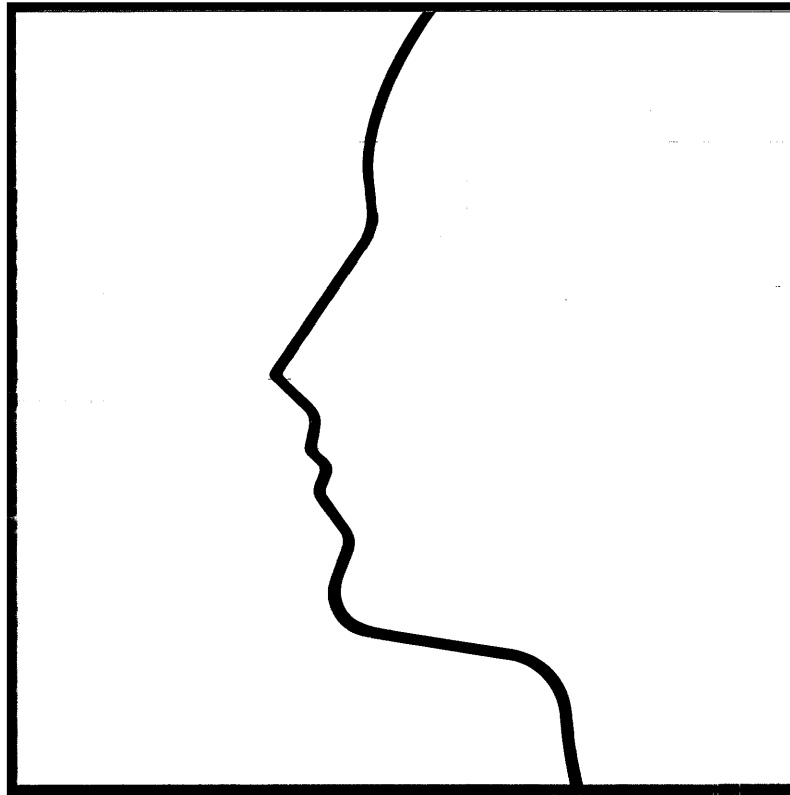


TEXAS INSTRUMENTS

EXPLORER™

7-SLOT SYSTEM

INSTALLATION



EXPLORER™ 7-SLOT SYSTEM INSTALLATION

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, can cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computer device pursuant to Subpart J of Part 15 of FCC Rules, which are designated to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case, the user at the user's own expense will be required to take whatever measures necessary to correct the interference.

WARNING: All international users that are subject to International Electrotechnical Commission (IEC) standards are required to read the Product Safety Instructions in Appendix A of this manual before using the Explorer system equipment. The Product Safety Instructions are also included in the OPEN FIRST box as a separate item.

WARNING: Lethal high voltages are present inside the chassis of this equipment. Only qualified service personnel who are familiar with the dangers of high voltages are permitted to open the chassis of this equipment for maintenance, equipment upgrading, or equipment rearrangement.

CAUTION: Do not stack more than two mass storage units on top of the Explorer 7-slot enclosure. When more than two units are stacked on top of the 7-slot enclosure, there is a danger that the stacked units will become top heavy and possibly tip over the 7-slot enclosure.

CAUTION: Check that all power cables are properly connected and that all ac input power switches are set to the proper ac voltages before you apply ac power to the Explorer systems.

MANUAL REVISION HISTORY

Explorer 7-Slot System Installation (2243140-0001)

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Revision C November 1986

Revision D June 1987

Revision E December 1987

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THE EXPLORER™ SYSTEM HARDWARE MANUALS

System Level Publications	Explorer 7-Slot System Installation	2243140-0001
	Explorer System Field Maintenance	2243141-0001
	Explorer System Field Maintenance Documentation Kit	2243222-0001
	Explorer System Field Maintenance Supplement	2537183-0001
	Explorer System Field Maintenance Supplement Documentation Kit	2549278-0001
	Explorer NuBus™ System Architecture General Description	2537171-0001

System Enclosure Equipment Publications	Explorer 7-Slot System Enclosure General Description	2243143-0001
	Explorer Memory General Description (8-megabytes)	2533592-0001
	Explorer 32-Megabyte Memory General Description	2537185-0001
	Explorer Processor General Description	2243144-0001
	68020-Based Processor General Description	2537240-0001
	Explorer II™ Processor and Auxiliary Processor Options General Description	2537187-0001
	Explorer System Interface General Description	2243145-0001
	Explorer Color System Interface Board General Description	2537189-0001
	Explorer NuBus Peripheral Interface General Description (NUPI board)	2243146-0001

Display Terminal Publications	Explorer Display Unit General Description	2243151-0001
	CRT Data Display Service Manual, Panasonic code number FTD85055057C	2537139-0001
	Explorer Color Console General Description	2537195-0001
	TRINITRON® Graphic Display Monitor GDM-1603 Service Manual, Sony® part number 0-558-986-01	2551107-0001
	Model 924 Video Display Terminal User's Guide	2544365-0001

143-Megabyte Disk/Tape Enclosure Publications	Explorer Mass Storage Enclosure General Description	2243148-0001
	Explorer Winchester Disk Formatter (ADAPTEC) Supplement to Explorer Mass Storage Enclosure General Description	2243149-0001
	Explorer Winchester Disk Drive (Maxtor) Supplement to Explorer Mass Storage Enclosure General Description	2243150-0001
	Explorer Cartridge Tape Drive (Cipher) Supplement to Explorer Mass Storage Enclosure General Description	2243166-0001
	Explorer Cable Interconnect Board (2236120-0001) Supplement to Explorer Mass Storage Enclosure General Description	2243177-0001

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143-Megabyte Disk Drive Vendor Publications	XT-1000 Service Manual, 5 1/4-inch Fixed Disk Drive, Maxtor Corporation, part number 20005 (5 1/4-inch Winchester disk drive, 112 megabytes) 2249999-0001 ACB-5500 Winchester Disk Controller User's Manual, Adaptec, Inc., (formatter for the 5 1/4-inch Winchester disk drive) 2249933-0001
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1/4-Inch Tape Drive Vendor Publications	Series 540 Cartridge Tape Drive Product Description, Cipher Data Products, Inc., Bulletin Number 01-311-0284-1K (1/4-inch tape drive) 2249997-0001 MT01 Tape Controller Technical Manual, Emulex Corporation, part number MT0151001 (formatter for the 1/4-inch tape drive) 2243182-0001 Viper™ Half-High Intelligent 4 1/4-Inch Streaming Cartridge Tape Drive SCSI Models 2060S and 2125S, Archive Corporation, part number 21136-001 2551106-0001
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182-Megabyte Disk/Tape Enclosure MSU II Publications	Mass Storage Unit (MSU II) General Description 2537197-0001
---	--

182-Megabyte Disk Drive Vendor Publications	Control Data® WREN™ III Disk Drive OEM Manual, part number 77738216, Magnetic Peripherals, Inc., a Control Data Company 2546867-0001
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515-Megabyte Mass Storage Subsystem Publications	SMD/515-Megabyte Mass Storage Subsystem General Description (includes SMD/SCSI controller and 515-megabyte disk drive enclosure) 2537244-0001
---	---

515-Megabyte Disk Drive Vendor Publications	515-Megabyte Disk Drive Documentation Master Kit (Volumes 1, 2, and 3), Control Data Corporation 2246129-0002 Volume 1, General Description, Operation, Installation and Checkout, and Part Data 2246125-0004 Volume 2, Theory, General Maintenance, Trouble Analysis, Electrical Checks, and Repair Information 2246125-0005 Volume 3, Diagrams 2246125-0006
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	1/2-Inch Tape Drive Theory of Operation (Volume 2), Cipher Data Products	2246126-0002
	SCSI Addendum With Logic Diagram, Cipher Data Products	2246126-0003

Printer Publications	Model 810 Printer Installation and Operation Manual	2311356-9701
	Omni 800™ Electronic Data Terminals Maintenance Manual for Model 810 Printers	0994386-9701
	Model 850 RO Printer User's Manual	2219890-0001
	Model 850 RO Printer Maintenance Manual	2219896-0001
	Model 850 XL Printer User's Manual	2243250-0001
	Model 850 XL Printer Quick Reference Guide	2243249-0001
	Model 855 Printer Operator's Manual	2225911-0001
	Model 855 Printer Technical Reference Manual	2232822-0001
	Model 855 Printer Maintenance Manual	2225914-0001
	Model 860 XL Printer User's Manual	2239401-0001
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	OmniLaser™ 2015 Page Printer Operator's Manual	2539178-0001
	OmniLaser 2015 Page Printer Technical Reference	2539179-0001
	OmniLaser 2015 Page Printer Maintenance Manual	2539180-0001
	OmniLaser 2108 Page Printer Operator's Manual	2546348-0001
	OmniLaser 2108 Page Printer Technical Reference	2546349-0001
	OmniLaser 2108 Page Printer Maintenance Manual	2546350-0001
	OmniLaser 2115 Page Printer Operator's Manual	2546344-0001
OmniLaser 2115 Page Printer Technical Reference	2546345-0001	
OmniLaser 2115 Page Printer Maintenance Manual	2546346-0001	

Communications Publications	990 Family Communications Systems Field Reference	2276579-9701
	EI990 Ethernet® Interface Installation and Operation	2234392-9701
	Explorer NuBus Ethernet Controller General Description	2243161-0001
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	Introduction to the Explorer System	2243190-0001
	Explorer Zmacs Editor Tutorial	2243191-0001
	Explorer Glossary	2243134-0001
	Explorer Networking Reference	2243206-0001
	Explorer Diagnostics	2533554-0001
	Explorer Master Index to Software Manuals	2243198-0001
Explorer System Software Installation Guide	2243205-0001	

Programming With the Explorer	Explorer Programming Concepts	2549830-0001
	Explorer Lisp Reference	2243201-0001
	Explorer Input/Output Reference	2549281-0001
	Explorer Zmacs Editor Reference	2243192-0001
	Explorer Tools and Utilities	2549831-0001
	Explorer Window System Reference	2243200-0001

Explorer Options	Explorer Natural Language Menu System User's Guide	2243202-0001
	Explorer Relational Table Management System User's Guide	2243203-0001
	Explorer Grasper User's Guide	2243135-0001
	Explorer TI Prolog User's Guide	2537248-0001
	Programming in Prolog, by Clocksin and Mellish	2249985-0001
	Explorer Color Graphics User's Guide	2537157-0001
	Explorer TCP/IP User's Guide	2537150-0001
	Explorer LX™ User's Guide	2537225-0001
	Explorer LX System Installation	2537227-0001
	Explorer NFS™ User's Guide	2546890-0001
	Explorer DECnet™ User's Guide	2537223-0001
	Personal Consultant™ Plus Explorer	2537259-0001

System Software Internals	Explorer System Software Design Notes	2243208-0001
	Release Information, Explorer System Software	2549844-0001

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ABOUT THIS MANUAL

Purpose

This manual provides installation procedures for the Texas Instruments Explorer 7-slot computer system. This manual includes general information about the physical features of the system, the factors to consider in selecting and preparing a site for the system, the initial power-up procedures, and the verification of self-test procedures. The information in this document is intended for value-added resellers (VARs), installation and maintenance personnel, operators, and system users.

This manual provides installation information for the basic Explorer systems that are described in Section 1. Installation information is provided in the general description manuals for optional equipment and for peripherals that are added to the basic Explorer system. Software manuals provide additional installation and operation information.

Contents

This manual is divided into five sections and an appendix. A brief description of each follows.

Section 1: Equipment Overview — Provides a general description of the physical features of the major units of the basic Explorer systems.

Section 2: Site Selection and Preparation — Provides factors to consider when selecting and preparing a site for the basic Explorer systems.

Section 3: Unpacking and Inventory — Provides instructions for unpacking and performing inventory on the components of the basic Explorer systems.

Section 4: Installation — Provides general information about how the Explorer system is packaged for shipment. Provides installation procedures for the basic Explorer systems.

Section 5: Power-Up and Self-Test — Provides instructions for applying power to the system and for conducting an initial self-test of the basic Explorer systems.

Appendix A: Product Safety Information — Provides product safety instructions for the major system components in both English and German.

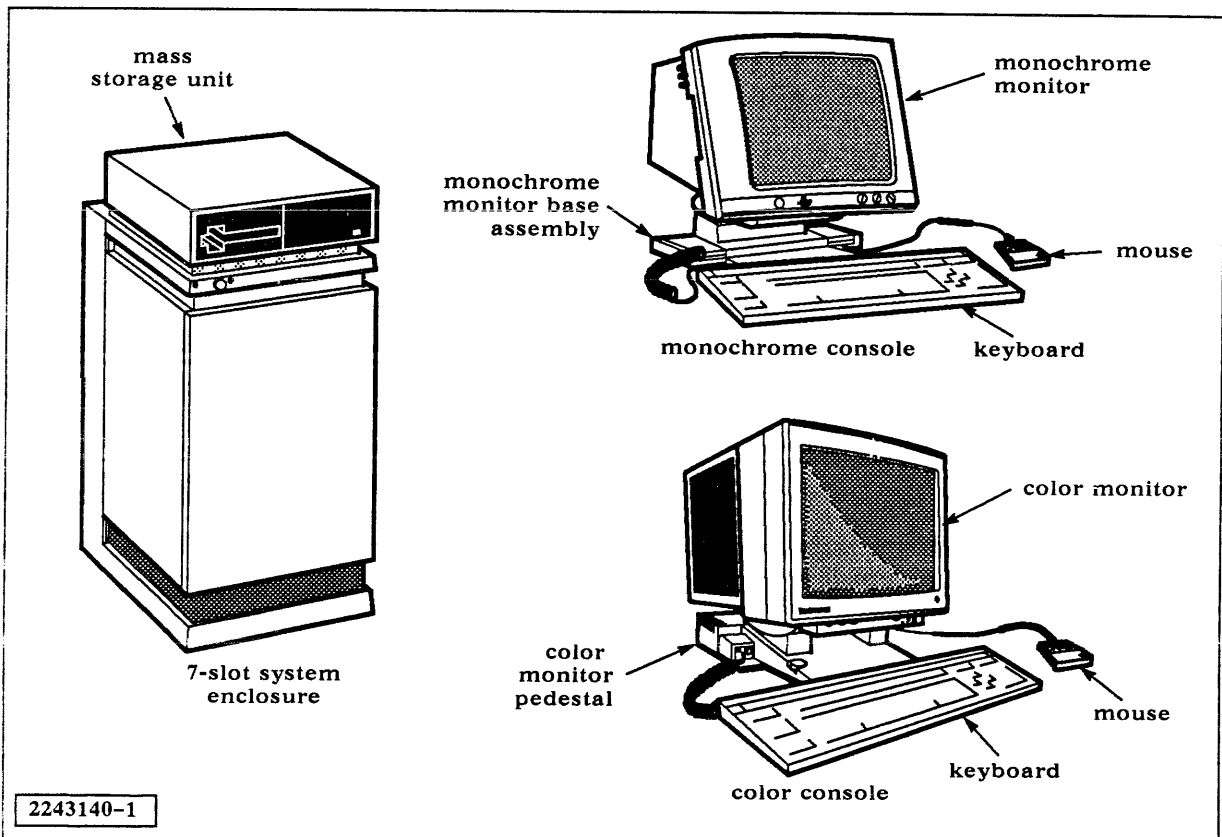
EQUIPMENT OVERVIEW

Introduction

1.1 This section provides a description of a basic Explorer 7-slot system with the monochrome console or the color console (Figure 1-1), and a variety of optional Explorer system configurations. The monochrome console consists of the monochrome monitor, the monochrome monitor base assembly, the keyboard, and the mouse. The color console consists of the color monitor, the color monitor pedestal, the keyboard, and the mouse. The equipment overview discussion is arranged under the following topics:

- Explorer systems overview
- 7-slot system enclosure
- Mass storage systems
- Monochrome console
- Color console
- Optional equipment

Figure 1-1 Explorer 7-Slot System With Monochrome or Color Console Configuration



2243140-1

Explorer Systems Overview

1.2 The Explorer systems are available in several configurations. The basic Explorer 7-slot computer system with the local bus backplane (Figures 1-2 and 1-3) is an advanced, single-user work station that supports the development of large-scale, complex programs, and research in new technologies, including artificial intelligence (AI). System features include a high-resolution, interactive video display monitor that supports high-quality graphics and high-speed symbolic processing using the Lisp (list processing) language.

The Explorer LX system (Figure 1-4) consists of a multiprocessor system that supports both the Lisp language and the TI System V operating system. The TI System V operating system is an implementation of the AT&T UNIX® System V operating system. The TI System V operating system is implemented by a 68020-based processor board that is installed in the 7-slot system enclosure. All Explorer systems can be upgraded in the field to an Explorer LX system.

The Explorer LX system (Figure 1-5) is also available with the communications carrier board and associated options. The communications carrier board and associated options provide the capability of adding multiple terminals to the operation of the TI System V operating system. Also available are other communications capabilities, such as high-speed modems, auto call units, and RS-232C interfaces. All Explorer LX systems can be upgraded in the field to use the communications carrier board and associated options.

NOTE: To allow a more flexible terminology in this manual, the terms *monochrome console* and *color console* are used. The term monochrome console includes the monochrome monitor, the monochrome monitor base assembly, the keyboard, and the mouse. The term color console refers to the color monitor, the color monitor pedestal, the keyboard, and the mouse. In earlier Explorer publications, the monochrome console is called the display unit. Terms such as display unit and display monitor are generically used to indicate all types of terminals, displays, and/or monitors.

