Lucent Technologies
Bell Labs Innovations

INTUITY™

MAP/100 Hardware Installation

585-310-139
Comcode 107856916
Issue 3
September 1996

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

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

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

This document was prepared by the Product Documentation Development, Lucent Technologies, Columbus, OH.

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About This Document

Purpose

This book, *Intuity MAP/100 Hardware Installation*, 585-310-139, describes the procedures for installing the Multi-Application Platform 100 (MAP/100) hardware. These procedures apply to Intuity™ Release 1.0. 2.0, and 3.0.

Intended Audiences

This book is intended primarily for the on-site Lucent Technologies service technician and customer technical personnel. Secondary audiences from Lucent Technologies include:

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

Prerequisite Skills and Knowledge

We assume that the primary users of this book have completed an Lucent Technologies MAP/100 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 verify power supply intake voltage, how to prewire for pinout connections, how to make asynchronous connections, and how to make connections for the ACCX circuit card.

- Chapter 2, "Getting Started"

  Discusses warnings pertaining to installing the system, required tools, how to unpack the MAP/100, how to connect the tip/ring distribution hardware, and descriptions of the MAP/100 platform, hardware components, and peripheral bay features.

- Chapter 3, "Connecting Peripherals and Powering Up"

  Describes how to connect the peripherals: monitor, keyboard, printer, 3820 modem, and 7400A modem, and how to power up the system, as well as how to correct system setup for the 486 CPU if necessary.

- Chapter 4, "Configuring the System"

  Describes how to configure the system; that is, allocate system resources for additional circuit cards and hardware, etc.

- Chapter 5, "Getting Inside the Computer"

  Describes how to remove and replace the dress covers, how to open and remove front doors, and how to access the peripheral bay and card cage.

- Chapter 6, "Installing Circuit Cards — Introduction and Types"

  Classifies and groups circuit cards used in the MAP/100. 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 Tip/Ring Circuit Cards"

  Describes how to set I/O addresses for each of the eleven tip/ring circuit cards associated with the Intuity software application.

- Chapter 8, "Installing Optional Feature Circuit Cards"

  Describes how to set jumpers, I/O addresses, and connect cables for circuit cards that are used for optional features, such as network, switch, and serial connections.

- Chapter 9, "Installing Standard MAP/100 Circuit Cards"

  Describes how to set jumpers, switches, I/O addresses, and connect cables for the four circuit cards that are always included with the MAP/100: video controller card, SCSI controller card, the 486 CPU, and the remote maintenance card.

- Chapter 10, "Installing Optional Hardware"

  Describes how to replace SIMMs, how to add additional SCSI hard disk drives, and how to add tip/ring distribution hardware.

- Chapter 11, "Finishing Up"

  Describes how to check or troubleshoot the hardware if the MAP/100 does not power-up correctly after installation. This chapter also includes information on how to clean the equipment and the air filter.

- Chapter 12, "Moving the System"

  Describes how to safely move the MAP/100 after it has been in operation.

- Appendix A, "Component Ordering Numbers"

  Lists the MAP/100 standard and optional components and their comcode ordering numbers for ordering spare or replacement parts.

- Appendix B, "Cable Connectivity"

  Details the external connectivity and cabling for connections from the MAP/100 to Lucent Technologies switches, networks, and distant terminals and modems.

- Abbreviations

  This section provides a list of abbreviations and acronyms used in Intuity Voice Processing documentation.

- Glossary

  The Glossary provides a definition of terms and acronyms used in Intuity Voice Processing documentation.

- Index

  The Index provides an alphabetical listing of principal subjects covered in this book.

How to Use This Book

This book accommodates either the user who has purchased a system that has been assembled, loaded, and tested (ALT) at the factory or the user that intends to assemble and load, as well as install the MAP/100 unit.

The chapters are placed in order of the steps to be followed to install the system, as if the system has not yet been assembled. If you are installing the Intuity system, begin with the first chapter and follow the chapters consecutively throughout the book.

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

To assure that you have followed all the steps required for your type of installation, refer to the *Intuity Installation Checklist*, 585-310-161.

If you need to add circuit cards or additional hardware to an ALT system, refer to chapters in this book beginning with Chapter 4, "Configuring the System".

Conventions Used in This Book

The following conventions are used in this book:

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

  Press ENTER

- 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.

- 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 two separate rounded boxes connected together by “and." For example, an instruction to press and hold ALT while typing the letter **d** is shown as

  ALT and D

- Commands and text you type or enter appear in **bold**.

- Values, instructions, and prompts that appear on the screen are shown in traditional typewriter type as

  ```
  Cconstant-width
  ```

- The number zero is shown in this book as “0” when you are asked to enter the number zero.

Related Resources

In addition to this document, you may need to reference the following documents:

Document	Document Number	Issue
INTUITY™ Release 3.0 System Description	585-310-232	1 or later
INTUITY™ Documentation Guide	585-310-540	2 or later
INTUITY™ New System Planning for Release 3.0	585-310-605	2 or later

INTUITY™ Release 3.0 Planning for Upgrades	585-310-653	1 or later
INTUITY™ Release 3.0 Planning for Migrations	585-310-652	1 or later
INTUITY™ Installation Checklist	585-310-161	2 or later
INTUITY™ MAP/5 Hardware Installation	585-310-146	2 or later
INTUITY™ MAP/40 Hardware Installation	585-310-138	2 or later
INTUITY™ Software Installation for Release 3.0	585-310-160	2 or later
INTUITY™ Release 3.0 Upgrade Procedures	585-310-164	2 or later
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INTUITY™ Platform Administration and Maintenance for Release 3.0	585-310-557	2 or later
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INTUITY™ Message Manager Release 4 User's Guide	585-310-743	1 or later
INTUITY™ Message Manager Release 4.1: Getting Started (Available late 1996)	585-310-740	1 or later
AUDIX® Administration and Data Acquisition Package	585-310-502	4 or later
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Intuity MAP/100 Hardware Installation
Issue 3
585-310-139

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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/100. This includes:

- Verifying environmental, space, and power requirements for the MAP/100
- Prewiring for pinout connections
- Reviewing regulatory agency guidelines

This information also can be found in *Intuity New System Planning*, 585-310-605. Use this chapter to verify that the site is ready for installation.

System Arrangement

You can install the MAP/100 in two ways:

- Deskside
- Rack-mounted

Deskside Units

The deskside version of the MAP/100 is shipped preassembled except as noted in this book. You must position the unit with approximately a six-inch (15.2-centimeter) clearance from the back to the front to provide for adequate air intake and exhaust.

Rack-Mount Units

Units ordered for rack-mount installations are shipped without exterior panels for installation in a 19-inch (48.3-centimeter) rack-mount enclosure. When ordering, you must specify a rack-mount kit for each MAP/100 you are installing. Each kit comes with full assembly instructions. See also "Installing a Commercial Cabinet- Mounted MAP/100" on page 2-16 in Chapter 2, "Getting Started" in this book.

Environmental Considerations

Place the MAP/100 in an area where the environmental conditions shown in Table 1-1 are maintained:

Table 1-1. Environmental Considerations

Operating State	Temperature	Humidity
Operating	+10 to +38°C (+50 to +100°F)	10 to 90%, non-condensing
Non-operating (that is, during shipping or storage)	-40 to +60°C (-40 to +140°F)	0% to 95%, non-condensing

Installation Area Considerations

Observe the following when deciding where to place the MAP/100:

- Install the MAP/100 in an area that provides protection from excessive sunlight, heat, cold, chemicals, static electricity, magnetic fields, vibration, dust, and grime.
- Do *not* install the unit in the same area as copier machines because of the paper particles created by such equipment.
- Maintain an air distribution system that provides adequately cooled, filtered, and humidity-controlled air.

  NOTE:
  The maximum heat output of a MAP/100 is approximately 2500 BTUs.

- Do *not* install the unit in an area with high-power electrical equipment.
- Provide surge protection and power backup in an area with volatile power (brown-outs or frequent power surges).
- Provide additional grounding if necessary in a multiple-system installation to facilitate a radio-frequency noise free environment.

Space Requirements

The table below lists the weight and size of the major MAP/100 components:

Table 1-2. Space Requirements

Equipment	Weight (lbs./kg.)	Height (inches/cm.)	Width (inches/cm.)	Depth (inches/cm.)
MAP/100				
Deskside	140/64	24.0/61	19.5/50	22/56
Rack	140/64	21.5/55	17.5/44.5	22/56
Monitor	15/7	13.5/34.5	13/33	14.5/37
Keyboard	5/2.5	2.5/6.5	19/48.5	8/20.5

Power Requirements

The MAP/100 requires 15 amps of power on initial power up. The maximum power dissipation of a MAP/100 is 600 watts. The MAP/100 powers the monitor through an interface cable. Note that a receptacle is provided on the rear of the MAP/100 to supply power for the monitor.

Make the following power requirements available for the MAP/100.

Table 1-3. Power Requirements for the MAP/100

Country/Continent	Volts AC Required	Input Power Cord Required	Comcode	Refer to Figure
Argentina	220 VAC	AS 3112	407051630	Figure 1-5
Australia	220 VAC	AS 3112	407051630	Figure 1-5
Belgium	220 VAC	CEE 7	407051648	Figure 1-2
Brazil	220 VAC	CEE 7	407051648	Figure 1-2
Colombia	110 VAC	NEMA* 5-15	406900092	Figure 1-1
France	220 VAC	CEE 7	407051648	Figure 1-2
Germany	220 VAC	CEE 7	407051648	Figure 1-2
Greece	220 VAC	CEE 7	407051648	Figure 1-2
Hong Kong	220 VAC	BS 1363	406999243	Figure 1-3
India	220 VAC	BS 546	407406735	Figure 1-4
Japan	110 VAC	JIS 8303	407406727	Not shown
Luxembourg	220 VAC	CEE 7	407051648	Figure 1-2
The Netherlands	220 VAC	CEE 7	407051648	Figure 1-2
New Zealand	220 VAC	AS 3112	407051630	Figure 1-5
North America	110 VAC	NEMA* 5-15	406900092	Figure 1-1
Singapore	220 VAC	BS 1363 or BS 546	406999243 407406735	Figure 1-3 Figure 1-4
Spain	220 VAC	CEE 7	407051648	Figure 1-2
Thailand	220 VAC	CEE 7	407051648	Figure 1-2
United Kingdom	220 VAC	BS 1363	406999243	Figure 1-3

* National Electrical Manufacturer's Association

In addition to making the power requirements available, follow the steps below:

- Locate each unit and printer within 9 feet of its power receptacle.
- Ensure that communication cables are kept separate from power cables.
- Install communication and power cables in accordance with National Electric Codes.

  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 shielded equipment with the MAP/100 to maintain safe levels of electromagnetic compatibility.

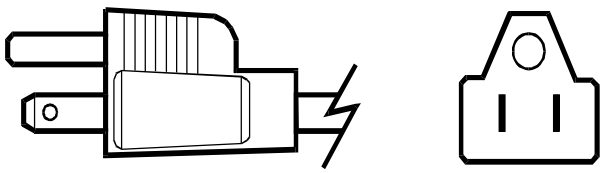


Figure 1-1. NEMA 5-15 Power Cord (Columbia, Mexico, North America)

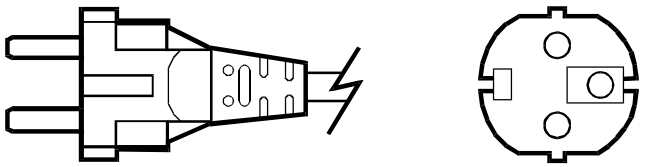


Figure 1-2. CEE 7 Power Cord (Belgium, Brazil, France, Germany, Greece, Luxembourg, Netherlands, Spain, and Thailand)

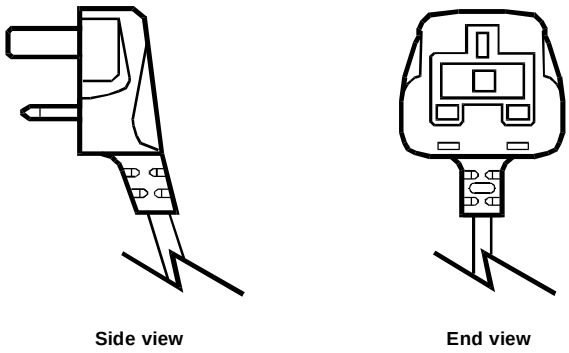
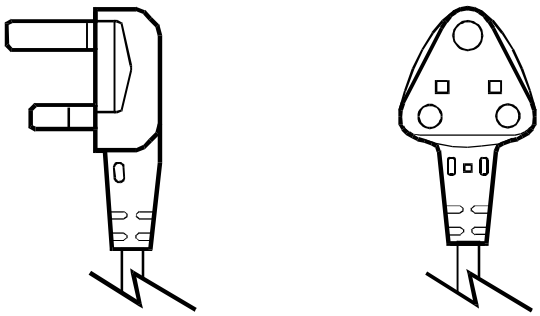
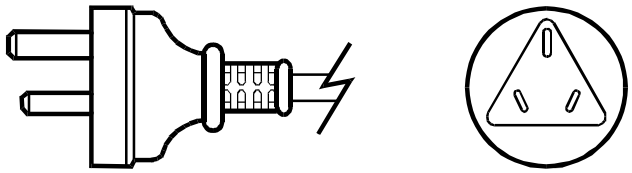


Figure 1-3. BS 1363 Power Cord (United Kingdom, Hong Kong, and Singapore)



Side view End view

Figure 1-4. BS 546 Power Cord (India and Singapore)



Side view End view

Figure 1-5. AS 3112 Power Cord (Argentina, Australia, and New Zealand)

Verifying Power Supply Intake Voltage for Systems with Battery Backup

You may use this procedure, if needed, if the MAP/100 has a front panel identical to the one in Figure 1-6 that shows Battery Status. This procedure may not be used on other types of power supplies.

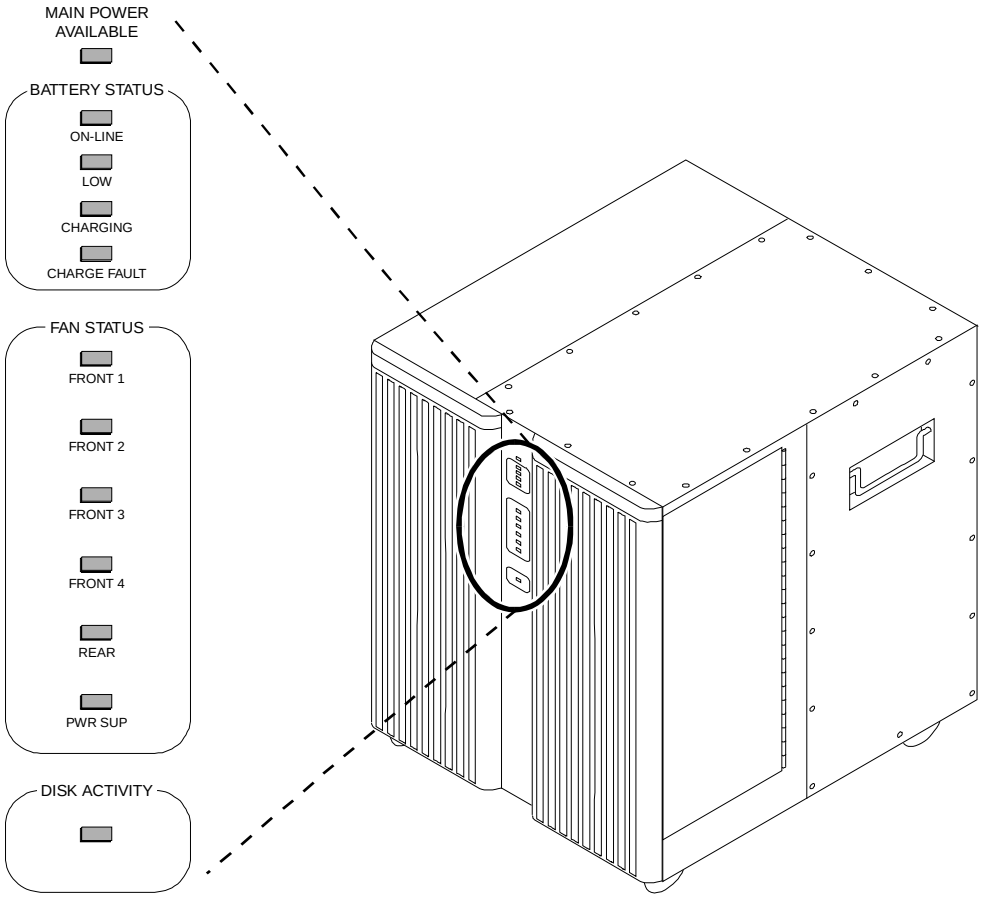


Figure 1-6. Locating the Power Supply

The manufacturer sets the power supply intake voltage for this supply type for either 115 VAC or 220 VAC as requested by the customer. Check the back of the MAP/100 chassis for the label which indicates either 115 VAC or 220 VAC to verify that the setting meets your requirements. If it does not, complete the following procedure to change the intake voltage.

1. Loosen the screws on the panel on the power supply drawer and slide the drawer toward you.

2. Loosen two screws on each side of the channel bracket which covers the power supply and remove the bracket. See the following figure.

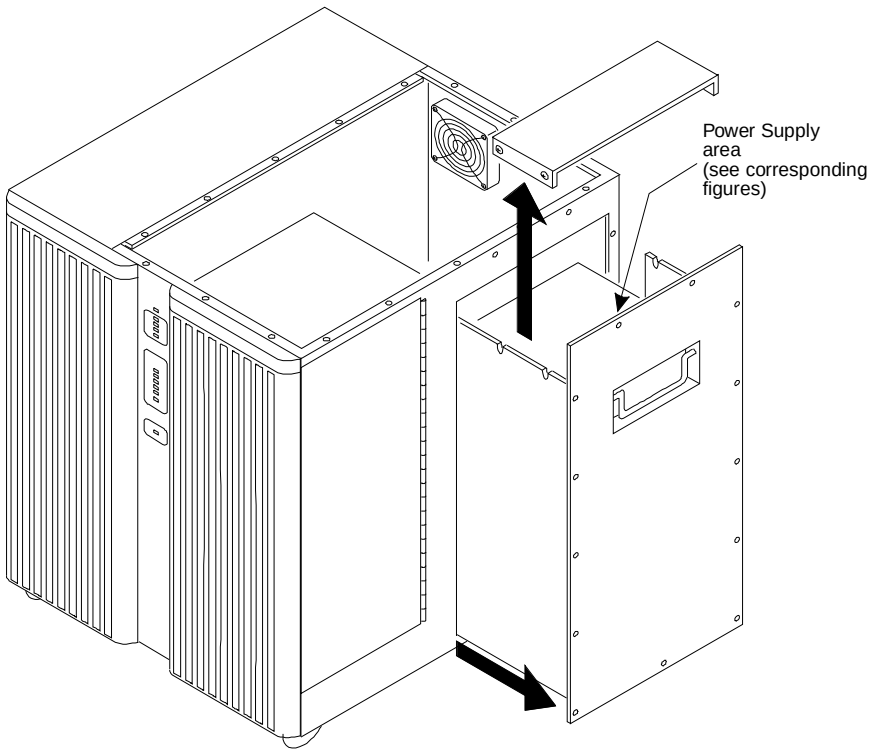


Figure 1-7. Locating the Power Supply

3. Remove the terminal block insulator in the lower left corner of the power supply.
4. Reset the jumpers if they are not set correctly for the intake voltage required at your location. See Figure 1-8, Figure 1-9, and Figure 1-10 for locations and settings of jumpers.
5. Verify that the shorting-bar jumpers are set correctly for the voltage you require. Refer to the jumper settings in Figure 1-8, Figure 1-9, and Figure 1-10.
6. Reset the jumpers if they are not correctly set for the intake voltage required at your location.

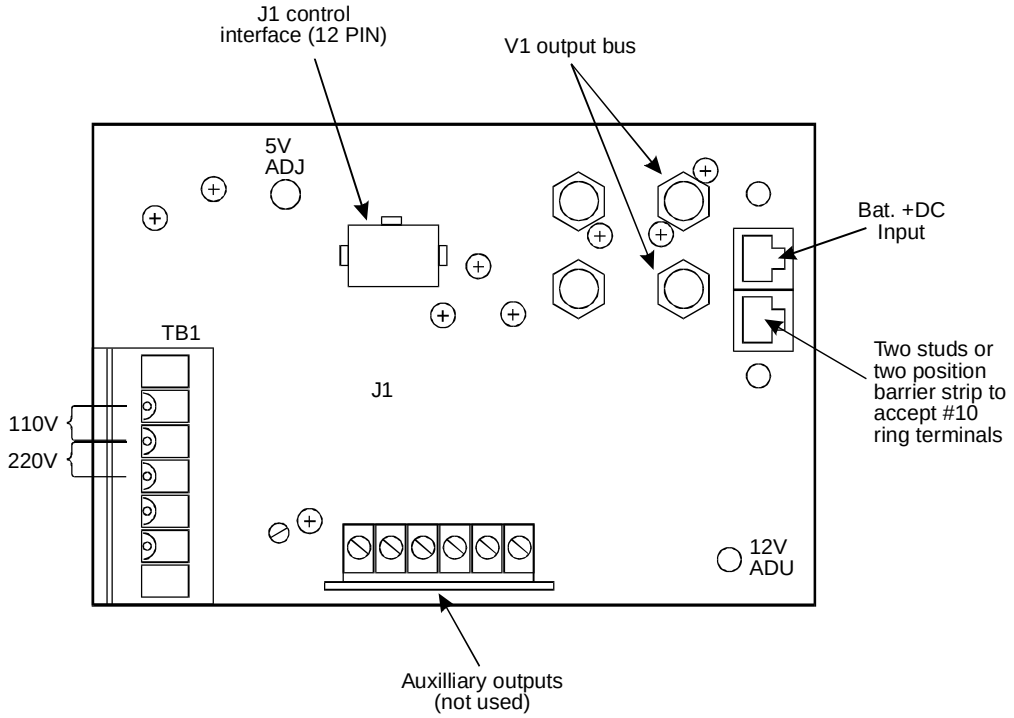


Figure 1-8. UNIPower Power Supply – Jumper Settings for Intake Voltage

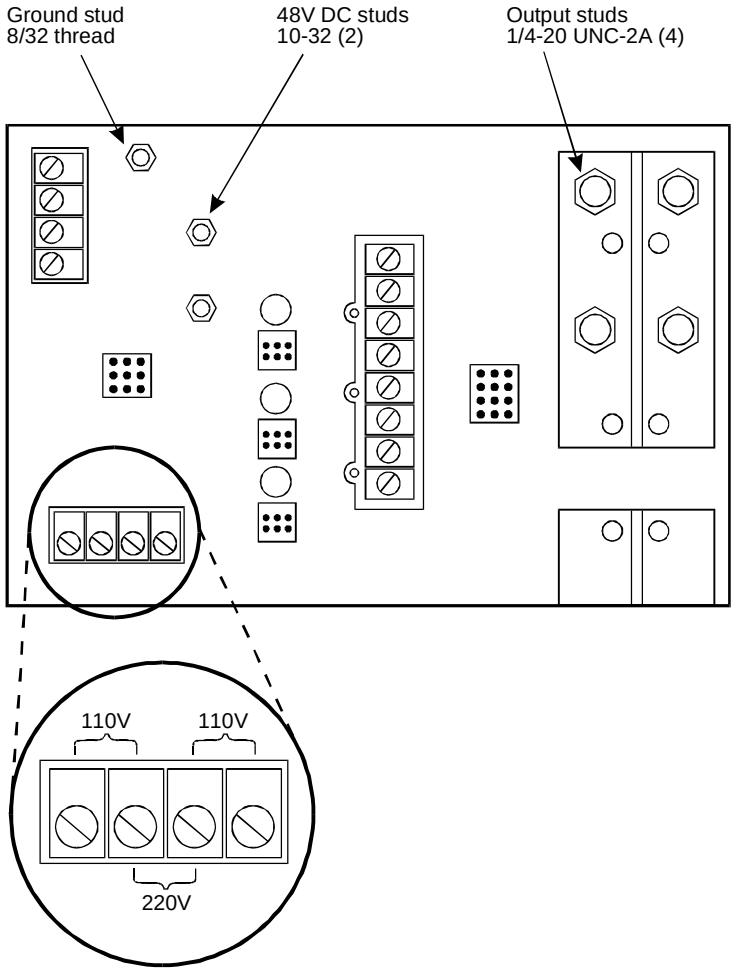


Figure 1-9. LH Power Supply – Jumper Settings for Intake Voltage

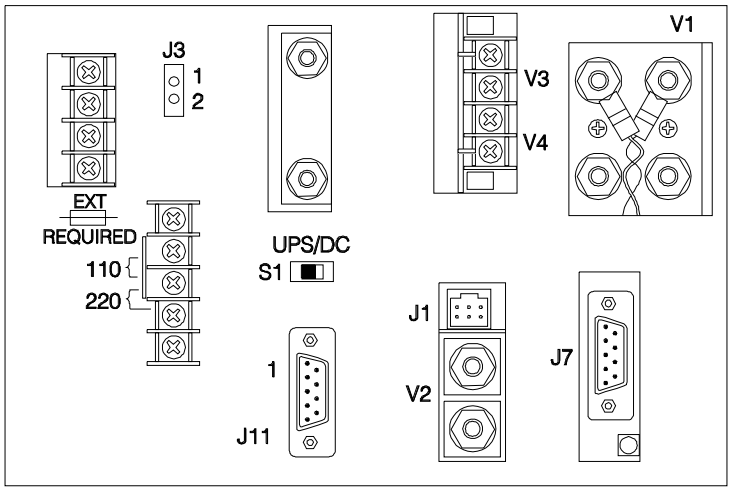


Figure 1-10. Modified LH Power Supply – Jumper Settings for Intake Voltage

Site Prewiring for Pinout Connections

This section describes pinout connections for:

- telephone lines,
- networking to other voice systems
- switch integration
- asynchronous connections

Telephone Line Connections – Tip/Ring Circuit Card

Connections from Lucent Intuity MAP/100 to attendant telephones are provided over telephone lines that may come from the local private branch exchange (PBX). 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:
If the customer's applications do a large amount of flash-hook transfers or if the customer has a large amount of AUDIX out-calling channels, you need to be sure that there are enough dial tone registers available. You will need to ensure that switch engineering has equipped the switch to handle the additional load placed on it by Lucent Intuity MAP/100.

Connecting the Tip/Ring Lines

Tip/Ring (T/R) circuit cards include the AYC10, AYC29, and the AYC30 cards. The identity of the T/R circuit card varies with location. In general, all installations use the AYC10, except installations in Australia (AYC29), and in Europe and Japan (AYC30).

The T/R circuit card uses two 6-pin modular jacks with each providing three lines for telephone hook-up for a total of six lines. You can connect the T/R card to telephone lines in one of three different ways:

1. Direct cable connection from the T/R card to the telephone line
2. Cable connection from the T/R card through an 885A line splitter and then to the telephone lines
3. Cable connection using T/R distribution hardware to the telephone lines These cable connections are explained in the next sections.

Direct Cable Connection

If you make a direct connection from the T/R card to the telephone line, only one telephone line or channel, rather than three, in the 6-pin conductor modular cord will be active.

Channel 1, pins 3 and 4 will be active.

Figure 1-11 illustrates a direct cable connection from the T/R card.

NOTE:
Please be aware that Figure 1-11 is an *example*. The slot numbers for T/R card placement in your system may differ from those shown in this figure.

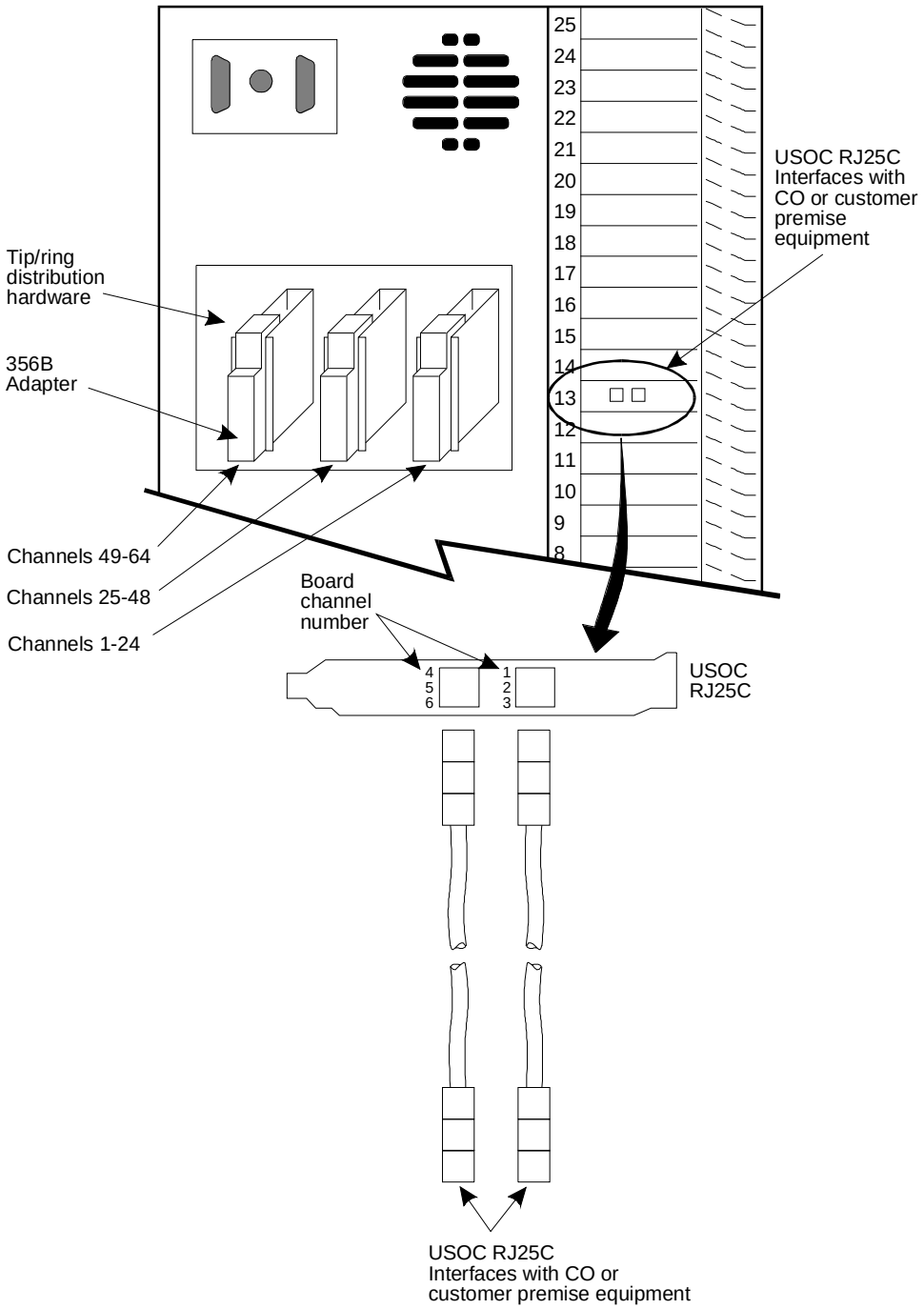


Figure 1-11. Direct Line Connection from the T/R card with T/R Distribution Hardware Shown

Cable Connection Using the Line Splitter

Use the 885A Adapter (line splitter) for the T/R cards in order to use all three channels or telephone lines in the 6-pin conductor modular cord.

WARNING:
There may be a magnet on the back of the 885A adapter. Do not place this near a hard disk drive or near floppy diskettes.

Use the next two figures to determine how to use the line splitters.

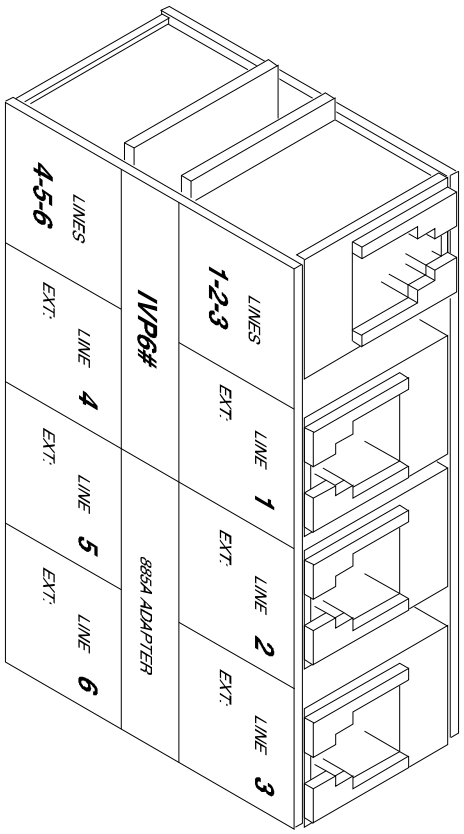


Figure 1-12. 885A Adapter - Line Splitter for the Tip/Ring Card

NOTE:
Record the circuit card slot number and telephone extension numbers on the 885A adapter.

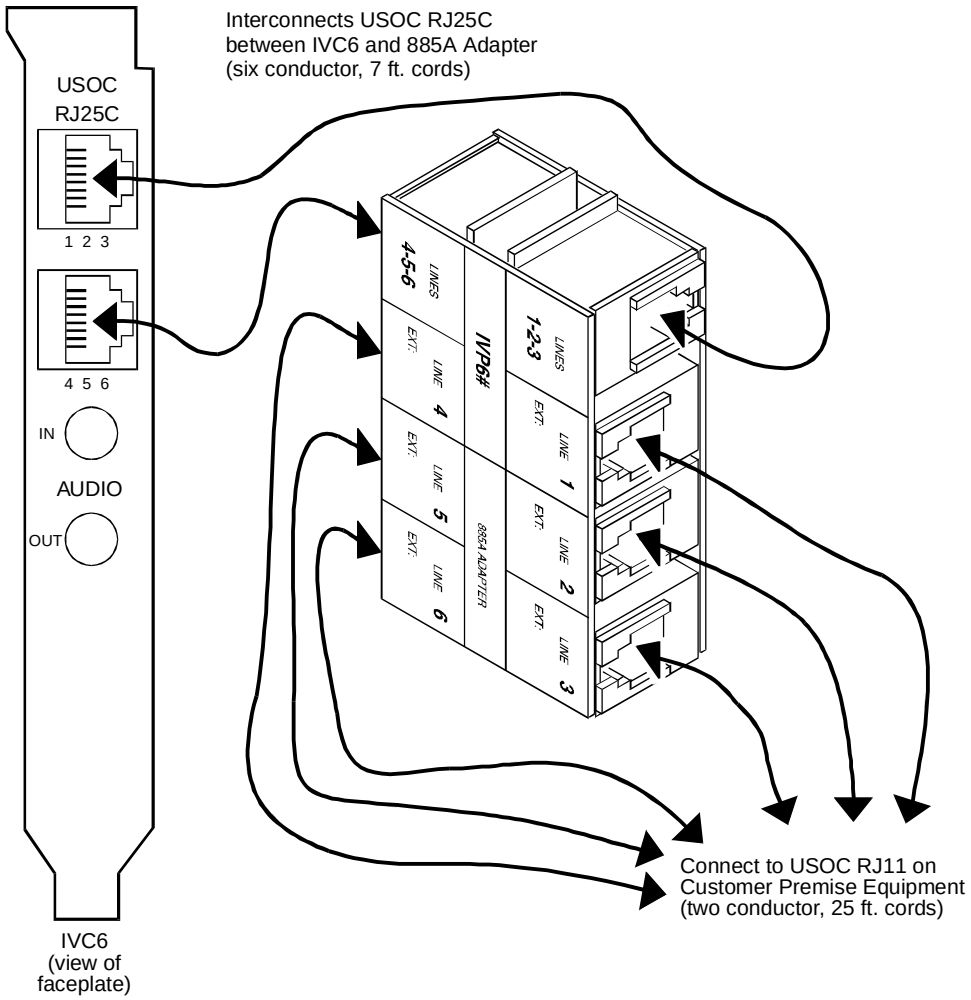


Figure 1-13. How to Use the 885A Adapter with a Tip/Ring Card

Cable Connection Using the Tip/Ring Distribution Hardware

Use the T/R distribution hardware to simplify the wiring scheme on premise as the number of lines served increases. Refer to Chapter 10, "Installing Optional Hardware" for information on how to install if you are adding the T/R distribution hardware to the platform.

Two Types of Tip/Ring Distribution Hardware

There are two types of T/R distribution hardware available in Lucent Intuity MAP/100. They are used in the Lucent Intuity MAP/100 based on the release of the product:

- 356B Adapter
- T/R Panels

Maximum Number of Channels

The T/R distribution hardware allows a maximum of 64 channels (11 T/R cards) to be connected to the local customer-premise equipment or the building connecting block provided by the central office via one, two, or three 25-pair, high density cables, RJ21X.

This distribution hardware is attached to the back of the unit and comes factory-assembled on initial orders. To correctly wire the T/R cards with channels and pinout connections, refer to procedures below and the tables that follow.

Cable Lengths

Different cable lengths are available for connectivity. These cables are listed in Appendix B, "Cable Connectivity".

Making Connections to the T/R Distribution Panels Using the 356B Adapter

1. Table 1-4 shows the numbering scheme for connecting the short modular cords provided with the T/R boards 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.
2. After you insert the modular cord into the appropriate jack, remove any slack in the cable on the back of the unit by dressing it so that it is stored in the area above the distribution panel PWB. Use cable ties, if necessary, to dress the cables neatly and tie them to the vertical cable support bracket in the center of the unit.

3. Make telephone line connections to the MAP/100 with the 25-ft. (7.6-meter) 50-conductor shielded cable(s) equipped with USOC RJ21X connections.

Table 1-4. Map/100 Tip/Ring Consolidation Wiring and Pinouts

From				To				
							RJ21X 50 Pin Conn.	
Channel #	Line Board #	Jack #	Pin #	356 Adapter #	Jack #	Pin #	T or R	Pin #
1	1	1	3	1	1	4	R1	1
1	1	1	4	1	1	5	T1	26
2	1	1	2	1	1	3	T2	27
2	1	1	5	1	1	6	R2	2
3	1	1	1	1	1	2	T3	28
3	1	1	6	1	1	7	R3	3
4	1	2	3	1	2	4	R4	4
4	1	2	4	1	2	5	T4	29
5	1	2	2	1	2	3	T5	30
5	1	2	5	1	2	6	R5	5
6	1	2	1	1	2	2	T6	31
6	1	2	6	1	2	7	R6	6
7	2	1	3	1	3	4	R7	7
7	2	1	4	1	3	5	T7	32
8	2	1	2	1	3	3	T8	33
8	2	1	5	1	3	6	R8	8
9	2	1	1	1	3	2	T9	34
9	2	1	6	1	3	7	R9	9
10	2	2	3	1	4	4	R10	10
10	2	2	4	1	4	5	T10	35
11	2	2	2	1	4	3	T11	36
11	2	2	5	1	4	6	R11	11
12	2	2	1	1	4	2	T12	37
12	2	2	6	1	4	7	R12	12
13	3	1	3	1	5	4	R13	13
13	3	1	4	1	5	5	T13	38

Continued on next page

Table 1-4. Map/100 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To				
							RJ21X 50 Pin Conn.	
Channel #	Line Board #	Jack #	Pin #	356 Adapter #	Jack #	Pin #	T or R	Pin #
14	3	1	2	1	5	3	T14	39
14	3	1	5	1	5	6	R14	14
15	3	1	1	1	5	2	T15	40
15	3	1	6	1	5	7	R15	15
16	3	2	3	1	6	4	R16	16
16	3	2	4	1	6	5	T16	41
17	3	2	2	1	6	3	T17	42
17	3	2	5	1	6	6	R17	17
18	3	2	1	1	6	2	T18	43
18	3	2	6	1	6	7	R18	18
19	4	1	3	1	7	4	R19	19
19	4	1	4	1	7	5	T19	44
20	4	1	2	1	7	3	T20	45
20	4	1	5	1	7	6	R20	20
21	4	1	1	1	7	2	T21	46
21	4	1	6	1	7	7	R21	21
22	4	2	3	1	8	4	R22	22
22	4	2	4	1	8	5	T22	47
23	4	2	2	1	8	3	T23	48
23	4	2	5	1	8	6	R23	23
24	4	2	1	1	8	2	T24	49
24	4	2	6	1	8	7	R24	24
25	5	1	3	2	1	4	R25	1
25	5	1	4	2	1	5	T25	26
26	5	1	2	2	1	3	T26	27
26	5	1	5	2	1	6	R26	2
27	5	1	1	2	1	2	T27	28

Continued on next page

Table 1-4. Map/100 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To				
							RJ21X 50 Pin Conn.	
Channel #	Line Board #	Jack #	Pin #	356 Adapter #	Jack #	Pin #	T or R	Pin #
27	5	1	6	2	1	7	R27	3
28	5	2	3	2	2	4	R28	4
28	5	2	4	2	2	5	T28	29
29	5	2	2	2	2	3	T29	30
29	5	2	5	2	2	6	R29	5
30	5	2	1	2	2	2	T30	31
30	5	2	6	2	2	7	R30	6
31	6	1	3	2	3	4	R31	7
31	6	1	4	2	3	5	T31	32
32	6	1	2	2	3	3	T32	33
32	6	1	5	2	3	6	R32	8
33	6	1	1	2	3	2	T33	34
33	6	1	6	2	3	7	R33	9
34	6	2	3	2	4	4	R34	10
34	6	2	4	2	4	5	T34	35
35	6	2	2	2	4	3	T35	36
35	6	2	5	2	4	6	R35	11
36	6	2	1	2	4	2	T36	37
36	6	2	6	2	4	7	R36	12
37	7	1	3	2	5	4	R37	13
37	7	1	4	2	5	5	T37	38
38	7	1	2	2	5	3	T38	39
38	7	1	5	2	5	6	R38	14
39	7	1	1	2	5	2	T39	40
39	7	1	6	2	5	7	R39	15
40	7	2	3	2	6	4	R40	16

Continued on next page

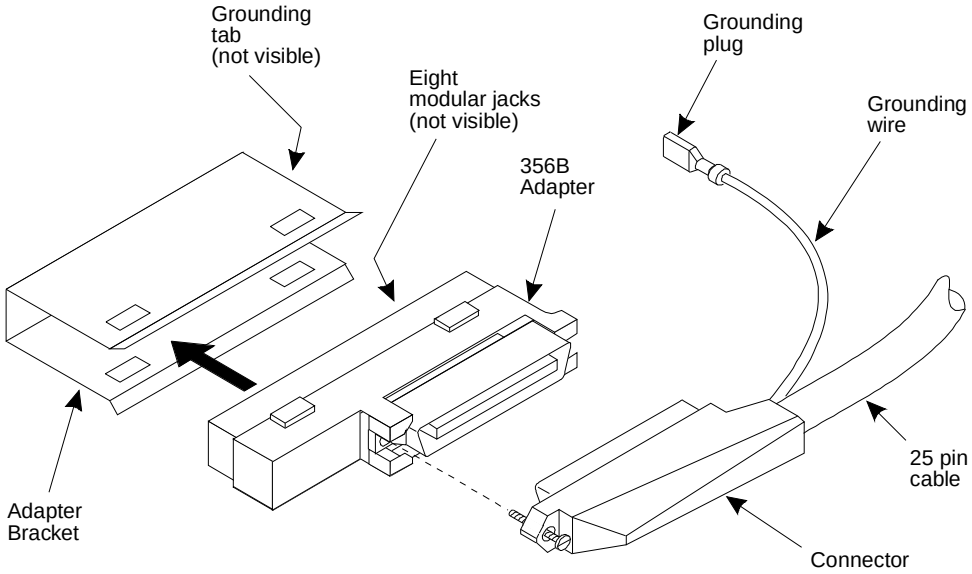
Table 1-4. Map/100 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To				
							RJ21X 50 Pin Conn.	
Channel #	Line Board #	Jack #	Pin #	356 Adapter #	Jack #	Pin #	T or R	Pin #
40	7	2	4	2	6	5	T40	41
41	7	2	2	2	6	3	T41	42
41	7	2	5	2	6	6	R41	17
42	7	2	1	2	6	2	T42	43
42	7	2	6	2	6	7	R42	18
43	8	1	3	2	7	4	R43	19
43	8	1	4	2	7	5	T43	44
44	8	1	2	2	7	3	T44	45
44	8	1	5	2	7	6	R44	20
45	8	1	1	2	7	2	T45	46
45	8	1	6	2	7	7	R45	21
46	8	2	3	2	8	4	R46	22
46	8	2	4	2	8	5	T46	47
47	8	2	2	2	8	3	T47	48
47	8	2	5	2	8	6	R47	23
48	8	2	1	2	8	2	T48	49
48	8	2	6	2	8	7	R48	24
49	9	1	3	3	1	4	R49	1
49	9	1	4	3	1	5	T49	26
50	9	1	2	3	1	3	T50	27
50	9	1	5	3	1	6	R50	2
51	9	1	1	3	1	2	T51	28
51	9	1	6	3	1	7	R51	3
52	9	2	3	3	2	4	R52	4
52	9	2	4	3	2	5	T52	29
53	9	2	2	3	2	3	T53	30

Continued on next page

Table 1-4. Map/100 Tip/Ring Consolidation Wiring and Pinouts — *Continued*

From				To				
							RJ21X 50 Pin Conn.	
Channel #	Line Board #	Jack #	Pin #	356 Adapter #	Jack #	Pin #	T or R	Pin #
53	9	2	5	3	2	6	R53	5
54	9	2	1	3	2	2	T54	31
54	9	2	6	3	2	7	R54	6
55	10	1	3	3	3	4	R55	7
55	10	1	4	3	3	5	T55	32
56	10	1	2	3	3	3	T56	33
56	10	1	5	3	3	6	R56	8
57	10	1	1	3	3	2	T57	34
57	10	1	6	3	3	7	R57	9
58	10	2	3	3	4	4	R58	10
58	10	2	4	3	4	5	T58	35
59	10	2	2	3	4	3	T59	36
59	10	2	5	3	4	6	R59	11
60	10	2	1	3	4	2	T60	37
60	10	2	6	3	4	7	R60	12
61	11	1	3	3	5	4	R61	13
61	11	1	4	3	5	5	T61	38
62	11	1	2	3	5	3	T62	39
62	11	1	5	3	5	6	R62	14
63	11	1	1	3	5	2	T63	40
63	11	1	6	3	5	7	R63	15
64	11	2	3	3	6	4	R64	16
64	11	2	4	3	6	5	T64	41



- SIDE VIEW -

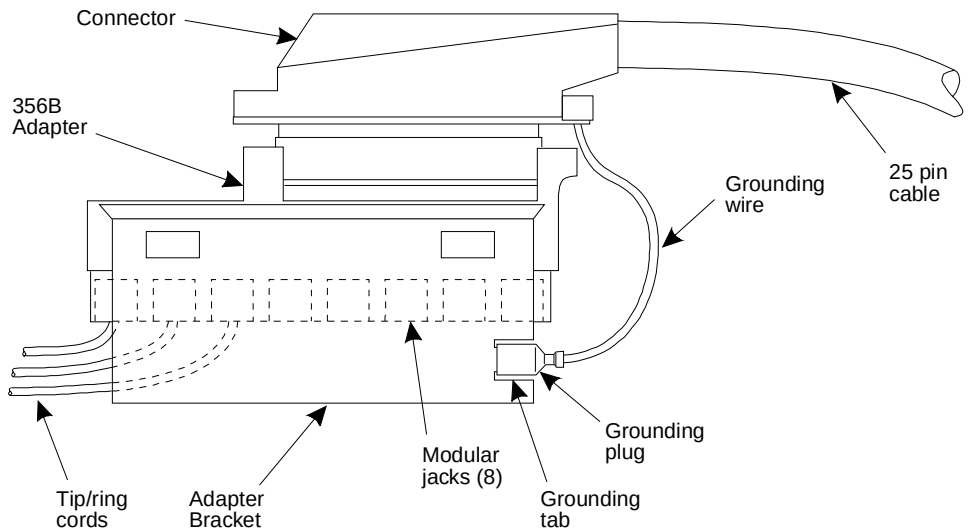


Figure 1-14. How Tip/Ring Hardware Connects Together

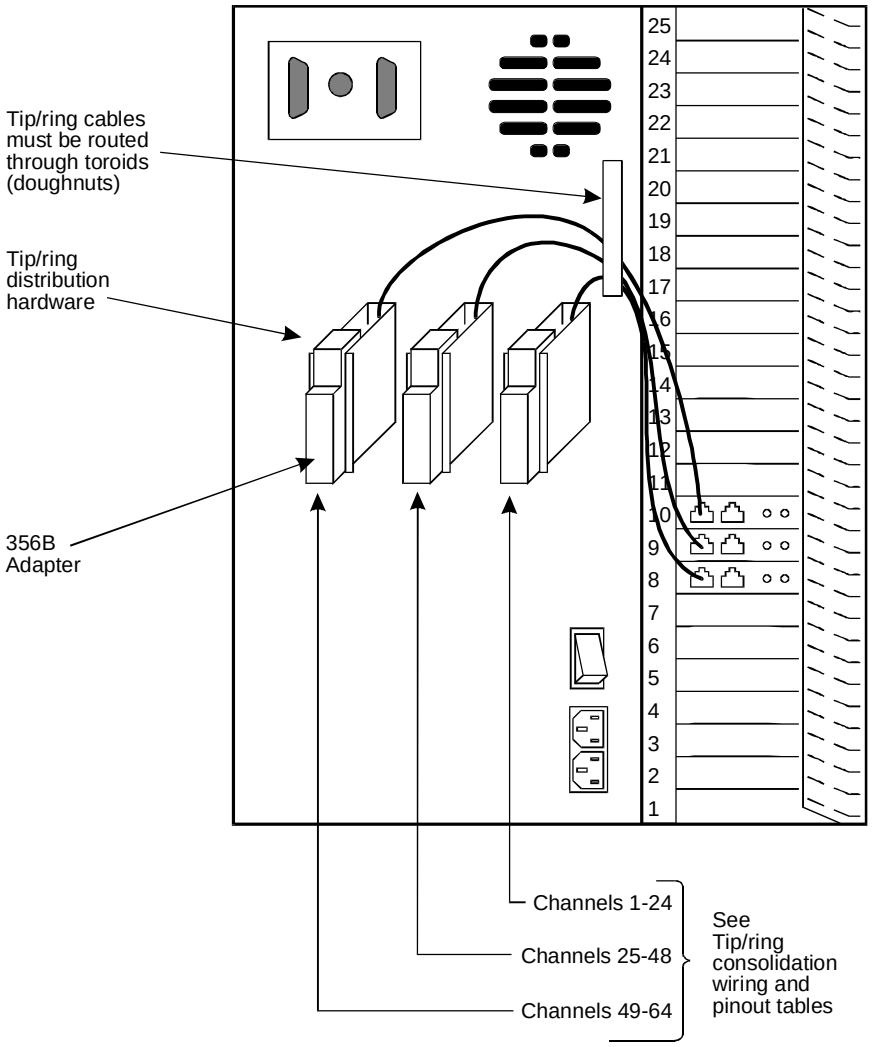


Figure 1-15. Channel Locations on T/R Distribution 356B Adaptors

Making Asynchronous Connections – Multi-Port Serial Card

You can connect the MAP/100 to a terminal, modem, or other DTE or DCE device via an asynchronous link in one of two methods.

These include:

- An asynchronous port, COM1, on the CPU card
- Additional asynchronous ports which are available on an optional multi-port serial card

You can also use asynchronous links for switch integration for non-DEFINITY PBX's.

NOTE:
The MAP/100 provides two asynchronous ports, COM1 and COM2. However, COM2 is reserved for Lucent Technologies remote maintenance and is not available for asynchronous connections.

Using COM1 for Asynchronous Connections

A 9-pin D-subminiature male connector, located on the faceplate of the CPU card (slot #16), is provided for COM1. COM1 supports asynchronous host connections running at 300-19200 BAUD. Networking modems typically use the 19,200 baud rate. The pinouts for the COM1 connector are illustrated in the following table.

