves the latest version of the system configuration (**conf_data**) from the "CONFIGURATION DATA" floppy disk.
- The **save_config** commandsaves the latest version of the system configuration (**conf_data**) to the "CONFIGURATION DATA" floppy disk.
- The **show_config** command displays and prints the valid system configuration represented by the **conf_data** file *or* the incomplete configuration represented by the **fail_data** file.

Before You Run the Commands

You must take the following steps before you can run any of the configuration commands:

- Log in as **root**. This is necessary because you will execute all commands at the UNIX system prompt.

- If you are not running ksh, enter **/bin/ksh /vs/bin/util/<command> [*options*]** to execute the commands, for example, **/bin/ksh /vs/bin/util/configure *new***
- You will use the /bin/ksh with all the configuration commands.
- If you are not running the Configuration Program on a VIS processing machine, complete the following procedure to modify your **.**profile and place the **/vs/bin/util** directory in your PATH:

  1. Enter **vi /.profile**

     This opens a file called "**.**profile".

  2. Look for the line that starts "PATH=$PATH:". If you find it, go to Step 3. If you do not find it, complete Steps a through e:

     a. Go to the last line in the file.

     b. Press [0] to add a line.

     c. Type **PATH=$PATH:/vs/bin/util**

     d. Press [ESC].

     e. Go to Step 4.

  3. Go to the end of the line and press [I] to insert new text. Type **:/vs/bin/util** and then press [ESC].

  4. Enter **:wq**

     System response:

     The system returns you to the system prompt.

  5. Enter **. .profile** to activate the changes.

The get_ config Command

Use the **get_config** command to retrieve the **conf_data** file from the "CONFIGURATION DATA" floppy disk. This data file represents the current configuration. The current configuration should be either the original shipped version or the latest upgrade version.

The save_config Command

Use the **save_config** command to save the **conf_data** file to the "CONFIGURATION DATA" floppy disk. This file represents the updated configuration as determined by the Configuration Program. To ensure that the newly determined configuration file is accessible for future use, save a configuration after any changes.

The show_ config Command

The **show_config** command uncompresses the database of the current configuration contained in the **conf_data** *or* the **fail_data** file, displays the information to the screen, and creates a file containing the formatted configuration information.

The **show_config** command takes only one argument at a time. The "fail" argument and specification of a file name are mutually exclusive.

Use the **show_config** command to

- Show a successful configuration

  If the configure program was successful at determining a configuration, execute **show_config** with no argument to create a **./configuration** file in the current working directory by expanding the contents of the **conf_data** file. You can then print the **./configuration** file for a hard copy of the successful configuration.

  If a **./configuration** file already exists, a prompt asks you for permission to overwrite its contents.

- Show an unsuccessful configuration

  If the configure program was not successful at determining a configuration, execute **show_config fail** to create a **./failed_config** file by expanding the contents of the **fail_data** file. You can then examine the **./failed_config** file to determine what conflicting resource caused the configuration to fail. Asterisks (*) for any field value indicate an UNRESOLVED resource conflict.

- Show a dated configuration

  You can also use **show_config** to view a previous configuration file saved by the configure program. To do this, type the command with a filename argument (for example, **show_config /vs/data/conf_*MMDDYY***). This command line expands the contents of the **conf_*MMDDYY*** file (if it exists) and prints its output to the screen. The program prompts you for an output filename so as to specify the output to this file rather than to the **./configuration** file.

Output of the show_config Command

Figure 4-1 shows a sample of a table generated by the **show_config** command for the MAP/40. This table has a section for each device. Each section contains the device name, an explanation of what the device is, and a list of all attributes that the Configuration Program resolves. A second set of dashes (---) under one of the attribute columns means that the attribute does not apply to the device in that section. Otherwise, the value that appears under an attribute heading is the value for that attribute assigned to that device. Asterisks (*) for any field value indicate an UNRESOLVED resource conflict.

```
                    SYSTEM   CONFIGURATION   TABLE

Asterisks (*) for any field value indicate an UNRESOLVED resource
conflict.
PLATFORM: MAP/40 CONVERSANT MAP/40 Platform
DEVICES
Device Name: VIDEO_CONTROLLER  Device Description: VGA Video Card
SLOT   INTR   IOADDR   RAMADDR   DMAC   S-PORT   P-PORT
----   ----   ------   -------   ----   ------   ------
 17      --     ---      a0000     --      --       --
-----------------------------------------------------------------

Device Name: COLOR_CONSOLE  Device Description: Color Monitor plus
Keyboard
SLOT   INTR   IOADDR   RAMADDR   DMAC   S-PORT   P-PORT
----   ----   ------   -------   ----   ------   ------
 --      --     ---      ------     --      --       --
-----------------------------------------------------------------

Device Name: SCSI_DISK  Device Description: SCSI Disk Drive
SLOT   INTR   IOADDR   RAMADDR   DMAC   S-PORT   P-PORT
----   ----   ------   -------   ----   ------   ------
 --      --     ---      ------     --      --       --
-----------------------------------------------------------------

Device Name: 486_CPU_25MHZ  Device Description:  CPU Card - 80486
- 25MHz - w/16MB On-card Memory
SLOT   INTR   IOADDR   RAMADDR   DMAC   S-PORT   P-PORT
----   ----   ------   -------   ----   ------   ------
 16      --     ---      ------     --      --       --
-----------------------------------------------------------------
```

Figure 4-1. Partial Table Generated by the show_config Command

Terms Used in the Output of the show_config Command

The following list defines the terms used by the Configuration Program in the output from the **show_config** command:

- PLATFORM — A full description of the hardware platform you chose for configuration.
- Device Name — The mnemonic name of the device. This is the same name that was chosen from the device menu in the Configuration Program.
- Device Description — A complete description of the device as contained in the **device_data** file.
- CHASSIS — A description of the chassis.
- SLOT — The slot number in the indicated chassis.
- #INTR — The interrupt (also known by IRQ) that is to be assigned to this card. See Chapter 7, Chapter 8, and Chapter 9 to determine what switch and/or jumper settings correspond to this interrupt level.
- IOADDR — The base I/O address that is to be assigned to this card. See Chapter 7, Chapter 8, and Chapter 9 to determine what switch and/or jumper settings correspond to this address.
- RAMADDR — The base RAM address that is to be assigned to this card. See Chapter 7, Chapter 8, and Chapter 9 to determine what switch and/or jumper settings correspond to this address.
- DMAC — The DMA channel that is to be assigned to this card. See Chapter 7, Chapter 8, and Chapter 9 to determine what switch and/or jumper settings correspond to this channel.
- S-PORT — The serial port number assigned to this device. The port number is for allocation purposes only, and in most cases does not directly correspond to any physical port. An exception to this is Port 1, which is always the standard CPU card serial port located on its faceplate.
- P-PORT — The parallel port number assigned to this device. Currently all supported platforms have only one parallel port, so this number will always be 1. Only one device in a configuration can use a parallel port.

Adding Hardware to an Existing Configuration

This section explains how to use the Configurator Program to add hardware to an existing MAP/40 configuration.

Before You Begin

You should have a hard copy of the existing **show_config** output before you attempt a hardware configuration change.

If you want to modify an existing configuration, you may have to change the current resource assignments:

- Differences in slot assignments or serial/parallel port assignments *will not* require switch settings and/or driver software changes. However, you may need to rearrange the cards and/or cables to fit the new configuration output.
- Differences in INTR, DMAC, IOADDR, or RAMADDR assignments *will* in most cases require you to change switch settings and reinstall driver software for the affected cards.

During the procedure, the system may notify you of the need to change the current resource assignments by the following message:

```
The new device(s) cannot be added without disturbing
the current configuration of the system.

PLEASE NOTE: Proceeding to attempt a new configuration
may make it necessary to alter some/all board switch
settings and/or reload some software driver packages.
To determine if any current assignments are changed
after the new configuration, compare the previous
show_config output with the new show_config output.
Where there are differences, switch settings/driver
software will have to be changed.

Press <Enter> to attempt a new configuration...
```

Procedure

Use the following procedure to change the hardware configuration. This procedure ensures synchronization between the actual configuration and the "CONFIGURATION DATA" floppy disk.

1. Insert the "CONFIGURATION DATA" floppy disk into the disk drive.

2. Enter **get_config** at the UNIX system prompt.

   System response:

   The system loads the initial/current configuration.

3. Enter **configure**

   System response:

   The system informs you of the hardware platform represented in the **conf_data** file and saves the current **conf_data** file in **conf_*MMDDYY*** (for example, **conf_081594**).

4. If your current system configuration does not include the maximum supported system memory, the system asks you if you want to upgrade with more memory. If yes, select the total amount of memory desired.

5. The system presents you with a menu of devices (Figure 4-2). See Table 4-1 for definitions of the device abbreviations used in this menu.

   NOTE:
   Not all of the platforms support all of the devices presented in this menu.

```
                    ---------DEVICES---------

1.   486_CPU_25MHZ     2.  486_CPU_50MHZ         3.   VIDEO_CONTROLLER
4.   COLOR_CONSOLE     5.  SCSI_DISK             6.   SCSI_TAPE_DRIVE
7.   16MB_SIMM         8.  2nd 1.4MB_FLOPPY_DISK 9.   TOKEN_RING
10.  IVP4              11. IVP6                  12.  SP
13.  MEGASP            14  T1                    15.  COMPANION
16.  FAX               17. DCP                   18.  DCP_NO_DMA
19.  IPCI              20. COSIB                 21.  IPIB
22.  8_PORT_SERIAL_EXP 23. MEGA_8_PORT_SERIAL    24.  CLEO PCXL
25.  FIFO_SIB          26. ETHERNET              27.  EXTERNAL_MODEM
28.  PARALLEL_PRINTER  29. SERIAL_PRINTER        30.  REMOTE_TERMINAL
31   RMB_M             32. RMB_SP                33.  EXTERNAL_ALARM
34.  VOICE_WORKSTATION 35. MOUSE

Enter number to select device, r to remove, s to show, or d for done
```

Figure 4-2. Menu of Available Devices

NOTE:
An asterisk (*) in the menu of available devices denotes the selected devices in the current configuration, or devices that have been selected to be added to the current configuration.

NOTE:
At the devices prompt, press (S) at any time to show all currently selected devices. Press (ENTER) to get back to the devices menu. Press (R) at any time to remove any of the currently selected devices. The system prompts you to enter the number that corresponds to the device you want to remove from your configuration. Press (D) to get back to the devices menu.

6. Enter the number that appears next to the first device you want to add to the current configuration.

   System response:

   A prompt asks you how many of the chosen devices you want to add, when more than one is allowed.

7. Enter the number of the devices you want to add. If you are adding only one of a device and that device uses any of the following attributes, the system then gives you the opportunity to preset each of these attributes for that device:

   - Interrupt
   - I/O address
   - RAM address
   - DMA channels

   Generally, you will not want to preset any of the attributes.

   See "Presetting Device Hardware Resources" on page 4-19 for more information.

8. When you have selected all of the devices you want, press (D).

   System response:

   The reconfiguration begins. In an upgrade situation, the Configuration Program may require two passes to complete its task. In this first pass, it makes an attempt to fit the newly specified device(s) into the current configuration without disturbing any current devices. If this attempt is successful, the system informs you with the following series of resolution statements:

   ```
   Slot assignments successfully resolved.
   Interrupt assignments successfully resolved.
   DMA Channel assignments successfully resolved.
   ```

```
IO Address assignments successfully resolved.
RAM Address assignments successfully resolved.
Port assignments successfully resolved.

Configuration complete and successful.

Configuration data written to file
/vs/data/conf_data

Run "show_config" with no arguments to view the
configuration
```

a. Type **show_config** to view the new **conf_data** file (Figure 4-1).

b. Type **save_config** to store the upgraded configuration on the "CONFIGURATION DATA" floppy disk.

   System Response:

```
This program copies the /vs/data/conf_data file
for a given VIS machine to floppy disk. This file
represents the configuration of the machine. The
floppy must be kept in a safe place. It will be
required as input for the /vs/bin/util/configure
program in the event of a hardware upgrade to this
machine.

Please insert the “CONFIGURATION DATA” floppy for
this machine.

Press <Enter> when ready to proceed...
```

   When the configuration has been saved, you see the following message:

```
... /vs/data/conf_data saved.
```

   You have completed this procedure with a successful reconfiguration.

   If the reconfiguration was *not* successful, the system automatically begins a second attempt, and informs you of such with a message similar to the following:

```
The new device cannot be added without disturbing
the current configuration of the system.
Your preset values may have created this conflict.

Try "configure new".

Configuration unsuccessful.
Run "show_config fail" to view the incomplete
configuration.
```

   This second attempt is the equivalent of a new configuration. The system unassigns all currently used resources and pools the newly selected devices with those already in the configuration.

If this second attempt is successful, the system informs you with the same series of resolution statements shown earlier in this step.

You must now complete Steps 8a and 8b above to view the **conf_data** file and store the upgraded configuration on the "CONFIGURATION DATA" floppy disk.

NOTE:
If this second attempt is successful, you may have to change the settings on some of the cards already in the system. You may also need to remove and reinstall some driver software. For example, if the IPCI circuit card is using interrupt 3 and you add a mouse that requires interrupt 3, you will have to move the IPCI card to interrupt 2. You will also have to remove the ASAI interface software package and reinstall it specifying interrupt 2 for use. (Note that you may also have to change the setting of the interrupt via a jumper on some cards.) This type of scenario will apply to other cards in the system, as well.

If this second attempt is *not* successful, the newly specified devices will not fit into the current configuration (that is, the configuration is invalid) and the system sends you the following message:

```
Slot assignments NOT resolved.

The new device(s) cannot be added without
disturbing the current configuration of the
system.

PLEASE NOTE: Proceeding to attempt a new
configuration may make it necessary to alter
some/all board switch settings and/or reload some
software driver packages. To determine if any
current assignments are changed after the new
configuration, compare the previous show_config
output with the new show_config output. Where
there are differences, switch settings/driver
software will have to be changed.

Press <Enter> to attempt a new configuration...

Not enough slots in main chassis for CONVERSANT
boards.

Configuration unsuccessful. Run "show_config fail"
to view the incomplete configuration.
```

c. Type **show_config fail** to view the **fail_data** file to see the reason for the failure.

Specifying a New Configuration

If your system is configured at the factory, you should not force a new configuration. The exception is when you want to remove some device from the system and add another device in its place. This requires selecting all of the devices currently in the configuration, excluding the devices to be removed, and including any new devices.

Use the following procedure to *force* a new configuration:

1. Type **configure new**

   System response:

   The system creates a new configuration even if a **conf_data** file already exists. As with upgrades, it saves the current **conf_data** in **conf_*MMDDYY***.

   The system then presents a menu of hardware platforms (Figure 4-3).

```
        --------- HARDWARE PLATFORMS ---------

      Select the platform you want to configure:
        1.    MAP/100
        2.    MAP/100C
        3.    MAP/40
        4.    Quit

        Selection  [ press <Enter> for MAP/100 ] :
```

Figure 4-3. Hardware Platforms Menu

2. Select the correct platform.

   System response:

   The system presents a menu of devices that you can configure with the platform you selected (Figure 4-2).

NOTE:
Not all of the platforms support all of the devices presented in this menu. See Table 4-1 for definitions of the device abbreviations used in this menu.

NOTE:
At the devices prompt, press S at any time to show all currently selected devices. Press ENTER to get back to the devices menu. Press R at any time to remove any of the currently selected devices. The system prompts you to enter the number that corresponds to the device you want to remove from your configuration. Press D to get back to the devices menu.

3. Enter the number that appears next to the first device you want to add to the current configuration.

   System Response:

   A prompt asks you how many of the chosen devices you want to add, when more than one is allowed.

4. Enter the number of chosen devices you want to add. If you are adding only one of a device and that device uses any of the following attributes, the system then gives you the opportunity to preset each of these attributes for that device:

   - Interrupt
   - I/O address
   - RAM address
   - DMA channels

   Generally, you will not want to preset any of the attributes. See "Presetting Device Hardware Resources" on page 4-19 in this chapter for more information.

5. When you have selected all of the devices you want, press D to indicate that you are done.

   System response:

   The system attempts to allocate resources to each device you selected.

   If the configuration you specified is valid, the Configuration Program terminates successfully and creates a **conf_data** file.

   a. Type **show_config** to view the new **conf_data** file.

   b. Type **save_config** to store the upgraded configuration on the “CONFIGURATION DATA” floppy disk and complete the procedure.

If the configuration you specified is *not* valid, the Configuration Program terminates unsuccessfully. The system creates a **fail_data** file and gives you the option to remove something and try again.

c. Type **show_config fail** to view the **fail_data** file to see the reason for the failure.

d. Type **save_config** to store the new configuration on the "CONFIGURATION DATA" floppy disk.

Device Abbreviations Defined

Table 4-1 explains the device abbreviations used in the Configuration Program.

Table 4-1. Configuration Program Hardware Abbreviations Defined

Abbreviation	Definition
BOP386	(MAP/100) Business Office Platform with 3.5-inch floppy disk drive
COP386	(MAP/100C) Central Office Platform with 3.5-inch floppy disk drive
MAP40	Mid-Range Platform with 3.5-inch floppy disk drive
486CPU1	CPU card 80486 25-MHz with 32 Mbyte on-card memory
486CPU2	CPU card 80486 50-MHz with 32 Mbyte on-card memory
8PORT	8-Port Async Expansion plus cable and adapter
16MBSIMM	16-Mbyte SIMM upgrade
ADAPSCSI	SCSI controller card
CCONSOLE	Color monitor plus keyboard
CLEOPC	CLEO PC/XL System Network Architecture (SNA) card for synchronous communications
CMP	AYC7 speech companion card
COSIB	AYC15 CONVERSANT operator services interface card
DCP	CAG1 digital communications protocol card for System 75 integration; also called a PC/PBX card; used with AUDIX voice power
DCPNODMA	CAG6 digital communications protocol for System 75 integration; no direct memory access (DMA) required
ETHERNET	Ethernet TCP/IP LAN card
EXTALARM	DDI relay output card
FAX	FAX attendant card TR114+I4L
FD14MB	1.4-Mbyte floppy disk drive
FIFOSIB	Synchronous interface
IPCI	CAG4 ISDN basic rate interface card; supports the Adjunct/Switch Application Interface (ASAI)
IPIB	OSPS IPIB card
IVP4	AYC6/AYC6B T/R interface card
IVP4TDM	IVP4 time division multiplexing (TDM) upgrade kit
IVP6	AYC28 T/R interface card for analog connection to customer premise telephone lines
MEGAPORT	8-port asynchronous expansion
MEGASP	AYC9 speech processor with additional memory for text to speech (TTS)

Continued on next page

Table 4-1. Configuration Program Hardware Abbreviations Defined — *Continued*

Abbreviation	Definition
MODEM	Modem
MOUSE	Serial mouse
PPRINT	Parallel printer
RMBM	Remote maintenance card with modem interface
RMBSP	Remote maintenance card with serial port interface
SCSIHD	SCSI disk drive
SCSITAPE	SCSI 520-Mbyte internal streaming tape drive
SP	AYC2B/AYC2C speech processor card
SPRINT	Serial printer
T1	AYC3B/AYC11 T1 interface card digital connection to customer premise telephone lines
TERM	Remote terminal
TOKNRING	IBM Token Ring Network Adapter
VIDEO	VGA video card
VWSMOD	Voice workstation adapter module—T/R audio jack

Presetting Device Hardware Resources

This section explains the preset option for hardware resources.

What Is the Preset Option?

The preset option allows you to preset the resources used for a particular card, thereby making it compatible and interchangeable with any of your application setups. The purpose of this option is to give you the flexibility to use your hardware with more than one application, each with different configurations. You may want to preset certain resources of a single new device being selected for a configuration (for example, to force the configure program to select interrupt 6 for a particular device being specified).

Procedure

Use the following procedure to preset resources:

1. When you specify a single device, the following prompt appears:

   ```
   Do you wish to preset any hardware options of <device
   name>? [y|(n)]
   ```

2. If you want to preset resources, press (Y). You can preset any of the following hardware attributes of the selected device (where applicable):
   - Interrupt
   - I/O address
   - RAM address
   - DMA address
3. Press (ENTER) to finish. The Configuration Program continues as normal.

Using the Preset Option When Adding Hardware

The Configuration Program attempts the initial pass at reconfiguration as described above in the section “Adding Hardware to an Existing Configuration.” If this pass is successful, the program terminates normally. If this pass is *not* successful, a message displays this information. The system does not attempt a second pass at the reconfiguration if you have preset any hardware options for any device.

Using the Preset Option with a New Configuration

The Configuration Program attempts the initial pass at reconfiguration as described above in “Specifying a New Configuration.” If this pass is successful, the program terminates normally. If this pass is *not* successful, a message displays this information. The system does not ask you if you want to remove something and try again if you have preset any hardware options for any device.

Configuration Device Data

The **device_data** file stores the devices and the attributes for creating a configuration. This file is in compressed form.

In most cases, you will not work with this file. The exceptions are when you want to use the

- **add_device** command to add a new device to the **device_data** file
- **remove_device** command to remove a device from the **device_data** file
- **show_devices** command to display and print to a file all devices and their attributes as represented in the **device_data** file
- **change_device** command to change the presentation name of a device (the name by which a device appears in the configuration program menus) in the **device_data** file (see Figure 4-2)

CAUTION:
Do not alter this file except by using one of the above commands.

The show_devices Command

The **show_devices** command uncompresses the database of devices and their attributes contained in the **device_data** file and displays the information on the screen. At the same time, a **./devices** file is created so that you can send this information to a printer.

If a **./devices** file already exists, you are prompted as to whether it is acceptable to overwrite the existing file.

The add_device Command

NOTE:
Remember when using the **add_device** command that "1" equals yes and "0" equals no.

The **add_device** command prompts you for all the necessary attributes required to add a new device. Once you add the new device to the file, it is available for configuration.

Note that only devices whose attributes are completely defined by the **add_device** command can be added successfully to those already supported by the Configuration Program. If a device has "special" attributes that the **add_device** command does not inquire about, the Configuration Program cannot support the device successfully unless you change the program software.

The remove_device Command

Use the **remove_device** command to remove devices that you have added to the **device_data** file.

NOTE:
You can only remove those devices that were added after the platform was shipped. The devices supplied originally by the Configuration Program are locked and cannot be removed.

The change_device Command

Use the **change_device** command if you want to change the presentation names of the devices displayed in the Configuration Program menus.

The program prompts you to select and input new name(s) for the device(s). New names can be from 2–20 characters long.

When you next use the Configuration Program, the new name(s) appear in the device selection menu (Figure 4-2) and in all outputs generated by the program.

Getting Inside the Chassis

5

What's in This Chapter

This chapter describes how to

- Open the MAP/40 by removing the dress cover over the chassis and the access panel to the circuit card cage
- Replace the dress cover and the access panel

CAUTION:
Before you open the dress cover and access panel, you must perform a soft shutdown of your operating system and then shut off the power to the MAP/40 (see "Shutting Down the MAP/40" on page 5-2 in this chapter).

CAUTION:
Notify the service provider immediately if you are going to permanently or temporarily disconnect the MAP/40 from its present line/trunk circuits. (This applies to digital circuits ONLY.)

Shutting Down the MAP/40

Complete the following procedure to stop the voice system and the operating system and shut off power to the MAP/40:

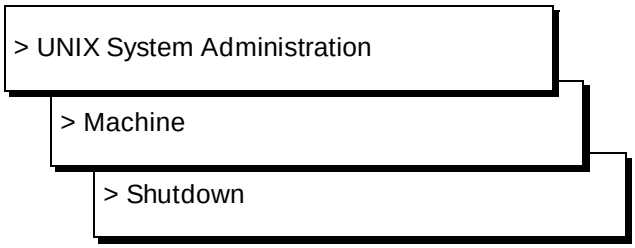
1. Enter **stop_vs *time,*** where *time* is the number of seconds (60–600 seconds) that you want the VIS to wait before it begins the shutdown procedure. The default wait time is 180 seconds.

   System Response:

   When the system is fully stopped, you see the following message on the screen:

   ```
   change to state 2 has been completed
   ```

2. Begin at the Intuity CONVERSANT VIS Version 5.0 menu and select the following sequence:

   System Response:

   The Shut Down the Machine screen appears.

3. Press F3 (CONT).

   System Response:

   The Shut Down the Machine screen appears with the Number of Seconds Before Shutdown Starts field highlighted.

4. Enter the number of seconds the machine should wait before shutting down. Valid values are between 0 and 999.

5. Press F3 (SAVE).

   System Response:

   The shutdown begins immediately or within the number of seconds you specified.

Removing the Dress Cover

Complete the following procedure to remove the dress cover from the chassis. Also see Figure 5-1.

NOTE:
You will need a No. 2 Phillips screwdriver.

1. In a tower configuration, keep the MAP/40 in an upright vertical position on the support base.
2. Locate the two screws on each of the bottom left and right corners of the chassis cover.
3. Remove these two screws, first from the right side and then from the left side of the chassis.
4. Place one hand on each side of the chassis with your palm down towards the top edge.
5. Press inward slightly with the palms of your hands on both sides of the chassis and lift up.

   NOTE:
   As you remove more of the dress cover, it may start to collapse inward from the pressure of your hands. Move your hands downward on the dress panel to reduce the pressure as you lift.

6. Remove the dress cover.

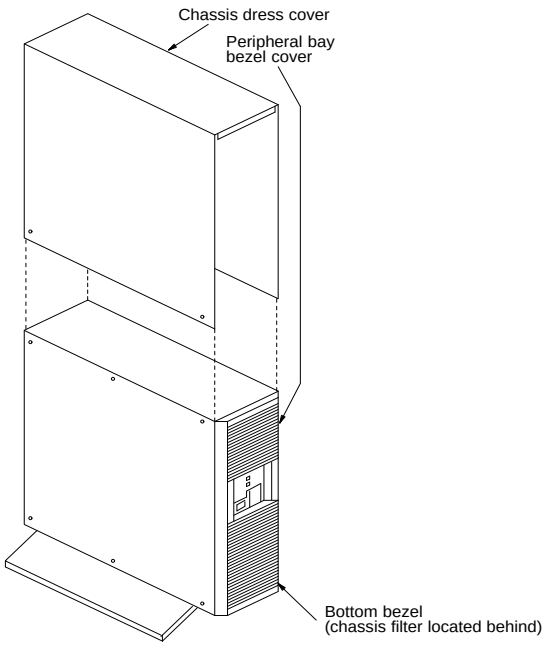


Figure 5-1. Removing the Dress Cover

Removing the Circuit Card Cage Access Panel

Use the following procedure to remove the circuit card cage access panel. Also see Figure 5-2.

NOTE:
You will need a No. 2 Phillips screwdriver.

Before You Begin

When you work inside the computer, the circuit card cage area is more accessible if the MAP/40 (tower configuration) is on its side. Use one of the following methods to place the MAP/40 on its side:

- If you have cables attached to the MAP/40 and want to leave the computer on the floor
  1. Place two books the size of large telephone books or a similar form of support on the floor.
  2. Turn the MAP/40 on its side, resting the side of the computer opposite from the support base on the two books. See Figure 5-3.
- If you do not have cables attached to the MAP/40 or currently have it sitting on a table, place the MAP/40 (tower configuration) on its side with the support base over the edge of the table. See Figure 5-3.

Procedure

1. Use the Phillips screwdriver to loosen the 1/4-in. flathead screws by *two turns only.*

   NOTE:
   You only need provide adequate clearance. It is not necessary to remove the screws.

2. Apply gentle downward pressure to the access cover with the palms of your hands.
3. Push into the chassis with your palms and slide the access cover back toward the chassis area.
4. Lift up and remove the access cover once you have cleared the Phillips screw heads.

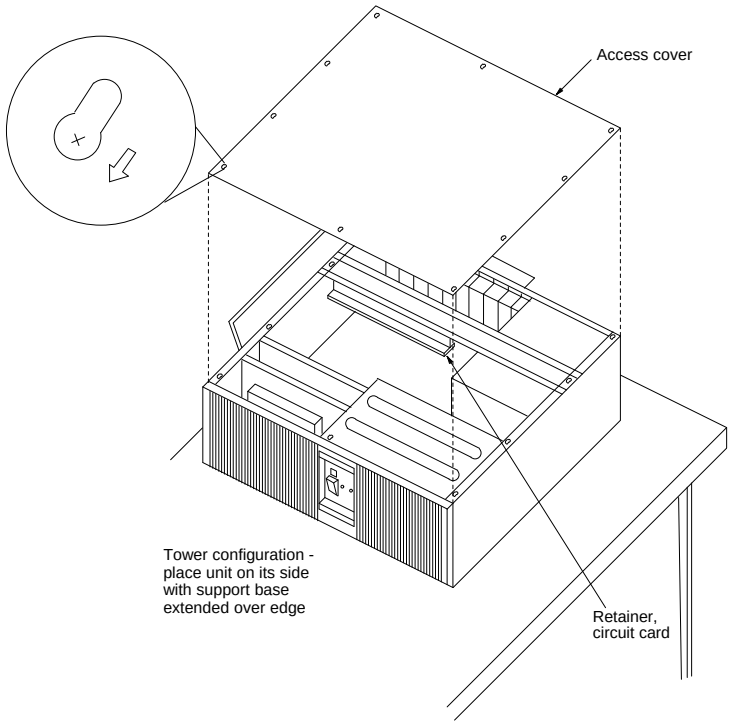


Figure 5-2. Removing the Access Cover

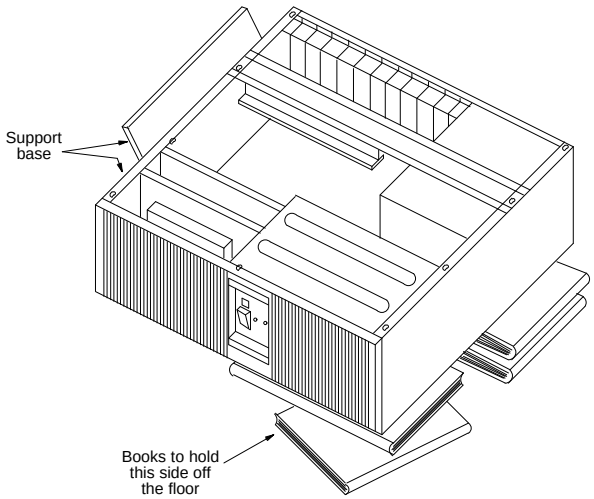


Figure 5-3. Working within the Card Cage—Floor Position

Removing the Circuit Card Cage Retaining Bracket

The manufacturer equips the MAP/40 card cage area with a retainer to reduce shipping and environmental vibrations that could damage the circuit cards.

Use a No. 2 Phillips screwdriver to remove the two hold-down screws in the retaining bracket (Figure 5-4). This gives you complete access to the card cage.

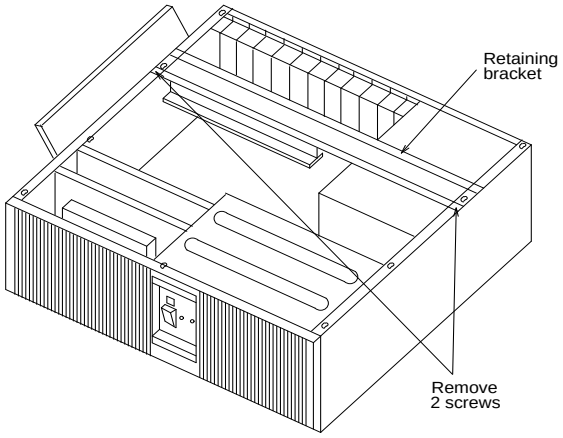


Figure 5-4. Removing the Screws from the Retaining Bracket

Replacing the Left Access Panel and Chassis Cover

Complete the following procedure to replace the circuit card cage access panel and chassis cover:

1. Remount the circuit card cage retaining bracket, but leave the two Phillips screws only partially mounted to provide adequate clearance for the access cover.
2. Mount the eight Phillips screws, but set the screws only partially to provide adequate clearance to assemble the access cover.
3. With the palms of your hands, gently apply downward pressure to the access cover.
4. Push in with your palms and slide the access cover back into place.
5. Firmly secure the ten screws.
6. With the palms of your hands, slide the exterior dress cover over the unit.
7. Remount the four Phillips retaining screws that you removed originally.

Installing Circuit Cards — Introduction and Types

6

What's in This Chapter

This chapter contains a

- Description of the types of circuit cards that you can install in the MAP/40
- Generic procedure for circuit card installation that you will supplement with the specific information in Chapter 7, Chapter 8, and Chapter 9.

NOTE:
In general, circuit cards do not come preset from the factory. Use the information in Chapter 7, Chapter 8, and Chapter 9 to set the switch and jumper settings (resource options) *before* you install the card. When you set the switches according to the instructions in this book, remember that OFF = open and ON = closed.

CAUTION:
Some hardware components in this platform occur in multiple versions. Verify that the installation information you are using is correct for the version of a component you are installing.

CAUTION:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground.

Types of Circuit Cards

The MAP/40 accommodates several categories of circuit cards. Within this book, circuit cards are grouped according to function. These groups are listed below along with the chapters where you will find installation procedures and information on setting switches and jumpers for specific cards.

- VIS circuit cards - Chapter 7, "Installing VIS Circuit Cards"
  - Tip/Ring (T/R) circuit card
  - T1 circuit card
  - Signal Processor (SP) circuit card
  - Companion (CMP) circuit card
- Optional feature circuit cards - Chapter 8, "Installing Optional Feature Circuit Cards"
  - Synchronous Host circuit card
  - 8-Port Asynchronous circuit card
  - Ethernet LAN circuit card
  - Token Ring circuit card
  - PC/PBX Interface circuit card (formerly known as the DCP circuit card)
  - PC/ISDN circuit card (formerly known as the IPCI circuit card)
  - FAX circuit card
- Standard MAP/40 circuit cards - Chapter 9, "Installing Standard MAP/40 Circuit Cards"
  - 486 Central Processing Unit (CPU) circuit card
  - Remote Maintenance circuit card
  - SCSI Host Adapter Controller circuit card
  - Video Controller circuit card

VIS Circuit Cards

This section describes the VIS circuit cards, which you need to tie into the telephone network and handle calls.