The color console is used only on Explorer II systems with the NuBus-only backplane. The monochrome console can be used on all Explorer systems. Due to software restrictions, the monochrome and color consoles cannot be used together on the same Explorer system. Future software changes may allow the color monitor (less the keyboard and mouse) and the monochrome console (with keyboard and mouse) to be used together on the same Explorer system. The color system interface board (CSIB) is presently arranged to handle this future capability.

The basic Explorer II system with the NuBus-only backplane is shown in Figure 1-6. Figure 1-7 shows a basic Explorer II LX system. Figure 1-8 shows an Explorer II LX system with the communications carrier board and associated options. The Explorer II systems all have the Explorer II processor and the Explorer 32-megabyte memory board. The capacity of the 32-megabyte memory board can be 8, 16, or 32 megabytes.

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The Explorer II processor is a single-board assembly that replaces the Explorer processor two-board assembly (Explorer I processor) that is presently used in the Explorer systems. The Explorer II processor uses the Explorer Lisp microprocessor chip that contains most of the logic that formerly was on the existing Explorer I processor. The Explorer II processor operates much faster than the existing Explorer I processor. Additional logic is provided on the Explorer II processor board which also adds many enhancements to the Explorer system. All Explorer systems, including the LX system, can use the Explorer II processor. All Explorer systems can be upgraded in the field to use the Explorer II processor and the auxiliary processor options.

The auxiliary processor options used with the Explorer II processor provide a convenient place to add processor options. The auxiliary processor options consist of a small assembly that is plugged into a connector on the backplane that is associated with connector P2 on the Explorer II processor. Auxiliary processor options will be available for addition to the Explorer II processor at a later date.

The Explorer 32-megabyte memory board (2540835) is available in capacities of 8, 16, and 32 megabytes. The Explorer 32-megabyte memory board is the standard memory board for the Explorer II systems, and can be used as the option memory board in slot 3 in Explorer systems with the Explorer I processor. The Explorer I processor always requires the Explorer 8-megabyte memory board (2243910) as the primary memory in slot 4.

The Explorer 32-megabyte memory board is sometimes called the Explorer II memory board in other publications. The Explorer 8-megabyte memory board is sometimes called the Explorer memory board in other publications.

The Explorer system requires minimum site preparation because it operates under normal office conditions. Installation of the system consists mainly of placing the major units where you want them and then connecting the power cords and interface cables. The locations you choose should have access to ac power circuits that have minimum line noise. For the best results, use ac power circuits that are dedicated solely to your computer system.

Figure 1-2 Explorer System With Local Bus Backplane (Example 1)

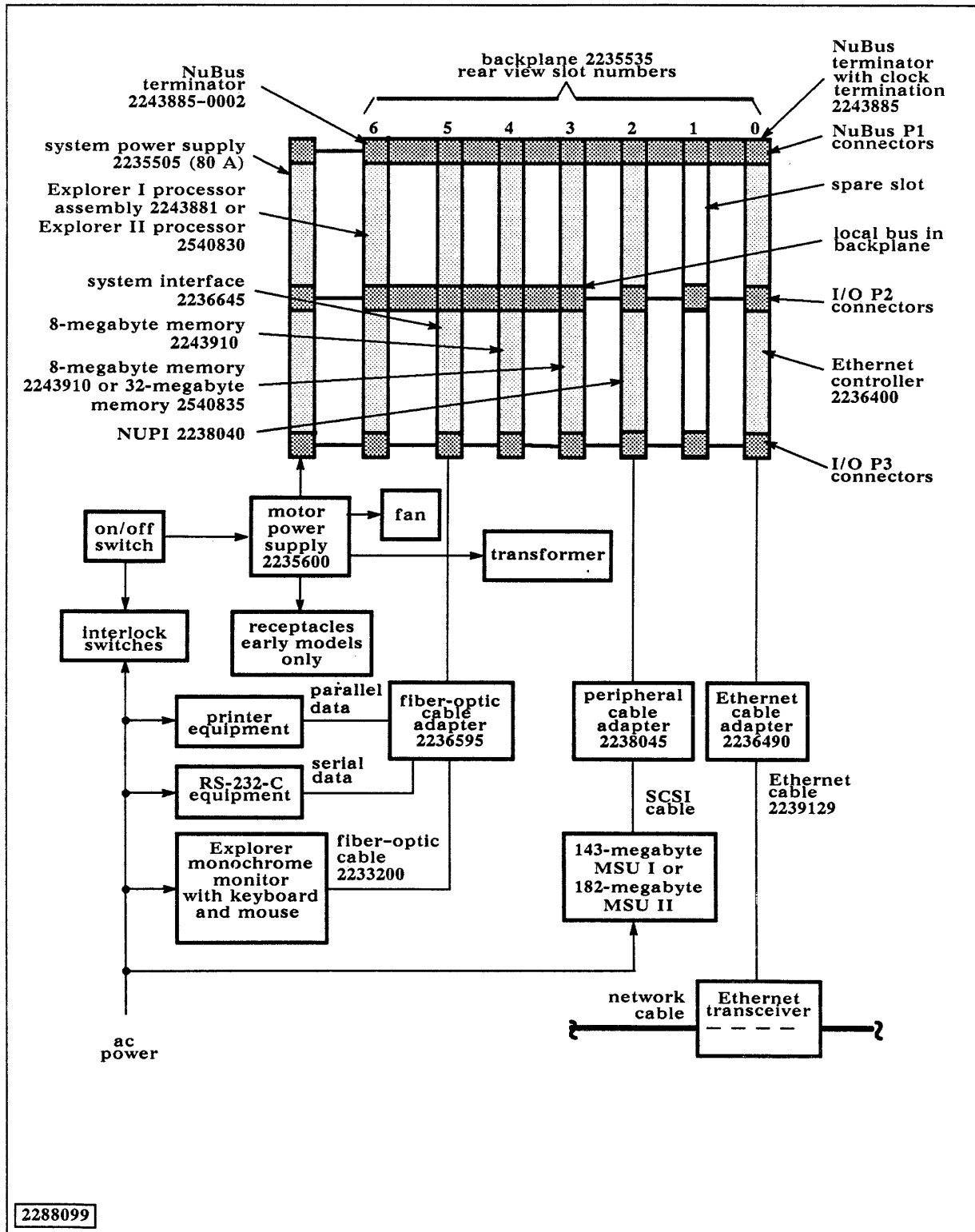


Figure 1-3 Explorer System With Local Bus Backplane (Example 2)

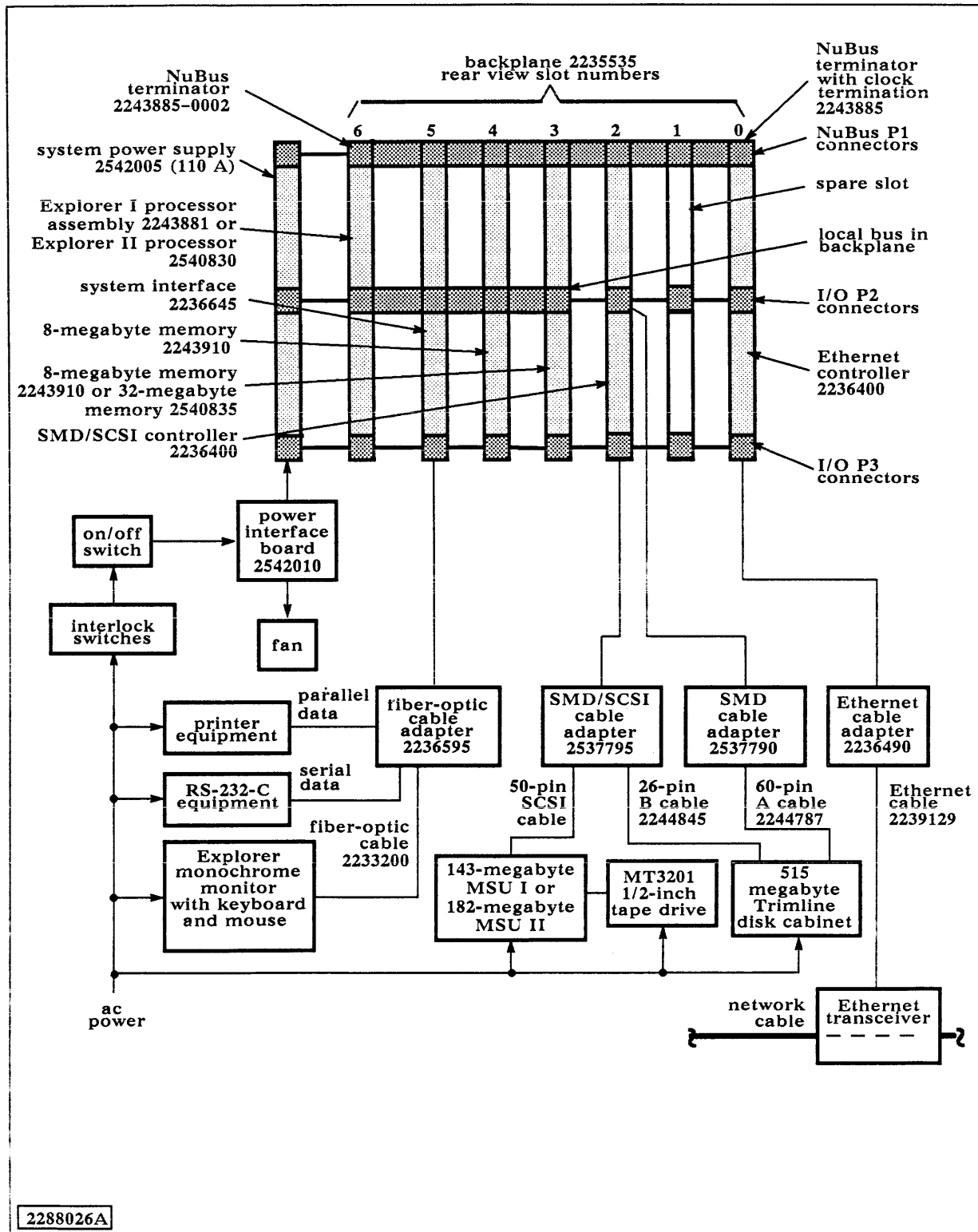


Figure 1-4 Explorer LX System With Local Bus Backplane (Example 1)

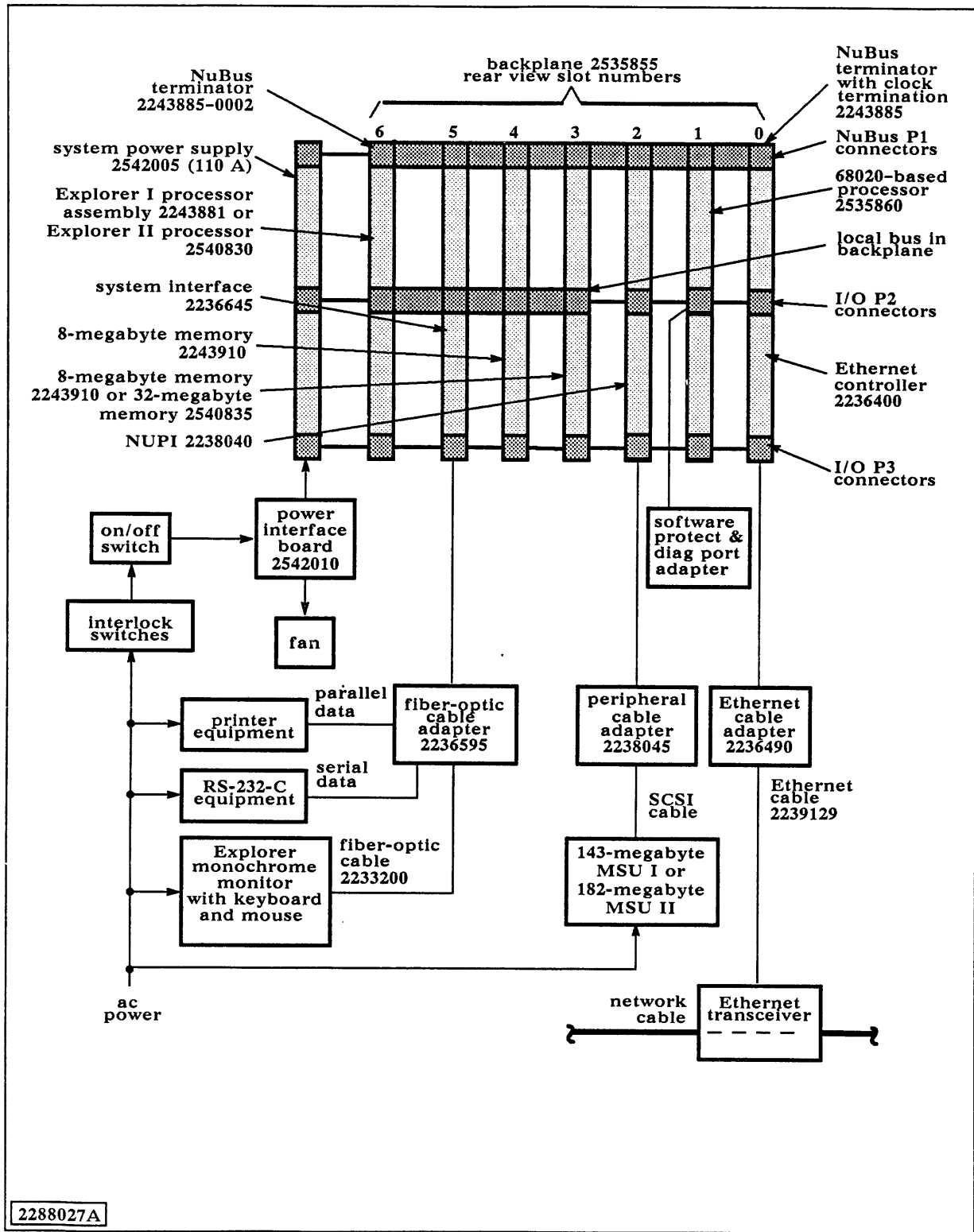
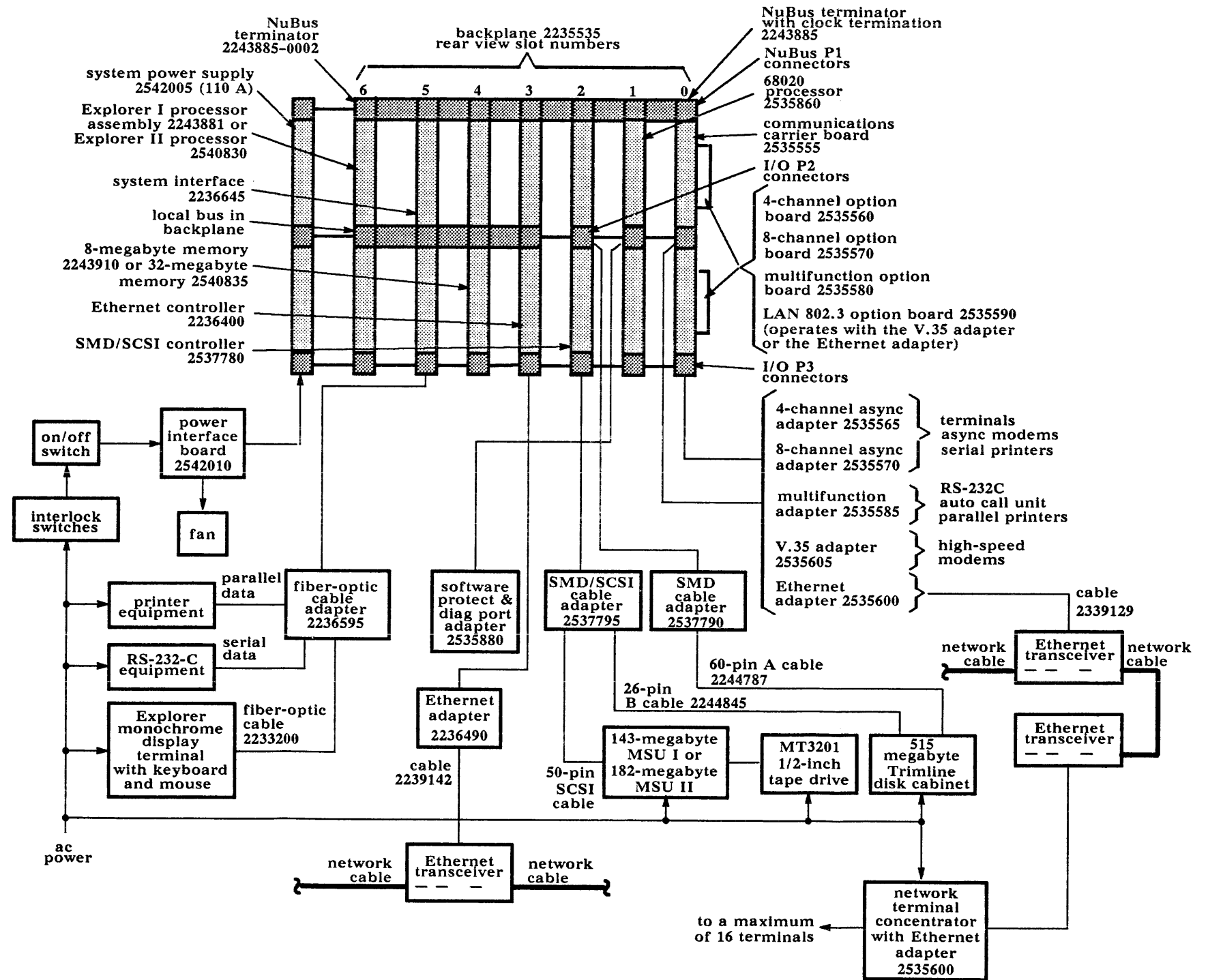


Figure 1-5 Explorer LX System With Local Bus Backplane (Example 2)