Table 1-5. COM1 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 Multi-Port (eight ports) Serial Card

The multi-port card provides eight additional asynchronous ports for connecting to modems, terminals, or switch integration devices with non-DEFINITY PBXs. Each 8-port card includes eight 14-foot (4.3-meter) modular cords (D6AP-87; comcode 102937604) for connections to adapters. Modular jacks are present on the faceplate of the card. These jacks connect to one of two types of 25-pin D subminiature adapters:

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

See the following figure for pinout information for the modular jacks on the circuit card. See the figure on the next page for pinout connections for the adapters.

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

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

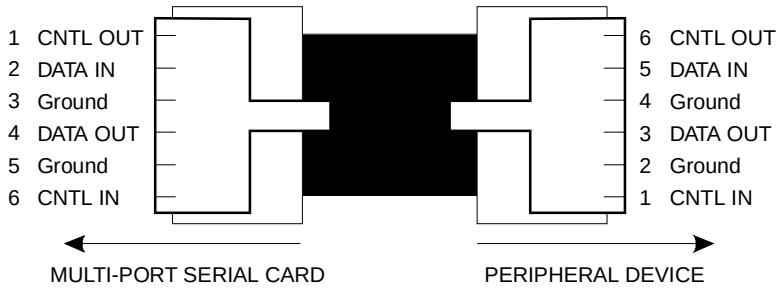
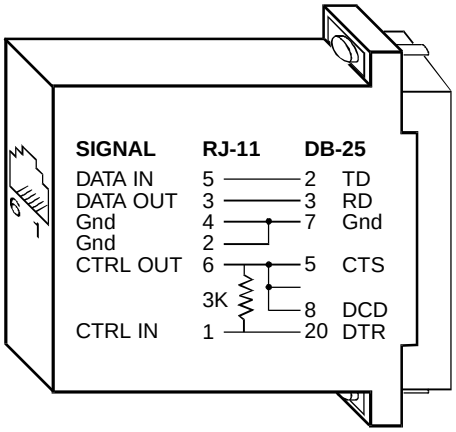


Figure 1-16. Pinout Connections for Modular Jacks on Multi-Port Serial Card

FOR TERMINALS:
PEC 70854 [DB-25 DCE Male]



FOR MODEMS:
PEC 70853 [DB-25 DTE Male]

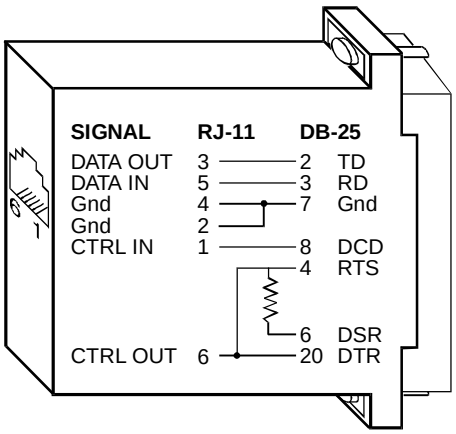


Figure 1-17. Pinout Connections for DTE or DCE Devices

Using Modems and Switch Integration Devices with the Multi-Port Serial Card

You must use a dedicated telephone line if a modem is used. The Lucent Intuity MAP/100 supports the 7400A data module as well as the 3820 and 3910 modems. See Chapter 3, "Connecting Peripherals and Powering Up", for information on how to install these two modems.

All connections to switch integration devices for non-Lucent switches should be made by following the instructions provided with the integration device. These devices are optionally available for the following switches:

- Mitel (PEC 70855)
- Rolm (PEC 70859)
- Northern Telecom Meridian (PEC 70858)
- NEAX (PEC 70856)

Refer to Chapter 8, "Installing Optional Feature Circuit Cards", for information on how to install the multi-port circuit card and set up asynchronous connections. Refer to Appendix B, "Cable Connectivity"" for information on how to connect cables for asynchronous connections.

Using a NULL Modem with a PMS Integration

All of the ports on the Intuity system are DTE. For DTE to DTE connections, such as connections from the Intuity system to some terminals, to a personal computer, or to a computer, use a NULL modem if you are not using a twisted or transposed-wire cable.

This connectivity is especially important for connections from the Intuity system to a Property Management System used to control the Intuity Lodging application. Customers are responsible for obtaining a null modem and may order a NULL modem from Lucent or provide the NULL modem locally. Figure 1-18 shows the standard NULL modem pin-outs.

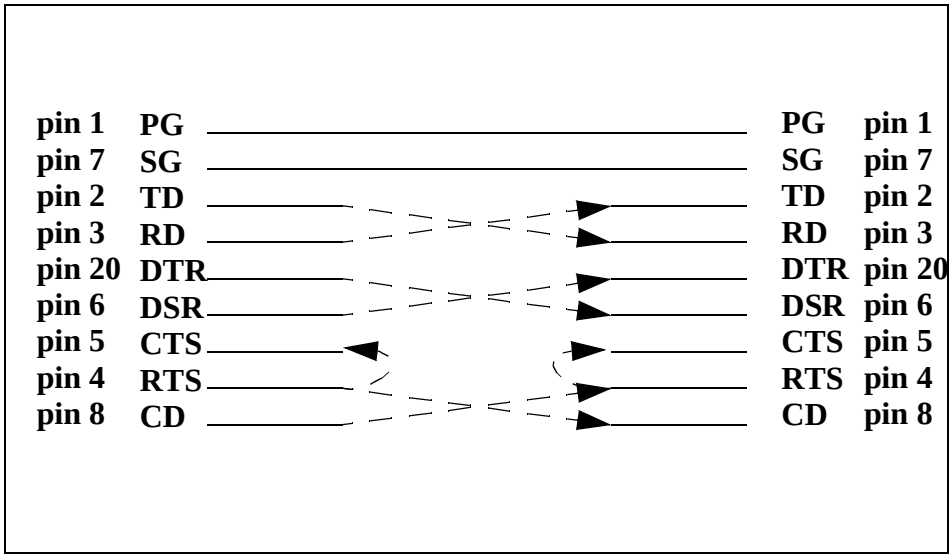


Figure 1-18. Pin-outs for RS-232 NULL modem

Making ACCX Circuit Card Connections for Switches

The Lucent Intuity system supports up to twelve networking channels on the MAP/100 via digital and analog remote connections from the ACCX card. Up to three ACCX cards can be installed in the MAP/100. Each ACCX card terminates four data channels in one of the following combinations:

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

Both DCP and RS-232 connections begin at a breakout box. The RS-232 or DCIU cable connects through a modem to the customer wall field and the DCP connects directly to the customer premise wall field.

NOTE:
See Appendix B, "Cable Connectivity" for information and diagrams on how to make cable connections from the ACCX card. Tables are also provided which list various cables and cable lengths which can be used to make the connections.

Use the cable provided with the ACCX card, as shown in the figure on the next page, to connect from the card to the breakout box. Use the breakout box to make the combination of RS-232 or DCP connections required at your site.

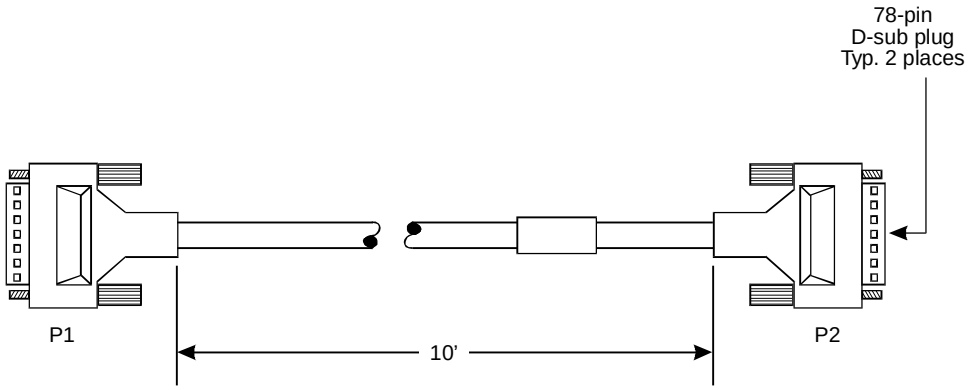


Figure 1-19. Connecting Cable Between the ACCX Card and Break-Out Box

Using a Break-Out Box with the ACCX Card

Use the provided break-out box with each ACCX card installed to make either the DCP or RS-232 connections. The box can be placed on the floor or attached to the wall. The cable length allows placement up to ten feet away from the MAP/100. Each RS-232 connection requires a modem. See Appendix B, "Cable Connectivity", and Chapter 3, "Connecting Peripherals and Powering Up", for information on how to connect modems and cables. See the next two figures.

Refer to Chapter 8, "Installing Optional Feature Circuit Cards"," for information on switch settings and how to install up to three of the ACCX cards.

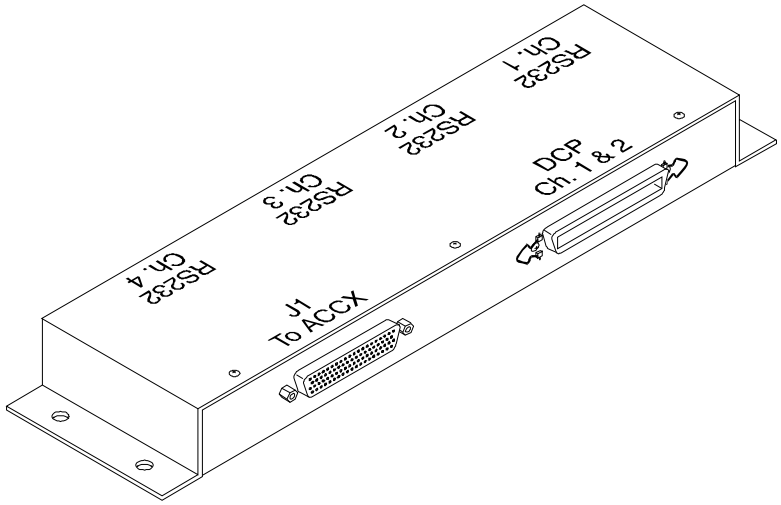


Figure 1-20. Making DCP Connections with a Break-Out Box

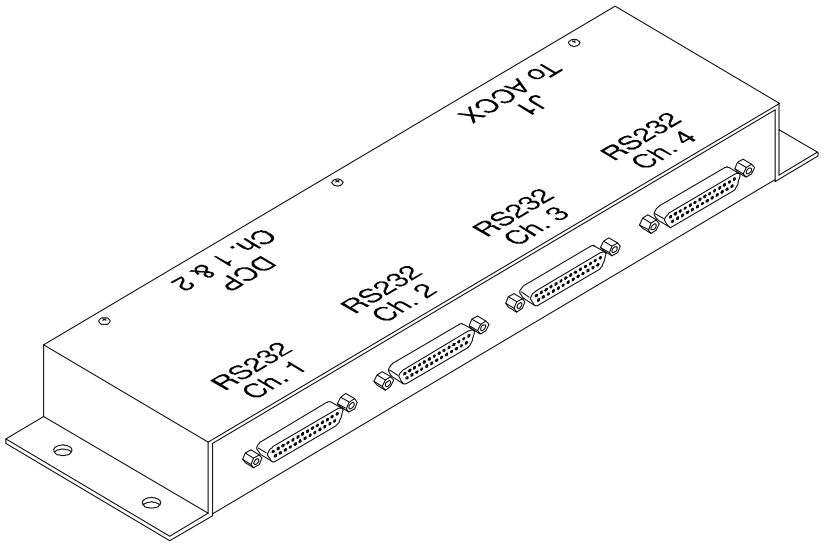


Figure 1-21. Making RS-232 Connections with a Break-Out Box

Pinouts for RS-232 and DCP Connections

The following tables provide pinout and signal information for RS-232 and DCP connections.

Table 1-6. RS-232 Signals, Connections & Pinouts

Signal Name	Description	RS-232 Pin #	Direction
AA	Protective GND	1	—
BB	Signal GND	7	—
BA	Transmit Data	2	from ACCX
BB	Receive Data	3	to ACCX
CA	Request-to-Send	4	from ACCX
CB	Clear-to-Send	5	to ACCX
CC	Data-Set-Ready	6	to ACCX
CD	Data-Terminal-Ready	20	from ACCX
CE	Ring Indicator	22	to ACCX
CF	Carrier Detect	8	to ACCX
DA	Terminal Timing	24	from ACCX
DB	Transmit Timing	15	to ACCX
DD	Receive Timing	17	to ACCX

Table 1-7. Termination Pin Assignments - 50-Pin DCP Cable

Pin #	Lead Name	Description	Lead Name	Description	Pin #
26		Not Used		Not Used	1
27	TXR-0	DCP port 0 transmit signal ring side	TXT-0	DCP port 0 transmit signal tip side	2
28	RXR-0	DCP port 0 receive signal ring side	RXT-0	DCP port 0 receive signal tipside	3
29		Not Used		Not Used	4
30	TXR-1	DCP port 1 transmit signal ring side	TXT-1	DCP port 1 transmit signal tip side	5
31	RXR-1	DCP port 1 receive signal ring side	RXT-1	DCP port 1 receive signal tip side	6
32		Not Used		Not Used	7
33		Not Used		Not Used	8
34		Not Used		Not Used	9
35		Not Used		Not Used	10
36		Not Used		Not Used	11
37		Not Used		Not Used	12
38		Not Used		Not Used	13
39		Not Used		Not Used	14
40		Not Used		Not Used	15
41		Not Used		Not Used	16
42		Not Used		Not Used	17
43		Not Used		Not Used	18
44		Not Used		Not Used	19
45		Not Used		Not Used	20
46		Not Used		Not Used	21
47		Not Used		Not Used	22
48		Not Used		Not Used	23
49		Not Used		Not Used	24
50		Not Used		Not Used	25

System Grounding Connections

Ensure that customer-premise-provided outlets are grounded in accordance with local and national standards and codes.

To maintain electro-magnetic interference (EMI) protection, personal protection and circuit noise immunity, each MAP/100 must be grounded to a solid, stable, single point ground. Ground AC units via the third wire of a three-prong grounded receptacle that is free from random connections to foreign unstable ground current surges.

⚠ CAUTION:
Use extreme care when making power and ground connections.

Regulatory Agency Guidelines

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

FCC/CSA Part agency compliance label(s) for the MAP/100 system card and individual network interface cards are located on the chassis rear surface or individual circuit card.

Equipment Attachment Limitations

FOR CANADIAN CUSTOMERS

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

Repairs to certified equipment should 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.

Users should ensure for their own protection 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:
Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

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

The Load Number for AYC10 is 6. However, other devices should not be connected on the same telephone line with the Lucent Intuity Tip/Ring circuit card.

European Union Declaration of Conformity

European Union Declaration of Conformity

Lucent Technologies Business Communications Systems declares that MAP/40 and MAP/100 equipment specified in this document conforms to the referenced European Union (EU) Directives and Harmonized Standards listed below:

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

CE The “CE” mark affixed to the equipment means that it conforms to the above Directives.

Getting Started

2

What's in This Chapter

This chapter describes how to unpack the MAP/100, the importance of saving packing materials, how to install the cable tie-down bracket, and where to locate key components of the MAP/100.

Heeding Warning and Caution Statements

Warnings and cautions appear throughout this book as needed when describing procedures. These admonishments let you know when the actions you are about to perform can harm you or the equipment unless you follow procedural steps as listed.

The warnings and cautions that occur within this book are listed here as well for your information.

CAUTION:
The 885A adapter, used with Tip/Ring (T/R) cards, may have a magnet on the back of the adapter. Do not place the adapter on or near circuit cards or peripherals. Magnets can damage the circuitry.

CAUTION:
Perform a "soft" shutdown of the Lucent Intuity operating system, if on-line, before shutting off power to the system. See Intuity Platform Administration and Maintenance, *585-310-557, for information.*

WARNING:
Shut off the main power switch on the back of the unit, only after executing a "soft" system shutdown and disconnect the power cord before removing the dress covers or opening the MAP/100 to work within it. See Intuity Platform Administration and Maintenance for Release 3.0, *585-310-557, for information.*

CAUTION:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap on your bare skin and connect to a ground.

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

CAUTION:
Do not use the dress covers of the MAP/100 as a way to lift the MAP/100.

CAUTION:
The external I/O connector of the SCSI controller card is equipped with a protective cover. Do not remove this cover.

CAUTION:
Handle toroid and ferrite components with care. These components are made of a highly conductive ferrite material that is compressed to meet certain electrical and mechanical requirements. If they are found to be damaged upon arrival, contact your service center for replacements.

Calling Technical Support

Repairs to the MAP/100 should be performed by an authorized representative. Field service representatives can call for technical support to help solve problems. For technical support call:

- In the United States and Canada, contact the Technical Support Center (TSC) at 1-800-562-8349
- Outside of the United States and Canada, contact your local Lucent Technologies representative or Lucent Technologies authorized distributor

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/100. 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 information in this book. Ensure that the jumper or switch settings are correct for the version of the component you are using.

Avoiding Electrostatic Discharge Damage to Circuit Cards

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* or *ESD*.

A person cannot feel ESD below approximately 3500 volts. However, only 30 volts are needed to damage ESD-sensitive electronic components.

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

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

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.

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

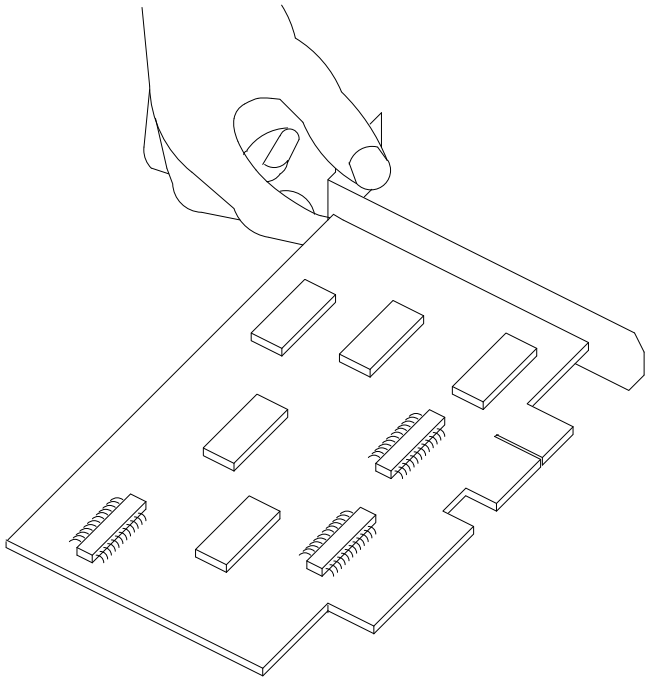


Figure 2-1. How to Hold a Short Circuit Card

- Hold a larger circuit card as shown in Figure 2-2.

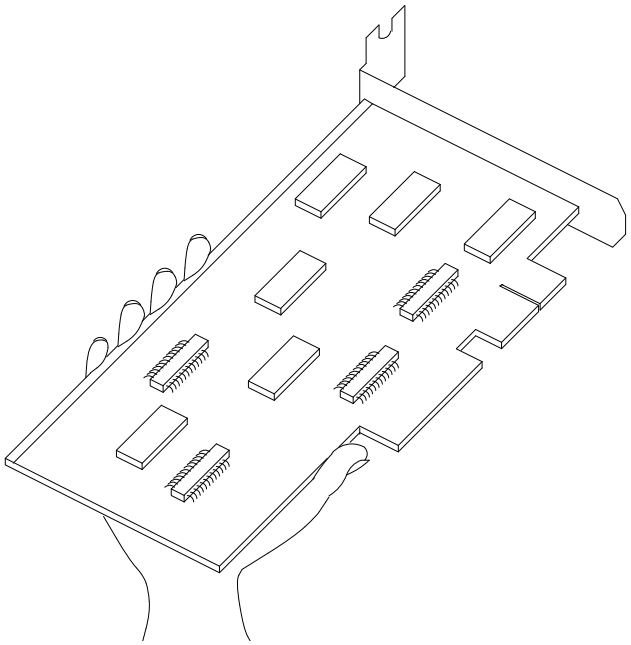


Figure 2-2. How to Hold a Large Circuit Card

CAUTION:
Ensure palm is not in contact with the board wiring side.

- 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 on the areas recommended below.

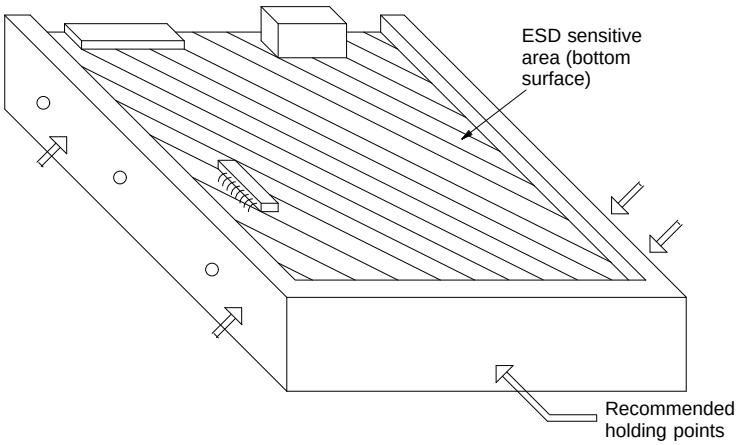


Figure 2-3. Electronic Component ESD Sensitive Area

Ordering Spares

Refer to Appendix A, "Component Ordering Numbers", or refer to the cable tables at the end of Appendix B, "Cable Connectivity"," for the numbers needed to place an order for a component. For installations in the United States and Canada, call 1-800-562-8349 (Technical Support Center) to place the order. For installations outside of the United States and Canada, contact your Lucent Technologies authorized distributor to place the order.

Gathering Tools and Test Equipment

To assemble and disassemble the MAP/100 hardware, you need the following tools:

- Medium width flat-blade screwdriver
- No. 2 Phillips screwdriver
- Magnetic-tip Phillips screwdriver
- Small pair of needle-nose pliers
- Small pair of wire cutters
- A sharp, pointed instrument such as a pen

  Do *not* use a lead pencil point. The graphite can damage a circuit card, causing problems such as electrical shorts.
- 5/32 inch open-end wrench
- 1/2 inch end or box wrench
- Antistatic grounded wrist strap
- Antistatic grounded work mat

Standard electronic test equipment such as a digital multi-meter is recommended to be available.

Saving Packing Materials

Save the shipping carton and all packing materials to use in the event the unit needs to be returned to the manufacturer. Packing materials include anti-static bags and bubble wrap as well as cardboard and foam inlays. This also applies to shipping cartons for the keyboard and monitor. If you have ordered multiple MAP/100s, saving one carton and packing materials should be sufficient.

CAUTION:
The manufacturer does not accept liability for a damaged unit if the unit is not returned in the original packing materials and carton. The carton has been designed to ensure product warranty and to prevent damage.

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

Unpacking the System

The MAP/100's carton is designed to facilitate unpacking. Because of the size and weight of the MAP/100, the keyboard and monitor are shipped separately.

Follow the steps listed below to unpack the system at the job site.

1. At the job site, cut the bands holding the carton to the wooden pallet and remove the top of the box.
2. Remove the accessory boxes and top foam packing materials.
3. Remove the large cardboard "sleeve" that surrounds the unit. The unit should now be fully exposed, resting on the bottom foam packing material.
4. Remove the plastic bag by "peeling" it around the sides of the unit as far as possible.
5. Using an appropriate lifting system (unit will weigh approximately 140 lbs. or 63.6 kilograms), lift the unit from the bottom of the carton. If the dress covers are installed on the unit, do not lift the unit by these "snap-on" covers. It is recommended that the unit be lifted from the front and rear as opposed to the sides to avoid inadvertently lifting by the "snap-on" covers. Save all packing materials in case the system must be repacked and transported to a different location.

If ordered, deskside kits will be factory installed and no additional assembly is required. If ordered as a field installable item, follow the instructions provided in each kit. Deskside units are equipped with 4 casters allowing the unit to be rolled around as required. Once positioned, secure the unit in place by activating the locking mechanisms located on each caster.

Locating Key Components on the MAP/100

Now that you can view the MAP/100, use the following sections and diagrams to locate key components on the unit. For additional information describing the MAP/100 hardware, see *Intuity System Description*, 585-310-232.

The Front of the Chassis

The front of the chassis will vary with power supply type. The MAP/100 may have one of 2 types of power supply:

- Supply with internal battery backup
- Supply without battery backup
- Redundant supply without battery backup

Figure 2-5 shows the Front Display Panels for both types. Figure 2-4 shows the receptacle and switch appearances on the front of the MAP/100, behind the doors. See the table on the following page for descriptions and functions of components on the front of the chassis.

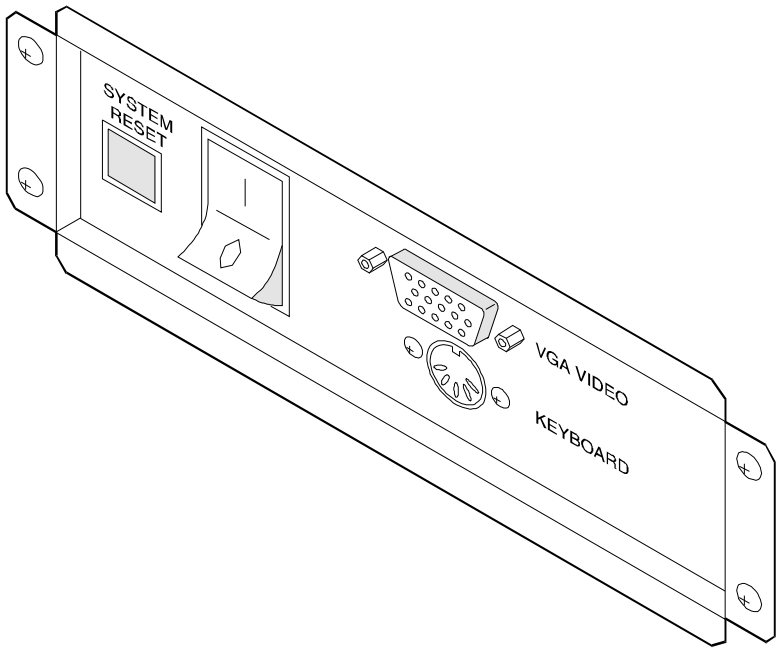


Figure 2-4. Power switch, Reset Button, Keyboard Receptacle, and Video Receptacle Appearance

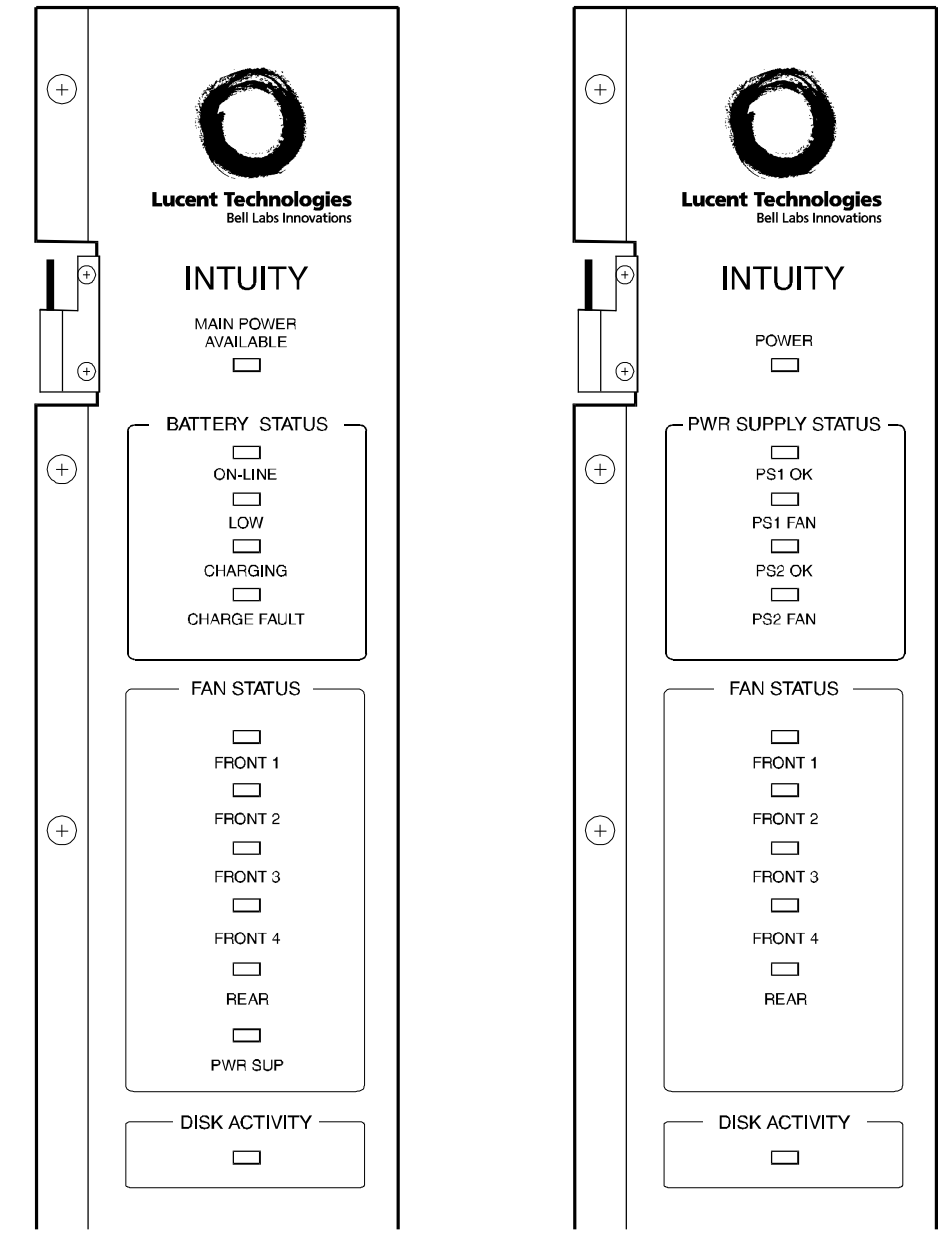


Figure 2-5. MAP/100 Front Display Panels

Table 2-1. Chassis Front Components: Power Supply with Battery Backup

Component	Location	Description	Function
Front doors	One on each side	Hinged doors	Cover peripheral bay - disk drives and cooling fans
Keyboard receptacle	Lower right side, behind door	5-pin circular DIN female	Connects keyboard to MAP/100: This is only to be used for test or diagnostics.
Video receptacle	Lower right side, behind door	15-pin high density D-subminiature female	Connects video to MAP/100: This is only to be used for test or diagnostics.
Power switch	Lower right side, behind door	Rocker switch	Turns MAP/100 on and off
Reset button	Lower right side, behind door	Button	Depress button to reset MAP/100
Main Power Available indicator	Center between doors	LED	Lights green when power is on
On-Line battery indicator	Center between doors	LED	Lights red when unit is powered by battery
Low battery indicator	Center between doors	LED	Lights yellow when batteries need to be recharged
Charging battery indicator	Center between doors	LED	Lights yellow when battery recharge rate is too high
Charge Fault battery indicator	Center between doors	LED	Lights red when batteries/recharger are faulty
Fan Status indicators	Center between doors	Six LEDs; one for each fan	Lights green when fan is working normally
Disk Activity indicator	Center between doors	LED	Lights green and flashes when hard disk is activated

NOTE:
The front keyboard and video receptacles are provided for diagnostic purposes *only*. These are not to be used as permanent installation receptacles.

Table 2-2. Chassis Front Components: Power Supply without Battery Backup

Component	Location	Description	Function
Front doors	One on each side	Hinged doors	Cover peripheral bay - disk drives and cooling fans
Keyboard receptacle	Lower right side, behind door	5-pin circular DIN female	Connects keyboard to MAP/100: This is only to be used for test or diagnostics.
Video receptacle	Lower right side, behind door	15-pin high density D-subminiature female	Connects video to MAP/100: This is only to be used for test or diagnostics.
Power switch	Lower right side, behind door	Rocker switch	Turns MAP/100 on and off
Reset button	Lower right side, behind door	Button	Depress button to reset MAP/100
Power	Center between doors	LED	Lights green when power is on
PS1 OK	Center between doors	LED	Lights green when power supply 1 is okay
PS1 Fan	Center between doors	LED	Lights green when power supply 1 fan is operating
PS2 OK	Center between doors	LED	Lights green when power supply 2 is okay
PS2 Fan	Center between doors	LED	Lights green power supply 2 fan is operating
Fan Status indicators	Center between doors	5 LEDs; one for each fan	Lights green when fan is working normally
Disk Activity indicator	Center between doors	LED	Lights green and flashes when hard disk is activated

Locations of Peripheral Drive Devices

Locate the various drives in the peripheral bay behind the right front door.

Table 2-3. Peripheral Bay Drives

Drive	Description	Function
Cartridge tape	525 MB SCSI or 2 GB	Backup & restore load system
Floppy disk drive	3.5inch 1.44MB high density	System config diagnostic testing
Hard disk	1.7 GB SCSI or 2 GB	Up to 6 disks can be installed stores operating system application software speech data

Chassis Cooling System

Four cooling fans are located in front of the circuit card cage area, behind the left front door. Another cooling fan (the chassis peripheral bay and power supply fan) is located in the center on the back of the chassis. The last fan is located inside the power supply(s), itself.

The fans maintain air flow in the unit to prevent components from overheating. Overheating can cause a component to malfunction. Maintain a six-inch (15.2-centimeter) clearance around the unit so that air can sully circulate.

CAUTION:
Keep the covers closed on the MAP/100 when you are not working inside the platform in order for the cooling system to pressurize and function properly.

The Back of the Chassis

Figure 2-6 shows the back view of the MAP/100. See the table below for the location and description of components on the back of the MAP/100 chassis.

Table 2-4. Components on Rear of Chassis

Component	Location	Description	Function
Asynchronous port COM1	CPU circuit card faceplate - slot #16 ISA configuration	9-pin male D-subminiature	Communicates with other devices over asynchronous link
Parallel port	CPU circuit card faceplate - left of COM1	25-pin female	Communicates with printer
Video connector	Video circuit card faceplate - slot #17 ISA configuration	15-pin female D-subminiature	Connects MAP/100 to monitor
Circuit breaker	Lower center	Rocker switch	Turns on/off incoming power to MAP/100
AC power outlet connector	Lower center below circuit breaker (AC units)	3-prong, 5 AMP 110/220V Reverse IEC-320	Connects MAP/100 to monitor via 6-foot (1.8-meter) monitor power cord
AC power inlet receptacle	Lower center below AC power outlet (AC units)	3-prong 110/220V or 200/250V IEC-320	Connects MAP/100 with 9-foot (2.7-meter) power cord power
Keyboard receptacle	Upper left corner	5-pin female circular DIN	Connects *one keyboard only* to MAP/100
Asynchronous port COM2	Upper left corner next to keyboard inlet	9-pin male D-subminiature DB-9	Communicates with other devices over asynchronous link
T/R distriburtion hardware (optional)	Center	Square panel screwed to MAP/100	Allows up to 11 T/R to communicate with customer premise equipment

NOTE:
Do not use the monitor and keyboard receptacles for any other purpose than to connect the monitor and keyboard. Only one keyboard can connect to the MAP/100.

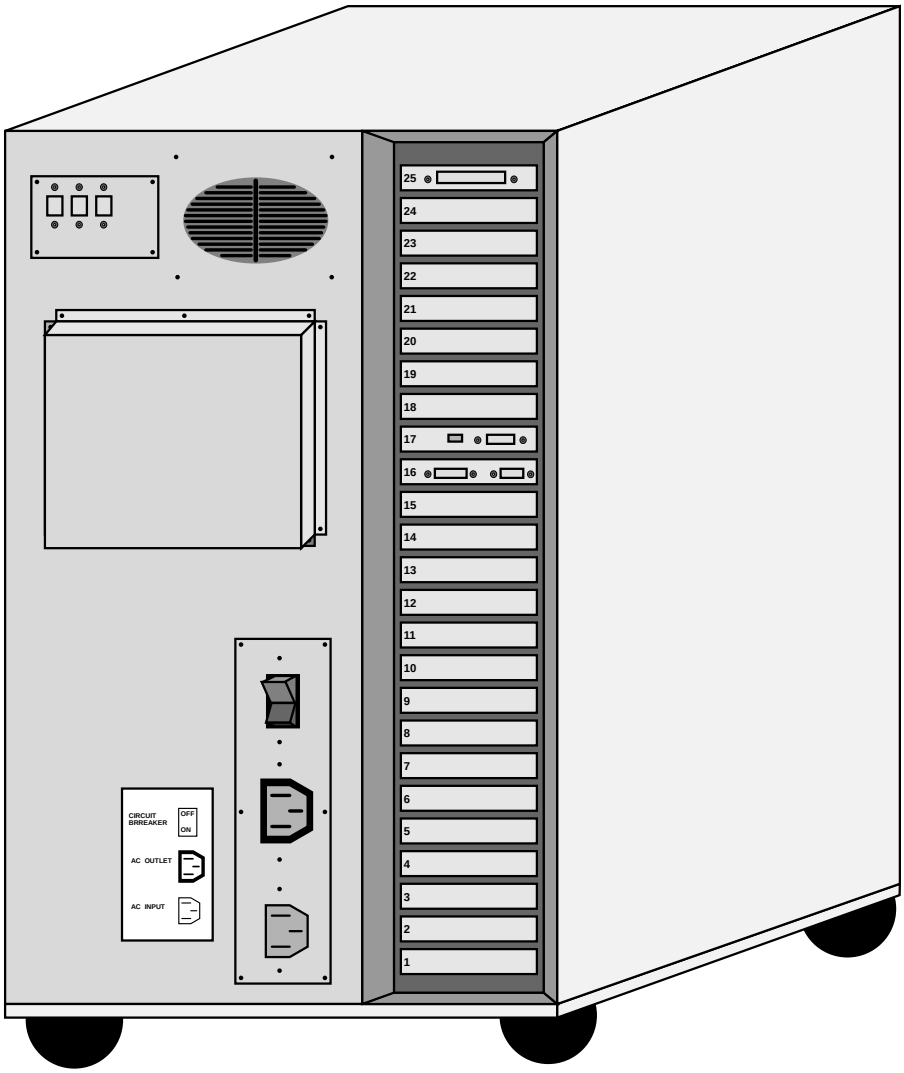


Figure 2-6. Back View of the MAP/100

Installing a Deskside MAP/100

If ordered with the MAP/100, deskside kits are factory installed and no additional assembly is needed. If ordered as a field-installable item, follow the instructions provided in each kit.

Deskside units are equipped with four casters that allow you to roll the chassis around as required. Once you position it, activate the locking mechanisms located on each caster to secure the MAP/100 in place.

Installing a Commercial Cabinet-Mounted MAP/100

In addition to a deskside configuration, the MAP/100 is also available with a commercial 19” cabinet unit.

The MAP/100 Commercial Cabinet Kit

Table 2-5 lists the contents of the MAP/100 rack-mount kit. Item numbers correspond to those referred to in the procedure that follows.

Table 2-5. Contents of the MAP/100 Rack-Mount Kit

Item No.	Part	Quantity
1	MAP/100	1
2	Commercial 19” shelf base	1
3	Commercial 19” shelf bracket	2
4	Slide bracket	2
5	Rear mounting bracket	2
6	Front mounting bracket	2
7	Screw	40
8	Flange nut	4
9	Sleeve	4
10	Nut	8
11	Screw	7

Procedure

NOTE:
Use Figure 2-7 as a reference when you perform this procedure.

1. Ensure that you have the required tools:
   - Magnetic-tip Phillips screwdriver
   - Open-end wrench (5/32-in.)
   - Open-end or box wrench (1/2-in.)
2. Attach the front mounting bracket (item 6) to the rack member (the widest section) of the slide (item 4), using the screws provided (item 7). Use the slide holes closest to the front to attach the bracket.
   a. Align the smaller holes in the rack member with the largest clearance holes in the middle slide member.
   b. Insert the screws from the direction shown.
   c. Repeat these steps for the other slide.
3. Assemble the rear mounting bracket (item 5) to the slide's rack member using screw (item 7) and nuts (item 10).
   a. Select the appropriate slots in the bracket to match the rack depth, 30 in. maximum. The selected holes in the rear bracket must be at least 4 in. apart.
   b. Insert the screws from the direction shown.
   c. Repeat these steps for the other slide.
4. Attach the slide assemblies to the rack using four screws (item 7). Use two screws for the front and two for the rear of each slide.

   NOTE:
   You may have to loosen the rear bracket hardware to adjust the slide assembly length to the rack depth. If you do, be sure to retighten all hardware before proceeding.

5. Assemble a sleeve (item 9) and a flange nut (item 8) to each of the four threaded studs on the commercial 19" shelf (item 2). Tighten to 8 in.-lb. maximum using the 1/2-in. wrench.
6. Fully extend the slides to the locked-out position. While supporting the base, align the front mounting holes of the slide with those on the base. Insert the screws (item 7) from the direction shown. Start all four screws before tightening any. After tightening the front four screws of each slide, align the smaller holes in the middle slide member.
7. Insert the screws from the direction shown, starting all before tightening any.
8. Place the rack base capture latches in the "open" position by pushing the latch and lifting and turning the handle. Turn the right latch 90 degrees clockwise (to the right). Turn the left latch 90 degrees counterclockwise (to the left).

9. Unlock the slides by pushing on the green button in the middle slide member, and pushing the base toward the commercial cabinet. Check for smooth slide travel and see that the rack base is level and square to the rack.
10. Push the base completely into the commercial cabinet. Turn and close the latches. Make sure each latch pawl is gripping the front mounting bracket and does not allow the base to move. If you need to adjust the grip, open the latches, pull the base forward to the lock-out position, and close the latches. Loosen both jam nuts. Turn the pawl clockwise (to the right) to tighten the latch grip, or counterclockwise (to the left) to loosen the latch grip. Use the 5/32-in. wrench to tighten the jam nuts after you reposition the pawl.

    CAUTION:
    Do not loosen or move the hex nut closest to the latch body on the rack base. It has been factory preset for proper latch operation.

11. Unlock the slides, push the base back into the commercial cabinet, and recheck the latch pawl grip.
12. With the base fully extended to the lock-out position, lower the MAP/100 (item 1) on to it. Make sure the flange nuts on the base align with the large-diameter portion of the keyway holes in the bottom surface of the MAP/100. Once the chassis is seated on the base, pull the MAP/100 forward until the noted thread in the base aligns with the clearance hole in the rear left of the bottom surface of the MAP/100. Use the screws provided (item 7) to secure the MAP/100 to the shelf base.
13. Secure the commercial shelf brackets (item 3) to the MAP/100 using the screws provided (item 11). Unlock the slides and slowly push the MAP/100 into the commercial shelf. Check for smooth, interference-free motion.

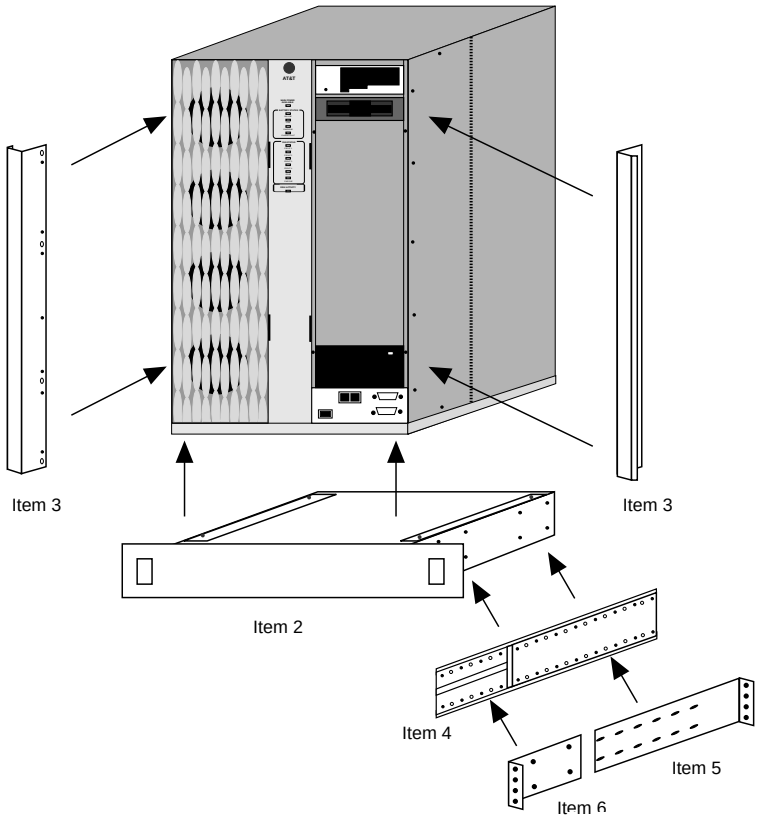


Figure 2-7. Mounting the MAP/100 in a Commercial 19” Shelf

Cable Tie-Dolwn Bracket

Each MAP/100 includes a cable tie-down bracket. Units equipped with multiple T/R boards and T/R distribution hardware are shipped with cabling attached to this bracket.

Connecting Peripherals and Powering Up

3

What's in This Chapter

This chapter describes how to:

- Place toroids and ferrites
- Connect the monitor
- Connect the keyboard
- Connect the printer
- Connect a 7400A data module
- Connect a 3810, 3820, or 3910 modem
- Make other cable connections
- Power up the system
- Access the CPU setup screens

CAUTION:
To avoid disturbing the customer's existing LAN, do NOT cable the ethernet LAN card prior to powering up. See Intuity Software Installation for Release 3.0, *585-310-160, for more information. In order for all other software to function properly, all cable connections to peripherals, switches, networks, etc. should be made prior to powering up the system.*

Toroid and Ferrite Placement

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

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

A ferrite (Type B) is a 1 inch (2.5 cm) rectangular device (comcode: 407616846). Ferrites are made of a variable conductive carbon type material to reduce special EMC frequency band width. Available in split and solid ferrite forms, a special snap-back protective cover is used to install and keep the halves together.

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

Two sizes of cable ties are used to secure the toroids and ferrites:

- Small, comcode: 407033349, 0.1 x 8.0 inch (0.3 x 20 cm)
- Large, comcode: 402678684, 0.19 x 7.72 inch, (0.5 x 20 cm)

Toroid and Ferrite Placement

The following table contains a summary of special toroid and ferrite installation. Refer to the following sections "How to Install a Toroid (Type A)" on Page 3-4 and "How to Install a Ferrite (Type B)" on Page 3-6 for detailed installation instructions.

Table 3-1. Toroid and Ferrite Placement

Installed Component:	Cable:	Toroid/Ferrite Placement:	Type:	Number of Cable Ties:
MAP Chassis	Power cord	3 ferrites	B	1 large
Keyboard	Keyboard cable	1 ferrite Wrap the cable 3 turns	B	none

Table 3-1. Toroid and Ferrite Placement

Installed Component:	Cable:	Toroid/Ferrite Placement:	Type:	Number of Cable Ties:
Monitor	Monitor power cable	3 ferrites	B	1 large
Monitor	Monitor video cable	1 ferrite	B	1 large
CPU serial port COM1 or COM2	CPU serial port cable	1 ferrite	B	1 large
CPU parallel port (only used if optional printer will be installed)	Printer cable	1 ferrite	B	1 large
DCIU circuit card	Cable from a DEFINITY switch to the Lucent INTUITY system	none	none	none
ACCX Circuit Card	80-pin cable that plugs into a breakout box	none	none	none
T/R Circuit Card AYC10 or AYC29	Two 3 foot unshielded flat modular cables for each T/R circuit card	1 ferrite on each modular cable Wrap each cable 1 turn through the ferrite	none	none
T/R Circuit Card AYC30	Two 3 foot unshielded flat modular cables for each T/R circuit card	1 ferrite on each modular cable Wrap each cable 1 turn through a pair of toroids Each pair of toroids may support a maximum of 11 cables	B A	none 1 small on the cable 2 small on the toroid
LAN Circuit Card	Unshielded modular cable	1 ferrite Wrap the cable 1 turn through the ferrite	B	none

Table 3-1. Toroid and Ferrite Placement

Installed Component:	Cable:	Toroid/Ferrite Placement:	Type:	Number of Cable Ties:
Multi-Port Serial Circuit Card	Unshielded modular cable	1 ferrite on each modular cable Wrap the cable 1 turn through the ferrite	B	none

General Toroid and Ferrite Installation Guidelines

When installing toroids and ferrites:

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

1. Place toroids and ferrites as closely as possible to the computer chassis.
2. Minimize the amount of cable between the toroids and ferrites and the chassis.
3. Wrap cables as tightly as possible. Do not leave large amounts of slack in the loop(s).
4. Place small cable ties to hold the cable wrap(s) tightly in place around the toroids. Use large cable ties behind the ferrite(s) to help them to stay in place.

How to Install a Toroid (Type A)

The following is the general toroid installation procedure. Figure 3-1 shows a paired toroid example installation.

Single Toroid

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

Paired Toroids

1. Verify that the toroids mounted in the cable tie-down bracket are mounted in pairs.
2. Wrap each cable around the toroid tightly. Wrap the cables around the toroid opposite of the cable tie.
3. Secure the cable(s) with a cable tie.
4. Trim off any excess from the cable tie.

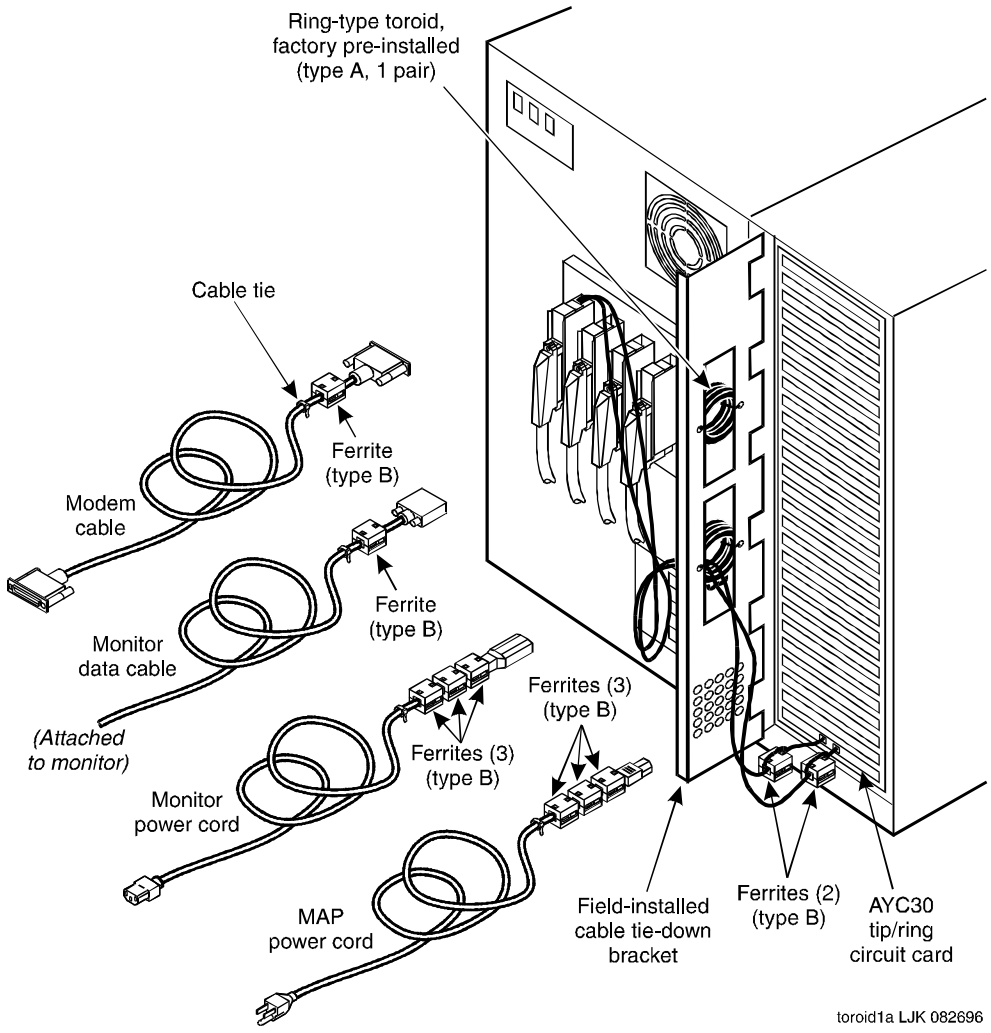


Figure 3-1. Example Toroid Pair Installation

How to Install a Ferrite (Type B)

The following is the general ferrite installation procedure. Figure 3-2 and Figure 3-3 show different examples of ferrite installations.