Types of VIS Circuit Cards

Depending on your application, you will install some or all of the following VIS circuit cards:

- Tip/Ring (T/R) circuit card
- T1 circuit card
- Signal Processor (SP) circuit card
- Companion (CMP) circuit card

Where to Install the VIS Circuit Cards

As a general rule, the VIS cards should form a contiguous group within the backplane so that the VIS time division multiplexing (TDM) bus, SP, and CMP circuit card cables do not have to jump over noncabled cards.

The Tip/Ring Circuit Card

The T/R card(s) interface between the VIS and the customer premise telephone lines. One T/R card can support up to six lines.

The MAP/40 accommodates eight T/R cards to provide up to 48 ports (network connections). These cards can be used for processing transactions and/or outgoing bridged calls in any combination.

You will install the following type of T/R circuit card:

- AYC28

The T1 Circuit Card

The T1 circuit card accepts a single two-way digital trunk in the standard DS-1 format and then converts it to 24 two-way audio ports (network connections).

The MAP/40 accommodates two T1 cards to provide up to 48 ports (network connections). These cards can be used for incoming calls and/or outgoing bridged calls in any combination.

You will install the following type of T1 circuit card:

- AYC11

The Signal Processor Circuit Card

The SP circuit card is used for applications that require sophisticated algorithms, for example, speech recognition and Full Call Classification. The SP card does not connect directly to the telephone network. You must use the SP card in conjunction with at least one T1 card for voice playback. These cards are connected via a TDM cable.

The T1, T/R, and SP circuit cards use the TDM proprietary bus to send digitized speech from one to another.

You will install one of the following types of SP circuit card:

- AYC2C
- AYC9

The Companion Circuit Card

The CMP circuit card is an extension of the SP circuit card. It connects to the SP by its own special 44- and 50-conductor flat ribbon bus cables. The MAP/40 powers the CMP circuit card through the backplane slot connectors. All the signal interfaces come from the SP board.

The CMP card is required for applications that use speech recognition. For more information, see *Intuity CONVERSANT VIS V5.0 Speech Development*, 585-310-228.

You will install the following type of CMP circuit card:

- AYC7

Optional Circuit Cards for Selected Features

Use these circuit cards for optional features that are application specific, but are not required specifically for Intuity CONVERSANT VIS. Optional circuit cards include the

- Synchronous Host circuit card
  - — AT&T FIFO/SIB board
  - — Supports the 3270 Host Communications Package over a synchronous data link
- 8-Port Asynchronous circuit card
  - — EQUINOX Megaport 8C5 8-Port Serial I/O Board
  - — Provides up to eight asynchronous ports for connection to printers, modems, etc.
- Ethernet LAN circuit card
  - — SMC Ethercard Elite 16C Ultra Combo Adapter
  - — Supports an ethernet local area network (LAN)
- Token Ring circuit card
  - — IBM Token Ring Network 16/4-ISA-16 Adapter Card
  - — Supports a token ring LAN and the 3270 Host Package across the network
- PPC/PBX circuit card (formerly called the DCP circuit card)
  - — Supports AUDIX Voice Power or FAX Attendant in a coresident environment with Intuity CONVERSANT
  - — Sets up digital communication with the PBX at the customer site
- PC/ISDN circuit card (formerly called the IPCI circuit card)
  - — Supports the Adjunct/Switch Application Interface (ASAI)
- FAX circuit card (the MAP/100 accommodates three FAX cards)
  - — Brooktrout TR114+I4L
  - — Supports FAX capabilities in a coresident environment with Intuity CONVERSANT

Standard MAP/40 Circuit Cards

The standard MAP/40 circuit cards are required for basic platform functionality. The manufacturer always equips the MAP/40 with these cards. These standard cards include the

- SCSI Host Adapter Controller circuit card
  - — Provides an interface between the system processor and the SCSI bus via a 16-bit ISA backplane bus
  - — Provides an interface between the system processor and the SCSI disks via a 30-pin flat ribbon bus cable
  - — Provides an interface to the floppy drive via a 40-pin flat ribbon bus cable
- Video Display Controller circuit card
  - — Provides an interface between the system processor and the video monitor
- 486 CPU circuit card
  - — Manipulates data and processes instructions
- Remote Maintenance circuit card
  - — Allows for remote diagnostics of basic MAP/40 components

General Procedure for Circuit Card Installation

Follow the *general* procedure below to install any VIS, optional feature, or standard MAP/40 circuit card. See Chapter 7, Chapter 8, and Chapter 9 for *specific* switch and jumper settings and cable connections for the particular type of card you are installing.

When to Perform This Procedure

You will have to install a MAP/40 circuit card if you

- Are assembling and installing the MAP/40 yourself rather than receiving a system that has been factory assembled (that is, if you are not installing an ALT system)
- Need to replace or verify an existing circuit card
- Are adding a new feature that requires a new card

Where to Install MAP/40 Circuit Cards

The MAP/40 is equipped with a backplane that provides 25 *slots* or mounting positions for circuit cards. These slots are numbered 1 through 25, with position 1 starting at the bottom of the MAP/40.

Before You Begin

- Use the information in Chapter 7, Chapter 8, and Chapter 9 to set the switch and jumper settings (resource options).
- If you are installing a *new* circuit card, you must run the Configuration Program to determine which circuit cards your system can accommodate and where you must locate them. See Chapter 4, "Running the Configuration Program", for additional information.

  NOTE:
  If you are *replacing* a card rather than adding one, you do not have to run the Configuration Program. Ensure, however, that you set the address switches and jumpers on the new card to match those on the old card.

Procedure

NOTE:
For information on cable connection and switch and jumper settings for specific types of cards, see Chapter 7, Chapter 8, and Chapter 9.

1. Verify that the card is on site and appears to be in usable condition, that is, the card is free of obvious shipping damage, etc.
2. *If you are installing a new card*, see the output from the Configuration Program for this system. Confirm that the card you are installing is the correct type of card for that slot.

   NOTE:
   This is not necessary if you are replacing a card into the same slot.

3. If you are currently connected to a digital telephone network, notify the service provider that you are disconnecting. They will ask you which extensions are affected.

   CAUTION:
   If you disconnect the MAP/40 from the telephone network on a continuing basis without letting the service provider know, they can discontinue your service permanently. (This applies to digital circuits ONLY.)

4. Perform a shutdown of the operating system and turn off power to the MAP/40. See "Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for the procedure.
5. When you see the message `Reboot the machine now`, turn off the front panel power switch and the circuit breaker in the rear.
6. Tag the power plugs with a note indicating that no one other than you should reconnect power to this equipment.
7. Remove the dress covers and open the card cage. See Chapter 5, "Getting Inside the Chassis", for more information.
8. Carefully remove any internal connecting cables attached to the circuit card or peripheral you are replacing or installing.

   CAUTION:
   Use the pull tabs or ejectors when they are available to reduce damage to the circuit card connector pin fields.

9. If you are installing a new card, remove the retaining screw and cover plate for the appropriate slot. If you are replacing an existing card, you will have to remove the retaining screw only (there will not be a cover plate). In either case, save the retaining screw.
10. Align the circuit card faceplate and the edge of the circuit card with the circuit card guide and the backplane slot position. The card is now next to the expansion slot. Move the card until it touches the slot.
11. Place your thumbs flat on the edge of the card over the connector and push it into the backplane slot. Firmly push on the card until it is completely seated.
12. Reinstall any internal and/or external cable assemblies that you previously removed. Ensure that the cable connector pin 1 indicator is mated to the circuit card or pin header.

    See the appropriate chapter (Chapter 7, Chapter 8, and Chapter 9) for additional information on cabling and connections specific to the type of card you are installing.
13. Replace the retaining screw by placing it through the card faceplate opening that is similar to the cover plate you previously removed.
14. If you have completed work inside the platform, close the card cage and/or peripheral bay access door, and replace the dress covers. See Chapter 5, "Getting Inside the Chassis", for more information.
15. Power up the MAP/40.

Installing VIS Circuit Cards

7

What's in This Chapter

This chapter provides the following information on the VIS circuit cards:

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

This information in this chapter is supplemented by Chapter 6, "Installing Circuit Cards —Introduction and Types".

NOTE:
In general, circuit cards do not come preset from the factory. Be sure you set the resource options *before* you install the cards. When you set the switches according to the instructions in this book, remember that OFF = open and ON = closed.

CAUTION:
Some hardware components in this platform occur in multiple versions. Verify that the installation information you are using is correct for the version of component you are installing.

CAUTION:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground.

Installing a Tip/Ring Circuit Card

The MAP/100 accommodates eight Tip/Ring (T/R) circuit cards. This section lists the type of T/R circuit card you will install and describes how to set the resource options and place it in the backplane.

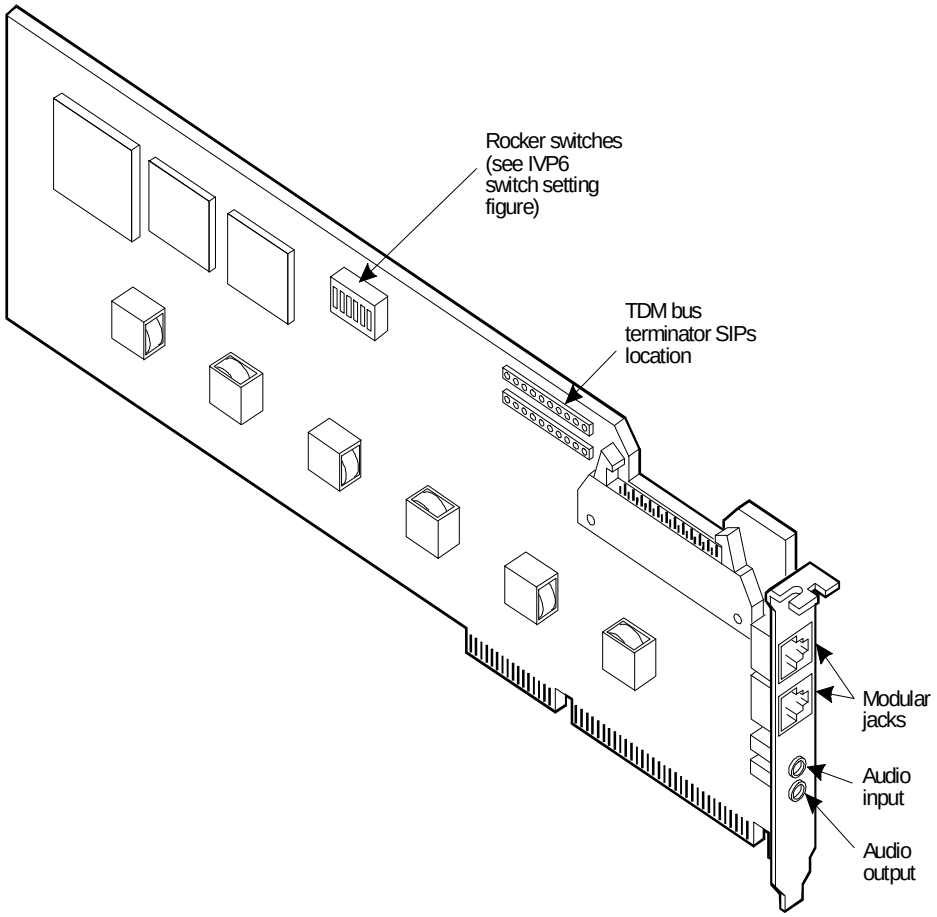


Figure 7-1. IVP6 (AYC28) Tip/Ring Circuit Card

Types of Tip/Ring Circuit Cards

You will install the following type of T/R circuit card:

- AYC28

Setting the Resource Options

Switches

The MAP/40 accommodates multiple T/R circuit cards, each of which must have a unique address. To set these addresses, you must set the switch banks on the AYC28 circuit card (see Figure 7-1 for location) as shown in Figure 7-2, where "T/R 0" denotes the first T/R circuit card you are installing, "T/R 1" denotes the second card, and so on.

Jumpers

There are no jumpers to set on the AYC28 circuit card.

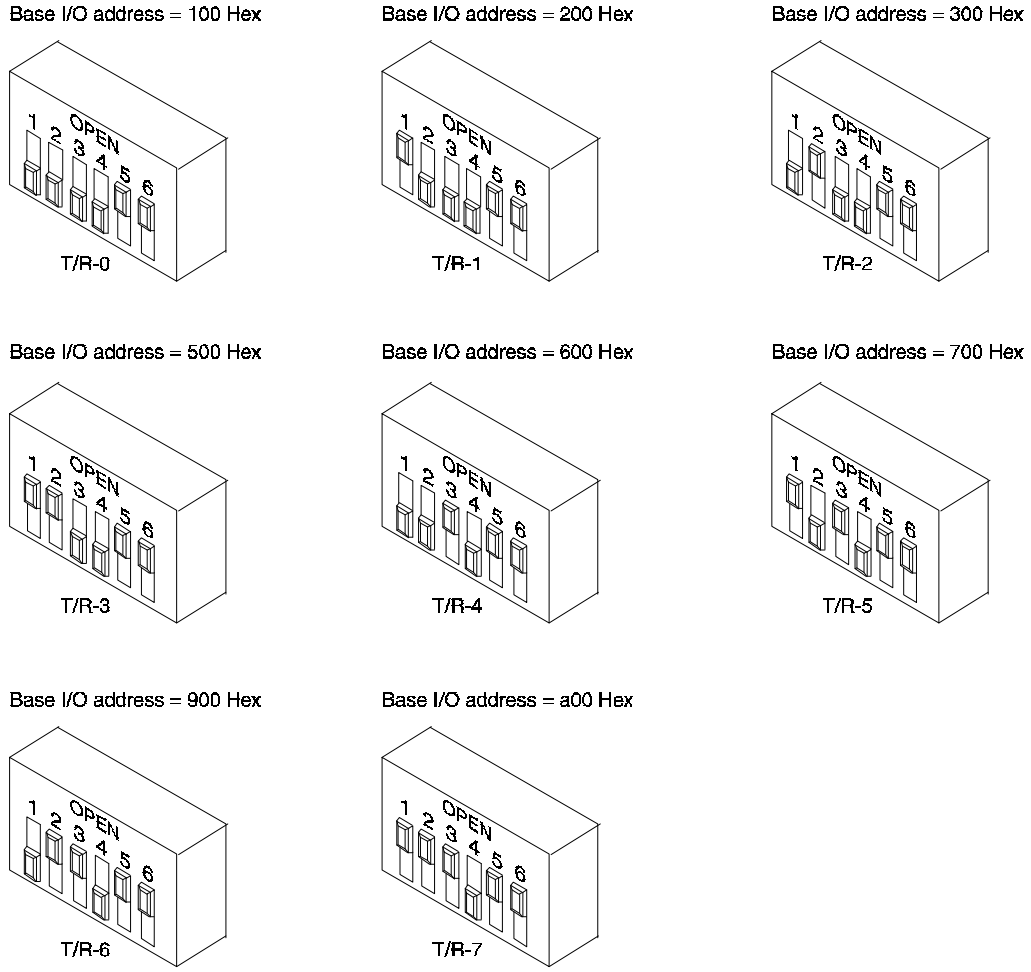


Figure 7-2. Switch Settings for the IVP6 (AYC28) Tip/Ring Circuit Cards, T/R 0 through T/R 7

Placing the Tip/Ring Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

Connect the TDM bus cable (ED5P208-30 Group 21) to the card using the appropriate unused connector.

If the T/R circuit card is the last card connected to either end of the TDM bus, you must ensure that the TDM bus terminator single in-line packages (SIPs) are in place on the card. If the T/R card is not the last card on the bus, you must remove the SIPs.

NOTE:
"Last card connected" means that there are no other cards between the T/R card and the end of the bus. There may, however, be empty connectors.

If the T/R card you are installing is now the last card on the bus, double check those cards that were already in place to ensure that the SIPs have been removed.

Replacing a Terminator SIP

If you must replace a terminator SIP, ensure that it is oriented as shown in Figure 7-3. Then align it with the key marking (this will be a dot, a square, or the number 1, depending on which version of the card you are installing) on the terminating resistor to the left (when you are looking at the card with the gold fingers pointing down) and insert it.

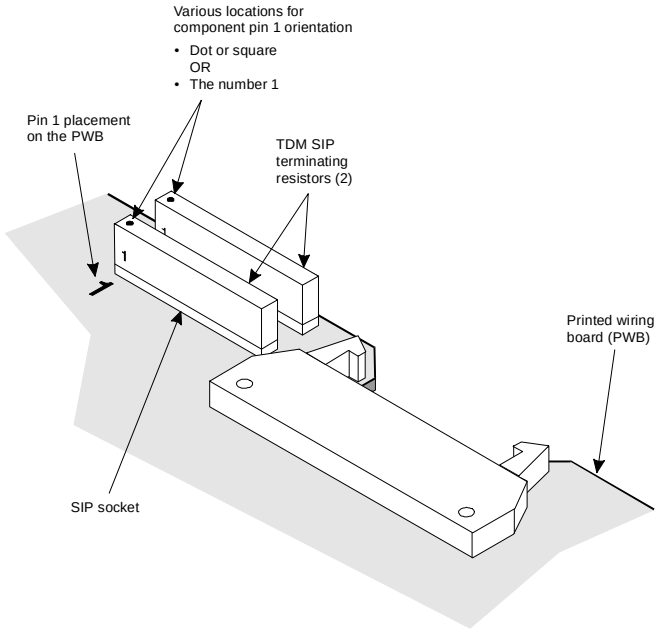


Figure 7-3. Replacing Terminator SIPs on the TDM Bus

Installing a T1 Circuit Card

The MAP/40 accommodates two T1 circuit cards (Figure 7-4). This section lists the type of T1 circuit card you will install and describes how to set the resource options and place it in the backplane.

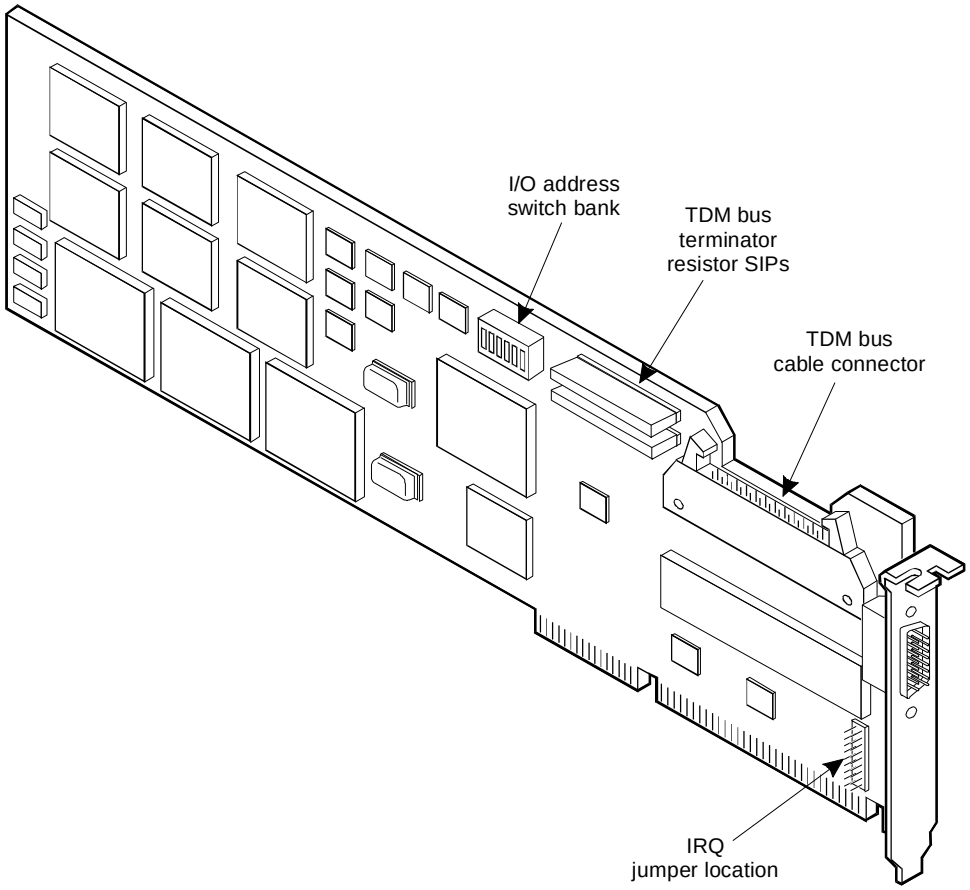


Figure 7-4. T1 (AYC11) Circuit Card

Types of T1 Circuit Cards

You will install the following type of T1 circuit card:

- AYC11

Setting the Resource Options

Switches

The AYC11 circuit card has a six-position rocker switch that sets the card's I/O address. Figure 7-4 shows the location of the rocker switch and jumpers. Figure 7-5 shows these settings for cards T1-0 through T1-4.

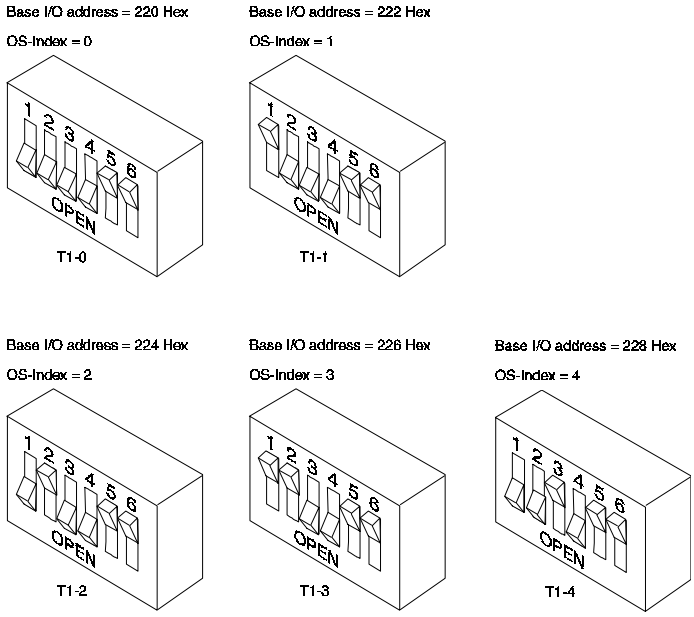


Figure 7-5. Switch Settings for T1 (AYC11) Circuit Cards, T1-0 through T1-4

Jumpers

The AYC11 circuit card has a jumper-selectable IRQ setting.

This jumper is preset at the factory. However, before you install this card, ensure that the jumper is set as shown in Figure 7-6.

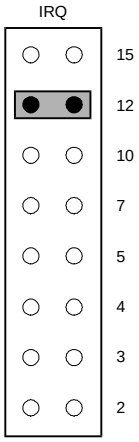


Figure 7-6. Jumper Setting for the T1 (AYC11) Circuit Card

Placing the T1 Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

Connect the TDM bus cable (ED5P208-30 Group 21) to the card using the appropriate unused connector.

If the T1 circuit card is the last card connected to either end of the TDM bus, you must ensure that the TDM bus terminator SIPs are in place on the card. If the T1 card is not the last card on the bus, you must remove the SIPs.

NOTE:
"Last card connected" means that there are no other cards between the T1 card and the end of the bus. There may, however, be empty connectors.

If you must replace a terminator SIP, ensure that it is oriented as shown in Figure 7-3. Then align the key marking (this will be a dot, a square, or the number 1, depending on which version of the card you are installing) on the terminating resistor to the left (when you are looking at the card with the gold fingers pointed down) and insert it.

Installing a Signal Processor Circuit Card

This section lists the types of Signal Processor (SP) cards (Figure 7-7) that you can install in the MAP/40 and describes how to set their resource options and place them in the backplane.

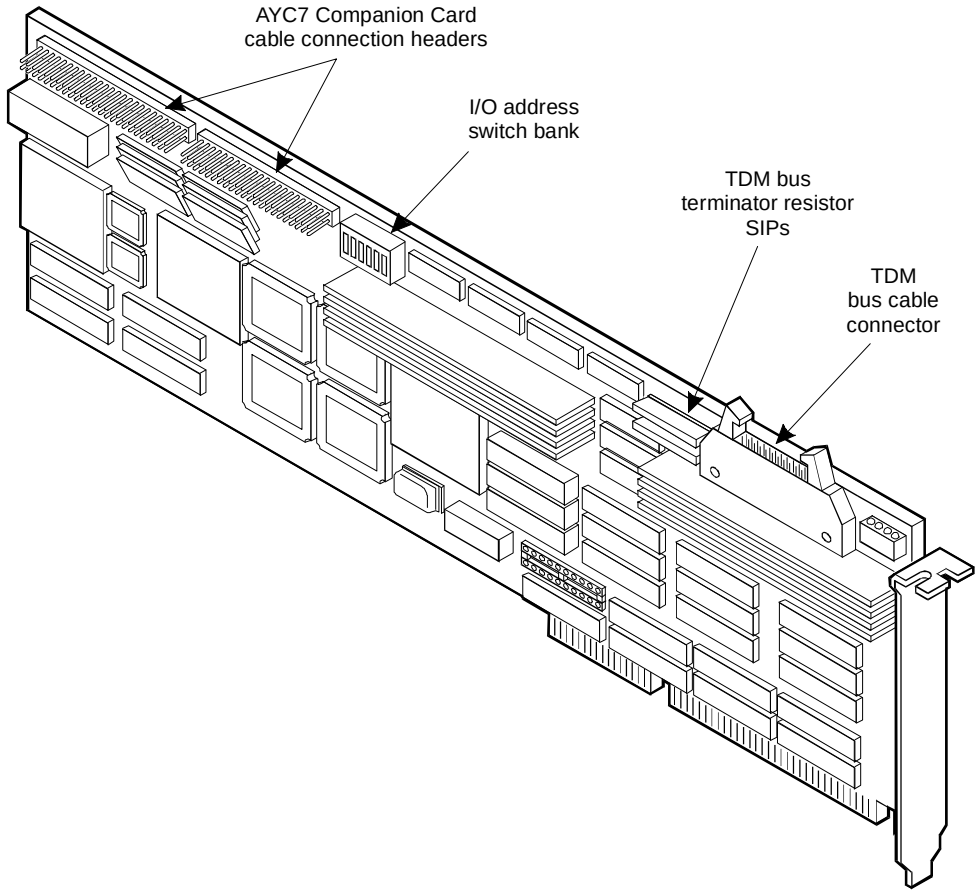


Figure 7-7. Signal Processor (AYC2C or AYC9) Circuit Card

Types of Signal Processor Circuit Cards

You will install one of the following types of SP circuit cards:

- AYC2C
- AYC9

Setting the Resource Options

Switches

You must set one bank of switches on the SP circuit card. See Figure 7-7 for the location of the switch bank and Figure 7-8 for the correct I/O address switch settings for SP-0 through SP-7.

Notice in Figure 7-8 that the switches are numbered 1 through 6. Switch 1 is a no-option switch. This means its setting is not significant. The figure shows this switch as open, but it does not matter if it is open or closed. Switch 2 must be closed. Switch 3 must be open. The figure also displays the OS index number for the corresponding switch settings. The Intuity CONVERSANT VIS uses this index to identify each SP card.

Jumpers

There are no jumpers on the AYC2C and AYC9 SP circuit cards.

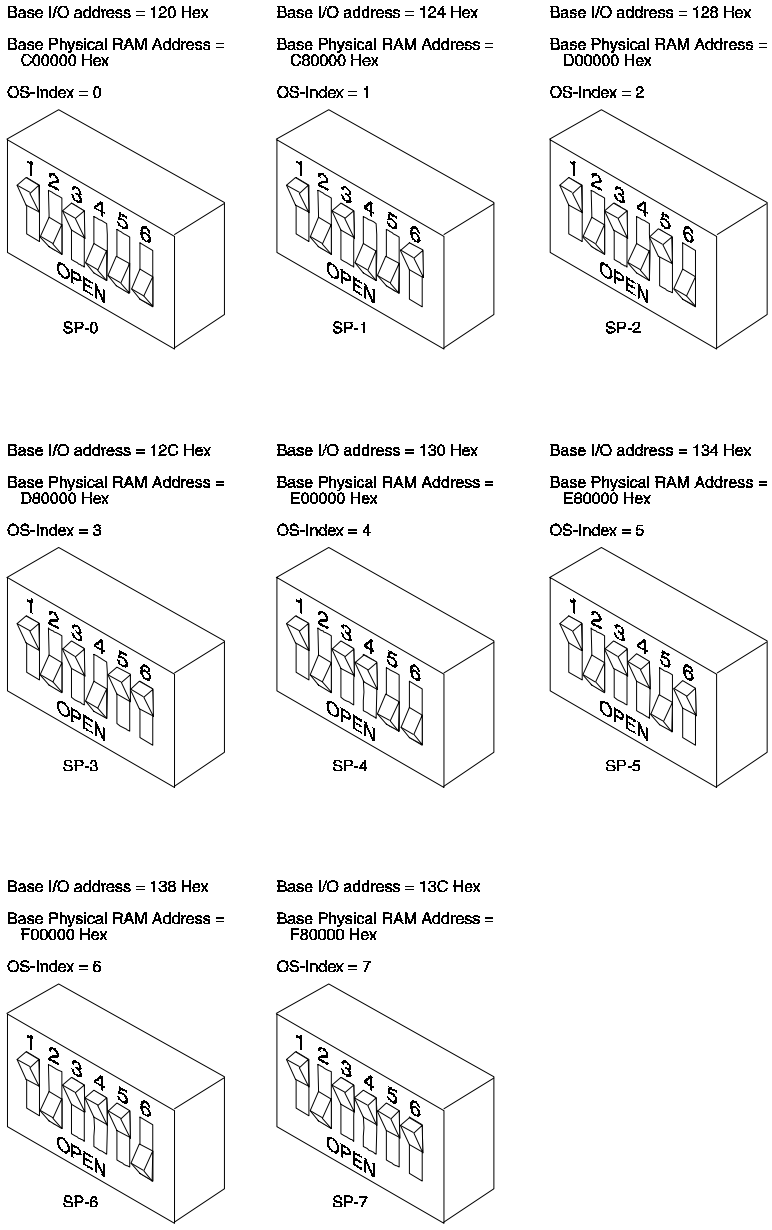


Figure 7-8. Switch Settings for the Signal Processor Circuit Cards (AYC2C and AYC9), SP-0 through SP-7

Placing the Signal Processor Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

Connect the TDM bus cable (ED5P208-30 Group 21) to the card using the appropriate unused connector.

If the SP circuit card is the last card connected to either end of the TDM bus, you must ensure that the TDM bus terminator SIPs are in place on the card. If the SP card is not the last card on the bus, you must remove the SIPs.

NOTE:
"Last card connected" means that there are no other cards between the SP card and the end of the bus. There may, however, be empty connectors.

If you must replace a terminator SIP, ensure that it is oriented as shown in Figure 7-3. Then align it with the key marking (this will be a dot, a square, or the number 1, depending on which version of the card you are installing) on the terminating resistor to the left (when you are looking at the card with the gold fingers pointing down) and insert it.

Installing a Companion Circuit Card

This section lists the type of Companion (CMP) circuit card you will install (Figure 7-9) and describes how to set its resource options, connect it to the SP circuit card, and place it in the backplane.

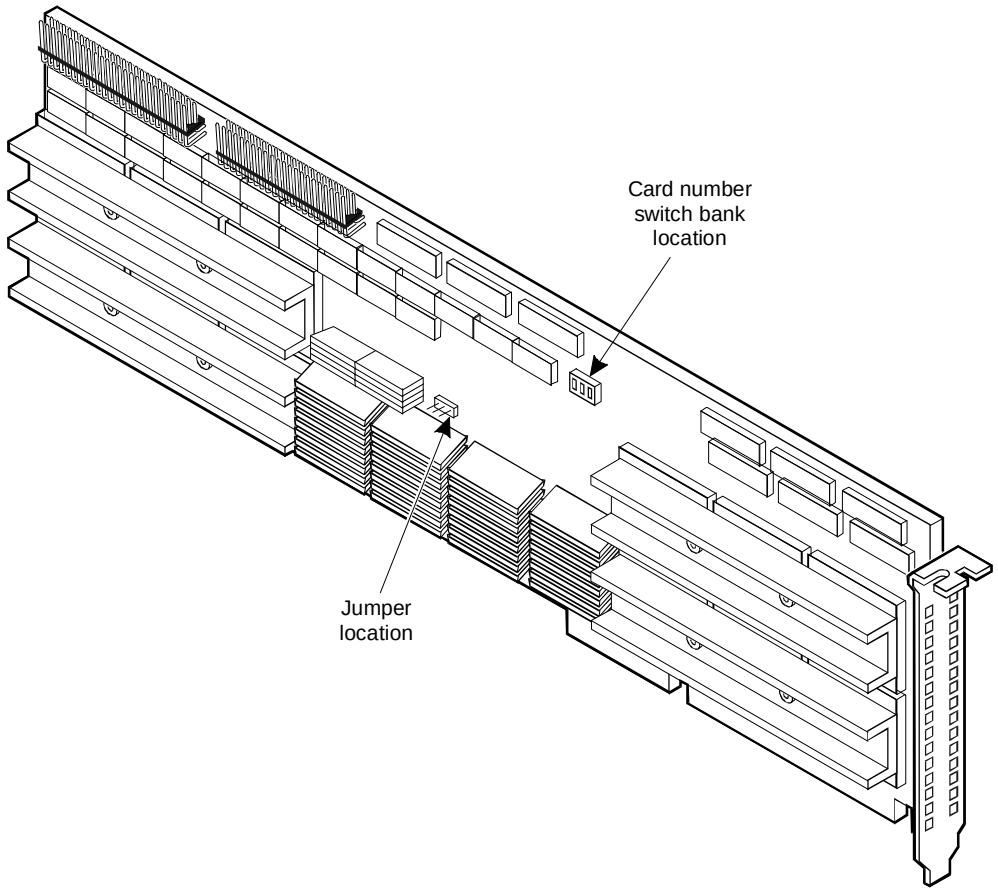


Figure 7-9. Companion (AYC7) Circuit Card

Types of Companion Circuit Cards

You will install the following type of CMP circuit card:

- AYC7

The CMP card is required for applications that use speech recognition. For more information, see *Intuity CONVERSANT VIS V5.0 Speech Development,* 585-310-228.

Setting the Resource Options

Switches

You must set one switch bank on the AYC7 circuit card. Figure 7-9 shows the location of the switches. Figure 7-10 shows the required switch settings for CMP-0 and CMP-1.