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Figure 1-6 Explorer II System With NuBus-Only Backplane

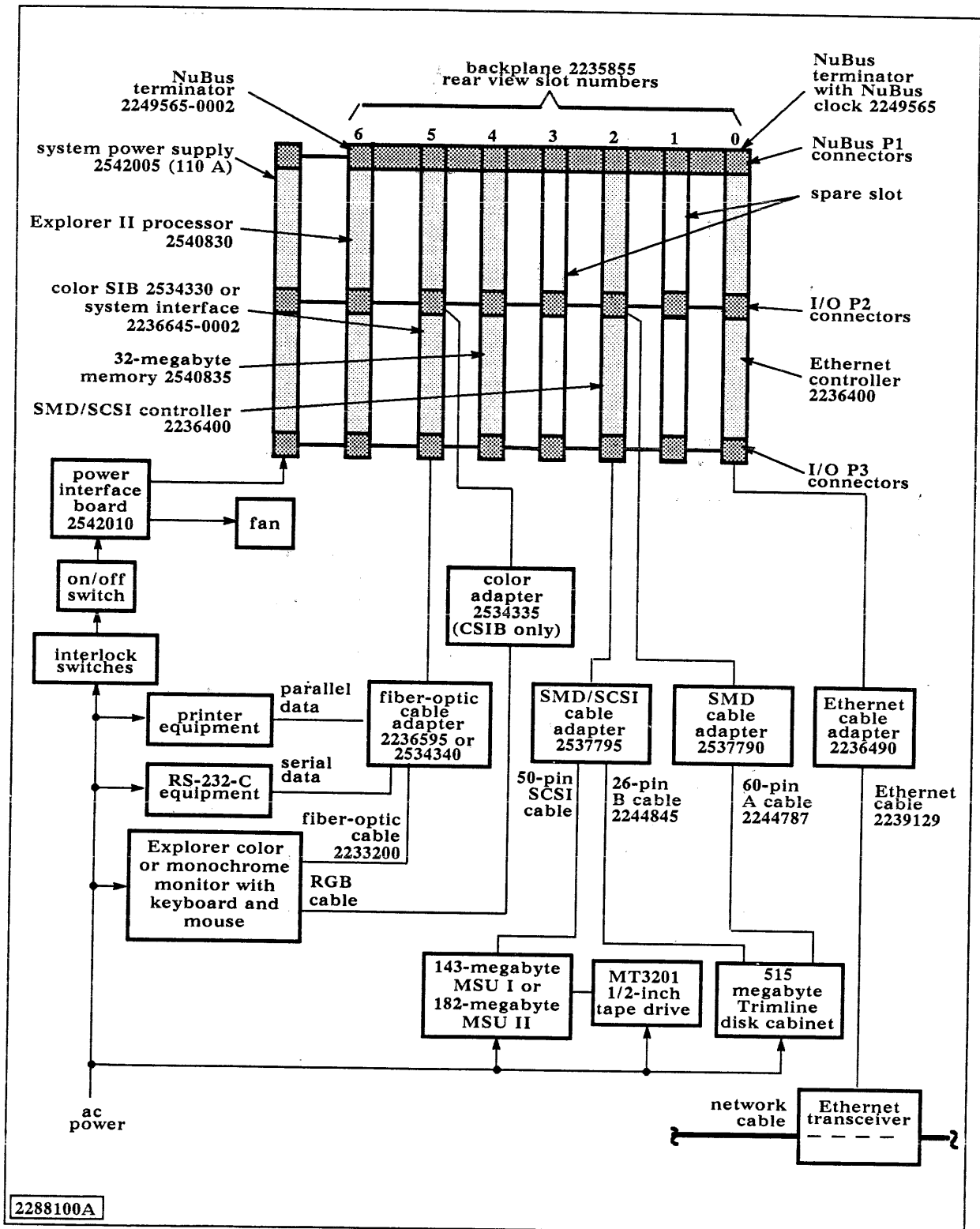
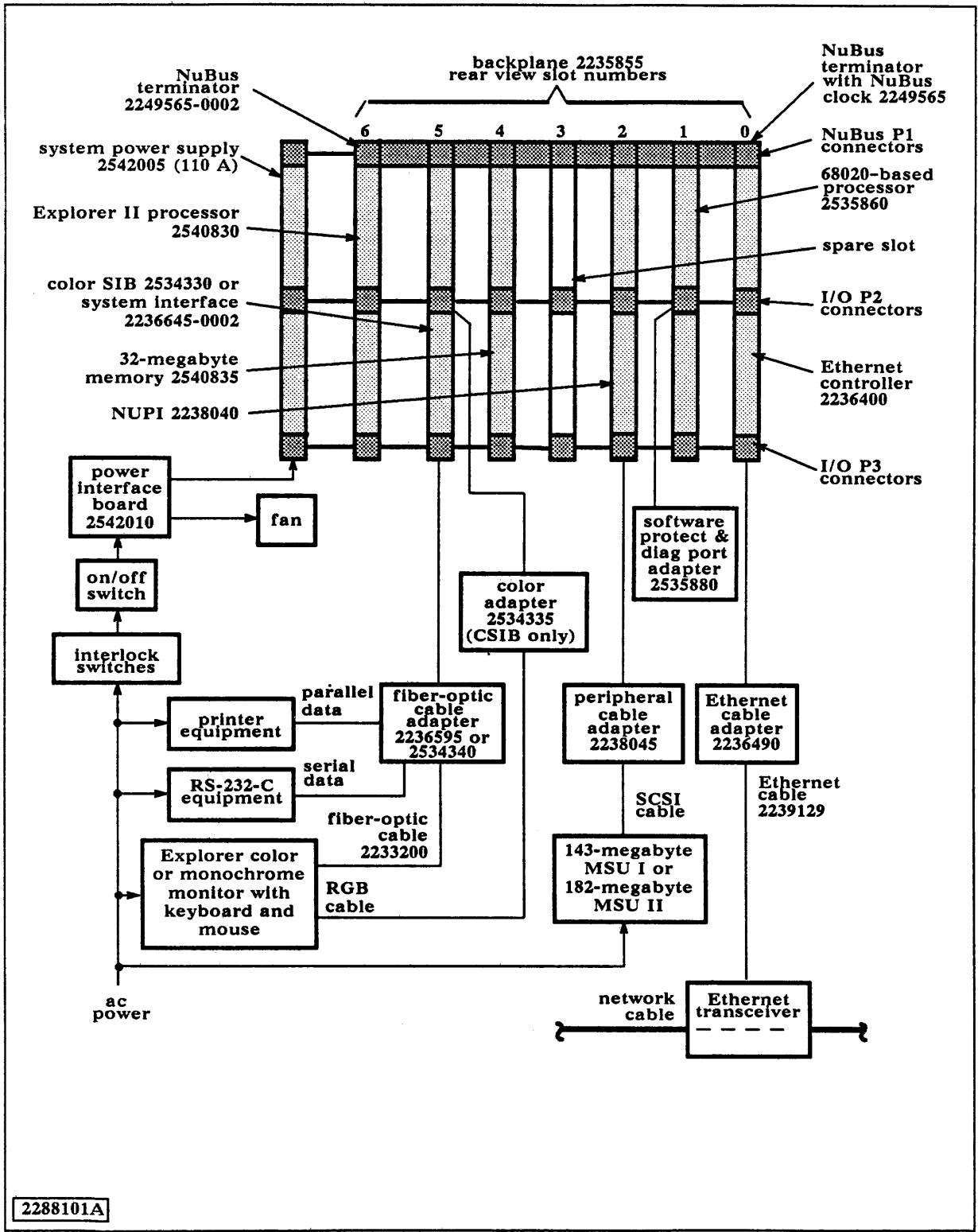
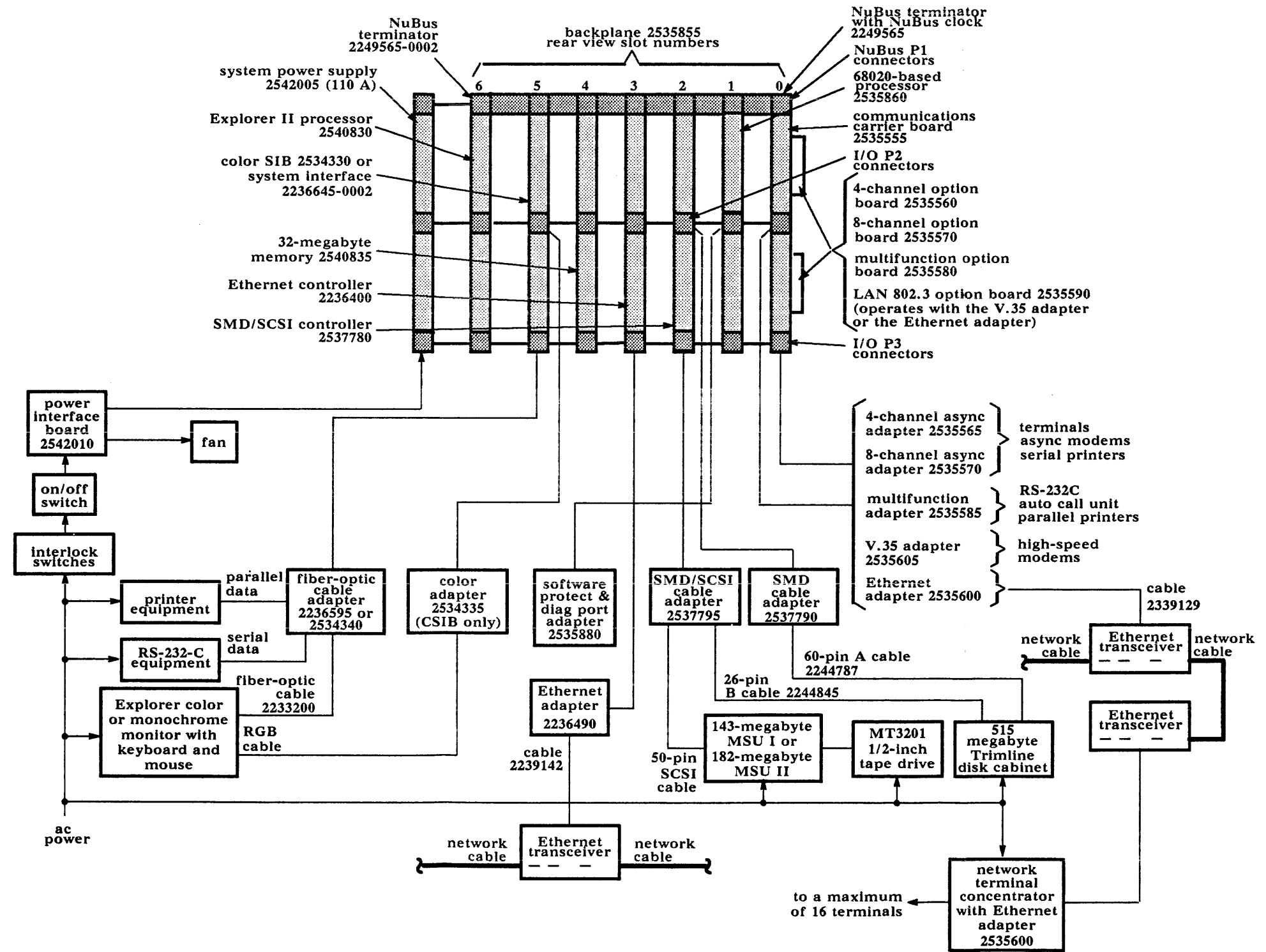


Figure 1-7 Explorer II LX System With NuBus-Only Backplane (Example 1)



2288101A

Figure 1-8 Explorer II LX System With NuBus-Only Backplane (Example 2)



Explorer Color Console

1.6 The Explorer color console consists of a high-resolution, color CRT monitor, a monitor pedestal, a padless mouse, and a detachable keyboard. The color console connects to the CSIB in the system enclosure over a color red-green-blue (RGB) cable and a fiber-optic cable. The color RGB cable is available in two lengths: 3 meters (10 feet) and 8.6 meters (28 feet). The minimum length of the fiber-optic cable is 15.24 meters (50 feet). The excess length of the fiber-optic cable should be carefully coiled and placed in an unused area to prevent damage to this cable.

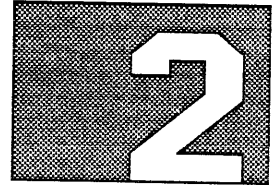
The color monitor pedestal requires a minimal desk space of 406 millimeters (16 inches) wide by 452 millimeters (17.8 inches) deep. You can adjust the tilt of the color monitor for a comfortable view of the screen. The height of the color monitor is not adjustable. The keyboard is attached to the color monitor pedestal with a coiled cord, permitting the keyboard to be conveniently located for ease of operation. Refer to Table 2-1 in Section 2 for the dimensions and weight of the color monitor and keyboard.

Optional Equipment

1.7 A variety of optional equipment is available for the Explorer system. For installation and operating instructions, refer to the appropriate documents listed in Table 1-1 for the optional equipment you have. Additional installation and operation instructions for optional equipment are also available in the system level software manuals.

Table 1-1 Optional Equipment

Equipment	Description
MT3201 1/2-inch tape drive	Can be used on any system that supports the SCSI bus and has the DSR software. Refer to the <i>MT3201 1/2-Inch Tape Drive General Description</i> for installation and operation instructions.
Trimline disk cabinet with 515-megabytes disk drives	Can be used only with 7-slot system enclosures that have the 110-ampere power supply. Refer to the <i>SMD/515-Megabyte Mass Storage Subsystem General Description</i> for installation and operation instructions.
Network terminal concentrator	Is normally used in the Explorer LX system. Refer to the <i>Communications Carrier Board and Options General Description</i> for installations and operation instructions.
Model 924 video display terminal	Is used in the Explorer LX system with multiple terminals. Refer to the <i>Model 924 Video Display Terminal User's Guide</i> for installation and operation instructions.
Printers	Refer to the applicable printer manual listed in the front part of this manual for installation and operation instructions.
68020-based processor subsystem	Can be used only in the Explorer LX system. Refer to the <i>68020-Based Processor General Description</i> for installation instructions.
Explorer II processor and auxiliary processor options	Can be used on any Explorer system, including the LX system. Refer to the <i>Explorer II Processor and Auxiliary Processor Options General Description</i> for installation instructions.



SITE SELECTION AND PREPARATION

Introduction

2.1 This section contains information on the following major topics:

- Space requirements
- Power requirements
- Power system planning
- System receptacle requirements
- Cooling requirements

The Explorer system is easy to install and integrate into the usual office environment. Since the 7-slot system enclosure is shipped with all circuit boards in place, installation consists mainly of deciding where you want to locate the system, then connecting the interface cables and power cords.

Some constraints need to be considered when you select and prepare a site for the system. These constraints, such as the lengths of the interconnecting cables and the location and quality of the electrical power sources, are described in the paragraphs that follow.

Space Requirements

2.2 When selecting the site for your system, first decide whether you want all the major units of the system together (including optional equipment). The only interface connection between the monochrome console and the system enclosure is a 15-meter (50-foot) fiber-optic cable, which is shipped with the system. If you need to locate the monochrome console more than 15 meters (50 feet) from the system enclosure, an optional 60-meter (200-foot) fiber-optic cable is available from Texas Instruments. The color console can be located a maximum of only 8.6 meters (28 feet) from the system enclosure, due to restrictions on the length of the color RGB cable.

The mass storage units (MSUs) are usually stacked on top of the 7-slot system enclosure. The 1-meter (40-inch) SCSI cable that is shipped with the system connects the primary mass storage unit to the back of the system enclosure. An optional 3-meter (10-foot) SCSI extension cable is required to stack the mass storage units on a nearby table rather than on the system enclosure.

In selecting your site, also consider the location of any peripheral device, such as a printer or an RS-232-C device, that is to be connected to the Explorer system. If your computer system is a network system, a 10-meter (33-foot) Ethernet transceiver cable is shipped with your system. Consider the path that your cable must follow and locate the system enclosure so that this cable can reach from the back of the system enclosure to your Ethernet transceiver.

The Explorer system is rated for a wide range of operating temperatures and humidities. These ranges coincide with the comfort range settings of office

air-conditioning systems. The 7-slot system enclosure is compact enough to fit under most desks and tables. To ensure adequate air cooling, however, leave at least three sides of the system enclosure unobstructed to the flow of air. For example, do not place the system enclosure flush between two filing cabinets.

Mount the display unit, including the keyboard, on a flat table or desk surface. The dimensions and weights of the major units of the Explorer system, including optional equipment, are provided in Table 2-1. Use the table to plan for your space requirements.