1. Open the ferrite by gently pulling the fastener away from the body of the ferrite.
2. Place the cord or cable in the groove inside the ferrite.
3. If the cable is to be wrapped around the ferrite, loop the cable tightly around half of the ferrite and place the cable into the groove.
4. Gently snap the ferrite shut.
5. Attach a large cable tie directly behind the ferrite to secure it. If the cable is installed looped through the ferrite, no cable tie is required (Figure 3-3).
6. Trim any excess from the cable tie.

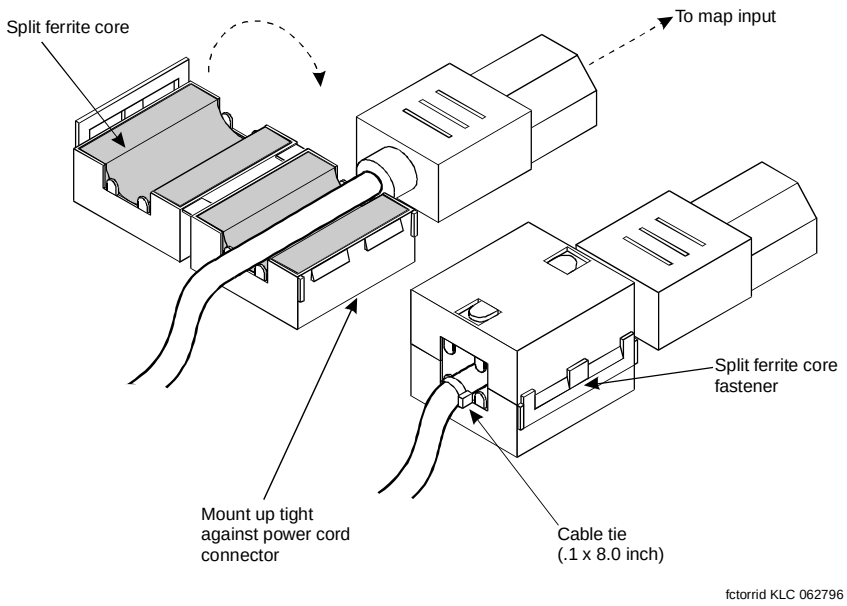


Figure 3-2. Example Ferrite (Type B) Installation

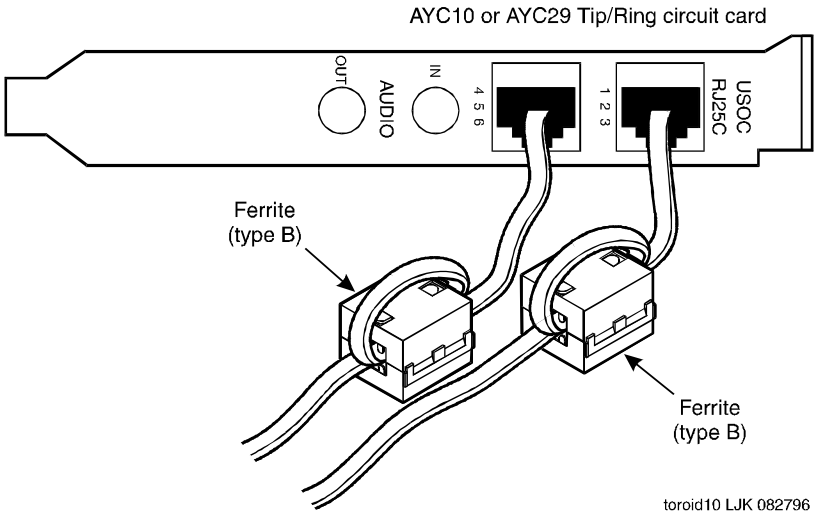


Figure 3-3. Example Ferrite (Type B) Installation

Connecting the Monitor

This section describes how to make the connections between the MAP/100 and a monitor when the monitor is either a permanent or a temporary part of the installation.

Required Cabling

The monitor is connected to the MAP/100 by a power cable and a signal cable. The power cable has a male plug at one end and a female plug at the other end. One end of the signal cable has a video input connector and the other end is permanently attached to the monitor.

Use the 15-pin, high density D-subminiature, female connector located on the video card faceplate (slot #17) to connect to the VGA color monitor. See Figure 3-4 for the location of this connector.

The monitor power cable requires 3 ferrites. The monitor video data cable requires 1 ferrite.

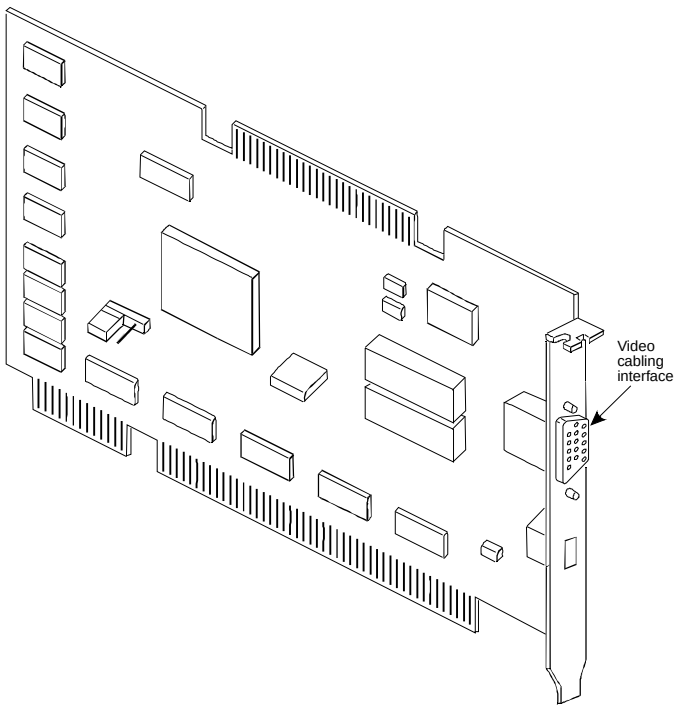


Figure 3-4. Video Card Cable Connector

To set the switches on the video card, see Chapter 9, "Installing Standard MAP/100 Circuit Cards".

Connecting the Monitor in Permanent Installations

Use the steps below to permanently install a monitor. Refer to Figure 3-5 as you complete the following steps:

1. Place 1 ferrite (Type B) on the monitor video cable. The ferrite should be located on the end of the cable closest to the system. Use a large cable tie to hold the ferrite in place. Trim off any excess from the cable tie.
2. Plug the signal cable connector from the monitor directly into the video connector located on the faceplate of the video controller card in slot #17 which is accessible from the rear of the unit.

   DO NOT attempt to use the video connector located in the upper left hand corner on the rear of the unit.
3. Tighten the thumbscrews on the signal cable connector by hand or with a small screw driver.
4. Using the monitor power cable provided, plug the female end of the cable into the monitor.
5. Place 3 ferrites (Type B) on the monitor power cable at the end that will connect into the MAP. Use a large cable tie to hold the ferrite in place. Trim off any excess from the cable tie.
6. Plug the male end into the rear of the unit directly above the MAP/100 power cord.

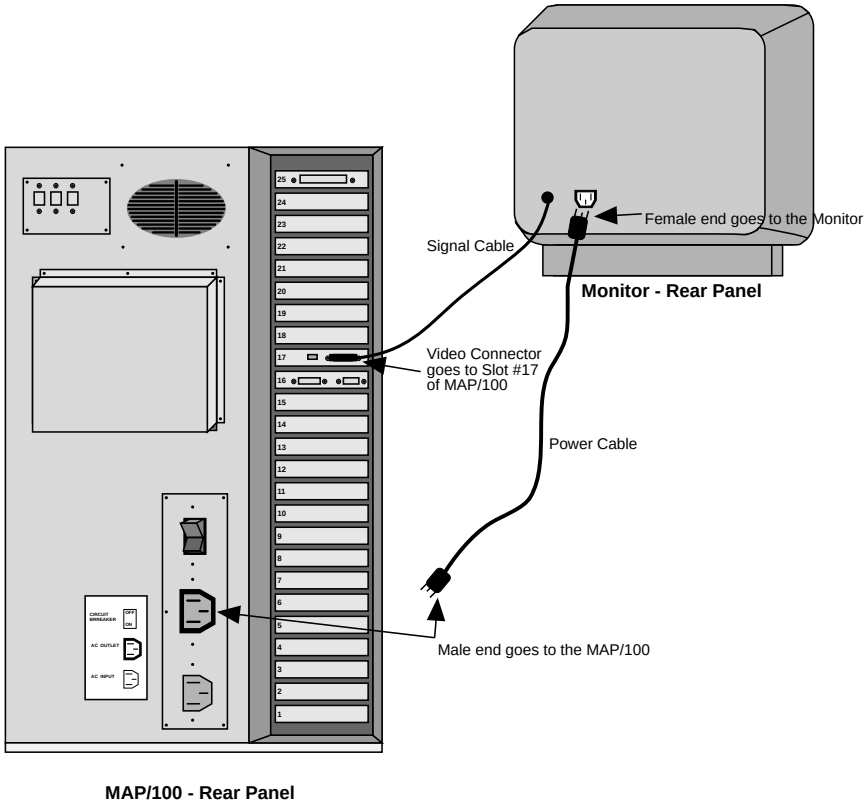


Figure 3-5. Connections in a Permanent Monitor Installation

Connecting the Monitor in Temporary Installations

In some installations, when a monitor may not be provided for all units, and particularly in rack mount installations, a video connector is provided on the front of the unit, behind the right door (see Figure 3-6).

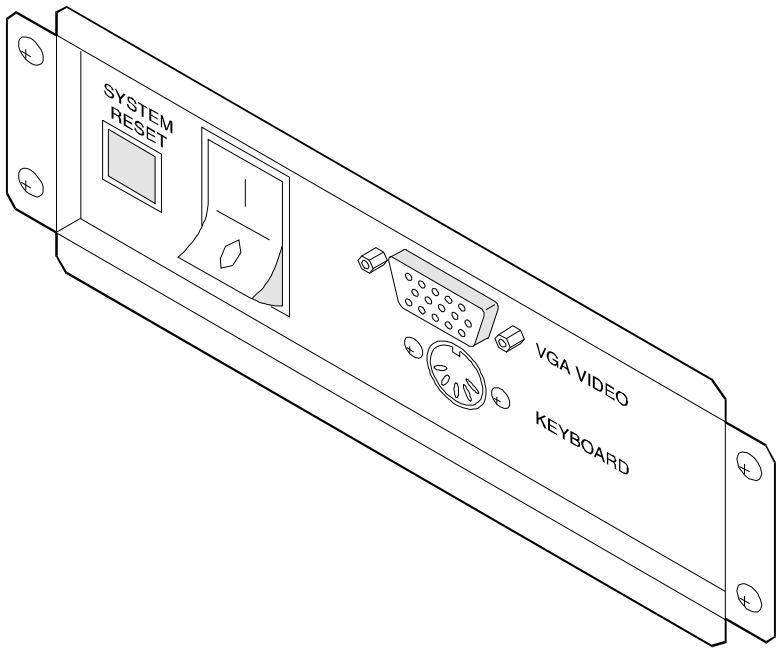


Figure 3-6. Video Connector Location

Use this as a temporary connection point for MAP/100 diagnostic work only.

Never use this connection for a permanent installation.

Use of this port requires a cable (comcode 406664979) to be connected from the video card (described above) to the connector marked "VGA Video" in the upper left hand corner on the rear of the unit. The cable may or may not be shipped with the unit.

When using this diagnostic video port, an external AC power source must be provided to the monitor since it will not be getting power from the MAP/100.

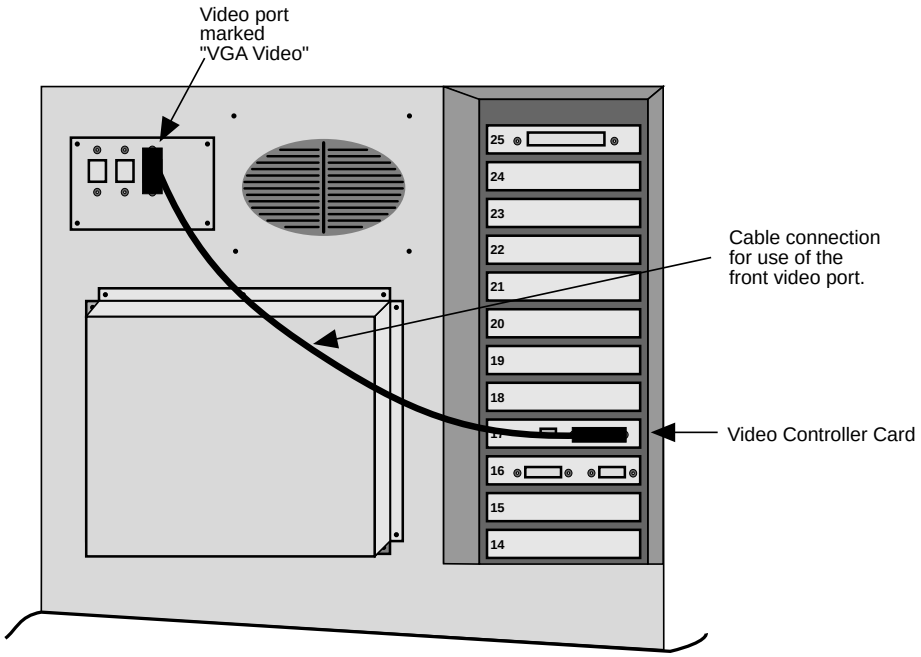


Figure 3-7. Cable Connection Required to Activate Front Diagnostics Video Port

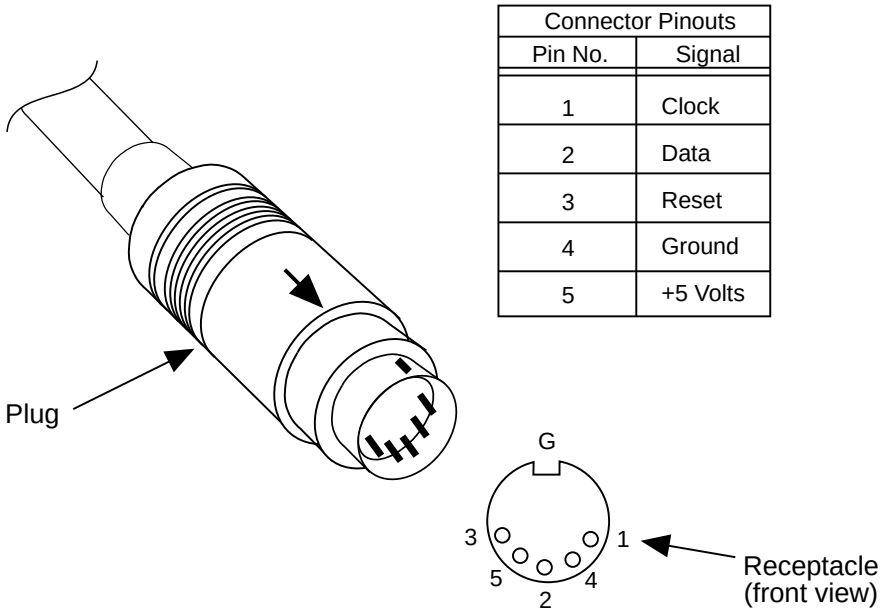
Connecting the Keyboard

A 5-pin, female DIN connector is located in the rear, upper left corner of the MAP/100. Use this connector for all permanent keyboard connections to the unit.

A second connector is provided behind the right front door as a convenience port for diagnostic purposes only (see Figure 3-8). Never use this connector in permanent keyboard installations.

The keyboard cable requires 1 toroid (Type A). The keyboard cable must be wrapped 3 times around the toroid.

The pinouts for both of these connector receptacles are shown in Figure 3-8.



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

Figure 3-8. Pinout Connections for Keyboard - Circular DIN 6-pin

Connecting the Keyboard Cable

1. Wrap the keyboard cable 3 times around 1 ferrite. Wrap the cable in a criss-cross pattern to secure the cable (Type B), Figure 3-9. The ferrite should be located as closely as possible to the keyboard connector cable end. No cable tie is needed.
2. Connect the keyboard cable to the keyboard receptacle.

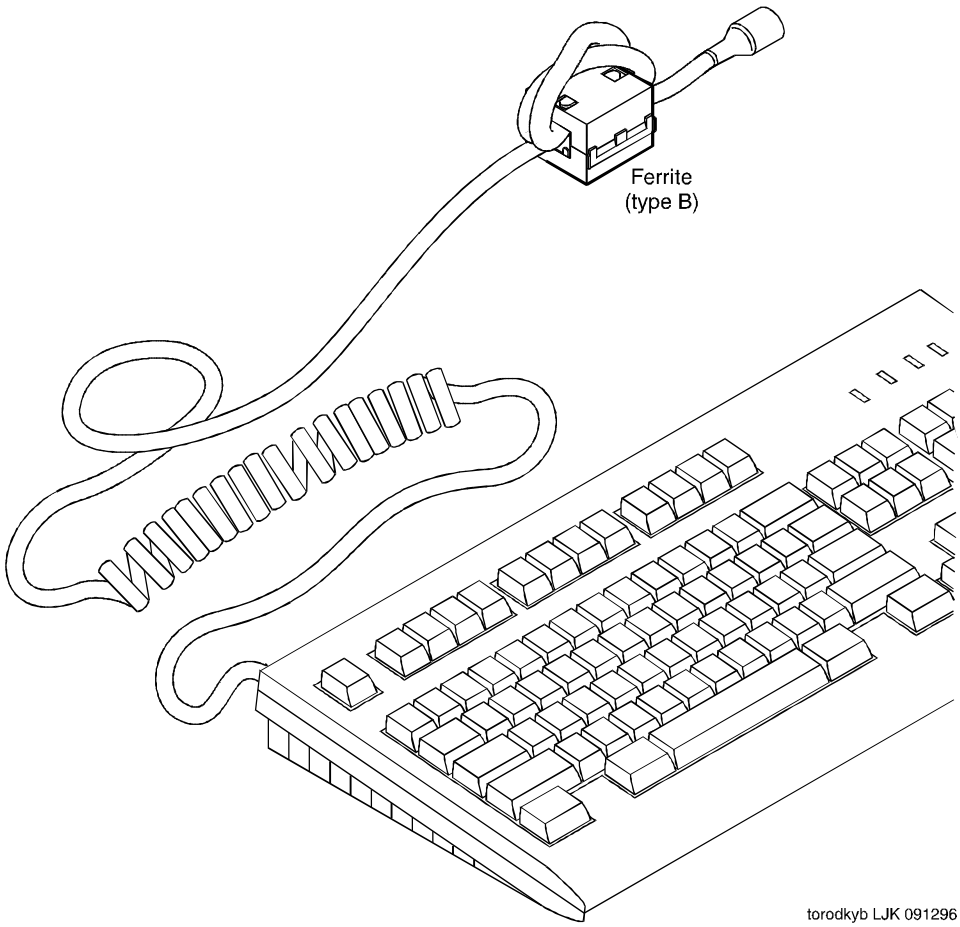


Figure 3-9. Toroid and Ferrite Placement for the Keyboard Cable

Connecting the Printer

A 25-pin D-subminiature, female receptacle located on the CPU card faceplate (slot #16) provides a parallel printer interface. The table below details the pin number and corresponding functional description of this connector.

The printer cable requires 1 ferrite (Type B).

Table 3-2. Pinout Connections for Printer

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 Printer
18-25	Ground

Use the instructions supplied in the manufacturer's manual, *Users' Guide 570 Printer* or the manual provided with your printer, to unpack and install your printer. The following installation overview supplements the information provided in the printer document.

1. Unpack your printer according to the steps provided in the printer document.
2. Install the ribbon cassette and paper as shown in your printer document.
3. Ensure that the ON-OFF switch of the printer is OFF.
4. Set the options as described in your printer document.
5. Connect the AC power cable to your printer.
   - If your printer does not have a self-test feature, go to Step 6 and continue.
   - If your printer has a self-test feature, plug the AC power cable into a grounded wall outlet and initiate the self test by following the instructions in the printer document. When the self-test is completed without any installation errors, turn the printer off and disconnect the power cable from the wall outlet.
6. Place 1 ferrite (Type B) on the printer cable. The ferrite should be located on the end interfacing with the MAP. Use a large cable tie to hold the ferrite in place. Trim off any excess from the cable tie.
7. Insert the male end of your cable into the parallel port on the back of the CPU card in slot #16. Fasten the screws.
8. Insert the other end of your cable to the parallel port on your printer. Press the two wire retaining clips together until you hear them click into the lock slots on either side of the plug.
9. Connect the AC power cable to a grounded wall outlet.
10. Switch the printer power-on button to ON.

Connecting a Modem or Data Module

A modem or data module can be used in the following situations:

- Connection to the multi-port serial card or CPU COM1 to enable remote access

  NOTE:
  COM2 is used only for the remote maintenance modem for all systems except MERLIN LEGEND integrations. A remote maintenance modem may be placed on systems integrated with the MERLIN LEGEND if the customer purchases the option.

- Location at a remote site for connection between a remote terminal and the network

- Connection to the 486 CPU COM2 for remote login for Lucent Technologies remote maintenance
- Connection to the ACCX circuit card break-out box via RS-232 (DCIU cable) for administration and networking

The following sections outline how to connect and set-up a 7400A data module and a 3810, 3820, or 3910 modem. The identity of the modem will depend upon location.

Connecting the 7400A Data Module

The 7400A data module can be used for connections to a distant modem or terminal to establish a data call or for remote administration. The 7400A can be connected to either COM1 on the 486 CPU card or to any of the eight ports on the multi-port serial card.

COM2 on the 486 CPU is reserved for Lucent Technologies remote maintenance. Only the 3820 or the 3910 is to be used on the COM2 port.

Follow the sections below to install the 7400A data module.

The data module cable requires 1 ferrite (Type B).

Setting Up the Hardware on the 7400A Data Module

Configure the data module for DCE operation. Refer to DTE/DCE Hardware Set Up in Chapter 2, "Installation," in the *7400A Data Module User's Manual*, 555-020-706.

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

Connecting the 7400A to COM1

Use the following procedure to connect the 7400A to COM1. See Appendix B, "Cable Connectivity", in the Lucent Intuity hardware installation guides for illustrations and additional information.

1. Attach a 9-25 pin adapter to COM1 on the 486 CPU.
2. Place 1 ferrite (Type B) on the RS-232 cable. The ferrite should be located close to the MAP. Use a large cable tie to hold the ferrite in place. Trim off any excess from the cable tie.
3. Attach an RS-232 cable to the adapter on COM1.

4. Attach the other end of the RS-232 cable to the 7400A.
5. Make your remaining connections.

Connecting the 7400A to the Multi-Port Serial Card

Use the following procedure to connect the 7400A to the serial card. See Appendix B, "Cable Connectivity" in the Lucent Intuity hardware installation guides for illustrations and additional information.

1. Place 1 ferrite (Type B) on the modular cable. The ferrite should be attached to the end of the cable closest to the the MAP.
2. Attach the 14-foot (4.3-meter) modular cable (provided with the card) to the multi-port serial card.
3. Attach the other end of the 14-foot (4.3-meter) modular cable to a DTE adapter.
4. Connect the DTE adapter to the 7400A data module.
5. Make your remaining connections.

Testing the Hardware Connections and Setup

To verify that you have the hardware connections and the setup completed correctly, and you have access to an RS-232 mini-tester:

1. Plug an RS-232 mini-tester into the COM2 port.
2. DTR, RTS, and TD on the tester should light.

Completing Setup on the 7400A Data Module

Set the options and interface baud rate on the 7400A. Refer to the table below and *Using the Front Panel* in the *7400A Data Module User's Manual*, 555-020-706, for details.

In the *set interface* option menu, set the ANS ONLY? option to YES. Then select the following options:

Table 3-3. 7400A Data Module Option Settings

Option	Setting
Baud Rate	19200
ANS	AUTO
BRK DISK	LONG
CI	OFF
CH	OFF
CTS	ON
DCD	Normal
DSR	ON
DTR	50 Msec
DTR	FOLLOW
LL	OFF
REMLOOP	GRANT
RI	ON
RL	OFF
SIGLS DISC	OFF
TM	OFF
DONE	YES

Installing the Data Module in Lucent Intuity Software

Use the following procedure to complete installation of the 7400A if you are installing a new data module onto the system. For initial installations, configure the data module as a part of the software installation checklist.

1. Login as craft.
2. Select Customer/Services Administration, System Management, UNIX Management, Modem/Terminal Administration, and then Install Modem/Terminal Software.

   The Install Modem/Terminal screen pops up for the user to assign the Device, Serial Port Number, and Speed.
3. Set Device to modem.
4. Set Serial Port Number to the appropriate port, which is /dev/tty00, or /dev/ttysaa, ... /dev/ttysah, etc.
5. Set to recommended speed of 19200. If the 19200 speed is not available, the speed can also be set at 9600, 4800, 2400, at 1200.

You have completed this procedure.

Setting Up a Terminal to Remotely Login to Lucent Intuity via a 7400A Data Module

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

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

Connecting the 3810, 3820 or 3910 Modem

The Paradyne Comsphere 3810, 3820, and 3910 modems are the only modems supported for connection to COM2. The identity of the modem varies with the location of the installation. COM2 is reserved for Lucent Technologies remote maintenance. However, COM1 and COM2 function the same. Follow the sections below to install the 3810, 3820, or 3910 modems.

Physically Connecting the 3810, 3820, or 3910 Modem

To physically connect the 3810, 3820, or 3910 modem to the hardware platform, follow the steps below:

1. Connect a 9-25 pin DTE-type adapter to the 9 pin COM2 port on the platform.
2. Place 1 ferrite (Type B) on the RS-232 cable. The ferrite should be located close to the system. Use a large cable tie to hold the ferrite in place. Trim off any excess from the cable tie.
3. Use a 25-pin, RS-232 extension cable to connect the adapter to the modem.
4. Plug the modular cable into the modem jack labeled DIAL.

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

   If using the modem for anything other than Lucent Technologies remote maintenance, use an RS-232 DTE adapter DTE and the six-pin cable to connect to the ports (ttysaa, etc.) on the multi-port serial card and the modem.

Configuring the 3820 or 3910 Modem for Remote Maintenance

For initial installations, configure the modem during system administration and test. The 3810, 3820, or 3910 modem can be configured in three ways:

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

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

  NOTE:
  All physical connections to the remote maintenance modem in the MAP/100 must be completed prior to powering up. If you select this method, make all connections before powering up.

- By using the control panel on the modem after connecting to the 486 CPU on the hardware platform
- By connecting the modem to a terminal which acts as a DTE

Typically the first method is the easiest way to configure the 3820 or 3910 modem. For more information on configuring the modems for remote maintenance or remote administration, see *Intuity Software Installation for Release 3.0*, 585-310-160.

The networking modems are connected through the breakout box. For more information on networking, see *Intuity AUDIX Release Digital Networking Administration,* 585-310-533.

Cabling Other Devices Used for Switch Connections

Various other devices may be used to connect Lucent Intuity MAP/100 and the switches or other peripherals. These devices include:

- Z3A Asynchronous Data Unit
- IDI ground device
- MPDM - Modular Processor Data Module
- Switch Integration Device
  - — Mitel
  - — Rolm
  - — Northern Telecom Meridian
  - — NEAX

Follow the instructions provided with these devices to make connections and establish setup correctly. Refer to Appendix B, "Cable Connectivity"," to determine how to cable these devices between Lucent Intuity MAP/100 and the switches or other peripherals.

Place 1 ferrite (Type B) on each cable connected into a multi-port serial circuit card or COM1. Wrap the cable 1 turn around the ferrite. The ferrite should be located close to the system.

Connecting the LAN Card

Prepare the LAN cable to be attached to the Lucent Intuity system.

CAUTION:
Do not connect the LAN cable to the system at this time. Doing so may interfere with the customer's LAN. Connect the cable when directed to do so in INTUITY Software Installation for Release 3.0*, 585-310-160.*

The type of cable used to connect the LAN ethernet card to the customer's LAN is dependent upon the connection the customer is already using for their LAN. This cable connection can be one of following types:

- Thin Coax cable with BNC T-Connectors
- Thick Coax cable
- Twisted pair

If you are installing twisted pair modular: Place 1 ferrite (Type B) on the LAN cable. Wrap the cable 1 turn around the ferrite. The ferrite should be located close to the system.

Completing all Other Cabling

Prior to turning on the MAP/100, all other cable connections should be completed as well. These include:

- Connecting the Tip/Ring (T/R) circuit card(s) to phone lines (channel capacity and allocation)
- Connecting the or DCIU card to most Lucent switches
- Connecting the ACCX card to the network
- Making asynchronous connections with the multi-port circuit card

Use pinout and channel information found in Chapter 1, "Preparing the Site". Make cable connections using information in Appendix B, "Cable Connectivity".

Required toroid and ferrite placement:

- Connections to the multi-port serial circuit card require 1 ferrite (Type B) on each modular cable. Wrap the cable 1 turn around the ferrite. The ferrite should be located close to the system.

- Connections to the AYC10 or AYC29 tip/ring circuit cards require 1 ferrite (Type B) on each modular cord. Modular cords should be wrapped 1 turn through the ferrite. See Figure 3-10.

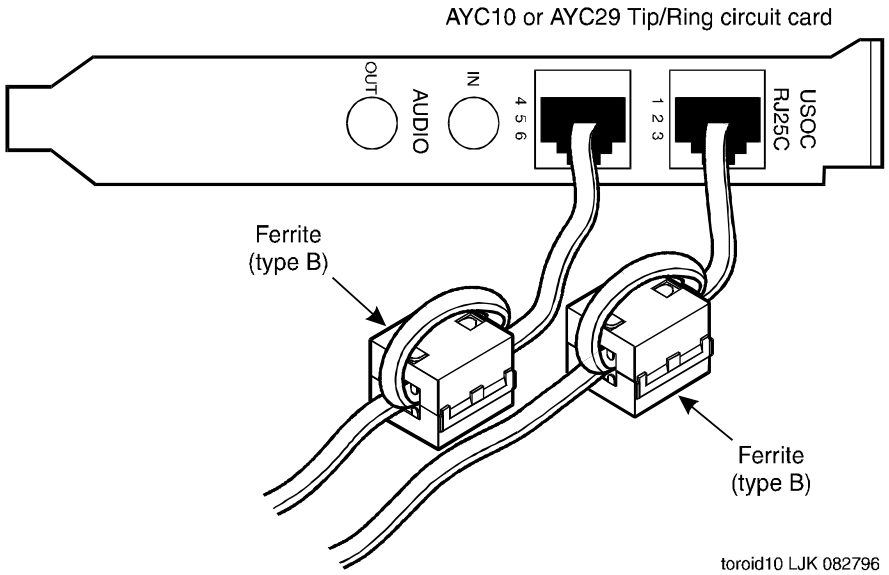


Figure 3-10. Ferrite and Toroid Placement for the AYC10 and AYC29 Tip/Ring Circuit Cards

- Connections to the AYC30 tip/ring circuit cards require 1 ferrite (Type B) on each modular cable, and each cable must be wrapped 1 turn through a pair of toroids (Type A). A maximum of 11 modular cables or 33 tip/ring channels my be wrapped through the same pair of toroids. Because toroids are fragile, use 1 small cable tie on the loose side of the toroid to prevent toroid damage. See Figure 3-11. The ferrite(s) and toroid(s) should be located close to the system.

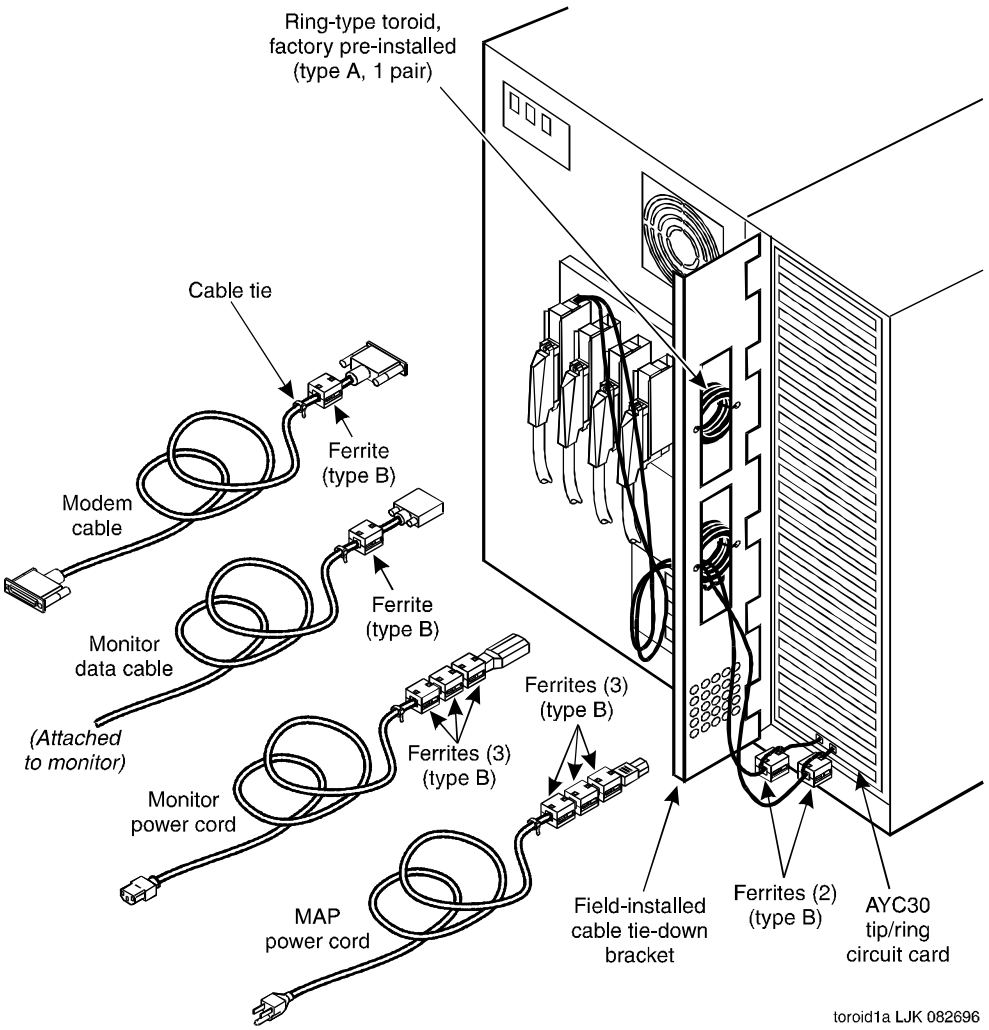


Figure 3-11. Ferrite and Toroid Placement for the AYC30 Tip/Ring Circuit Card

Connecting the System to the Power Supply

A dedicated line should be provided for the MAP/100. The AC power output receptacle on the back of the unit is to be used ONLY for the monitor. No other devices may be plugged into this receptacle. Use Figure 3-12 as a reference during this procedure.

Use the following procedure to ensure that the system is connected properly to the power outlet and is receiving power:

1. Place 3 ferrites (Type B) on the power cord end that will connect into the MAP. Use a large cable tie to hold the ferrites in place. Trim off any excess cable tie. The ferrites should be located close to the system.
2. Plug one end of the MAP/100 power cord into the input AC on the rear of the unit.

   NOTE:
   The power cord needed for your country/continent is described in Chapter 1, "Preparing the Site" of this book in the section titled, "Power Requirements" on Page 1-4." Refer to Table 1-3.

3. Plug the other end of the MAP/100 power cord into the designated 110 VAC power outlet or 200–250 VAC power outlet, depending on your configuration.
4. You should have already verified the power supply intake voltage for systems with battery backup. If you are installing a system with battery backup and have not, use the procedure titled, "Verifying Power Supply Intake Voltage for Systems with Battery Backup" on Page 1-8, found in Chapter 1, "Preparing the Site"," in this book.

   NOTE:
   Systems without battery backup do not require this step.

5. Place the monitor's power switch in the ON position.

6. After checking to see that the rear panel circuit breaker is ON, turn ON the power switch on the front of the unit.

   The green light labeled "MAIN POWER" on the front of the main unit should light. Resident diagnostics should be initiated on the monitor.

7. If the light is not lit or diagnostics are not initiated, check the power connections.

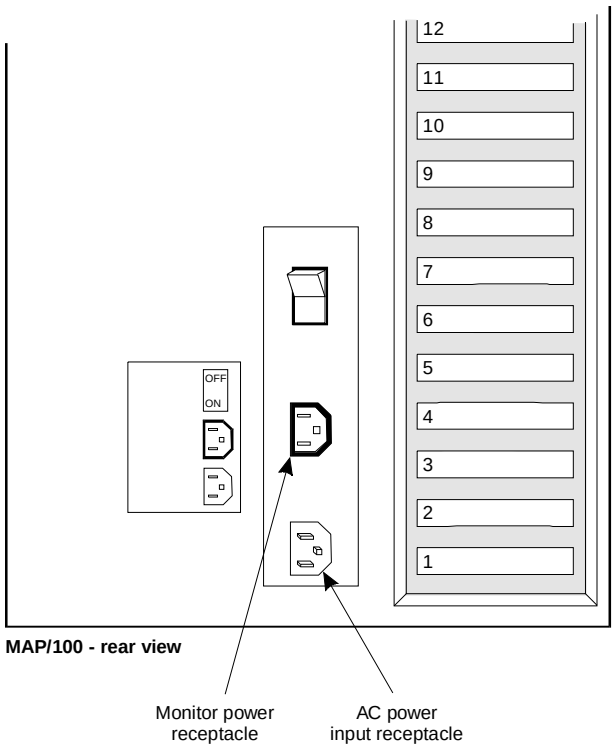


Figure 3-12. Power Connection for AC Units

Accessing the 486 CPU Setup Screens

The 486 CPU has a setup utility which you may need to access when making changes to the hardware. Changes need to be made if the actual settings do not agree with the default settings shown in Figure 3-13. You need to change the setup in the following cases:

- Installing or removing a second hard disk
- Installing or removing the keyboard

The 486 CPU setup menus include the Setup Utility Main Menu which appears when you first enter 486 setup and the Advanced CPU Setup menu which you enter from the main screen using the function keys. Complete the following steps to enter the 486 CPU Setup Utility Main Menu.

1. 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
   ```

2. Press ESC now.

   The message blanks out after you press ESC and the power up continues.

   NOTE:
   Do not press ESC more than once. If you do, the system exits setup and you must begin the process again.

After memory diagnostics have completed during power-up, the setup screen appears.

The manufacturer sets the defaults for the 486 CPU setup menus prior to shipment. The following screen shows the factory defaults.

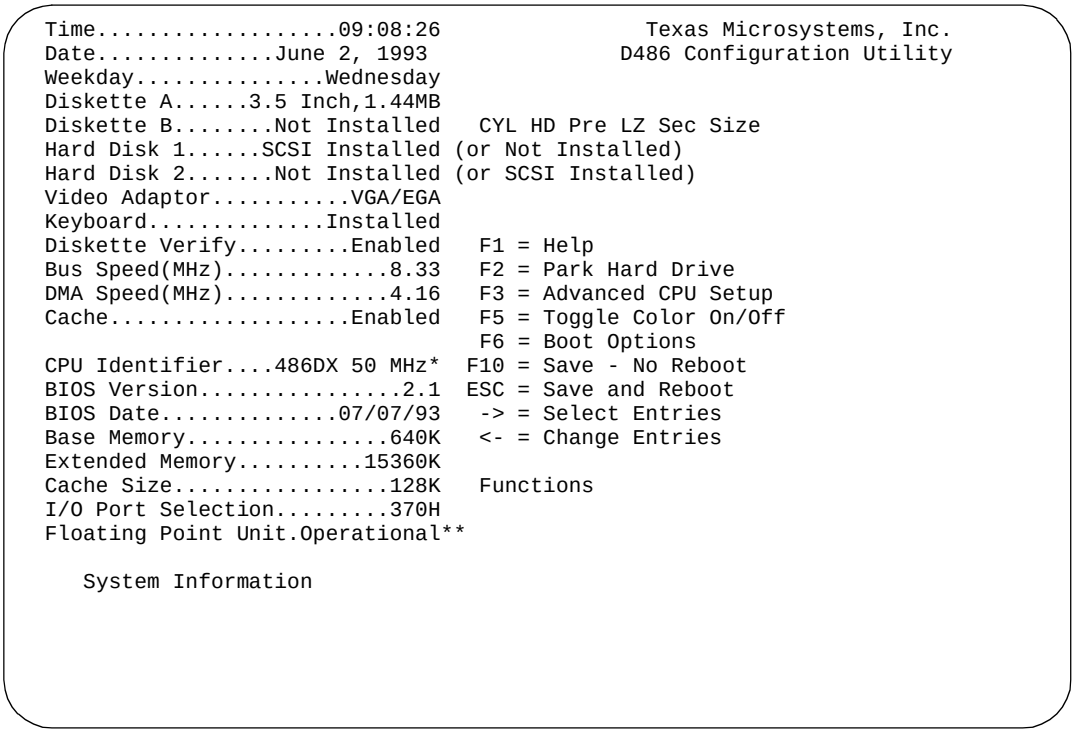


Figure 3-13. The 486 CPU Setup Utility Main Menu

NOTE:
The MAP/100 supports a 486DX 50MHz.

NOTE:
"Operational" appears in this field when using the 486DX 50MHz.

NOTE:
It makes no difference in SCSI systems if Hard Disk 1 and Hard Disk 2 say "Not Installed" or "SCSI Installed" whether or not the disk is installed. If it is anything else, the system will not boot. Either entry is correct.

When to Change the 486 CPU Setup Utility Main Menu

The keyboard option is the only option that may need to be changed in the System Information menu of the 486 CPU setup utility main menu assuming the disk default settings are correct. You also may need to make additional changes in Advanced CPU Setup. Read "When to Change the Advanced CPU Setup" to determine if you need to correct entries in that menu.

Use the table below to determine what changes, if any, should be made to the 486 CPU main menu.

Table 3-4. When to Change the 486 Setup Utility Main Menu

If --	Change setup entry	To --
Default settings are incorrect		Per Figure 3-13
Removing the keyboard	Keyboard ...	Not Installed
Installing a keyboard to a system that did not previously have one	Keyboard ...	Installed

If you set the disk type for the primary or boot disk to something other than SCSI Installed or Not Installed, the system will not boot.

Setting the keyboard value to "Not Installed" when you remove the keyboard allows the CPU to ignore keyboard errors at start-up. An error message prints before memory is tested and the system then boots if the value is set to "Installed" and the keyboard is not present.

WARNING:
Do not change the 486 Setup Utility Main Menu unless the factory default is not set as shown in the screen on the previous page or the keyboard has changed as described in the table above.

Making Entries Within the 486 Setup Menus

Use the table below to determine how to enter the setup menus, as well as how to make entries within the menus.

Table 3-5. Keys to Use in the 486 Setup Utility Menu

Press --	To --	At this point --
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
F10	Save values without a reboot	After the values are set
ESC	Save values and reboot	After making configuration changes (Required)
F2	Park a SCSI hard drive	When moving the system and you have a SCSI hard drive (Required)
F3	Enter Advanced CPU Setup from the main menu	When changing the serial/parallel port assignments

When to Change the 486 Advanced CPU Setup

The 486 Advanced System Configuration Options should be changed only if the default settings shown below are incorrect.

WARNING:
Do NOT change any menu in the Advanced CPU Setup unless it does not agree with the default settings.

Accessing the Advanced CPU Setup Menus

Press F3 at the 486 CPU Setup Utility Main Menu. The Advanced CPU Setup Menu displays as shown below.

```
            Advanced System Configuration Options


F2.......Shadow Option ROM
F3.......Serial/Parallel Port Assignments
F4.......Wait State Selections
F5.......Shadow RAM Cache Definitions
F6.......Floppy Controller and IDE Interface
F7.......Customized Hard Drive Table Entry
F8.......Memory Relocation
F9.......Non-Cacheable Address Definitions
F10......Floppy Controller Port Address
Enter....Return to Main Setup Screen
```

Figure 3-14. Advanced CPU Setup Menu

Press F3 to enter the Serial/Parallel Port Assignments submenu if necessary to make a change. Do NOT make changes in other menus. The screen appears with the manufacturer defaults as shown below.

```
                    Serial/Parallel Port Configuration

UART Number 1: 03F8 IRQ4

UART Number 2: Disabled

Parallel Port: 0378 IRQ7 Compatible

     ENTER = Save F1 = Help
```

Figure 3-15. Serial/Parallel Port Configuration Submenu

If the settings on your MAP/100 do not agree with the default settings shown above, make the appropriate changes. Refer to Table 3-5 on page 3-31 "Keys to Use in the 486 Setup Utility Menu" to know which keys to use to make changes.

Configuring the System

4

What's In This Chapter

This chapter describes the different Lucent Intuity feature configurations on the MAP/100 platform. These configurations include:

- Types and number of circuit cards allowed
- Configuration rules for circuit cards
- Circuit card slot assignments
- Circuit card resource assignments
- Serial Port Usage
- Peripheral bay slot assignments

Certain configuration rules must be followed when adding circuit cards or hard disks. Refer to this chapter for these rules.

Types and Number of Circuit Cards Allowed

There are 25 circuit card slots available and eight different types of circuit cards in the MAP/100 platform. Circuit card slots are numbered 1 - 25 beginning with the bottom slot as number one.

Standard MAP/100 Circuit Cards

Four of the cards are standard to the MAP/100 as listed below:

- 486 central processing unit - slot 16
- Video controller - slot 17
- Reserved for remote maintenance use - slot 18
- SCSI bus controller - slot 25

Feature Circuit Card Configuration Rules

Following is a summary of the configuration rules from the standpoint of each feature card:

- Up to 11 tip/ring circuit cards can be installed in the MAP/100 platform to establish a maximum of 64 analog channels.

  At least one tip/ring card must be active on the system.

- Switch Administration (System Programming and Maintenance Utility) is required for all MERLIN LEGEND configurations. It requires the COM1 (tty00) serial port.

- Remote customer access requires one or more asynchronous ports. To accommodate this, a multi-port serial card may be required.

  The maximum number of simultaneous asynchronous ports that can be active for remote administration and maintenance by the customer is three.

  Use the serial port, COM1 - tty00, as the first customer remote access port, unless the port is already in use for a switch integration or other application. Use the multi-port serial card for the additional two remote access ports.

- For systems using Lucent Intuity Lodging, the Property Management system (PMS) automatically configures the first available serial port other than COM2 as the PMS link port.

  NOTE:
  Remote administration for the customer is available as a separately ordered package that includes modems, the UNIX System V Release 4.2 Multi-user package (if not already purchased for

networking), and a multi-port serial card (if not already purchased for SID switch integrations).

- One remote access port (COM2) and modem must be dedicated for remote maintenance (optional for MERLIN LEGEND).

  Remote access by the TSC or other Lucent Technologies representative is accomplished over the async port COM2 and the attached remote maintenance modem. A separate modem must be used for remote maintenance access.

- The serial port, COM2 - tty01, is reserved for the remote maintenance modem and Lucent Technologies remote maintenance. Since the remote maintenance modem is optional for MERLIN LEGEND configurations, COM2 may be free for other applications on a MERLIN LEGEND integration.
- Lucent Intuity Call Accounting System (if configured) requires one serial port. Depending on the configuration, this may use COM1 or the multi-port serial card.
- The parallel port supports a local printer.
- Message Manager requires the installation of a TCP/IP ethernet card.
- SID integrations require the multi-port serial card.
- Up to three ACCX (AYC22) cards can be installed for a maximum of 12 networking channels via digital and analog remote connections using DCP and RS-232 links.
- Each ACCX card terminates four data channels in one of the following combinations:
  - Two DCP lines, each providing two I-channels for data. Depending on the version of the switch you are connecting to, you may only be able to use one of the two I-channels of each DCP circuit as shown in the following list:
    - System 75 R1V3, DEFINITY G1 R1V4, and DEFINITY G3i, G3s, or G3vs Version 1 only support one I-channel
    - DEFINITY G2, G3i, G3s, G3vs Version 2, and System 85 can use both of the I-channels. The option must be purchased, installed, and administered on the switch before Lucent Intuity system administration is performed.
  - Four RS-232 ports
  - One DCP line (two I-channels) and two RS-232 ports

Both DCP and RS-232 connections begin at a breakout box. The RS-232 or DCIU cable then connects through a modem to the customer wall field and the DCP then connects directly to the customer premise wall field.

NOTE:
See Appendix B, "Cable Connectivity" for information and diagrams on how to make cable connections from the ACCX card. Tables are also provided which list various cables and cable lengths which can be used to make the connections.

3. One GP Synch or DCIU circuit card can be installed in the MAP/100 platform to establish a control link (X.25) with the DEFINITY switch.
4. One multi-port serial card with eight RS-232 connections can be installed in situations where more than one RS-232 port is needed.

Circuit Card Slot Assignments

Refer to the following table for slot locations for all the cards. Cards cannot be placed in any other slots than those indicated in the table.

Table 4-1. MAP/100 Circuit Card Slot Locations

Circuit Card	Slot Number	Function
SCSI Bus Controller	25	Controls hard disk & tape drive
Empty	24	Future PC hardware
3rd ACCX card installed	23	Connects to Lucent other switches
2nd ACCX card installed	22	Connects to Lucent other switches
1st ACCX (AYC22) installed	21	Connects to Lucent other switches
GP Synch or DCIU	20	Connects to Lucent switches
Multi-port serial	19	Connects, terminals, modems, and data modules
Reserved slot for remote maintenance	18	Reserved
Video controller	17	Controls monitor
486 CPU	16	Central processing unit
Ethernet LAN	15	TCP/IP message manager
Future application hardware	12-14	Reserved for future use
Tip/ring card - begin installing in slot 1 and continue up to slot 11	1-11	Tip/Ring analog connections

Circuit Card Resource Assignments

Use the following table for resource assignment information when adding additional circuit cards. See additional notes regarding the table on the following page.

Table 4-2. Table of Resource Assignments for MAP/100

Card	IRQ	I/O Ports	RAM	Notes
video controller (VGA)			A0000-BFFFF(128K) & C0000-C7FFF(32K)	required
system BIOS			E0000-EFFFF(64K)	required
CPU card parallel printer port	7	378-37F		
CPU card serial port #1	4	3F8-3FF		
CPU card serial port #2	3	2F8-2FF		Reserved for Lucent Technologies maintenance
SCSI Host Adaptor	11	330-333	DC000-DDFFF	DMA 5
floppy drive	6	3F0-3F7		DMA 2
Tip/ring circuit cards	2	X00-X1F where X=[1-3,5-7,9]		card 0-11
ACCX	5	X40-X4F where X=[1,3,5,6,7,9]		
serial card			D0000-D1FFF D2000-D3FFF	
GPSC-AT/E or DCIU	12	240-24F	D4000-D7FFF	
Reserved	3	180,2F8-2FF	CC000-CCFFF	Do not use.
Ethernet LAN	10	280-29F	C8000-CBFFF	

Notes for Table 4-2

NOTE:
IRQs 0,1,8,9 are always used by the PC itself, and are unavailable for assignment (IRQ 2 maps to IRQ 9). IRQs 3, 4 and 7 are allocated for the asynchronous TTY and parallel printer ports on the CPU, and can be re-used. IRQ 13 is reserved for a Math co-processor.

Brackets are used to indicate any of the included values are allowable. Where multiple boards of the same type are used, IRQs are common for all, but I/O ports and RAM address are unique.

The above configuration intends to use all IRQ's except for IRQ 15.

Serial Port Usage

Serial ports on the MAP/100 platform are primarily used in the following situations:

1. To support remote access to networks
2. To support remote maintenance
3. To integrate the system with switches other than the Lucent DEFINITY switch

The GP Synch or the DCIU and the multi-port serial cards set up control links with all switches. Following is a list of the switches that can be integrated with each card:

1. GP Synch or the DCIU card
   - Lucent DEFINITY switches
2. Multi-port serial card
   - NEC® NEAX
   - Rolm
   - Mitel
   - Northern Telecom SL1
   - All Centrex (SMSI) switches including the following:
     - — Lucent 5ESS®
     - — Northern Telecom® DMS100

Remote access for system administration and maintenance requires the use of one or more serial ports. A maximum of three serial ports can be simultaneously active for this purpose.

NOTE:
Multi-User Software must be purchased for this to be true.

There are only two serial ports (COM1 and COM2) available on the MAP/100 platform on the 486 CPU card. COM2 is reserved for Lucent Technologies maintenance. If you need additional ports, you may use a multi-port serial card which provides eight serial ports.

For a single remote access configuration, COM1 (tty00) can be used. For multiple access, COM1 could be used as the first serial port, and the two additional remote access ports could be located on the multi-port serial card. Alternatively, the serial card could be used to provide all three serial ports.

NOTE:
Remote administration is available as a separate package which includes modems, the UNIX System V Release 4.2 Multi-user package (if not already selected for Networking), and a multi-port serial card (if not already selected for SID switch integrations).

Peripheral Bay Slot Allocations

Use the following table when adding disks to the MAP/100 platform. The peripheral bay slots must be used as shown below. For information on how to install additional disks, refer to Chapter 10, "Installing Optional Hardware".

Table 4-3. MAP/100 Hard Disk Installation Bay Locations

SCSI ID	Disk Name	Bay Number	Installation Order
3	Tape Drive	9	N/A
n/a	Floppy Drive	8	N/A
n/a	Empty	7	N/A
2	disk02	6	Fourth
1	disk01	5	Third
5	disk05	4	Sixth
6	audfsdisk	3	Second
4	disk04	2	Fifth
0	disk 00	1	First

Getting Inside the Computer

5

What's in This Chapter

This chapter describes how to:

- Shut down an operating MAP/100
- Remove the dress covers of the chassis
- Open and remove the front doors
- Access the peripheral bay and card cage
- Replace the dress covers and the front doors

WARNING:
Shut power off before removing the dress covers or front doors of the MAP/100.

Perform a "soft" shutdown of your software operating system, if on-line, before shutting off power.

Shutting Down the MAP/100

To shut down an operating MAP/100 in order to power-off and get inside the computer you must first do the following:

- Inactivate alarm origination
- Stop the voice system
- Shut down the Lucent Intuity system

Inactivating Alarm Origination

This procedure inactivates alarm origination so that the Lucent Intuity system will not inform the remote maintenance center of any alarms that occur during the shutdown of the system.

1. If the system is not currently at the Lucent Intuity Administration menu, that is, the system is at the log-in prompt, complete the following:
   a. Log-in as craft
   b. Press ENTER to accept the AT386 default.
2. Starting at the Lucent Intuity Administration menu, select:

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

The system responds with the Alarm Management screen (Figure 5-1).

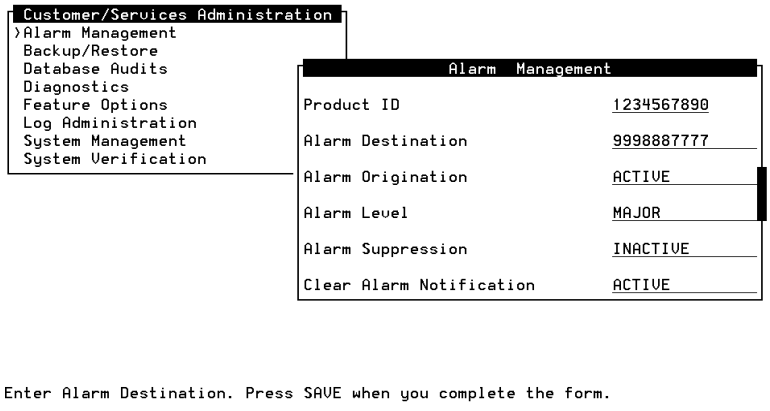


Figure 5-1. Alarm Management Screen

3. Move the cursor to the `Alarm Origination` field.
4. Press F2 (Choices).

   The system responds with the Alarm Origination screen (Figure 5-2).

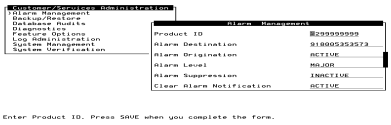


Figure 5-2. Alarm Origination Menu

5. Select `INACTIVE`.
6. Press F3 (Save).

   The system responds with an Information screen (Figure 5-3).

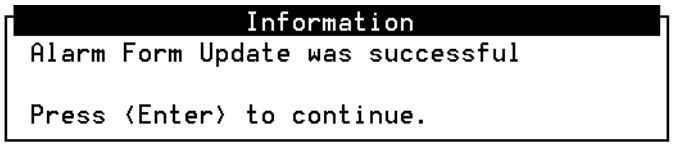


Figure 5-3. Information Screen

7. Press ENTER.
8. Press F6 (Cancel).

   The system returns to the Customer/Services Administration menu.

Shutting Down the Lucent Intuity System

1. Starting at the System Management menu select:

   ```
   > System Control
   ```

   The system responds with the System Control menu (Figure 5-4).

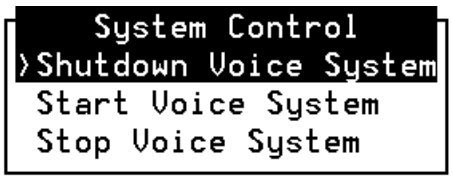


Figure 5-4. System Control Menu

2. Select `Shutdown Voice System`.

   The system responds with the following prompt:

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

3. Enter **y**.The system responds with the following text:

   ```
   voice system is not running
   Shutdown started.  Month date time year
   INIT: New run level: 0
   The system is coming down. Please wait

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

   CAUTION:
   Do not press CTRL ALT DELETE at this time. This will restart the system.