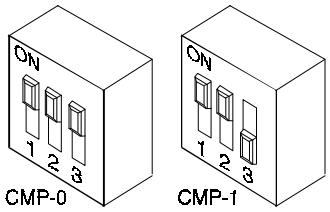


Figure 7-10. Switch Settings for the Companion Card

Jumpers

Figure 7-9 shows the location of the jumper on the AYC7 CMP circuit card. This jumper is preset at the factory. However, before you install the card, ensure that the setting matches that shown in Figure 7-11.

Figure 7-11. Jumper Setting for the Companion (AYC7) Circuit Card

Placing the Companion Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

The CMP circuit card is an extension of the SP circuit card. Therefore, you will always install a CMP card in a slot that is adjacent to the noncomponent side of the SP circuit card.

NOTE:
Never leave an empty space between the SP card and its CMP card.

You can configure an SP circuit card with a maximum of two CMP circuit cards. The CMP circuit card(s) connected to the SP circuit card(s) must always be set starting with address zero (0). For example, if there are four SP cards, each with one CMP card, each CMP card will be addressed as card zero (0).

Cable Connection between the Signal Processor and Companion Circuit Cards

Before You Begin

- The ribbon cables that connect the SP and CMP cards are polarized. Figure 7-12 and Figure 7-13 show how they are oriented with respect to the SP and CMP cards.
- Perform a visual inspection of all of the connector pins. If any of these pins are bent, you must straighten them *carefully* before you attempt to attach the cables.

Procedure: Connecting the Cables

NOTE:
Always attach the cables to the SP circuit card first. If there are cards adjacent to the SP card that interfere with the cable installation, remove the SP card to install the cables.

CAUTION:
Be extremely careful when you install the SP/CMP cables. The SP/CMP bus cable arrangement is not designed with ejectors like the TDM bus cable.

When you have attached the cables to the SP and the SP is installed in the platform, complete the following steps:

1. Carefully align each cable with the respective CMP connector so that the connector and pins are equidistant from each side of the cable.
2. Firmly press the connector down on both rows of the pins with uniform pressure until the connector is seated against the plastic pin support. There must be no gap between the connector and the plastic pin support.
3. Verify that both rows of pins are inserted into each connector. Inspect the connection for gaps between the connector and the plastic pin support. The presence of such gaps may indicate that one or more of the connector pins is bent. If you find a bent pin, you must remove the cable (see the procedure below), straighten the pin *carefully*, and then reattach the cable.
4. Insert your index finger into the plastic loop (Figure 7-14) and hold the card steady with your free hand.
5. Push with uniform force across the width of the loop to install the connector. One ribbon is a 50-pin conductor cable. The other is a 44-conductor cable. See Figure 7-12 and Figure 7-13 for the proper cable and card configuration.

Procedure: Removing the Cables

CAUTION:
You must remove the connectors attached to the CMP circuit cards before you remove those attached to the SP circuit card.

CAUTION:
Use the flexible plastic loops to remove the cables from the boards. Pulling on the ribbon wires can damage the cables.

1. Insert a finger into the flexible plastic loop (Figure 7-14).
2. Pull firmly until the cable and the card are separated. It may be necessary to tug gently on each side of the loops to start the disconnection.

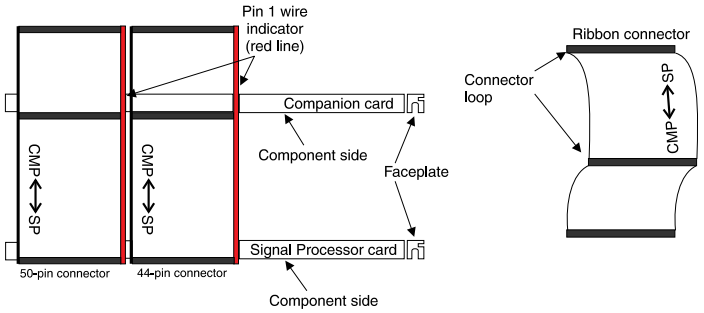


Figure 7-12. Top View of the Signal Processor/Companion Bus Cables

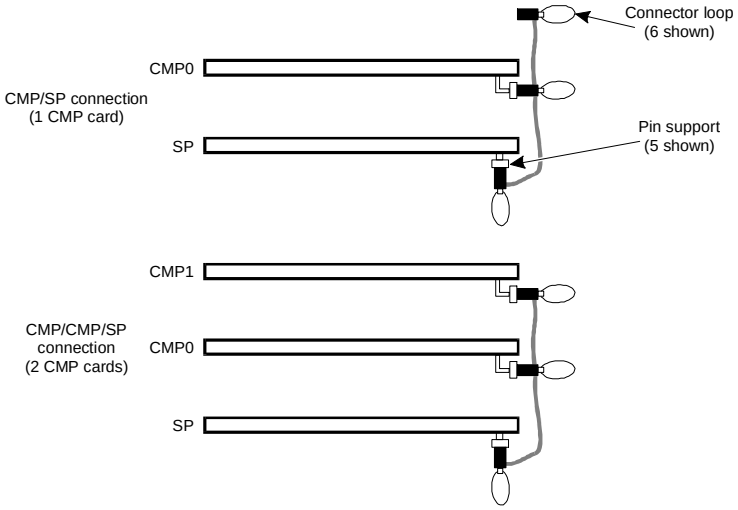


Figure 7-13. End View of Signal Processor/Companion Bus Cables

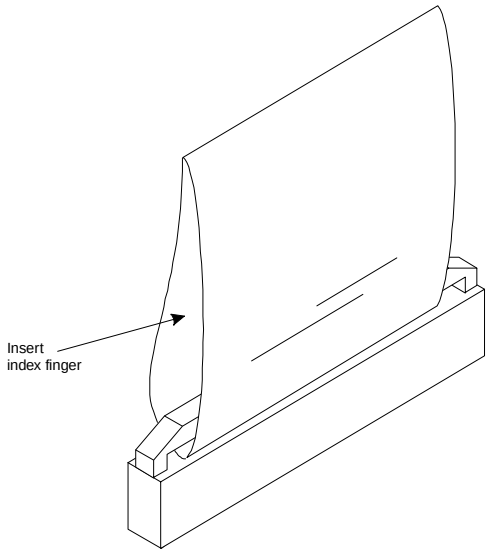


Figure 7-14. Signal Processor/Companion Connector Loop

Installing Optional Feature Circuit Cards

8

What's in This Chapter

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

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

This information in this chapter is supplemented by Chapter 6, "Installing Circuit Cards —Introduction and Types".

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

CAUTION:
Some hardware components in this platform occur in multiple versions. Verify that the installation information you are using is correct for the version of component you are installing.

CAUTION:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground.

Installing a Synchronous Host Circuit Card

The MAP/40 accommodates two Synchronous Host circuit cards (Figure 8-1) for synchronous communications.

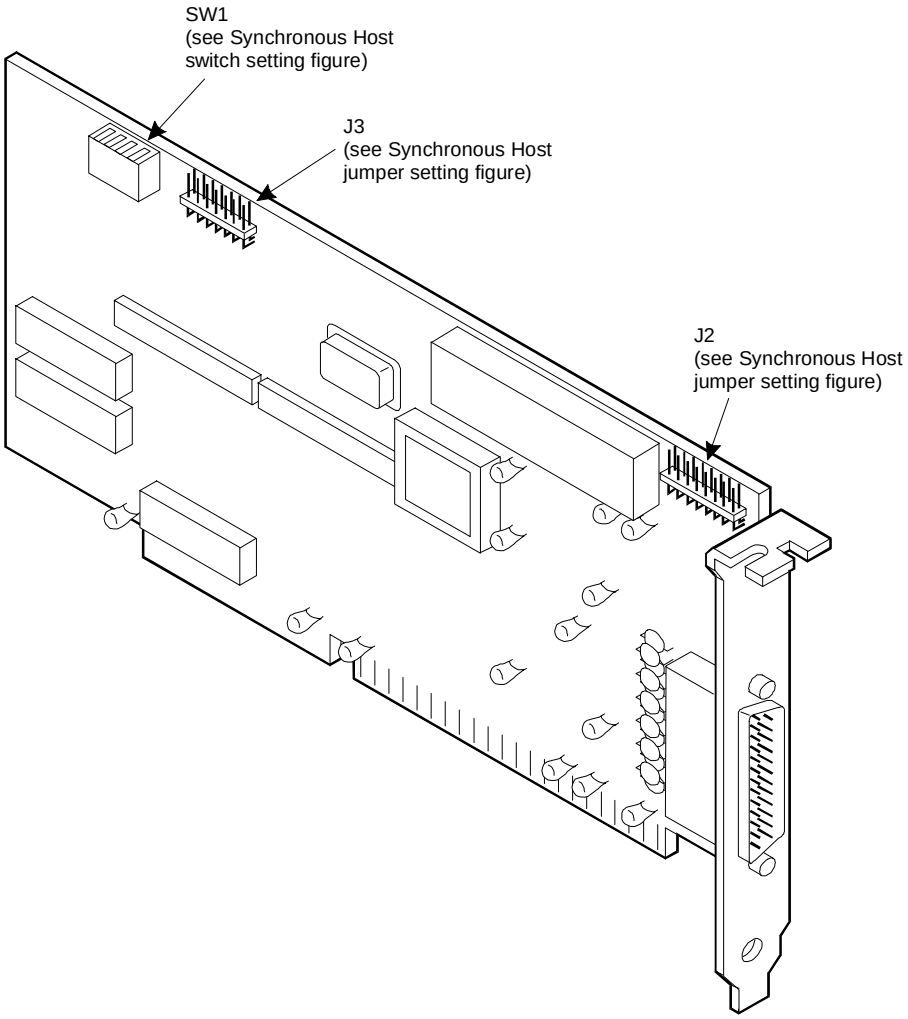


Figure 8-1. Synchronous Host Circuit Card

Setting the Resource Options

Switches

Figure 8-1 on page 8-2 shows the location of the I/O switch block SW1. Figure 8-2 shows the I/O switch settings. Note that switch 4 is not used.

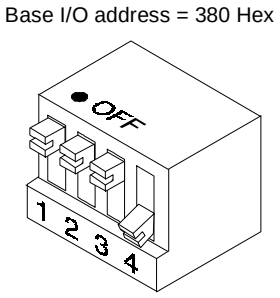


Figure 8-2. Switch Settings for the Synchronous Host Circuit Card

Jumpers

There are two jumper locations on the Synchronous Host circuit card, J3 and J2.

Setting J3

Use J3 to set the interrupt request line (IRQ) to a value of 3, 5, 9, 10, 11, 12, or 13 (Figure 8-3). Refer to the output of the Configuration Program to determine which value is correct for your system (see Chapter 4, "Running the Configuration Program", for more information).

NOTE:
If you are using IRQ 9, ensure that IRQ 2 is unused on your system.

Setting J2

J2 is preset at the factory. However, before you install the Synchronous Host circuit card, ensure that this jumper is set as shown in Figure 8-3.

NOTE:
When operating at 64 kbaud, this setting supports a maximum cable length of 15 ft.

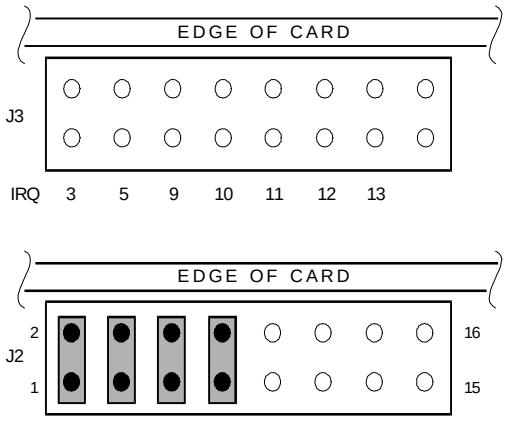


Figure 8-3. Jumper Settings for the Synchronous Host Circuit Card

Placing the Synchronous Host Circuit Card in the MAP/40

After you set the switches and jumpers, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards — Introduction and Types", to place the card in the MAP/40.

Installing an 8-Port Asynchronous Circuit Card

The MAP/40 accommodates an 8-Port Asynchronous circuit card (Figure 8-4). The 8-Port Asynchronous circuit card provides eight ports for asynchronous communications.

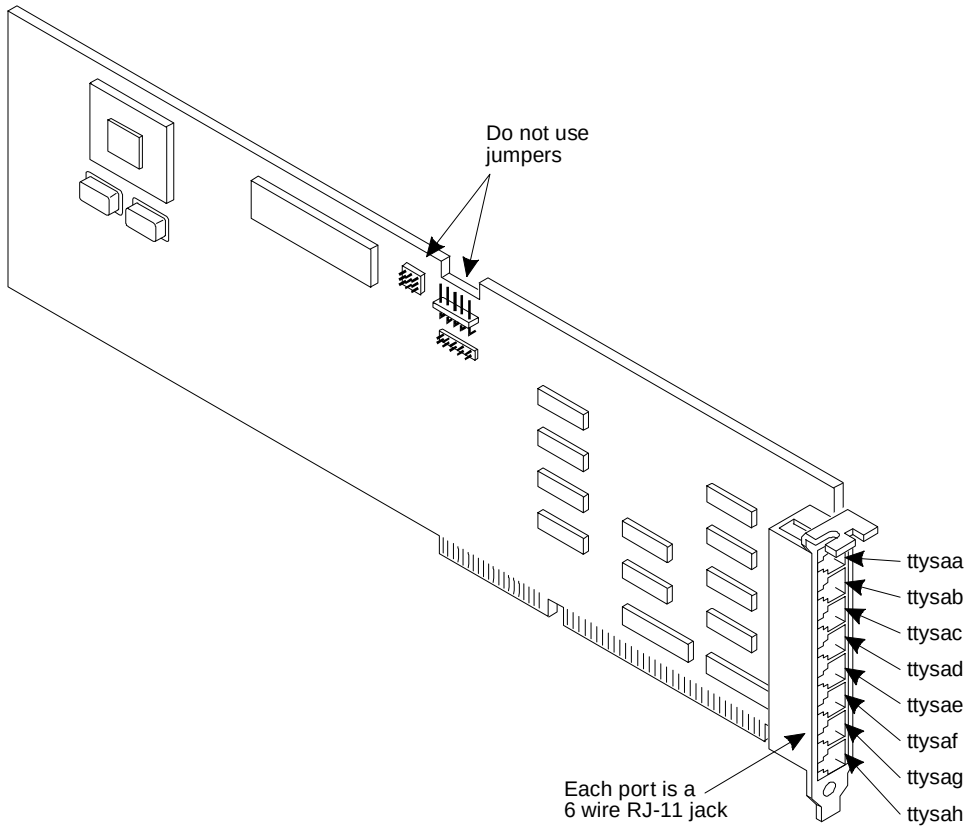


Figure 8-4. 8-Port Asynchronous Circuit Card

Setting the Resource Options

Switches

There are no switches to set on the 8-Port Asynchronous circuit card.

Jumpers

Figure 8-4 shows the location of the jumpers on the 8-Port Asynchronous circuit card. Verify that no jumpers are set.

Placing the 8-Port Asynchronous Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

Making Asynchronous Connections

Each port has a 6-wire, RJ-11 modular jack. Adapters convert the modular jacks to RS-232 connectors. Use one adapter for each device you are connecting. You can use all eight ports for modem, terminal, or printer connections.

See Chapter 1, "Preparing the Site", for information regarding the types of adapters to use and the pinouts required for the modular jacks and adapters.

See Appendix B, "Cable Connectivity", for information on how to cable the 8-Port Synchronous circuit card to make asynchronous connections.

Installing an Ethernet LAN Circuit Card

The MAP/40 accommodates an Ethernet LAN circuit card for Ethernet network support (Figure 8-5).

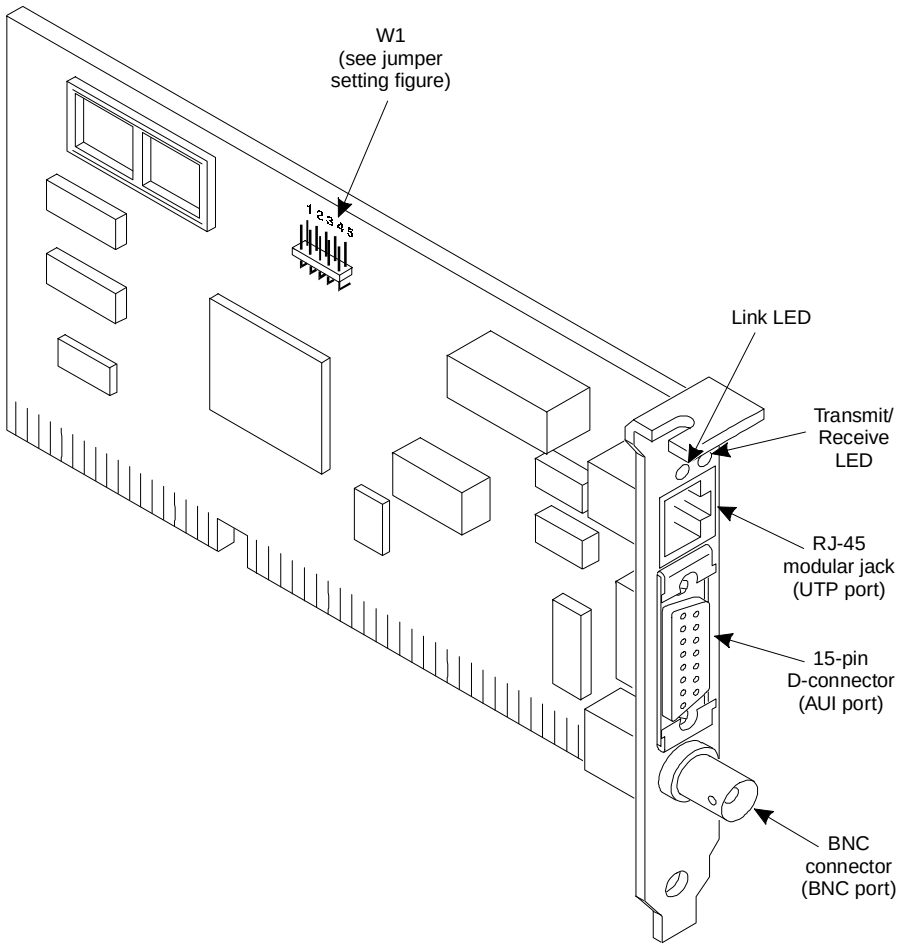


Figure 8-5. The Ethernet LAN Circuit Card

Setting the Resource Options

Switches

There are no switches to set on the Ethernet LAN circuit card.

Jumpers

The Ethernet LAN circuit card has one jumper, W1, to set the I/O base address, IRQ channel, RAM base address, and ROM base address (see Figure 8-5 for the location of W1).

The default software configuration is as follows:

- IRQ: 10
- I/O base address: 280
- RAM base address: D8000

The default setting for W1 is “1,” which configures the card to be software programmable beginning at the default settings. Figure 8-6 illustrates this placement of the jumper. Table 8-1 shows the other configuration settings for W1.

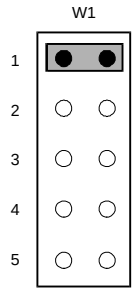


Figure 8-6. Ethernet LAN Circuit Card Software Programmable Jumper Setting

.

Table 8-1. W1 Configuration Settings

Position	I/O	IRQ	RAM	ROM
1	Soft configuration			
2	280	3	D000	None
3	300	10	CC00	None
4	280	3	D000	D800
5	300	10	CC00	D800

Changing the Default Configuration

To change the configuration to anything other than those settings provided by jumpering W1, you must use the diskette included with the Ethernet LAN circuit card software package, which will prompt you for the required information This diskette is labeled “SMC Ethernet STREAMS Device Driver Package,” and it includes the “SMC ‘ezsetup’ for UNIX.”

Placing the Ethernet LAN Circuit Card in the MAP/40

After you set the switches and jumpers, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards — Introduction and Types", to place the card in the MAP/40.

Installing a Token Ring Circuit Card

The MAP/40 accommodates a Token Ring circuit card (Figure 8-7) for support of a token ring local area network.

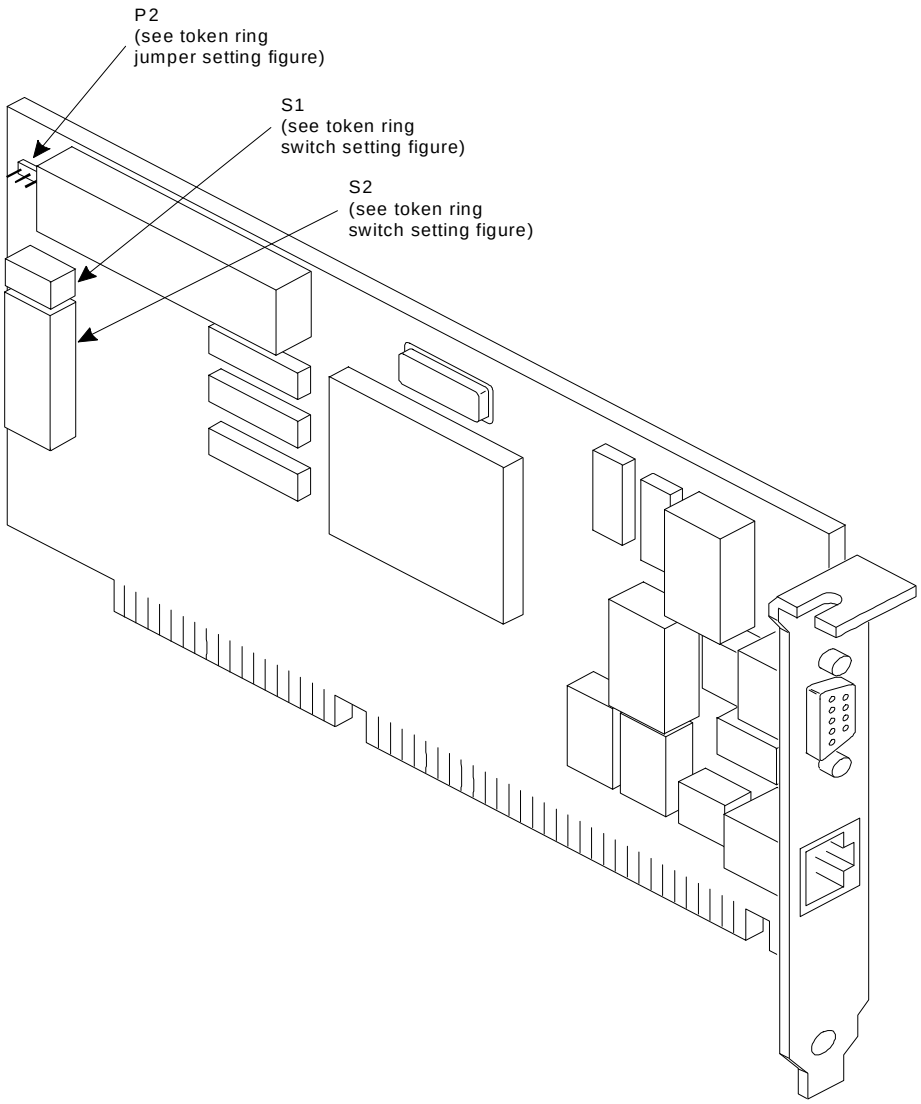


Figure 8-7. Token Ring Circuit Card

Setting the Resource Options

Switches

Figure 8-7 shows the location of switches S1 and S2 on the Token Ring circuit card. Figure 8-8 shows how to set the switches. With the exception of the interrupt level (switches 7 and 8), these are the default settings. Figure 8-9 provides a switch description summary.

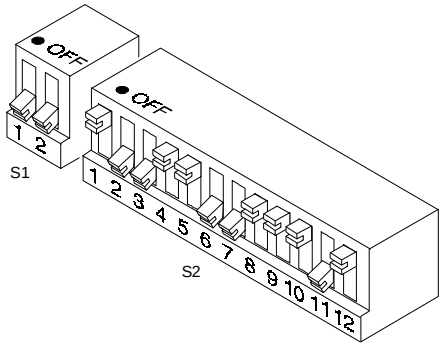


Figure 8-8. Switch Settings for the Token Ring Card

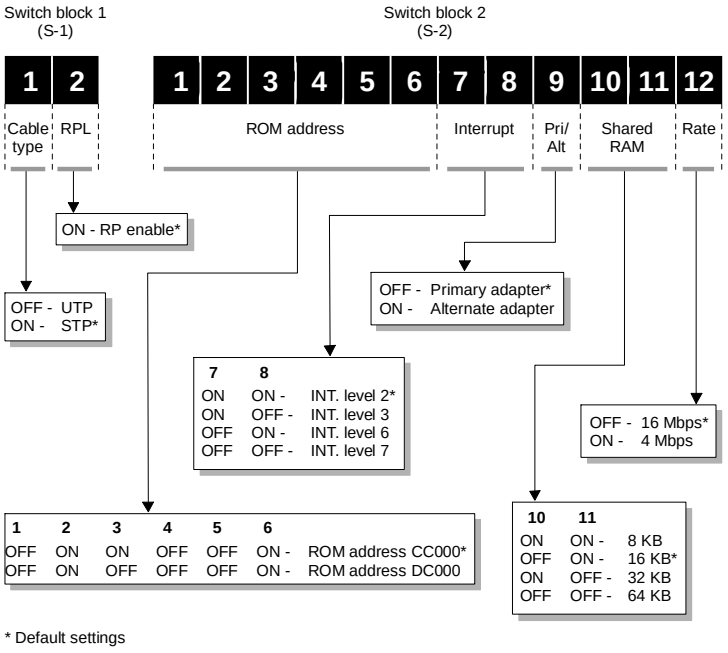


Figure 8-9. Token Ring Circuit Card Switch Description Summary

Jumpers

Figure 8-7 shows the location of the 8- or 16-bit mode jumper. You must place the jumper across positions 1 and 2 to select the 8-bit mode, as shown in Figure 8-10.

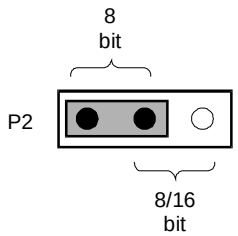


Figure 8-10. Token Ring Circuit Card 8- or 16-Bit Mode Jumper

Placing the Token Ring Circuit Card in the MAP/40

After you set the switches and jumpers, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards — Introduction and Types", to place the card in the MAP/40.

Connecting the Adapter Cable

You will connect one of two types of cable to the connector:

- An IBM Token-Ring Network PC Adapter Cable or its equivalent
- A Category 3, 4, or 5 cable with RJ-45 connectors

Installing a PC/PBX Interface Circuit Card

If your system is coresident with AUDIX Voice Power, directly interfacing with System 75 or DEFINITY G1/G2, you must install a PC/PBX interface circuit card (Figure 8-11) in the MAP/40. This card is designated by apparatus code “CAG1” or “CAG6”. This code is etched into the component side of the card on the edge opposite the faceplate.

NOTE:
Other AT&T documentation may refer to this card as the PC/PBX Platform or Expansion or Digital Communications Protocol (DCP) card.

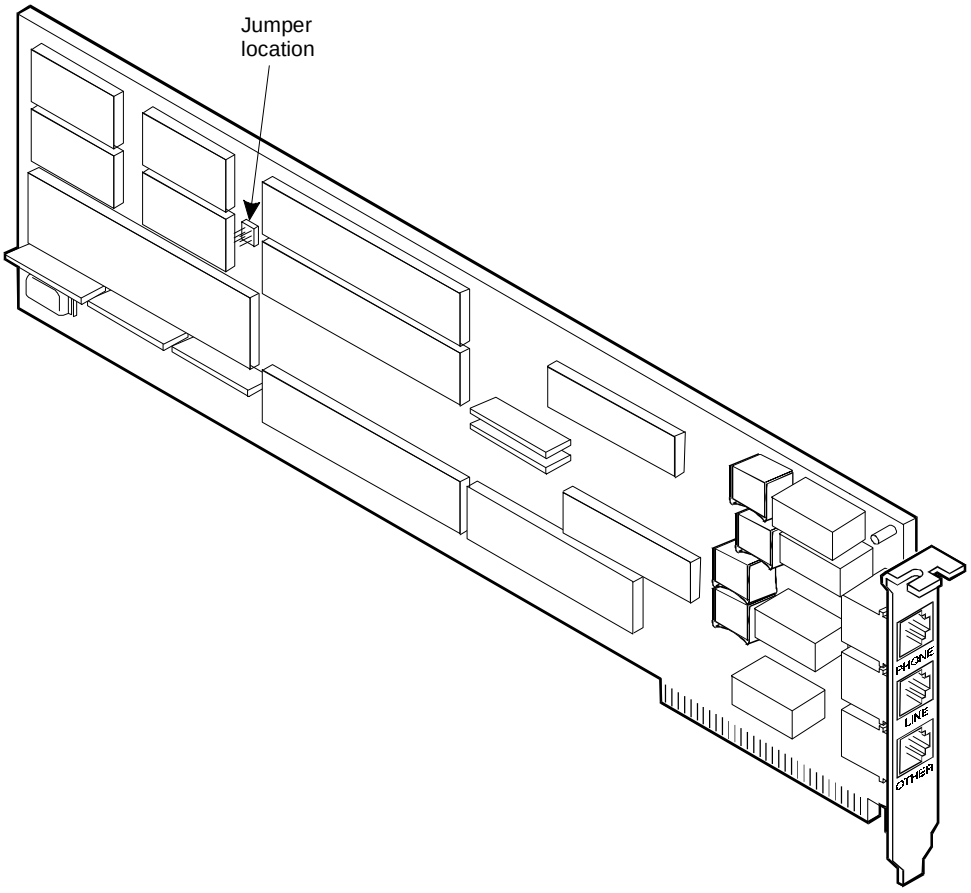


Figure 8-11. PC/PBX Interface Circuit Card

Setting the Resource Options

NOTE:
The software driver allows the setting of the interrupt number and I/O address.

Switches

There are no switches to set on the PC/PBX Interface circuit card. Normally, the IRQ is set to 2 and the I/O address is always 380. However, if you are using this card with the FAX Attendant feature, you must disable serial port 2 and select IRQ 3.

Jumpers

Figure 8-11 shows the location of the jumpers on the PC/PBX Interface circuit card. These jumpers are preset at the factory. However, before you install this card, ensure that the jumpers are set as shown in Figure 8-12.

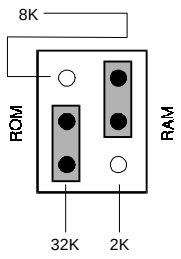


Figure 8-12. Jumper Settings on the PC/PBX Interface Circuit Card

Placing the PC/PBX Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

Disabling COM2

You may need to disable the CPU COM2 serial port to prevent IRQ address conflict. Refer to the output of the Configurator Program and if necessary, see "Installing a 486 CPU Circuit Card" on page 9-2 in Chapter 9, "Installing Standard MAP/40 Circuit Cards", for more information on the COM2 serial port.

Installing a PC/ISDN Circuit Card

The PC/ISDN circuit card (Figure 8-13) supports the Adjunct/Switch Application Interface (ASAI).

NOTE:
Other AT&T documentation may refer to this card as the IPCI card.

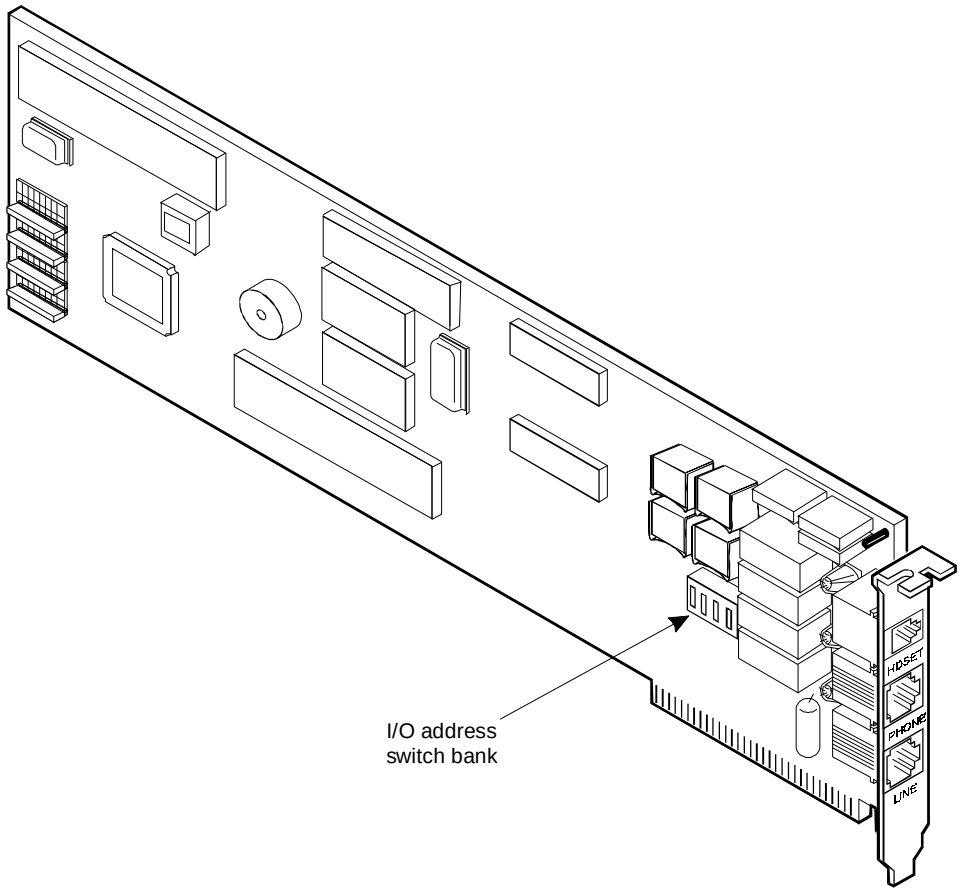


Figure 8-13. PC/ISDN Circuit Card

Setting the Resource Options

Switches

Figure 8-13 shows the location of its switches on the PC/ISDN circuit card. Figure 8-14 shows the switch settings.