Table 2-1 Explorer System Space Requirements

Unit	Dimensions	Weight
System enclosure	Height — 635 mm (25 in) Width — 330.2 mm (13 in) Depth — 457.2 mm (18 in)	26.4 kg (58 lb) without boards 38.6 kg (85 lb) with boards
Mass storage unit	Height — 132.1 mm (5.2 in) Width — 330.2 mm (13 in) Depth — 386.1 mm (15.2 in)	15 kg (33 lb)
Trimline disk cabinet with 515-megabyte disk drives	Height — 746.8 mm (29.4 in) Width — 272.5 mm (10.73 in) Depth — 819.2 mm (32.25 in)	131 kg (288 lb) with two disk drives 91 kg (201 lb) with one disk drive
MT3201 1/2-inch tape drive	Height — 241.3 mm (9.5 in) Width — 508 mm (20 in) Depth — 698.5 mm (27.5 in)	41 kg (90 lb)
Network terminal concentrator	Height — 508 mm (20 in) Width — 17.8 (7 in) Depth — 45.7 (18 in)	15 kg (33 lb)
Model 924 video display terminal	Height — 297.2 mm (11.7 in) Width — 330.2 mm (13 in) Depth — 365.8 mm (14.4 in)	11 kg (24 lb) with base and keyboard
Model 924 video display terminal keyboard	Height — 11 to 40 mm (0.4 to 1.5 in) Width — 495.3 mm (19.5 in) Depth — 185.4 mm (7.3 in)	
Explorer monochrome monitor with base assembly	Height — 431.8 mm (17 in) Width — 439.4 mm (17.3 in) Depth — 411.5 mm (16.2 in)	18.5 kg (41 lb) 20 kg (44 lb) with anti-glare screen
Explorer color monitor with pedestal	Height — 452.1 mm (17.8 in) Width — 406.4 mm (16 in) Depth — 452.1 mm (17.8 in)	34 kg (75 lb)
Explorer keyboard	Height — 35.6 mm (1.4 in) Width — 520.7 mm (20.5 in) Depth — 203.2 mm (8 in)	2.7 kg (6 lb)

Power Requirements

2.3 The Explorer computer system operates using the ordinary commercial power available in the United States and other countries. Tolerances to line surges and sags are as follows:

- 102 to 132 Vac at 120 volts
- 187 to 264 Vac at 220/240 volts

The quality of the power received from the electrical utility can vary because of factors beyond your control. Additionally, many offices have machinery that can generate surges and spikes on the ac power lines. These irregularities and line noises are major causes of computer errors. To prevent these problems, isolate the power circuits for the Explorer system from office equipment such as copiers, pencil sharpeners, water coolers, and other motor driven devices that often generate electrical noises. The best approach is to make sure that no other equipment is connected to these circuits.

Power System Planning

2.4 Proper grounding of the wiring and equipment is essential to prevent safety hazards as well as computer malfunctions of an irregular and intermittent nature. The following paragraphs describe the power system planning and electrical wiring requirements for your system.

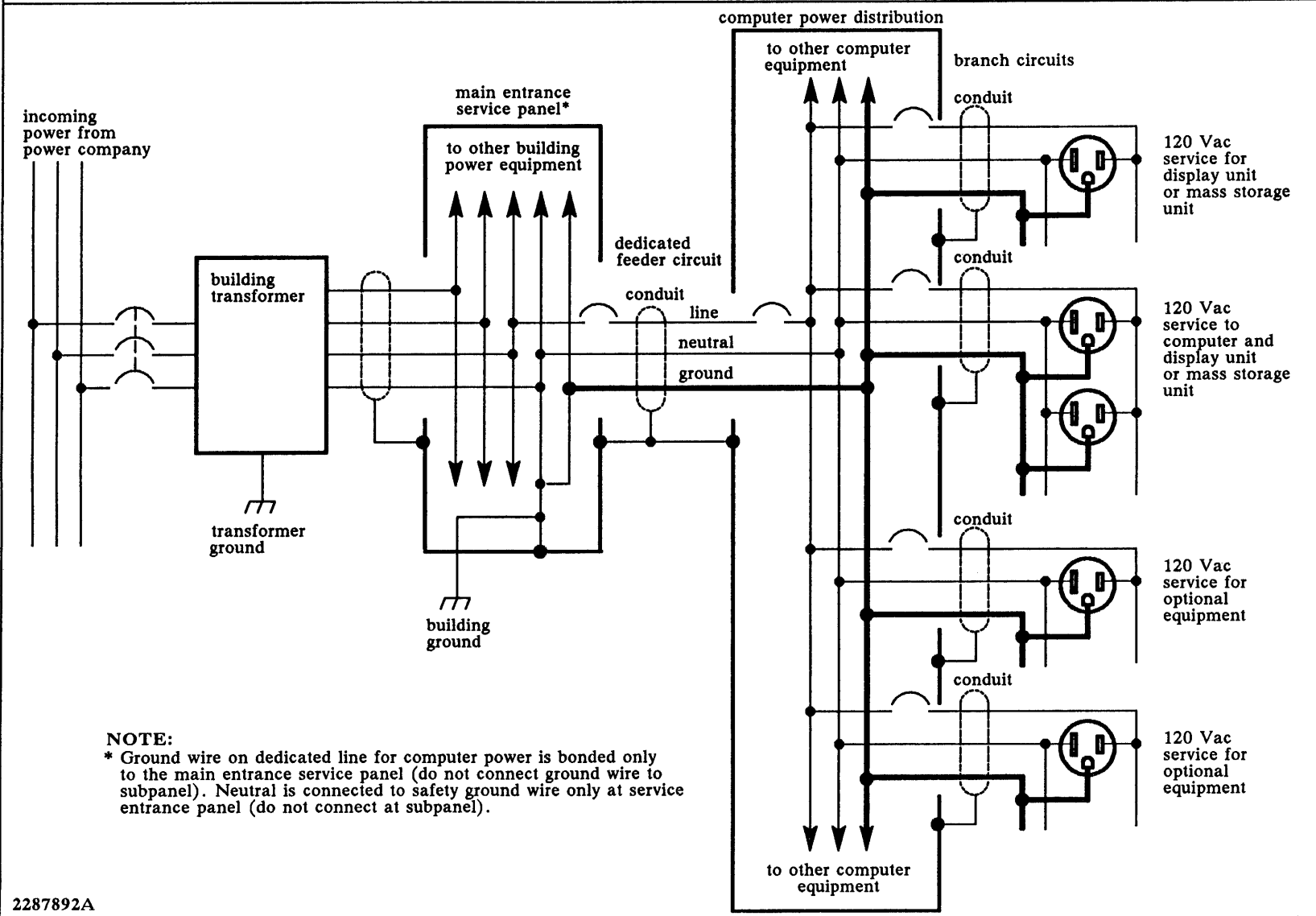
Power Distribution

2.4.1 The recommended power distribution configuration is a dedicated ac power feeder circuit. Figure 2-1 is an example of a properly wired 120-volt power distribution system for computer equipment. The dedicated feeder runs, either directly or through one or more dedicated subpanels, from the building's main entrance power distribution panel to the computer equipment. The implementation of this dedicated circuit isolates the computer equipment from other electrical systems in the building. Thus, noise generated by noncomputer equipment cannot affect the sensitive electronic operation of the computer.

In the main entrance service panel, the neutral bus is bonded to the ground bus, and the ground bus is bonded to the panel as shown in Figure 2-1. At this point, the neutral bus is connected to the building ground electrode via a grounding electrode conductor. In many cases, you can bond neutral to ground by installing or tightening a screw provided by the manufacturer of the panel box. The ground conductor in the dedicated power feeder must be insulated to prevent multiple ground current paths through the feeder conduit.

In a dedicated subpanel, if used, the ground bus and the neutral bus are both insulated from the subpanel frame. Each branch circuit from the computer subpanel should have a separate insulated safety ground conductor. If the subpanel used to distribute the power in the computer room does not have separate neutral and ground buses, install an insulated terminal block to provide separate neutral and ground buses. Ensure that the terminal block you install conforms to all applicable electrical codes and is insulated from the subpanel.

Figure 2-1 Power Distribution Requirements for a 120-Volt System



Grounding

2.4.2 The grounding scheme shown in Figure 2-1 has two main functions. The first is to ensure personnel safety in the event of a power short to the computer equipment chassis frame caused by computer equipment failure or power distribution panel problems. Personnel safety is ensured when your computer power distribution system meets all applicable national and local electrical codes. The resistance between the building ground electrode and true ground should be as little as possible and measure less than 25 ohms.

WARNING: Do not use neon lamp DS1 on the system power supply as an indication of an earth ground connection to the 7-slot system enclosure. Neon lamp DS1 indicates only that an unqualified earth ground path exists. Special instruments are required to determine if the earth ground connection is a qualified safety ground.

The second function of the grounding scheme is to provide a stable signal reference for computer operations. You can create a stable signal reference by providing a single low-resistance path to earth ground through the building ground electrode. You isolate the ground conductor from the conduit and from the computer equipment distribution panel. Isolating the ground conductor allows only one path to earth ground and prevents electrical noise induced by multiple current paths to ground, commonly called ground loops.

System Receptacle Requirements

2.5 Some early model 7-slot enclosures with the 80-ampere power supply may have auxiliary ac power receptacles. These receptacles may be connected to the display monitor and/or the MSUs in cases where the power cords are not long enough to reach a wall outlet. It is recommended that all peripherals be connected to wall outlets even though the auxiliary ac power receptacles are available.

All new 7-slot enclosures with 80-ampere power supplies and 110-ampere power supplies do not have the auxiliary ac power receptacles. On these enclosures, the power cords for the peripherals must all be connected to wall outlets. Operating current requirements for major units of the computer system at each standard voltage are shown in Table 2-2. Use these operating currents to determine the current drain on wall outlets connected to the various peripherals.

Cooling Requirements

2.6 The Explorer system operates in an office environment and requires no special cooling provisions. The allowable range for ambient temperatures is from 10 degrees Celsius (50 degrees Fahrenheit) to 35 degrees Celsius (95 degrees Fahrenheit) at 20 to 80 percent relative humidity.

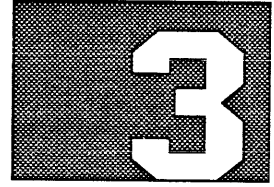
In a very small office or in an area with many computer systems, the heat produced by the system can become significant. Table 2-3 provides Explorer heat loading data for use in air conditioning adjustment. To achieve the highest reliability and longest operating life, adjust the room temperature within the comfort range of an individual.

Table 2-2

Unit	System Nominal Operating Current Requirements		
	Operating Voltages at 47 to 63 Hz		
	120 Vac	220 Vac	240 Vac
System enclosure with:			
80-ampere power supply	7.5 A	4.8 A	4.5 A
110-ampere power supply	12.0 A	6.0 A	6.0 A
Explorer monochrome display monitor	1.7 A	0.9 A	0.9 A
Explorer color monitor	2.2 A	1.3 A	1.3 A
Color monitor pedestal	0.83 A	0.5 A	0.5 A
Mass storage unit	2.0 A	1.0 A	1.0 A
Trimline disk cabinet:			
with two disk drives	8.0 A	4.6 A	4.6 A
with one disk drive	4.0 A	2.3 A	2.3 A
MT3201 1/2-inch tape drive	1.7 A	0.85 A	0.85 A
Network terminal concentrator	1.0 A	0.5 A	0.5 A
Model 924 video display monitor	0.5 A	0.25 A	0.25 A

Table 2-3

Heat Loading	
Unit	Heat Dissipation
7-slot system enclosure with 80-ampere power supply, excluding auxiliary ac outlets	2072 Btu/h
7-slot system enclosure with 110-ampere power supply	3400 Btu/h
Explorer monochrome Display monitor	375 Btu/h
Explorer color monitor	510 Btu/h
Color monitor pedestal	146 Btu/h
Mass storage unit	450 Btu/h
Trimline disk cabinet with two disk drives	2300 Btu/h
MT3201 1/2-inch tape drive	500 Btu/h
Network terminal concentrator	285 Btu/h
Model 924 video display terminal	150 Btu/h



UNPACKING AND INVENTORY

Introduction

3.1 This section provides instructions for unpacking and performing inventory on the Explorer computer system. This section includes the following information:

- Receiving the system
- Unpacking the system shipping containers

This section includes exploded-view illustrations of the major shipping containers. Refer to the applicable hardware general description manuals referenced in Section 1 for the unpacking and inventory of optional equipment, such as additional mass storage devices, communications equipment, and multiple terminals.

Receiving the System

3.2 When you receive your system, perform the following steps before you unpack it:

1. Visually inspect the shipping containers for damage. If the inspection reveals damage to any of the shipping containers, contact the carrier agent for instructions on filing a claim. The carrier, not Texas Instruments, is responsible for damage during shipment. Resolve all problems relating to damage before proceeding with the installation.
2. Note on the delivery receipt any problems that you discover.
3. Make sure that the driver has signed the delivery receipt.
4. Inventory the shipping containers. The Explorer system normally ships in five containers, or in six containers if the system includes two mass storage units. These containers are as follows:
 - a. OPEN FIRST
 - b. Display Unit
 - c. System Unit
 - d. Mass Storage Unit
 - e. Documentation Kits
5. If any items are missing, contact the Texas Instruments local field sales office.
6. Retain all packing and delivery receipts.

The following procedure outlines the tasks you must perform to prepare for system installation if you are having your system installed by TI personnel:

1. Note the system serial number on the OPEN FIRST box that contained this manual.
2. Make sure your site is prepared as explained in Section 2.
3. When your site is ready, call the Field Service Communication Center (FSCC) to schedule a site inspection and the equipment installation. The FSCC number is 1-(800)-572-3300. The following information is required to schedule the installation:
 - a. System serial number
 - b. Customer name
 - c. Customer street address and zip code
 - d. Name and telephone number of customer personnel to contact
 - e. Purchase order number if the installation was not ordered with the equipment

If you are installing the equipment, follow the unpacking procedures provided in this section.

Unpacking the System

3.3 Figures 3-1 through 3-7 show the exploded views of the shipping containers for the major components of the Explorer system. The keyboard and applicable mouse containers are shipped within the monochrome or color console shipping containers. The hardware and software documentation kits are included in separate shipping containers.

You need the following tools to unpack your system:

- Diagonal cutters or their equivalent for cutting steel bands
- Safety glasses

As you unpack the system cabinets and other components, visually inspect each item for shipping damage. If the inspection reveals damage that you feel is significant, stop unpacking the system and contact the carrier agent. After the carrier agent inspects the damage, contact a Texas Instruments field service office. Save all packing material until you finish with the inventory of the shipment.

Follow common-sense safety procedures while unpacking the equipment. For example, use safety glasses when cutting steel straps and use mechanical lifting equipment or a sufficient number of people to lift heavy items.

NOTE: Texas Instruments ships the 7-slot system enclosure with all standard interface and system circuit boards installed in the system cabinet.

WARNING: Wear safety glasses or other eye protection while performing the following steps. To avoid injury from flying loose ends, be sure to have all personnel stand clear while you cut the steel bands around the container.

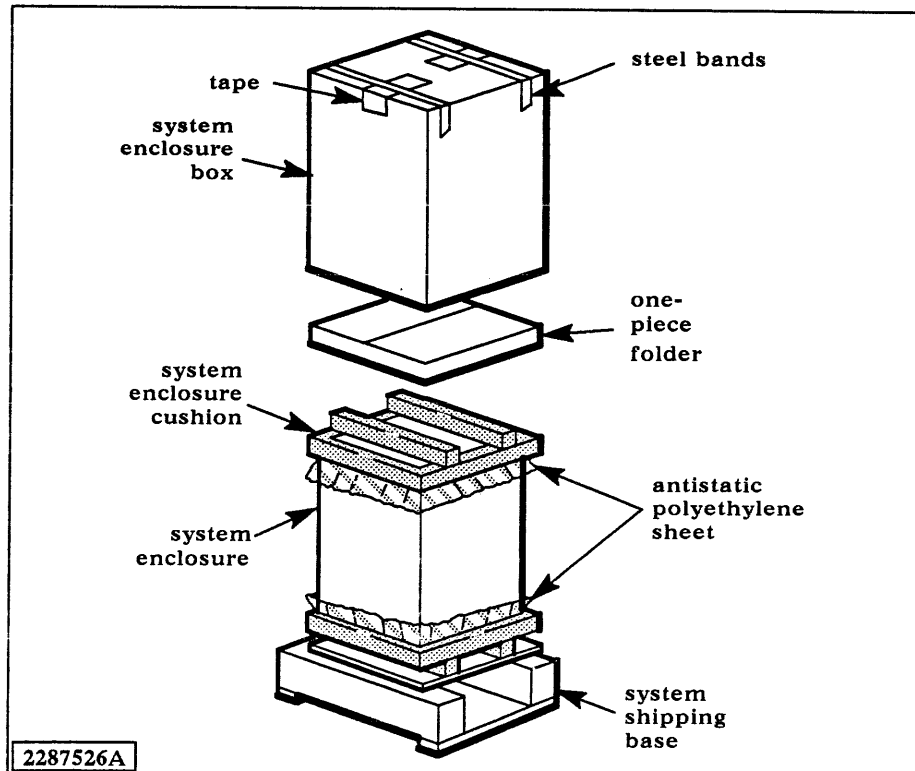
Unpacking the System Enclosure

3.3.1 To unpack the system enclosure, refer to Figure 3-1 as you perform the following steps:

1. Cut the steel bands around the container with the diagonal cutters or an equivalent tool.
2. Remove the tape holding the steel bands in place and then remove the steel bands.
3. Remove the cardboard box from the system enclosure base and set it aside.
4. Remove the one-piece folder and system enclosure cushion and set them aside.
5. Lift the system enclosure from the wooden base (one person on each side) and set it upright on its casters.

Figure 3-1

System Enclosure Shipping Container



Unpacking the
Monochrome
Console

3.3.2 To unpack the monochrome console, refer to Figure 3-2 as you perform the following steps:

WARNING: The monochrome monitor with the base assembly weighs approximately 20 kg (44 lb). When lifting the monitor from its shipping container or when moving the monitor, be sure there are two persons available who are in the proper physical condition to perform the lifting or moving tasks.

1. Open the display monitor box.
2. Carefully remove the top tray and set it aside. Inside this tray are three boxes containing the keyboard, the mouse (and mouse pad if included), and the fiber-optic cable.
3. Remove the four corner blocks and the top pad. Then, slide the two foam blocks at the front corners of the display up and out of the box.
4. Lift the monochrome monitor and base assembly out of the box and place it on a convenient work surface.
5. Remove the clear plastic bag that covers the monitor.
6. Remove the tape and microfoam from the base of the monitor.