4. Press the front panel power rocker switch and the circuit breaker on the rear of the MAP/100.

Removing the Front Doors

1. Open the right door on the front of the MAP/100 by placing your finger in the indentation on the bottom right corner of the door. Pull the door towards you.
2. With the door fully opened, remove it by applying upward pressure to slide it off its hinges. Set the door aside.
3. Open the left door on the front of the MAP/100 by placing your finger in the indentation on the bottom left corner of the door. Pull the door towards you.
4. With the door fully opened, remove it by applying upward pressure to slide it off its hinges. Set the door aside.

Removing the Dress Covers

1. In one corner of the top dress cover, place your fingertips in the space between the bottom of the top cover and the top of the side cover. Gently pry off the dress cover by applying upward pressure at each corner.
2. Gently pry off the dress cover by applying outward pressure at each corner.
3. Repeat Steps 1 and 2 for the other side dress cover, if necessary.

Accessing the Peripheral Bay

1. Remove the dress covers.
2. Remove the right front door.
3. Loosen the four 1/4-turn fasteners around the perimeter of the peripheral bay.

   CAUTION:
   Before you retighten any of the 1/4-turn fasteners, read the label on the side plate of the unit. Excessive force will permanently damage these fasteners.

4. Loosen the seven 1/4-turn fasteners around the perimeter of the peripheral bay access door and open the door. See Figure 5-5.
5. Grasp the peripheral bay steel framework and carefully pull the entire peripheral bay out while observing that no cable "hang-ups" occur (observe cables through the side door). Continue to pull the assembly forward until it is against its mechanical stop.

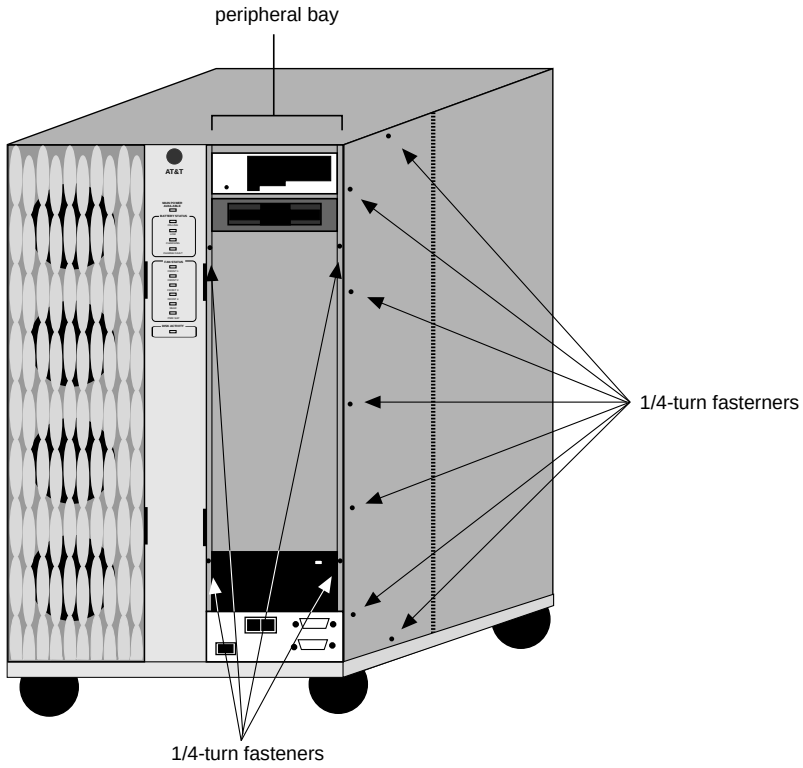


Figure 5-5. Fasteners Around the Peripheral Bay and Peripheral Bay Access Door

Accessing the Card Cage

1. Remove the dress covers.
2. Loosen the eight 1/4-turn fasteners around the card cage access door (Figure 5-6) and open the door.

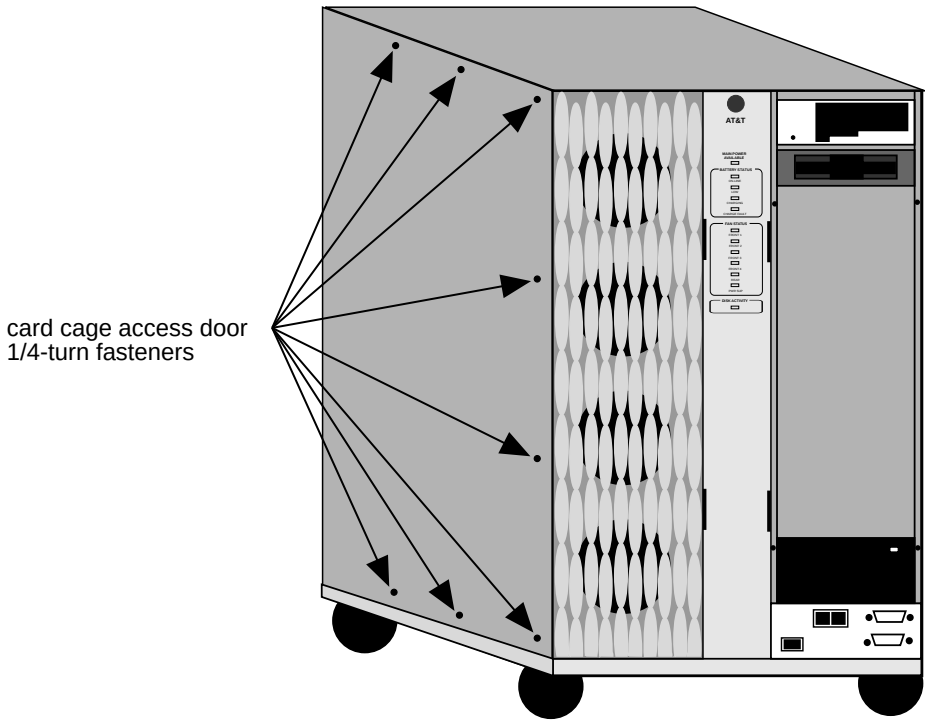


Figure 5-6. Fasteners Around the Card Cage Access Door

Replacing the Dress Covers

1. For each of the side covers, align the holes on the back of the cover with the pegs on the MAP/100. Push the cover on by applying inward pressure at each of the corners.
2. For the top cover, align the holes on the bottom of the cover with the pegs on the MAP/100. Push the cover on by applying downward pressure at each of the corners.

Replacing the Front Doors

1. With the door in the fully open position, align the hinge pins on the door with the hinges on the chassis.
2. Slide the hinge pins downward into the hinges.
3. Close the door.
4. Complete Steps 1 through 3 for each door.

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/100
- General procedure for circuit card installation that you will supplement with the specific information in Chapters 7 through 9

NOTE:
In general, circuit cards are not preset at the factory. Use the information in Chapters 7 through 9 to set the 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/100 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.

- The tip/ring circuit card: Chapter 7, "Installing Tip/Ring Circuit Cards"
- Optional feature circuit cards: Chapter 8, "Installing Optional Feature Circuit Cards"
  - Multi-port asynchronous circuit card
  - ACCX (AYC22) circuit card
  - General Purpose Synchronous Controller circuit card
  - Ethernet LAN circuit card
- Standard MAP/100 circuit cards: Chapter 9, "Installing Standard MAP/100 Circuit Cards"
  - 486 Central Processing Unit (CPU) circuit card
  - SCSI Host Adapter Controller circuit card
  - Video Controller circuit card
  - Remote maintenance circuit card

Tip/Ring Circuit Cards

One or more tip/ring circuit cards are required for the MAP/100. This analog card ties the Lucent Intuity system into the telephone network. See Chapter 7, "Installing Tip/Ring Circuit Cards", for information about setting addresses and installing cards.

The tip/ring circuit card may be an AYC10, AYC29, or AYC30. The identity of the T/R circuit card varies with location. In general, all installations use the AYC10, except installations in Australia (AYC29) and in Europe and Japan (AYC30). This card is key to tying into the telephone network and handling calls.

The MAP/100 accommodates 11 T/R cards to provide up to 64 ports (network connections). The MAP/100 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/100.

Optional Circuit Cards for Selected Features

Use these circuit cards for optional features that are not application specific, that is, are not required for Lucent Intuity system. These optional cards include the:

- Multi-port (eight ports) serial card
  - — Supports DTE or DCE connections, such as terminals or modems
  - — Can install only one card
- GP (general purpose) synchronous controller or the DCIU circuit card
  - — Connects to Lucent switches via a X.25 link
  - — Can install only one card
- ACCX (AYC22) card
  - — Supports digital and analog remote connections via DCP and RS-232 links
  - — Offers two DCP ports per card, two or four channels depending on the switch
  - — Can install up to three cards
- Ethernet LAN card
  - — Connects to the customer's current LAN
  - — Can install only one card

Standard MAP/100 Circuit Cards

The standard MAP/100 circuit cards are required for basic platform functionality. The manufacturer always equips the MAP/100 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 50-pin SCSI 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 card: Manipulates data and processes instructions

General Procedure for Circuit Card Installation

Follow the *general* procedure below to install any Lucent Intuity, optional feature, or standard MAP/100 circuit card. See Chapters 7 through 9 for *specific* switch and jumper settings and cable connections for the particular type of card you are installing.

NOTE:
Use the information in Chapters 7 through 9 to set or verify the switch and jumper settings (resource options) *before* you install the card.

When to Perform This Procedure

You will have to install a MAP/100 circuit card if you

- Are assembling and installing the MAP/100 yourself rather than receiving a system that has been factory assembled (that is, if you are not installing an ALT system)
- Must replace or verify an existing circuit card
- Are adding a new feature that requires a new circuit card

Where to Install MAP/100 Circuit Cards

The MAP/100 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/100.

Before You Begin

- Use the information in Chapters 7 through 9 to set the switch and jumper settings (resource options).
- If you are installing a *new* circuit card, you must refer to Chapter 4, "Configuring the System", to determine which circuit cards your system can accommodate and where you must locate them.

  NOTE:
  If you are *replacing* a card rather than adding one, you do not have to refer to configuration rules in Chapter 4. Be sure that you set the 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 Chapters 7 through 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 Chapter 4, "Configuring the System" for configuration information. 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. Perform a shutdown of the operating system and turn off power to the MAP/100. See "Shutting Down the MAP/100" on page 5-2 in Chapter 5, “Getting Inside the Computer,” for the procedure.
4. After shutting down the software system, turn off the front panel power switch and the circuit breaker in the rear.
5. Tag the power plugs with a note indicating that no one other than you should reconnect power to this equipment.
6. Remove the dress covers and open the card cage. See Chapter 5, "Getting Inside the Computer" for more information.
7. 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.

8. 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
9. 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.
10. 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.

11. 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 (Chapters 7 through 9) for additional information on cabling and connections specific to the type of card you are installing.

12. Replace the retaining screw by placing it through the card faceplate opening that is similar to the cover plate you previously removed.
13. 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 Computer", for more information.
14. Power up the MAP/100.

Installing Tip/Ring Circuit Cards

7

What's in This Chapter

This chapter describes how to install the tip/ring (T/R) circuit card. The T/R circuit card may be an AYC10, AYC29, or AYC30. Up to 11 T/R circuit cards may be installed. Switch settings change for each installed card.

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

NOTE:
In general, circuit cards are not preset at the factory. You must 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 (AYC10 and AYC29)

Set the switch settings (resource options prior to installing each T/R AYC10 or AYC29 circuit card. Refer to the figures below.

Setting the Resource Options

One switch bank is located on each T/R circuit card. Refer to Figure 7-1 for an illustration of the T/R card and the switch location on the card. Use Figure 7-2 to set the switches. “T/R 0” is the first T/R circuit card installed.

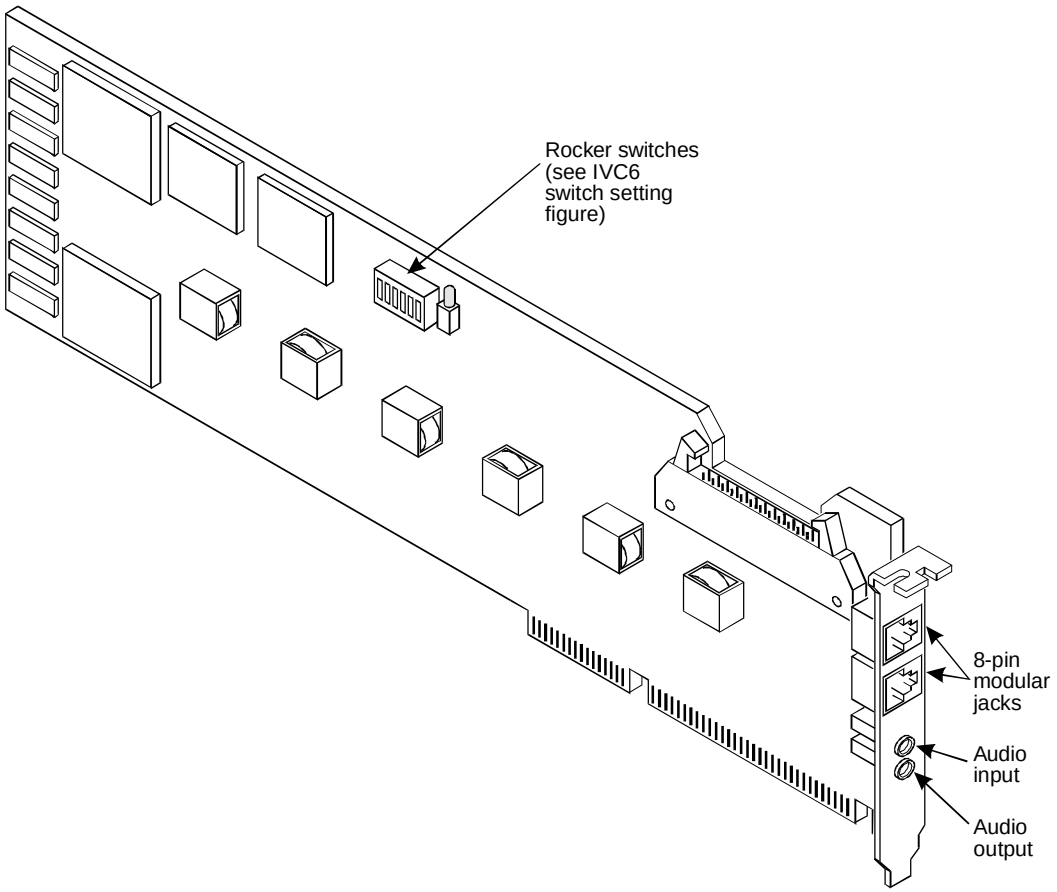


Figure 7-1. AYC10 and AYC29 Tip/Ring Circuit Card and Switch Location

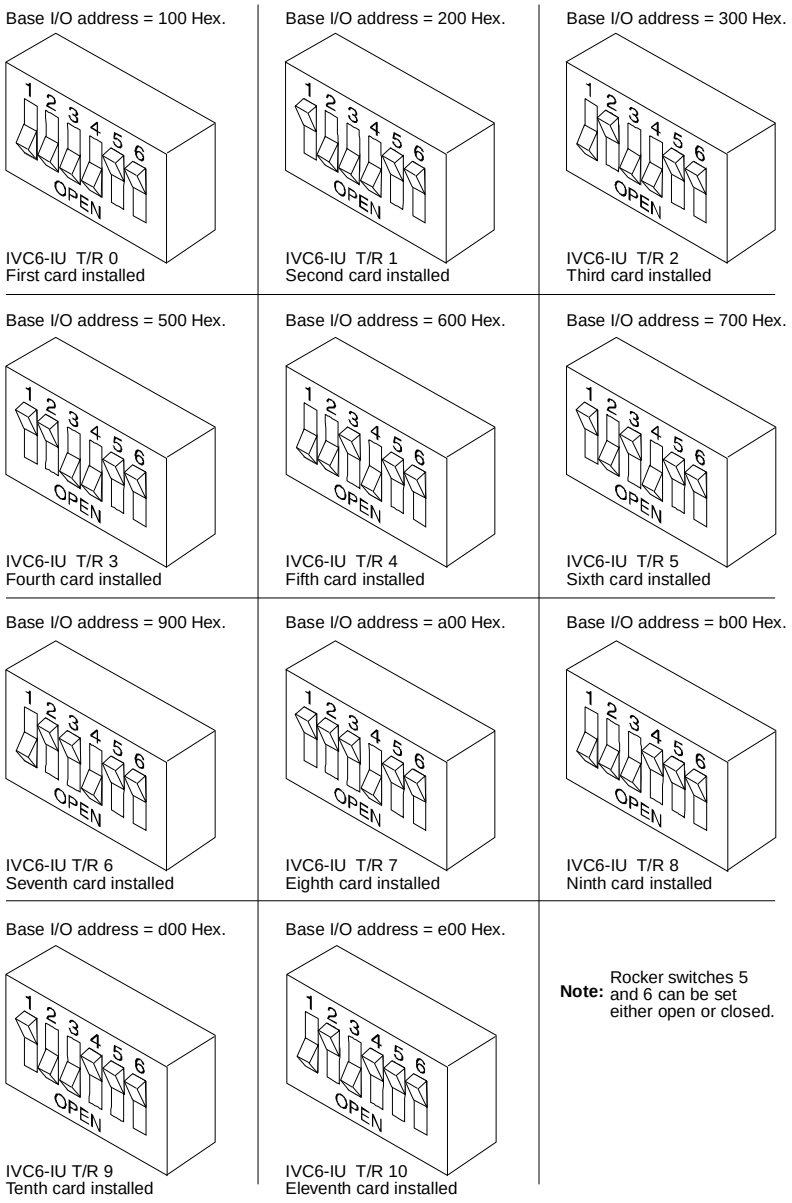


Figure 7-2. AYC10 and AYC29 Tip/Ring Switch Settings

Placing the T/R Card in the MAP/100

After you set the resource options, follow the "General Procedure for Circuit Card Installation" in Chapter 6, "Installing Circuit Cards — Introduction and Types", to place the card in the MAP/100. Use pinout and cable information found in Chapter 1, "Preparing the Site".

Installing a Tip/Ring Circuit Card: AYC30

Set the switch settings (resource options) prior to installing each T/R AYC30 circuit card. Refer to the figures on the following pages.

CAUTION:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

Setting the Resource Options

One switch is located on each T/R circuit card. Refer to Figure 7-3 for an illustration of the T/R card and the switch location on the card. Use Figure 7-4 to set the switches. "T/R 0" denotes the first T/R circuit card installed.

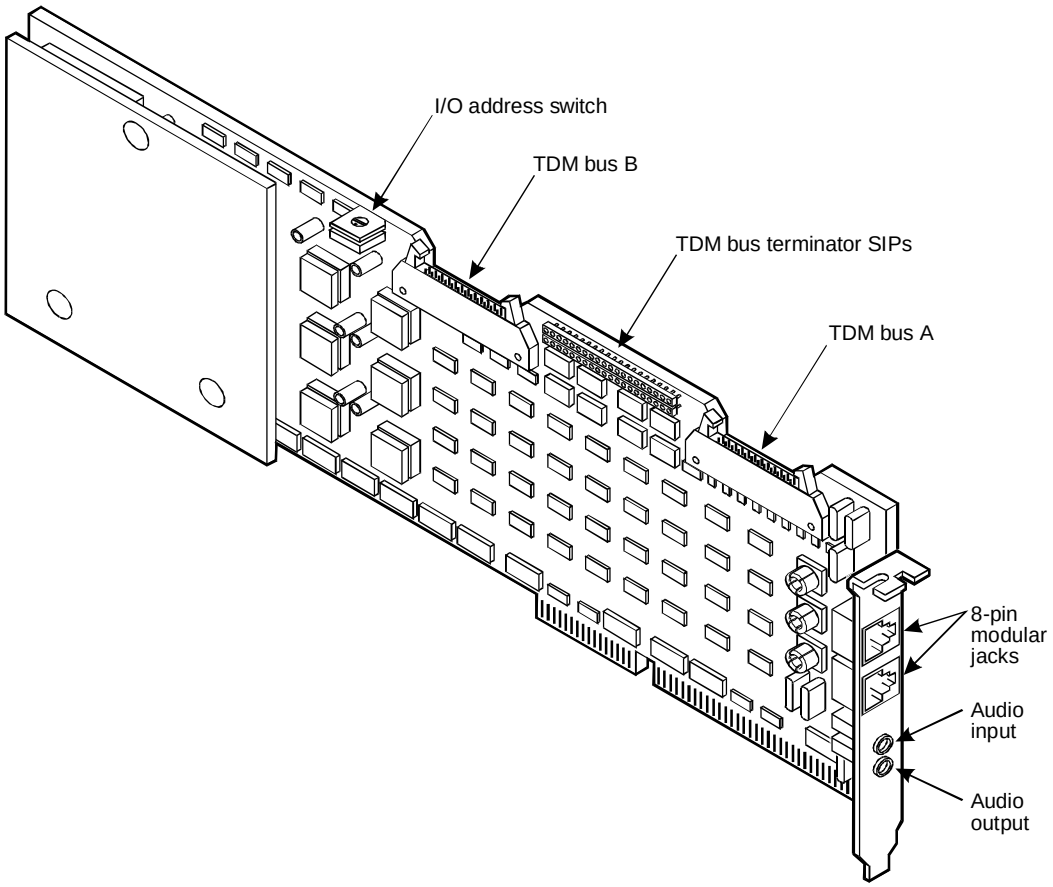


Figure 7-3. AYC30 Tip/Ring Card

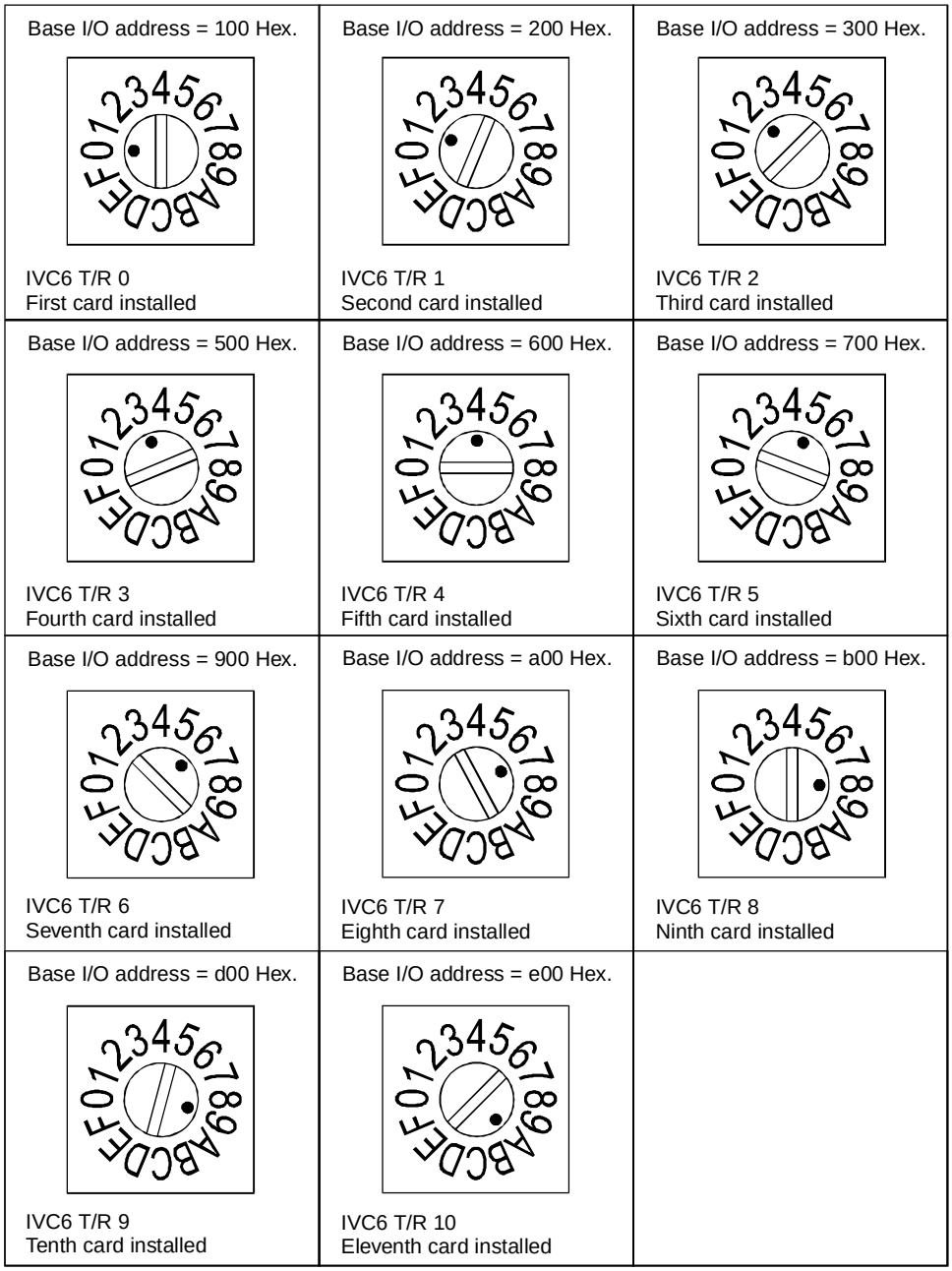


Figure 7-4. AYC30 Tip/Ring Switch Settings

Placing the Tip/Ring Card in the MAP/100

After you set the resource options, follow the "General Procedure for Circuit Card Installation" in Chapter 6, "Installing Circuit Cards — Introduction and Types", to place the card in the MAP/100. Use pinout and cable information found in Chapter 1, "Preparing the Site".

Installing Optional Feature Circuit Cards

8

What's in This Chapter

This chapter details the optional feature circuit cards. Included for each card is an illustration of the card and illustrations of any jumper and switch settings. Refer to Chapter 4, "Configuring the System", if you need to determine into which slot a card should be installed.

The optional feature cards include:

- Multi-port serial - asynchronous connections
- ACCX (AYC22) - networking
- General Purpose Synchronous Controller - AT/E (X.25 switch integration) or DCIU
- Ethernet LAN - TCP/IP connections

Installing a Multi-Port Serial Card

The multi-port serial card provides eight ports. Each port is a 6-wire, RJ-11 modular jack. Adapters convert the modular jacks to RS-232 connectors. Use one adapter for each device to be connected. All eight ports can be used for modem, or 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 multi-port serial card to make asynchronous connections.

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

Only one multi-port serial card can be installed in the MAP/100. Follow the steps under "General Procedure for Circuit Card Installation" on page 6-4 referring below for specific information about the multi-port serial card.

Setting the Resource Options

The multi-port serial card is shown in Figure 8-1. Verify that no jumpers are set on this card.

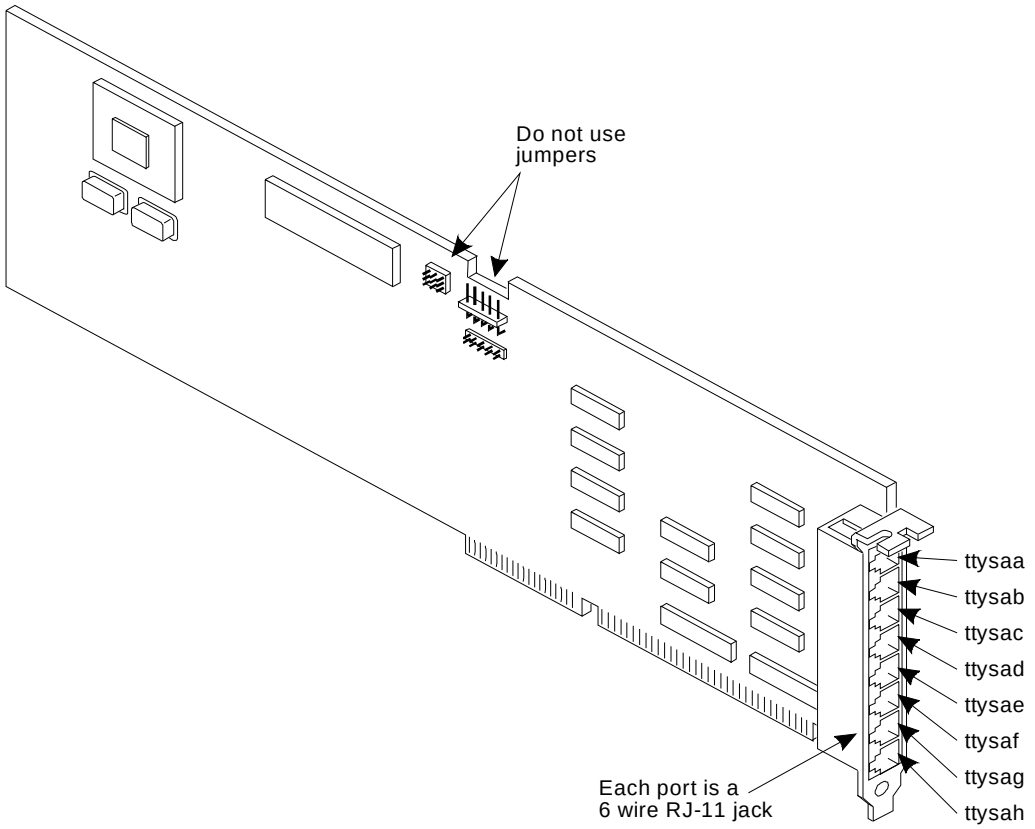


Figure 8-1. Multi-Port Serial Card

Installing an ACCX (AYC22) Card

Each ACCX card has two serial connectors: DCP and RS-232. Four channels exist per card, all of which can be DCP and/or RS-232 connections. Or, two can be DCP and two can be RS-232.

The ACCX card has a 78 pin, D-Sub connector attached to the card. This connector attaches to a cable that leads to a breakout box. From there the connector is broken into the RS-232 connections (25 pin connector) and the DCP connections (50 pin connector). The break-out box can either be mounted on the wall or set on the floor.

Refer to Chapter 1, "Preparing the Site", and Appendix B, "Cable Connectivity", for additional information on how to cable the ACCX card.

⚠ WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

Follow the steps under "General Procedure for Circuit Card Installation" on page 6-4 referring to the information below for switch and jumper settings.

Setting the Resource Options

Figure 8-2 shows the ACCX networking card. A maximum of three ACCX cards can be used in the MAP/100. Refer to Chapter 4, "Configuring the System", for correct slot assignments if adding new cards to the platform. Figure 8-3 shows the dip switch settings for each of the three cards. Each ACCX card includes 8 dip switches labeled SA4 through SA11 which are used to set the address of each card.

Each card installed requires different switch settings.

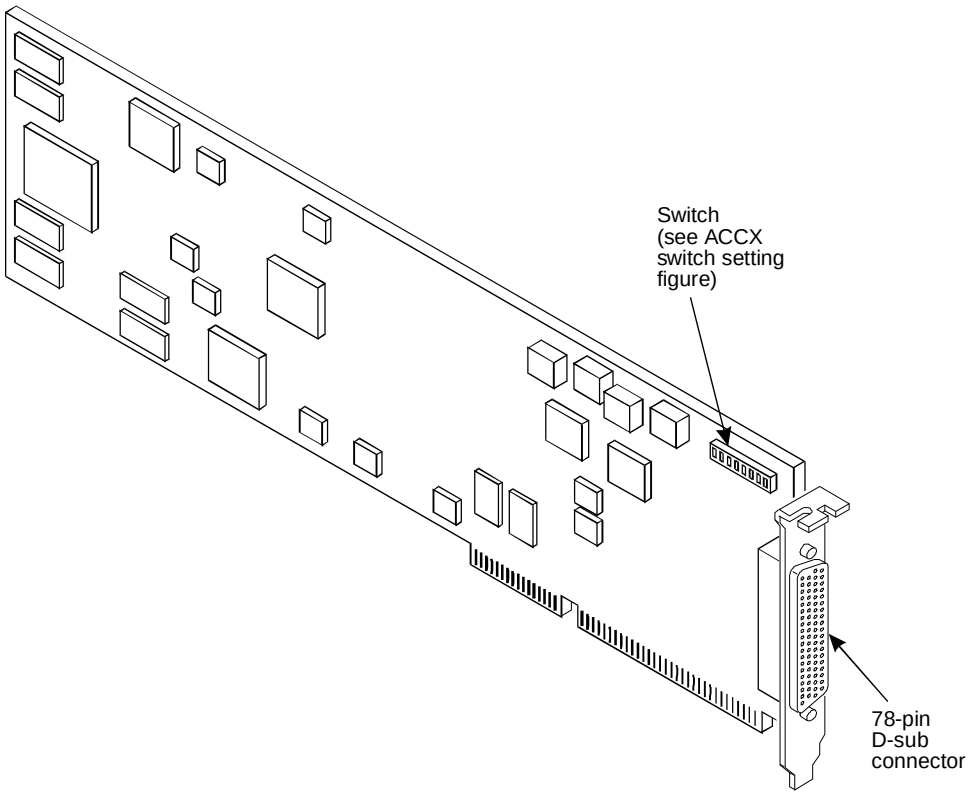


Figure 8-2. ACCX Networking Card

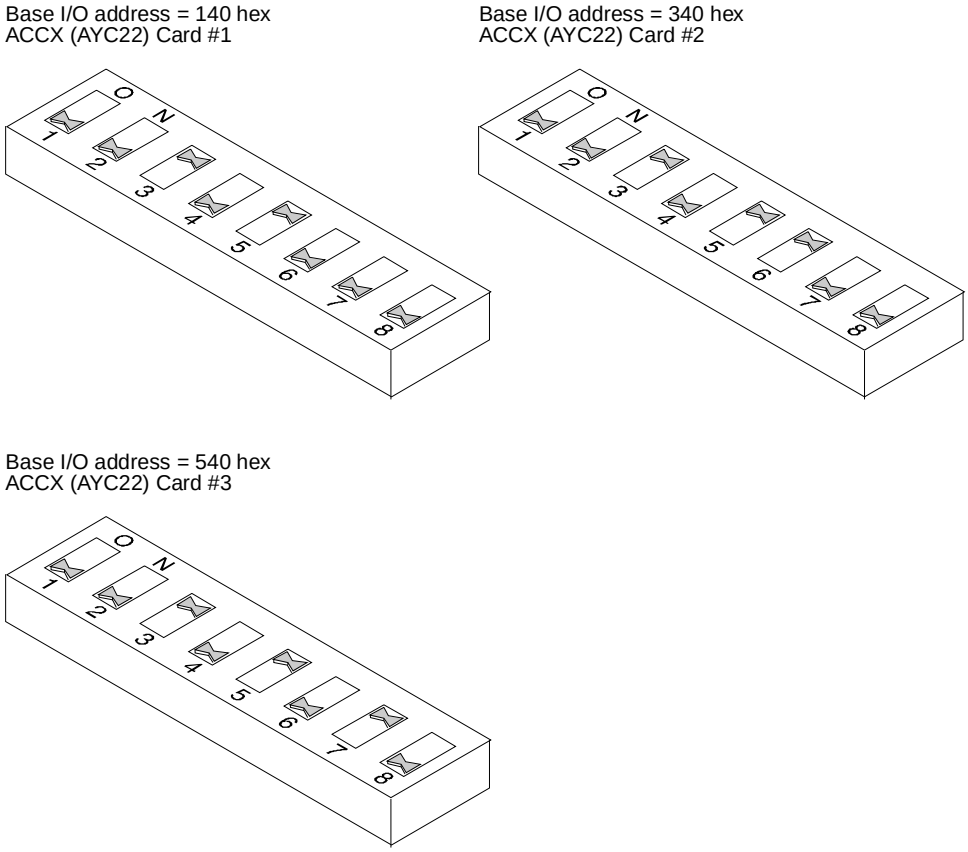


Figure 8-3. Switch Settings for the ACCX Networking Card

Installing a General Purpose Synchronous Controller – AT/E

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

Only one General Purpose Synchronous (GP Synch card can be installed in the platform.

Follow the steps under Chapter 6, "Installing Circuit Cards — Introduction and Types", referring to the information below for switch and jumper settings.

Setting the Resource Options

See Figure 8-4 on the next page for an illustration of the GP Synch card and jumper locations.

Refer to Figure 8-5 for jumper settings.

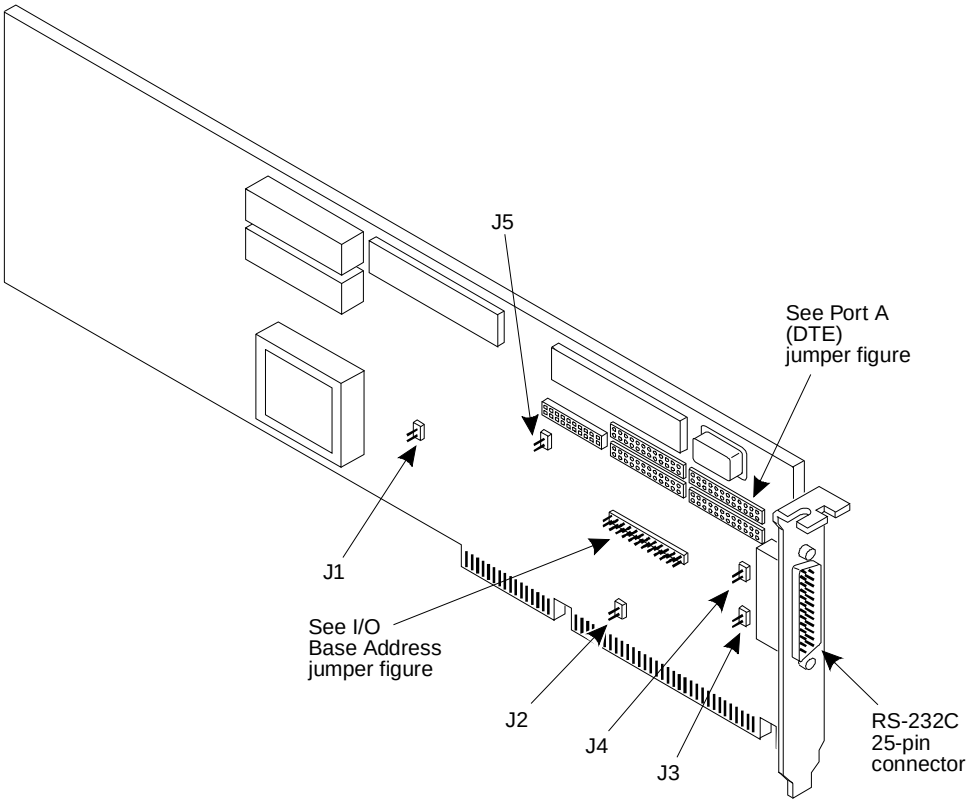


Figure 8-4. GP Synch card with Jumper Locations

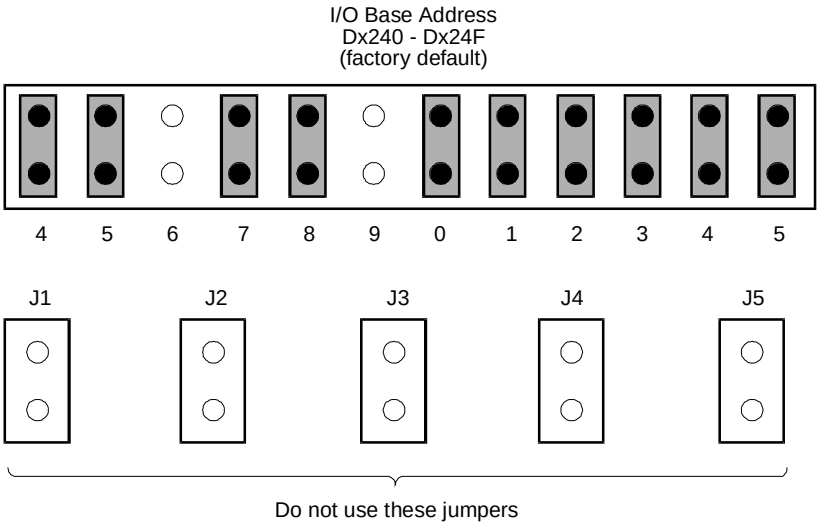


Figure 8-5. GP Synch Card Jumper Settings

Port A jumpers on the GP Synch card require a different type of strap in order to set the jumpers. See the figure below to set these jumpers.

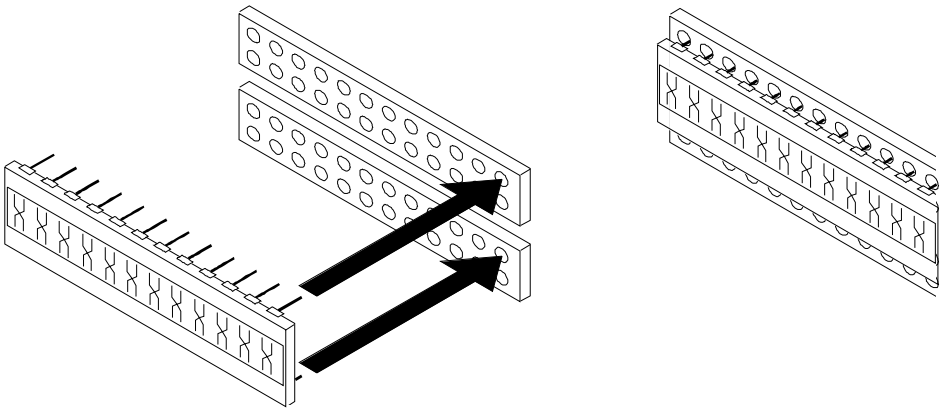


Figure 8-6. How to Set the Port A Jumpers on the GP Synch Card

Installing a DCIU Circuit Card

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

You can have only one DCIU circuit card in a MAP/100. Follow the steps in Chapter 6, "General Steps for Circuit Card Installation," referring to the information below for switch and jumper settings.

NOTE:
Your system may interface with the link through this card or through the GP-Synch circuit card. See "Installing a General Purpose Synchronous Controller – AT/E" on page 8-7 for information about the GP Synch circuit card.

Setting the Resource Options

The DCIU circuit card connects to Lucent Technologies switches through a X.25 link. Figure 8-7 shows the DCIU circuit card. The DCIU circuit card contains no jumpers or switches that you must set before you install the circuit card.

The DCIU circuit card has a female connector. Verify that the circuit card has a gender changer (comcode 406783613).

NOTE:
If you are replacing a GPSYNCH circuit card with a DCIU circuit card, you will be required to make software changes. For additional information, see the replacement instructions (107857328) included in the replacement kit (601824956, ED5P905-70 Group 4).

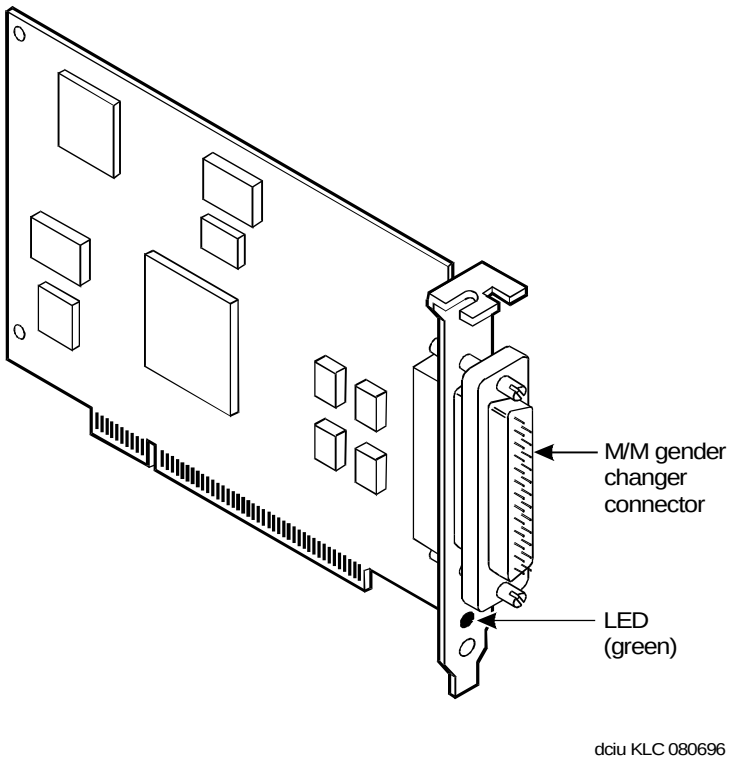


Figure 8-7. DCIU Circuit Card

Ethernet LAN Interface Card

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

Only one LAN card can be installed in the platform. See Chapter 4, "Configuring the System", to determine slot location if this information has not been provided by your project manager. See the figure on the next page for jumper setting location.

The LAN card may be either Version 1 or Version 2. Match the circuit card to the drawing. Version 1 requires that resource options be set. Version 2 does not have any jumpers or switches.