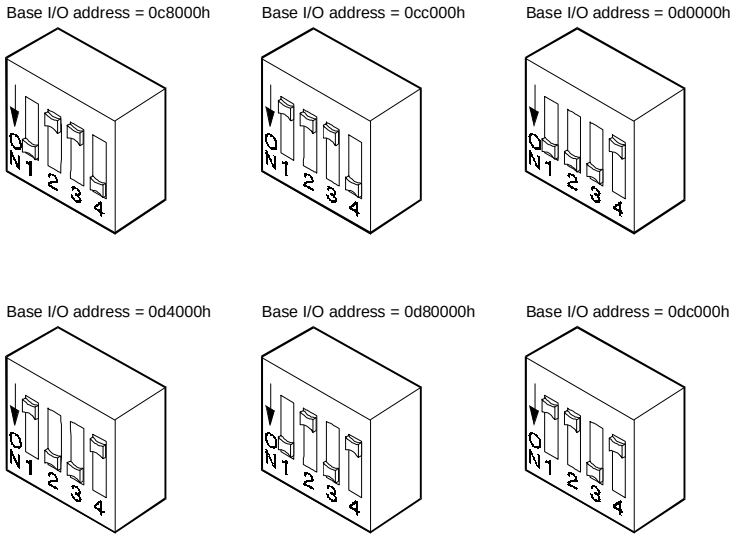


Figure 8-14. PC/ISDN Circuit Card Switch Settings

Jumpers

There are no jumpers to set on the PC/ISDN circuit card.

Placing the PC/ISDN Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40.

Installing a FAX Circuit Card

The MAP/40 supports up to three FAX circuit cards (Figure 8-15).

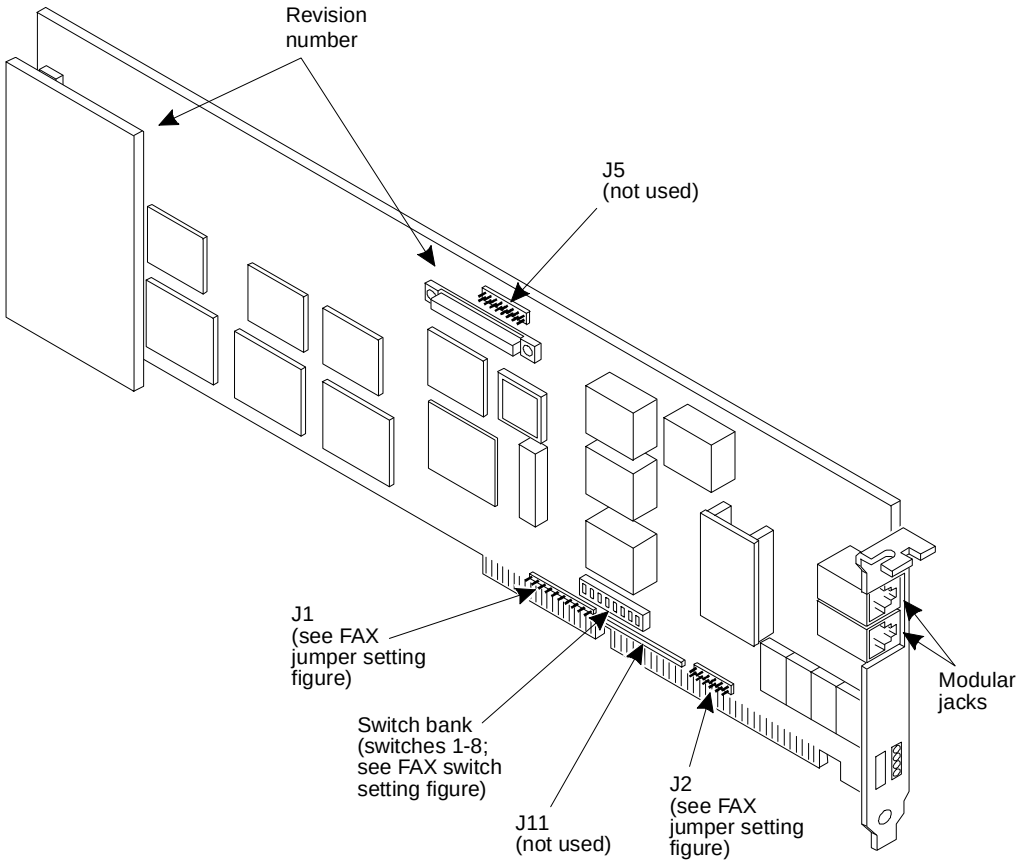


Figure 8-15. FAX Circuit Card

Setting the Resource Options

Switches

There are multiple versions of the FAX circuit card, revision 5, revision 6, and higher. The revision number is indicated on the card at one of the two locations shown in Figure 8-15. Set the switches for all versions as shown in Figure 8-16 unless otherwise instructed for those cards beyond revision 6, and observe the following:

- For revision 5 cards, switch #1 does not affect the I/O address and must be OFF on *all* FAX circuit cards in the system. Switch #2 does not affect the base I/O address and must be ON *on one and only one* FAX circuit card.
- For revision 6 cards, switch #1 does not affect the base I/O address. It is used to pull up the TR114 interrupt line and must be ON *on one and only one* FAX circuit card in the system.

Note that in Figure 8-16, the first switch bank indicates settings for the first card installed, the second switch bank for the second card installed, and the third switch bank for the third card installed.

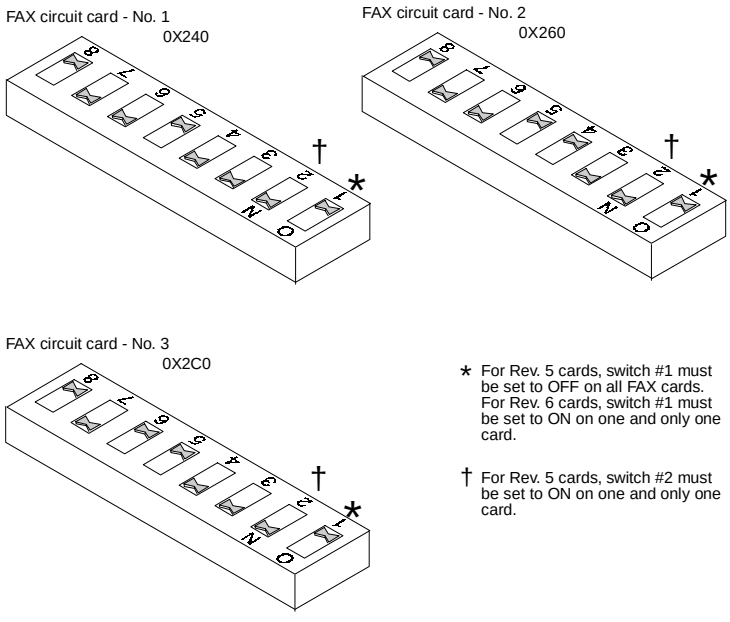
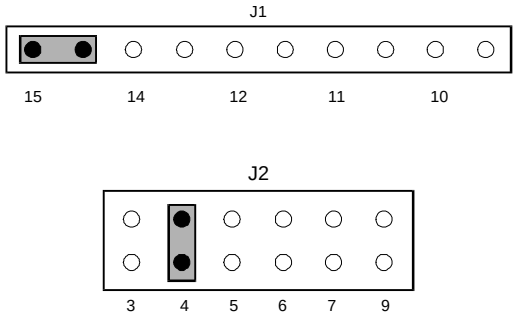


Figure 8-16. FAX Circuit Card Switch Settings

Jumpers

Jumpers on the FAX circuit card are in two locations: top center and bottom right (Figure 8-15). Neither J5 at the top center nor J11 in the middle of the bottom group is used.

Figure 8-17 shows diagrams of J1 and J2. Interrupt numbers are indicated beneath the jumper blocks. In this example, J1 is set to 15 and J2 is set to 4. You must set the jumpers according to the output of the Configuration Program for the system you are installing (see Chapter 4, "Running the Configuration Program", for more information).



Set jumpers according to the output of the configuration program for your system. This example shows interrupts set to 15 (J1) and 4 (J2).

Figure 8-17. Sample FAX Circuit Card Jumper Settings and Interrupt Numbers

Placing the FAX Circuit Card in the MAP/40

After you set the resource options, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types", to place the card in the MAP/40. See the output of the Configuration Program for slot locations.

Connecting T/R Lines

The FAX circuit card comes with two telephony connection cables. Each cable supports two telephone lines, and the card provides modular jacks for two cables. Each cable has an RJ14C connector on one end. This connector plugs into the FAX circuit card. Two RJ11 single-line connectors (labeled “A” and “B”) on the opposite end of the cable plug into the telephone lines.

Installing Standard MAP/40 Circuit Cards

9

What's in This Chapter

This chapter provides the following information on the standard circuit cards that are included with every MAP/40:

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

This information in this chapter is supplemented by Chapter 6, "Installing Circuit Cards —Introduction and Types".

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

CAUTION:
Some hardware components in this platform occur in multiple versions. Verify that the installation information you are using is correct for the version of component you are installing.

CAUTION:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground.

Installing a 486 CPU Circuit Card

The manufacturer packages the central processing unit (CPU) on a single PC/AT- compatible circuit card that plugs into the passive backplane. This card comes equipped with 32 Mbyte of memory. You can add additional 16-Mbyte single in-line memory modules (SIMMs) up to a total of 64 Mbytes (this is a maximum of two additional SIMMs).

NOTE:
See Chapter 10, "Installing Optional Hardware", for instructions on how to add or replace memory on the 486 CPU circuit card.

There are two revisions of the 486 CPU circuit card, revision 1 and revision 2. Use the illustrations in the following sections to determine which revision you are working with and set the resource options accordingly. The remaining procedures for placing the card in the MAP/40, completing the setup, and making header connections for keyboard and serial ports are the same for either card.

486 CPU Circuit Card, Revision 1

Figure 9-1 shows revision 1 of the 486 CPU circuit card.

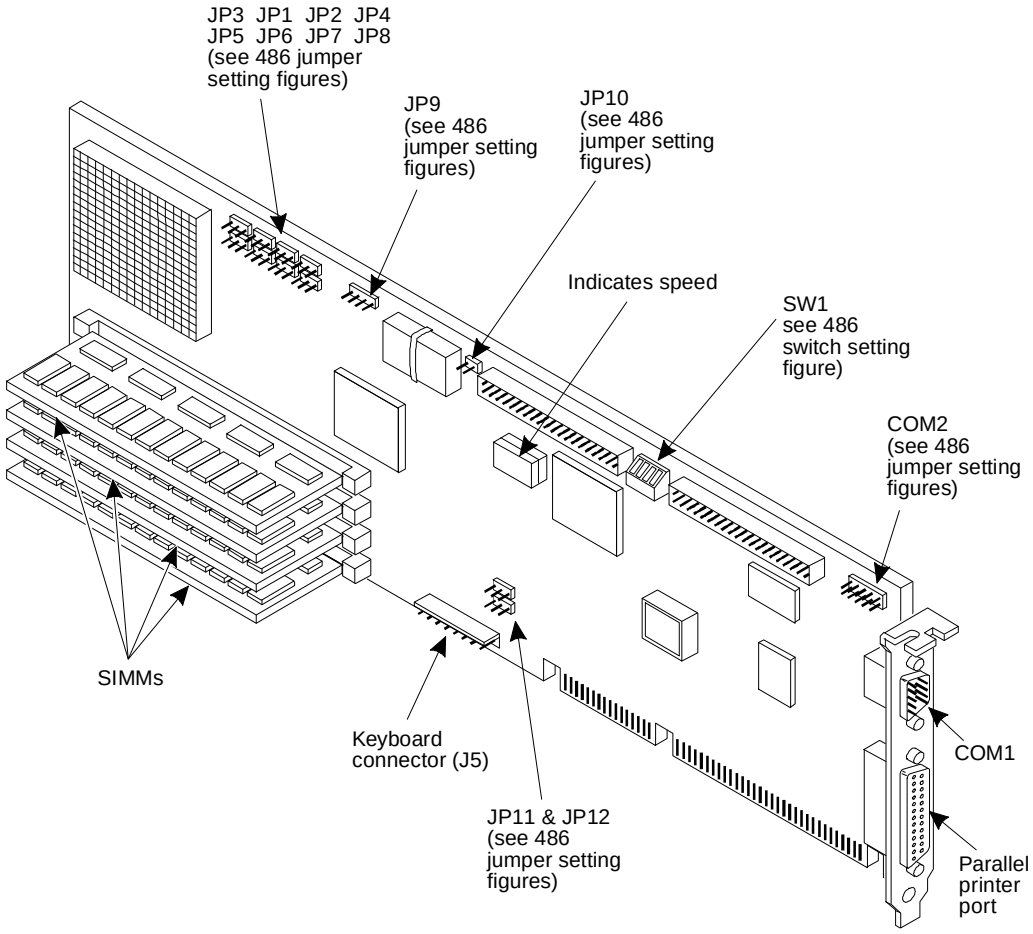


Figure 9-1. 486 CPU Circuit Card, Revision 1

Setting the Resource Options

The manufacturer presets the switches and jumpers on the 486 CPU circuit card. However, before you install the card, you must verify those settings.

Switches

Figure 9-1 shows the location of the rocker switch (SW1) on revision 1 of the 486 CPU circuit card. Verify that it is set as shown in Figure 9-2.

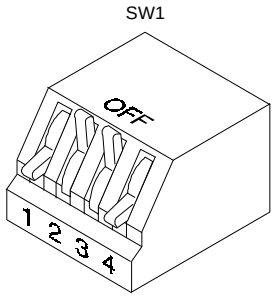


Figure 9-2. Switch Settings for the 486 CPU Circuit Card, Revision 1

Jumpers

Figure 9-1 shows the location of the jumpers (JP1 through JP12) on revision 1 of the 486 CPU circuit card. Verify that they are set as shown in Figure 9-3 for the 25-MHz version and in Figure 9-4 for the 50-MHz version.

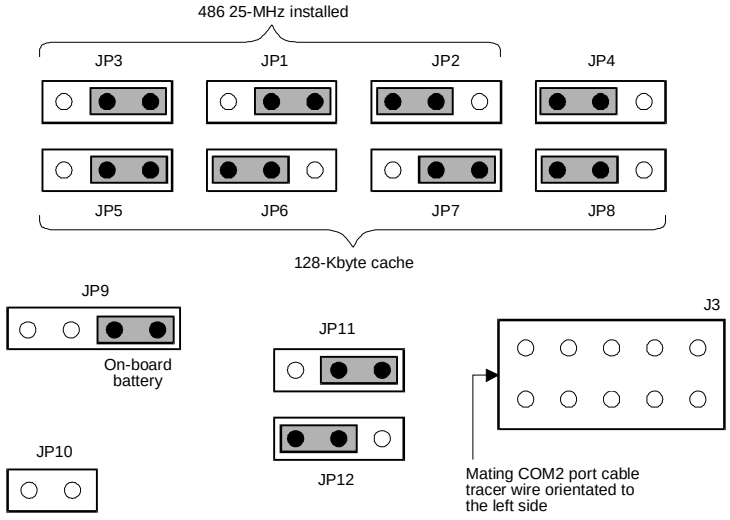


Figure 9-3. Jumper Settings for the 25-MHz 486 CPU Circuit Card, Revision 1

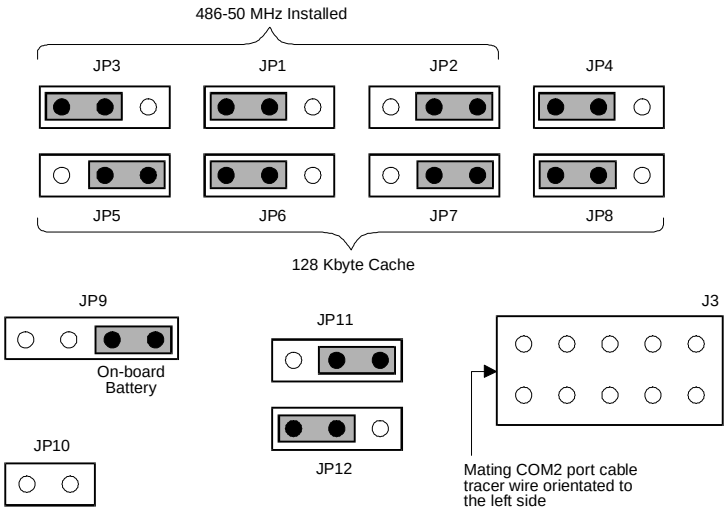


Figure 9-4. Jumper Settings for the 50-MHz 486 CPU Circuit Card, Revision 1

486 CPU Circuit Card, Revision 2

Figure 9-5 shows revision 2 of the 486 CPU circuit card.

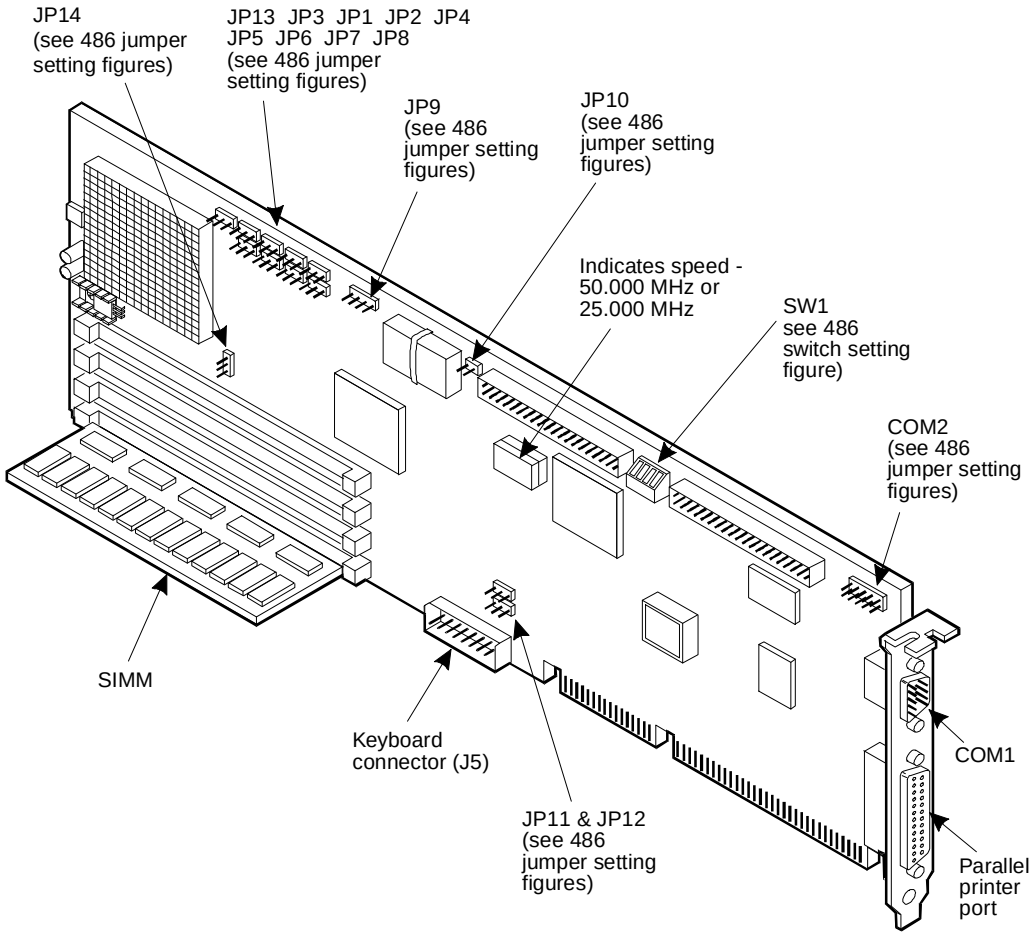


Figure 9-5. 486 CPU Circuit Card, Revision 2

Setting the Resource Options

The manufacturer presets the switches and jumpers on the 486 CPU circuit card. However, before you install the card, you must verify those settings.

Switches

Figure 9-5 shows the location of the rocker switch (SW1) on revision 2 of the 486 CPU circuit card. Verify that it is set as shown in Figure 9-6.

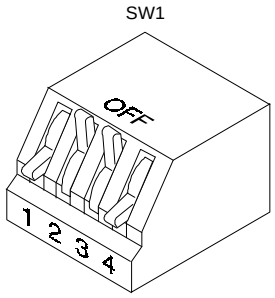


Figure 9-6. Switch Settings for the 486 CPU Circuit Card, Revision 2

Jumpers

Figure 9-5 shows the location of the jumpers (JP1 through JP14) on revision 2 of the 486 CPU circuit card. Verify that they are set as shown in Figure 9-7 for the 25-MHz version and in Figure 9-8 for the 50-MHz version.

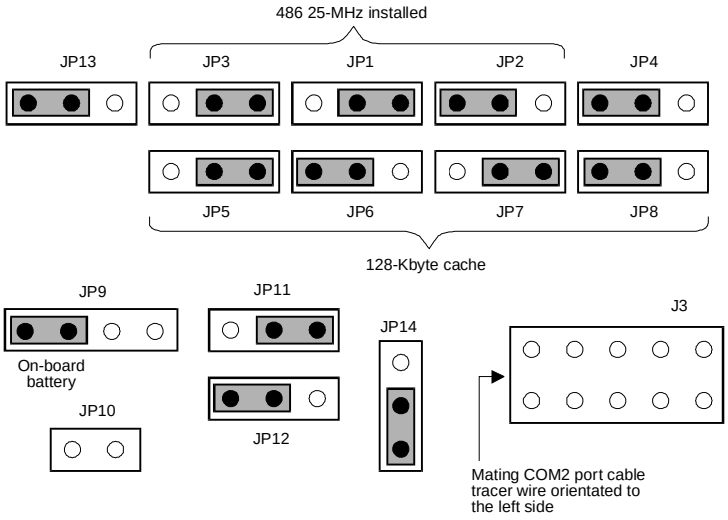


Figure 9-7. Jumper Settings for the 25-MHz 486 CPU Card, Revision 2

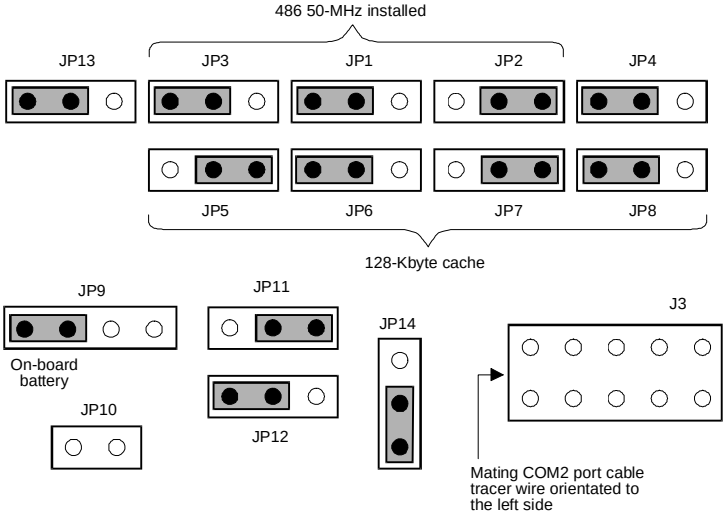


Figure 9-8. Jumper Settings for the 50-MHz 486 CPU Card, Revision 2

Completing the Installation

The following procedures apply to either revision of the 486 CPU circuit card.

Placing the 486 CPU Circuit Card in the MAP/40

1. Align the red marker on the keyboard cable with pin 1 on the keyboard connector in the bottom center of the board.
2. After prefolding the cable neatly and dressing the excess across the CPU card top edge towards the rear I/O mounting, press the connector into place.
3. Connect the COM2 cable to the pin header at the top far right of the card, with the cable tracer wire oriented to the left side of the header.
4. After prefolding the cable, neatly dress the excess down against the CPU card and press the connector into place.
5. Align the faceplate and edge of the circuit card with the circuit card guide and the backplane slot position.

   The card is now over the expansion slot.
6. Lower the card until it touches the slot.
7. Place your thumbs flat on the edge of the card over the connector and push it into the backplane slot.

Ensure that the card is firmly seated in the slot by gently pushing on it; it will not give when firmly seated.

8. Secure the outer retaining bracket (faceplate) of the circuit card with the screw.

Completing the Setup

Once you have completed work within the platform and you are ready to power up, refer to the output of the Configuration Program and the section titled "The 486 CPU Set-Up Utility" on page 3-8 in Chapter 3, "Connecting Peripherals and Powering Up", to determine if you need to make changes in the 486 setup. Follow instructions in that section to complete the setup.

Making Header Connections for Keyboard and Serial Ports

The platform includes cables that connect to the 486 CPU circuit card. These cables connect to the keyboard port, bottom center, and the second asynchronous port (COM2), top far right. Locate the two pin header connectors on the CPU card and the keyboard and COM2 cables inside the platform. Make these connections after you install the 486 CPU card.

The header connector numbers are written on the circuit on the right side of the pin connectors.

The header connectors are numbered as follows:

- J4: COM1; keyed for connection
- J3: COM2; use red tracer for connection
- J5: Keyboard; keyed for connection
- J8: Parallel port; keyed for connection

NOTE:
The 486 CPU circuit card does not use the top two pin connectors labeled for the hard disk and the floppy controller. Make these connections to the SCSI controller card instead.

Installing a SCSI Host Adapter Controller Circuit Card

The SCSI Host Adapter Controller circuit card (Figure 9-9) controls the hard drives, the floppy disk drive and the cartridge tape drive, as well as the SCSI bus LED front chassis panel indicators for these drives.

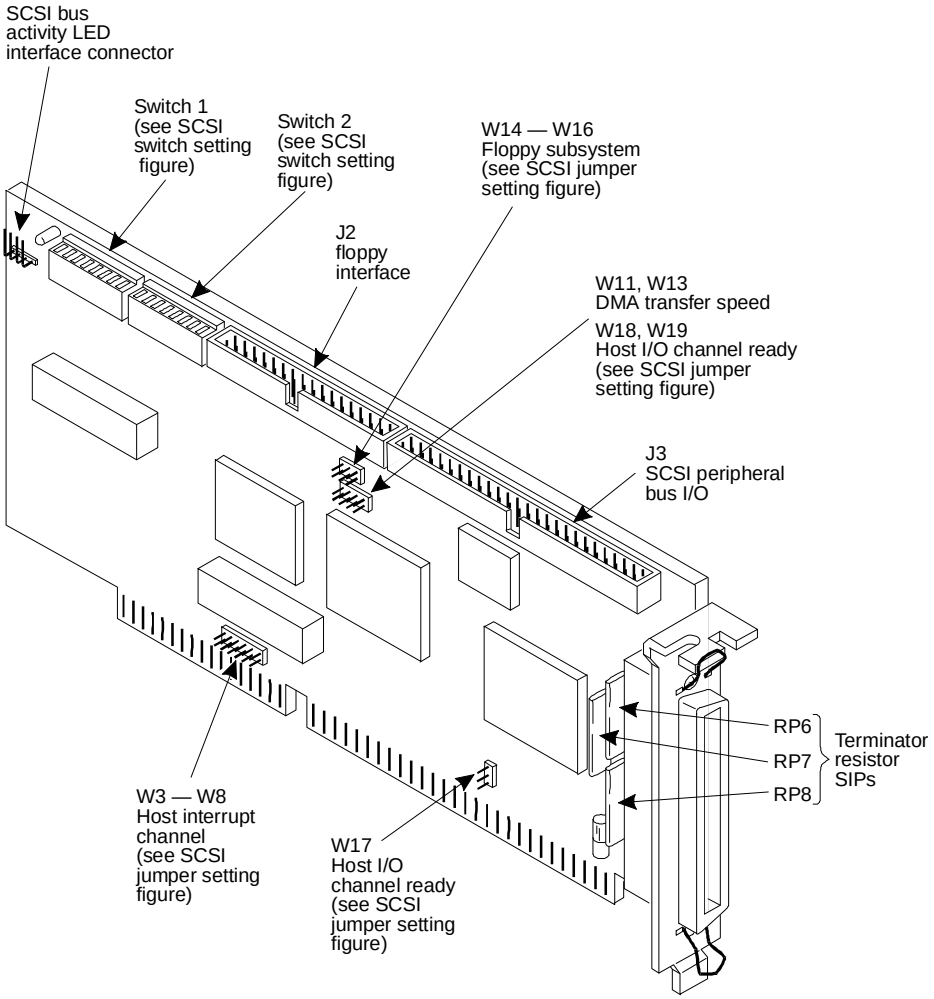


Figure 9-9. SCSI Host Adapter Controller Card

Setting the Resource Options

Switches

Figure 9-9 shows the location of the switches on the SCSI Host Adapter Controller circuit card. Figure 9-10 shows the switch settings. Table 9-1 and Table 9-2 provide a summary of the switch settings (the recommended settings are shown in bold type).

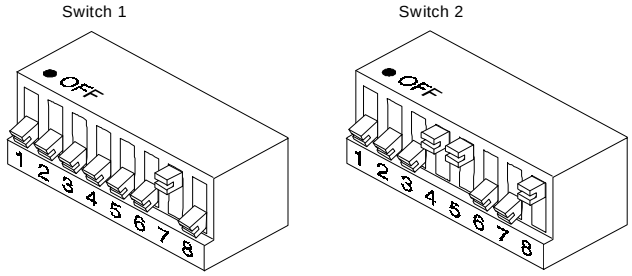


Figure 9-10. Switch Settings for the SCSI Host Adapter Controller Circuit Card

Table 9-1. Summary of Switch Settings for Switch Bay 1 on the SCSI Controller Circuit Card

Function	Switch Number	Switch Setting*	Output Result
Host adapter SCSI ID	1,2,3	OFF, OFF, OFF	0
	1,2,3	ON, OFF, OFF	1
	1,2,3	OFF, ON, OFF	2
	1,2,3	ON, ON, OFF	3
	1,2,3	OFF, OFF, ON	4
	1,2,3	ON, OFF, ON	5
	1,2,3	OFF, ON, ON	6
	1,2,3	**ON, ON, ON**	**7, default**
SCSI parity	4	OFF	Disable
	4	**ON**	**Enable, default**
Disk > 1 Gbyte (not SCO UNIX)	5	OFF	Enable
	5	**ON**	**Disable, default**
Adapter initiate synchronous negotiation	6	OFF	Enable
	6	**ON**	**Disable, default**
Host DMA channel	7,8	OFF, OFF	Disable
	7,8	ON, OFF	7
	7,8	**OFF, ON**	**6**
	7,8	ON, ON	5, default

*Recommended settings are shown in bold.

Table 9-2. Summary of Switch Settings for Switch Bay 2 on the SCSI Controller Circuit Card

Function	Switch Number	Switch Setting*	Output Result
Host I/O port address	1,2,3	ON, OFF, OFF	134H-137H
	1,2,3	OFF, ON, OFF	234H-237H
	1,2,3	OFF, OFF, OFF	Reserved
	1,2,3	ON, ON, OFF	334H-337H
	1,2,3	OFF, OFF, ON	Reserved
	1,2,3	ON, OFF, ON	130H-133H
	1,2,3	OFF, ON, ON	230H-233H
	1,2,3	**ON, ON, ON**	**330H-333H, default**
Host BIOS (16-Kbyte address)	**4,5**	**OFF, OFF**	**0C8000H**
	4,5	ON, OFF	Disable
	4,5	OFF, ON	0D8000H
	4,5	ON, ON	0DC000H, default
Host interrupt	6,7,8	OFF, OFF, OFF	Reserved
	6,7,8	ON, OFF,OFF	Reserved
	6,7,8	OFF, ON, OFF	15
	6,7,8	**ON, ON, OFF**	**14**
	6,7,8	OFF, OFF, ON	12
	6,7,8	ON, OFF, ON	9
	6,7,8	OFF, ON, ON	10
	6,7,8	ON, ON, ON	11, default

*Recommended settings are shown in bold.

Jumpers

Figure 9-9 shows the locations of the jumpers on the SCSI Host Adapter Controller circuit card. Figure 9-11 shows the correct settings for these jumpers. Table 9-3 provides a summary of the jumper settings (the recommended settings are shown in bold).

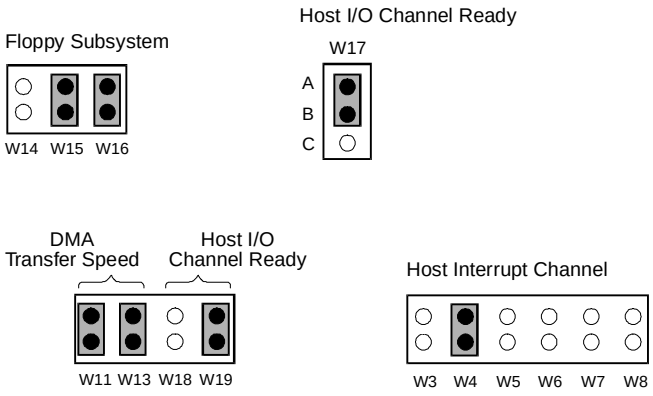


Figure 9-11. Jumper Settings for the SCSI Host Adapter Controller Circuit Card

Table 9-3. Summary of the Jumper Settings for the SCSI Controller Circuit Card

Function	Jumper Number	Jumper Setting*	Output Result
Host interrupt channel	W3	Installed	15
	W4	**Installed**	**14**
	W5	Installed	12
	W6	Installed	11, default
	W7	Installed	10
	W8	Installed	9
DMA transfer speed	W11 W13	Not installed Not installed	5.0 Mbyte/sec
	W11 W13	Not installed Installed	5.7 Mbyte/sec
	W11 W13	Installed, Not installed	6.7 Mbyte/sec
	W11 **W13**	**Installed** **Installed**	**3.3 Mbyte/sec**
Floppy subsystem	**W14**	**Not installed**	**Primary (3FX)**
	W14	Installed	Secondary (37X)
	W15 W16	Not installed Not installed	Disable
	W15 **W16**	**Installed** **Installed**	**Enable, default**
Host I/O channel ready	**W17**	**A-B installed**	**Enable, default**
	W17	B-C installed	Disable
	W18	**Not installed**	**Reserved for spare**
	W19	**Installed**	**Reserved for factory testing**

*Recommended settings are shown in bold.

Placing the SCSI Host Adapter Controller Circuit Card in the MAP/40

CAUTION:
*Use the following procedure to install this circuit card. **Do not** use the instructions shipped by the manufacturer with the card.*

CAUTION:
***Do not** remove the protective cover from the external I/O connector of the SCSI controller card.*

1. Orient the card as shown Figure 9-9.
2. Ensure that the three terminating resistor SIPS are installed on the card (these are labeled as RP6, RP7, and RP8 in Figure 9-9).
3. Ensure that the terminating resistor SIPS are installed on the tape drive.