Unpacking the
Color Console

3.3.3 To unpack the color console, refer to Figure 3-3 as you perform the following steps:

WARNING: The color monitor with the pedestal weighs approximately 34 kg (75 lb). When lifting the monitor from its shipping container or when moving the monitor, be sure there are two persons available who are in the proper physical condition to perform the lifting or moving tasks.

1. Open the display monitor box.
2. Carefully remove the top tray and set it aside. Inside this tray are three boxes containing the keyboard, the padless mouse, and the fiber-optic cable.
3. Lift the color monitor and pedestal out of the box, with the front and rear pads in place, and place the whole assembly on a convenient work surface.
4. While a second person holds the display monitor, remove the front and rear pads from the color monitor.

Figure 3-2 Monochrome Console Shipping Container

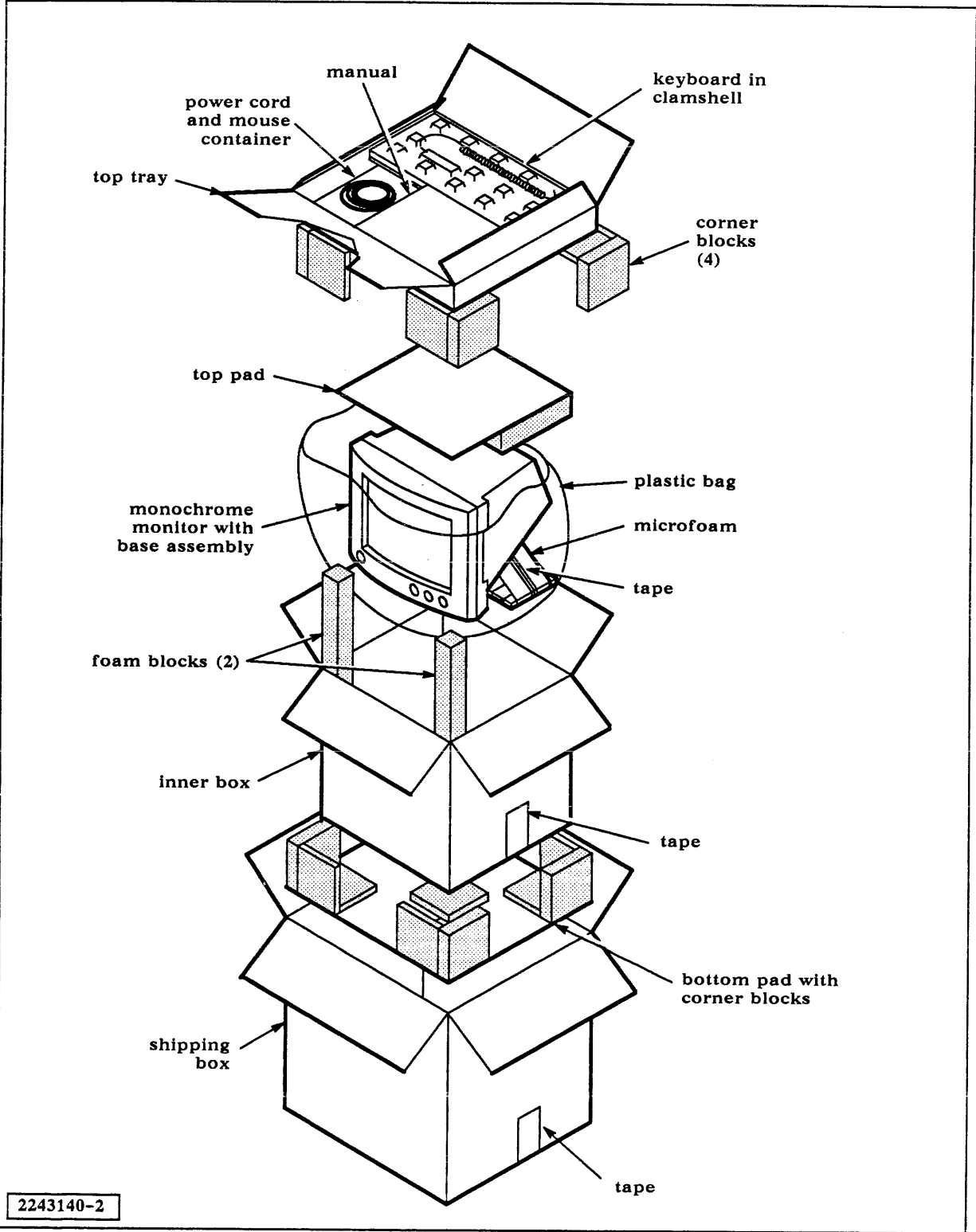
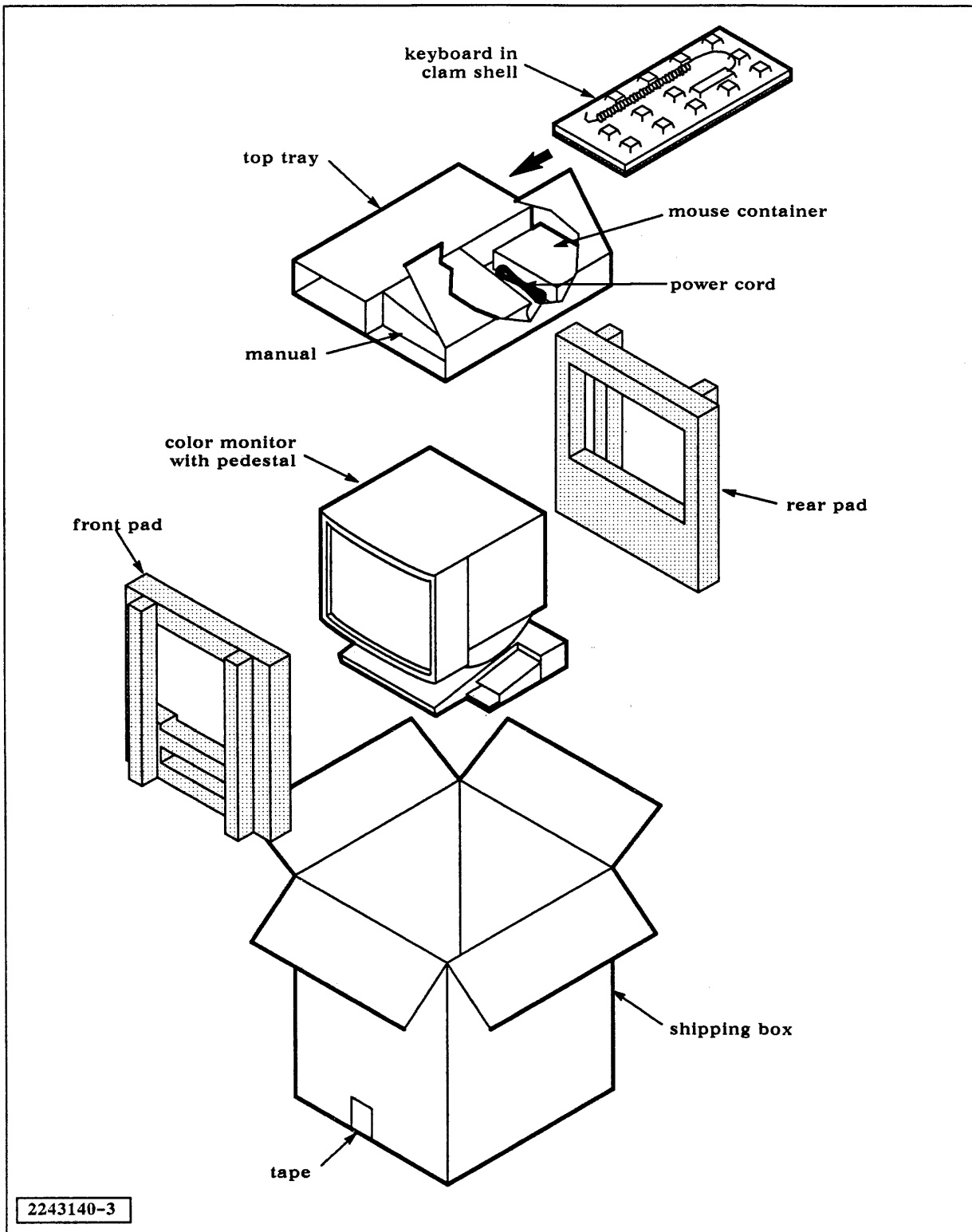


Figure 3-3 Color Console Shipping Container

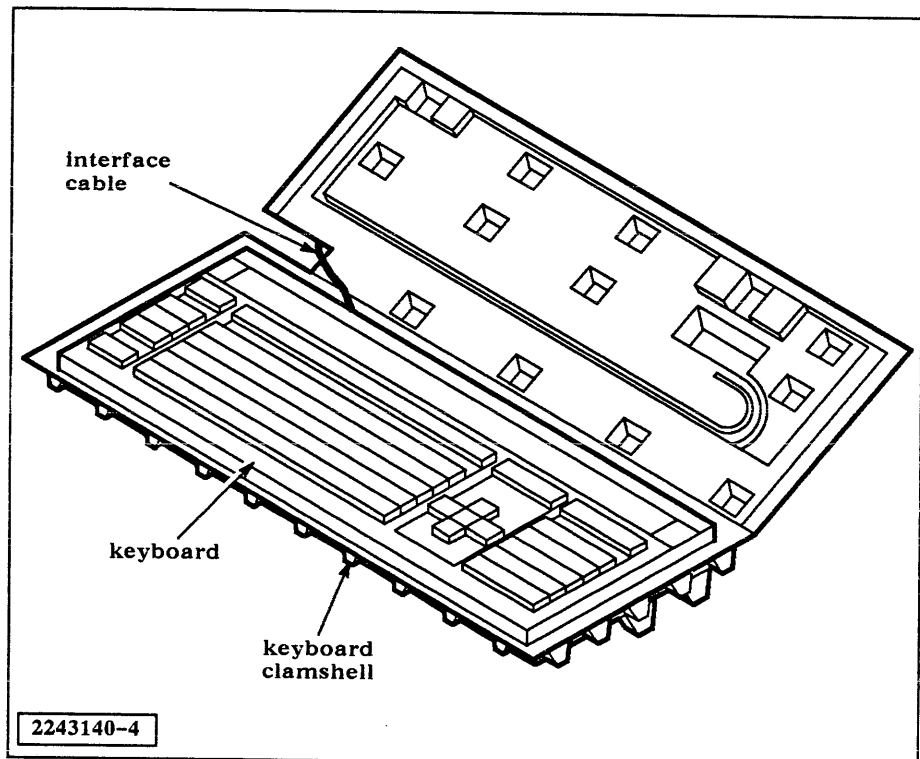


Unpacking the Keyboard

3.3.4 To unpack the keyboard, refer to Figure 3-4 as you perform the following steps:

1. Remove the clamshell that contains the keyboard from the top tray of the monochrome monitor or color monitor packing boxes.
2. Open the keyboard clamshell.
3. Remove the keyboard from the clamshell.

Figure 3-4

Keyboard Shipping Container**Unpacking the Mouse and Pad**

3.3.5 The Explorer systems can have either an optical mouse with a mouse pad or a padless mouse. Perform the following applicable step to unpack the optical mouse or the padless mouse:

1. Remove the mouse shipping container from the top tray of the monochrome monitor or color monitor packing boxes.
2. If your system has an optical mouse, open the shipping container shown in Figure 3-5. Remove the mouse pad and the thin, white box that contains the optical mouse. Remove the optical mouse from the white box.
3. If your system has a padless mouse, open the shipping container shown in Figure 3-6, and remove the padless mouse.

Figure 3-5

Optical Mouse Shipping Container

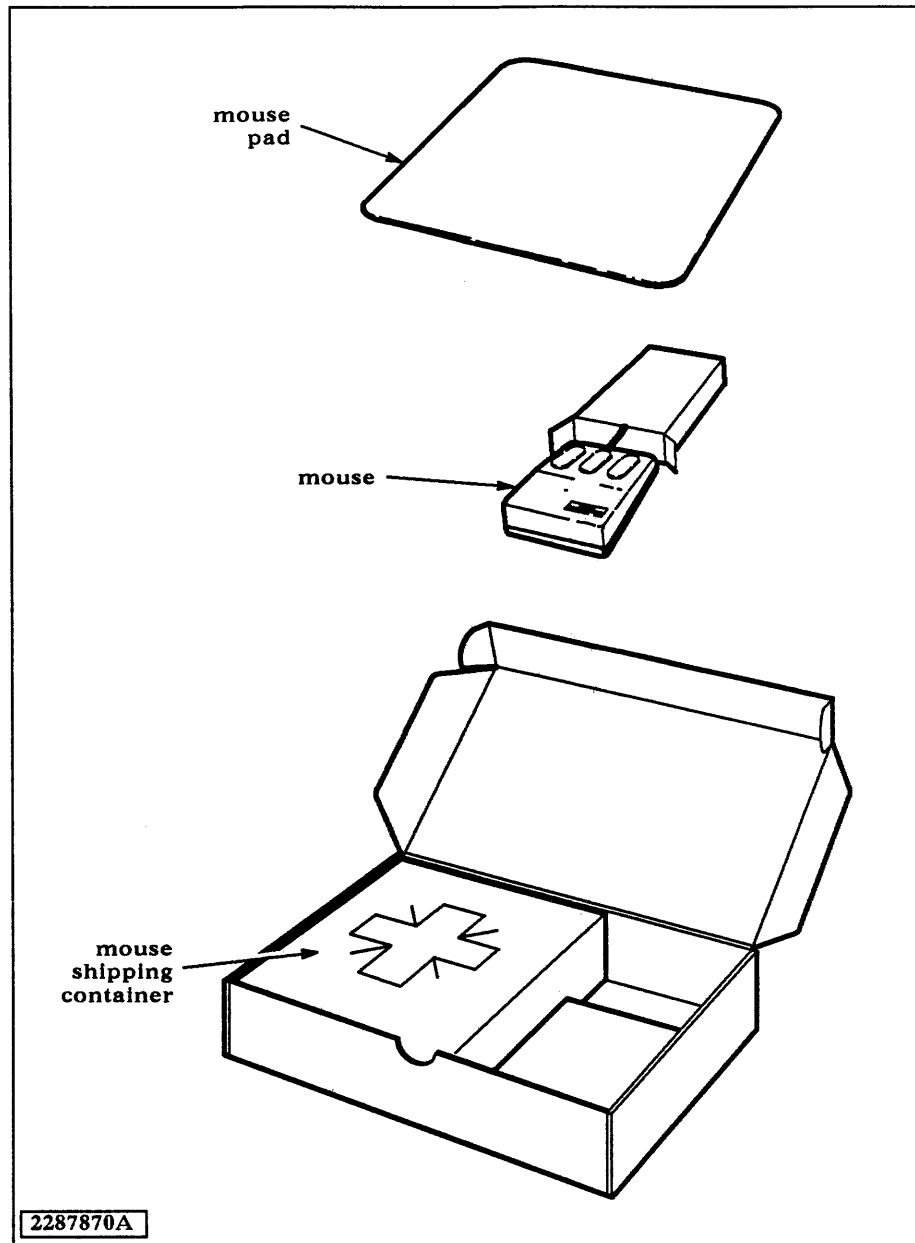
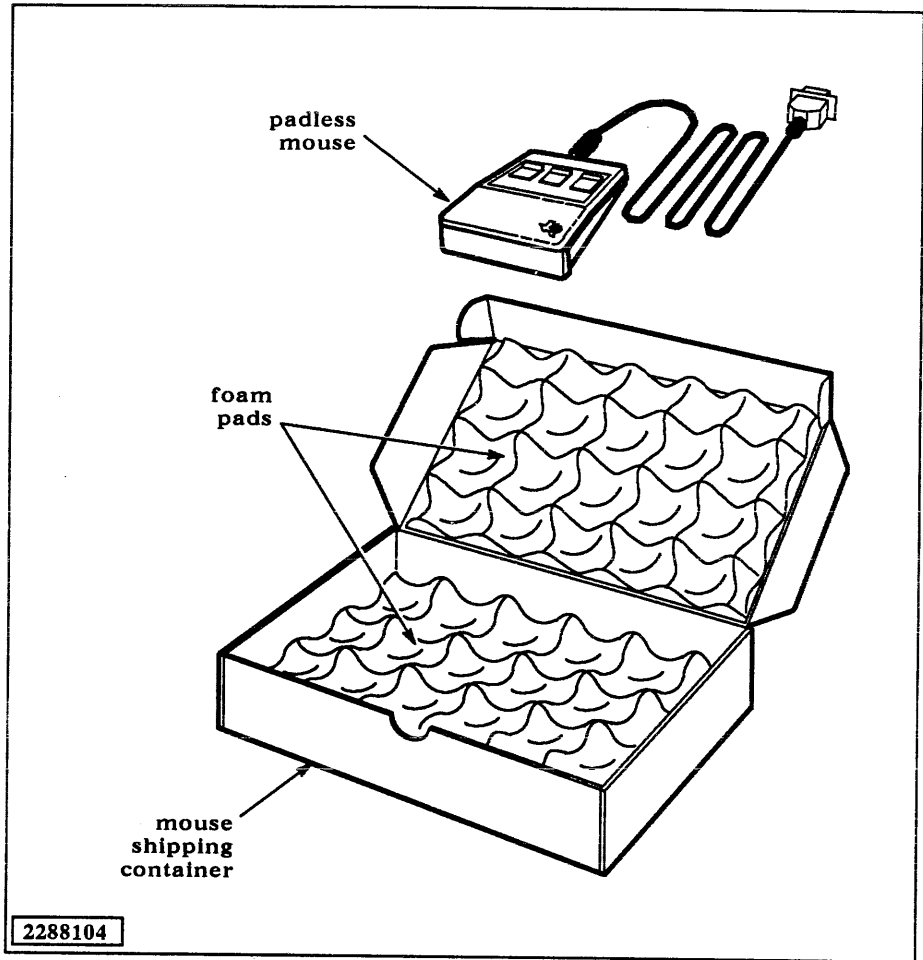


Figure 3-6

Padless Mouse Shipping Container



Unpacking the Mass Storage Unit

3.3.6 To unpack the mass storage unit, refer to Figure 3-7 as you perform the following steps:

1. Open the mass storage unit box.
2. Remove the one-piece folder and set it aside.
3. Remove the cushion assembly and set it aside.