CAUTION:
*Do **NOT** cable the LAN card until after the system has been powered up and TCP/IP administration has been completed. Doing so may disrupt the customer's LAN. Refer to the* Intuity Software Installation for Release 3.0*, 585-310-160.*

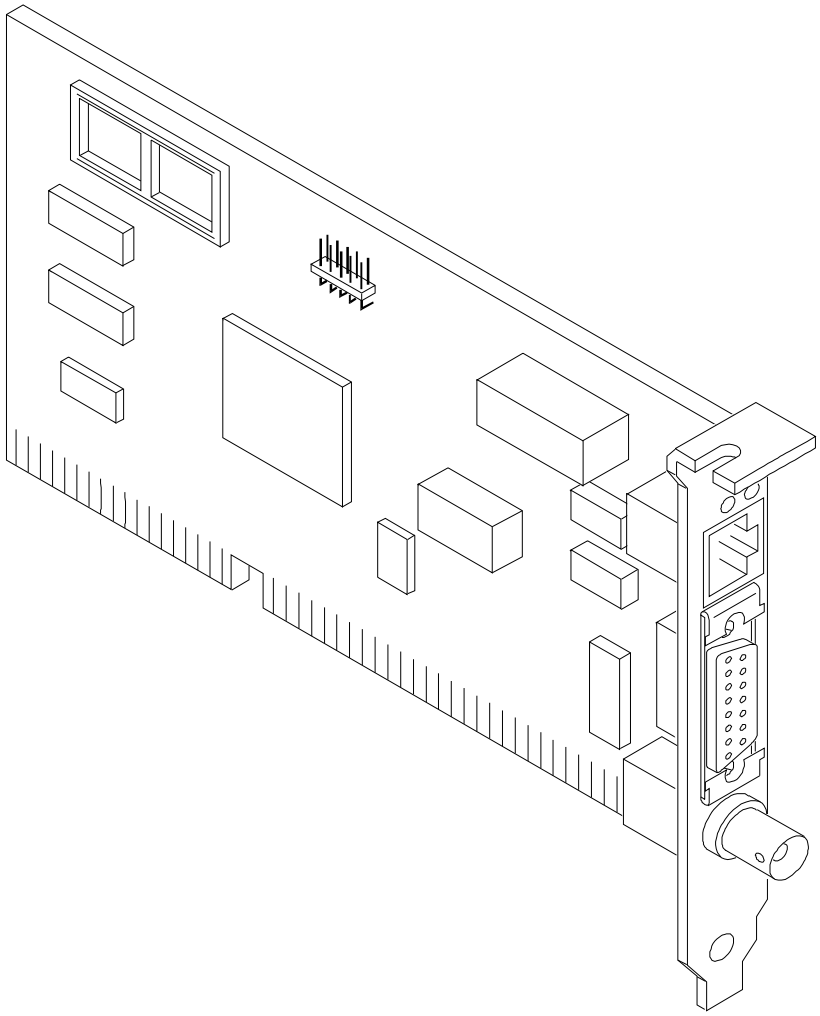


Figure 8-8. The Ethernet LAN Interface Card Version 1 with Jumper Location

Setting the Resource Options: Version 1

Switches

There are no switches to set on the LAN card.

Jumpers

The LAN card has one jumper, W1, to set the I/O base address, IRQ channel, and RAM base address. See Figure 8-8 for the location of W1. The jumper should already be located on jumper 1.

The Lucent Intuity software configuration is as follows:

- IRQ - 10
- I/O base address - 280
- RAM base address - C8000

The jumper default setting for W1 is "1," which configures the card to be software programmable beginning at the default settings. Figure 8-9 illustrates the placement of the jumper.

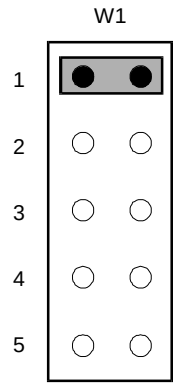


Figure 8-9. LAN Card Software Programmable Jumper Setting

Setting the Resource Options: Version 2

Version 2 does not require that any jumpers or switches be set. Refer to the Figure 8-10 below to verify that you are instating Version 2.

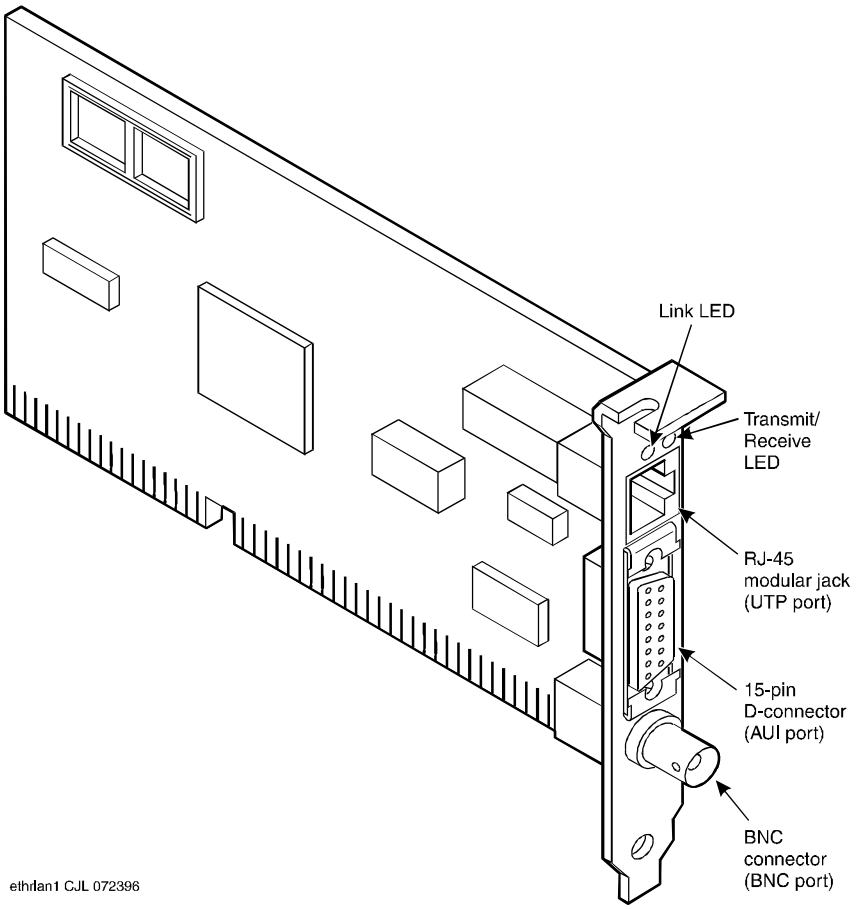


Figure 8-10. The Ethernet LAN Interface Card Version 2 with Jumper Location

Placing the LAN Card in the MAP/100

After you set the resource options, see the procedure "General Procedure for Circuit Card Installation" on page 6-4 in Chapter 6, “Installing Circuit Cards — Introduction and Types,” to install the LAN card in the MAP/100.

Cabling

Do NOT cable the LAN before powering up. You must do the following in order to cable the LAN.

- Install the card
- Power up the system
- Administer the TCP/IP
- Power down the system
- Cable the LAN
- Power up the system

Use the *Intuity Software Installation for Release 3.0*, 585-310-160, guide to administer the TCP/IP and power down the system.

Installing Standard MAP/100 Circuit Cards

9

What's in This Chapter

This chapter details the standard MAP/100 circuit cards. The manufacturer provides the MAP/100 cards in every unit shipped. Refer to this chapter if you need to replace a card. If you need to replace a memory SIMM on the 486 CPU card, refer to Chapter 10, "Installing Optional Hardware".

Standard MAP/100 circuit cards include:

- 486 Central Processing Unit (CPU) circuit card
- SCSI controller card
- Video controller card

Installing the 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. The 486 supports four 16 MB SIMMs which are located in four sockets on the left side of the card.

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

To install the 486 CPU:complete the following:

- Verify switch settings
- Refer to "General Procedure for Circuit Card Installation" on page 6-4 in Chapter 6, "Circuit Cards - Introduction and Types
- Follow specific steps for the 486 CPU installation
- Connect keyboard and serial port ribbon cables
- Complete 486 setup as described in Chapter 3, "Connecting Peripherals and Powering Up"

There are two revisions to the 486 CPU circuit card. Use the illustrations in the following sections to determine which revision you are working with and set the resource options accordingly. The procedures for placing the card in the platform and making header connections for keyboard and serial ports are the same for either card.

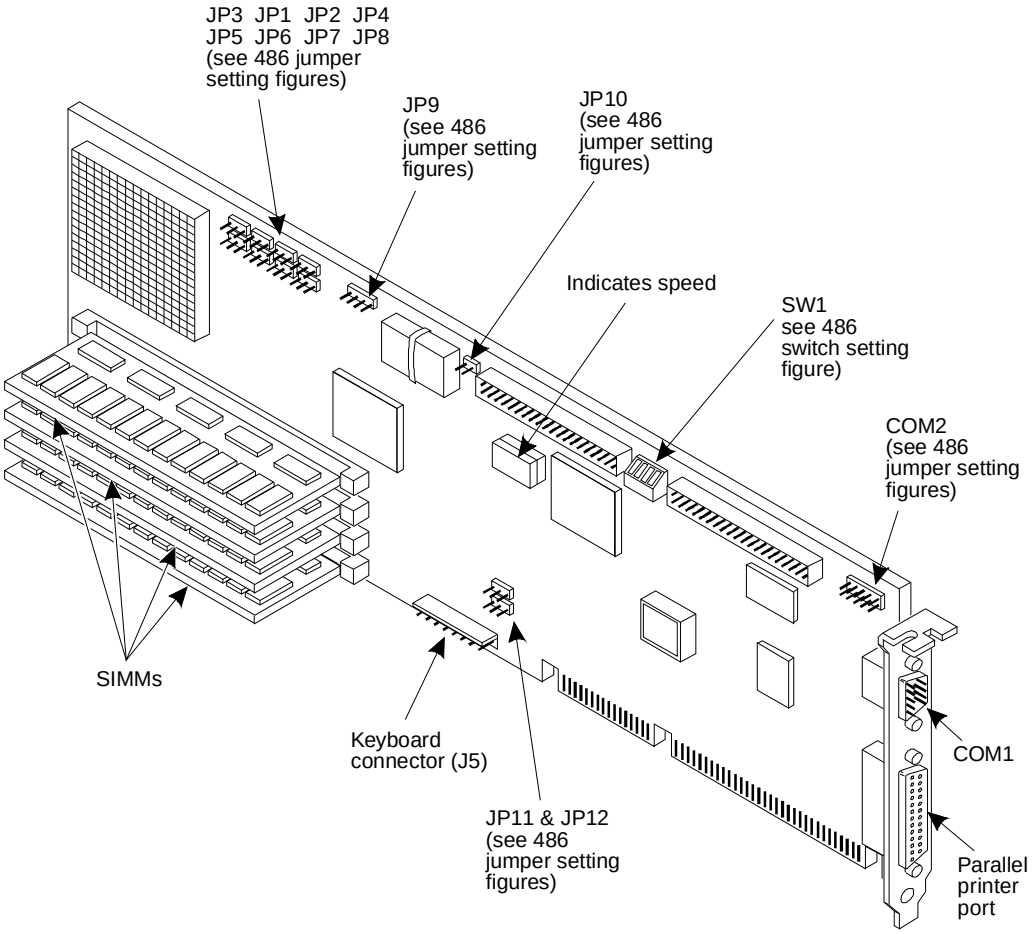


Figure 9-1. 486 CPU Circuit Card and Jumper Locations, Revision 1

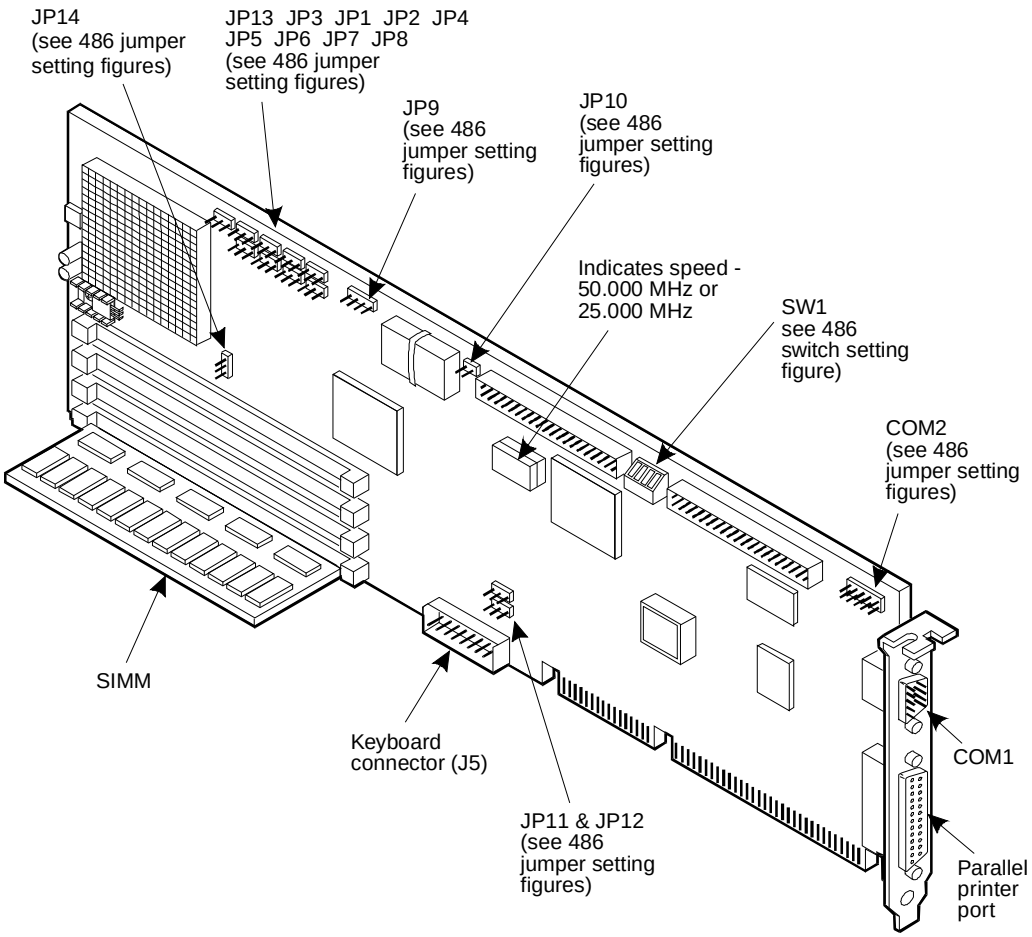


Figure 9-2. 486 CPU Circuit Card and Jumper Locations, Revision 2

Verifying Jumpers on the 486 CPU

Jumpers on the 486 CPU circuit card, Revision 1, should be set as indicated in the figure below.

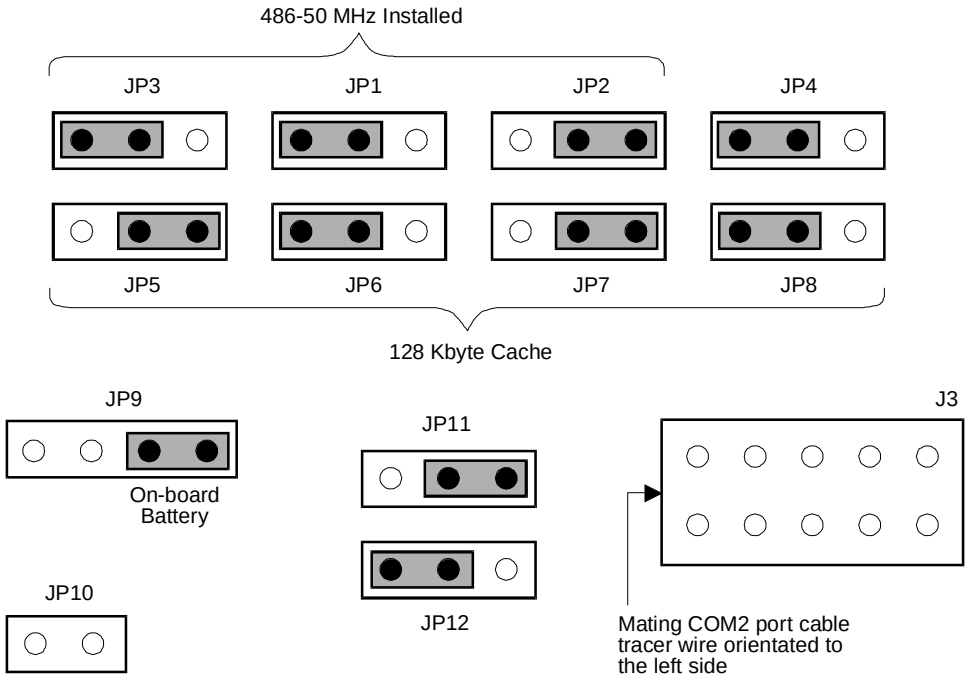


Figure 9-3. Jumper Settings for the 486 50MHz CPU Card, Revision 1

Jumpers on the 486 CPU circuit card, Revision 2, should be set as indicated in Figure 9-4 on page 9-6.

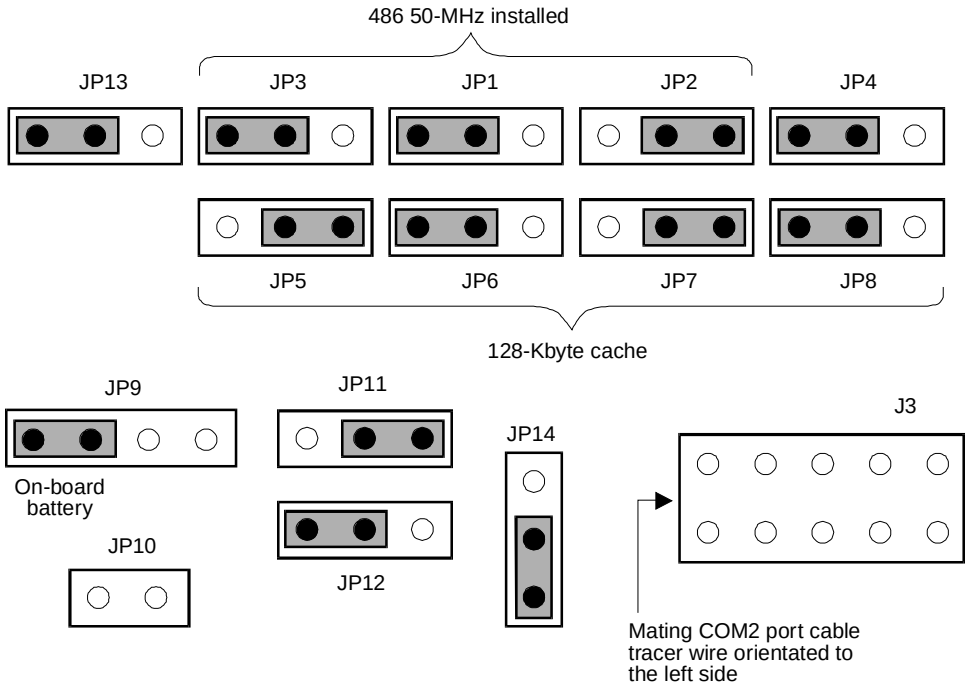


Figure 9-4. Jumper Settings for the 486 50MHz CPU Card, Revision 2

Verifying Switch Settings on the 486 CPU

Switches are set by the manufacturer. Use the figure below to verify correct switch settings on the 486.

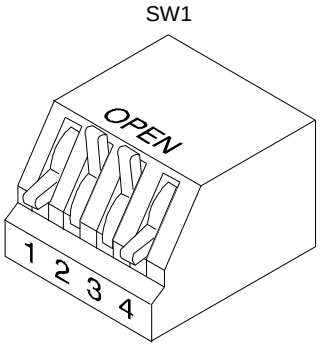


Figure 9-5. Switch Settings for the 486 CPU Card

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 the CPU card is installed.

The header connector numbers are written on the circuit card on the right side of the pin connectors. The header connectors are numbered as follows:

- COM1 - J4 - keyed for connection
- COM2 - J3 - use red tracer for connection

  The red tracer on the cable is a very faint red. Be sure that the red tracer is on the right side of the cable when you make the connection. The arrow (pointing down) on the connector should be facing toward the inside of the unit when you make the cable connection.
- Keyboard - J5 - keyed for connection
- Parallel port - J6 - keyed for connection

NOTE:
The top two pin connectors on the card which are labeled for the hard disk and the floppy controller are not used on the CPU card. Make these connections to the SCSI controller card.

Installing the 486 CPU Card

1. Align the red marker on the keyboard cable with pin 1 on the keyboard connector in the bottom center of the card.

   The keyboard cable is keyed.

2. After pre-folding 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 connector at the top far right of the card.

   CAUTION:
   The red tracer on the cable is a very faint red. Be sure that the red tracer is on the right side of the cable when you make the connection. The arrow (pointing down) on the connector should be facing toward the inside of the unit when you connect the cable.

4. After pre-folding the cable, neatly dress the excess down against the CPU card and press the connector into place.

5. Ensure the two cables that are part of the CPU circuit card are pressed firmly against the card.

   The adjacent video card can easily pull out the cables when it is removed if the cables are not pressed firmly against the CPU circuit card.

6. Align the face plate and edge of the circuit card with the circuit card guide and the backplane slot position.

   The card is now over the expansion slot.

7. Lower the card until it touches the slot.

8. 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.

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

10. You have completed this procedure.

Installing the SCSI Controller Card

The SCSI controller card controls the hard drives, the floppy disk drive, the cartridge tape drive, as well as the SCSI Bus LED front chassis panel indicators for these drives. The information outlined in this section describes the card for use with up to seven SCSI devices: 6 hard disk drives and one cartridge tape drive. This card also controls the floppy disk drive, though this drive is not a SCSI device.

⚠ WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

This card must be used if you are installing a SCSI hard disk. Do NOT use the instructions shipped by the manufacturer with the card. Use the procedure below to install this circuit card.

1. Orient the card as shown in the next figure.
2. Verify that the three terminating resistor SIPS are installed.

   The first and last physical SCSI peripheral devices on the SCSI cable must have terminators installed. All other SCSI devices must have terminators removed.

   The SCSI card is always the first device and the tape drive is always the last device connected. The hard drives are always connected in the middle of the cable.
3. Set the jumpers using the proper settings as shown in the next figure. Refer to Table 9-1 on Page 9-12 for a summary of the jumper settings.
4. Follow the steps under "General Procedure for Circuit Card Installation" on page 6-4 in Chapter 6, "Circuit Cards - Introduction and Types."
5. Locate the SCSI cable coming from the hard drive.
6. With cable in hand, notice that there is a single connector located approximately 12 inches (30.5 centimeters) from the next nearest connector.
7. Attach this connector to the SCSI controller card.
8. Dress the cable neatly down the side and rear of the power supply.
9. With the floppy drive cable in hand, route it similarly.

   Note at the SCSI controller end, the SCSI cable should be under the floppy cable for best routing.
10. Connect the disk activity cable to the SCSI controller card to the two populated receptacles, of the four, toward the short end of the card.
11. You have completed this procedure.

WARNING:
The external I/O connector of the SCSI controller card is equipped with a protective cover and should not be removed.

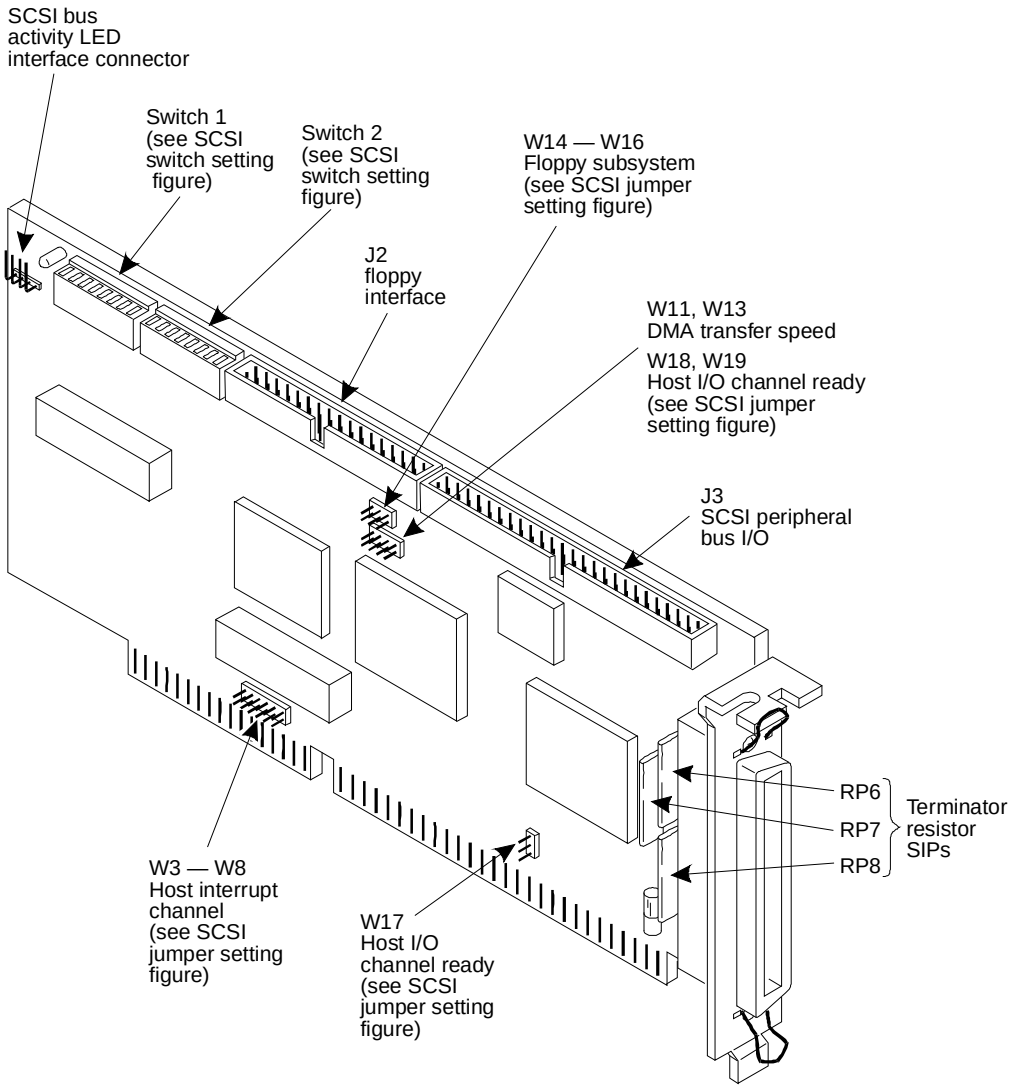


Figure 9-6. SCSI Controller Card with Switch and Jumper Locations

Jumper Settings for the SCSI Controller Card

The correct jumper settings for the SCSI controller card are shown below. Refer to the previous figure for jumper locations. Refer to the following table for a summary of the jumper settings. The proper jumper settings are displayed in the table in bold italics.

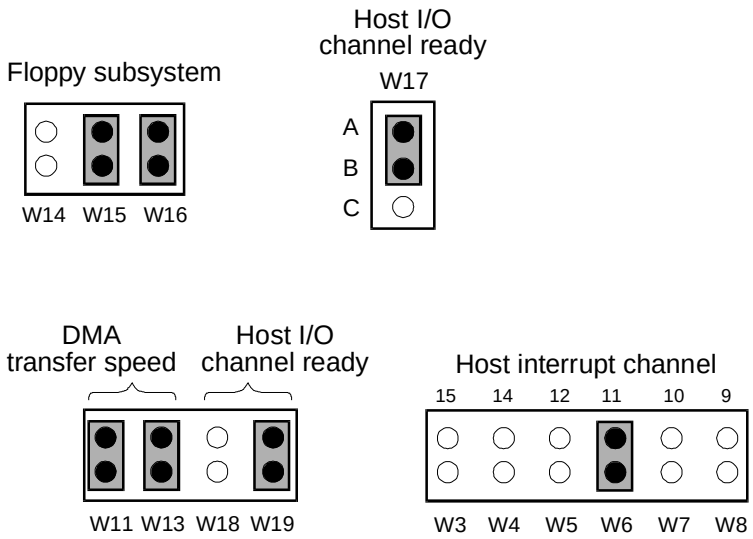


Figure 9-7. SCSI Controller Card Jumper Settings

Table 9-1. Summary of Jumper Settings for the SCSI Host Adapter 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.

SCSI Controller Card Switch Settings

The proper switch settings for the SCSI controller card are shown below.

Refer to the next table for a summary of the switch setting functions, with the proper switch settings displayed in bold italics.

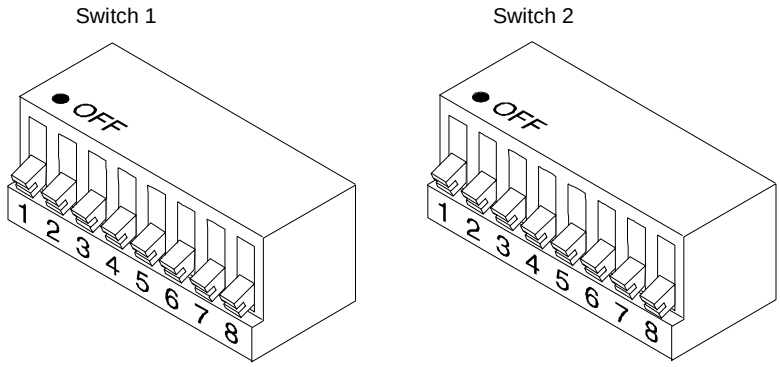


Figure 9-8. SCSI Controller Card Switch Settings

Table 9-2. SCSI Controller Card Switch Setting Functions

FUNCTION	SWITCH BAY	SWITCH #	OUTPUT RESULT
Host Adapter SCSI ID	1	1,2,3 = 000 1,2,3 = 100 1,2,3 = 010 1,2,3 = 110 1,2,3 = 001 1,2,3 = 101 1,2,3 = 011 ***1,2,3 = 111***	0 1 2 3 4 5 6 ***7, Default***
SCSI Parity	1	4 = 0 ***4 = 1***	Disable ***Enable, Default***
Disk	1	5 = 0 ***5 = 1***	Enable ***Disable, Default***
Adapter Initiate Synchronous Negotiation	1	6 = 0 ***6 = 1***	Enable ***Disable, Default***
Host DMA Channel	1	7,8 = 00 7,8 = 10 7,8 = 01 ***7,8 = 11***	Disable 7 6 ***5, Default***
Host I/O Port Address	2	1,2,3 = 000 1,2,3 = 100 1,2,3 = 010 1,2,3 = 110 1,2,3 = 001 1,2,3 = 101 1,2,3 = 011 ***1,2,3 = 111***	Reserved 134H-137H 234H-237H 334H-337H Reserved 130H-133H 230H-233H ***330H-333H, Default***
Host BIOS (16K Byte Address)	2	4,5 = 00 4,5 = 10 4,5 = 01 ***4,5 = 11***	0C8000H Disable 0D8000H ***0DC000H, Default***
Host Interrupt Request	2	6,7,8 = 000 6,7,8 = 100 6,7,8 = 010 6,7,8 = 110 6,7,8 = 001 6,7,8 = 101 6,7,8 = 011 ***6,7,8 = 111***	Reserved Reserved 15 14 12 9 10 ***11, Default***

Note: 0 represents off; 1 represent on. Recommended settings are bold.

Installing a Video Controller Card

The MAP/100 support several different video card. For all video controller cards:

1. Attach a ground wrist strap and connect to an appropriate ground.
2. Remove the card from its shipping carton, saving the carton and packing materials should the card need to be returned.
3. Match the card to one of the drawings below.
4. Set the resource options.

CAUTION:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

Video Controller Card Version 1

The Version 1 video controller card can be one of three versions:

- Comcode 407356955
- Comcode 406365809
- Comcode 406901884.

Differences are in the jumper settings. Switch settings are the same. Refer to the figure below.

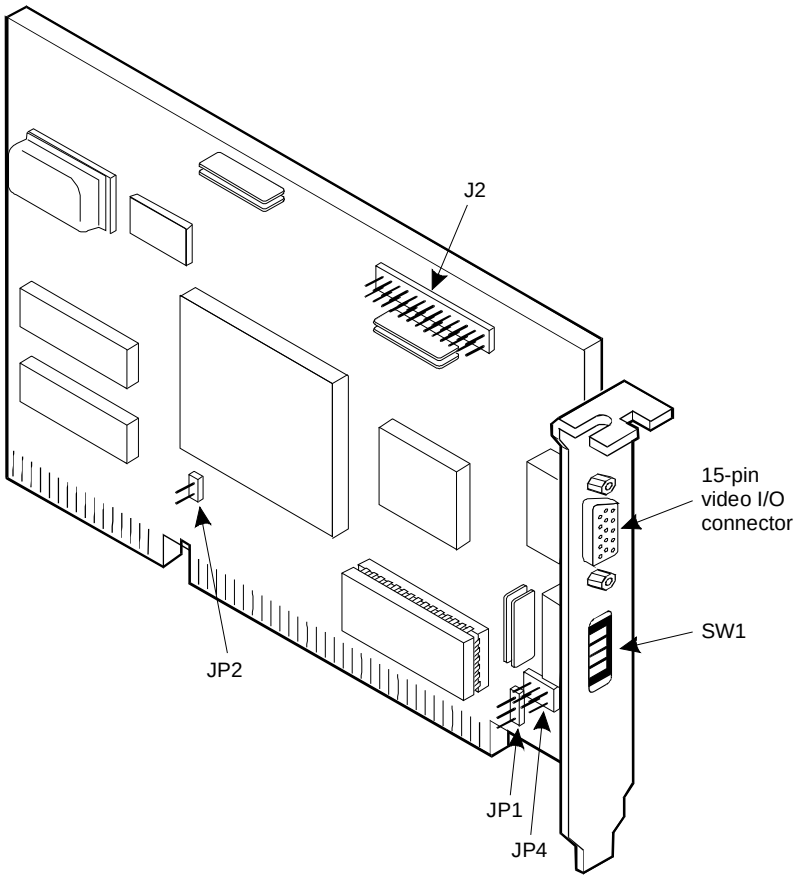


Figure 9-9. Video Controller Card WDXR833124 (comcode: 407356955) with Jumper and Switch Locations

Set the Resource Options: Version 1

Complete the following procedures to set option switches and jumpers on the circuit card.

1. Set the dip switch on the card faceplate as indicated in the following figure, Figure 9-10.

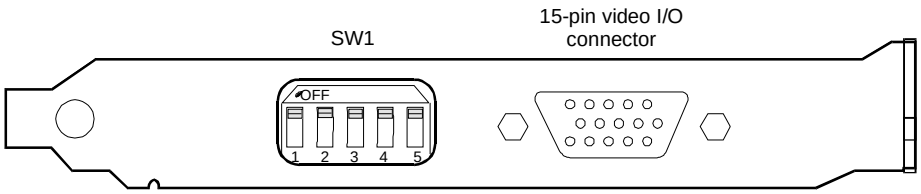


Figure 9-10. Video Card Switch Settings on the Card Faceplate: Version 1

All dip switches should be set to the off position and all the switches should be pointed upward. Use the point of a pen or similar instrument to set the switches. Do NOT use a lead pencil. The graphite can damage the card.

These switches control the monitor's mode and vertical and horizontal retrace/scan rate.

2. Set the jumpers.

   For video controller cards with comcodes 406365809 or 406901884:

   Remove jumper JP3. The JP4 jumper enables the address latch and should be pre-installed on pins 1 and 2. Note that pin1 is on the left side of the jumper.

   For the video controller card comcode 407356955, set the jumpers as shown in Figure 9-11.

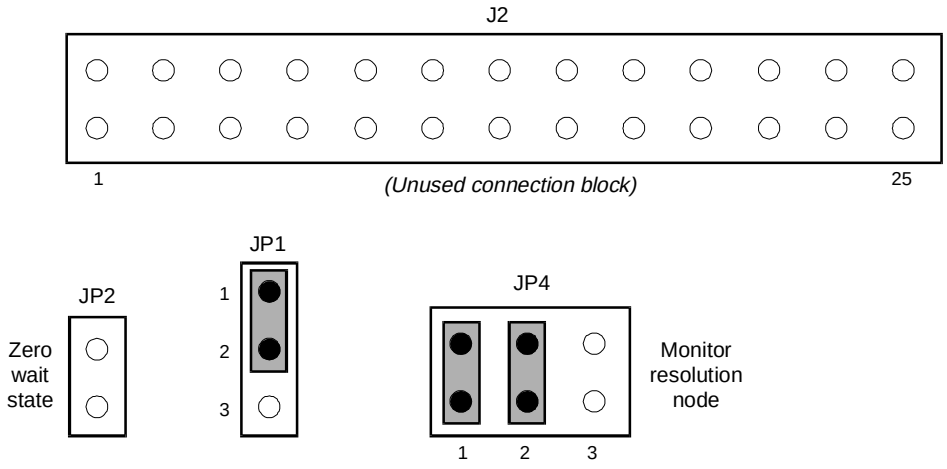


Figure 9-11. Video Card Jumper Settings: Version 1

Video Controller Card: Version 2

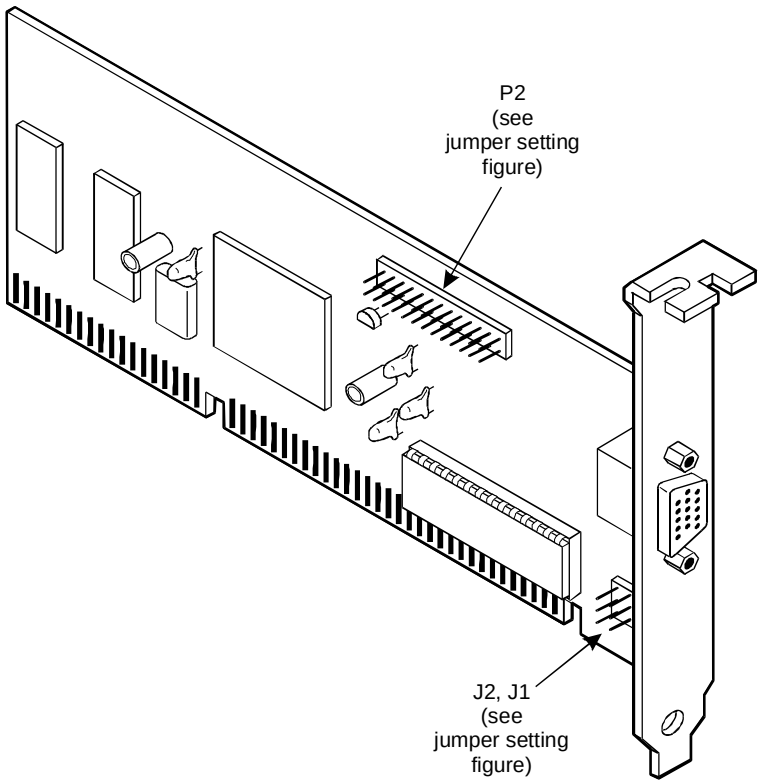


Figure 9-12. Video Controller Circuit Card: Version 2

Set the Resource Options: Version 2

Set the jumper. Match the jumper settings to Figure 9-13.

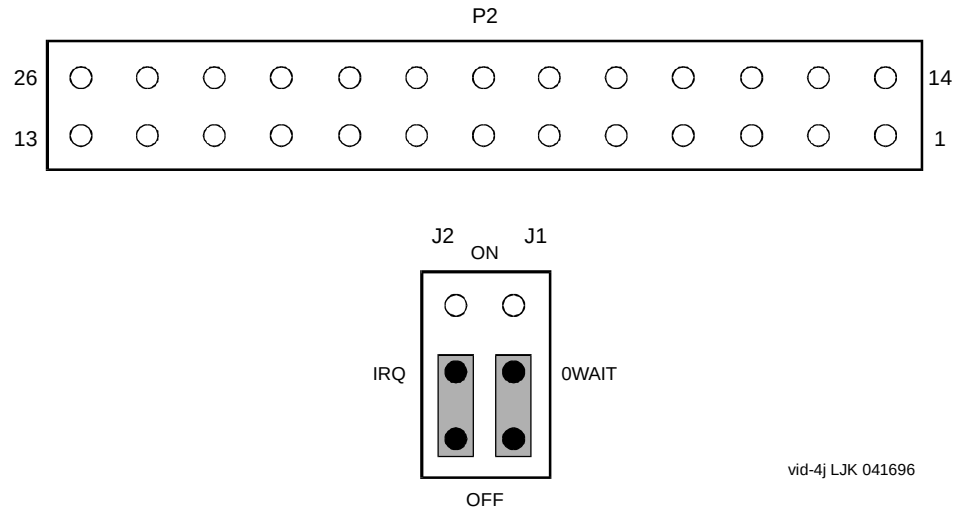


Figure 9-13. Video Controller Circuit Card Jumper Settings: Version 2

Video Controller Card: Version 3

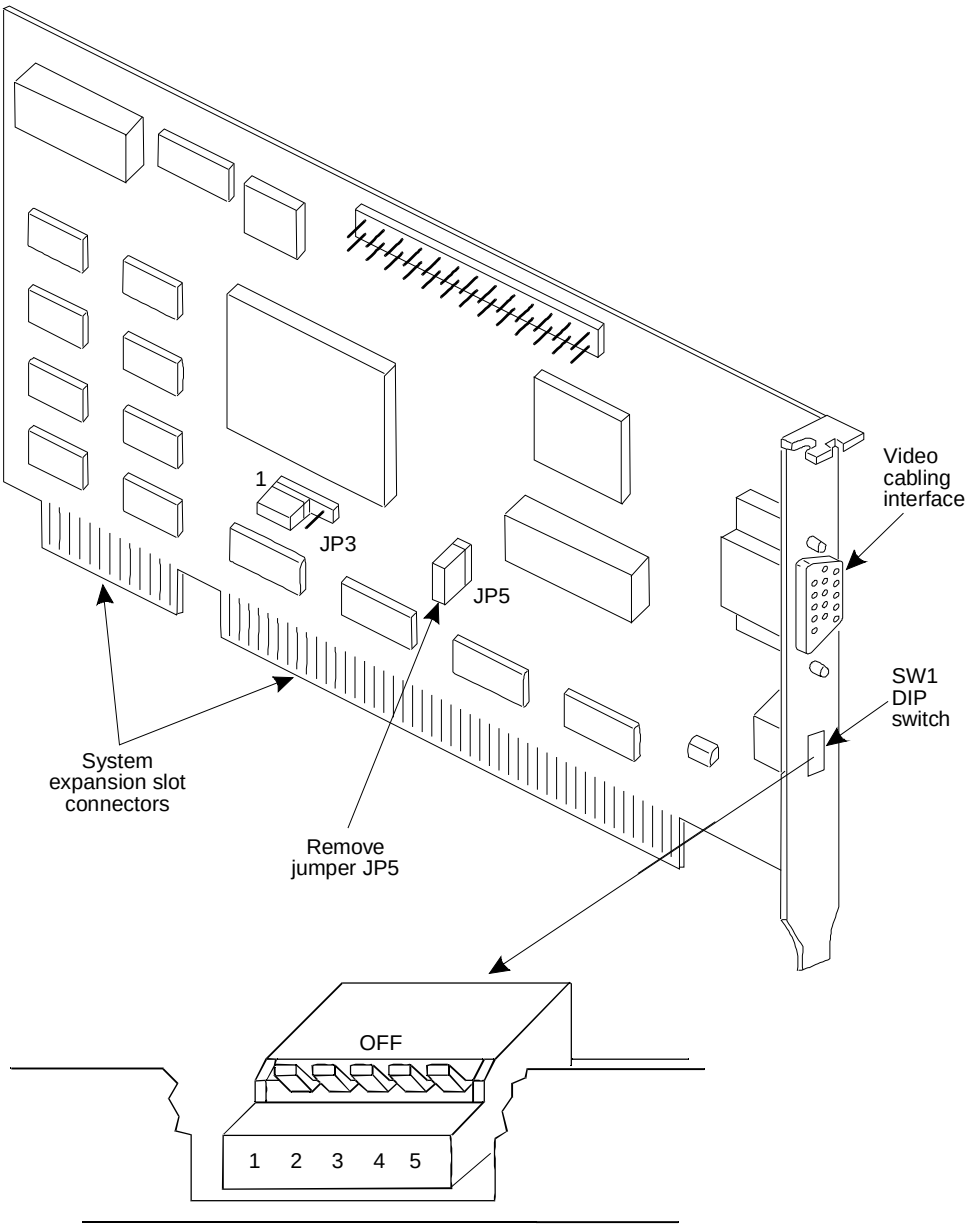


Figure 9-14. WDXLR831124 Video Controller Circuit Card and Switch Settings: Version 3

Set the Resource Options: Version 3

Match the jumpers and switches to Figure 9-14. Be sure to remove jumper JP5.

Video Controller Card: Version 4

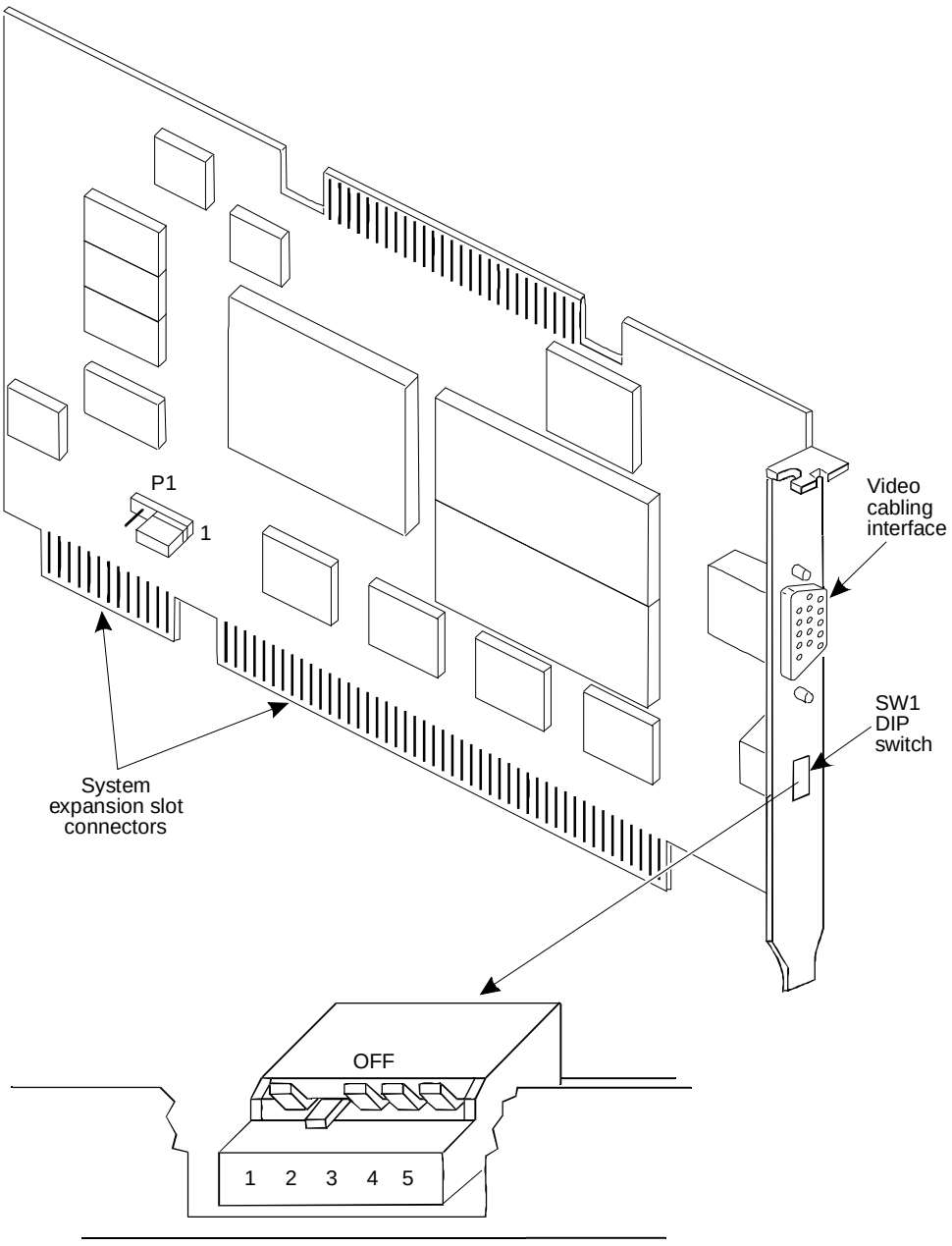


Figure 9-15. WDXLR83160 Video Controller Circuit Card and Switch Settings: Version 4

Set the Resource Options: Version 4

Match the switches and the jumper to Figure 9-15.

Placing the Card in the MAP/100

Follow the procedures in "General Procedure for Circuit Card Installation" on page 6-4 in Chapter 6 and the steps listed below.

1. Hold the card by its top corners.
2. Align the circuit card face plate and edge of the circuit card with the circuit card guide and the backplane slot position against the CPU card.

   The card is next to the expansion slot.
3. Move the card until it touches the slot.
4. Carefully try not to pinch or damage any cable.
5. Place your thumbs flat on the edge of the card and push it into the backplane slot.
6. Ensure that the card is firmly seated in the slot by gently pushing on it; it will not give when firmly seated.
7. Replace the cover plate retaining screw by placing it through the card faceplate opening.

You have completed this procedure.

Installing Optional Hardware

10

What's in This Chapter

This chapter describes how to add or replace the following hardware:

- Memory on the CPU circuit card
- Hard disk drive(s)
- Tip/Ring (T/R) distribution hardware

Replacing Memory

This section describes the memory available with the platform, how to determine if memory modules are damaged, and how to replace memory.

WARNING:
Observe proper ESD precautions when handling computer components. Attach a wrist ground strap and connect to an appropriate ground. See Chapter 2, "Getting Started" for details.

Memory and SIMM Description

The 486 CPU circuit card supports 64 MB of memory packaged on four single in-line memory modules. These modules are located in the bottom left corner of the 486 CPU circuit card. Additional memory cannot be added to the 486 CPU card. However, if you need to replace a damaged SIMM, follow the instructions in this chapter.

Determining if SIMMs Are Damaged

The MAP/100 486 CPU circuit card supports four 16 MB SIMMS. In order to determine which one may be damaged, each SIMM must be tested individually on the circuit card. All SIMMS must be removed from the card and then, each in turn, placed in the card and the system rebooted.

This allows a reading on the amount of memory on the card. If the memory is less than 16, you know that the SIMM is damaged.

Follow the procedure below to determine if the SIMMS are damaged. Detailed instructions for removing and installing the 486 CPU circuit card and a SIMM are described in the next section, "Replacing SIMMs" on page 10-2.

The steps below are an outline of the procedure that needs to be followed. Refer to the next section for more details.

1. Verify that all four SIMMS are properly seated in their slots. If so, continue with the following steps.

   If any of the SIMMS are not properly installed or seated, correct this problem and reboot the system. If the memory reflects 64 MB, the problem has been corrected. If not, continue with the following steps.

2. Remove the top SIMM from the 486 CPU card.
3. Re-install the 486 CPU circuit card and boot the system.
4. Verify the amount of memory as the system reboots.

   If the memory reads 48 MB, then these three SIMMs are OK, and it was the first one that was damaged. Replace the first SIMM.

   If the memory does not read 48 MB, then one of these SIMMS is damaged. Begin the procedure again. Remove the next SIMM, reboot, and check the amount of memory.

5. Continue with this procedure until all SIMMs have been checked or until the damaged SIMM is located.
6. Replace any damaged SIMMs. Follow the procedure in the next section.

Replacing SIMMs

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap against your bare skin and connect to an earth ground.

1. Verify that the new or replacement SIMMs are on site and appear to be in usable condition, that is, no obvious shipping damage, etc.

2. If you are currently connected to the telephone network, notify the switch administrator that you are disconnecting. They will ask you which extensions will be affected.
3. Perform a "soft" shutdown of the system if you have been operating the MAP/100 as a fully loaded system.
4. Turn *off* both the front panel power switch and the circuit breaker on the back and remove the incoming AC line. Also disconnect keyboard and video cords.
5. Tag the power plugs with a note indicating that nobody other than yourself should reconnect power to this equipment.
6. Remove the parallel port (printer) and COM1 connector from the CPU card.
7. Remove the dress covers and open the card cage.

   See Chapter 5, "Getting Inside the Computer", for more information.
8. Remove the screws in the circuit card hold-on bracket and remove the bracket. Do *not* lose the screws, place them where you can relocate them.
9. Carefully remove any internal connecting cables attached to the CPU card.

   Use pull tabs when available to reduce damage to the connector pin fields.

   CAUTION:
   The CPU COM2 port and keyboard ribbon cable connected to the chassis' rear area need to be disconnected before completing removal. Even though some cable slack is provided, it is better to remove these connector cables before attempting to remove the CPU card.

10. Remove the retaining screw of the face plate for slot #16, saving the retaining screw.
11. Gently remove the CPU card from the slot.
12. Lay the CPU card on an appropriate flat, clean ESD surface.
13. 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.
14. To install: position the new SIMM at approximately a 60 degree angle with respect to the circuit card.