   NOTE:
   The terminators must be installed on the *first* and *last* physical SCSI peripheral devices on the SCSI cable. Therefore, they must be present on the *SCSI card*, which is always the first device, and on the *tape drive*, which is always the last device on the cable. They must not be present on any of the other SCSI devices. That is, they must not be present on the hard drives, which are always connected in the middle of the cable.

4. Locate the jumpers on the card (these are labeled in Figure 9-9). Set the jumpers using the proper settings as shown in Figure 9-11.
5. Complete the procedure "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types".
6. Locate the SCSI cable coming from the hard drive.
7. Attach this connector to the SCSI controller card.
8. Of the four receptacles that are located toward the short end of the card, connect the disk activity cable to the SCSI controller card to the two that are populated.

Installing a Video Controller Circuit Card

The MAP/40 accommodates a Video Controller circuit card, Model WDXLR831124.

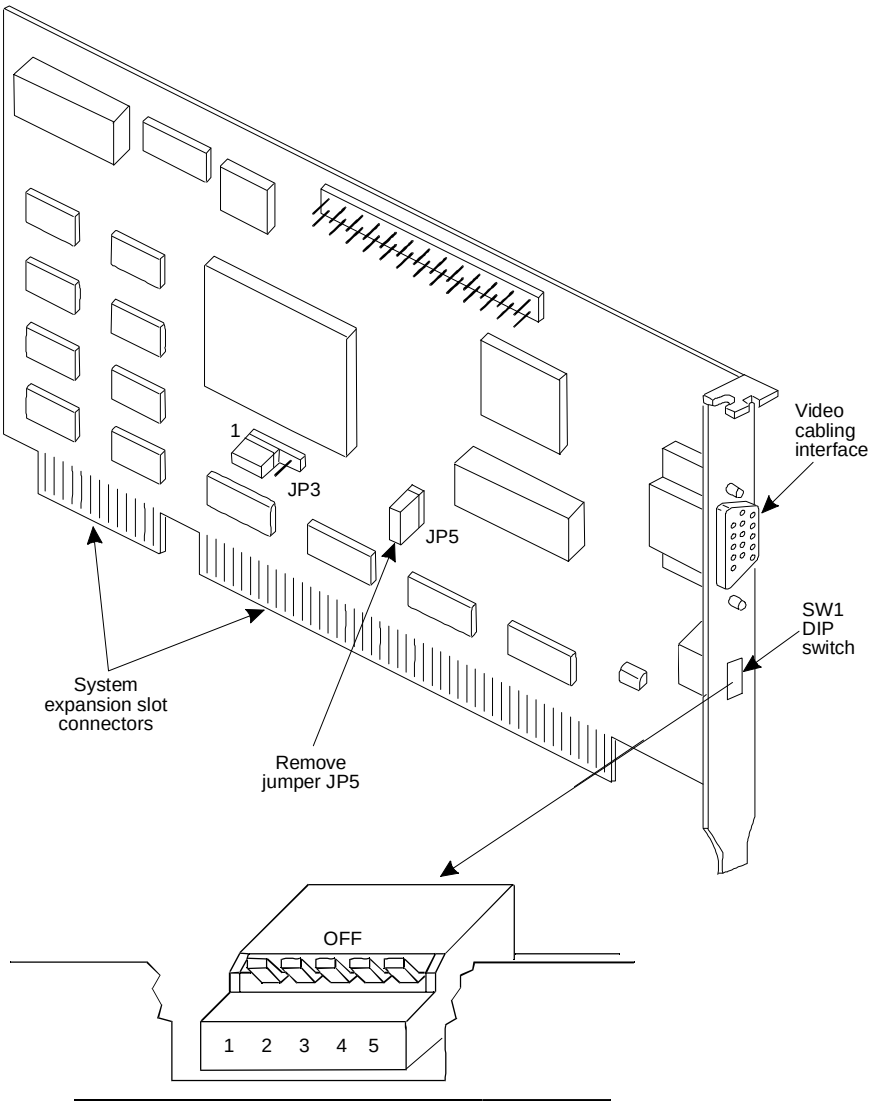


Figure 9-12. Video Controller Circuit Card, Model WDXLR831124

Setting the Resource Options

Switches

1. Position the circuit card in front of you with the gold fingers pointing down as shown in Figure 9-12.
2. Locate the set of five dip switches labeled SW1. These switches control the monitor's mode and vertical and horizontal retrace and scan rate.
3. Set all switches to the OFF position, as shown in Figure 9-12. Use the point of a pen or similar object (see the Caution statement below) to set the switches.

⚠ CAUTION:
Do not use a lead pencil to set the switches. The graphite can damage the card.

Jumpers

1. Locate Jumpers JP5 and JP3 on the circuit card (Figure 9-12).
2. Remove the jumper block from JP5.
3. Install the jumper block on Pins 1 and 2 of JP3. Note that Pin 1 is on the left side of the jumper.

Placing the Video Controller Circuit Card in the MAP/40

After you set the jumpers and switches, follow the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards — Introduction and Types", to place the card in the MAP/40.

In addition, you must also attach the monitor's cable to the video cabling interface port on the Video Controller circuit card. Figure 9-12 shows the location of that interface on the WDXLR831124 Video Controller circuit card.

Installing a Remote Maintenance Circuit Card

The MAP/40 accommodates a Remote Maintenance circuit card (Figure 9-13) to allow for remote diagnostics of basic MAP/40 components.

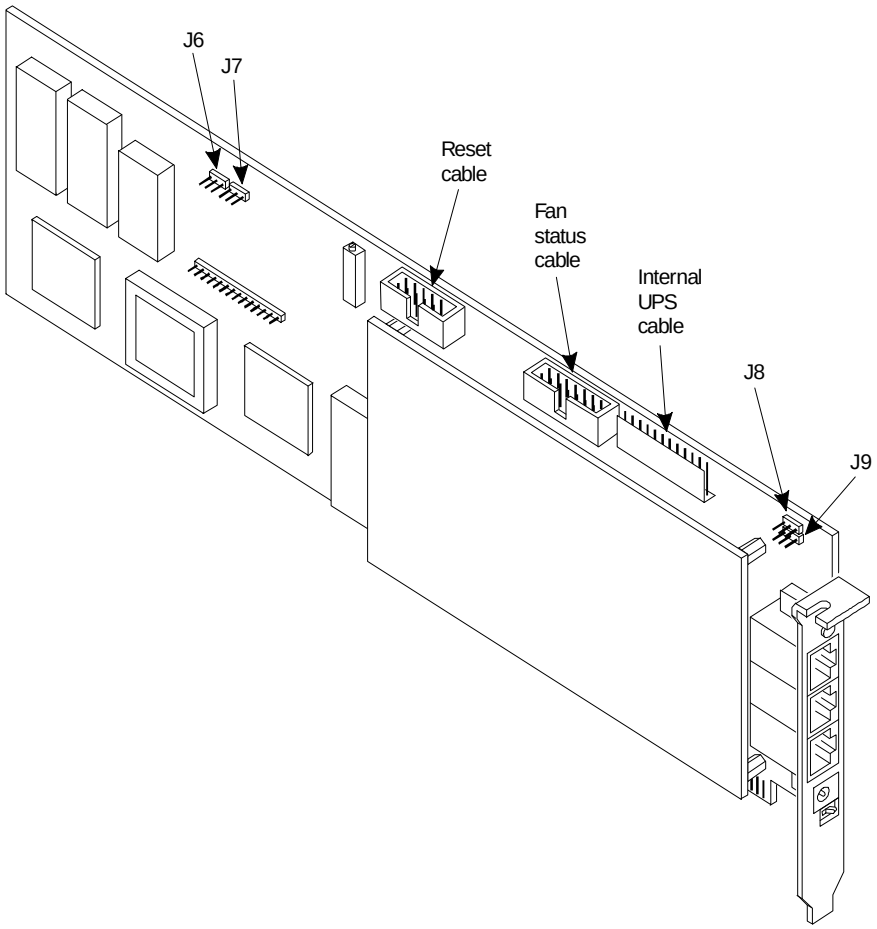


Figure 9-13. Remote Maintenance Circuit Card

Setting the Resource Options

Switches

Figure 9-14 shows the faceplate of the Remote Maintenance circuit card and an enlarged view of the BIOS Extension EPROM (BEE) enable switch. Ensure that this switch is set to the ON (default) position as shown.

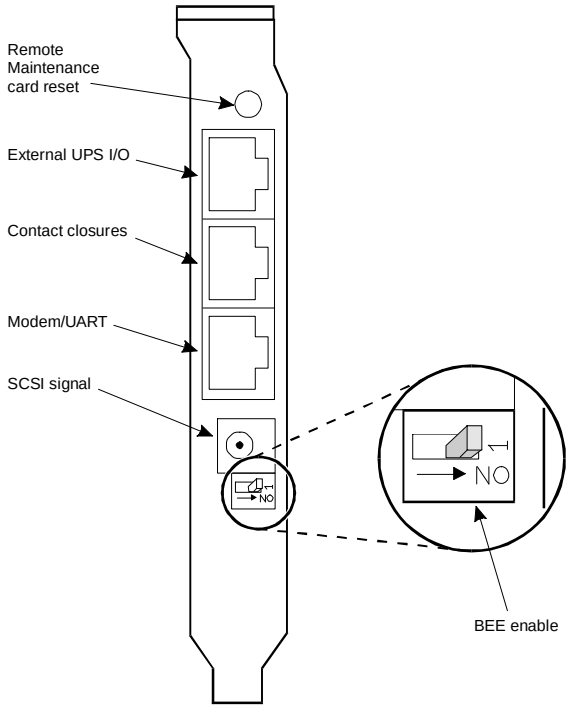


Figure 9-14. Faceplate of the Remote Maintenance Circuit Card Showing the BEE Enable Switch

Jumpers

Figure 9-13 shows the four jumper locations on the Remote Maintenance circuit card (J6, J7, J8, and J9). Ensure that a jumper is installed on pins 1 and 2 of each one as shown in Figure 9-15.

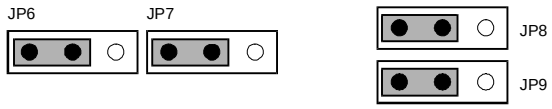


Figure 9-15. Jumper Settings for the Remote Maintenance Circuit Card

Pinouts for Remote Maintenance Circuit Card Connectors

The following tables show the pinouts for the various connectors on the Remote Maintenance circuit card. Figure 9-13 and Figure 9-14 show the locations of these connectors.

Table 9-4. External and Internal UPS Status Signals

External UPS I/O	Internal UPS I/O	Signal Direction	Label	Description
1	9	Input	UPSChrgngB-P	UPS Fast Charging Battery, positive input
2	1	Input	UPSOnB-P	UPS on Battery, positive input
3	2	Input	UPSOnB-N	UPS on Battery, negative input
4	3	Input	UPSLwB-P	UPS has a Low Battery, positive input
5	4	Input	UPSLwB-N	UPS has a Low Battery, negative input
6	5	Input	UPSFl-P	UPS malfunction or overload, positive input
7	6	Input	UPSFl-N	UPS malfunction or overload, negative input
8	7	Output	UPSEPO-P	UPS Emergency Power Off, positive output; for UPS models with this feature, the UPS will shut off power to the platform
9	8	Output	UPSEPO-N	UPS Emergency Power Off, negative output; for UPS models with this feature, the UPS will shut off power to the platform
10	10	Input	UPSChrgngB-n	UPS Fast Charging Battery, negative input
N/A	11	Input	UPSChrgF-P	UPS Charge Fault, positive input
N/A	12	Input	UPSChrgF-N	UPS Charge Fault, negative input

Table 9-5. Fan Status Signals

Pin	Label	Notes
1	Not Connected	
2	Not Connected	
3	Front Fan 4	Normal = -2.1V, Fault +0.77V
4	Not Connected	
5	Front Fan 2	Normal = -2.1V, Fault +0.77V
6	Front Fan 3	Normal = -2.1V, Fault +0.77V
7	Exhaust Fan	Normal = -2.1V, Fault +0.77V
8	Front Fan 1	Normal = -2.1V, Fault +0.77V
9	Power Fail	Not connected to the Remote Maintenance circuit card
10	Power Supply Fan	Normal = -2.1V, Fault +0.77V
11	Ground	Not connected to the Remote Maintenance circuit card
12	Ground	Not connected to the Remote Maintenance circuit card
13	+12V	Not connected to the Remote Maintenance circuit card
14	+5V	Not connected to the Remote Maintenance circuit card

Table 9-6. CPU Reset Signals

Pin	Label	Pin	Label
1	KBD Clk	2	Ground
3	KBD Clk	4	Not Connected
5	KBD Inhibit	6	Not Connected
7	+5V PWR	8	Not Connected
9	Reset	10	Ground

Table 9-7. Remote Maintenance Circuit Card Contact Closures

RJ-68 Pin	Signal Direction	Description/Label
1	Output	Warning/Critical NPN Collector/Closure
2	Output	Major NPN Collector/Closure
3	Output	Major NPN Emiitter/Closure
4	Output	Minor NPN Collector/Closure
5	Output	Minor NPN Emitter/Closure
6	Output	Pulldown
7	Output	Pullup
8	Input	Remote Reset Positive
9	Input	Remote Reset Negative
10	Output	Warning/Critical NPN Emitter/Closure

Placing the Remote Maintenance Circuit Card in the MAP/40

After you set the resource options, turn to the "General Procedure for Circuit Card Installation" on page 6-7 in Chapter 6, "Installing Circuit Cards —Introduction and Types". Read the introductory information and complete *Steps 1 through 7* of the section labeled "Procedure" on page 6-8. Then return to this chapter and continue with the following section, “Connecting the Remote Maintenance Circuit Card in the MAP/40.”

Connecting the Remote Maintenance Circuit Card in the MAP/40

1. Locate the CPU/Remote Maintenance circuit card keyboard adapter (391A adapter) in the MAP/40 (see Figure 9-16).
2. Locate the reset cable (Figure 9-17) that is connected to the CPU/Remote Maintenance circuit card keyboard adapter. The reset cable is on the right side behind all the circuit cards (if you are viewing the MAP/40 from the front as shown in Figure 9-16).

   NOTE:
   It may be necessary to remove one of the other cards in a lower-position slot to reach the reset cable and pull it out. If you must remove another card, be sure to first note the cable placement and slot location.

3. Insert the Remote Maintenance circuit card into slot #11. Align the circuit card faceplate and the edge of the circuit card with the circuit card guide and backplane slot position. The card is now next to the expansion slot. Move the card until it touches the slot.
4. Place your thumbs flat on the edge of the card over the connector and push it into the backplane slot. Firmly push on the card until it is completely seated.
5. Attach the reset cable to the Remote Maintenance circuit card as shown in Figure 9-18.
6. Secure the card with a screw through the faceplate.
7. Connect the suppression cable to the external modem connection on the faceplate of the Remote Maintenance circuit card (see Figure 9-14 for the location of the modem/UART connection) and to the modem.
8. Connect any external modem, serial, and/or alarm cables to the Remote Maintenance circuit card.
9. Recheck all the cable dressing (routing) and connections.
10. If you have completed work inside the MAP/40, close the card cage and/or peripheral bay access door, replace the dress covers, and power up the MAP/40. See Chapter 5, "Getting Inside the Chassis", for more information.

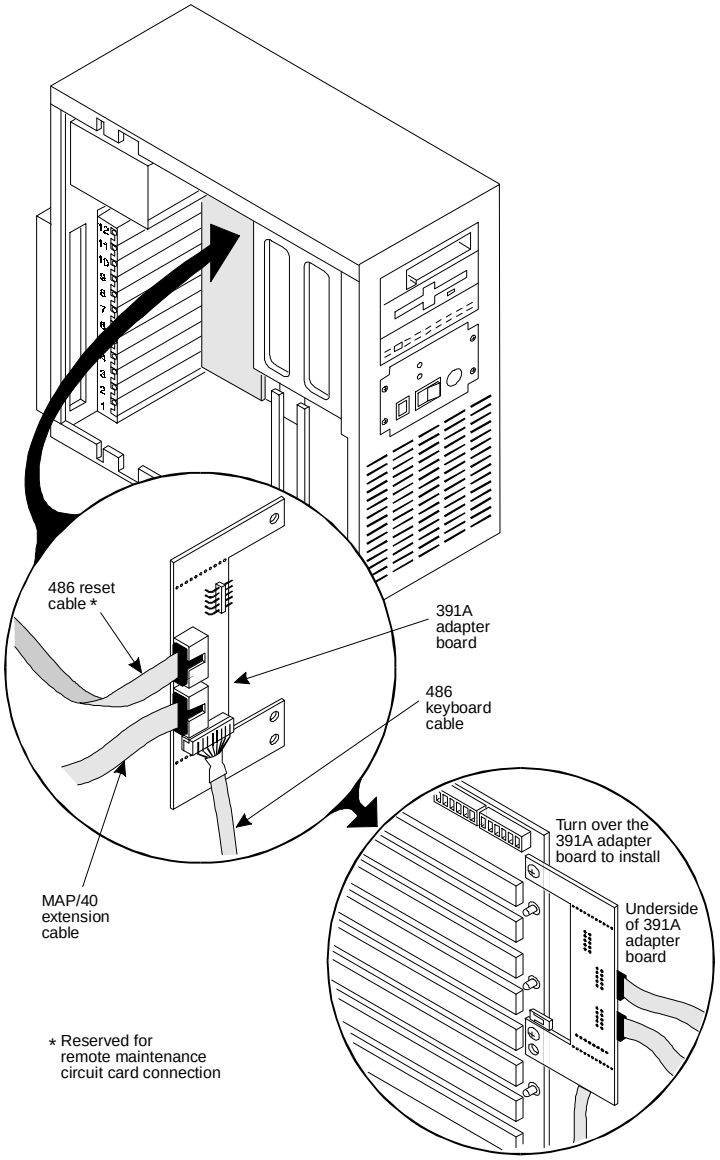


Figure 9-16. CPU/Remote Maintenance Circuit Card Keyboard Adapter Installed in the MAP/40

Figure 9-17. MAP/40 Remote Maintenance Circuit Card Reset Cable

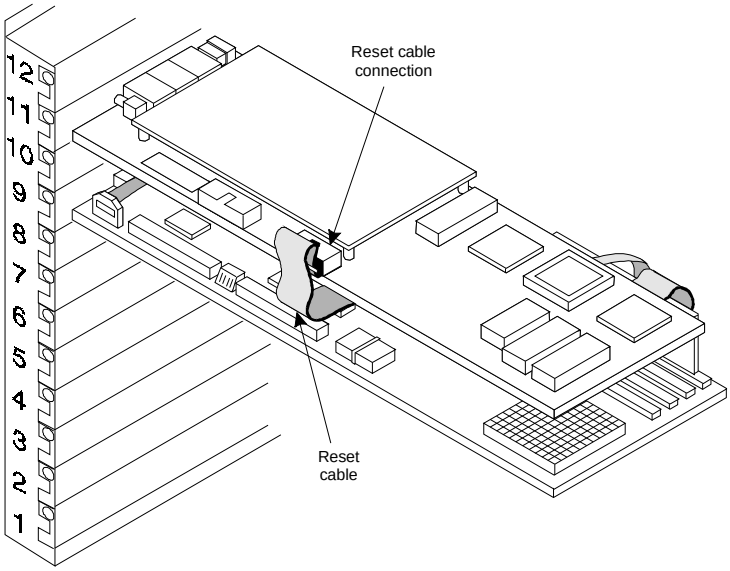


Figure 9-18. Remote Maintenance Circuit Card Installed and Cabled in the MAP/40

Installing Optional Hardware

10

What's in This Chapter

This chapter describes how to

- Add to or replace the memory on the CPU circuit card
- Install an additional hard disk drive
- Install a Tip/Ring (T/R) distribution panel
- Install a mouse
- Install a Graphical Speech Editor

CAUTION:
Observe proper electrostatic discharge precautions when you handle computer components. Wear an antistatic wrist strap that touches your bare skin and connect the strap cable to an earth ground.

Adding or Replacing Memory

The 486 CPU circuit card (Figure 10-1) comes equipped with 32 MByte of memory. You can add additional 16-MByte SIMMs up to a total of 64 MByte (this is a maximum of two additional SIMMs). The following procedure describes how to add new SIMMs or replace existing SIMMs that are no longer functioning.

NOTE:
See "Determining if SIMMs Are Damaged" on page 10-5 if you suspect poor system performance due to a malfunctioning SIMM.

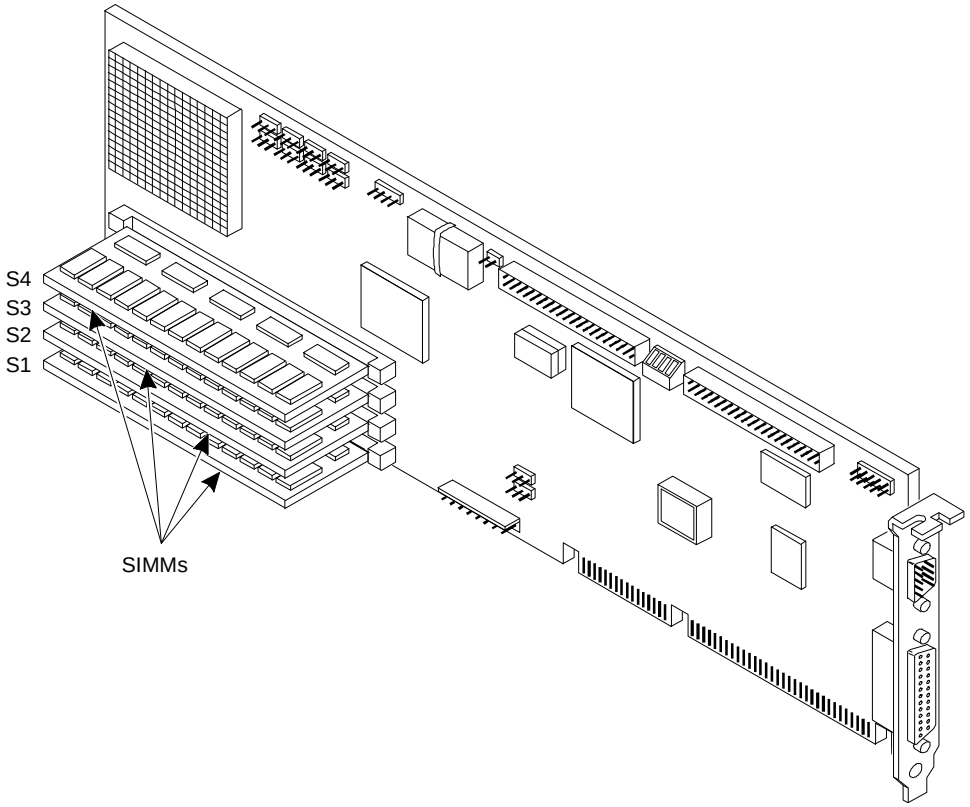


Figure 10-1. SIMM Sockets on the 486 CPU Circuit Card

Procedure

1. Verify that the new or replacement SIMMs appear to be in usable condition, that is, there is no obvious shipping damage, etc.
2. If you are currently connected to a digital telephone network, notify the service provider that you are disconnecting. They will ask you which extensions will be affected.

   CAUTION:
   If you disconnect the MAP/40 from the telephone network on a continuing basis without letting the service provider know, they can disconnect your service permanently. (This applies to digital circuits ONLY.)

3. Perform a shutdown of the operating system and turn off power to the MAP/40. See "Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for the procedure.
4. Tag the power plugs with a note indicating that no one but you should reconnect power to this equipment.
5. Remove the parallel port (printer) and COM1 connector from the CPU card.
6. Remove the dress covers and open the card cage. See Chapter 5, "Getting Inside the Chassis", for more information.
7. Remove the screws in the circuit card hold-on bracket and remove the bracket.

   NOTE:
   Do *not* lose the screws. Place them where you can relocate them.

8. Carefully remove any internal connecting cables attached to the CPU card. Use the pull tabs when they are available to reduce damage to the connector pin fields.

   CAUTION:
   Even though some cable slack is provided, it is better to disconnect the CPU COM2 port and keyboard ribbon cable connected to the rear of the chassis before you remove the CPU card.

9. Remove the retaining screw of the face plate for slot #11.

   NOTE:
   Do *not* lose the screw. Place it where you can relocate it.

10. Gently remove the CPU card from the slot.

11. Lay the CPU card on an appropriate flat, clean surface that is protected against electrostatic discharge.
12. To remove an existing SIMM, gently release the metal snap locks at the edge of the SIMM connectors. Rotate the SIMM downward to a 60-degree angle and remove it.
13. To install a new SIMM, position it at an approximate 60-degree angle with respect to the circuit card.

    NOTE:
    Install a new SIMM in the slot adjacent to the last SIMM installed. Do not leave any empty sockets between SIMMS.

14. Push down at that angle until you feel the SIMM reset into the SIMM carrier.

    NOTE:
    All SIMMs are keyed to prevent you from inserting them incorrectly.

15. Snap the SIMM into place by rotating it to an upright position. The metal snap locks on the ends of the connector for the SIMM will open and then lock when in the upright position.
16. Ensure that the connector guide pins are seated into the clearance holes provided at the end of each SIMM. When they are properly seated, the guides should be fully extended into the circuit card clearance holes.
17. Place the circuit card in the slot. Align the circuit card faceplate and edge of the circuit card with the circuit card guide and the backplane slot position. The card is now beside the expansion slot. Move the card until it touches the backplane slot connector.
18. Place your thumbs flat on the edge of the card over the connector and push it into the backplane slot. Ensure that the card is firmly seated in the slot by gently pushing on it. The card will not give when it is firmly seated.
19. Complete the following Steps a through e to reinstall the keyboard and COM2 ribbon cable connectors. See Chapter 9, "Installing Standard MAP/40 Circuit Cards", for more information on CPU connectors.

    a. Align the red marker on the keyboard cable with Pin 1 in the third connector (P303) from the CPU faceplate.

       NOTE:
       “Pin 1” is printed on the circuit card.

    b. Prefold the cable neatly and dress the excess across the CPU card top edge (towards the rear I/O mounting). Press the connector into place.

    c. Align the red marker on the COM2 cable with Pin 1 in the closest connector (P302) to the faceplate.

d. Prefold the cable neatly and dress the excess across the CPU card top edge (towards the rear I/O mounting). Press the connector into place.

e. Ensure that the two cables that are part of the CPU circuit card are neatly dressed to reduce congestion and interference if adjacent cards are removed.

20. If you have completed work in the card cage and in the MAP/40, complete the following Steps a through g:

a. Replace the cover plate retaining screw by placing it through the card faceplate opening.

b. Close the card cage access door.

c. Replace the dress covers. See Chapter 5, "Getting Inside the Chassis", for more information on replacing the card cage access door and dress covers.

d. Reconnect the input AC power cord, keyboard, and monitor.

e. Replace the parallel port (printer) and COM1 connectors to the CPU faceplate.

f. Reconnect the telephone lines or trunk connections.

g. Power up the MAP/40.

NOTE:
The system senses the quantity of installed memory during the initial setup of the CPU card and requires no additional hardware setup.

Determining if SIMMs Are Damaged

The MAP/40 486 CPU circuit card supports up to four 16-Mbyte SIMMs. You must test each one individually if poor system performance leads you to suspect memory damage. Figure 10-1 shows the location of the SIMMs on the 486 CPU circuit card.

Before You Begin

Ensure that all four SIMMs are properly seated in their slots. If any SIMM is not, seat it properly and then reboot the system. If the system shows an amount of memory that equals that installed on the card, you have corrected the problem. If the system shows an amount of memory that is less than that installed on the card, complete the following procedure to find the damaged SIMM.

Procedure

1. Remove the 486 CPU circuit card from the MAP/40.
2. Remove the *top* SIMM from the card (this is labeled “S4” in Figure 10-1).
3. Reinstall the 486 CPU circuit card and boot the system.

4. If the amount of memory shown by the system equals the amount of memory still installed on the card, the SIMM you removed was damaged and you must replace it. See "Adding or Replacing Memory" on page 10-2 for instructions on how to replace a SIMM.

   If the amount of memory shown by the system is not equal to the amount of memory still installed on the card, one of the remaining SIMMs is damaged. Repeat Steps 2 through 4 until you locate the damaged SIMM or you have checked all SIMMs on the card.

Installing a Hard Disk Drive

The MAP/40 comes equipped with a SCSI disk drive. You can add a second SCSI hard disk drive for increased storage. The preparation and installation procedures in this section are the same for either drive.

Table 10-1 shows the hardware configuration for a two-disk system. Table 10-2 shows the hardware configuration for a single-disk system with mirroring.

See *Intuity CONVERSANT VIS V5.0 System Description*, 585-310-225, for more information on supported SCSI disk configurations and the purpose of SCSI disk mirroring.

Table 10-1. Hardware Configuration for a Two-Disk System without Mirroring*

Physical Address	Disk Name	Disk Use	SCSI ID	Bay No.	Order of Installation
c0t0d0	disk01	System disk	0	1	First
c0t1d0	disk02	Speech disk	1	3	Second

*In this system, the tape drive is the terminated device.

.

Table 10-2. Hardware Configuration for a Single -Disk System with Mirroring*

Physical Address	Disk Name	Disk Use	SCSI ID	Bay No.	Order of Installation
c0t0d0	disk01	System disk	0	1	First
c0t1d0	disk02	Mirrors disk01	1	3	Second

*In this system, the tape drive is the terminated device.

Preparing the MAP/40 for Disk Installation

1. If you are currently connected to a digital network, notify the service provider that you are disconnecting. They will ask you which extensions are affected.

   CAUTION:
   If you disconnect the MAP/40 from the telephone network on a continuing basis without notifying the service provider, they can discontinue your service permanently. (This applies to digital circuits ONLY.)

2. Perform a shutdown of the operating system and turn off power to the MAP/40. See "Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for the procedure.
3. Tag the power plugs with a note indicating that no one but you should reconnect power to this equipment.
4. Remove the dress covers and right front door.
5. Open the access door to the peripheral bay. See Chapter 5, "Getting Inside the Chassis", for more information.
6. Loosen the four captive screws on the front of the peripheral bay and slide the bay out.
7. Verify the number of disks currently in the platform.
8. Remove one screw on each side of the appropriate filler panel.
9. Reach through the inside of the MAP/40 peripheral bay to behind the filler panel.
10. Push out the filler panel and discard it.

Continue with the next procedure, “Preparing a SCSI Disk for Installation.”

Preparing a SCSI Disk for Installation

CAUTION:
Handle the SCSI disk with care. It is an extremely sensitive device and mishandling it could void the warranty.

1. Remove the installation kit and bag of screws from the top of the hard disk carton. Open the box containing the hard disk. Cut the top seam and side seams so that the box can be used again should you need to return the hard disk to the factory.

   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 carton has been designed to prevent damage and ensure product warranty.

2. Remove the disk from the antistatic bag. Keep the bag with the shipping carton.
3. Place the disk on its back, a solid aluminum surface, with the circuitry up.
4. Verify that there is no faceplate/bezel attached to the front of the disk drive. If there is one, remove it.
5. Verify that the jumpers are positioned correctly (see Figure 10-2 for the location of the jumpers on the drive and Figure 10-3 and Figure 10-4 for the jumper settings).
6. Correct the jumper settings if necessary.
7. Remove terminator resistors RN1 and RN2.

   CAUTION:
   If you must reinstall the terminating resistors, ensure that they are properly oriented. Pin 1, which is designated by a dot on the resistor SIP, must be next to the W1/W2 jumpers for both RN1 and RN2.

8. Set the disk aside and open the Universal Installation Kit.

   The kit contains two bags. One bag contains the LED lenses, the LED with the connector cable assembly, and the faceplate. The second bag contains the mounting rails, spacer bar, and screws for assembly and mounting.

9. Discard the LED lenses, the LED connector cable assembly, the faceplate, and the spacer bar. You do not need these items to assemble the hard disk.

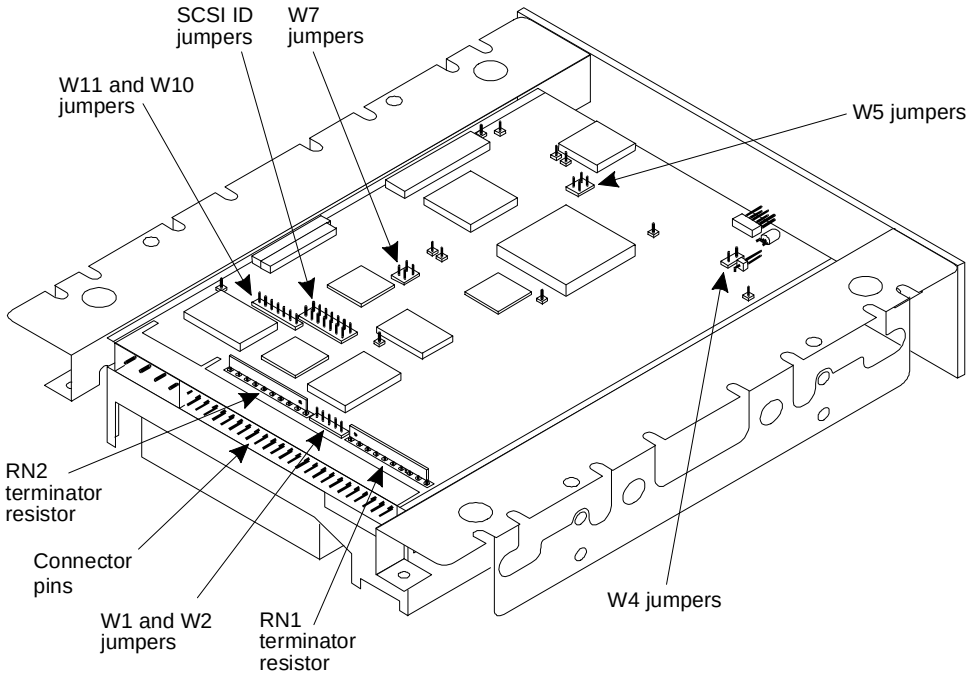


Figure 10-2. 1.7-Gbyte SCSI Hard Disk Drive

10. Assemble the installation kit according to directions on the box (see Figure 10-5).
11. Place the mounting rails parallel to each other with the smaller of the two flanges of the rails on the inside.
12. Locate the drive with the metal face up between the rails. Ensure that the connector end of the drive unit is flush with the ends of the mounting rails as shown in Figure 10-5 on page 10-13.
13. Align the mounting holes of the drive and the mounting rails.
14. Insert four #6-32 x 3/16-in. screws (two screws per side) and tighten. Ensure that the back connector edge of the drive is flush with the rail ends as shown in the instructions.
15. Mount the plastic faceplate and secure it to the extended bracket ends using two #6-32 x 3/16-in. screws.