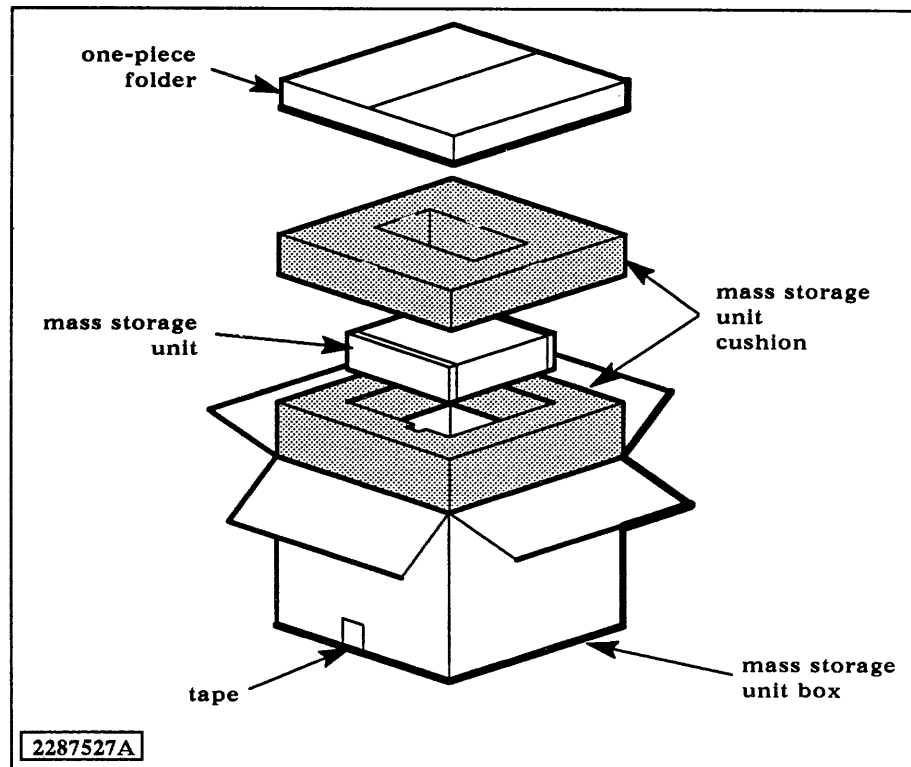
CAUTION: The mass storage unit contains precision disk drive units that can be damaged by mechanical shock. Be careful not to jar or drop the mass storage unit.

4. Remove the mass storage unit.

NOTE: The one-piece folder contains the documentation kit, a system interface cable, one long power cord, and a tape cartridge (when supplied). The long power cord is used to obtain power from a wall outlet.

Figure 3-7

Mass Storage Unit Shipping Container



4

INSTALLATION

Introduction

4.1 This section contains the following installation procedures for a basic Explorer system:

- 7-slot system enclosure initial placement
- Mass storage unit installation
- Display monitor installation
- Optional peripheral device installation
- 7-slot system enclosure final placement

These installation procedures assume that the site has been selected and prepared for installation of the Explorer system and that the units of the system have been unpacked and moved to the selected site. When installing your Explorer system, refer to either of the following cabling diagrams: Figure 4-1 for monochrome console configurations or Figure 4-2 for color console configurations.

Refer to the applicable hardware general description manuals and the appropriate software manuals that are referenced in Section 1 for the installation of other optional peripherals, such as additional mass storage devices, communications equipment, and multiple terminals.

System Enclosure Initial Placement

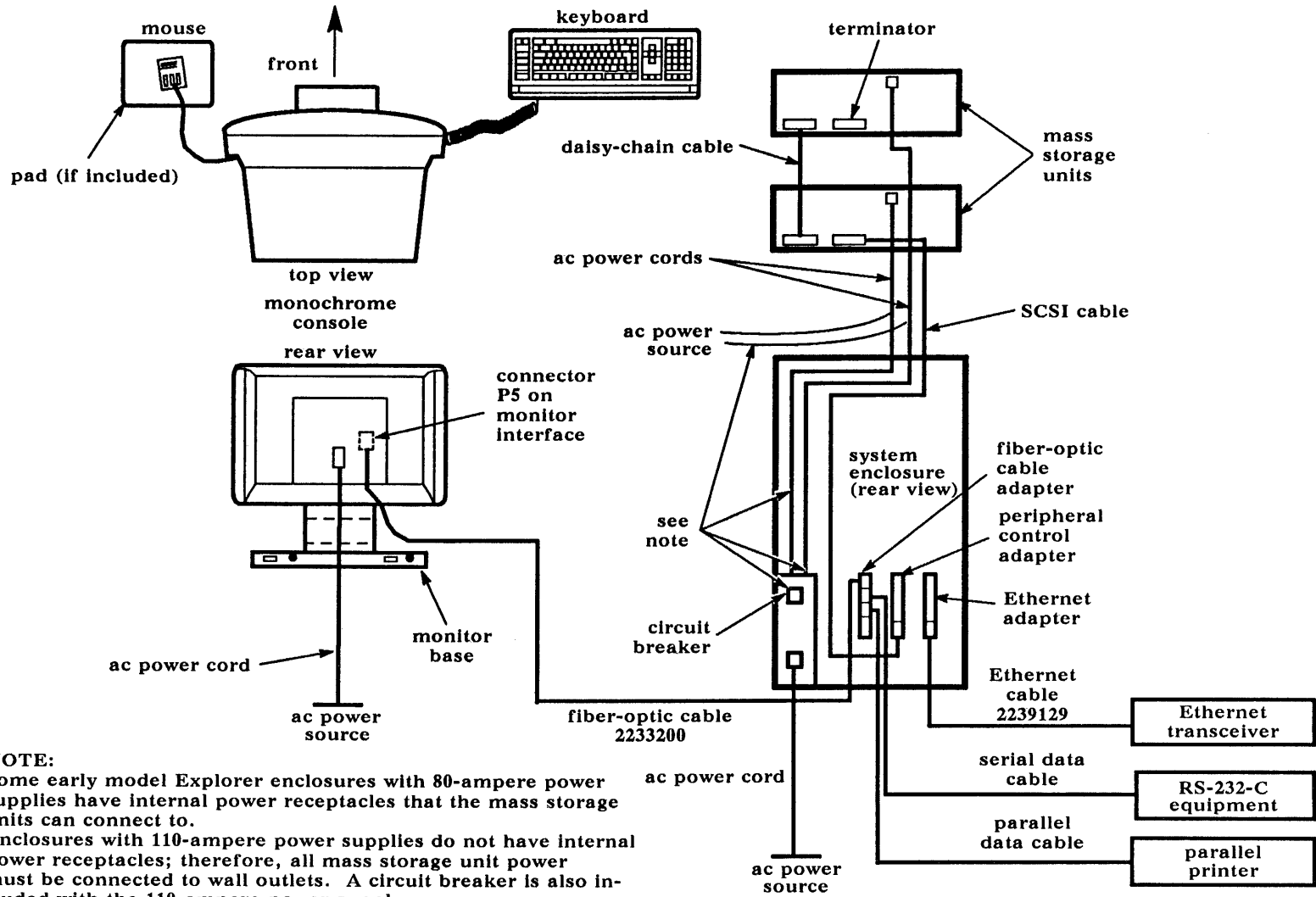
4.2 To install the Explorer system, first move the 7-slot system enclosure to its final location. Leave working room both at the top and at the back of the system enclosure. Leave enough room at the top to stack the mass storage unit(s) and to install the system interface cable and power cords through the spring-loaded cable access panel located at the rear of the enclosure top. Leave enough room at the back of the system enclosure to open the back door to connect various signal interface cables.

Figure 4-1 shows the system cabling when the 7-slot system enclosure has the 80-ampere power supply or the 110-ampere power supply. A circuit breaker is also included with the 110-ampere power supply. Some early model enclosures with the 80-ampere power supply have auxiliary ac power receptacles. If you have the long ac power cords to reach wall outlets, it is recommended that these auxiliary ac power receptacles not be used. Figure 4-2 shows the system cabling for an Explorer II system with the color console.

Mass Storage Unit Installation

4.3 Use Figure 4-3 or 4-4 as a guide to install the primary mass storage unit (MSU). The primary mass storage unit is normally placed on top of the 7-slot system enclosure. In some cases, you can place the primary mass storage unit remote from the 7-slot system enclosure by using longer cables. This procedure assumes the primary mass storage unit is placed on top of the 7-slot system enclosure.

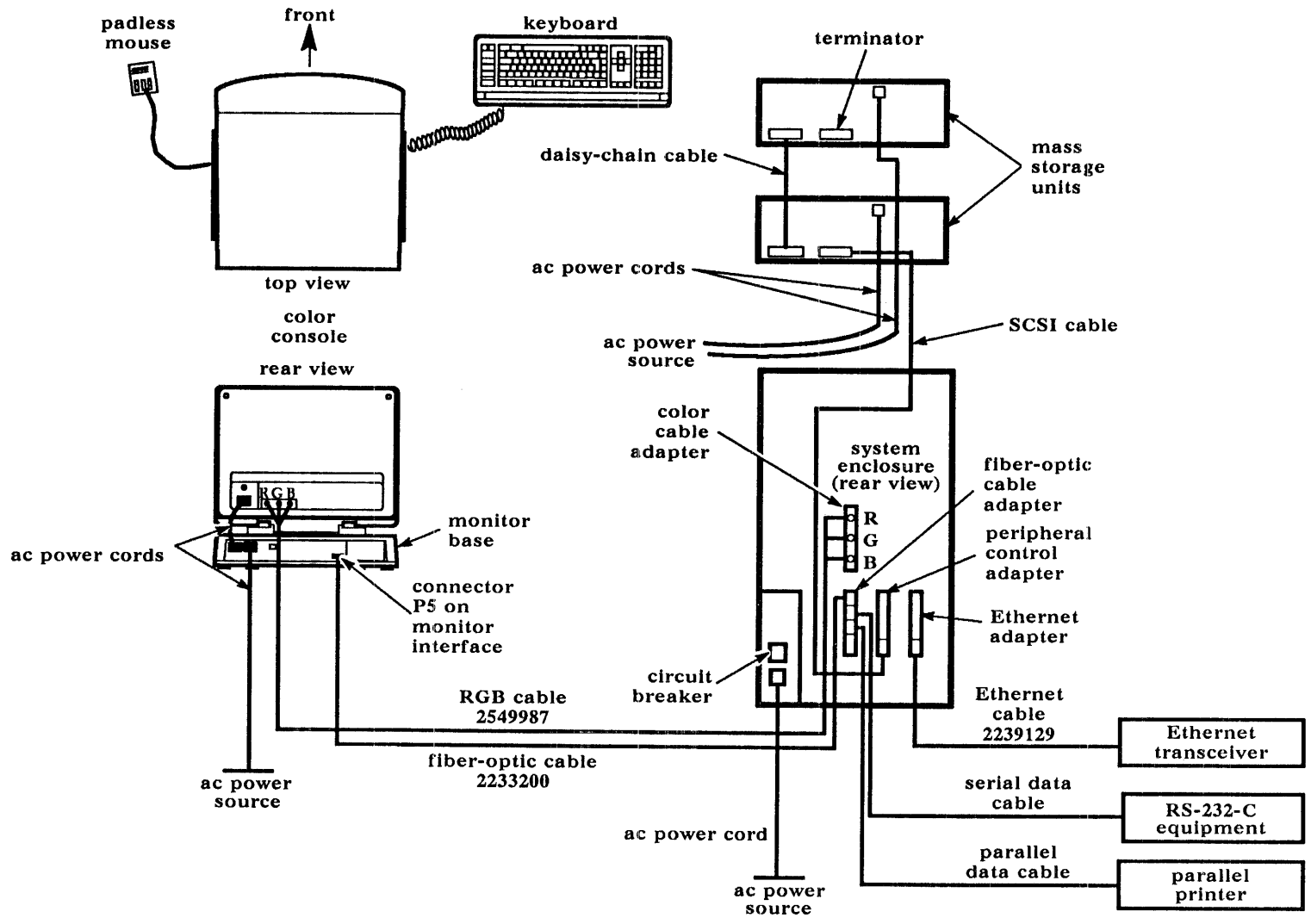
Figure 4-1 Typical Explorer System Cabling Diagram With a Monochrome Console



NOTE:
 Some early model Explorer enclosures with 80-ampere power supplies have internal power receptacles that the mass storage units can connect to. Enclosures with 110-ampere power supplies do not have internal power receptacles; therefore, all mass storage unit power must be connected to wall outlets. A circuit breaker is also included with the 110-ampere power supply.

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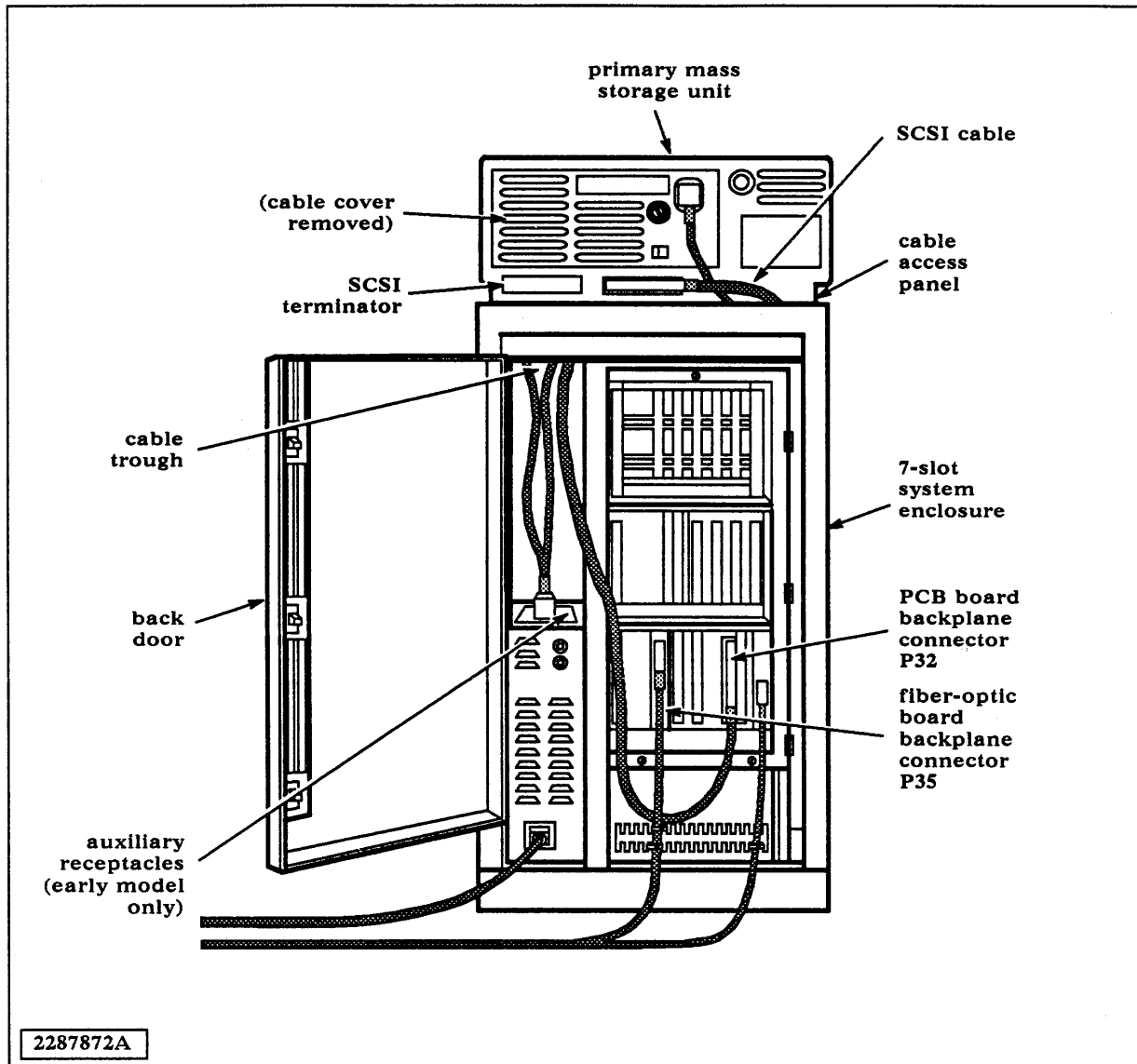
Figure 4-2 Typical Explorer System Cabling Diagram With a Color console