    All SIMMs are keyed to prevent them from being inserted incorrectly.
15. Push down at that angle until you feel the SIMM reset into the SIMM carrier.

16. 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.

17. Ensure the connector guide pins are seated into the clearance holes provided at the end of each SIMM. When properly seated, the guides should be fully extended into the circuit card clearance holes.

18. Place the card in the slot. Align the circuit card face plate 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.

19. 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.

20. Reinstall the keyboard and COM2 ribbon cable connectors by following the instructions given below. See Chapter 9, "Installing Standard MAP/100 Circuit Cards", for more information on CPU connectors.

    a. Align the red marker on the keyboard cable with pin 1 on the keyboard connector in the bottom center of the card.

       The keyboard cable is keyed. Pin 1 is printed on the circuit card.

    b. 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.

    c. Connect the COM2 cable to the pin connector at the top far right of the card.

       CAUTION:
       The red tracer on the cable is a very faint red. Be sure that the red tracer is on the right side of the cable when you make the connection. The arrow (pointing down) on the connector should be facing toward the inside of the unit when you connect the cable.

    d. After prefolding the cable, neatly dress the excess down between the CPU and video card and press the connector into place.

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

21. If you have completed work in the card cage and in the computer, complete the following steps.

    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 Computer" 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 phone lines or trunk connections.

g. Power up the computer.

22. You have completed this procedure.

NOTE:
The quantity of installed memory is sensed automatically during the card's initial setup and requires no additional hardware setup.

Adding a Hard Disk

Up to six SCSI hard disks can be installed in the MAP/100 platform. For mirrored systems, the disks must be installed in pairs. The instructions in this section apply to any disk that is being physically installed.

The only variances per disk are:

- SCSI ID number
- Order of installation
- Jumper settings
- Bay location

For software information that applies to adding or replacing a disk, please refer to *Intuity Platform Administration and Maintenance,* 585-310-557.

Readying the MAP/100 for Disk Installation

1. Notify the switch administrator(s) that you are disconnecting the system if you are currently connected to the network. They will ask you which extensions are affected.
2. Turn *off* both the front panel power switch and the circuit breaker on back and remove the incoming AC line. Also disconnect the keyboard and video cords.
3. Tag the power plugs with a note indicating that nobody other than yourself 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 Computer", 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. Refer to the following table to determine in which bay the next disk should go.

   NOTE:
   A mirrored system requires the installation of disks in pairs.

Table 10-1. MAP/100 Hard Disk Installation Bay Locations

SCSI ID	Disk Name	Bay Number	Order of Installation
3	Tape drive	9	N/A
N/A	Floppy drive	8	N/A
N/A	Empty	7	N/A
2	disk02	6	Fourth
1	disk01	5	Third
5	disk05	4	Sixth
6	audfsdisk	3	Second
4	disk04	2	Fifth
0	disk00	1	First

NOTE:
The MAP/100 should have only nine bays with one empty as shown in Table 10-1. Should you receive a MAP/100 with ten bays, two empty bays should be located below the floppy drive.

9. After determining the correct bay for the disk you want to install, remove one screw on each side of the appropriate filler panel.
10. Reach through the inside of the MAP/100 peripheral bay to behind the filler panel.
11. Push out the filler panel and discard.

You have completed this procedure.

Readying a SCSI Disk for Installation

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap on your bare skin and connect to a ground.

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.

   WARNING:
   Return any piece of equipment in the original shipping carton and packing materials to ensure 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. If there is a faceplate, remove it.
5. The disk drive is available in 2 versions: Type A and Type B. Match the drive to either Figure 10-1 or Figure 10-8. The position of the jumpers are different for the drives.
6. Set the jumpers. Identify the drive and set the jumpers according to the pictures below the drive.
7. Verify that all jumpers are correctly positioned for the disk you are installing.

   NOTE:
   Remember that jumper settings for the SCSI ID change for each disk installed, that is, SCSI ID jumper settings for the third disk installed are different than those for the first disk installed, etc.

8. Correct jumper settings if necessary.
9. Remove terminator resistors, RN1 and RN2.
10. Set the disk aside and open the Universal Installation Kit which contains the installation hardware.

    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 a bag of screws needed for assembly and mounting.

11. Discard the LED lenses, the LED connector cable assembly, and the spacer bar.

    These items are not needed to assemble the hard disk.

12. Assemble the installation kit according to directions on its box.
13. Place the mounting rails parallel to each other with the smaller of the two flanges of the rails on the inside.
14. Locate the drive with the metal face up between the rails; the connector end of the drive unit should be flush with the ends of the mounting rails as illustrated in Figure 10-15.
15. Align the mounting holes of the drive and the mounting rails.
16. Insert #6-32 x 3/16 in. screws (two screws per side) and tighten.

    The back connector edge of the drive should be flush with the rail ends as shown in the instructions.

17. Mount the plastic faceplate and secure it to extended bracket ends using two #6-32 x 3/16 in. screws.

You have completed this procedure. Continue with the next procedure, "Mounting a SCSI Disk in the MAP/100" on page 10-16.

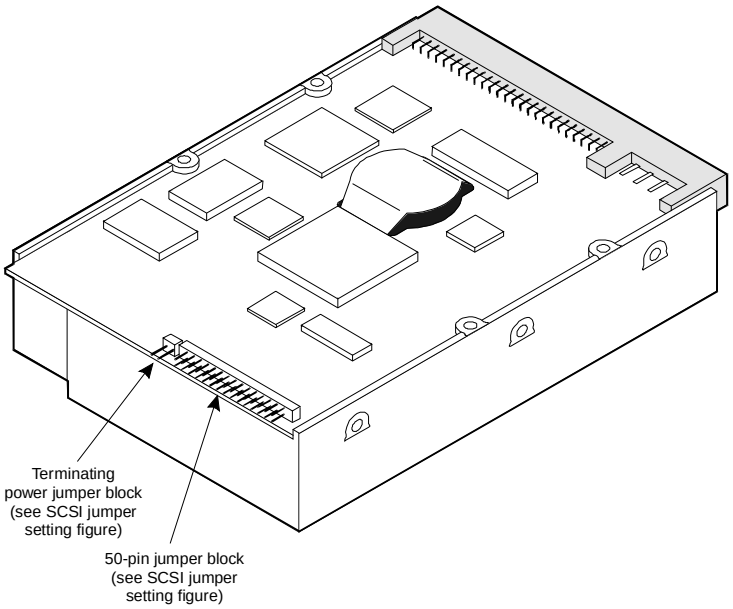


Figure 10-1. Jumper Locations on the SCSI Hard Disk Drive: Type A

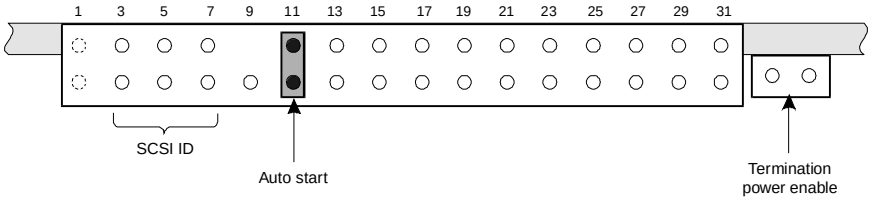


Figure 10-2. Type A: Jumper Settings for the First Disk Installed; Bay 1, SCSI ID = 0

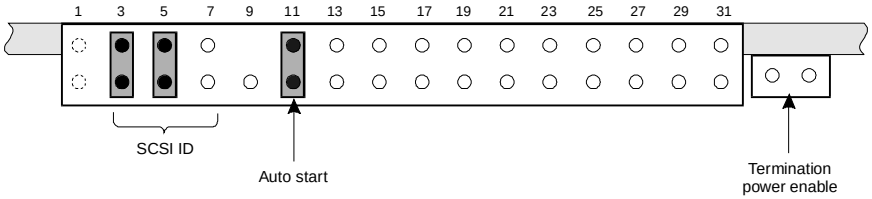


Figure 10-3. Type A: Jumper Settings for the Second Disk Installed; Bay 3, SCSI ID = 6

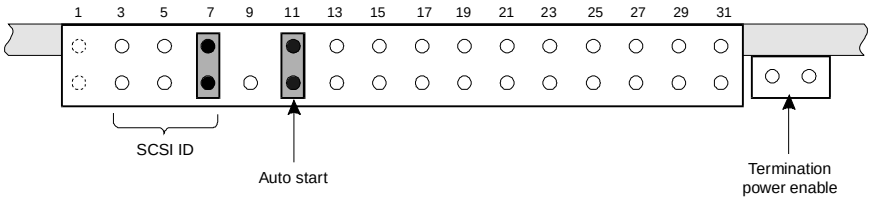


Figure 10-4. Type A: Jumper Settings for the Third Disk Installed; Bay 5, SCSI ID = 1

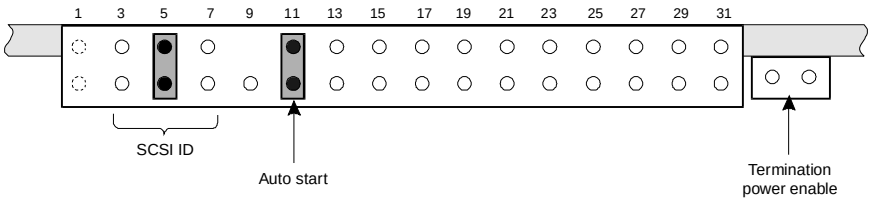


Figure 10-5. Type A: Jumper Settings for the Fourth Disk Installed; Bay 6, SCSI ID = 2

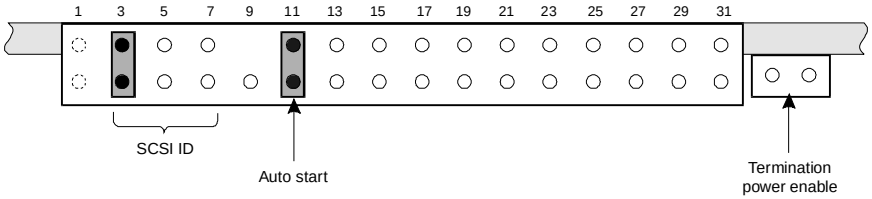


Figure 10-6. Type A: Jumper Settings for the Fifth Disk Installed; Bay 2, SCSI ID = 4

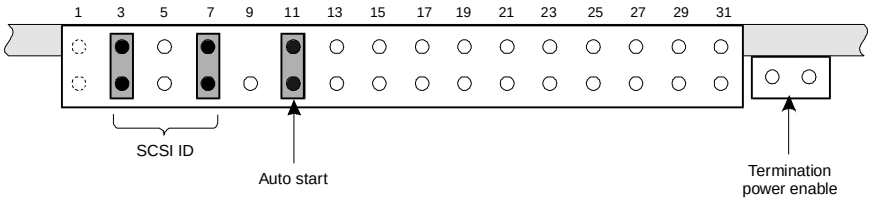


Figure 10-7. Type A: Jumper Settings for the Sixth Disk Installed; Bay 4, SCSI ID = 5

The Type B hard disk drive has the jumpers located in the center of the unit (Figure 10-8). Figure 10-9 through Figure 10-14 show the jumper settings for the Type B hard disk drive.

CAUTION:
The Type B hard disk drive is shipped with a third jumper placed on the thirteenth and fourteenth pins. This jumper must be removed prior to installing the hard disk drive.

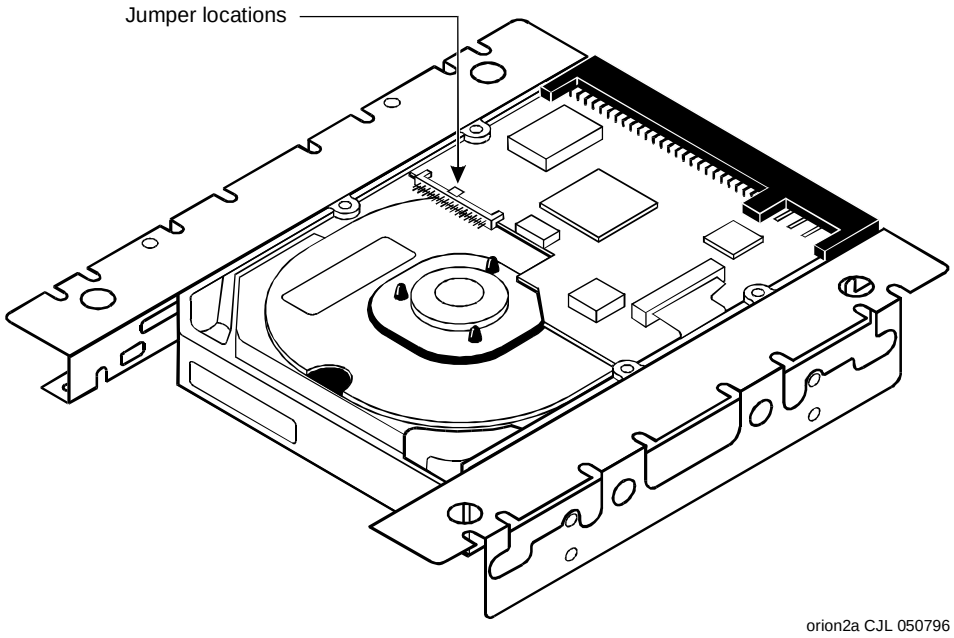


Figure 10-8. Jumper Locations on the Type B Hard Disk Drive: Type B

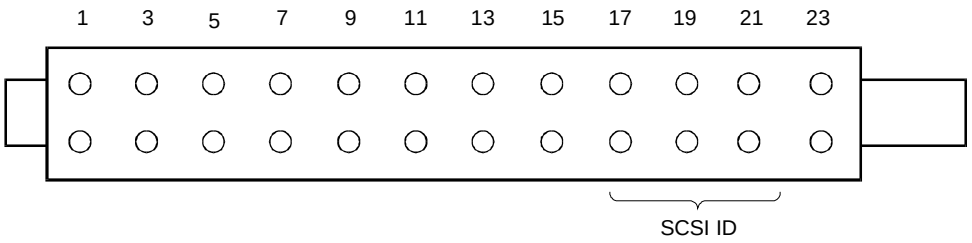


Figure 10-9. Type B: Jumper Settings for the First Type B Hard Disk Drive Installed; Bay 1, SCSI ID = 0

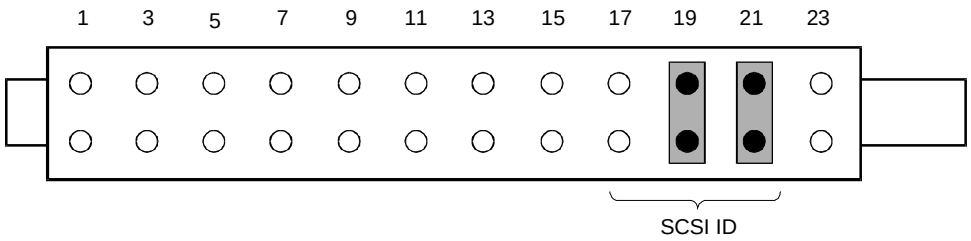


Figure 10-10. Type B: Jumper Settings for the Second Type B Hard Disk Drive Installed; Bay 3, SCSI ID = 6

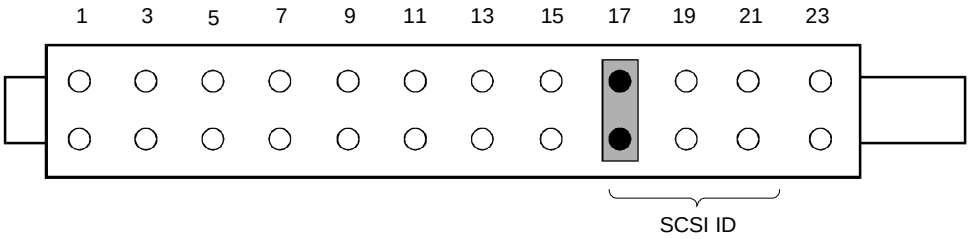


Figure 10-11. Type B: Jumper Settings for the Third Type B Hard Disk Drive Installed; Bay 5, SCSI ID = 1

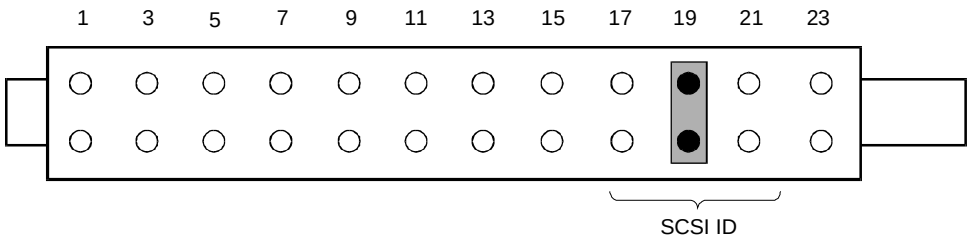


Figure 10-12. Type B: Jumper Settings for the Fourth Type B Hard Disk Drive Installed; Bay 6, SCSI ID = 2

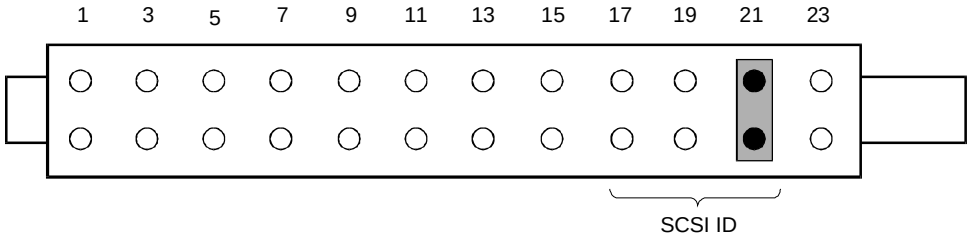


Figure 10-13. Type B: Jumper Settings for the Fifth Type B Hard Disk Drive Installed; Bay 2, SCSI ID = 4

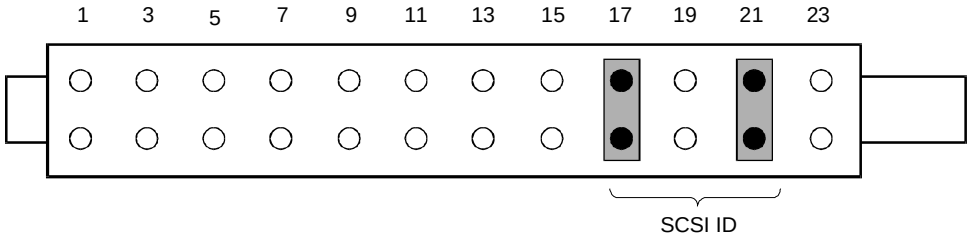


Figure 10-14. Type B: Jumper Settings for the Sixth Type B Hard Disk Drive Installed; Bay 4, SCSI ID = 5

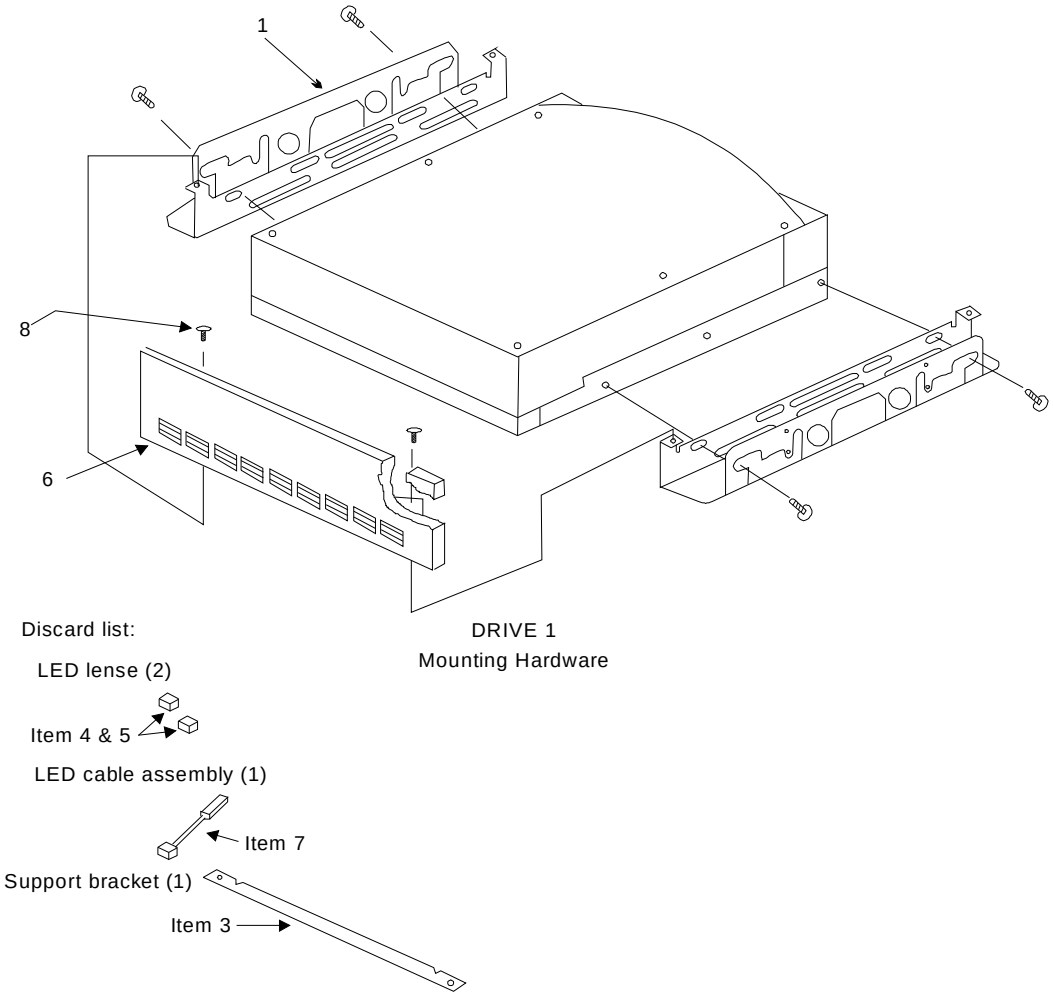


Figure 10-15. Universal Installation Kit Assembly Instructions

Mounting a SCSI Disk in the MAP/100

WARNING:
Observe proper electrostatic discharge precautions when handling computer components. Wear a ground wrist strap on your bare skin and connect to a ground.

1. Position the drive.

   The aluminum case of the drive should be 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/100.

2. Locate on either side of the peripheral bay drawer the bottom third set of slots just behind the front of any of the peripheral bays you may be using.

   Use the screws provided with the bracket kit to secure the drive through the bottom slot of the peripheral bay.

   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/100.

3. Place the drive in the MAP/100, sliding it through the front entry area.

   Hold the drive unit from inside the peripheral bay area when aligning the bracket with the holes.

4. Insert two screws on each side of the disk in the first bottom mounting hole.

   Lock screw in place, but do not tighten.

5. Lift the drive from the back. Position the drive so you can see the back bottom mounting holes.

6. Lock screws in place on either side, but do not tighten.

7. Adjust the bracket depth so the face plate is even with back edge of the bezel or flush with the adjacent floppy disk drive bezel.

   Loosen the two front side screws if necessary.

   The face plate should have a flush appearance, similar to the floppy drive and cartridge tape unit.

8. Now firmly lock screws in place.

You have completed this procedure. Continue with the next procedure, "Connecting Cables to the SCSI Drive" on page 10-17.”

Connecting Cables to the SCSI Drive

1. Attach the SCSI cable by aligning the SCSI connector with the gold fingers on the hard-drive cable receptacle. Push the connector into the cable receptacle. All connectors are "keyed" to prevent incorrect installation (see Figure 10-16).
2. Attach the power cable to the hard disk in the same manner.
3. "Dress" power cables together neatly and affix it to the peripheral bay assembly by adjusting the plastic cable retainer that is part of the assembly. This cable retainer can be seen by looking through the right side door.

   All disk cables are held in place by this retainer when shipped from the manufacturer. Pull on the tab at the top of the retainer to release it. Press on the retainer tab to secure it.
4. Go to "Finishing Up" on page 10-22 found at the end of this chapter.

You have completed this procedure.

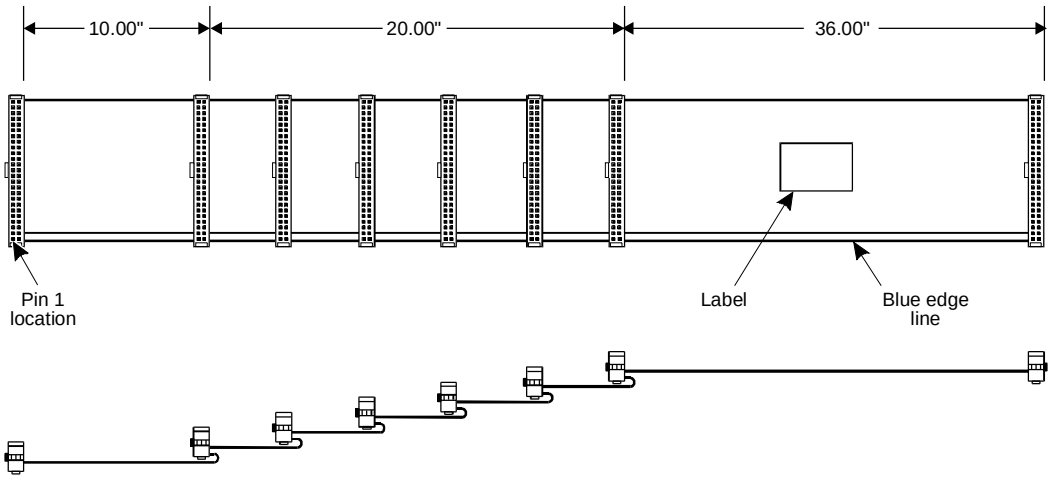


Figure 10-16. SCSI Cable for SCSI Peripherals

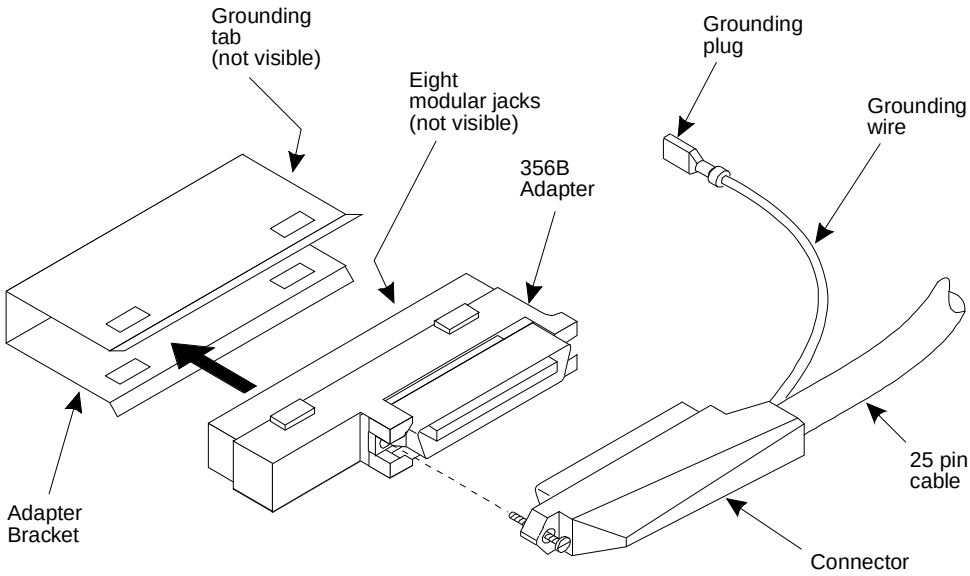
Installing the Tip/Ring Distribution Hardware

As the number of lines served by the Lucent Intuity system increases, the number of 6-pin conductor modular cords connecting the system with the customer-premise equipment or the on-premises terminal block provided by the central office also increases. In an effort to simplify this wiring scheme, optional T/R distribution hardware is available.

The T/R distribution hardware allows a maximum of 64 channels (11 T/R boards) to be connected to the local customer-premise equipment or building connecting block provided by the central office via two 25-pair, high-density cables (USOC RJ21X). This hardware may be ordered and installed in the field using the following procedures.

Readying the MAP/100 for the Tip/Ring Distribution Panel

1. Turn *off* both the front panel power switch and the circuit breaker on the back and remove the incoming AC line. Also disconnect keyboard and video cords.
2. Tag the power plugs with a note indicating that nobody other than yourself should reconnect power to this equipment.
3. Verify that the distribution hardware assembly kit is on site and appears to be in usable condition, (that is, no obvious shipping damage).
4. Verify that the following components are included in the kit:
   - Mounting plate with six screws
   - 356B adapter (up to three adapters can be used)
   - Adapter bracket with two screws each (up to three brackets can be used)
   - 25-pair consolidation cable with grounding wire and strap
5. Refer to Figure 10-17 for an illustration of the distribution components and how the components are assembled. Figure 10-11 on page 10-13 illustrates how the hardware should be attached to the MAP/100.



- SIDE VIEW -

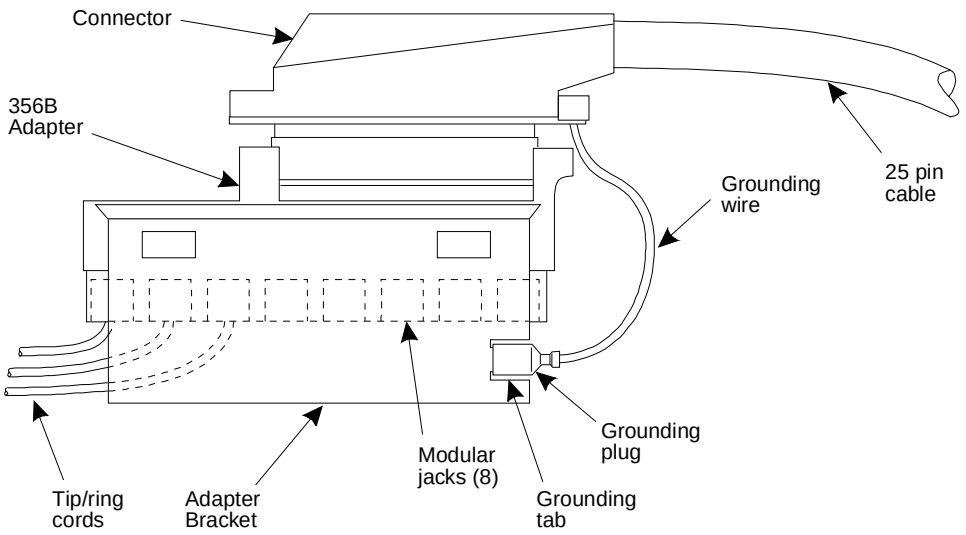


Figure 10-17. How Tip/Ring Distribution Hardware Connects

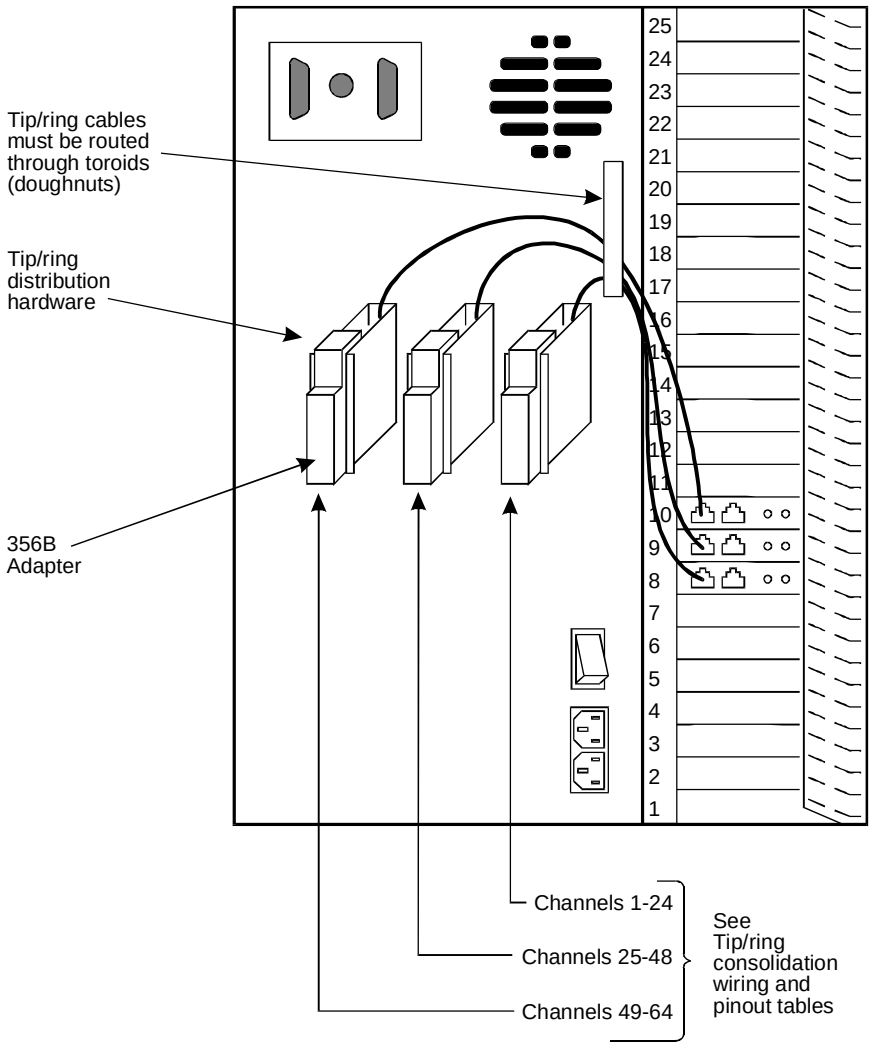


Figure 10-18. How Tip/Ring Distribution Hardware Attaches to the MAP/100

6. Remove the 7 screws securing the distribution panel cover which is located on the center of the back of the platform.

   The distribution panel cover (1-1/2 inches or 4 centimeters in depth) extends away from the platform.

7. Discard the distribution panel cover.
8. Locate the five threaded metal stand-offs that were beneath the distribution panel cover.
9. Remove the screws from the metal stand-offs and set aside.

10. Horizontally attach the mounting plate to the MAP/100. Place the eight threaded inserts on the back of the mounting plate toward the MAP/100.
11. Use the corner screw holes closest to the edge of the mounting plate to position the plate.

    These should be at the top of the mounting plate when you attach it to the MAP/100.
12. Fasten the mounting plate to the cabinet using the five 6-32X.25" screws and lockwashers previously removed from the metal standoffs.

Making Connections to the T/R Distribution Panel

The numbering scheme for pinouts and channels which shows how to connect the short modular cords, provided with the T/R boards, to the distribution hardware is shown in Chapter 1, "Preparing the Site".

Referring to those tables and using the channel numbers on the T/R cards and the number of T/R cards in the system, connect the T/R card modular jacks to the appropriate jacks on the 356B adapters.

Then continue with the following procedures.

1. Beginning at the left of the mounting panel, attach the u-shaped adapter brackets with the screws provided.

   The u-shape of the bracket should open toward you. If you locate the bracket with the grounding tab at the top, the consolidation cable will come from the top. If located at the bottom, the consolidation cable will exit from the bracket at the bottom.
2. Plug the 3-foot (1-meter), 6-pin modular cords from the T/R cards into the 356B adapter after using the tables in Chapter 1, "Preparing the Site" and determining the correct connections.

   Each adapter can accommodate eight modular cords.
3. Using the connector provided, attach the consolidation cable to the 356B adapter.
4. Snap the 356B adapters into the adapter brackets.
5. Connect the grounding wire and strap to the grounding tab on the adapter brackets.
6. Complete Steps 1 through 3 in "Finishing Up" on page 10-22 found at the end of this chapter.

Finishing Up

1. Close the card cage and/or peripheral doors if you have finished working on the computer.
2. Replace the exterior dress covers and reconnect the keyboard, the monitor, and power. See Chapter 5, "Getting Inside the Computer" for more information.
3. Power up the unit.
4. Run diagnostics to verify the hardware is functioning properly.
5. Notify the telephone company that you are back on-line.

You have completed this procedure.

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

Finishing Up

11

What's in This Chapter

This chapter describes how to troubleshoot the hardware installation, if a problem exists, and describes how to clean the hardware after installation.

For information about maintaining the MAP/100, refer to *Intuity Platform Administration and Maintenance*, 585-310-557.

Basic Troubleshooting

The suggestions below resolve the majority of installation problems and are further explained in the sections that follow.

- Verify Your Configuration
- Check All Cables
- Check All Cards

NOTE:
Make sure that the floppy drive does not contain a disk.

Verify Your Configuration

Using the information in Chapter 4, "Configuring the System", verify that you have completed the following for your application.

1. Placed all cards in the correct slots.
2. Set all jumpers correctly.
3. Set all interrupts and addresses correctly.

Check All Cables

Make sure all cables are securely connected. Ribbon cables are especially fragile. Make sure they are not crimped or damaged in any way. Keeping extra cables on hand for trouble-shooting may be helpful.

For each ribbon cable, verify that Pin 1 of the cable is matched to Pin 1 of the connector. Pin 1 is usually denoted with a stripe on the side of the ribbon cable.

⚠ CAUTION:
Do not reverse-plug the cables. This can damage the system.

Check All Cards

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

Cleaning Up After Installation

If the unit needs cleaning after installation, follow the recommendations below.

Cleaning the Chassis Exterior

Disconnect the power source before cleaning. Use a mild detergent on a damp cloth to clean the chassis. If you use a spray cleaner, make sure that you also use a cloth. Dampen the cloth with the cleaner and wipe the chassis surface. Using a spray directly could seep into the chassis and cause damage.

Cleaning the Monitor

Local office supply centers sell CRT screen cleaning wipes (wet pads). Use only these wet pads to clean the screen. Follow directions provided with the product. Clean the exterior monitor, other than the CRT screen, in the same manner as the chassis exterior. Use a mild detergent on a damp cloth. If you use a spray cleaner, make sure that you also use a cloth. Dampen the cloth with the cleaner and wipe the surface.

Cleaning the Keyboard

Disconnect the keyboard from the MAP/100. Use a mild detergent on a damp cloth to clean the chassis. If you use a spray cleaner, make sure that you also use a cloth. Dampen the cloth with the cleaner and wipe the surface.

Cleaning the Floppy Diskette Drive

If you find that you can no longer read or write when your floppy disk is in use, you should 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.

Refer to *Intuity Platform Administration and Maintenance*, 585-310-557, for information on how to replace a floppy drive.

Cleaning the Air Filter

The air filter is located in the front of the chassis in the lower bezel cover and is reusable. The air filter should be checked and cleaned on a regular basis. To remove and clean the air filter, follow the procedure below:

1. Press down on the center tab at the top of the lower bezel and pull forward to remove the bezel.
2. Remove the filter.
3. Wash with mild soap and water.
4. Allow the air filter to thoroughly air dry.

   Do not use heat to dry the filter and do not place a wet or damp filter into the computer.
5. Place the dry filter in the lower bezel.
6. Insert the bottom tab of the bezel into the exterior chassis bezel.
7. Bring the bezel forward and press the top center tab down.
8. Lock into place.

   You have completed this procedure.

Moving the System

12

What's in This Chapter

The chapter offers guidelines to follow if you intend to move the MAP/100. Key guidelines include:

- Protecting the hard disk heads
- Protecting the peripheral drives

Moving Equipment

Prepare the MAP/100 before moving the system. Specific procedures and precautions must be followed when shipping any part(s) of the MAP/100.

On short moves (across the room or down the hall), do not attempt to move all computer parts at one time. Disconnect the keyboard and monitor from the MAP/100 and move each unit separately.

Backup the hard disk before moving, as described later in this section. The power supply and storage peripherals may be removed from the unit to reduce the overall weight, but it is not recommended. Removal of any device increases the risk of error during reassembly.

Before moving the MAP/100 across a large distance, insure that the original shipping box and packing materials, or suitable substitutes, are available and accessible. Do not begin this job without them. In the United States and Canada, 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 must provide adequate protection against:

- corrosion, deterioration, and physical damage
- water and electrostatic damage to any electrical/electronic part or device

Also be sure that proper preventive steps (cushioning, blocking, bracing, etc.) have been taken to prevent movement so that no structural or functional damage may occur.

Preparing the Hard Disk Drive for Moving

Back up your system before moving it. Refer to Chapter 20 of the *Intuity Platform Administration and Maintenance for Release 3.0*, 585-310-557, guide for information.

You must also correctly shut the system down before moving it. Again, refer to the *Platform Administration and Maintenance* guide.

Moving your MAP/100 can be rough on the disk drives. Both the floppy disk drive and the hard disk drive can be damaged by dropping the main unit or bumping it against something. The damage usually occurs to the disk heads.

When power is removed from a hard disk, the disk heads lock down on the platters to reduce the risk of bouncing. This can damage the platters. You must shut down the system before moving it. Refer to Chapter 20 of the *Intuity Platform Administration and Maintenance*.

Removing the Peripherals

1. Refer to Chapter 5, "Getting Inside the Computer", to see how to get into the peripheral bay. Follow the steps documented there before proceeding to Step 2.
2. Grasp the peripheral bay steel framework and carefully pull the entire peripheral bay out while observing that no cable "hang-ups" occur (observe cables through the side door). Proceed pulling the assembly forward until it is against its mechanical stop.
3. Reach behind the peripheral and remove the ribbon and power cables from it.
4. Remove the screws that secure the peripheral to the bay; the 2 rear screws, one from each side, then the 2 forward screws. For the half-height peripherals, support them from the bottom before removing the 2 forward screws.
5. After all the fasteners and cables have been removed, push the peripheral forward, out of the bay, until it can be grasped and removed from the front.

Removing the Power Supply

The power supply and battery module (PS&BM) for systems with battery backups is located on the right side of the unit. The PS&BM can be removed completely from the unit:

1. Refer to Chapter 5, "Getting Inside the Computer", to see how to get into the peripheral. Follow the steps documented there before proceeding to Step 2.
2. Grasp the PS&BM external pull handle and pull the PS&BM from the unit until is rests against the safety stop while observing any cable "hang-ups" through the open door.
3. Reach inside, past the protective top shield, and remove the mating plugs from the panel mounted receptacles.
4. When all connections have been broken, push the PS&BM slightly forward and lift so that the slot on the unit and safety stops on the PS&BM are aligned, and remove the PS&BM from the unit.

CAUTION:
The Power Supply and Battery Module weighs 50 (23 kilograms) pounds. There is a handle on the back of the receptacle panel, so that two persons (if necessary) can lift and move it.

Component Ordering Numbers

A

What's in This Appendix

Use this appendix to order standard or optional components for the MAP/100. Please contact your service representative if you need additional information on identifying other components you want to order. For installations in the United States and Canada, call the comcode hotline at 1-800-654-5832. For installations outside the United States and Canada, contact your Lucent Technologies authorized distributor.

The following table lists the components, component reference numbers, and the comcodes or ordering numbers. You must have a comcode to order a component. See the tables at the end of Appendix B, "Cable Connectivity", to determine types of cables and ordering numbers

Component Ordering Number Listing

Table A-1. Component Ordering Numbers

Basic Component Description	Order Number
CP, CPU, 50MHZ, 0MB Memory	407300342
CP, ACCX Interface	106930944
CP, AYC10, IVC6 Analog Interface	106406580
CP, AYC29, IVC6-1A, Analog Interface	107213944
CP, AYC30, Tip/Ring Analog Interface	107224586
CP, 8-Port Async Int	407009406
CP, Video Controller	407356955
CP, SCSI Drive Controller	406830356
CP, SCSI Drive Controller	407021856
CP, GB Sync	406801647
CP, Ethernet LAN Interface	407199538
CP, 8-Port Async Int (SST-8I)	407497460
CP, Remote Maintenance Kit	406969238
CP, Serial, Hi Speed	407429398
IC, 16MB SIMM	407420116
Floppy Disk Drive, 1.44MB	406832584
SCSI Hard Disk Drive, 2GB	407340942
SCSI Streaming Tape Drive, 2GB	407334507
Keyboard (GIS gray)	407104066
Monitor, Color, VGA (GIS gray)	407088335
Cord, 6 Pin Modular, 14ft	102937604
Power Cord, 15A, 125VAC	406666263
Cord, Power, Monitor	407115591
Filter, Left Door	406568873
Filter, Right Door	406568832
Fan Bracket Assembly	406591321
Fan, 12VDC TA450	406568816
AC Power Module Assy	407417377

Table A-1. Component Ordering Numbers — *Continued*

Basic Component Description	Order Number
Battery, 12VDC, 6.5AH	406666420
Fuse, 65VDC, 30A, VFB	406666412
Backplane, 25 Slot	406548719
Main Power Dist Board	406798231
Cable Assy, EMI Suppression (RMB)	407265529
Cable Assy, Fanout, 8-Port	407497486
Cable Assy, RJ-45, 10 ft	407463140
Cable Assy, RJ-45, 25 ft	407463157
Cable Assy, RJ-45, 75 ft	407463165
Cable Assy, SCSI Periipheral Cntrl ED5P208-30 G25	601415235
Cable Assy, 486 Keyboard Adapter ED5P208-30 G30	601436082
Cable Assy, 486 Reset ED5P208-30 G31	601436090
Cable Assy, Internal Fan Status ED5P208-30 G32	601436108
Cable Assy, RMB MAP/100 UPS Mtr ED5P208-30 G33	601436116
Cable Assy, ACCX ED5P208-30 G34	601436124
Cable Assy, ACCX ED5P208-30 G34	407027564
Cable Assy, Tel Cord, 3 ft ED5P208-30 G16	601448632
Cable Assy, Port/Line ED5P208-30 G36E	601447014
Cable Assy, Port/Line ED5P208-30 G37E	601447162
Cable Assy, ACCX/DCP ED5P208-30 G38E	601447170
Cable Assy, ACCX/DCP ED5P208-30 G39E	601447188
Cable Assy, VGA Port Jumper	406664979
Cable Assy, CPU/Keyboard Int	406664938
Cable Assy, Disk Power	406664946
Cable Assy, Floppy Drive	406664920
Cable Assy Kit, Hard Disk	406664912
Cord, Telephone, 25 ft	103623195
Cord, AC Power, India, 8 ft.	407406735
PC Filler Brackets(20)	406798686
Resistor SIP, TDM Terminator	403789167
Stud, 1/4 Turn	900491069

Table A-1. Component Ordering Numbers — *Continued*

Basic Component Description	Order Number
Retainer, Push-on	403867005
Receptacle, 1/4 Turn	403291354
Bracket, Cable	406667519
Desk Side Dress Package	406548677
Deskside H/W Kit	406664896
Top Deskside Panel	406568899
Left Side Panel	406568907
Right Side Panel	406568915
Assy, Deskside Base Kit	406664888
Rack Mount Package	406548669
Caster	406976126
Adapter, Elec, DCE Female	407345776
Adapter, Elec, DTE Female	407345768
Adapter, Elec, DTE Male DB-25	406983155
Adapter, SPM Port Connector	105012645
Adapter, Electrical, Jack to Jack	407005255
Adapter, 356B	105197297
Intf Unit, AYC22 Cable	107221467
Adapter, Elec (Modems)	407050095
Adapter, Elec (WYSE Trmnls, Prntrs)	407050111
Hardware, Switch Integration Device (SID), Mitel	407024728
Hardware, (SID), Rolm	407024686
Hardware, (SID), Nor Telcom (SL-1)	407024694
Hardware, (SID), Nor Telcom (Meridian)	407024702
Hardware, (SID), NEAX	407024710
Mini-Tester, RS-232	407515139
3A Translator	601799265

Cable Connectivity

B

This appendix details external connectivity and cabling from the MAP/100 platforms to the following:

- Lucent Switches
  - — DEFINITY G1, G3 and System 74 R1V3
  - — DEFINITY G2 and System 85 R2V4
- Networks
- Terminals and distant modems

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

This appendix describes connections to the switch, network, or terminals, but not the connections made at those devices. Step procedures and illustrations are provided in order to make these connections.

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

Connecting Cables from the Platform to the Switch

To begin switch connections from the MAP platform, you must connect to the GP-Synch circuit card which is located in slot 1 on the MAP/100. Verify the slot location. The GP-Synch card has a single 25-pin RS-232 connector on the faceplate.

Using an IDI or MPDM for Switch Connections

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

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

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

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

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

See the following illustration for an overview of the types of connections that need to be made from the MAP platforms to various Lucent switches.

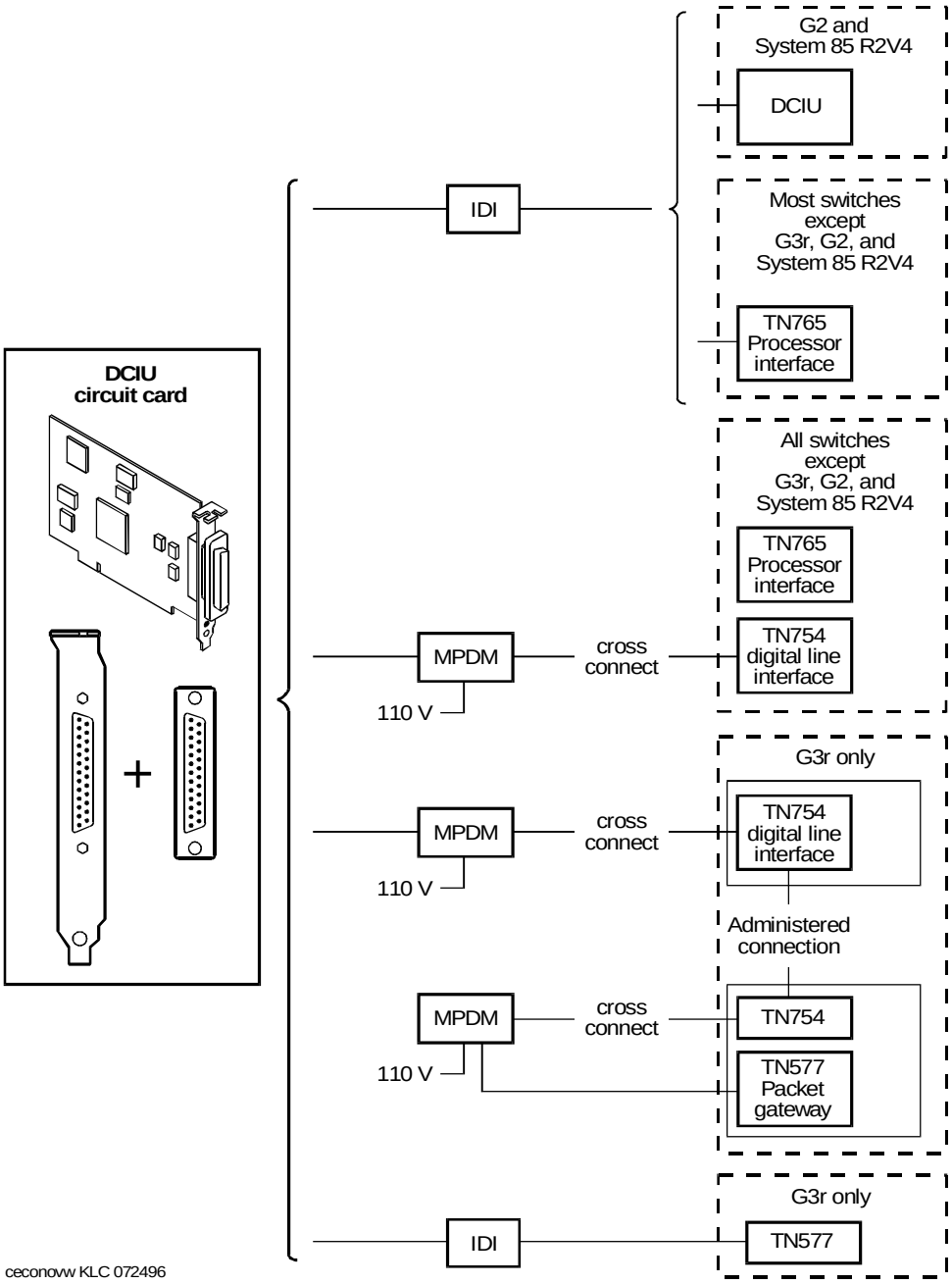


Figure B-1. Overview Platform Switch Cable Connections

Connecting Lucent Intuity System to G2 and System 85 R2V4 Using Duplicated Common Control via an IDI

Use the following procedure and illustration to make these cable connections.