Continue with the next procedure, "Mounting a SCSI Disk in the MAP/40."

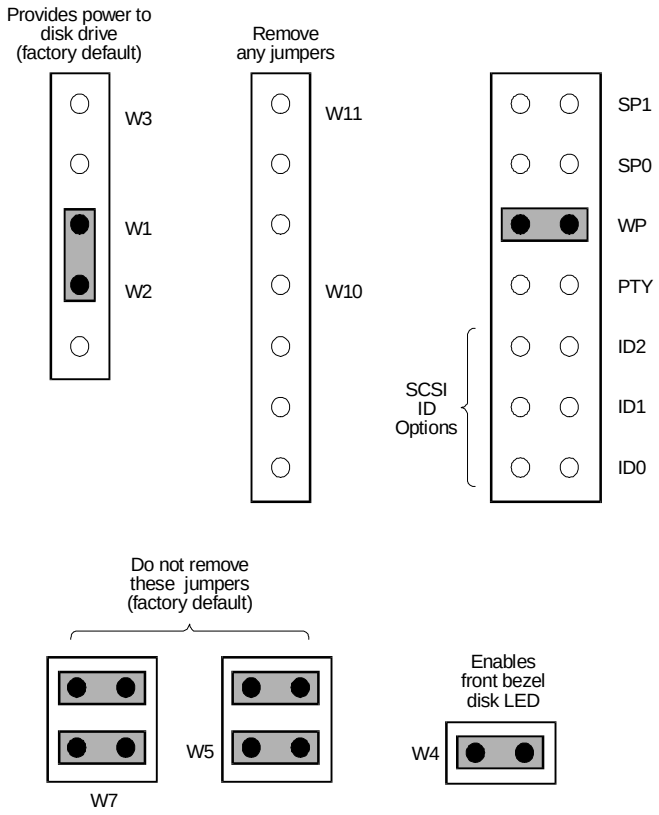


Figure 10-3. Jumper Settings for SCSI Hard Disk Drive 0 (First Drive)

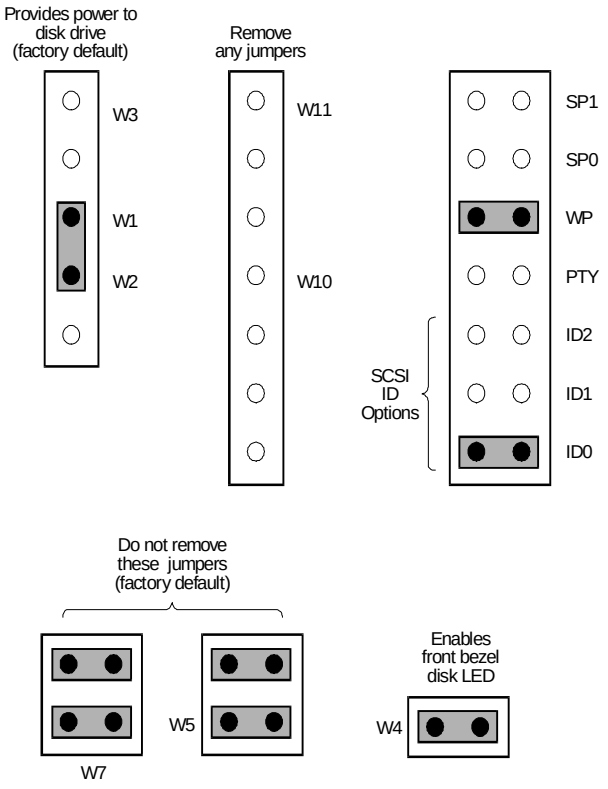


Figure 10-4. Jumper Settings for SCSI Hard Disk Drive 1 (Second Drive)

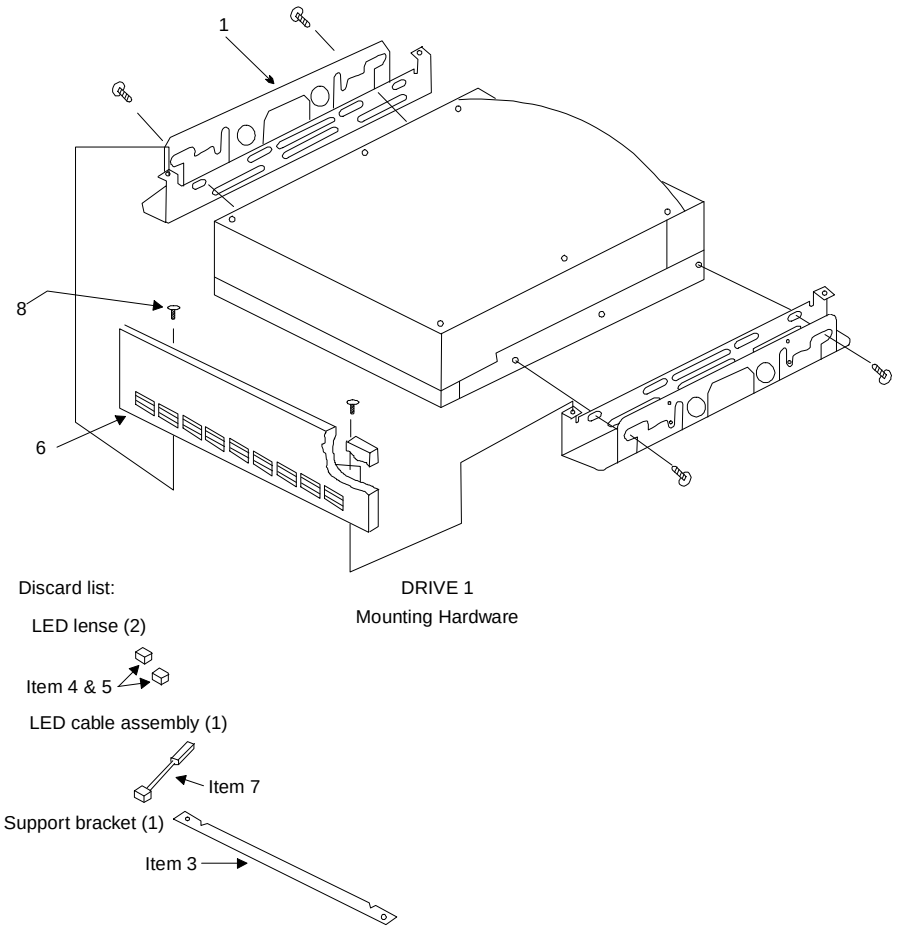


Figure 10-5. Universal Installation Kit

Mounting a SCSI Disk in the MAP/40

1. Position the drive.

   NOTE:
   Ensure that the aluminum case of the drive is face up. The mounting rails prevent the circuitry from touching the work table and adjacent chassis components once the disk is mounted in the MAP/40.

2. On either side of the MAP/40, locate the bottom third set of slots just behind the front of any of the peripheral bays you are using.
3. Use the screws provided with the bracket kit to secure the drive to the peripheral bay through the bottom slot.

NOTE:
Even though there are two threaded holes located just above each other, use only the bottom position to secure the disk drive/mounting brackets inside the MAP/40.

4. Place the drive in the MAP/40, sliding it through the front entry area. Hold the drive unit from inside the peripheral bay area when you align the bracket with the holes.
5. Insert two screws on each side of the disk in the first bottom mounting hole. Lock the screw in place, but do not tighten it.
6. Lift up the drive from the back and position it so you can see the back bottom mounting holds through the bottom slot position.
7. Lock the screws in place on either side, but do not tighten them.
8. Adjust the bracket depth so the faceplate is even with the back edge of the bezel or flush with the adjacent floppy disk drive bezel. Loosen the two front side screws if necessary.
9. Lock the screws firmly in place.

Continue with the next procedure, “Connecting Cables to the SCSI Drive.”

Connecting Cables to the SCSI Drive

1. Align the connector on the SCSI cable with the gold pins on the cable receptacle of the hard drive and push the connector into the cable receptacle (see Figure 10-2 for the location of the connector pins).

   NOTE:
   All cables are keyed to prevent you from installing them incorrectly.

2. Attach the power cable to the hard disk in the same manner.
3. Dress all cabling together neatly and affix it to the peripheral bay assembly by adjusting the plastic cable retainer that is part of the assembly.

   NOTE:
   When the MAP/40 is shipped from the factory, this retainer holds all disk cables in place. You can see this cable retainer by looking through the right side door. To release it, pull on the tab at the top of the retainer. Press on the retainer to secure it.

Finishing Up

1. Close the card cage and/or peripheral doors if you have finished working on the MAP/40.
2. Replace the exterior dress covers and reconnect the keyboard, the monitor, and power. See Chapter 5, "Getting Inside the Chassis", for more information.
3. Power up the unit.
4. Access and connect the 486 CPU Set-up Utility Main Menu so that the MAP/40 will recognize the new hard disk drive(s).

   See "The 486 CPU Set-Up Utility" on page 3-8 in Chapter 3, "Connecting Peripherals and Powering Up", for information on changing the set-up menu.
5. Run diagnostics to verify that the hardware is functioning properly.
6. Notify the service provider that you are back on line.

NOTE:
You do not have to low-level format the SCSI hard disk. The manufacturer does this prior to shipping.

Installing the Tip/Ring Distribution Panel

This section describes the MAP/40 T/R distribution panel, how to assemble the panel kit, and how to make the required connections from the panel to the T/R cards.

Function of the Tip/Ring Distribution Panel

The MAP/40 T/R distribution panel provides a simplified wiring scheme for connecting to the local customer-premise equipment or building connecting block provided by the central office.

Capacities of the Tip/Ring Distribution Panel

The MAP/40 T/R distribution panel allows you to connect 48 channels (up to eight T/R circuit cards).

Before You Begin

You will use 25-pair, high-density cables (USOC RJ21X) to make the connections between the T/R distribution panel and customer premise equipment or connecting block. One of these cables is supplied with the distribution panel kit. However, this cables terminates only 24 lines. Therefore, *if you are connecting 48 channels to the distribution panel, you will need an additional cable that is not a part of the kit.* Before you begin, ensure that this cable was ordered and is on-site with the distribution panel kit(s).

Procedure

NOTE:
Figure 10-6 shows the T/R distribution panel assembly.

1. Verify that the distribution panel assembly kit is on site and appears to be in usable condition (that is, it has sustained no obvious shipping damage) and that the following components are included:
   - Distribution panel circuit pack assembly mounted in its base
   - A top cover plate
   - Four 6-32X.25-in. screws and lock washers
   - A 25-ft 50-conductor interface cable for the first 24 channels

NOTE:
An additional cable is required for the second 24 channels coming out of this panel. See "Before You Begin" on page 10-16.

2. If you are currently connected to the telephone network, notify the service provider that you are disconnecting. They will ask you which extensions will be affected.
3. Perform a shutdown of the operating system and turn off power to the MAP/40. See "Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for the procedure.
4. Table 10-3 shows the numbering scheme for connecting the short modular cords provided with the T/R circuit cards to the panel. Use this information, the channel numbers on the T/R circuit cards, and the number of T/R circuit cards in the system to connect the T/R circuit card modular jacks to the appropriate jacks on the T/R distribution panel.
5. Make telephone line connections to the MAP/40 with the 25-ft 50-conductor shielded cable(s) equipped with USOC RJ21X connections.
6. Mount the rear cover plate to the distribution panel cover with the four screws provided.
7. Mount the T/R distribution panel to a wall or cabinet or allow it to rest on a shelf or the floor.

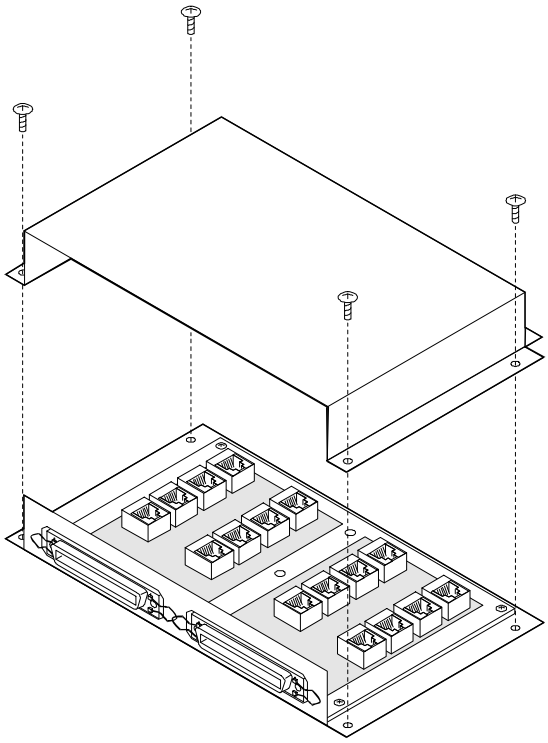


Figure 10-6. MAP/40 Tip/Ring Distribution Panel Assembly

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Table 10-3. Connecting the Modular Cords from the MAP/40 Tip/Ring Circuit Cards to the Tip/Ring Distribution Panel

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

Installing a Mouse

NOTE:
The three-button mouse (Figure 10-7) that is optional with the MAP/40 includes a cord, an attached 9-pin connector, and a separate 9- to 25-pin adapter. *You will not use the adapter* to install the mouse on the MAP/40.

Complete the following steps to add a mouse to the MAP/40:

1. Connect the 9-pin connector on the mouse to the 9-pin serial port labeled COM2 on the back of the MAP/40.
2. Tighten the thumbscrews so that the connector is firmly seated and does not move when you move the mouse cord.

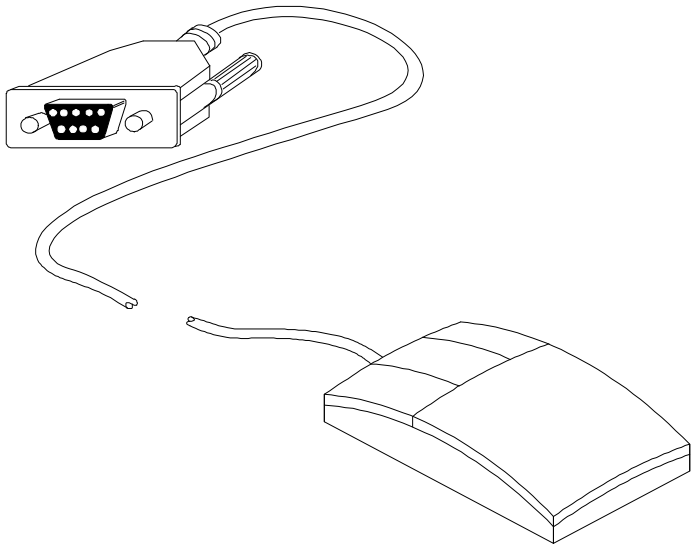

Figure 10-7. Mouse with a 9-Pin Serial Connector

Installing a Graphical Speech Editor

You can add a Graphical Speech Editor to the MAP/40 in one of three configurations:

- Microphone and speaker
- Voice workstation system tip/ring (T/R) interface
- Telephone switch

Microphone and Speaker Configuration

Required Equipment

- Microphone
- Speaker

Procedure

CAUTION:
The input impedance of the AUDIO IN jack on the VWS-TR interface module is 600 ohms. Do not attempt to drive this input with an audio source with an impedance of less than 600 ohms.

1. Locate the selected T/R circuit card at the back of the MAP/40.
2. Plug the microphone cable into the AUDIO IN jack on the faceplate of the T/R circuit card (Figure 10-8). This connection dedicates line 0 of the T/R circuit card.
3. Plug the speaker cable into the AUDIO OUT jack.

NOTE:
If you are using an *external* amplifier, turn it to the lowest volume setting.

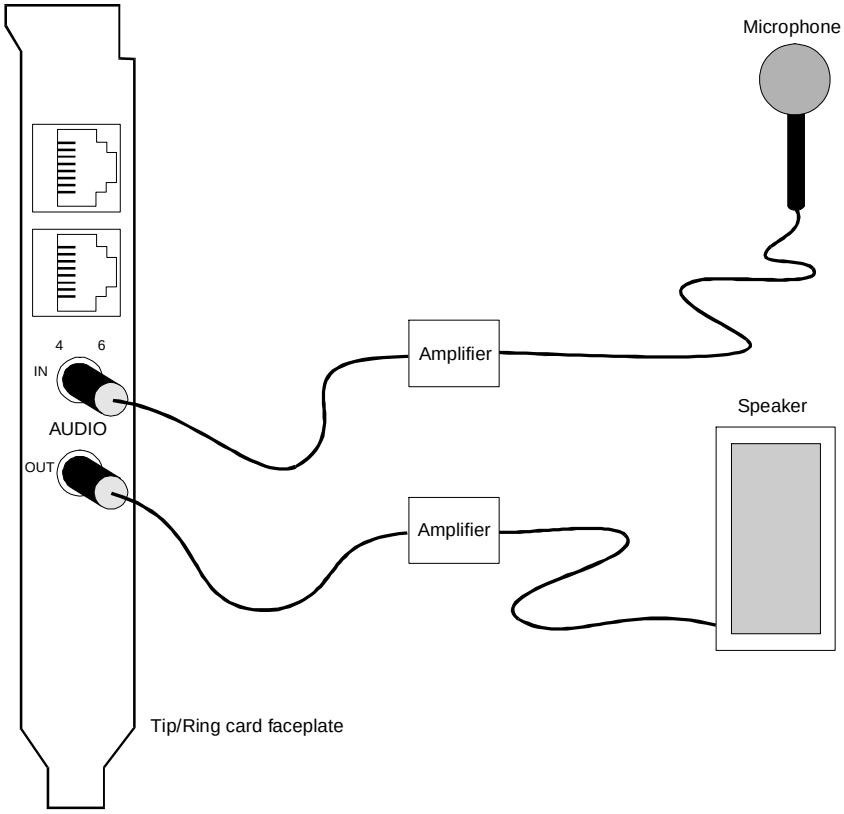

Figure 10-8. Connecting the Tip/Ring Circuit Card and Graphical Speech Editor

Voice Workstation System Tip/Ring Interface Configuration

Required Equipment

- Audio Jack Kit (see Figure 10-9); this includes:
  - — Audio cable
  - — Modular telephone cord
  - — 24-VDC power supply
  - — Voice workstation-tip/ring (VWS-TR) interface module
- Tape deck or reel-to-reel tape player with an integrated low-wattage amplifier
- Tape deck or reel-to-reel tape player with an external amplifier (the tape player is connected to the amplifier line-input connector)
- Headphones

Procedure

CAUTION:
The input impedance of the AUDIO IN jack on the VWS-TR interface module is 600 ohms. Do not attempt to drive this input with an audio source with an impedance of less than 600 ohms.

1. Place your tape device or microphone close to the back panel of the MAP/40.
2. Connect the audio cable to your tape device or microphone.
3. Plug the other end of the audio cable into the AUDIO IN connector of the VWS-TR interface module (Figure 10-9).
4. Plug one end of the modular telephone cord into the connector receptacle labeled “Tip/Ring Interface” on the VWS-TR interface module.
5. Plug the jack end of the 24-VDC power supply cable into the connector labeled “24 VDC IN” on the VWS-TR interface module.
6. Plug the power module of the 24-VDC power supply into a 120-VAC power outlet.
7. On the selected T/R circuit card, plug the other end of the modular telephone cord into the top connector receptacle if you are using channel 0 or the bottom connector receptacle if you are using channel 2.

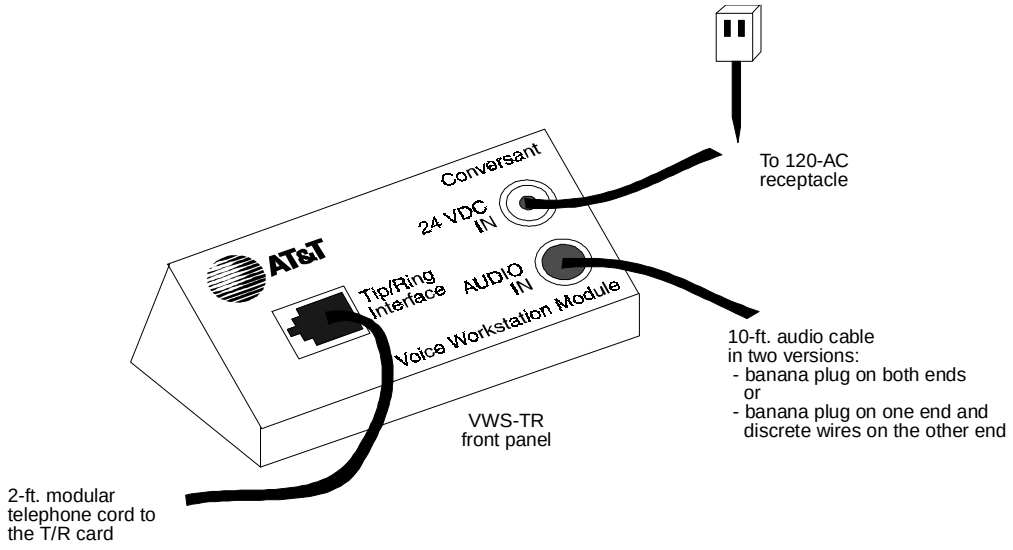

Figure 10-9. Voice Workstation System, Tip/Ring Interface Module

Telephone Switch Configuration

In this configuration, the handling of all audio I/O signals is automatically transferred to the switch. These bidirectional signals are passed to and from the switch through a T/R circuit card. The telephone handset serves as the user interface.

See "Site Prewiring for Pinout Connections" on page 1-6 in Chapter 1, "Preparing the Site", for how to connect T/R circuit cards to the telephone lines.

Finishing Up

11

What's in This Chapter

This chapter describes how to

- Troubleshoot the hardware installation
- Clean the chassis, monitor, keyboard, and drives after installation
- Clean the air filter
- Care for diskettes and cartridge tapes

NOTE:
See *Intuity CONVERSANT VIS V5.0 Maintenance*, 585-310-153, for detailed information on maintaining the MAP/40.

Basic Troubleshooting

Completing these simple checks will resolve most installation problems:

- Make a visual inspection.
- Verify your configuration.
- Check all cables.
- Check all cards.

Complete a Visual Inspection

- Are all system components and peripherals turned on?
- Is the power outlet burned out?
- Are all cables plugged in securely?
- Are any cables damaged?

Verify Your Configuration

Refer to the output from the Configuration Program to verify the following for your application:

- All cards are in the correct slots.
- All jumpers are set correctly.
- All interrupts and addresses are set correctly. Cards must not have conflicting addresses.

NOTE:
See Chapter 4, "Running the Configuration Program", for more information.

Check All Cables

- Ensure that you have connected all cables securely and correctly. For each ribbon cable, verify that Pin 1 of the cable is matched to Pin 1 of the connector. Pin 1 is usually denoted by a stripe on the side of the ribbon cable.
- Ensure that the ribbon cables are not crimped or damaged in any way, and that none are reverse-plugged. This can damage the system.

  NOTE:
  Ribbon cables are especially fragile. Keeping extra cables on hand is a good idea.

Check All Circuit Cards

- Ensure that all cards are securely seated in their slots on the backplane.
- Ensure that once the cards are permanently installed, you have used the mounting screw in the faceplate to secure them.

Correcting Minor Failures

This section will help you correct minor problems that may occur with the system peripherals or when you are trying to boot the system.

Screen Discoloration

If the colors on the monitor do not appear as they should (for example, red appears green around the edges), turn the monitor off for approximately 15 minutes and then turn it back on. This engages the monitor's automatic degaussing circuit to correct any magnetic interference.

Screen Failure (No Display)

- Ensure that the monitor is turned on.
- A knob under the front edge of the monitor controls the screen brightness. Ensure that it is not turned down all the way.

Keyboard Failure

- Is the keyboard cable plugged in? If it is not, turn off the system unit and plug in the keyboard.

  CAUTION:
  Do not plug or unplug the keyboard while the power is on.

- Is the keyboard frozen? Ensure that the keyboard cable and plug are properly connected and then reboot the system.

Printer Failure

- Is the printer power on?
- Is the printer cable plugged in?
- Is your application configured for the correct printer type?
- Is your printer configured properly?

- Is the printer out of paper or jammed? Check the indicator lights on the operating panel of the printer.

Operating System Booting Failure

- If you are trying to boot from a floppy diskette, is there a nonbootable diskette in the diskette drive? If so, remove and replace the diskette and try again.
- If you are trying to boot from a fixed disk, is the operating system loaded on your disk

Cleaning Up After Installation

To clean the MAP/40 after installation, follow the recommendations below.

Cleaning the Chassis Exterior

CAUTION:
Before you clean the chassis, perform a shutdown of the operating system and turn off power to the MAP/40. See ""Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for procedures.

Disconnect the power source before cleaning. Use a mild detergent on a damp cloth to clean the chassis. If you use a spray cleaner, use it on a cloth. Dampen the cloth with the cleaner and wipe the chassis surface. Using a spray directly could cause liquid to seep into and damage the chassis.

Cleaning the Monitor

Use only the specially formulated CRT screen cleaning wipes (wet pads) to clean the screen. Follow the directions provided with the product. Clean the monitor housing in the same manner as the chassis exterior.

Cleaning the Keyboard

Disconnect the keyboard from the MAP/40. Clean the keyboard in the same manner as the chassis exterior.

Cleaning the Cartridge Tape Drive

To clean the cartridge tape drive, use the 3M products DC-6320 or DC-6150 cleaning tape cartridges. These are available at your local computer or office supply store. Follow the instructions provided with the product.

Cleaning the Floppy Disk Drive

If you can no longer read or write when your floppy disk drive is in use, have the drive replaced. The manufacturer recommends that you *do not clean the disk heads* because they are susceptible to scratching and are easily damaged.

NOTE:
See *Intuity CONVERSANT VIS V5.0 Maintenance*, 585-310-153, for information on how to replace a floppy disk drive.

Cleaning the Air Filter

Check and clean the air filter on a regular basis. To remove the air filter and clean it, use the following procedure.

1. Open the left door on the front of the unit by placing your finger in the indentation on the bottom left corner of the door. Pull the door towards you.
2. Remove the filter.
3. Wash with mild soap and water.
4. Allow the air filter to air dry.

   CAUTION:
   Do not use heat to dry the filter and do not place a wet or damp filter into the computer.

5. Place the filter in the door.
6. Close the door.

Care of Diskettes

This section provides guidelines for storage and use that will preserve the life of diskettes.

Storage Conditions

- Do not place heavy objects on the diskettes.
- Store diskettes at a temperature between 50 and 125°F (10 and 51°C).
- Keep diskettes away from magnets and magnetic fields.

Inserting and Removing

To insert a diskette, hold it by the edge and place it label side up into the disk drive until it clicks and locks into place. The release button pops out to ensure that the diskette is inserted properly.

To remove a diskette from the disk drive, press the release button after the access light goes out. The diskette ejects. When you remove the diskette from the drive, the spring-plate cover of the head aperture closes automatically.

CAUTION:
Do not remove a diskette from the drive when the access indicator is on. This can damage the diskette.

Write-Protection

Write-protection prevents the inadvertent writing to or deleting data from diskettes. If a diskette is write-protected, the diskette drive cannot write to it. To write-protect a diskette, turn it over and slide the write-protect tab so that the hole is visible.

Care of Tape Cartridges

This section provides guidelines for storage and use that will preserve the life of tape cartridges.

Storage Conditions

- Store tape cartridges in their protective cases.
- Do not store tape cartridges in a dusty environment.
- Do not expose tape cartridges to magnetic or electrical fields or extreme temperatures.

Loading and Unloading

To load a tape cartridge, orient it with the metal plate down and the long edge that contains the write-protect screw to the left. Push the cartridge into the drive until you feel resistance and then press the latch. Release the cartridge and it will slide back out slightly and then lock into place.

To remove the tape cartridge, push it fully into the drive until it clicks and then release it. The cartridge will disengage from the drive and you may then withdraw it.

Write-Protection

To reduce the possibility of accidentally writing over or erasing important data, you can write-protect a tape cartridge. To do so, use a small, nonmagnetic flat-blade screwdriver to turn the write-protection screw until the arrow on the screw points to the word “SAFE” on the cartridge.

Moving the MAP/40

12

What's in This Chapter

This chapter contains general precautions and procedures that apply to moving or shipping any part(s) of the MAP/40.

General Precautions

Observe these guidelines to ensure safe transport of the MAP/40.

For Short Moves

For short moves (across the room or down the hall), do not attempt to move all the parts of the system at one time. Disconnect the keyboard and monitor from the MAP/40 and move each unit separately. It is recommended that you prepare the hard disk drive for moving as described below.

Over Longer Distances

If you must move the MAP/40 across a large distance, ensure that the original shipping box and packing materials or suitable substitutes are available. Do not begin this job without them. Use only packaging material that complies with the current Uniform Freight and National Motor Freight classification rules and regulations.

The packaging material and packing method you use must provide adequate protection against

- Corrosion, deterioration, and physical damage
- Water and electrostatic damage to any electrical/electronic part or device

You must also take the proper steps (cushioning, blocking, bracing, etc.) to prevent movement inside the box(es) so that no structural or functional damage occurs.

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

Preparing the Hard Disk Drive for Moving

To preserve system data, you must back up your system before you move it. See "Backing Up the System" in Chapter 4, "Performing Common Maintenance Procedures," of *Intuity CONVERSANT VIS V5.0 Maintenance,* 585-310-153*,* for more information.

To avoid physical damage to the disk drives, you must also park the disk and shut the system down. See "The 486 CPU Set-Up Utility" on page 3-8 in Chapter 3, "Connecting Peripherals and Powering Up", for information on parking the disk. See "Shutting Down the MAP/40" on page 5-2 in Chapter 5, "Getting Inside the Chassis", for shut-down procedures.

Component Ordering Numbers

A

What's in This Appendix

This appendix contains the information you need to order standard or optional components for the MAP/40. Contact your service representative if you need additional information on identifying other components for order. For additional help with determining the comcode of a specific component, call the comcode hotline at 1-800-654-5832.

NOTE:
You must have a comcode to order a component.

Components and Ordering Numbers

Table A-1. MAP/40 Component Ordering Numbers

Basic Component Description	Ordering Number
CP, CPU, 25 MHZ, 12 Mbyte Memory (386)	406989806
CP, CPU, 25 MHZ, 0 Mbyte Memory (486)	407019272
CP, CPU, 50 MHZ, 0 Mbyte Memory (486)	407019306
CP, Signal Processor (SP) AYC2C	106439839
CP, Signal Processor (SP) AYC9 (TTS)	106406572
CP, Companion Processor (CMP) AYC7 (ASR)	106024151
CP, Serial Sync Interface	406715771
CP, Serial Sync Interface (V5 and later)	407176601
CP, Token Ring, IBM	407199637
CP, Racal LAN Interface	406972646
CP, LAN Interface SMC (V5 and later)	407199538
CP, IVP6 Analog Interface AYC5B	106430861
CP, IVP6 Analog Interface AYC28 (V5)	107213936
CP, IVP4 Analog Interface AYC6B	106769227
CP w/Upgrade Kit, T1 Digital Int AYC11	601413172
CP, Starlan Interface	406817999
CP, SCSI Controller	407021856
CP, 8-Port Asynch Int (IPC 900)	406618538
CP, 8-Port Asynch Int EQUINOX (V5 and later)	407009406
CP, Tape Drive Controller	406272799
CP, Disk Drive Controller, IDE	406899153
CP, Video Controller	407095835
IC, 4 Mbyte SIMM (386)	406056696

Continued on next page

Table A-1. MAP/40 Component Ordering Numbers — *Continued*

Basic Component Description	Ordering Number
IC, 16 Mbyte SIMM (486)	406997601
Streaming Tape Drive (non SCSI)	406664862
SCSI Streaming Tape Drive	407194729
Hard Disk Drive, 200 Mbyte IDE	407021153
Hard Disk Drive, 1.2 Gbyte SCSI	406844134
Hard Disk Drive, 1.7 Gbyte SCSI	407071950
Floppy Disk Drive, 1.44 Mbyte	406832584
Keyboard	406743336
Monitor, Color 345	406594952
Fan, Card Cage 85CFM, 12 VDC	406900126
Backplane, 12-Slot	406900084
Filter, Vented Door (quantity 5)	406900050
Door, Drive Cover	406900043
Door, Vented	406900035
Power Supply, AC, 325 W	406962654
Switch, Rocker	406901918
Switch, Reset	406901926
Base, Tower	406900019
Cover, Tower	406900563
Bezel, Front	406900001
Mouse, Serial (V4 or later)	407050970
Mouse, Serial (V5 or later)	407176593
Cord, 10-Pin Modular, (10 ft) D8W (IPC 900)	846983039
Cord, AC Power, 9 ft	406900092
Cord, Power, Monitor	407115591
Cable Assy, Reset/Dual Keyboard	407076876

Continued on next page

Table A-1. MAP/40 Component Ordering Numbers — *Continued*

Basic Component Description	Ordering Number
Cable Assy, COM2	406899963
Cable Assy, Disk Activity	406899856
Cable Assy, LED PCB/Fan	406899872
Cable Assy, Switch Power Ext	406932947
Cable Assy, 9-Pos TDM Bus ED5P208-30 G21	601412836
Cable Assy, Hard Drive (non SCSI) ED5P208-30 G22	601412844
Cable Assy, Floppy Drive (non SCSI) ED5P208-30 G23	601412851
Cable Assy, Floppy Drive (SCSI units) ED5P208-30 G26	601436041
Cable Assy, Tape Drive (non SCSI) ED5P208-30 G24	601415227
Cable Assy, SP/CMP Bus ED5P208-30 G5B,6B (2/kit)	601412828
Cable Assy, T1, 75 ft ED5P208-30 G1	601386873
Cable Assy, SCSI Bus ED5P208-30 G27	601436058
Cable Assy, 386 Keyboard/Reset ED5P208-30 G28 (Remote Maintenance)	601436066
Cable Assy, Keyboard Adapter ED5P208-30 G29 (Remote Maintenance)	601436074
Cable Assy, 486 Reset ED5P208-30 G31 (Remote Maintenance)	601436090
Cable Assy, 386 CPU Extension ED5P208-30 G35 (Remote Maintenance)	601436132
Cable Assy, M/F RS232	405119355
Miscellaneous Hardware Kit containing 2 ball studs, 2 ball stud receptacles, 2 PCB slot covers, extra screws	406899849
Connector, BNC Wye LAN	405990169
Filler Bracket, PC	406798686
Resistor SIP, TDM Terminator	403789167
Adapter, Electrical, Jack-to-Jack (Remote Maint.)	407005255
Adapter 885A	601419666

Continued on next page

Table A-1. MAP/40 Component Ordering Numbers — *Continued*

Basic Component Description	Ordering Number
Cord, Telephone, 6-cond. 3-ft	105197297
Cord, Telephone, 6-cond. 25-ft	103623195
T1 Adapter Cable (CSU)	107063711
T1 Adapter Cable (LST1) F/F	H600-435-G1
Cord, Data 6-cond. 14-ft. (EQUINOX)	102937604
Module, Voice Workstation (SB)	601459621

Cable Connectivity

B

What's in This Appendix?