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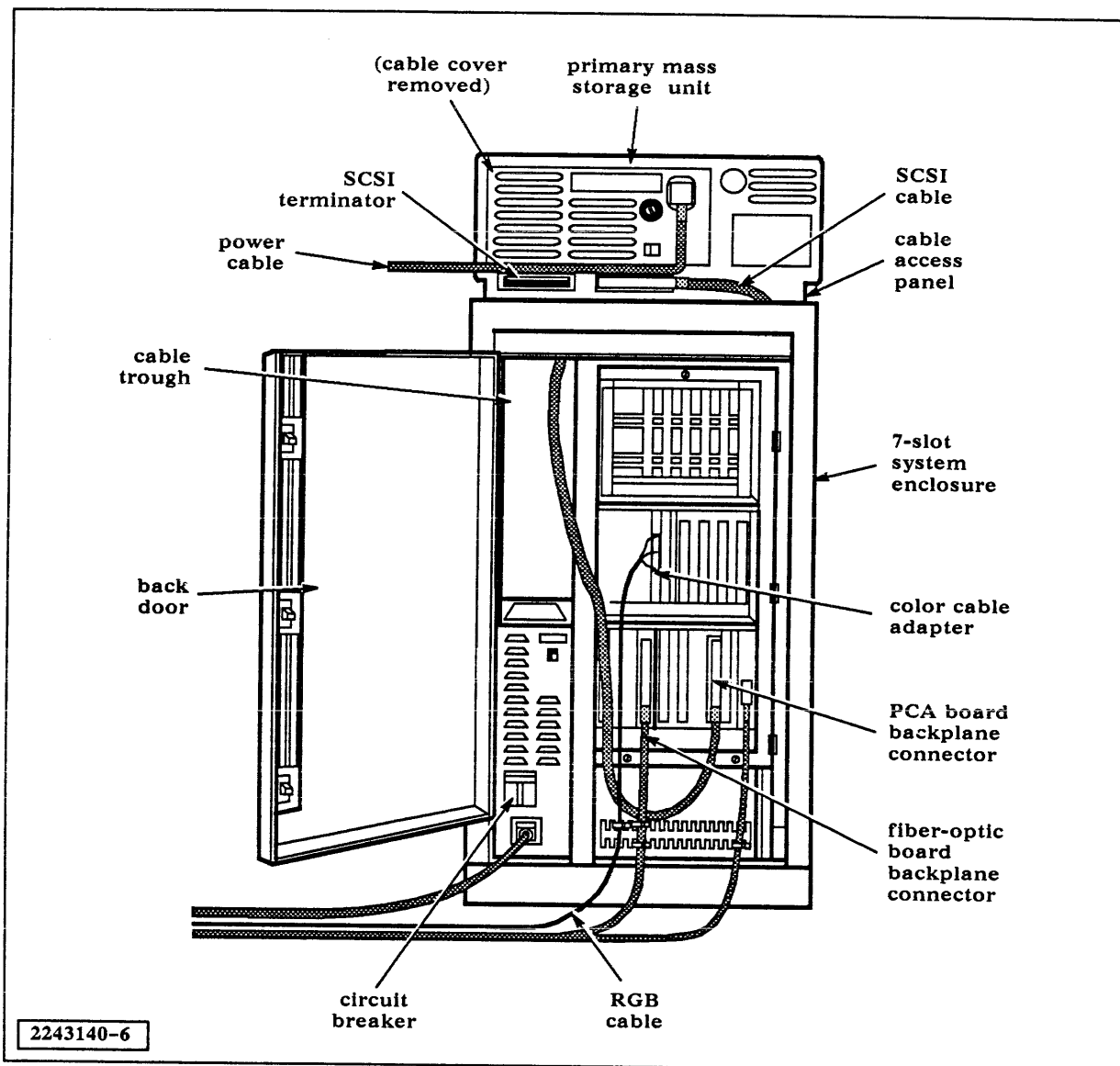
The two versions of the mass storage unit are the mass storage unit I (MSU I) and the mass storage unit II (MSU II). MSU I has AMPMODU connectors, and MSU II has CHAMP connectors. The two versions have other internal differences, but these differences are not discussed in this procedure. When a reference is made to either MSU I or MSU II, the designation MSU is used.

Figure 4-3 System Enclosure With 80-Ampere Power Supply and Primary MSU



WARNING: Use care when handling the mass storage unit. A mass storage unit that is either dropped while it is being handled or is jostled from the top of a system enclosure can cause a painful injury. Damage to the mass storage unit can also occur.

Figure 4-4 System Enclosure With 110-Ampere Power Supply and Primary MSU



NOTE: Some early models of the 7-slot enclosure may have a short power cord that is used to connect the MSU to the system enclosure auxiliary receptacle for power. All new 7-slot enclosures with the 80-ampere power supply or the 110-ampere power supply have the long power cords that are used to connect the MSUs to wall receptacles for power. The part number and appearance of the longer power cord is different for 120-volt, 220-volt, and 240-volt configurations. See Table 4-1 for cable part numbers and description information.

Follow these steps to install the mass storage unit:

1. Place the primary MSU (the one marked *primary* on its serial number label) on top of the 7-slot system enclosure. Line up the front and side edges of the MSU with the front and side edges of the 7-slot system enclosure.
2. Remove the snap-on cosmetic cover plate (if it is installed) from the back of the MSU to uncover the ac power receptacle. Figures 4-3 and 4-4 show the primary MSU with cover plate removed. Connect the female end of the ac power cord to the ac receptacle at the back of the MSU, connect the other end of the power cord to a wall outlet, and proceed to step 6. If you have auxiliary receptacles in your 7-slot system enclosure, it is recommended that you do not use them except as a temporary power connection until longer power cords can be obtained for connection to wall outlets. If you need to connect the power cord to the auxiliary receptacles, proceed with step 3.
3. Press down on the back door latch at the upper right side of the back door of the 7-slot system enclosure and open the back door.
4. Remove the cable notch inserts from the spring-loaded cable access panel at the rear of the 7-slot system enclosure top (see Figure 4-5). Press down on the cable access panel to slide it inside the top part of the adapter guide and backplane plastic cover. Thread the male end of the ac power cord through the leftmost cable notch (as viewed from the rear of the unit) and down through the vertically-oriented cable trough.
5. Insert the male end of the ac power cord into one of the two auxiliary receptacles.

CAUTION: All connectors are keyed for proper orientation, but be very careful when connecting and disconnecting them. If you attempt to insert these connectors incorrectly on an MSU I, you may damage the connector pins. This caution also applies to insertion of the terminator on an MSU I.

6. Locate the 1-meter SCSI cable that is shipped with the primary mass storage unit.
7. Thread the metal shell connector end of the SCSI cable through the rightmost cable notch of the cable access panel (as viewed from the rear of the system enclosure), then back to the left and down through the cable trough.
8. Connect the plastic connector end of the SCSI cable to the rightmost 50-pin connector of the MSU (as viewed from the rear of the unit).
9. Connect the metal shell connector end of the cable to the peripheral cable adapter (PCA) board that extends from the backplane at connector P32. Make sure the cable connector is seated properly on the PCA.

10. Place the cable access panel in its closed position; then, ensure that the cable and connector are as shown in Figure 4-3 or 4-4. Note that the cable dresses downward from the metal shell connector. Neatly dress and store any excess cable inside the cable trough.
11. If your Explorer system has more than one MSU, do not perform this step but proceed to the next step. If your system has only one MSU, install the 50-pin SCSI terminator (see Figure 4-6 and Table 4-1) into the leftmost 50-pin connector of the MSU (as viewed from the rear). Install the snap-on cosmetic cover plate on the back of the MSU. This step completes your primary MSU installation. Proceed to paragraph 4.4 for display unit installation procedures.

NOTE: The secondary MSU is normally placed on top of the primary MSU. In cases where the secondary MSU is placed remote from the primary MSU, longer cables are used. See Table 4-1 for cable part numbers and length information.

Figure 4-5

Cable Access Doors

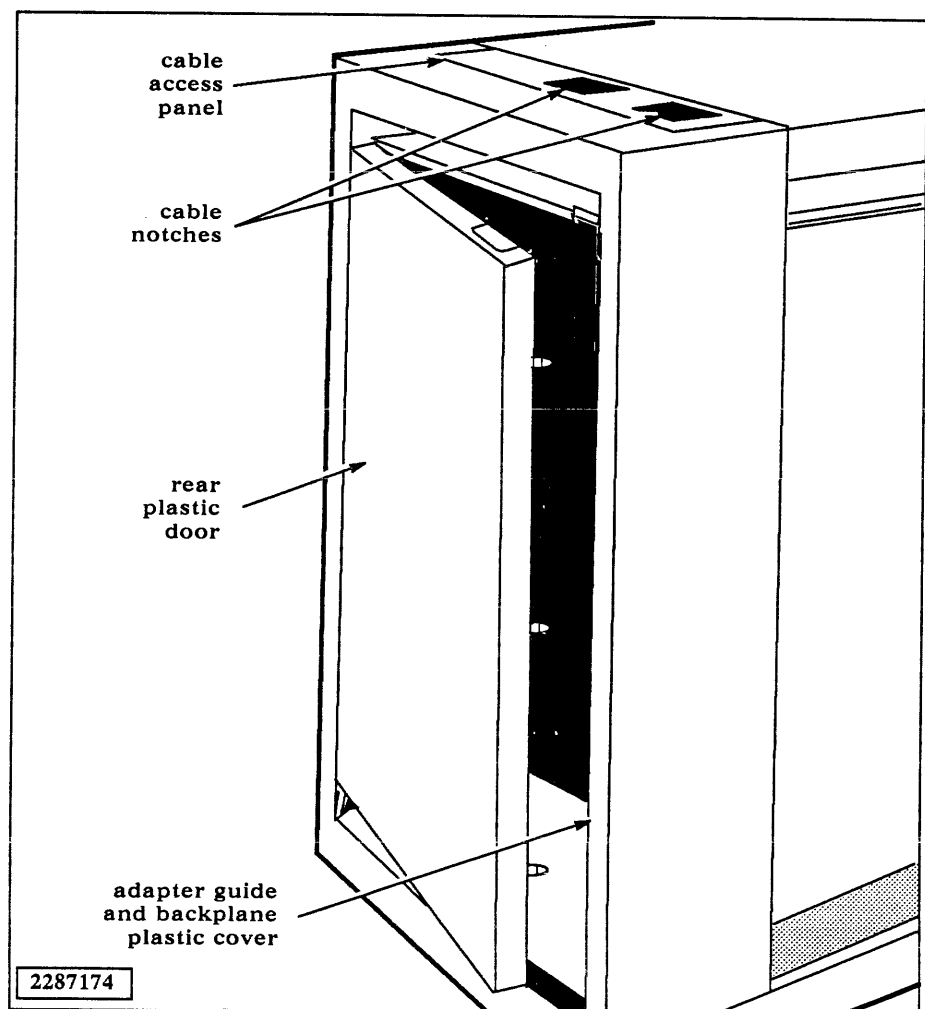
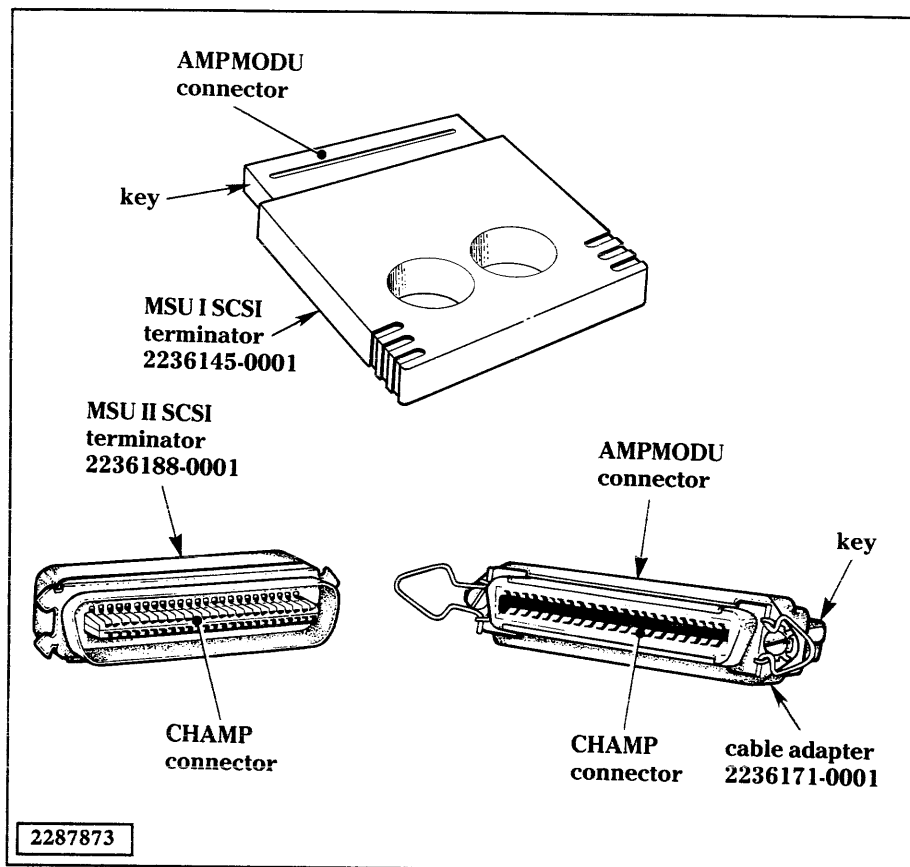


Table 4-1 Cabling and Terminator Information

Mass Storage Unit	Cable Part Number	Cable Length	Functional Description
SCSI bus cables:			
MSU I	2236142-0002	1 m (3.3 ft)	These bus cables connect the host computer to the MSU when the MSU sits on top of the host computer.
MSU II	2236190-0002	1 m (3.3 ft)	
MSU I	2236142-0001	3 m (10 ft)	These bus cables connect the host computer to the MSU when the MSU does not sit on top of the host computer.
MSU II	2236190-0001	3 m (10 ft)	
MSU I	2236142-0002	1 m (3.3 ft)	These bus cables connect two MSUs when they are not stacked on top of each other.
MSU I	2236142-0001	3 m (10 ft)	
MSU II	2230602-0001	1 m (3.3 ft)	
MSU II	2230602-0002	2 m (6.6 ft)	
MSU II	2230602-0003	3 m (10 ft)	
Daisy-chain cables:			
MSU I	2236153-0001		These daisy-chain cables connect two MSUs when they are stacked on top of each other.
MSU II	2236187-0001		
Terminators:			
MSU I	2236145-0001		Each of these terminators plugs into the last MSU in a chain of MSUs. It terminates the SCSI bus in the proper load resistance.
MSU II	2236188-0001		
Cable adapter:			
MSU I	2236171-0001		This cable adapter plugs into the AMPMODU connector on an MSU I. It provides a CHAMP I/O connector on an MSU I.
Power cables:			
MSU I	2247530-0002	0.7 m (2.3 ft)	The -0002 cable connects to 120-volt auxiliary ac receptacles in the 7-slot enclosure (not recommended). The -0004 cable connects to a 120-volt ac wall outlet.
MSU I & II	2247530-0004	2 m (6.6 ft)	
MSU I & II	2210558-0002	2.5 m (8 ft)	This cable connects to a 220-volt ac Western European type wall outlet.
MSU I & II	2247599-0002	2.5 m (8 ft)	This cable connects to a 240-volt ac British type wall outlet.

Figure 4-6

SCSI Terminator and Cable Adapter



12. This step and the following mass storage installation steps are to be performed only if your Explorer system has a secondary MSU. Stack the secondary MSU on top of the primary MSU as shown in Figure 4-7 or 4-8. Carefully line up the front and side edges of the two units.
13. If it is installed, remove the snap-on cosmetic cover plate from the back of the secondary MSU.
14. Connect a daisy-chain cable (see Table 4-1) from the leftmost 50-pin connector at the rear of the primary MSU to the leftmost 50-pin connector at the rear of the secondary MSU.
15. Install the 50-pin SCSI terminator (see Figure 4-6 and Table 4-1) into the rightmost 50-pin connector of the secondary MSU (as viewed from the rear of the unit).
16. For correct placement of daisy-chain cables, SCSI bus cables, and the terminator when subsequent MSUs are installed, refer to Figure 4-9. For alternate configurations of mass storage enclosures, refer to the applicable 143-megabyte or 182-megabyte MSU documents listed in the front of this manual.