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

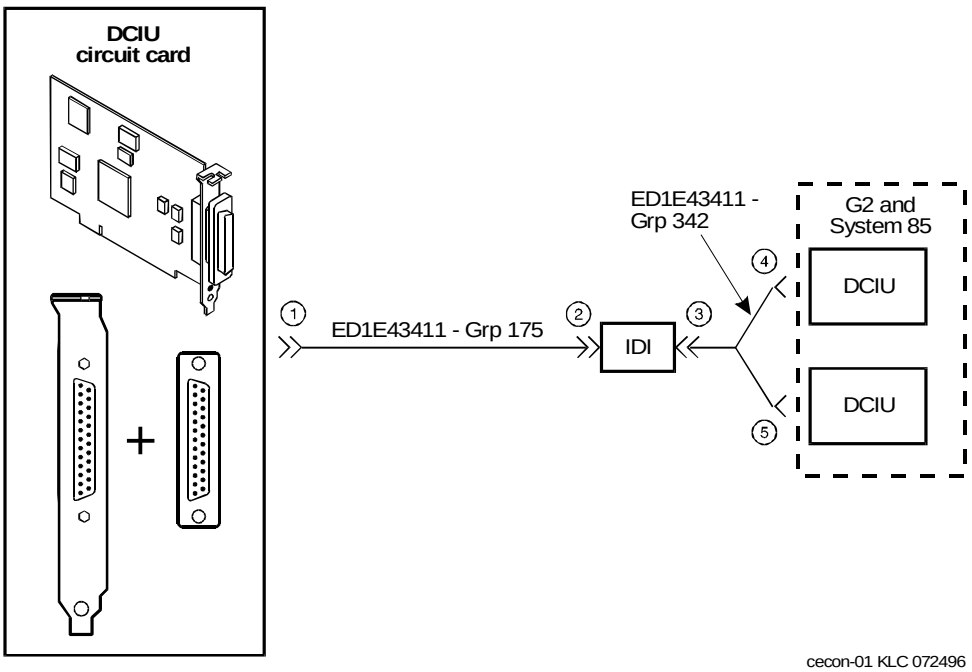


Figure B-2. Connecting Lucent Intuity System to G2 and System 85 R2V4 Using Duplicated Common Control via an IDI

Connecting Lucent Intuity System to G2 and System 85 R2V4 Using an IDI

Use the following procedure and illustration to make these cable connections.

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

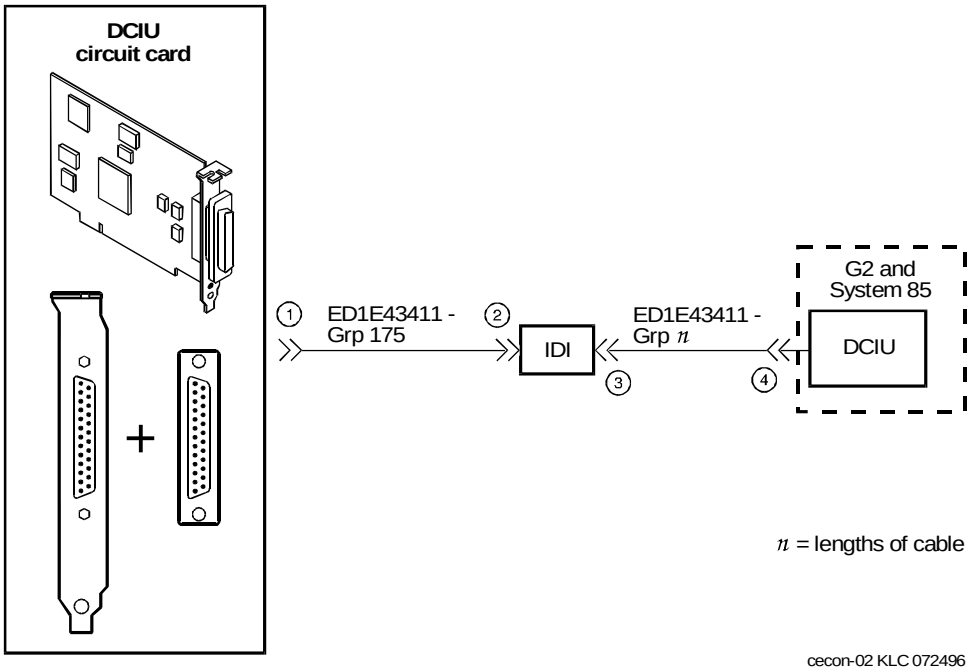


Figure B-3. Connecting Lucent Intuity System to G2 and System 85 R2V4 Using an IDI

NOTE:
In the figure above, Grp n equals Grp 304.

Connecting Lucent Intuity System to the G3r via an IDI

Use the following procedure and illustration to make these cable connections.

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

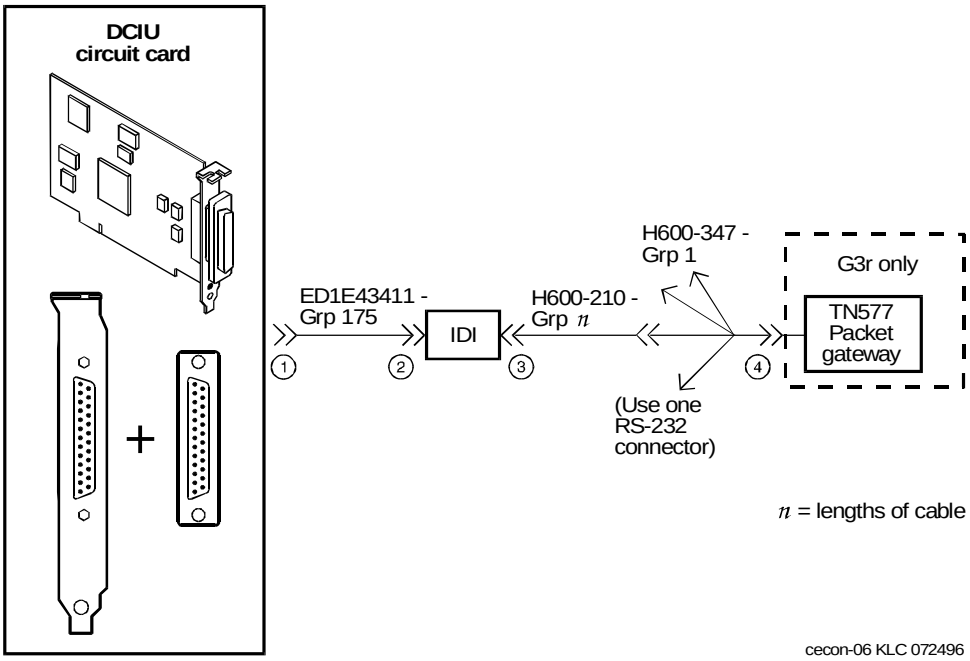


Figure B-4. Connecting Lucent Intuity System to the G3r Switch via IDI

Connecting Lucent Intuity System to Most Lucent Switches via an IDI

Use the following procedure and illustration to make these cable connections.

NOTE:
The following switches are excluded from this procedure:

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

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

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

Refer to the figure on the next page.

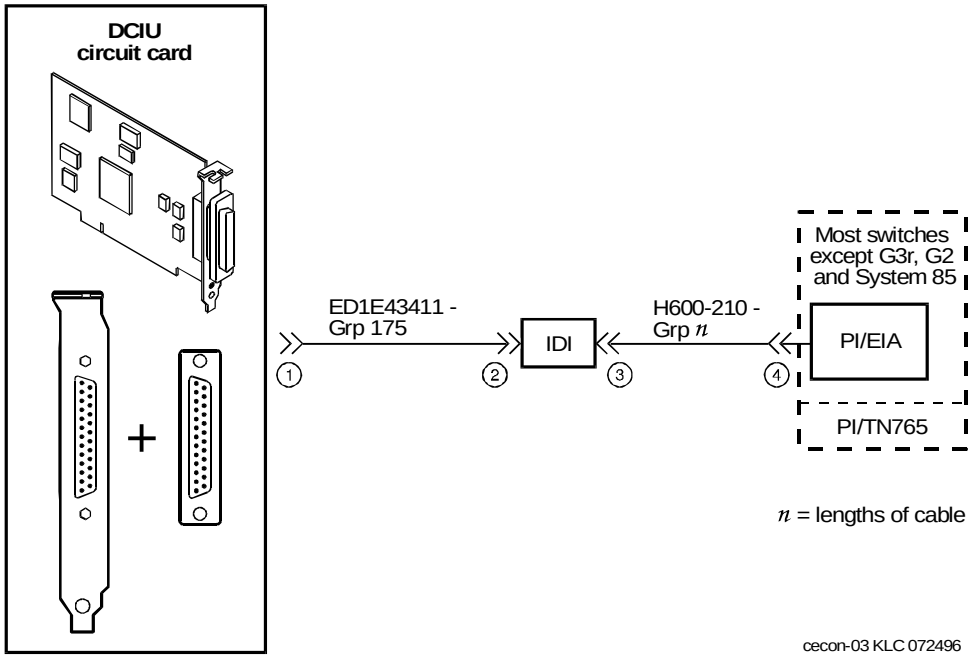


Figure B-5. Connecting Lucent Intuity to Most Lucent Switches via an IDI

Connecting Lucent Intuity System to Most Lucent Switches via an MPDM: G3r or G2 and System 85 Excluded

Use the following procedure and illustration to complete these connections.

1. Attach one end of the 847118171 cable to the GP-Synch card (labeled 1).
2. Attach the other end of the 847118171 cable to the RS-232 connector of the MPDM (labeled 2).
3. Attach one end of the D8W-87 (4-pair) modular cord to the modular jack on the MPDM (labeled 3).
4. Attach the other end of the D8W-87 modular cord to the 103A adapter modular jack (labeled 4).
5. Attach a 3-pair cord from the 103 A adapter to the cross-connect field (labeled 5).
6. Attach a 25-pair cable between the cross-connect field and the digital line interface card (TN754) on the switch (labeled 6).

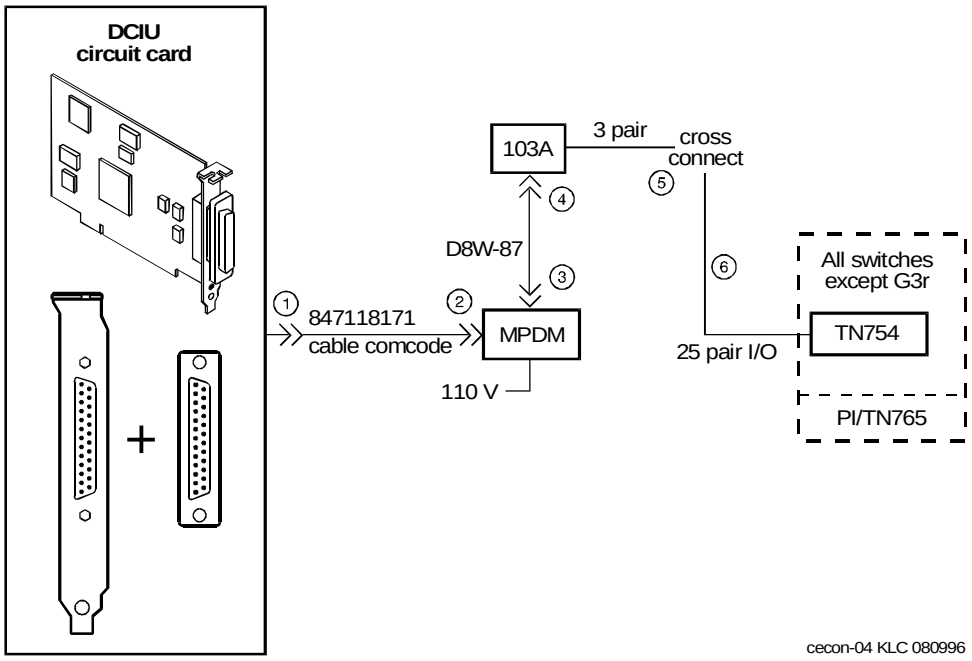


Figure B-6. Connecting Lucent Intuity System to Most Lucent Switches via an MPDM -- G3r or G2 and System 85 Excluded

Connecting Lucent Intuity System to the G3r via MPDMs

Use the following procedure and illustration to make these connections.

1. Attach one end of the 847118171 cable to the GP-Synch circuit card (labeled 1).
2. Attach the other end of the 847118171 cable to the RS-232 connector of the MPDM (labeled 2).
3. Attach the one end of the D8W-87 (4-pair) modular cord to the modular jack on the MPDM (labeled 3).
4. Attach the other end of the D8W-87 modular cord to the 103A adapter with a 3-pair cord (labeled 4).
5. Attach a 3-pair cord from the 103A adapter to the cross-connect field (labeled 5).
6. Attach a 25-pair cable between the cross-connect field and the digital line interface card (TN754) on the switch (labeled 6).
7. Attach a 25-pair cable between the cross-connect field and a second digital line interface circuit card (TN754) on the switch (labeled 7).
8. Attach a 3-pair cord from the cross-connect field to the 103A adapter (labeled 8).
9. Attach one end of the D8W-87 modular cord to the 103A adapter (labeled 9).
10. Attach the other end of the D8W-87 (4-pair) modular cord to the modular jack on the MPDM (labeled 10).
11. Attach one end of the Group 110 cable to the RS-232 connector of the MPDM (labeled 11).
12. Attach the other end of the Group 110 cable to one of the four RS-232 connectors on the H600-347 (labeled 12).
13. Attach the other end of the H600-347 cable to an RS-232 connector on the packet gateway circuit card (TN577) on the G3r switch (labeled 13).

Refer to the following figure.

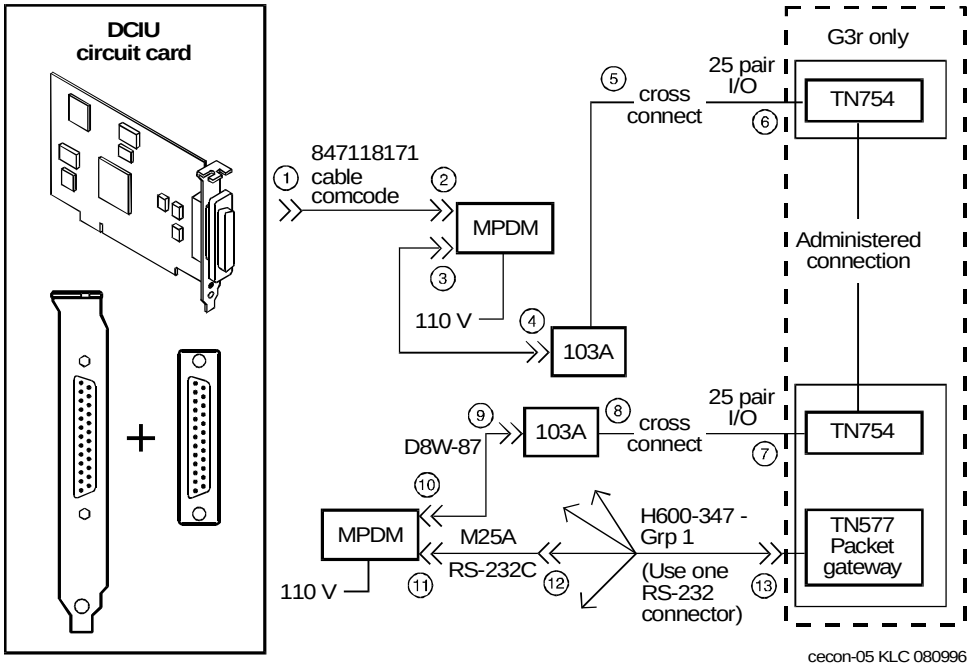


Figure B-7. Connecting Lucent Intuity System to the G3r via MPDMs

Connecting Lucent Intuity System to the Network

The ACCX circuit card is used on the MAP platforms for connections to the network. Each card supports four networking channels via digital and/or analog remote connections using DCP and/or RS-232 links respectively. The MAP/100 supports only one ACCX card. Each ACCX card terminates four data channels in one of the following combinations:

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

Each ACCX card includes a ten-foot (three-meter) cable and a breakout box for RS-232 or DCP connections. The ACCX card is located in slot 3 on the MAP/100. Refer to Chapter 1, "Preparing the Site", for information on RS-232 and DCP cable pinouts and the breakout box. Refer to Chapter 8, "Installing Optional Feature Circuit Cards", for information on how to install the ACCX card.

Read the following pages for cable connection information.

Connecting Lucent Intuity System to the Network via Two DCP Lines

Use the following procedure and illustration to make these connections.

1. Attach the provided 78-pin cable to the ACCX circuit card.
2. Attach the other end of the cable to J1 on the provided breakout box.
3. Attach ED5P208 - Grp 30 cable to the DCP connector on the breakout box.
4. Attach the other end of the ED5P208-Grp 30 cable to the customer wall field.

See the following figure.

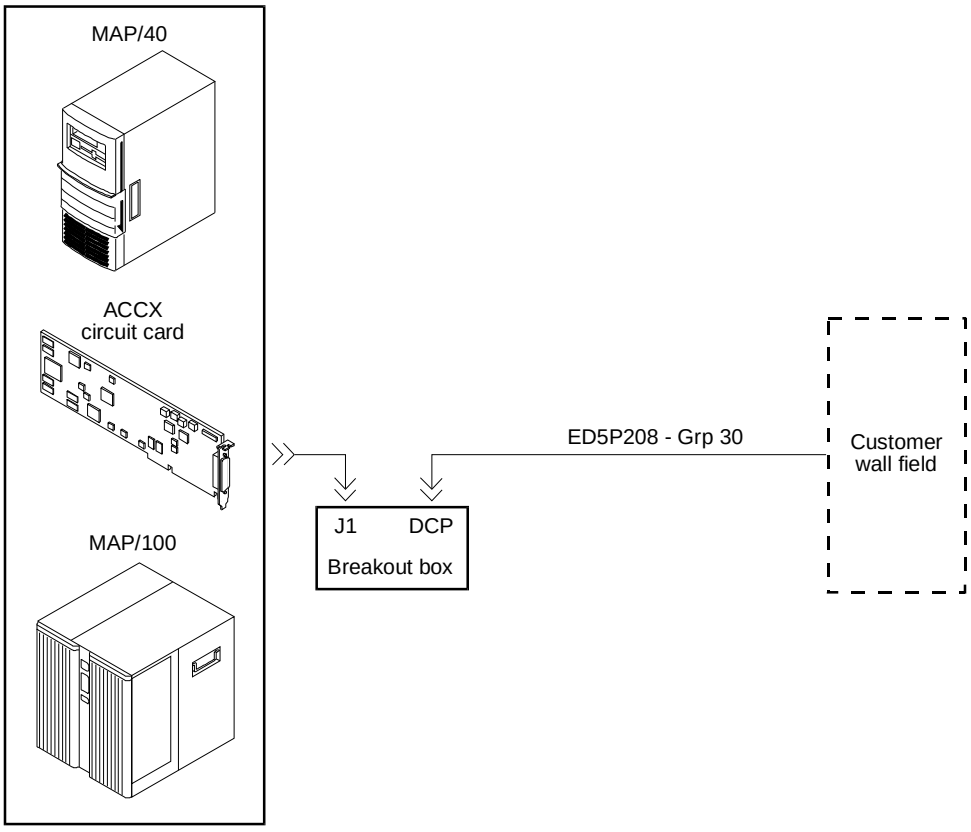


Figure B-8. Connecting Lucent Intuity System to the Network via Two DCP Lines

Connecting Intuity to the Network via Two RS-232 and One DCP Lines

Use the following procedure and illustration to make these connections.

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

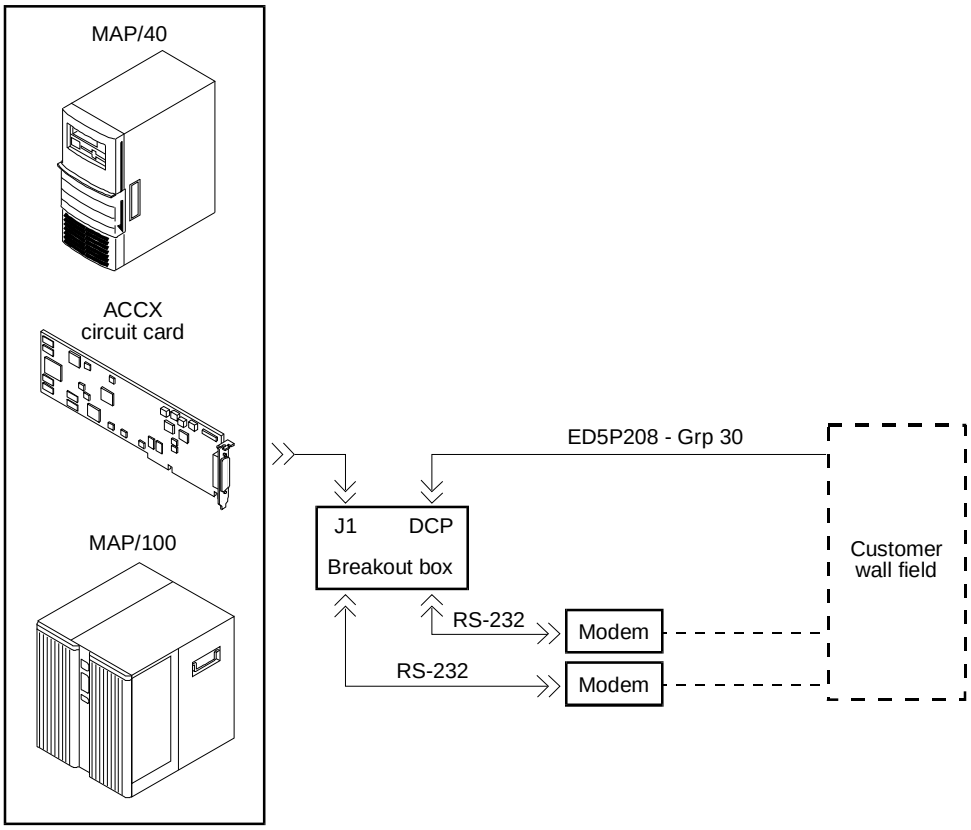


Figure B-9. Connecting Lucent Intuity System to the Network via Two RS-232 and One DCP Lines

Connecting Lucent Intuity System to the Network via Four RS-232 Cables

Use the following procedure and illustration to make these connections.

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

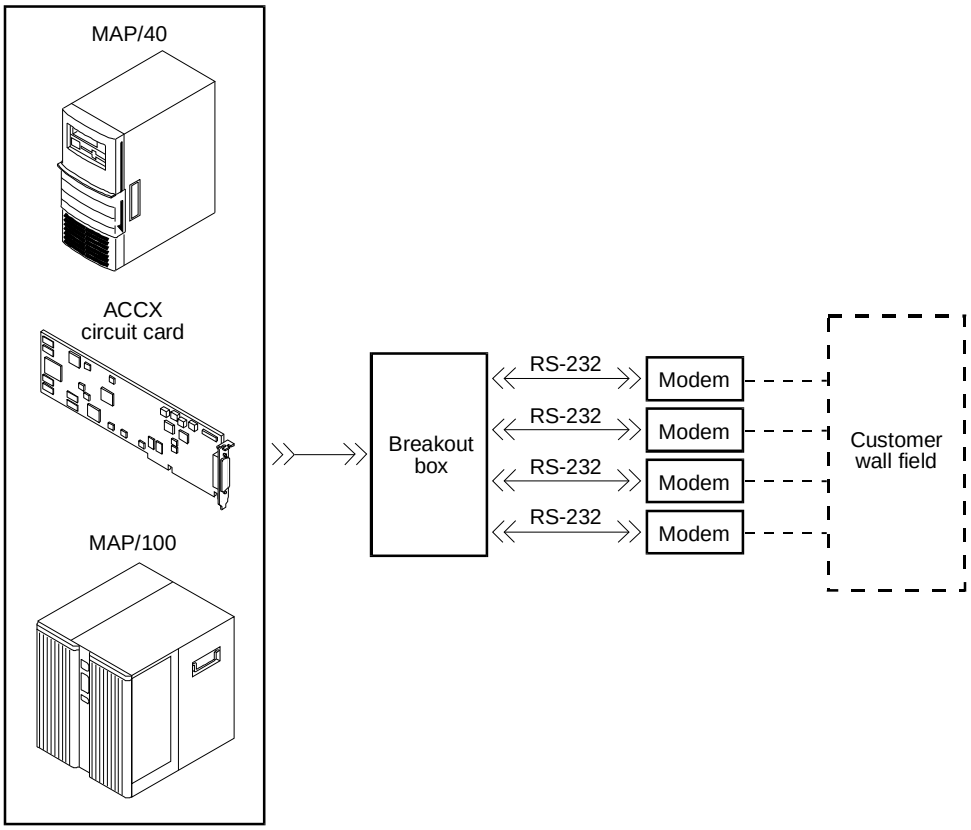


Figure B-10. Connecting Lucent Intuity System to the Network via Four RS-232 Cables

Overview of Lucent Intuity System Serial Port Connections

Serial port connections from the Lucent Intuity system to terminals, distant modems, or other customer equipment can be made either from COM1 (Serial Port 1) on the back of the MAP/100 or from the multi-port serial circuit card.

If there is only one serial connection to be made, use COM1 (Serial Port 1) on the back of the MAP/100. If more then one serial connection is to be made, use the multi-port card first (up to eight connections) and then use COM1.

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

See the table below for circuit card slot locations on the platform. See the following figure for an overview of serial port connections.

Table B-1. Serial Port Platform Locations

Circuit Card	Location
COM 1 (serial port 1)	Back of MAP/100
Multi-port serial card	Slot 4

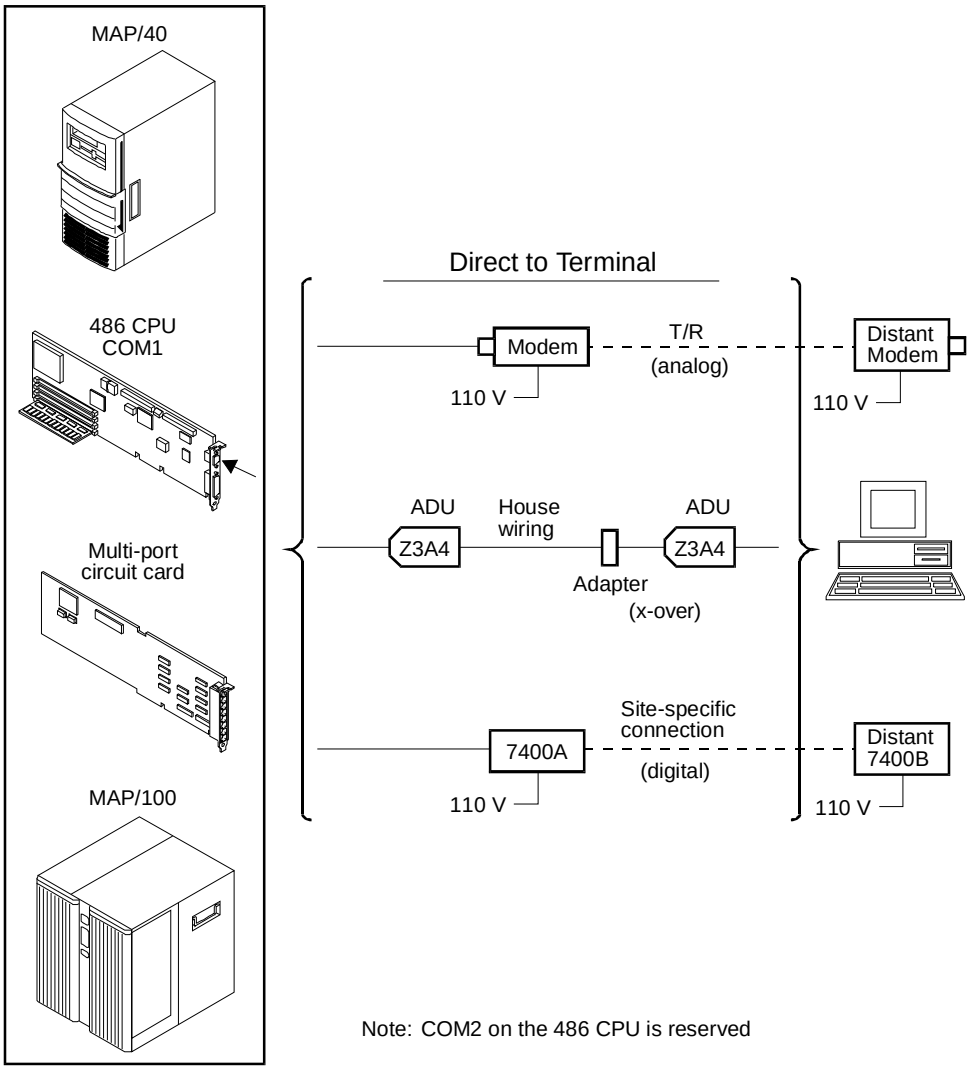


Figure B-11. Overview of Intuity Serial Port Connections

Connecting Lucent Intuity System COM1 to Customer Equipment via a Modem

Use the following procedure and illustration to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/100.
2. Attach the other end of the RS-232 cable to a modem.
3. Make cable connections between the modem and the customer equipment.

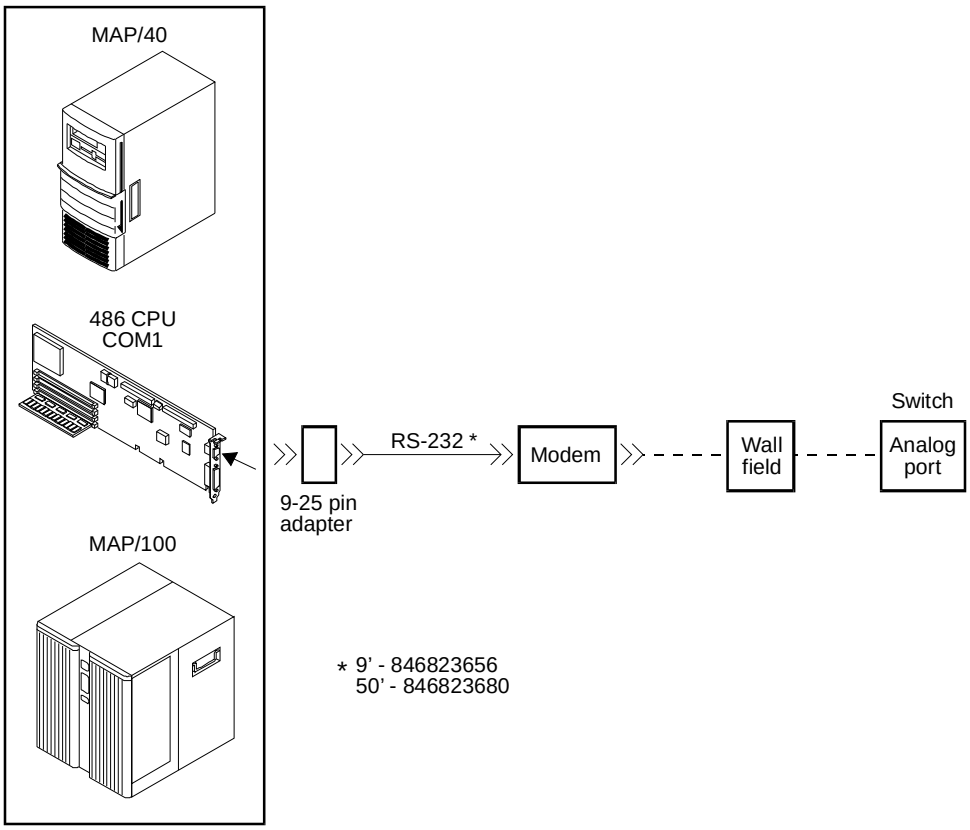


Figure B-12. Connecting Lucent Intuity System COM1 to Customer Equipment via a Modem

Connecting Lucent Intuity System COM1 to a 715 Terminal DCE Port via ADUs

Use the following procedure and illustration to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/100.
2. Attach the other end of the RS-232 cable to the ADU.
3. On the other end of the ADU, attach a D8AM crossover cord.
4. Connect the D8AM crossover cord to customer premises wiring.
5. At the other end of the customer premises wiring, attach the customer wiring to another ADU.
6. At the other end of that ADU, attach an RS-232 cable.
7. Attach the other end of this RS-232 cable to the 715 DCE port or other DCE device.

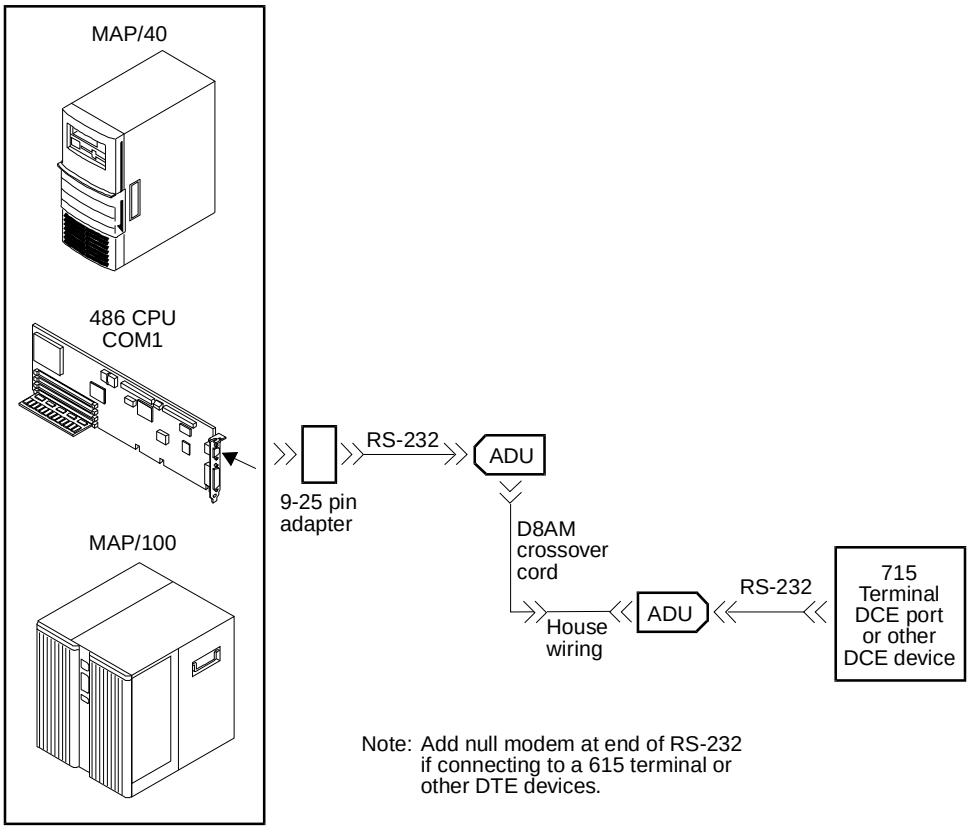


Figure B-13. Connecting Lucent Intuity System COM1 to a 715 Terminal DCE Port via ADUs

Connecting Lucent Intuity System COM1 to a Distant Data Module via a 7400A

Use the following procedure and illustration to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/100.
2. Attach the other end of the RS-232 cable to a 7400A data module.
3. Cable between the 7400A data module and the distant 7400B data module.

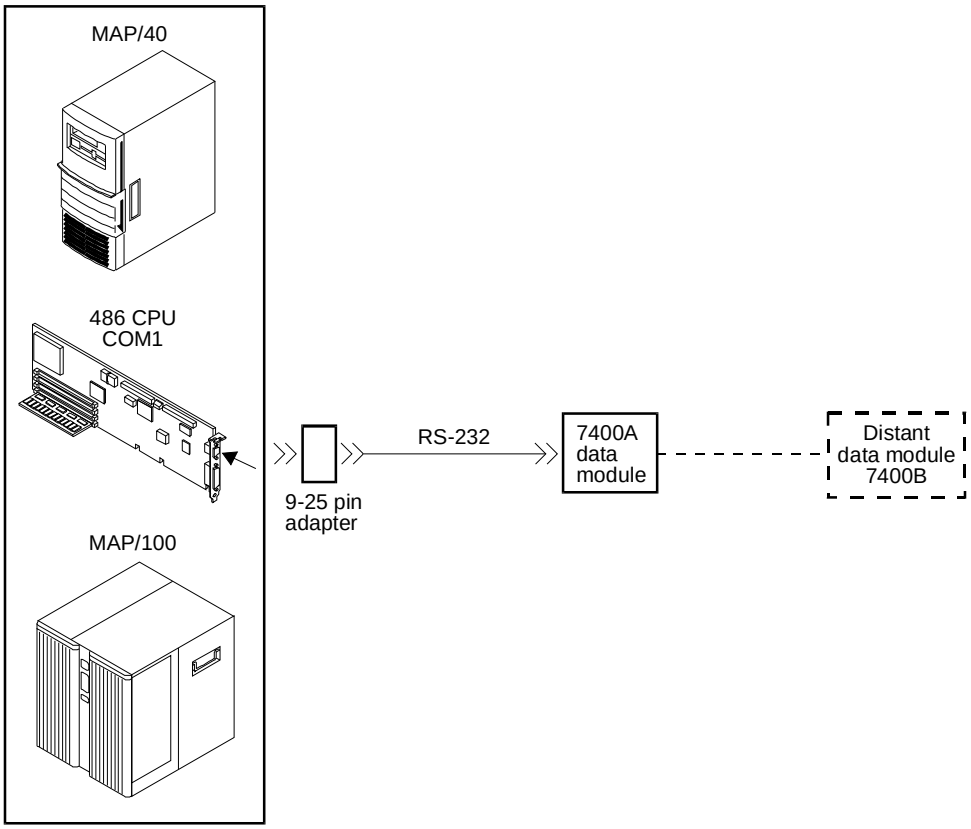


Figure B-14. Connecting Lucent Intuity System COM1 to a Distant Data Module via a 7400A

Connecting Lucent Intuity System COM1 to a 615 Terminal or Other DTE Device via a NULL Modem

Use the following procedure and illustration to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/100.
2. Attach the other end of the RS-232 cable to the NULL modem.
3. On the other end of the NULL modem, attach another RS-232 cable.
4. Attach the other end of this RS-232 cable to the 615 terminal or other DTE device.

NOTE:
The NULL modem must be provided locally.

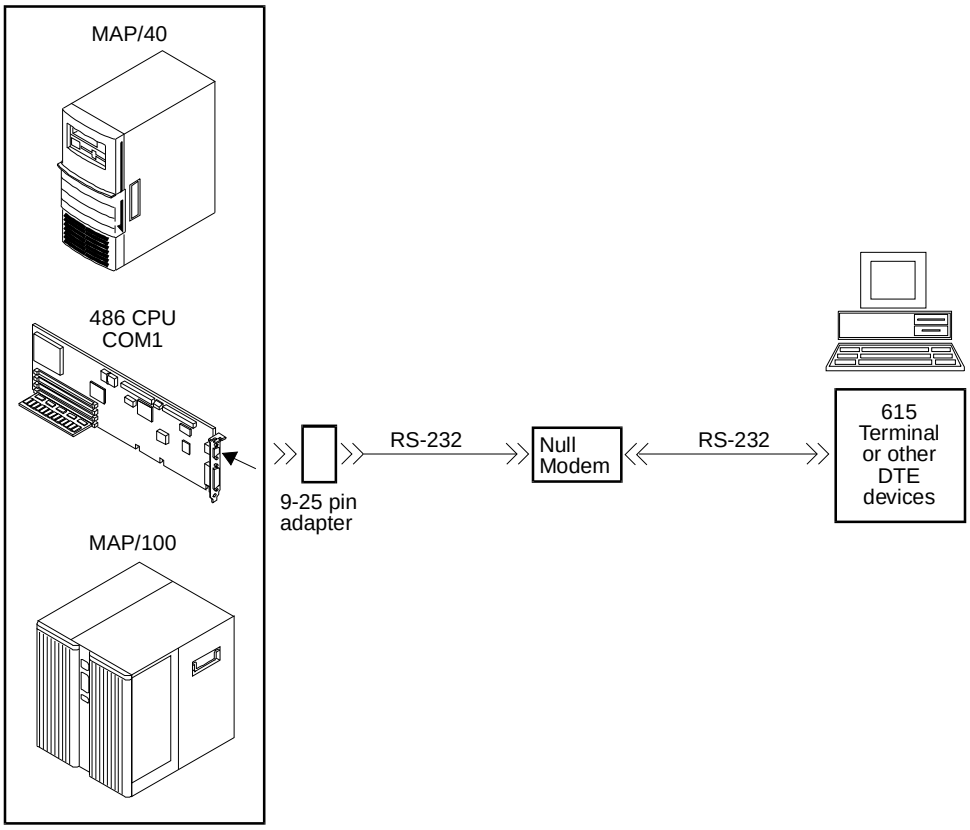


Figure B-15. Connecting Lucent Intuity System COM1 to a 615 Terminal via a NULL Modem

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

Use the following procedure and illustration to make these connections.

1. Attach an RS-232 cable to COM1 on the back of the MAP/100 platform.
2. Attach the other end of the RS-232 cable to the 715 terminal DCE port or other DCE device.

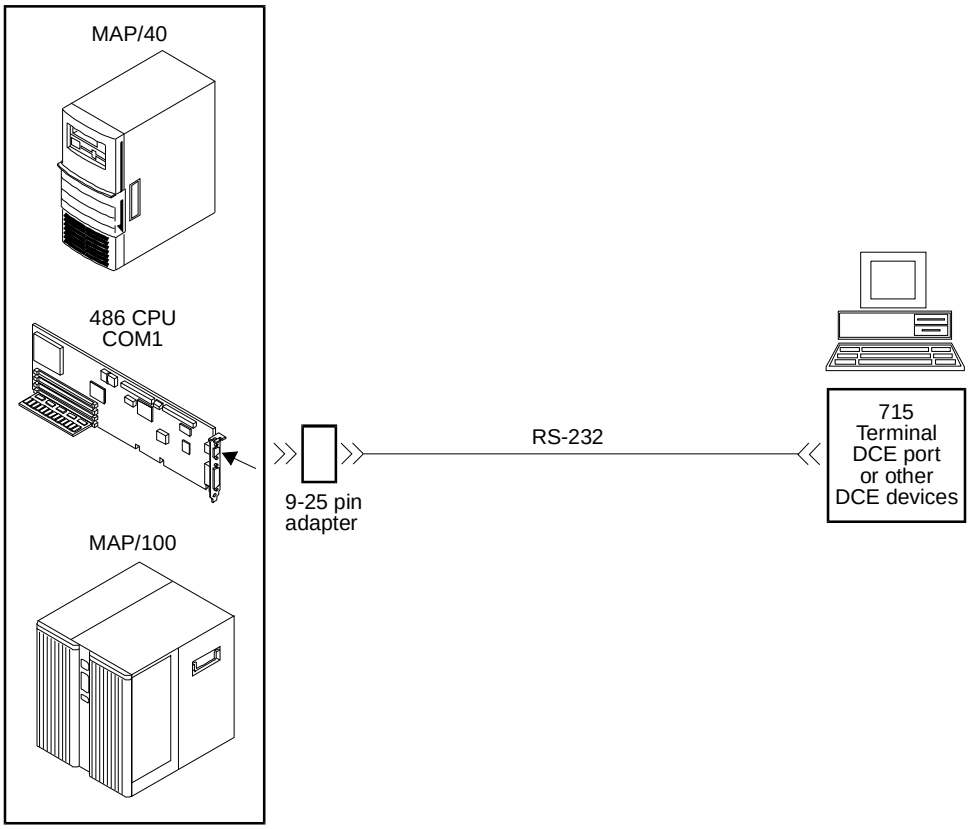


Figure B-16. Making a Direct Connection from Lucent Intuity COM1 to a 715 Terminal or Other DCE Device

Connecting Lucent Intuity System Multi-Port Card to Customer Equipment via a Modem

Use the following procedure and illustration to make these connections.

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

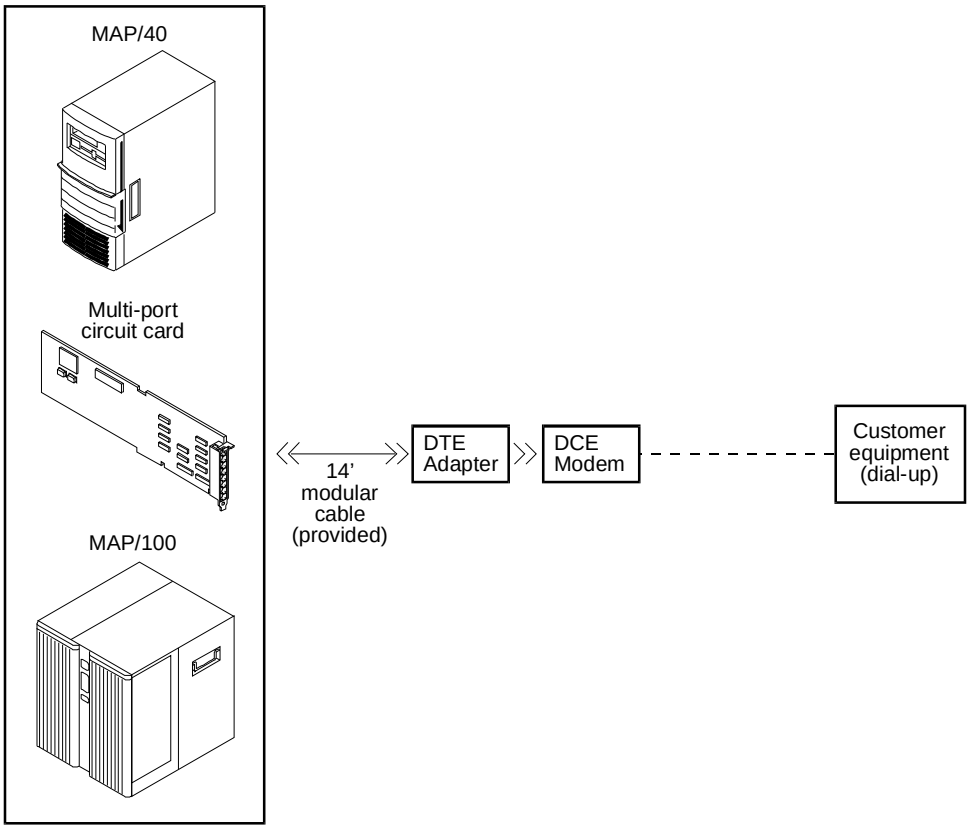


Figure B-17. Connecting the Lucent Intuity Multi-Port Card to Customer Equipment via a Modem

Connecting the Lucent Intuity System Multi-Port Card to a Terminal via ADUs

Use the following procedure and illustration to make these cable connections.

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

   DTE adapters are described in Chapter 1, "Preparing the Site".
3. Connect the DTE adapter to a 400D auxiliary power adapter if necessary. The MAP/100 may not have the needed power for the ADU connection.

   This step is not illustrated below.
4. Connect the 400D auxiliary power adapter to the ADU.
5. Attach a D8AM crossover cord to the other end of the ADU.
6. Connect the D8AM crossover cord to house wiring.
7. Connect another ADU to the other end of the house wiring.
8. Attach an RS-232 cable to the other end of this ADU.
9. Connect the other end of the RS-232 cable to the 715 terminal or other DCE device.

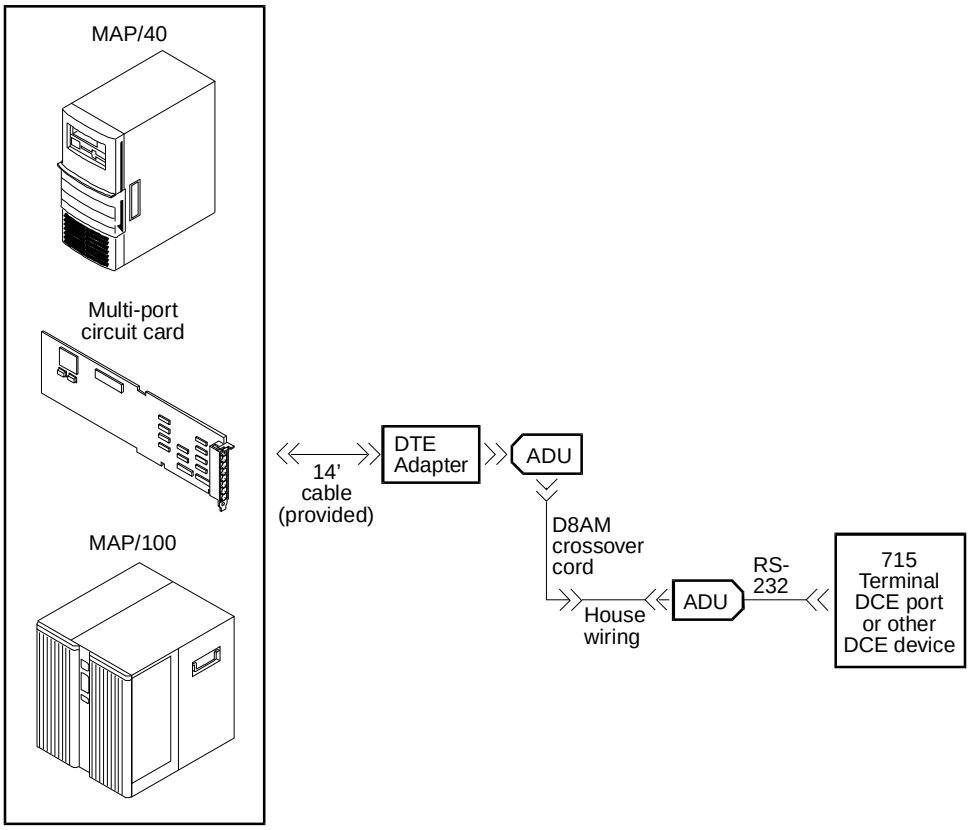


Figure B-18. Connecting the Lucent Intuity Multi-Port Card to a Terminal via ADUs

Connecting the Lucent Intuity Multi-Port Card to a Distant Data Module via a 7400A

Use the following procedure and illustration to make these cable connections.

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

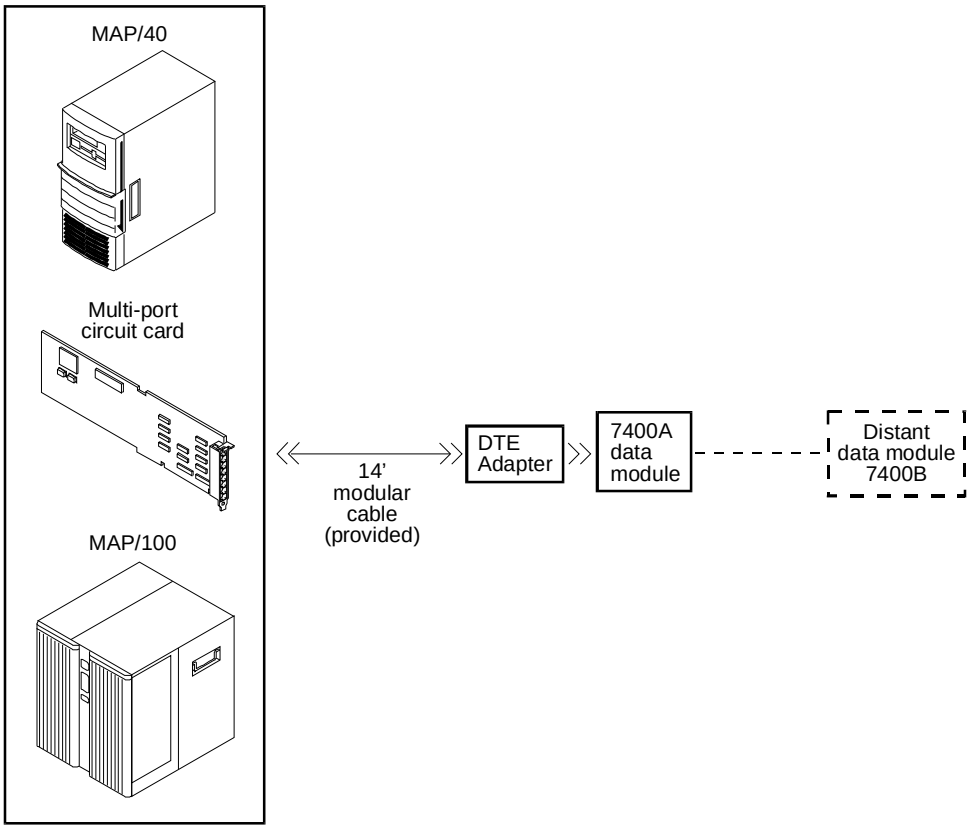


Figure B-19. Connecting Lucent Intuity Multi-Port Serial Card to a Distant Data Module via a 7400A

Making a Direct Connection from Lucent Intuity Multi-Port to a 615 Terminal or Other DTE Devices

Use the following procedure and illustration to make these cable connections.