This appendix details external connectivity and cabling.

Connectivity Reference Tables

Table B-1 lists the parts required for making connections to and from the MAP/40. The letter(s) in the "Label" column correspond to the alphabetic labels used in the figures throughout this appendix.

Table B-1. Connectivity Reference Table

Label	Part Name	Description	Order Number(s)
A	Terminal/printer (DTE) adapter	RJ-45 (10-conductor) to female DB-25	BCSystems PEC 69609; CS PEC 37784, ED3P001-70 G1305
B	Terminal/printer (DTE) adapter	RJ-45 (6-conductor) to male DB-25	BCSystems PEC 69608; CS PEC 37782, ED3P001-70 G1304
C	Printer (DTR) adapter	RJ-45 (10-conductor) to male DB-25*	BCSystems PEC 69622; CS PEC 37800, ED3P001-70 G1319
D	ACU/modem (DCE) adapter	RJ-45 (10-conductor) to female DB-25	BCSystems PEC 69611; CS PEC 37788, ED3P001-70 G1307
E	ACU/modem adapter	RJ-45 (10-conductor) to male DB-25	BCSystems PEC 69610; CS PEC 37786, ED3P001-70 G1306
F	Remote console adapter	RJ-45 (10-conductor) to male DB-25†	BCSystems PEC 69612; CS PEC 37790, ED3P001-70 G1308
G	Terminal/printer adapter	RJ-45 (8-conductor) to male DB-25	CS PEC 2750-C09, TRW-232125010
H	Terminal/printer adapter	RJ-45 (8-conductor) to female DB-25	TRW-2322225010
I	ACU/modem adapter	RJ-45 (8-conductor) to male DB-25	CS PEC 2750-C10, TRW-2322125005
J	ACU/modem adapter	RJ-45 (8-conductor) to female DB-25	TRW-232225005
K	Cable, 10 ft	10-Conductor modular	BCSystems PEC 69605; CS PEC 37776
L	Cable, 25 ft	10-Conductor modular	BCSystems PEC 69606; CS PEC 37778
M	Cable, 50 ft	10-Conductor modular	BCSystems PEC 69607; CS PEC 37780
N	Cable, 7 ft	8-Conductor modular	CS PEC 2725-16G

Continued on next page

Table B-1. Connectivity Reference Table — *Continued*

Label	Part Name	Description	Order Number(s)
O	Cable, 14 ft	8-Conductor modular	CS PEC 2725-16N
P	Cable, 25 ft	8-Conductor modular	CS PEC 2725-16S
Q	Cable, 50 ft	8-Conductor modular	CS PEC 2725-16V
R	Cable, 7 ft, parallel printer	DB-25 male to Centronics 37	BCSystems PEC 6950EB1; ED3P001-70 G1109, TP-440500
S	Cable, 7 ft, modem	DB-25 male to DB-25 male	BCSystems PEC 6950EA1; CS PEC 2721-28E, ED3P001-70 G1100, TP-416174
T	Gender changer	Male to male	N/A
U	Gender changer	Female to female	N/A
V	Null modem adapter	RJ-45 (10-conductor) DTE to female DB-9	BCSystems PEC 69619; CS PEC 37792, ED3P001-70 61318
W	Null modem adapter	DB-25 female to DB-25 female	N/A
X	Extender, 10-conductor	RJ-45 (10) to RJ-45 (10)	CS PEC 37796
Y	Extender, 8-conductor	RJ-45 (8) to RJ-45 (8)	N/A
Z	Adapter	DB-25 male to DB-9 female	N/A
AA	Cable, 25 ft	RJ-21X male/female 50-pin (25 pair) distribution panel	CS PEC 70335
BB	Cable, 2 ft	6-Conductor mounting analog Tip/Ring modular	N/A
CC	Cable, 25 ft	6-Conductor analog Tip/Ring modular	N/A
DD	Cable, 75 ft, 15-pin	D-subminiature T1 extension male/male‡	CS PEC 70325MDL02
EE	Cable, asynch shielded	Male/female (3270)	CS PEC 6950EA5 (7 ft), 6950EA6 (12 ft), 6950EA7 (25 ft), 6950EA8 (50 ft.)
FF	Cable, ASAI interface	8-Conductor D8W-87	CS PEC 272507G (7 ft), 272507N (14 ft), 272507S (25 ft)
GG	Cable, LAN	8-Conductor modular	CS PEC 2725-16N

Continued on next page

Table B-1. Connectivity Reference Table — *Continued*

Label	Part Name	Description	Order Number(s)
HH	CSU and cable RJ-48C	15-pin to 8-pin	BCSystems PEC 63158, 63157 (wall mount)
II	Null modem adapter	8-Conductor to DB-25 male	CS PEC 2750-C11, trw-2322125021
JJ	Cable, 14 ft	6-Conductor D6AP-87	Comcode 102937604
KK	Adapter cable	Female/female adapter for LST1	H600-435-G1
LL	Adapter cable	Male\/female T1-CSU slide latch adapter cable (optional)	Comcode 107063711
MM	Adapter	DB-25 for terminals and printers	PEC 70854; Comcode 407050111
NN	Adapter	DB-25 DTE male for modems	PEC 70853; Comcode 407050095

*Provides DTR hardware flow control.

†Used to maintain communication with the host system when it resets or reboots.

‡Up to seven cables supported.

Making Asynchronous Connections

The following section provides information on making asynchronous connections to the MAP/40.

Overview

Serial ports on the MAP/40 and 8-Port Asynchronous circuit card are configured as data terminal equipment (DTE). DTE ports require a cross-over or null modem cable to connect to serial devices such as a terminal, computer, or printer. The term “cross-over” refers mainly to the transmit and receive lines. To communicate with any of the devices mentioned above, the transmit line on the serial port must ultimately be connected to the receive line of the terminal device. Conversely, the receive line on the serial port must be connected to the transmit line of the terminal device.

Connecting to a modem does not require a cross-over cable. A modem is normally considered data communications equipment (DCE). DCE ports require a modem or straight-through cable. The cross-over of transmit and receive are handled within the modem.

DTE/DCE Adapters

The following adapters enable DCE equipment to communicate with DTE and vice versa:

- Null modem adapter or cable. This adapter “flips” the transmit and receive lines while still maintaining the functions of the other lines, that is, data terminal ready (DTR) and ground. This device is normally used to connect one DTE device to a another DTE device.
- Terminal/printer adapter. This adapter provides a cross-over function much the same as a null modem adapter.
- ACU modem adapter. This adapter or cable provides a straight-through connection.
- Gender changers. Gender changers convert a male adapter to female and vice versa. There are two types of gender changers, male/male and female/female. The functionality of the incoming lines is maintained on the outgoing side.
- Modular extenders. Extenders allow you to connect two modular cables to each other without losing functionality. An extender consists of two female RJ-45 type ports linked to each other. The number of conductors in the extender must match the number of conductors in the cables used. There are three types of modular cables used with the MAP/40:
  - — A 6-conductor telephone hook-up cable (three pair) for analog Tip/Ring (T/R) connections

— An 8-conductor data cable for LAN and serial port peripheral connections (the standard serial ports provided on the MAP/40)

— A 10-conductor cable to connect devices with the modular ports provided on the 8-Port Asynchronous circuit card

You can also make serial port connections via standard EIA-232 cables. Note that according to the EIA-232 standard recommendation, the distance between devices should not exceed 50 ft. You can separate devices by longer distances, however, depending on how much electrical interference exists in the area. An asynchronous data unit (ADU) should be used for distances from 50 to 5000 ft. Refer to the appropriate ADU documentation for maximum limits.

It is possible to connect 8-conductor to 10-conductor cable. The adapters used with the 8-conductor cable must be 8-pin adapters. Ten-pin adapters can be used with 10-conductor modular cables only. Eight-pin adapters can be connected to 10-pin adapters. However, check the wiring diagrams of both adapters to make sure that there is no loss of functionality when connecting 8- to 10-pin adapters.

In most cases, if transmit goes to receive (and vice versa) in connecting DTE devices, you can use any combination of equipment. For modems, it is most likely that a straight-through connection will be required since they are DCE devices. However, you should confirm the pin positions of other functions (that is, DSR, DTR, carrier, etc.) on all connected devices to ensure proper functionality.

Asynchronous Connectivity Diagrams

The following figures detail various scenarios for external asynchronous connections to terminals, computers, and modems.

Eight-Port Asynchronous Connection to a Terminal

Figure B-1 shows an example of external connectivity and cabling for an 8-port asynchronous connection to a terminal.

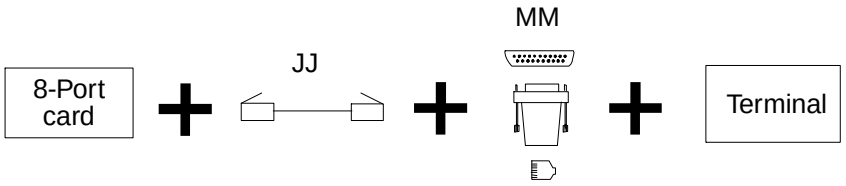

Figure B-1. Eight-Port Asynchronous Terminal Connection Using 6-Conductor Modular Cable

Eight-Port Asynchronous Connection to a Computer

Figure B-2 shows an example of external connectivity and cabling for an 8-port asynchronous connection to a computer.

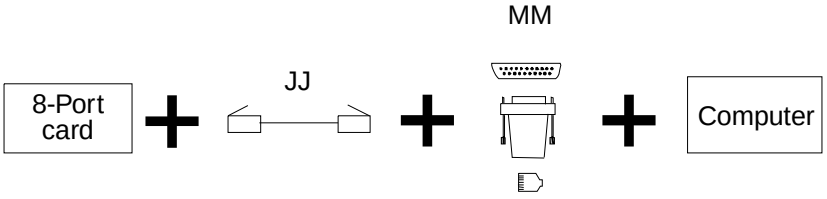

Figure B-2. Eight-Port Asynchronous Computer Connection Using 6-Conductor Cable

Eight-Port Asynchronous Connection to a Modem

Figure B-3 and Figure B-4 show examples of external connectivity and cabling for an 8-port asynchronous connection to a modem.

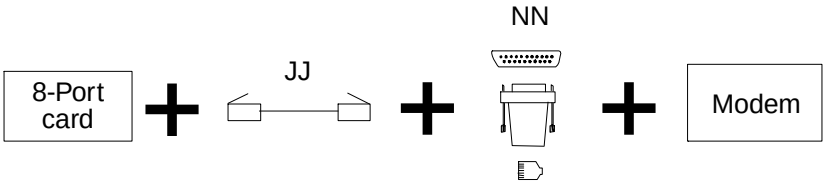

Figure B-3. Eight-Port Asynchronous Modem Connection Using 6-Conductor Cable

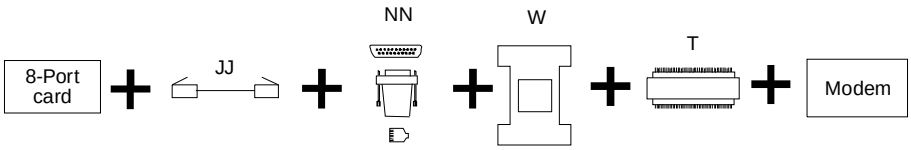

Figure B-4. Eight-Port Asynchronous Modem Connection Using 6-Conductor Cable and a Null Modem

Eight-Port Asynchronous Connections to an ADU

Figure B-5 shows an example of external connectivity and cabling for an 8-port asynchronous connection to an ADU.

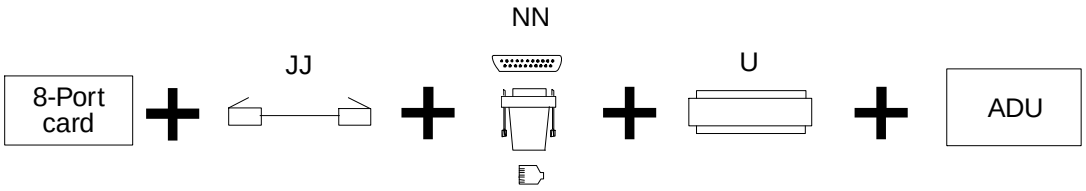

Figure B-5. Eight-Port Asynchronous ADU Connection

Making Synchronous (Host) Connections

NOTE:
AT&T recommends that any required host computer channels be operational before the equipment is installed. This includes any data facilities and cabling that may be required.

Overview

Host cable access from the main unit of the MAP/40 to host equipment is accomplished via a shielded EIA-232 cable. If the distance is less than 100 ft, you must use a modem eliminator cable with leads for timing. The total cable length must not exceed 100 ft without a modem between the system controller and host equipment.

Standard installation of the MAP/40 does *not* include installing or testing the logical interface. AT&T will contract for additional installation services. All host connections must be in place prior to any loading and testing of application software.

The 3270 Host Communications Package

The 3270 Host Communications Package is an option that requires the use of a Synchronous Host circuit card.

This package emulates a 3274-41C or a 3174-01R cluster controller, with up to 32 logical units (that is, 3278 Model 2 terminals) connected to it. It does *not* emulate the extended attributes of a 3279 terminal or any other terminal. The 3270 card typically links to a 3725 or 3745 front end processor (FEP), and uses 3270 data streams through either Binary Synchronous Communication (BSC) or Synchronous Data Link Control (SDLC) and Synchronous Network Architecture (SNA) protocols.

Standard links from the card to the FEP can be made through synchronous modems (for distances over 100 ft), leased lines (for out-of-building connections), or modem eliminators (for distances under 100 ft) with speeds up to 9600 baud. Note that channel attachment is *not* possible with this card.

Synchronous Connectivity Diagrams

Figure B-6 through Figure B-8 show examples of external connectivity and cabling for a 3270 connection to the FEP. Note the following about these connections:

- The 3270 card requires straight-through connections on pins 18, 25, 17, and 20.
- The synchronous modem (Figure B-6) must provide clocking on pins 15 and 17.
- The modem eliminator (Figure B-7) is used for distances of 100 to 400 ft and must provide a DB-25 female connector.
- The example in Figure B-8 assumes that the FEP provides the closing on pins 15 and 17 to transmit and receive. This type of connection is rarely used.

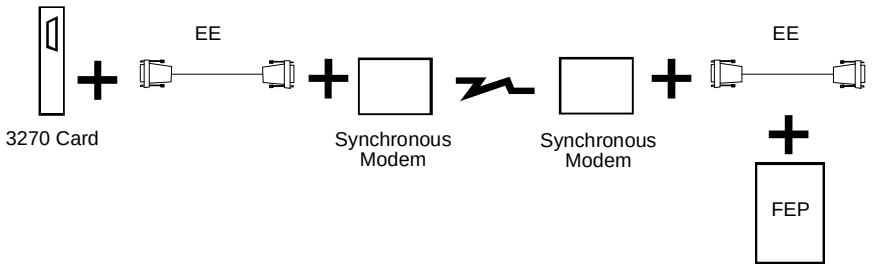

Figure B-6. 3270 Interface Connection Using Synchronous Modems

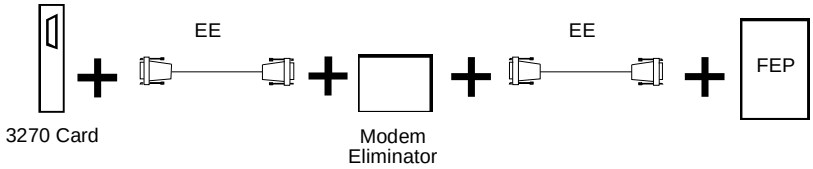

Figure B-7. 3270 Interface Connection Using a Modem Eliminator

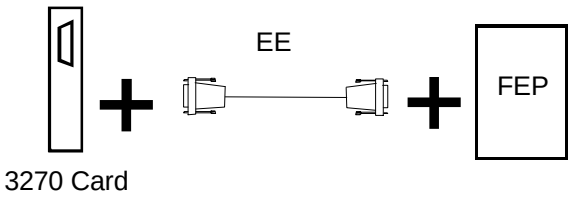

Figure B-8. 3270 Interface Connection Using a Direct Connection to the FEP

Making Analog (Tip/Ring) Connections

The following section details how to make analog connections to the MAP/40.

Overview

The MAP/40 supports analog Tip/Ring (T/R) interface to either the central office 4ESS or the AT&T System 75 and DEFINITY G3 PBXs. Refer to Chapter 6, “Switch Interface Administration,” of *Intuity CONVERSANT VIS V5.0 Operations*, 585-310-550, for the various switch settings for PBXs.

Making Tip/Ring Connections to a 4ESS

If they are not already in place, you must order analog lines from the service provider. Configure the lines as a 2500 set on the switch.

Making Tip/Ring Connections to the AT&T System 75 and DEFINITY PBX

The following settings and configuration data must be present on the PBX for analog T/R communication:

- The PBX must provide analog service using CCITT and LSSGR standards. For System 75 and DEFINITY PBXs, three circuit packs provide this capability. They are the TN742, TN746, or TN769.
- Each analog T/R channel must be configured to communicate with a standard 2500 analog set. On AT&T System 75 and DEFINITY PBXs, the command to bring up this screen is **add station**. The only required inputs are the telephone number assigned to each analog channel, line type (2500), and port identifier. The port identifier references the cabinet that the analog pack physically sits in (either A or B), the card number, and the channel number. An example of a port identifier is A0101. Also, make sure that the field auto answer is set to "n," which is the default.
- The telephone numbers assigned to each analog channel must be valid entries in the dial plan record.

Analog Connectivity Diagrams

Figure B-9 and Figure B-10 show typical T/R (IVP6) connections from the MAP/40.

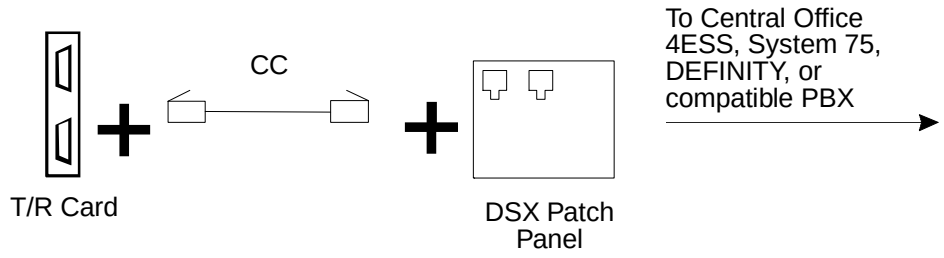

Figure B-9. Analog Tip/Ring Interface Connection to a DSX Patch Panel

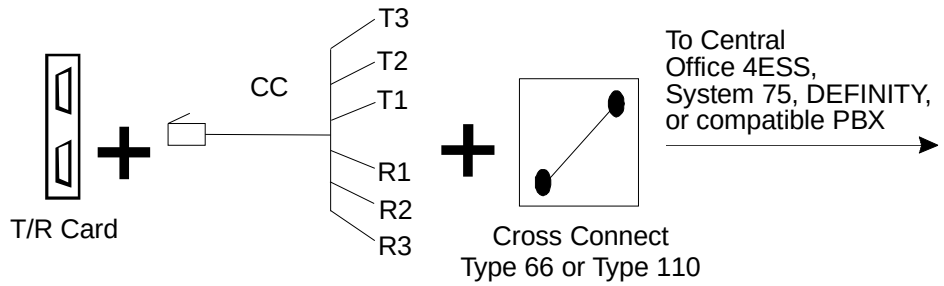

Figure B-10. Analog Tip/Ring Interface Connection to a Type 66 or 110 Cross-Connect

Making Digital (T1) Connections

The MAP/40 supports a T1 interface to the central office 4ESS.

For information about setting options on the MAP/40 and the 4ESS, refer to Chapter 6, “Switch Interface Administration,” of *Intuity CONVERSANT VIS Version 5.0 Operations*, 585-310-550.

A Channel Service Unit (CSU) is used to connect digital telephone lines (T1) coming into the MAP/40. A CSU performs certain line-conditioning and equalization functions and responds to loopback commands from the central office. A CSU also regenerates digital signals, monitors them for problems, and provides a way to test the digital circuit. See Chapter 1, "Preparing the Site", in *Intuity CONVERSANT VIS V5.0 MAP/40 Hardware Installation*, 585-310-150, for additional information about digital connections using a CSU.

Digital Connectivity Diagrams

Figure B-11 through Figure B-13 show examples of typical T1 connections. Figure B-14 shows an optional adapter cable for line side T1.

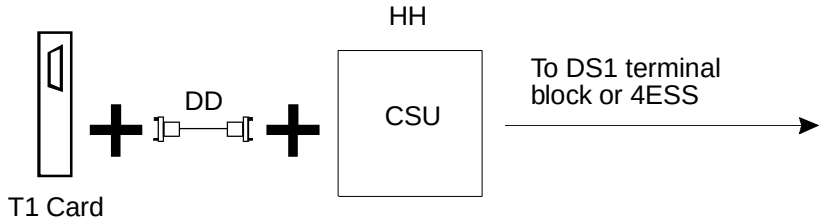

Figure B-11. T1 Interface Connection to a CSU with a 15-Pin D-Subminiature Connector

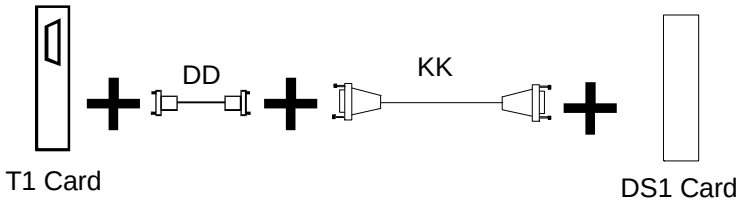

Figure B-12. T1 Interface Connection to DS1 for Line Side T1

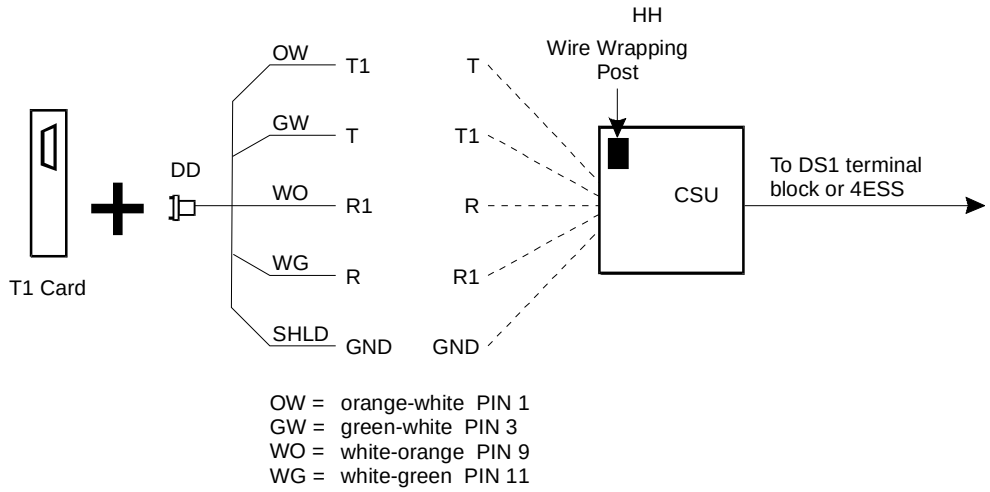

Figure B-13. T1 Interface Connection to a CSU with Wire-Wrapping Posts

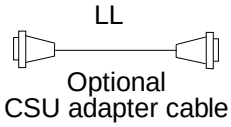

Figure B-14. Optional Adapter Cable for Use between DD and HH in Figure B-11

Making ASAI Connections

The following details the information required to make Adjunct/Switch Application Interface (ASAI) connections to the MAP/40.

Overview

The MAP/40 is designed to operate with the AT&T DEFINITY Communications System, Generic 3i (DEFINITY Generic 3i) with the installation of a PC/ISDN circuit card. In addition, an ISDN line circuit pack (TN556) must be installed on the DEFINITY Generic 3i. For information on the TN556, see the *DEFINITY Communications System Generic 1 and Generic 3i System Description*, 555-230-200, and the *DEFINITY Generic 1 and Generic 3i Wiring Manual, Issue 2*, 555-104-630.

To support the ASAI capability, the MAP/40 must be connected via a point-to-point ISDN BRI to the DEFINITY Generic 3i. The T/R lines that must access ASAI capabilities must be configured as members of an ACD split of the PBX. For the DEFINITY G3i, three analog circuit packs provide this capability. They are the TN742, the TN746, and the TN769. The PC/ISDN card supports the BRI D-channel interface from the switch. One ASAI link per MAP/40 is supported.

Figure B-15 shows a typical MAP/40 and DEFINITY Generic 3 configuration.

See *Intuity CONVERSANT VIS V5.0 Communication Development*, 585-310-229, for additional information about administration.

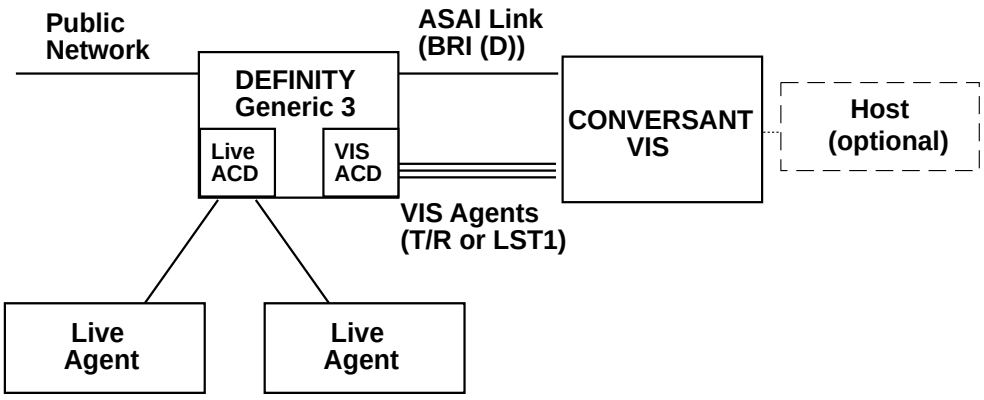

Figure B-15. Typical DEFINITY Generic 3i Configuration

ASAI Connectivity Diagrams

Figure B-16 shows typical wiring architecture for the ASAI link.

Note that you must connect the AT&T 440A4 eight-pin terminating resistor (or equivalent) to the LINE connector of the PC/ISDN card using the DW8 cable provided. Use the other DW8 cable to connect from the connecting block to the terminating resistor.

CAUTION:
Total cable length from the DEFINITY Generic 3 system to the MAP/40 must not exceed 1900 ft.

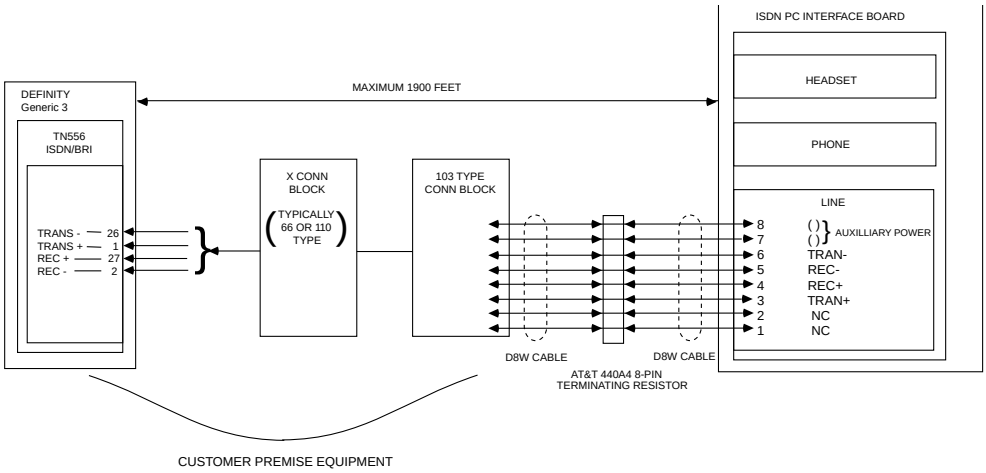

Figure B-16. Typical Wiring for ASAI Link

Making PRI Connections

The following section details the information you need to make a primary rate interface (PRI) connection to the MAP/40.

PRI Switch Configuration

The MAP/40 supports a PRI to the network over layer-1 T1 using either D4 or extended super frame (ESF) framing.

Two parameters are dependent on the framing protocol used:

- If D4 framing is used, line coding must be "ZCS" and D-channel inversion must be "Inverted."
- If ESF framing is used, line coding must be "B8ZS" and D-channel inversion must be "Non-Inverted."

NOTE:
Special provisioning of PRI is required on the 4ESS switch for compatibility with the MAP/40. The interface ID (CCID) parameter default value must be set to 1 instead of the normal value of 0. The interface ID (CCID) must be provisioned on the 4ESS switch as follows:

- 23B+D configurations:
  - Interface ID (CCID): 1
- 47B+D Configurations:
  - Interface ID (CCID) for circuit with D channel: 1
  - Interface ID (CCID) for circuit without D channel: 2

Specification of this parameter is currently not part of the normal order process for AT&T PRI network services. Thus, special attention is required when ordering.

In addition, the MAP/40 uses some Layer 2 and Layer 3 parameters. You must set these parameters on the switch as shown in Table B-2 and Table B-3, respectively.

Note that incoming calls to the system should be provisioned so that the channel number is exclusive and not preferred.

Also note that if the switch is configured to deliver ANI on a subscription basis, it is not possible for the system to request a different type of ANI on a call-by-call basis.

Table B-2. PRI Layer 2 Parameters

Layer 2 Parameter	Value
Retry Count N200	3
Timer T200	1 sec
Timer T203	30 sec
HDLC (D4/ZCS)	Inverted
HDLC (ESF/B8ZS)	Noninverted

Table B-3. PRI Layer 3 Parameters

Layer 3 Parameter	Value
Timer T302	10 sec
Timer T303	4 sec
Timer T305	4 sec
Timer T308	4 sec
Timer T310	10 sec
Timer T313	4 sec
Timer T316	120 sec
Timer TL3	120 sec
Timer T309	10 sec
Interface ID (with D channel)	1
Interface ID (without D channel)	2
Bearer capability	64 Kbit voice

PRI Connectivity Diagrams

See "Making Digital (T1) Connections" on page B-15 in this appendix for information on PRI connections. Currently, PRI is not supported in an interface between the MAP/40 and a PBX.

Making ARU and SCCS Connections

The following section details the information needed to make Alarm Relay Unit (ARU) and Switching Center Control System (SCCS) connections to the MAP/40.

Overview

The MAP/40 supports both local and remote alarming systems. The local alarm system, ARU, consists of a small hardware device, cabling, and an installable package. The device monitors errors logged on the system and provides a system heartbeat.

The remote alarm monitor, SCCS, provides remote error and system heartbeat monitoring and allows remote access for maintenance through the same port.

Both alarm monitors interface to the MAP/40 via a serial port. For more information regarding ARU and SCCS capabilities, refer to *Intuity CONVERSANT VIS V5.0 Communication Development*, 585-310-229.

ARU/SCCS Connectivity Diagrams

Figure B-17 shows the connection from the 8-port asynchronous unit on the MAP/40 to the ARU/SCCS.

NOTE:
The 8- and 10-conductor cables shown in the figure must be gray straight-through cables for this configuration to work properly. The black null modem cables will not work in this configuration.

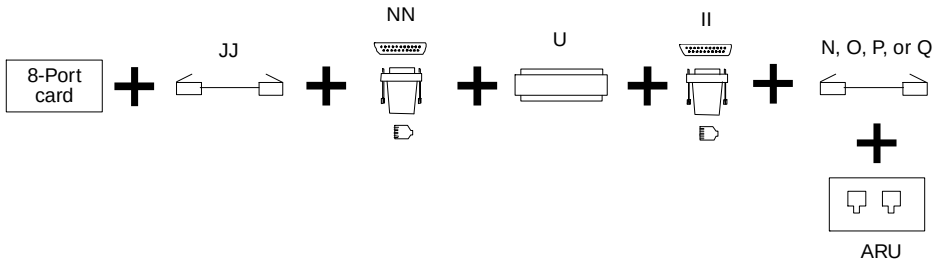

Figure B-17. ARU/SCCS Connection from the 8-Port Asynchronous Unit

Figure B-18 shows the connection from the main serial port (COM1) on the MAP/40 to the ARU/SCCS.

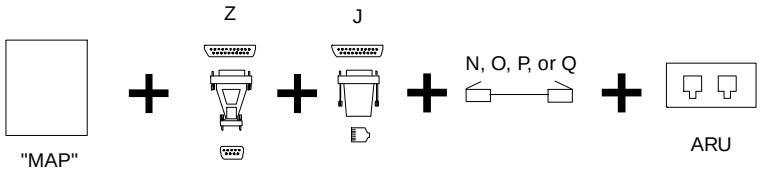

Figure B-18. ARU/CCS Connection from the Main Serial Port

Figure B-19 shows the connection from the second serial port (COM2) on the MAP/40 to the ARU/SCCS.

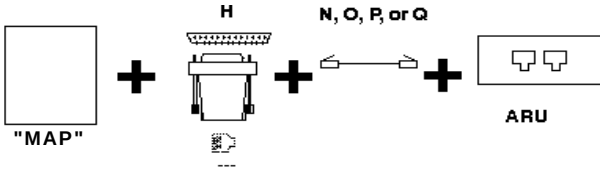

Figure B-19. ARU/SCCS Connection from the Second Serial Port

Making Other System Connections

There are other basic connections located on the MAP/40:

- Main serial port (COM1) connection

  COM1 is located on the faceplate of the CPU. This port is a 9-pin male DTE connector (item “Z” in Table B-1). See "Eight-Port Asynchronous Connection to a Terminal" on page B-7 for additional information on connectivity.

- Second serial port (COM2) connection

  COM2 is located on the rear right center of the MAP/40. This port is a DB 9 male connector. Refer to "Eight-Port Asynchronous Connection to a Terminal" on page B-7 for information on connecting devices to this port.

- Parallel port connection

  The parallel port connection is located on the faceplate of the CPU card. This port is a DB 25 male connector.

Abbreviations

A

AC
Alternating current

ACD
Automatic call distributor

AD
Application Dispatch

AD-API
Application dispatch application programming interface

ADPCM
Adaptive differential pulse code modulation

ADU
Asynchronous data unit

AGL
Application generation language

ALERT
VIS Alerter process

ANI
Automatic number identification

API
Application programming interface

ARU
Alarm relay unit

ASAI
Adjunct/Switch Application Interface

ASCII
American Standard Code for Information Interchange

ASI
Analog switch integration

B

BB
Bulletin board

bps
Bits per second

BRDG
Call bridging process

BSC
Binary synchronous communication

C

CCA
Call classification analysis

CDH
Call data handler

CELP
Continuously Excited Linear Prediction

CGEN
Voice system general message class

CICS
Customer Information Control System

CMP
Companion circuit card

CMS
Call Management System

CO
Central office

CPE
Customer provided equipment or customer premise equipment

CPN
Calling party number

CPT
Call progress tones

CPU
Central processing unit

CSU
Channel service unit

CVS
Converse vector step

D

dB
Decibels

DB
Database

DBC
Database checking process

DBMS
Database management system

DC
Direct current

DCE
Data communications equipment

DCP
Digital communications protocol

DIO
Disk input and output process

DIP
Data interface process

DMA
Direct memory access

DNIS
Dialed number identification service

DSP
Digital signal processor

DTE
Data terminal equipment

DTMF
Dual tone multi-frequency

DTR
Data terminal ready

E

EBCDIC
Extended Binary Coded Decimal Interexchange Code

EIA
Electronic Industries Association

EISA
Extended Industry Standard Architecture

EMI
Electromagnetic interference

ESD
Electrostatic discharge

ESDI
Extended Serial Data Interface

ESS
Electronic Switching System

ET
Error tracker

EXTA
External alarms feature message class

F

FCC
Federal Communications Commission

FDD
Floppy disk drive

FEP
Front end processor

FFE
Form Filler Plus feature message class

FIFO
First-in-first-out processing order

foos
Facility out-of-service state

FTS
File transfer process message class

G

GEN
PRISM logger and alerter general message class

GSE
Graphical Speech Editor

GUI
Graphical user interface

H

HDD
Hard disk drive

HLLAPI
High Level Language Application Programming Interface

HOST
Host interface process message class

hwoos
Hardware out-of-service state

Hz
Hertz

I

IBM
International Business Machines

ICK
Integrity checking process message class

ID
Identification

IDE
Integrated Disk Electronics

IE
Information element

INIT
Voice system initialization message class

inserv
In-service state

IPC
Interprocess communication

IPC
Intelligent Ports Card (IPC-900)

IPCI
Integrated personal computer interface

IRAPI
Intuity Response Application Programming Interface

IRQ
Interrupt request

ISA
Industry Standard Architecture

ISDN
Integrated Services Digital Network

ISV
Independent Software Vendor

ITAC
International Technical Assistance Center

IVP4
Integrated Voice Processing card with 4 analog channels

IVP6
Integrated Voice Processing card with 6 analog channels

IVPSS
Integrated Voice Processing System Software

K

Kbps
Kilobites per second

Kbyte
Kilobyte

L

LAN
Local area network

LDB
Local database

LED
Light-emitting diode

LIFO
Last-in-first-out processing order

LN
Load number

LOG
VIS logger process message class

LST1
Line side T1

LU
Logical unit

M

manoos
Manually out-of-service state

MAP/100
Multi-Application Platform 100

MAP/100C
Multi-Application Platform 100C

MAP/40
Multi-Application Platform 40

Mbps
Megabits per second

Mbyte
Megabyte

ms
Millisecond

msec
Millisecond

MHz
Megahertz

MTC
Maintenance process

N

NCP
Network Control Program

NEBS
Network Equipment Building Standards

NEMA
National Electrical Manufacturers Association

netoos
Network out-of-service state

NFAS
Non-Facility Associated Signaling

NFS
Network file sharing

NMVT
Network Management Vector Transport

NM-API
Network Management - Application Programming Interface

nonex
Nonexistent state

NRZ
Non Return to Zero

NRZI
Non Return to Zero Inverted

O

OEM
Original equipment manufacturer

OGA
Operator generated alert

P

PBX
Private branch exchange

PC
Personal computer

PCB
Printed circuit board

PCM
Pulse code modulation

PEC
Price element code

PRI
Primary rate interface

PSTN
Public switch telephone network

PS&BM
Power supply and battery module

R

RAM
Random access memory

RECOG
Speech recognition feature message class

RDBMS
ORACLE relational database management system

REN
Ringer equivalence number

RFS
Remote file sharing

RM
Resource manager

RMB
Remote maintenance board

RTS
Request to send

S

SBC
Sub-band coding

SCCS
Switching Control Center System

SCSI
Small Computer System Interface

SDLC
Synchronous Data Link Control

SDN
Software Defined Network

SID
Station identification

SIMM
Single inline memory module

SLIP
Serial Line Interface Protocol

SNA
Systems Network Architecture

SNMP
Simple Network Management Protocol

SP
Signal processor circuit card

SPIP
Signal processor interface process

SPPLIB
Speech processing library

SQL
Structured Query Language

SR
Speech recognition

SYS
UNIX system calls message class

sysgen
System generation

T

tas
Transaction assembler

TCC
Technology Control Center

TCP/IP
Transmission control protocol/internet protocol

TDM
Time division multiplexing

TE
Terminal emulator

THR
Threshold message class

TKR
Token Ring

TLI
Transport layer interface

TLP
Transmission level plan

T/R
Tip/Ring circuit card

TRIP
Tip/Ring interface process

TSO
Technical Service Organization

TSO
Time Share Operation

TSM
Transaction state machine process

TTS
Text-to-Speech

TWIP
T1 interface process

U

UK
United Kingdom

USOC
Universal service ordering code

UVL
Unified Voice Library

V

VDC
Video display controller

VIS
Intuity CONVERSANT Voice Information System

VPC
Voice processing comarketer

VRU
Voice response unit

VROP
Voice response output process

Glossary

Numerics

3270 interface
A link between one or more Intuity CONVERSANT Voice Information System (VIS) machines and a host mainframe. In Intuity CONVERSANT VIS documentation, the 3270 interface means the link between one or more VIS machines and an IBM host mainframe.

4ESS
A large AT&T central office switch used to route calls through AT&T's telephone network.

A

ACD
See "automatic call distributor."

ADPCM
See "adaptive differential pulse code modulation."

adaptive differential pulse code modulation
A means of encoding analog voice signals into digital signals by adaptively predicting future encoded voice signals. This adaptive modulation method reduces the number of bits required to encode voice. See also "pulse code modulation."

adjunct products
Products (for example, Adjunct/Switch Application Interface) that the Intuity VIS administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to CONVERSANT VIS's ability to administer the switch directly.

Adjunct/Switch Application Interface
An optional feature package that provides an Integrated Services Digital Network-based interface between AT&T PBX's and adjunct processors.

affiliate
A business organization that AT&T controls or which with AT&T is in partnership.

alarm relay unit
A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (like the Intuity CONVERSANT VIS) to audio.

alerter
A system process that responds to patterns of events logged by the "logdaemon" process.

analog
An analog signal, such as voice or music, that varies in a continuous manner. An analog signal may be contrasted with a digital signal, which represents only discrete states.

application
Made of several components that provide an automated version of the communication between a caller and an attendant. The Intuity CONVERSANT VIS provides several methods for creating applications, including Script Builder, the Intuity Response Application Programming Interface (IRAPI), and transaction state machine (TSM) script language.

application administration
The component of the Intuity CONVERSANT VIS that provides access to the applications currently available on your system and helps you to manage and administer them.

application installation
A two-step process in which the Intuity CONVERSANT VIS invokes the TSM script assembler for the specific application name and files are moved to the appropriate directories.

application verification
A process in which the Intuity CONVERSANT VIS verifies that all the components needed by an application are complete.

ASCII
An acronym for American Standard Code for Information Interchange, a standard for data representation. ASCII code represents alphanumeric characters as binary numbers. The code includes 128 upper- and lowercase letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is 1 byte long.

asynchronous communication
A method of data transmission in which bits or characters are sent at irregular intervals and are spaced by start and stop bits and not by time. See also “synchronous communication.”

asynchronous data unit
An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet in length.

AUDIX Voice Power
A complete voice-mail messaging system accessed and operated by touch-tone telephones and integrated with a switch or “Private Branch Exchange.”

automatic call distributor
A telephone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The Automatic Call Distributor can send the call to an operator or group of operators as soon as the operator has completed a previous call or after the system has played a message to the caller.

automatic number identification
A method of identifying the calling party by automatically receiving a string of digits that identifies the calling station of a particular customer.

B

back up
The preservation of the information in a file in a different location, so that the data is not lost in the event of hardware or system failure.

backing up an application
A utility that makes an archive copy of a completed application or makes an interim copy of an application in progress. The backup copy can be restored to the VIS if the online version is damaged, or if you make revisions and wish to go back to the previous version.

barge-in
A capability provided by WholeWord speech recognition that allow callers to speak their responses to the VIS prompt and have those responses recognized before the prompt has finished playing.

batch file
A file containing one or more lines, each of which is a command executable by the UNIX shell.

binary synchronous communications
A character-oriented synchronous link protocol.

blind transfer protocol
A protocol in which a call is completed as soon as the extension is dialed, without having to wait to see if the telephone is busy or if the caller answered.

bridging
The process of connecting one telephone network connection to another telephone network connection over the Intuity CONVERSANT VIS TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, etc., for the transaction.

BSC
See “binary synchronous communication.”

bundle
In the context of the Enhanced File Transfer package, this term is used to denote a single file, a group of files (package), or a combination of both.

byte
A unit of storage in the computer. On many systems, a byte is 8 bits (binary digits), the equivalent of one character of text.

C

call classification analysis
An optional feature package that allows application developers to classify the disposition of originated and transferred calls.

call data event
A parameter that specifies a list of variables that are appended to a call data record at the end of each call.

call data handler process
A software process that accumulates generic call statistics and application events.

called party number
The number dialed by someone making a telephone call. It can be used by telephone switching equipment to selectively route an incoming call to a particular department or agent.

caller
The party that calls for a service, gets connected to the Intuity CONVERSANT VIS, and interacts with the system. As the Intuity CONVERSANT VIS is also capable of making outbound calls for service, the caller can also be the person who responds to those outbound calls.

call progress tones
Standard telephony sounds that indicate the status of the call. These sounds include busy, fast busy, ringback, reorder, etc.

card cage
An area within a Intuity CONVERSANT VIS 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 can be removed from the system and stored as a backup, or used on another system.

caution
An admonishment used when there is a possibility of a service interruption or a loss of data.

CCA
See “call classification analysis.”

CDH
See “call data handler process.”

central office
An office or location in which large telecommunication machines such as telephone switches and network access facilities are maintained. These locations follow strict installation and operation requirements.

central processing unit
A component of the Intuity CONVERSANT VIS that is based on either the Multi-Application Platform 100 (MAP/100), MAP/40, or MAP/100C.

channel
See “port.”

CICS
See “Customer Information Control System.”

circuit card upgrade
A new circuit card that replaces an existing one in the platform. Usually the replacement is an updated version of the other card, and the replacement is designed to deal with technology made obsolete by industry trends or a new VIS release.

cluster controller
A bisynchronous interface that provides a means of handling remote communication processing.

command
An instruction or request given by the user to the VIS software to perform a particular function. An entire command consists of the command name and options.

CompuLert/SCCS interface
An optional feature that enables remote or console monitoring of error messages generated from the Intuity CONVERSANT VIS. CompuLert is a centralized maintenance system for monitoring minicomputers, computer mainframes, etc. The Switching Control Center System (SCCS) is similar to the CompuLert system, but is used to support 4ESS local switching systems.

configuration
The arrangement of the software and hardware of a computer system or network. The Intuity CONVERSANT VIS configuration includes either a standard or custom processor, peripheral equipment (for example, printers, modems), and software applications. Configuration also refers to the way the switch network is set up; that is, the types of products that are in the network and how those products communicate.

configuration management
The component of the VIS that allows you to manage the current configuration of voice channels, host sessions, and database connections, assign scripts to run on specific voice channels or host sessions assign functionality to SP and T1 cards, and perform various maintenance functions.

Converse Data Return (conv_data)
A Script Builder action that supports the DEFINITY call vectoring (routing) feature by enabling the switch to retain control of vector processing in the VIS environment. It supports the DEFINITY "converse" vector command to establish a two-way routing mechanism between the switch and the VIS to facilitate data passing and return.

controller circuit card
A circuit card used on a computer system that controls its basic functionality and makes the system operational. These cards are used to control magnetic peripherals, video monitors, and basic system communications.

copying an application
A utility in which information from a source application is directed into the destination application.

coresidency
The ability of two products or services to operate and interact with each other on a single hardware platform. An example of this is the use of AUDIX Voice Power along with Intuity CONVERSANT on the same VIS platform.

CPU
See "central processing unit."

crash
An interactive utility for examining the operating system core and for determining if system parameters are being exceeded.

custom speech
Unique words or phrases to be used in Intuity CONVERSANT VIS voice prompts that AT&T records for a customer on a custom basis.

custom vocabulary
A specialized package of unique words or phrased created on a per-customer basis and used by WholeWord or FlexWord speech recognition.

Customer Information Control System
Part of the operating system that manages resources for running applications (for example, IND$FILE). Note that TSO and CMS provide analogous functionality in other host environments.

D

danger
An admonishment used when there is a possibility of personal injury.

data interface process
A software process that communicates with Script Builder applications.

database
A structured set of files, records, or tables.

database field
A field used to extract values from a local database and form the structure upon which a database is built.

database table
A structure, made up of columns and rows, that holds information in a database. Database tables provide a means of storing information that changes too often to "hard-code," or permanently store, in the transaction outline.

debug
The process of locating and correcting errors in computer programs. This process is also referred to as "troubleshooting."

default
The way a computer performs a task in the absence of other instructions.

default owner
The owner of a channel when no process takes ownership of that channel. The default owner holds all idle, in-service channels. In terms of the IRAPI, this is typically the Application Dispatch process.

diagnose
The process of performing diagnostics on Tip/Ring, T1, or SP circuit cards or a bus.

dialed number identification service
A service that allows incoming calls to contain information about the telephone number for which it is destined.

directory
A type of file used to group and organize other files or directories.

DNIS
See "dialed number identification service."

DIP
See "data interface process."

display errdata
A command that displays system errors sent to the logger.

DTMF
See “dual tone multi-frequency.”

dual 3270 links
A feature that provides an additional physical unit (PU) to allow a cost-effective means of connecting to two host computers. The customer can connect a VIS to two separate FEPs or to a single FEP shared by one or more host computers. Each link supports a maximum of 32 LUs.

dual tone multi-frequency
A touch tone.

dump space
An area of the disk that is fixed in size and should equal the amount of RAM on the system. The operating system “dumps” an image of core memory upon system crashes. The dump can be fetched after rebooting for analysis of what may have caused the crash.

E

editor system
A system that allows speech phrases to be displayed and edited by a user. See “Graphical Speech Editor.”

Enhanced File Transfer
A feature that allows the transferring of files automatically between the Intuity CONVERSANT VIS and a synchronous host processor on a designated logical unit.

Enhanced Serial Data Interface
A software- and hardware-controlled method used to store data on magnetic peripherals.

error message
A message on the screen indicating that something is wrong and possibly suggesting how to correct it.

Error Tracker process
See “etStub.”

Ethernet
A name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLAN signaling techniques.

etStub
A system process that processes pre-Version 3.1 error message logging requests. These requests are transformed and passed on to the “logdaemon” process.

event
The notification given to an application when some condition occurs.

external actions
Specific tasks and interfaces controlled by Intuity CONVERSANT VIS software that allow a Script Builder application script to invoke processes and interact with other products or services. For example, a Intuity CONVERSANT VIS application script can invoke AUDIX Voice Power functionality through the used of an external action within an application script.

F

feature
A function or capability of a product or an application within the Intuity CONVERSANT VIS.

feature package
An optionally purchased package that may contain both hardware and software resources, which provides additional functionality to a standard system.

feature_tst script package
A standard CONVERSANT VIS software program that allows a VIS user to perform self-tests of critical hardware and software functionality.

field
A “slot” in a VIS window that holds one column of information in a row.

file
A collection of data treated as a basic unit of storage.

file transfer
An option that allows you to transfer files interactively or directly to and from UNIX using the File Transfer System.

filename
Alphabetic characters used to identify a particular file.

FlexWord speech recognition
A type of speech recognition based on subword technology that recognizes phonemes or parts of words of American English vocabularies. See “subword technology.”

Form Filler Plus
An optional feature package that provides the capability for application scripts to record caller’s responses to prompts for later transcription and review.

function key
A key, labeled F1 through F8, on your keyboard to which the Intuity CONVERSANT VIS software gives special properties for manipulating the user interface.

G

Graphical Speech Editor
A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files to be used by VIS applications.

H

hard disk drive
A high-capacity data storage/retrieval device that is located inside a computer platform. 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, etc., are all hardware.

hardware upgrade
Replacement of one or more fundamental platform hardware components (for example, the CPU or hard disk drive), but the existing platform and other existing optional circuit cards remain.

High Level Language Applications Programming Interface (HLLAPI)
An application programming interface that allows user to write custom applications that can communicate with the host via an API.

HLLAPI
See “High Level Language Applications Programming Interface.”

host computer
A computer linked to a network providing a range of services, such as database access and computation. The host computer operates in a time-sharing manner with other computers linked to it via the network.

I

iCk
The system integrity checking process.

idle channel
A channel that either has no owner or is owned by its default owner and is onhook.

IND$FILE
The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND$FILE is independent of link-level protocols such as BISYNC and SDLC.

indexed table
A table that, unlike a nonindexed table, can be searched via a field name that has been indexed.

initialize
To start up the system for the first time.

Integrated Services Digital Network
A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

Integrated Voice Processing circuit card
The IVP4 or IVP6 circuit card.

intelligent transfer protocol
A transfer protocol that monitors the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. It also recognizes when the extension is answered or if the extension is not answered after a specified number of rings.

interface
The access point of a system. With respect to the Intuity CONVERSANT VIS, the interface is designed to provide you with easy access to the software's capabilities.

interrupt
The termination of voice and/or telephony functions when some condition occurs.

Intuity Response Application Programming Interface
A library interface the provides a standard development interface for voice-telephony applications.

ipcs
A command that reports interprocess communication facilities status.

IRAPI
See "Intuity Response Application Programming Interface."

ISDN
See "Integrated Services Digital Network."

K

keyboard mapping
In emulation mode, this feature enables the keyboard to send 3270 keyboard codes to the host according to a configuration table set up during installation.

keyword spotting
A capability provided by WholeWord Speech Recognition that allows the VIS to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.

L

LAN
See "local area network."

library states
The state information about channel activities maintained by the IRAPI.

line side T1
A digital method of interfacing a Intuity CONVERSANT VIS to a PBX or switch using T1-related hardware and software.

listfile
An ASCII catalog that lists the contents of one or more talkfiles. Each application script is typically associated with a separate listfile. The listfile maps speech phrase strings used by application scripts into speech phrase numbers.

local area network
A data communications network in a limited geographical area. The local area network provides communications between computers and peripherals.

local database
A database residing on the Intuity CONVERSANT VIS.

logical unit
A type of SNA Network Addressable Unit.

logdaemon
System information and error logging process.

logger
See “logdaemon.”

logging on/off
Entering or exiting the Intuity CONVERSANT VIS software.

LU
See “logical unit.”

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.

main screen
The Intuity CONVERSANT VIS VERSION 5.0 screen from which you are able to enter System Administration or Voice System Administration.

maintenance process
A software process that runs temporary diagnostics.

Manual Configurator Program
A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

masked event
An event that an application can ignore (that is, the application can ask not to be informed of the event).

master
A board that provides clock information to the TDM bus.

megabyte
A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

Microsoft
A company that manufactures software products, primarily for IBM-compatible computers.

mirroring
A method of data backup that allows all of the data transactions to the primary hard disk drive to be copied and maintained on a second identical drive in near real time. If the primary disk drive crashes or becomes disabled, all of the data stored on it (up to 1.2 billion bytes of information) is accessible on the second mirrored disk drive.

MS-DOS
A personal computer disk operating system developed by the Microsoft Corporation.

MTC
See “maintenance process.”

multi-threaded application
A single process/application that controls several channels. Each thread of the application is managed explicitly. Typically this means state information for each thread is maintained and the state of the application on each channel is tracked.

N

NetView
An optional feature package that transmits high-priority (major or critical) messages to the host as Operator-Generated Alerts (OGAs) over the 3270 host link. The NetView Alarm feature package does not require a dedicated LU.

new error logging environment
A more flexible and informative environment for logging errors and status messages (introduced in CONVERSANT VIS Version 3.1). Customer applications created earlier than V3.1 that log messages require conversion to this new environment.

new operating system
The UnixWare operating system being introduced in Intuity CONVERSANT VIS V5.0.

nonindexed table
A table that may be searched only in a sequential manner and that cannot be searched via a field name.

nonmasked event
An event that must be sent to the application. Generally, an event is nonmaskable if the applicaiton would likely encounted state transition errors by trying to ignore the event.

null value
An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

O

obsolete hardware
Hardware that is no longer supported on Intuity CONVERSANT VIS V5.0.

on-line help
Messages or information that appear on the user's screen when a "function key" (F1 through F8) is pressed.

Operator Generated Alerts
System monitoring messages transmitted from the CONVERSANT VIS or other computer system to an IBM host computer that are classified as critical or major.

option
An argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command will execute according to its default options.

ORACLE
A company that produces Relational Database Management software. It is also used as a generic term that identifies a database residing on a local or remote system that is created and maintained using an ORACLE RDBMS product.

P

PBX
See "private branch exchange."

PCM
See "pulse code modulation."

peripheral (device)
Equipment such as printers or terminals that is in addition to the basic processor.

permanent process
A process that starts and initializes itself before it is needed by a caller.

phoneme
A single basic sound of particular spoken language. The English language contains 40 phonemes that represent all basic sounds used with the language. As an example, the word "one" can be represented with three phonemes, "w" - "uh" - "n." Phonemes vary between languages because of guttural and nasal inflections and syllable constructs.

phrase filtering
The rejection of unrecognized speech. The WholeWord and FlexWord speech recognition packages can be programmed to reprompt the caller if the spoken response was not recognized by the VIS.

phrase tag
A string of up to 50 characters that identify the contents of a speech phrase used by an application script.

platform migration
See “platform upgrade.”

platform upgrade
The process of replacing the existing platform with a new platform.

poll
A message sent from a central controller to an individual station on a multipoint network inviting that station to send if it has any traffic to send.

polling
A network arrangement whereby a central computer asks each remote location whether they wish to send information. This arrangement enables each user or remote data terminal to transmit and receive information on shared facilities.

port
A connection or link between two devices that allows information to travel to a desired location. See “telephone network connection.”

Primary Rate Interface
An optional feature package that provides a digital interface capable both of receiving and originating telephone calls directly from/to an AT&T 4ESS switch.

private branch exchange
A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer’s premises.

processor
In Intuity CONVERSANT VIS documentation, the computer on which UnixWare and Intuity CONVERSANT VIS software runs. In general, the part of the computer system that processes the data. Also known as the “central processing unit.”

ps
A command that shows active processes. This command displays the process table and can be used to determine which processes are consuming large amounts of system resources, such as CPU time.

pseudo driver
A driver that does not control any hardware.

pulse code modulation
A digital modulation method of encoding voice signals into digital signals. See also “adaptive differential pulse code modulation.”

R

recovery
The process of using copies of the VIS software to reconstruct files that have been lost or damaged. See also “restore.”

remote database
The component of the VIS that provides access to information not currently on the VIS.

remote maintenance board
A Intuity CONVERSANT VIS board that is equipped standard on all new MAP/100 and MAP/40 platform purchases. This card, available with a built-in modem, allows remote personnel (for example, field support) to access all Intuity CONVERSANT VIS machines with a standard simplified process.

reports administration
The component of the VIS that provides access to system reports, including VIS call classification reports, call data detail reports, call data summary reports, message log reports, and traffic reports. In addition, if AUDIX Voice Power R2.1.1 is installed on your system, the reports administration component gives you access to AUDIX Voice Power reports.

restore
The process of recovering lost or damaged files by retrieving them from available backup tapes or from another disk device. See also “recovery.”

restore application
A utility that replaces a damaged application or restores an older version of an application.

reuse
The concept of reusing an existing system component after a software upgrade or platform migration.

roll back
To cancel changes to a database since the point at which changes were last committed.

rollback segment
A portion of the database that records actions that should be undone under certain circumstances. Rollback segments are used to provide transaction rollback, read consistency, and recovery.

S

sar
A command that is associated with the system activity report package.

screen pop
A method of delivering a screen of information to a telephone operator at the same time a telephone call is delivered. This is accomplished by a complex chain of tasks that include identifying the calling party number, using that information to access a local or remote ORACLE database, and pulling a “form” full of information from the database using an ORACLE database utility package.

script
The set of instructions for the Intuity CONVERSANT VIS to follow during a transaction.

Script Builder
An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the VIS.

SCSI
See “Small Computer System Interface.”

shared database table
A database table that is used in more than one application.

shared speech
Speech that is a part of more than one application.

shared speech pools
A parameter that allows the user of a voice application to share speech components with other applications.

Single Inline Memory Modules
A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

single-threaded application
An application that runs on a single voice channel.

slave
A circuit card that depends on the TDM bus for clock information.

Small Computer System Interface
A disk drive control technology in which a single SCSI adapter card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, etc.

software
The set or sets of programs that instruct the computer hardware to perform a task or series of tasks — for example, UnixWare software and the Intuity CONVERSANT VIS Version 5.0 software.

software upgrade
The installation of a new version of software. The existing platform and circuit cards are kept.

source system
The system from which you are upgrading (that is, your system as it exists *before* you upgrade).

speech energy
The amount of energy in an audio signal. Literally translated, it is the output level of the sound in every phonetic utterance.

speech envelope
The linear representation of voltage on a line. It reflects the sound wave amplitude at different intervals of time. This envelope can be plotted on a graph to represent the oscillation of an audio signal between the positive and negative extremes.

speech file
A file containing an encoded speech phrase.

speech filesystem
A collection of several talkfiles. The filesystem is organized into 16-Kbyte blocks for efficient management and retrieval of talkfiles. The Intuity CONVERSANT VIS speech filesystem is not consistent with standard UNIX filesystems, and can not be referenced with standard UNIX commands such as **ls**, **cat**, etc.

speech modeling
Creating WholeWord speech recognition algorithms by collecting thousands of different speech samples of a single word and comparing them all to obtain a statistical average of the word. This average is then used by a WholeWord speech recognition program to recognize a single spoken word.

speech phrase
A continuous speech segment encoded into a digital string.

speech space
An area that contains all digitized speech used for playback in the applications loaded on the system.

standard speech
The speech package containing simple words and phrases produced by AT&T for use with an Intuity CONVERSANT VIS. This package includes digits, numbers, days of the week, and months, each spoken with initial, medial, and falling inflection. The speech is in digitized files stored on the hard disk to be used in the voice prompts played by the VIS.

standard vocabulary
A standard package of simple word speech models provided by AT&T and used for WholeWord speech recognition purposes. These phrases include the digits "zero" through "nine," "yes," "no," and "oh."

string
A contiguous sequence of characters treated as a unit. Strings are normally bounded by white spaces, tabs, or a character designated as a separator. A string value is a specified group of characters symbolized by a variable.

Structured Query Language
A standard data programming language used with data storage and data query applications.

subword technology
A method of speech recognition that recognizes phonemes or parts of words of American English vocabularies. See "whole-word technology."

switch
A software and hardware device that controls and directs voice and data traffic. A customer-based switch is known as a "private branch exchange."

switch hook
The device at the top of most telephones that is depressed when the handset is resting in the cradle (on hook). The device is raised when the handset is picked up (the telephone is off hook).

switch hook flash
A signaling technique in which the signal is originated by momentarily depressing the "switch hook."

switch interface administration
The component of the VIS that enables you to define the interaction between the VIS and switches by allowing you to establish and modify switch interface parameters and protocol options for both analog and digital interfaces.

switch network
Two or more interconnected switching systems.

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."

System 75
An advanced digital switch supporting up to 800 lines that provides voice and data communications for its users.

System 85
An advanced digital switch supporting up to 3000 lines that provides voice and data communications for its users.

system administrator
The person assigned the responsibility of monitoring all VIS software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

system architecture
The manner in which the Intuity CONVERSANT VIS software is structured.

system message
An event or alarm generated by either a VIS or end-user process.

system monitor
A component of the VIS in which tests are performed to verify that each incoming telephone line and its associated tip/ring or T1 card is functional. Through the "System Monitor" component, you are able to see displays of the Voice Channel and Host Session Monitors.

T

T1
A digital transmission link with a capacity of 1.544 Mbps.

table
A collection of records that are logically grouped together.

talkfile
An ASCII file that contains the speech phrase tags and phrase tag numbers for all the phrases of a specific application. The speech phrases are organized and stored in groups. Each talkfile can contain up to 65,535 phrases and the speech filesystem can contain multiple talkfiles.

target system
The system to which you are upgrading (that is, your system as you expect it to exist *after* you upgrade).

TDM
See "time-division multiplex."

telephone network connection
The point at which a telephone network connection terminates on an Intuity CONVERSANT VIS. Supported telephone connections are Tip/Ring and T1.

Terminal Emulator
Software that allows the VIS to temporarily transform itself into a "look alike" of an IBM 3270 terminal. In addition to providing full 3270 functionality, the Terminal Emulator enables you to transfer files to and from UNIX.

Text-to-Speech
An optional feature that allows an application to play speech directly from ASCII text by converting that text to synthesized speech. The text can be used for prompts or for text retrieved from a database or host, and can be spoken in an application with prerecorded speech. Text-to-Speech application development is supported through Script Builder.

ThickNet
A 10-millimeter (10BASE5) coaxial cable used to provide InterLAN communications.

ThinNet
A 5-millimeter (10BASE2) coaxial cable used to provide InterLAN communications.

time-division multiplex
A method of serving a number of simultaneous channels 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 analog telecommunications using four-wire media.

Token/Ring
A ring type of local area network that allows any station in the network to communicate with any other station.

trace
A command that can be used to monitor the execution of a script.

traffic
The flow of information or messages through a communications network for voice, data, or audio services.

transaction
Comprised of the exchanges between the caller and the voice system. A transaction can involve one or more telephone network connections and voice responses from the Intuity CONVERSANT VIS. It can also involve one or more of the VIS optional features, such as speech recognition, 3270 host interface, FAX response, etc.

transaction state machine process
A multi-channel IRAPI application that runs applications driven by script information.

transient process
A process that is created dynamically only when needed.

troubleshoot
The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

TSM
See “transaction state machine process.”

TTS
See “Text-to-Speech.”

U

UNIX Operating System
A multiuser, multitasking computer operating system developed by the Bell Telephone Laboratories division of AT&T.

UNIX shell
The command language that provides a user interface to the UNIX operating system.

upgrade image tape
A tape, optionally provided to you by the Technical Service Organization, containing the new operating system and Intuity CONVERSANT VIS V5.0 base software in a standard configuration which is compatible with your target system.

upgrade scenario
The particular combination of current hardware, software, application and target hardware, software, applications, etc.

V

vi editor
A screen editor used by the Intuity CONVERSANT VIS to create and change electronic files.

virtual channel
A channel that is not associated with an interface to the telephone network (Tip/Ring, T1, or PRI). Virtual channels are intended to run "data only" applications which do not interact with callers but may interact with DIPs. Voice or network functions (for example, coding or playing speech, call answer, origination, or transfer) will not work on a virtual channel. Virtual channel applications may be initiated only by a "virtual seizure" request to TSM from a DIP.

VIS
See "Voice Information System."

vocabulary
A collection of words that a VIS is able to recognize using either WholeWord or FlexWord speech recognition.

vocabulary activation
The set of active vocabularies that define the words and wordlists known to the FlexWord recognizer.

vocabulary loading
The process of copying the vocabulary from the system where it was developed and adding it to the target system.

voice channel
A channel that is associated with an interface to the telephone network (Tip/Ring, T1, or PRI). Any Intuity CONVERSANT VIS application can run on a voice channel. Voice channel applications may be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a "soft seizure" request to TSM from a data interface process (DIP) or the **soft_szr** command.

Voice Information System
A computer connected to a telephone network that handles touch-tone input, voice response, and line transfer. The Voice Information System uses a screen-based, menu-driven user interface to interact with the system operator or administrator.

voice processing co-marketer
A company licensed to purchase voice processing equipment, such as the Intuity CONVERSANT VIS, to market and sell based on their own marketing strategies.

voice response output process
A software process that transfers digitized speech between system hardware (for example, Tip/Ring and SP cards) and data storage devices (that is, hard disk, etc.)

Voice System Administration
The means by which you are able to administer both voice- and nonvoice-related aspects of the system.

VROP
See “voice response output process.”

W

warning
An admonishment used when there is a possibility of equipment damage.

WholeWord speech recognition
An optional feature based on whole-word technology that provides speaker independence, connected digit recognition, key word spotting, prompt interrupt, and DTMF support functionality. See “whole-word technology.”

whole-word technology
The ability to recognize an entire word, not the phoneme or a part of a word. See “subword technology.”

wink signal
An interruption of current to a busy lamp indicating that there is a line on hold.

word
A unique utterance understood by the recognizer.

wordlist
A set of words identified by a wordlist name. If the wordlist is part of an active vocabulary, the wordlist name appears as a recognition type in the Prompt & Collect mode field.

word spotting
The ability to search past extraneous speech during a recognition.

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