1. Attach the 14-foot (4.3-meter) modular cable (provided with the card) to the multi-port serial card.
2. Attach the other end of the 14-foot (4.3-meter) modular cable (provided with the multi-port card) to the DTE adapter.
3. Connect the DTE adapter to the NULL modem.
4. Connect an RS-232 cable to the NULL modem.
5. Connect the other end of the RS-232 cable to a 615 terminal or other DTE device.

NOTE:
The NULL modem must be provided locally.

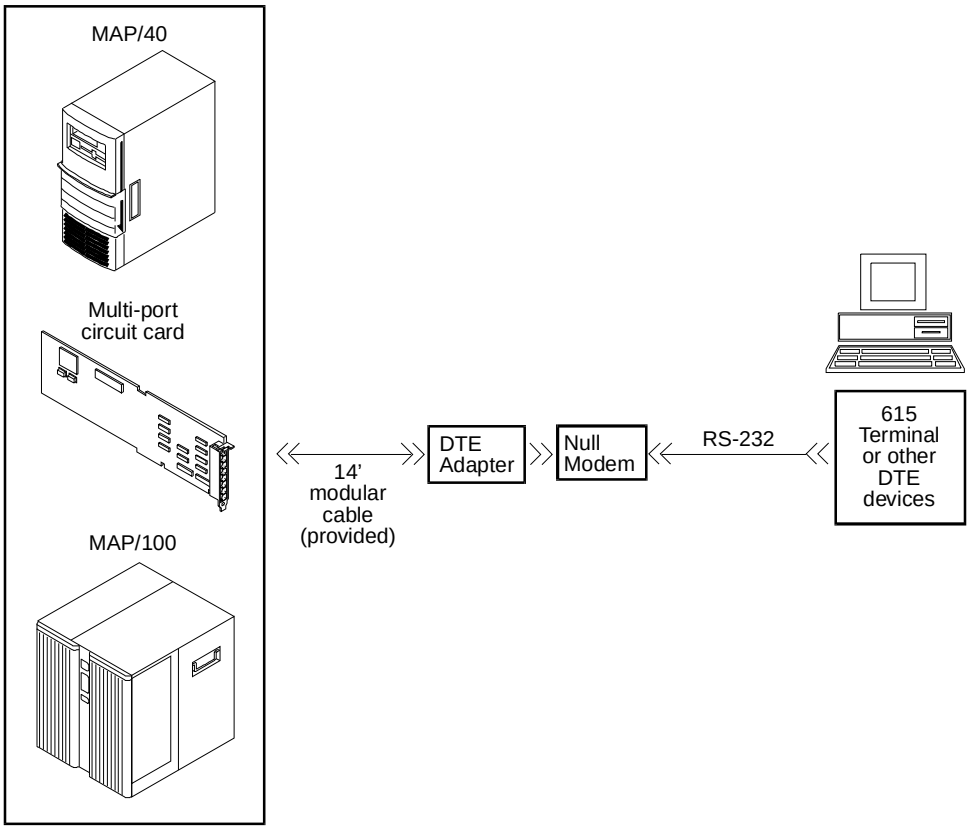


Figure B-20. Making a Direct Connection from Lucent Intuity Multi-Port to 615 Terminal or other DTE Devices

Making a Direct Connection from Lucent Intuity Multi-Port to 715 Terminal or Other DCE Devices

Use the following procedure and illustration to make these cable connections.

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

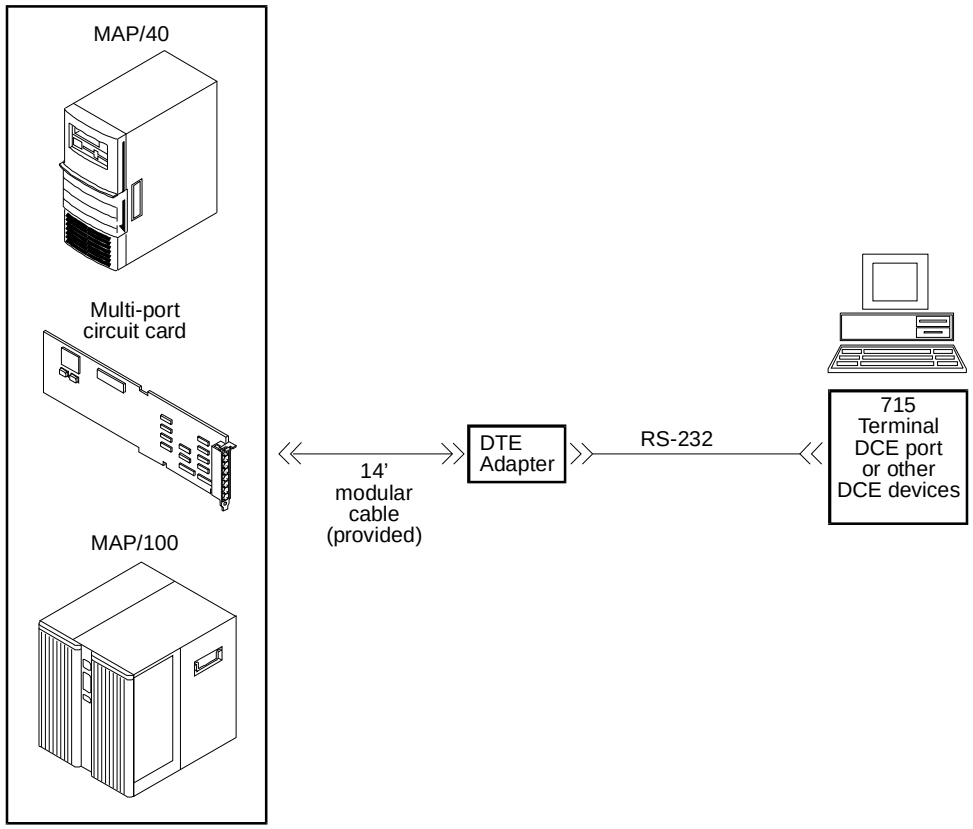


Figure B-21. Making a Direct Connection from Lucent Intuity Multi-Port Card to a Terminal or other DCE Devices

Cable and Adapter Ordering Numbers

The following tables list cables, adapters, and ordering numbers for the following types of connections:

- Tip/Ring (AYC10 circuit card for all installations except Australia. AYC29 circuit card for Australian installations) Voice
- ACCX (AYC22 circuit card) Network
- Serial (multi-port serial card)

Table B-2. Cable Types and Lengths for Tip/Ring - (Voice) Connections

Type	Length feet / meters	ED #
G37A, F-to-M Port Line Customer Interface	15 / 4.6	ED5P208-30
G37B, F-to-M Port Line Customer Interface	20 / 6.1	ED5P208-30
G37C, F-to-M Port Line Customer Interface	25 / 7.6	ED5P208-30
G37D, F-to-M Port Line Customer Interface	30 / 9.1	ED5P208-30
G37E, F-to-M Port Line Customer Interface	35 / 10.7	ED5P208-30
G37F, F-to-M Port Line Customer Interface	40 / 12.2	ED5P208-30
G37G, F-to-M Port Line Customer Interface	45 / 13.7	ED5P208-30
G37H, F-to-M Port Line Customer Interface	50 / 15.2	ED5P208-30
G37J, F-to-M Port Line Customer Interface	55 / 16.8	ED5P208-30
G37K, F-to-M Port Line Customer Interface	60 / 18.3	ED5P208-30
G37L, F-to-M Port Line Customer Interface	65 / 19.8	ED5P208-30
G37M, F-to-M Port Line Customer Interface	70 / 21.3	ED5P208-30
G37N F-to-M Port Line Customer Interface	75 / 22.9	ED5P208-30
G37P, F-to-M Port Line Customer Interface	80 / 24.4	ED5P208-30
G37Q, F-to-M Port Line Customer Interface	85 / 25.9	ED5P208-30
G37R, F-to-M Port Line Customer Interface	90 / 27.4	ED5P208-30
G37S, F-to-M Port Line Customer Interface	95 / 29	ED5P208-30
G37T, F-to-M Port Line Customer Interface	100 / 30.5	ED5P208-30
G37U, F-to-M Port Line Customer Interface	125 / 38.1	ED5P208-30
G37V, F-to-M Port Line Customer Interface	150 / 45.7	ED5P208-30
G37W, F-to-M Port Line Customer Interface	175 / 53.3	ED5P208-30
G37X, F-to-M Port Line Customer Interface	200 / 61	ED5P208-30
G37Y,F-to-M Port line Customer Interface	300 / 91.4	ED5P208-30
G36A, F-to-F Port Line Customer Interface	15 / 4.6	ED5P208-30
G36B, F-to-F Port Line Customer Interface	20 / 6.1	ED5P208-30
G36C, F-to-F Port Line Customer Interface	25 / 7.6	ED5P208-30
G36D, F-to-F Port Line Customer Interface	30 / 9.1	ED5P208-30
G36E, F-to-F Port Line Customer Interface	35 / 10.7	ED5P208-30

Table B-2. Cable Types and Lengths for Tip/Ring - (Voice) Connections — *Continued*

G36F F-to-F Port Line Customer Interface	40 / 12.2	ED5P208-30
G36G, F-to-F Port Line Customer Interface	45 / 13.7	ED5P208-30
G36H, F-to-F Port Line Customer Interface	50 / 15.2	ED5P208-30
G36J, F-to-F Port Line Customer Interface	55 / 16.8	ED5P208-30
G36K, F-to-F Port Line Customer Interface	60 / 18.3	ED5P208-30
G36L, F-to-F Port Line Customer Interface	65 / 19.8	ED5P208-30
G36M, F-to-F Port Line Customer Interface	70 / 21.3	ED5P208-30
G36N, F-to-F Port Line Customer Interface	75 / 22.9	ED5P208-30
G36P, F-to-F Port Line Customer Interface	80 / 24.4	ED5P208-30
G36Q, F-to-F Port Line Customer Interface	85 / 25.9	ED5P208-30
G36R, F-to-F Port Line Customer Interface	90 / 27.4	ED5P208-30
G36S, F-to-F Port Line Customer Interface	95 / 29	ED5P208-30
G36T, F-to-F Port Line Customer Interface	100 / 30.5	ED5P208-30
G36U, F-to-F Port Line Customer Interface	125 / 38.1	ED5P208-30
G36V, F-to-F Port Line Customer Interface	150 / 45.7	ED5P208-30
G36W F-to-F Port Line Customer Interface	175 / 53.3	ED5P208-30
G36X, F-to-F Port Line Customer Interface	200 / 61	ED5P208-30
G36Y, F-to-F Port Line Customer Interface	300 / 91.4	ED5P208-30

Table B-3. Cable Types and Lengths for the ACCX Circuit Card - DCP Connection

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

Table B-3. Cable Types and Lengths for the ACCX Circuit Card - DCP Connection — *Continued*

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

Table B-4. Cables (Length), Adapters, Comcodes -- Serial Configurations

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

Table B-4. Cables (Length), Adapters, Comcodes -- Serial Configurations

Modem 10-pin modular to 25-pin male	Adapter	846362754
Modem 10-pin modular to 25-pin female	Adapter	846362762
Terminal/printer 8-pin modular to 25-pin male	Adapter	403602717
Modem 8-pin modular to 25-pin male	Adapter	403417538

Abbreviations

A

AC
alternating current

ACD
automatic call distribution

ADAP
administration and data acquisition package

ADU
asynchronous data unit

ALT
assembly load and test

AMIS
Audio Messaging Interchange Specification

API
application programming interface

AUDIX
Audio Information Exchange

AWG
American wire gauge

B

BIOS
basic input/output system

bit
binary digit

bps
bits per second

BRI
basic rate interface

BSC
binary synchronous communications

BTU
British thermal unit

C

CAS
call accounting system

CCA
call classification analysis

CDH
call data handler process

CELP
code excited linear prediction

CICS
customer information control system

CMS
call management system

CO
central office

COIN
central office implemented network

COM1
serial communications port 1

COM2
serial communications port 2

COR
class of restriction

COS
class of service

CPU
central processing unit

CSI
called subscriber information

CTS
clear to send

D

DAC
dial access code

DBP
database processor

DC
direct current

DCE
data communications equipment

DCIU
data communications interface unit

DCP
digital communications protocol

DCS
distributed communications system

DID
direct inward dialing

DIP
data interface process

DMA
direct memory access

DNIS
dialed number identification service

DSP
digital signal processor

DSR
data set ready

DSU
data service unit

DTE
data terminal equipment

DTMF
dual tone multifrequency

DTR
data terminal ready

E

EIA
Electronic Industries Association

ESD
electrostatic discharge

ESS
electronic switching system

F

F key
function key

FIFO
first-in first-out

FOOS
facility out of service

G

GBCS
Global Business Communications Systems

GOS
grade of service

H

Hz
hertz

I

I/O
input/output

IDI
isolating data interface

IMAPI
Intuity messaging application programming interface

INADS
initialization and administration system

IRQ
interrupt request

ISDN
integrated services digital network

IVC6
integrated voice CELP card (6 channels)

IVR
integrated voice response

K

Kbps
kilobits per second

Kbyte
kilobyte (1024 bytes)

kHz
kilohertz

L

LAN
local area network

LCD
liquid crystal display

LED
light-emitting diode

LIFO
last-in first-out

LWC
leave word calling

M

MANOOS
manually out of service

Mbyte
megabyte (one million bytes)

MHz
megahertz

modem
modulator/demodulator

MPDM
modular processor data module

ms
millisecond

MT
maintenance (Intuity software component)

MTBF
mean time between failures

MWI
message-waiting indicator

MWL
message-waiting lamp

N

NW
Intuity AUDIX Digital Networking

O

OA&M
operations, administration, and maintenance

OS
operating system

OSI
open systems interconnection

P

PBX
private branch exchange

PC
power converter or personal computer

PDM
processor data module

PEC
price element code

PIB
processor interface board

PMS
property management system

POST
power-on self test

R

RAM
random-access memory

REN
ringer equivalence number

ROM
read-only memory

RTS
request to send

RTU
right to use

S

SCA
switch communications adapter

SCSI
small computer systems interface

SID
switch integration device

SIMM
single in-line memory module

SMSI
simplified message service interface

SW
switch integration (Intuity software component)

T

TCP/IP
Transmission Control Protocol/Internet Program

TDD
telecommunications device for the deaf

TDM
time division multiplex

T/R
tip/ring

TRIP
tip/ring input process

TSC
Lucent Technologies's Technical Services Center

U

UCD
uniform call distribution

UPS
uninterruptible power supply

V

VM
Intuity AUDIX Voice Messaging

VP
voice platform (Intuity software component)

VROP
voice response output process

Glossary

5ESS Switch
A Lucent Technologies central office switch that can be integrated with the Lucent Intuity system.

A

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

ACD
See *automatic call distribution*.

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

ADAP
See *administration and data acquisition package*.

address
Intuity AUDIX subscriber identification, containing the subscriber's extension and machine, that indicates where the system needs to deliver a message. An address may include several subscribers or mailing lists. Name or number addressing can be selected with the *A command.

adjunct
A separate system closely integrated with a switch, such as a Lucent Intuity system or a call management system (CMS).

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

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

ADU
See *asynchronous data unit*.

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

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

alphanumeric
Alphabetic, numeric, or punctuation symbols.

ALT
See *assemble load and test.*

AMIS
See *Audio Messaging Interchange Specification*.

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

ampere (amp)
The unit of measurement of electric current. One volt of potential across one ohm causes a current flow of one amp.

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

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

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

antistatic
A material that is treated to prevent the build-up of static electricity.

API
See *application programming interface.*

application programming interface
A set of formalized software calls and routines that can be referenced by an application program to access underlying network services.

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

asynchronous communication
A method of data transmission in which bits or characters are sent at irregular intervals and bits or characters are spaced by start and stop bits and not by time. See also *synchronous communication*.

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

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

attendant console
A special purpose phone with numerous lines and features located at the front desk. The front desk attendant uses the phone to answer and transfer calls.

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

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

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

AUDIX
See *Audio Information Exchange*.

autodelete
An Intuity AUDIX feature that allows subscribers to indicate that faxes are automatically deleted from their mailbox after being printed.

automated attendant
A feature that allows a user of an Intuity system to set up a main extension number with a menu of options that routes callers to an appropriate department at the touch of a button.

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

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

autoprint
An Intuity AUDIX feature that allows subscribers to indicate that faxes are automatically sent to a specified print destination.

autoscan
See *automatic message scan*.

AWG
See *American wire gauge.*

American wire gauge
A standard measuring gauge for non-ferrous conductors.

B

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

backup
A duplicate copy of files and directories saved on a removable media such as floppy diskette or tape. The backup filesystem may be copied back (restored) if the active version is damaged (corrupted) or lost.

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

baud
A unit of measurement that describes the speed of transferred information.

baud rate
Transmission signaling speed.

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

basic rate access
See *basic rate interface*.

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

binary digit (bit)
Two-number notation that uses the digits 0 and 1. Low-order bits are on the right (for example, 0001=1, 0010=2, and so forth). Four bits make a nybble; eight bits make a byte.

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

BIOS
See *basic input/output system*.

bit
See *binary digit*.

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

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

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

bps (bits per second)
The number of binary units of information (1s or 0s) that can be transmitted per second. Mbps refers to a million bits per second; Kbps refers to a thousand bits per second.

BRI
See *basic rate interface*.

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

BSC
See *binary synchronous communications*.

buffer
Memory used to compensate for time differences in transmission by temporarily storing data.

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

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

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

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

byte
A unit of storage in the computer. On many systems, a byte is eight bits (binary digits), the equivalent of one character of text.

C

call accounting system (CAS)
A software device that monitors and records information about a calling system.

call-answer
An Intuity AUDIX or Lucent Intuity Lodging feature that allows the system to answer a call and record a message when the subscriber is unavailable. Callers may be redirected to the system through the call coverage or call forwarding switch features. Intuity AUDIX subscribers may record a personal greeting for these callers.

call-answer language choice
The capability of subscriber mailboxes to accept messages in different languages. For the Intuity AUDIX application, this capability exists when the multilingual feature is turned on.

callback number
In AMIS analog networking, the telephone number transmitted to the recipient machine to be used in returning messages that cannot be delivered.

call coverage
A switch feature that defines a preselected path for calls to follow if the first (or second) coverage points are not answered. The Intuity system may be placed at the end of a coverage path to handle redirected calls through call coverage, send all calls, go to cover, etc.

call delivery
See *message delivery*.

call-distribution group
The set of analog port cards on the switch that connects subscribers and users to the Intuity system by distributing new calls to idle ports. This group (or split) is called automatic call distribution (ACD) on System 85, Generic 2, and Generic 3 and uniform call distribution (UCD) on System 75, Generic 1, and Generic 3. See also *automatic call distribution* and *uniform call distribution*.

call management system (CMS)
An inbound call distribution and management reporting package.

called tone (CED tone)
The distinctive tone generated by a fax endpoint when it answers a call (constant 2100 Hz tone).

called subscriber information (CSI)
The identifier for the answering fax endpoint. This identifier is sent in the T.30 protocol and is generally the telephone number of the fax endpoint.

calling tone (CNG tone)
The distinctive tone generated by a fax endpoint when placing a call (constant 1100 Hz tone on for one-half second, off for three seconds).

call vectoring
A System 85 R2V4, Generic 2, and Generic 3 feature that uses a vector (switch program), allowing a switch administrator to customize the behavior of calls sent to an automatic call distribution (ACD) group.

card cage
An area within the Intuity hardware platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive
A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape is to be removed from the system and stored as a backup.

CAS
See *call accouting system*.

CED tone
See *called tone*.

CELP
See *code excited linear prediction*.

central office (CO)
An office or location in which large telecommunication machines such as telephone switches and network access facilities are maintained. In a CO, private customer lines are terminated and connected to the public network through common carriers.

central processing unit (CPU)
The component of the computer that manipulates data and processes instructions coming from software.

channel
A telecommunications transmission path for voice and/or data.

channel capacity
A measure of the maximum bit rate through a channel.

CICS
See *customer information control system*.

class of service (COS)
The standard set of Intuity AUDIX features given to subscribers when they are first administered (set up with a voice mailbox).

clear to send (CTS)
Located on Pin 5 of the 25-conductor RS-232 interface, CTS is used in the transfer of data between the computer and a serial device.

client
A computer that sends, receives and uses data, but that also shares a larger resource whose function is to do most data storage and processing. For Intuity Message Manager, the subscriber's PC running Message Manager is the client. See also *server*.

CMS
See *call management system*.

CNG tone
See *calling tone*.

CO
See *central office*.

COS
See *class of service*.

code excited linear prediction
An analog-to-digital voice coding scheme.

co-located
An Intuity system installed in the same physical location as the host switch. See also *local installation*.

co-located adjunct
Two or more adjuncts that are serving the same switch (i.e., each has voice port connections to the switch) or that are serving different switches but can be networked through a direct RS-232 connection due to their proximity.

comcode
Lucent's numbering system for telecommunications equipment. Each comcode is a nine digit number that represents a specific piece of hardware, software, or documentation.

command
An instruction or request given by the user to the software to perform a particular function. An entire command consists of the command name and options. Also, one- or two-key touch tones that control a mailbox activity or function.

compound message
A message that combines both a message and a fax message into one unit, which is then handled by Intuity AUDIX as a single message.

configuration
The particular combination of hardware and software components selected for a system, including external connections, internal options, and peripheral equipment.

controller circuit card
A circuit card used on a computer system that controls its basic functionality and makes the system operational. These cards are used to control magnetic peripherals, video monitors, and basic system communications.

COS
See *class of service*.

coverage path
The sequence of alternate destinations to which a call is automatically sent when the call is not answered by a subscriber. This sequence is set up on the switch, normally with the Lucent Intuity system as the last or only destination.

CPU
See *central processing unit*.

cross connect
Distribution system equipment used to terminate and administer communication circuits.

cross connection
The connection of one wire to another, usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made.

CSI
See *called subscriber information*.

CTS
See *clear to send*.

D

DAC
See *dial access code*.

database
A structured set of files, records, or tables. Also, a collection of filesystems and files in disk memory that store the voice and nonvoice (program data) necessary for Lucent Intuity system operation.

data communications equipment (DCE)
Standard type of data interface normally used to connect to data terminal equipment (DTE) devices. DCE devices include the data service unit (DSU), the isolating data interface (IDI), and the modular processor data module (MPDM).

data communications interface unit (DCIU)
A switch device that allows nonvoice (data) communication between a Lucent Intuity system and a Lucent switch. The DCIU is a high-speed synchronous data link that communicates with the

common control switch processor over a direct memory access (DMA) channel that reads data directly from FP memory.

data link
A term used to describe the communications link used for data transmission from a source to a destination. For example, a phone line for data transmission.

data service unit (DSU)
A device used to access digital data channels. DATAPHONE II 2500 DSUs are synchronous data communications equipment (DCE) devices used for extended-local Lucent Intuity system connections. The 2600 or 2700 series may also be used; these are more expensive DSU options and support diagnostic testing and the DATAPHONE II Service network system.

data set
Lucent Technologies term for a modem. A data set usually includes the telephone. See also *modem*.

data terminal equipment (DTE)
Standard type of data interface normally used for the endpoints in a connection. Normally the Lucent Intuity system, most terminals, and the switch data link are DTE devices.

data terminal ready (DTR)
A control signal sent from the data terminal equipment (DTE) to the data communications equipment (DCE) that indicates the DTE is on and ready to communicate.

DBP
See *data base processor*.

DCE
See *data communications equipment*.

DCIU
See *data communications interface unit*.

DCP
See *digital communications protocol*.

DCS
See *distributed communications system*.

debug
See *troubleshoot*.

dedicated line
A communications path that does not go through a switch. A dedicated (hard-wired) path may be formed with directly connected cables. MPDMs, DSUs, or other devices may also be used to extend the distance that signals can travel directly through the building wiring.

default
A value that is automatically supplied by the system if no other value is specified.

default print number
The subscriber-administered extension to which autoprinted faxes are redirected upon their receipt into the subscriber's mailbox. This default print destination is also provided as a print option when the subscriber is manually retrieving and printing faxes from the mailbox.

delivered message
A message that has been successfully transmitted to a recipient's incoming mailbox.

demand testing
Testing performed on request (usually by service personnel).

diagnostic testing
A program run for testing and determining faults in the system.

dial-ahead/dial-through
The act of interrupting or preceding Intuity AUDIX system announcements by typing (buffering) touch-tone commands in the order the system would normally prompt for them.

dialed number identification service (*DNIS_SVC)
An available channel service assignment on the Lucent Intuity system. Assigning this service to a channel permits the Lucent Intuity system to interpret information from the switch and operate the appropriate application for the incoming telephone call.

DID
See *direct inward dialing*.

digital
Discrete data or signals such as 0 and 1, as opposed to analog continuous signals.

digital communications protocol (DCP)
A 64 Kbps digital data transmission code with a 160 Kbps bipolar bit stream divided into two information (I) channels and one signaling (S) channel.

digital networking
A method of transferring messages between messaging systems in a digital format. See also *Intuity AUDIX Digital Networking*.

digital signal processor
A specialized digital microprocessor that performs calculations on digitized signals that were originally analog and then sends the results on.

DIP
See *data interface process*.

DIP switch
See *dual in-line package switch*.

direct inward dialing
The ability for a caller outside a company to call an internal extension without having to pass through an operator or attendant.

direct memory access (DMA)
A quick method of moving data from a storage device directly to RAM, which speeds processing.

directory
An Intuity AUDIX feature allowing you to hear a subscriber's name and extension after typing **N at the activity menu. Also, a group of related files accessed by a common name in software.

display terminal
A data terminal with a screen and keyboard used for displaying Lucent Intuity screens and performing maintenance or administration activities.

distributed communications system (DCS)
A network of two or more switches that uses logical and physical data links to provide full or partial feature transparency. Voice links are made using tie trunks.

distribution list
See *mailing list*.

DMA
See *direct memory access*.

DNIS
See *dialed number identification service*.

DSP
See *digital signal processor*.

DSU
See *data service unit*.

DTE
See *data terminal equipment*.

DTMF
See *dual tone multifrequency*.

dual in-line package (DIP) switch
A very small switch, usually attached to a printed circuit card, in which there are only two settings: on or off (or 0 or 1). DIP switches are used to configure the card in a semipermanent way.

dual language greetings
The capability of Intuity AUDIX subscribers to create personal greetings in two different languages — one in a primary language and one in a secondary language. This capability exists when the multilingual feature is turned on and the prompts for subscriber mailboxes can be in either of the two languages.

dual tone multifrequency
A way of signaling consisting of a pushbutton or touch tone dial that sends out a sound which consists of two discrete tones picked up and interpreted by telephone switches.

E

electrostatic discharge (ESD)
Discharge of a static charge on a surface or body through a conductive path to ground. An ESD can be damaging to integrated circuits.

enabled/disabled
The state of a hardware device that indicates whether the Lucent Intuity system can use it. Devices must be equipped before they can be enabled (made active). See also *equipped/ unequipped*.

endpoint
See *fax endpoint*.

enhanced call transfer
An Intuity AUDIX feature that allows compatible switches to transmit messages digitally over the BX.25 (data) link. This feature is used for quick call transfers and requires a fully integrated digital switch. Callers can only transfer to other extensions in the switch dial plan.

enhanced serial data interface
A software- and hardware-controlled method used to store data on magnetic peripherals.

equipped/unequipped
The state of a networking channel that indicates whether Lucent Intuity software has recognized it. Devices must be equipped before they can be enabled (made active). See also *enabled/ disabled*.

error message
A message on the screen indicating that something is wrong and possibly suggesting how to correct it.

errors
Problems detected by the system during operation and recorded in the maintenance log. Errors can produce an alarm if they exceed a threshold.

escape from reply
The ability to quickly return to getting messages for a subscriber who gets stuck trying to respond to a message. To escape, the subscriber simply presses #.

escape to attendant
An Intuity AUDIX feature that allows a subscriber with the call answer feature to have a personal attendant or operator administered to potentially pick up an unanswered call. A system-wide extension could also be used to send callers to a live agent.

ESD
See *electrostatic discharge*.

events
Informational messages about the system's activities. For example, an event is logged when the system is rebooted. Events may or may not be related to errors and alarms.

F

facility out-of-service
The current channel is not receiving a dial tone and is not functioning.

fax endpoint
Any device capable of receiving fax calls. Fax endpoints include fax machines, individual PC fax modems, fax ports on LAN fax servers, and ports on fax-enabled messaging systems.

field
An area on a screen, menu, or report where information can be typed or displayed.

FIFO
See *first-in/first-out*.

file
A collection of data treated as a basic unit of storage.

filename
Alphanumeric characters used to identify a particular file.

file redundancy
See *mirroring*.

file system
A collection of related files (programs or data) stored on disk that are required to initialize a Lucent Intuity system.

first-in/first-out
The first call (or data) to be received is the first call (or data) to be processed.

F key
See *function key*.

FOOS
See *facility out-of-service*.

format
To set up a disk, floppy diskette, or tape with a predetermined arrangement of characters so that the system can interpret meaningful information.

function
Individual steps or procedures within a mailbox activity.

function key (F key)
A key on a computer keyboard that performs a defined function when pressed. The user interface for the Lucent Intuity system defines keys F1 through F8.

G

Generic 1, 2, or 3
Lucent switch system software releases. Generic 1, Generic 3i, and Generic 3s correspond to the new generation of System 75-based software. Generic 2 and Generic 3r correspond to the new release of System 85-based software.

generic tape
A copy of the standard software and stand-alone tape utilities that is shipped with a new Lucent Intuity system.

GOS
See *grade of service*.

grade of service (GOS)
A parameter that describes the delays in accessing a port on the Lucent Intuity system. For example, if the GOS is P05, 95% of the callers would hear the system answer and 5% would hear ringing until a port became available to answer the call.

guaranteed fax
A feature of Lucent Intuity FAX Messaging that temporarily stores faxes sent to a fax machine. In cases where the fax machine is busy or does not answer a call, the call is sent to an Intuity AUDIX mailbox.

guest password
A feature that allows users who are not Intuity AUDIX subscribers to leave messages on the system by dialing a subscriber's extension and entering a system-wide guest password.

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 non-removable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware
The physical components of a computer system. The central processing unit, disks, tape and floppy drives are all hardware.

header
Information that the system creates to identify a message. A message header includes the originator or recipient, type of message, creation time, and delivery time.

help
A command run by pressing HELP or CTRL ? on a Lucent Intuity display terminal to show the options available at your current screen position. In the Intuity AUDIX system, press * H on the telephone keypad to get a list of options. See also *on-line help*.

hertz (Hz)
A measurement of frequency in cycles per second. A hertz is one cycle per second.

host switch
The switch directly connected to the Lucent Intuity system over the data link. Also, the physical link connecting a Lucent Intuity system to a distributed communications system (DCS) network.

hunt group
A group of analog ports on a switch usually administered to search for available ports in a circular pattern.

Hz
See *hertz*.

I

I/O
Input/output.

IDI
See *isolating data interface*.

IMAPI
See *Intuity messaging application programming interface*.

INADS
See *initialization and administration system*.

information service
See *bulletin board*.

initialization
The process of bringing a system to a predetermined operational state. The start-up procedure tests hardware; loads the boot filesystem programs; locates, mounts, and opens other required filesystems; and starts normal service.

initialization and administration system (INADS)
A computer-aided maintenance system used by remote technicians to track alarms.

initialize
To start up the system for the first time.

input
A signal fed into a circuit or channel.

integrated services digital network (ISDN)
A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

integrated voice processing CELP (IVC6) card
A computer tip/ring circuit card that supports both fax processing and voice processing capabilities. It provides two analog ports to support six analog channels. All telephone calls to and from the Lucent Intuity system are processed through tip/ring circuit cards.

integrated voice response
An application module that allows customers to write their own alternate applications, also known as a script builder.

interface
The device or software that forms the boundary between two devices or parts of a system, allowing them to work together. See also *subscriber interface*.

interrupt request (IRQ)
A device that signals the data bus and the CPU that it needs attention.

Intuity AUDIX Digital Networking
A Lucent Intuity feature that allows customers to link together up to 500 remote Lucent Intuity machines for a total of up to 500,000 remote subscribers. See also *digital networking*.

Intuity Message Manager
A Windows-based software product that allows Intuity AUDIX subscribers to receive, store, and send their voice/FAX messages from a PC.

Intuity messaging application programming interface (IMAPI)
A software function-call interface that allows Intuity AUDIX to interact with Lucent Intuity Message Manager.

I/O address
input/output address.

IRQ
See *interrupt request*.

ISDN
See *integrated services digital network*.

isolating data interface (IDI)
A synchronous, full duplex data device used for cable connections between a Lucent Intuity GPSC-AT/E card and the switch data communications interface unit (DCIU).

IVC6
See *integrated voice processing CELP (IVC6) card.*

IVR
See *integrated voice response*.

J

jumper
Pairs or sets of small prongs on circuit cards and mother boards that allow the user to instruct the computer to select one of its available operation options. When two pins are covered, an electrical circuit is completed.

K

Kbps
kilobits per second; one thousand bits per second.

Kbyte
kilobyte per second; 1024 thousand bytes per second.

L

label
The name assigned to a disk device (either a removable tape cartridge or permanent drive) through software. Cartridge labels may have a generic name (such as 3:3) to show the software release or a descriptive name if for backup copies (such as back01). Disk drive labels usually indicate the disk position (such as disk00 or disk02).

LAN
See *local area network*.

last-in/first-out
The last call (or data) to be received is the first call (or data) to be processed.

LCD
See *liquid crystal display*.

leave word calling (LWC)
A switch feature that allows the calling party to leave a standard (nonvoice) message for the called party using a feature button or dial access code.

LED
See *light emitting diode*.

LIFO
See *last-in/first-out*.

light emitting diode (LED)
A light indicator on the hardware platform that shows the status of operations.

liquid crystal display (LCD)
The 10-character alphanumeric display that shows status of the system, including alarms.

load
To read software from external storage (such as disk) and place a copy in system memory.

local area network (LAN)
A network of PCs that communicate with each other and that normally share the resources of one or more servers. Operation of Lucent Intuity Message Manager requires that the Intuity AUDIX system and the subscribers' PCs are on a LAN.

local AUDIX machine
The Lucent Intuity system where a subscriber's Intuity AUDIX mailbox is located. All subscribers on this home machine are called *local subscribers*.

local installation
A switch, adjunct, or peripheral equipment installed physically near the host switch or system. See also *colocated*.

local network
An Intuity AUDIX Digital Network in which all Lucent Intuity systems are connected to the same switch.

login
A unique code used to gain approved access to the Lucent Intuity system. See also *password*.

login announcement
A feature enabling the system administrator and other designated users to create a mail message that is automatically played to all Intuity AUDIX subscribers every time they login to the system.

LWC
See *leave word calling*.

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

mailbox
A portion of disk memory given to each subscriber for creating and storing outgoing and incoming messages.

mailing list
A group of subscriber addresses assigned a list ID# and public or private status. A mailing list may be used to simplify sending messages to several subscribers.

maintenance
The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.

major alarm
An alarm detected by Lucent Intuity software that affects at least one fourth of the Lucent Intuity ports in service. Often a major alarm indicates that service is affected.

MANOOS
See *manually out-of-service*.

manually out-of-service
A unit has been intentionally taken out of service.

mean time between failures
The average time a manufacturer estimates before a failure occurs in a component or system.

megabyte
A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

memory
A device which can store logic states such that data can be accessed and retrieved. Memory may be temporary (such as system RAM) or permanent (such as disk).

menu tree
The way in which nested automated attendants are set up.

message categories
Groups of messages in Intuity AUDIX subscribers' mailboxes. Categories include new, unopened, and old for the incoming mailbox and delivered, accessed, undelivered, undeliverable (not deliverable), and file cabinet for the outgoing mailbox.

message delivery
An optional Lucent Intuity feature that permits subscribers to send messages to any touch-tone telephone, as long as the telephone number is in the range of allowable numbers. This feature is an extension of the AMIS analog networking feature and is automatically available when the AMIS feature is activated.

Message Manager
See *Intuity Message Manager*.

message-waiting indicator (MWI)
An indicator that alerts subscribers that they have received new mail messages. An MWI can be LED, neon, or audio (stutter dial tone).

message waiting lamp (MWL)
An lamp that alerts subscribers that they have received new mail messages. An MWL can be LED, neon, or audio (stutter dial tone). Also known as a message-waiting indicator.

migration
An installation that moves data from another messaging system to the Lucent Intuity system.

minor alarm
An alarm detected by maintenance software that affects less than one fourth of the Lucent Intuity ports in service, but has exceeded error thresholds or may impact service.

mirroring
a Lucent Intuity system feature that allows data from crucial filesystems to be continuously copied to backup (mirror) filesystems while the system is running. If the system has some problem where an original filesystem cannot be used, the backup filesystem is placed in service automatically.

mode code
A string of touch-tones from a MERLIN LEGEND switch. A mode code may send the Lucent Intuity AUDIX system information such as call type, calling party, called party, and on/off signals for message waiting lamps.

modem
A device that converts data from a form that is compatible with data processing equipment (digital) to a form compatible with transmission facilities (analog), and vice-vera.

modular
A term that describes equipment made of plug-in units that can be added together to make the system larger, improve its capabilities, or expand its size.

modular processor data module (MPDM)
A data device that converts RS-232C or RS-449 protocol signals to digital communications protocol (DCP) used by System 75/85, Generic1, and Generic 3 switches. MPDMs may connect Lucent Intuity to a switch DCIU or SCI link or connect terminals to a switch port card.

MPDM
See *modular processor data module*.

MTBF
See *mean time between failures*.

multi-application platform (MAP)
The computer hardware platform used by the Lucent Intuity system. Currently, a MAP/5, MAP/40, and MAP/100 are available.

multilingual feature
A feature that allows simultaneously-active language announcement sets on the system. With this feature, mailboxes can be administered so that subscribers can hear prompts in the language of their choice.

MWI
See *message-waiting indicator*.

MWL
See *message waiting lamp*.

N

networking
See *Intuity AUDIX Digital Networking*.

networking prefix
A set of digits that identifies a Lucent Intuity machine.

night attendant
The automated attendant created on a MERLIN LEGEND switch that automatically becomes active during off-hours. The night attendant substitutes for one or more daytime attendants.

not deliverable message
Al message that could not be delivered after a specified number of attempts. This usually means that the subscriber's mailbox is full.

O

on-line help
A Lucent Intuity feature that provides information about Lucent Intuity user interface screens by pressing a predetermined key. See also *help*.

open systems interconnection (OSI)
Internationally accepted framework of standards for communication between two systems made by different vendors.

operating system (OS)
The set of programs that runs the hardware and interprets software commands.

option
A choice selected from a menu, or an argument used in a command line to 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.

OS
See *operating system*.

OSI
See *open systems interconnection*.

outcalling
A Lucent Intuity feature that allows the system to dial subscribers' numbers to inform them they have new messages.

outgoing mailbox
A storage area for subscribers to keep copies of messages for future reference or action.

P

parallel transmission
The transmission of several bits of data at the same time over different wires. Parallel transmission of data is usually faster than serial transmission.

password
A code assigned to every Lucent Intuity terminal user and Intuity AUDIX subscriber for security reasons. After dialing the system, subscribers must dial their personal password correctly to log on. Passwords are also assigned to local and remote networked machines to identify the machines or the network. See also *login.*

password aging
An Intuity AUDIX feature that allows administrators to set a length of time after which a subscriber's password expires. The subscriber is then forced to change the password.

PBX
See *private branch exchange*.

PC
See *power converter*.

PDM (processor data module)
See *modular processor data module (MPDM)*.

PEC
See *price element code*.

peripheral device
Equipment external to the Lucent Intuity cabinet, such as printers or terminals, necessary for full operation and maintenance of the Lucent Intuity system. Also called *peripherals*.

personal directory
An Intuity AUDIX feature allowing each subscriber to create a private list of customized names.

personal fax extension
See *secondary extension*.

pinouts
The signal description per pin number for a particular connector.

PMS
See *property management system*.

port
A connection or link between two devices, allowing information to travel to a desired location. For example, a switch port connects to a Lucent Intuity voice port to allow a subscriber to leave a message.

POST
See power-on self test.

priority call answer
An Intuity AUDIX feature that allows callers to designate a call answer message as a priority message. To make a message priority, the caller presses 2 after recording the message.

priority messaging
An Intuity AUDIX feature that allows some subscribers to send messages that are specially marked and preferentially presented to recipients. See also *priority outcalling*.

priority outcalling
Works with the priority messaging feature by allowing the message recipient to elect to be notified by outcalling only when a priority message has been received. See also *priority messaging*.

private branch exchange (PBX)
An analog, digital, or electronic system where data and voice transmissions are not confined to fixed communications paths, but are routed among available ports or channels. See also *switch*.

private mailing list
A list of addresses that only the owning subscriber can access.

private messaging
A feature of Intuity AUDIX that allows a subscriber to send a message that cannot be forwarded by the recipient.

processor data module (PDM)
See *modular processor data module (MPDM)*.

processor interface (PI)
A System 75, Generic 1, Generic 3i, Generic 3s, and Generic 3vs switch data link. Also called *processor interface board (PIB)*.

programmed function key
See *function key*.

property management system
Term used in hospitality industry referring to the database used by hotels for guest records and billing information.

protocol
A set of conventions or rules governing the format and timing of message exchanges (signals) to control data movement and the detection and possible correction of errors.

public mailing list
A list of addresses that any Intuity AUDIX subscriber can use if that subscriber knows the owner's list ID# and extension number. Only the owner can modify a public mailing list.

pulse-to-touchtone converter
A device connected to the switch that converts signals from a rotary phone to touch tones. This device allows callers to use rotary phones to access options in a subscriber's mailbox or to access options in an automated attendant.

R

RAM
See *random access memory*.

random access memory (RAM)
The primary memory in a computer that can be overwritten with new information.

read-only memory
A memory device which is programmed at the factory and whose contents thereafter cannot be altered.

reboot
See *boot*.

remote access
Sending and receiving data to and from a computer or controlling a computer with terminals or PCs connected through communications links.

remote installation
A system, site, or piece of peripheral equipment that is installed in a different location from the host switch or system.

remote network
A network in which the systems are integrated with more than one switch.

remote service center
A Lucent or Lucent-certified organization that provides remote support to Lucent Intuity customers. Depending upon the terms of the maintenance contract, your remote service center may be notified of all major and minor alarms and have the ability to remotely log into your system and remedy problems.

remote subscribers
Intuity AUDIX subscribers whose mailboxes reside on a remote Intuity AUDIX Digital Networking machine.

remote terminal
A terminal connected to a computer over a phone line.

REN
See *ringer equivalence number*.

reply loop escape
An Intuity AUDIX feature that allows a subscriber the option of continuing to respond to a message after trying to reply to a nonsubscriber message.

reply to sender
An Intuity AUDIX feature that allows subscribers to immediately place a call to the originator of an incoming message if that person is in the switch's dial plan.

request to send (RTS)
One of the control signals on a RS-232 connector that places the modem in the originate mode so that it can begin to send.

restart
A Lucent Intuity feature that allows Intuity AUDIX subscribers who have reached the system through the call answer feature to access their own mailboxes by typing the *R (Restart) command. This feature is especially useful for long-distance calls or for users who wish to access the Lucent Intuity system when all the ports are busy. Also, the reinitialization of certain software. For example, restarting the messaging system.

restore
The process of recovering lost or damaged files by retrieving them from available backup tapes, floppy diskette, or another disk device.

retention time
The amount of time messages are saved on disk before being automatically deleted from a subscriber's mailbox.

ringer equivalence number (REN)
A number required in the United States for registering your telephone equipment with the phone company.

ROM
See *read-only memory*.

RS-232
A set of standards developed by the Electrical Industries Association (EIA) that specifies various electrical and mechanical characteristics for interfaces between computers, terminals, and modems.

RTS
See *request to send*.

S

sales representative
A Lucent or Lucent-certified person who assists you in the purchasing, planning, and implementation of Lucent equipment and solutions.

SCA
See *switch communications adapter*.

scan
To automatically play mail messages, headers, or both.

scheduled delivery time
A time and/or date that an Intuity AUDIX subscriber optionally assigns to a message that tells the system when to deliver it. If a delivery time is omitted, the system sends the message immediately.

SCSI
See *small computer system interface*.

secondary extension
A second, fax-dedicated extension that directs incoming faxes directly into a subscriber's mailbox without ringing the telephone. The secondary extension shares the same mailbox as the voice extension, but acts like a fax machine. Also called *personal fax extension*.

serial transmission
The transmission of one bit at a time over a single wire.

server
A computer that processes and stores data that is used by other smaller computers. For Lucent Intuity Message Manager, Intuity AUDIX is the server. See also *client*.

shielded cables
Cables that are protected from interference with metallic braid or foil.

SID
See *switch integration device*.

SIMMs
See *single in-line memory modules*.

simplified message service interface (SMSI)
Type of data link connection to an integrated 1A ESS switch or 5ESS switch in the Lucent Intuity system.

single in-line memory modules (SIMMs)
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.

small computer systems interface (SCSI)
An interface standard defining the physical, logical, and electrical connections to computer system peripherals such as tape and disk drives.

SMSI
See *simplified message service interface*.

split
Group (or queue) of analog ports on the switch. See also *call-distribution group*.

subscriber
A Lucent Intuity user who has been assigned the ability to access the Intuity AUDIX Voice Messaging system.

subscriber interface
The devices that subscribers use to access their mailboxes, manage mailing lists, administer personal greeting, and use other messaging capabilities. Subscriber interfaces include a touch-tone telephone keypad and a PC using Lucent Intuity Message Manager.

surge
A sudden voltage rise and fall in an electrical circuit.

surge protector
A device that plugs into the phone system and the commercial AC power outlet. It is designed to protect the phone system from high voltage surges that could be damaging to the phone system.

SW
See *switch integration*.

switch
An automatic telephone exchange that allows the transmission of calls to and from the public telephone network. See also *private branch exchange (PBX)*.

switched access
A connection made from one endpoint to another through switch port cards. This allows the endpoint (such as a terminal) to be used for several applications.

switch hook
The device at the top of most telephones which is depressed when the handset is resting in the cradle (on hook). This device is raised when the handset is picked up (the phone is off hook).

switch hook flash
A signaling technique in which the signal is originated by momentarily depressing the switch hook.

switch integration
Sharing of information between a messaging system and a switch in order to provide a seamless interface to callers and subscribers.

switch integration device
Operates as a digital telephone set emulator.

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*.

synchronous transmission
A type of data transmission where the data characters and bits are exchanged at a fixed rate with the transmitter and receiver synchronized. This allows greater efficiency and supports more powerful protocols.

system configuration
See *configuration*.

T

T.30
The standard for Group III fax machines that covers the protocol used to manage a fax session and negotiate the capabilities supported by each fax endpoint.

tape cartridge
One or more spare removable cartridges required to back up system information.

tape drive
The physical unit that holds, reads, and writes magnetic tape.

TCP/IP
See *transmission control protocol/internet program*.

TDD
See *telecommunications device for the deaf*.

TDM
See *time division multiplex*.

telecommunications device for the deaf (TDD)
A device with a keyboard and display unit that connects to or substitutes for a phone. The TDD allows a deaf or hearing-impaired person to communicate over the phone lines with other people who have TDDs. It also allows a deaf person to communicate with the Intuity AUDIX system.

terminal
See *display terminal*.

terminal type
A number indicating the type of terminal being used to log on to the Lucent Intuity system. Terminal type is the last required entry before gaining access to the Lucent Intuity display screens.

terminating resistor
A grounding resistor placed at the end of bus, line, or cable to prevent signals from being reflected or echoed.

time division multiplex
A device which derives multiple channels on a single transmission facility by connecting bit streams one at a time at regular intervals.

tip/ring
A term used to denote the analog telecommunications interface.

tone generator
A device acoustically coupled to a rotary phone, used to produce touch-tone sounds when subscribers cannot use a regular touch-tone generating voice terminal.

traffic
The flow of attempts, calls, and messages across a telecommunications network.

translations
Software assignments that tell a system what to expect on a certain voice port or the data link, or how to handle incoming data. They customize the Lucent Intuity system and switch features for users.

transmission control protocol/internet program (TCP/IP)
A set of protocols developed by the Department of Defense to link dissimilar computers across many kinds of networks. It is the protocol commonly used over Ethernet, as well as x.25, networks. Although committed to an eventual migration to an Open Systems Interconnection (OSI) architecture. TCP/IP currently divides networking functionality into only four layers: network interface, Internet, transport, and application.

T/R
See *tip/ring*.

troubleshoot
The process of locating and correcting errors in computer programs. Also called *debug*.

U

UCD
See *uniform call distribution*.

Undelete
An Intuity AUDIX feature that allows subscribers to restore the last message deleted. The subscriber presses * U to restore a deleted message.

undelivered message
A message that has not yet been sent to an Intuity AUDIX subscriber's incoming mailbox. The message resides in the sender's outgoing message and may be modified or redirected by the sender.

Unequipped
See *equipped/unequipped*.

unfinished message
A message that was recorded but not approved or addressed, usually the result of an interrupted Intuity AUDIX session. Also called *working message*.

uniform call distribution (UCD)
The type of call-distribution group (or hunt group) of analog port cards on some switches that connects subscribers and users to the Intuity AUDIX system. System 75, Generic 1, Generic 3, and some central office switches use UCD groups. See also *call-distribution group*.

uninterruptable power supply
An auxiliary power unit for a telephone system that provides continuous power in cases where commercial power is lost.

UNIX operating system
A multi-user, multi-tasking computer operating system.

upgrade
An installation that moves a Lucent Intuity system to a newer release.

untouched message
An Intuity AUDIX feature that allows a subscriber to keep a message in its current category by using the **H (Hold) command. If the message is in the new category, message-waiting indication remains active (for example, the message-waiting lamp will remain lit).

UPS
See *uninterruptable power supply*.

U. S. 123
An alternate announcement set in U. S. English whose prompts use numbers, not letters, to identify phone keypad presses. For example, a prompt might say, "press star three," instead of, "press star D."

user population
A combination of light, medium, and heavy users on which Lucent Intuity configuration guidelines are based.

V

vector
A customized program in the switch for processing incoming calls.

voice link
The Lucent Intuity analog connection(s) to a call-distribution group (or hunt group) of analog ports on the switch.

voice mail
See *voice message*.

voice mailbox
See *mailbox*.

voice message
Digitized information stored by the Lucent Intuity system on disk memory. Also called *voice mail*.

voice port
The tip/ring circuit card port that provides the interface between the Lucent Intuity system and the analog ports on the switch.

voice terminal
A telephone used for spoken communications with the Lucent Intuity system. A touch-tone telephone with a message-waiting indicator is recommended for all Intuity AUDIX subscribers.

voicing
Either speaking a message into the Lucent Intuity system during recording, or having the system playback a message or prompt to a subscriber.

volt
The unit of measurement of electromotive force. One volt is the force required to product a current of one ampere through a resistance of one ohm.

W

watt
A unit of electrical power that is required to maintain a current of one amp under the pressure of one volt.

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