Figure 4-7 System Enclosure With 80-Ampere Power Supply and Two MSUs

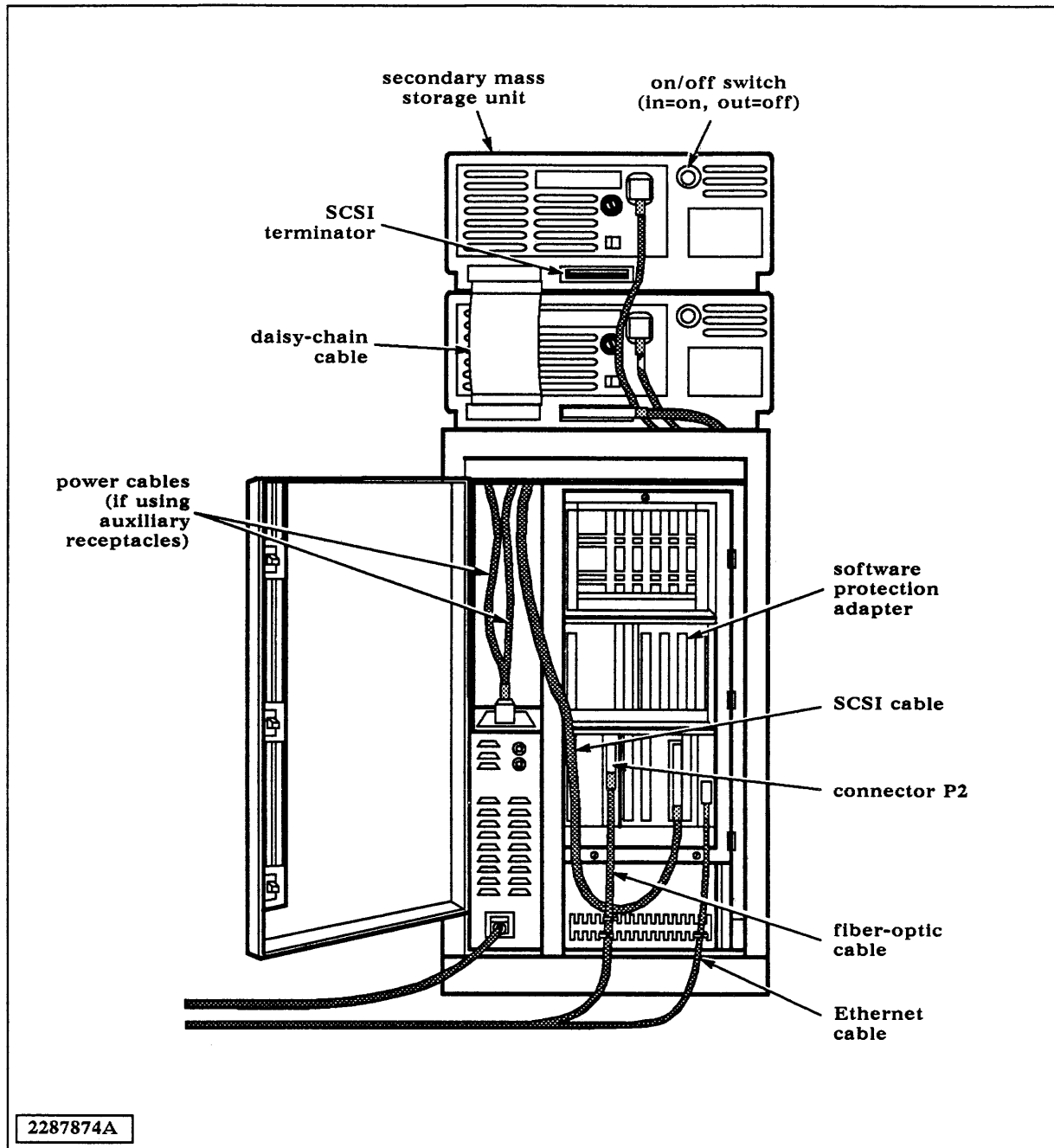
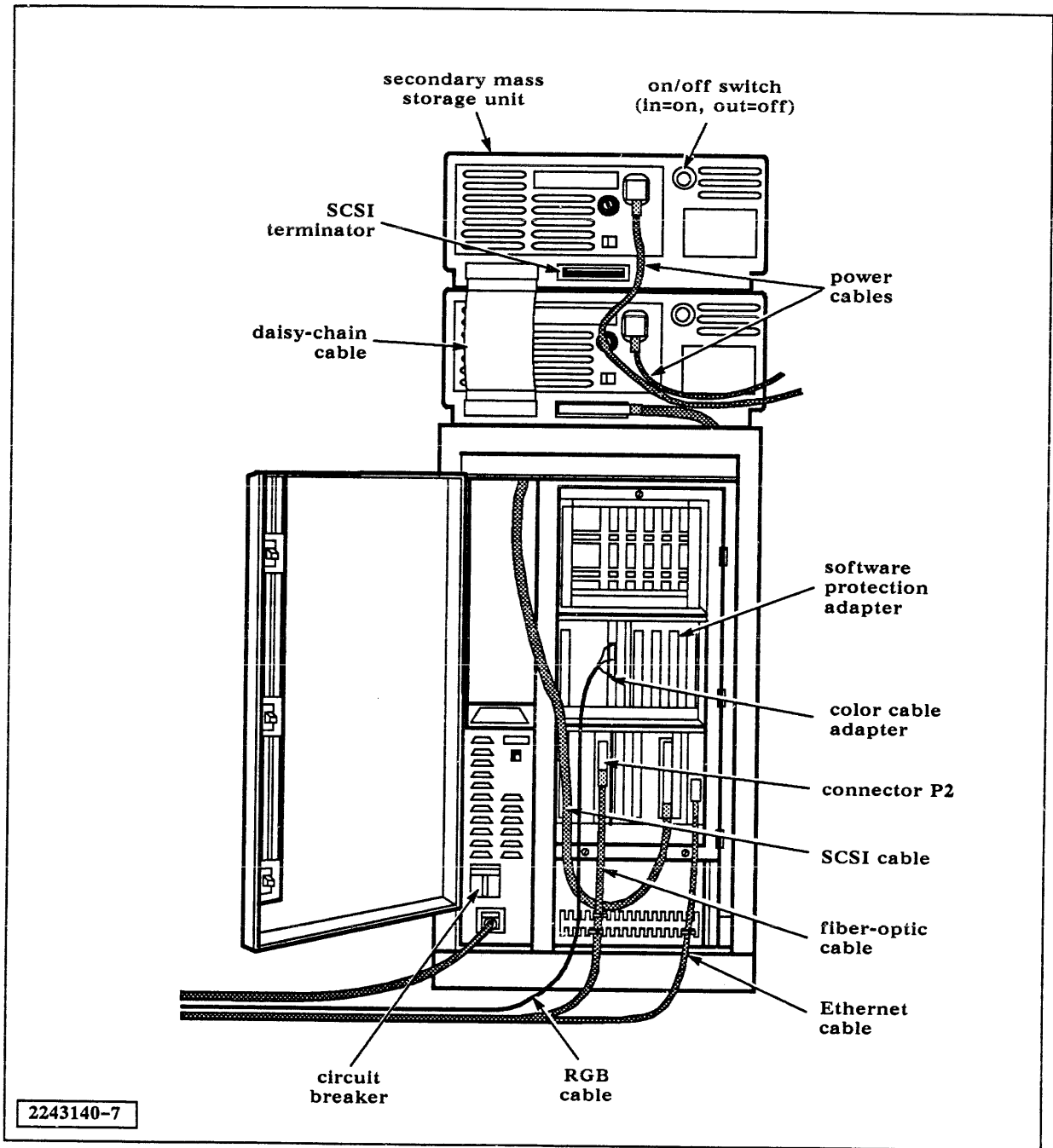


Figure 4-8 System Enclosure With 110-Ampere Power Supply and Two MSUs



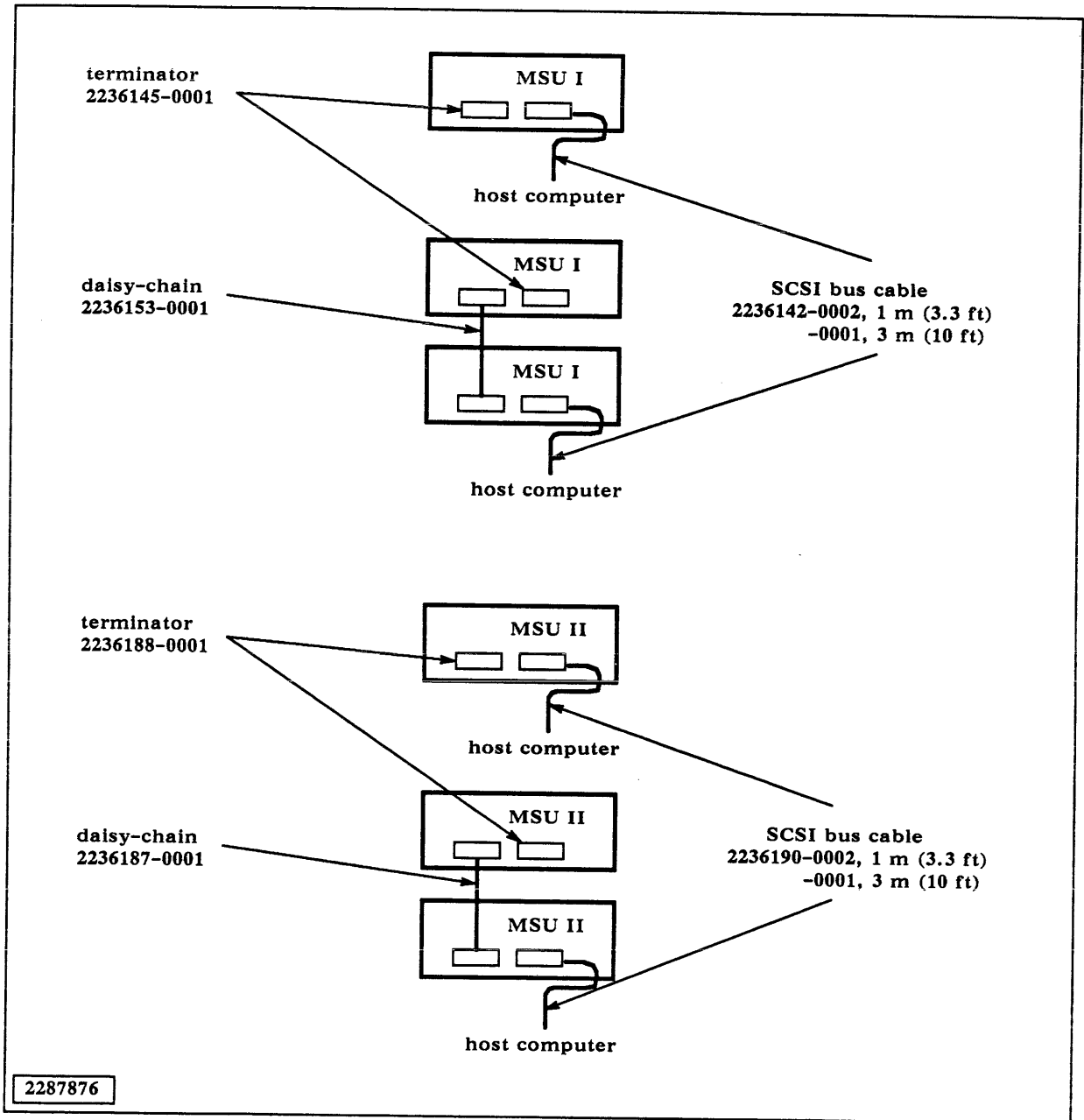
NOTE: Some early models of the 7-slot enclosure may have a short power cord that is used to connect the MSU to the system enclosure auxiliary receptacle for power. All new 7-slot enclosures with the 80-ampere power supply or the 110-ampere power supply have the long power cords that are used to connect the MSUs to wall receptacles for power. The part number and appearance of the longer power cord is different for 120-volt, 220-volt, and 240-volt configurations. See Table 4-1 for cable part numbers and description information.

17. When installing an MSU on top of a new 7-slot enclosure with an 80-ampere power supply or a 110-ampere power supply, all power cords must be connected to wall outlets. If you are upgrading an early model of the 7-slot enclosure, you may find short cables connected from the MSUs to the auxiliary ac power receptacles. It is recommended that all peripherals be connected to wall outlets even though the auxiliary ac power receptacles are present. The auxiliary ac power receptacles can be used as a temporary connection point until longer power cords become available to connect to wall outlets. Connect the power cord using the applicable substep that follows:
 - a. To use an auxiliary receptacle for power to a secondary MSU, connect the female end of the short ac power cord to the ac receptacle at the rear of the unit. Thread the other end of the ac power cord alongside the power cord of the primary MSU, through the same cable notch in the cable access panel, and down through the cable trough to the second ac auxiliary receptacle. Insert the male end of the ac power cord into the ac outlet.
 - b. To use a wall outlet for ac power to the secondary MSU, connect the female end of the power cord shipped with your secondary MSU to the ac receptacle at the rear of the MSU. Ensure that the power switch (Figure 4-7 or 4-8) on the secondary MSU is set to off (in the out position), then connect the male end of the ac power cord directly to the wall outlet.

An alternate method is to thread the power cord down through the cable trough as in the previous step, then out under the system enclosure back door to the wall receptacle. This method provides a neater package if your power cord is long enough to reach the wall receptacle using this route. Note that the appearance and part numbers of the power cords are different for 120-volt, 220-volt, and 240-volt configurations.

18. Install the snap-on cosmetic cover plate on the back of the secondary mass storage unit.

Figure 4-9 Examples of Multiple MSU I and MSU II Connections



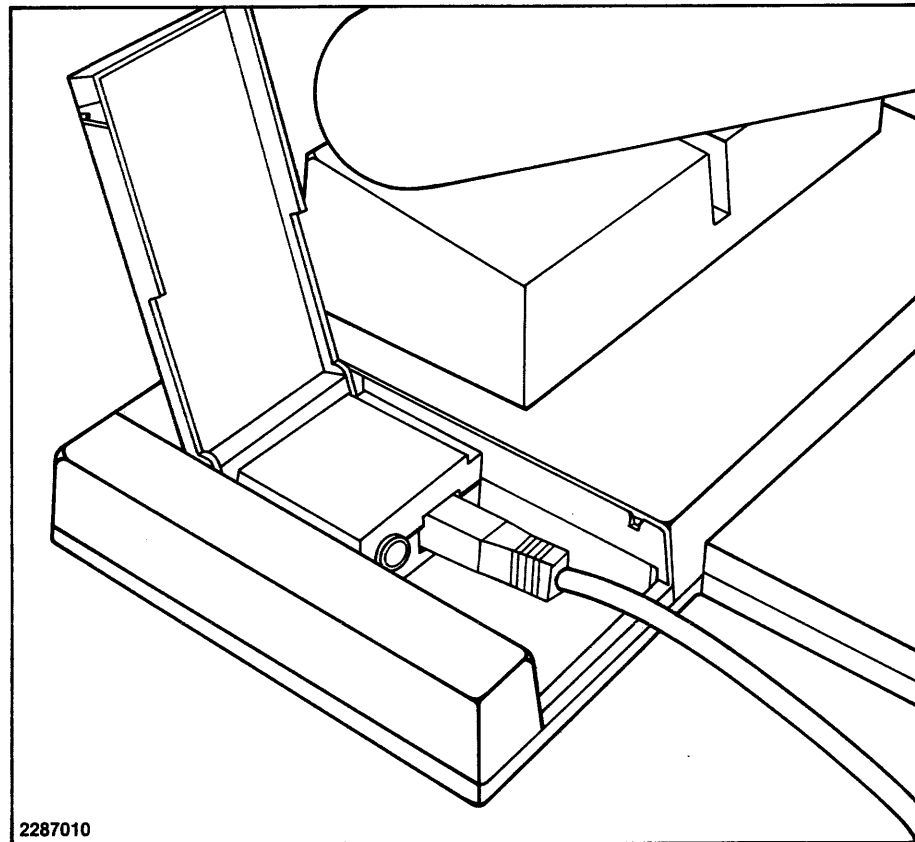
Monochrome Console Installation

4.4 Place the monochrome monitor, the mouse assembly, and the keyboard on the desktop or table top area you selected. Install the monochrome console monitor as follows:

1. Plug the keyed keyboard cable into the square keyboard connector at the left edge of the display monitor base (see Figure 4-10), making sure that the connector pins are oriented correctly.

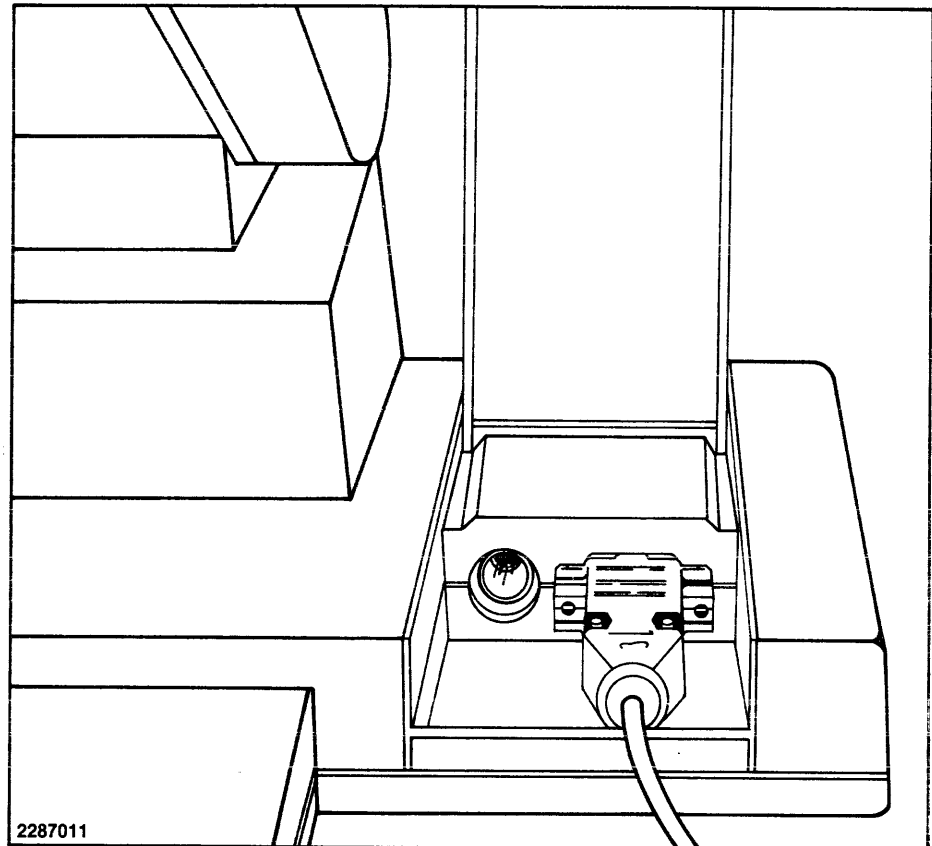
Figure 4-10

Keyboard Cable Connection on a Monochrome Console



2. Plug the mouse cable into the mouse connector at the right edge of the display monitor base, as viewed from the front of the display monitor (see Figure 4-11). The mouse connector is the outer connector of the two connectors at the right edge of the base. If you have an optical mouse, perform step 3. If you have a padless mouse, proceed to step 4.
3. Place the mouse on the mouse pad with the shorter sides of the mouse parallel to the longer sides of the optical pad (see Figure 4-12). You must maintain this orientation when you move the mouse across the pad; otherwise, the mouse cursor will move incorrectly on the video display.

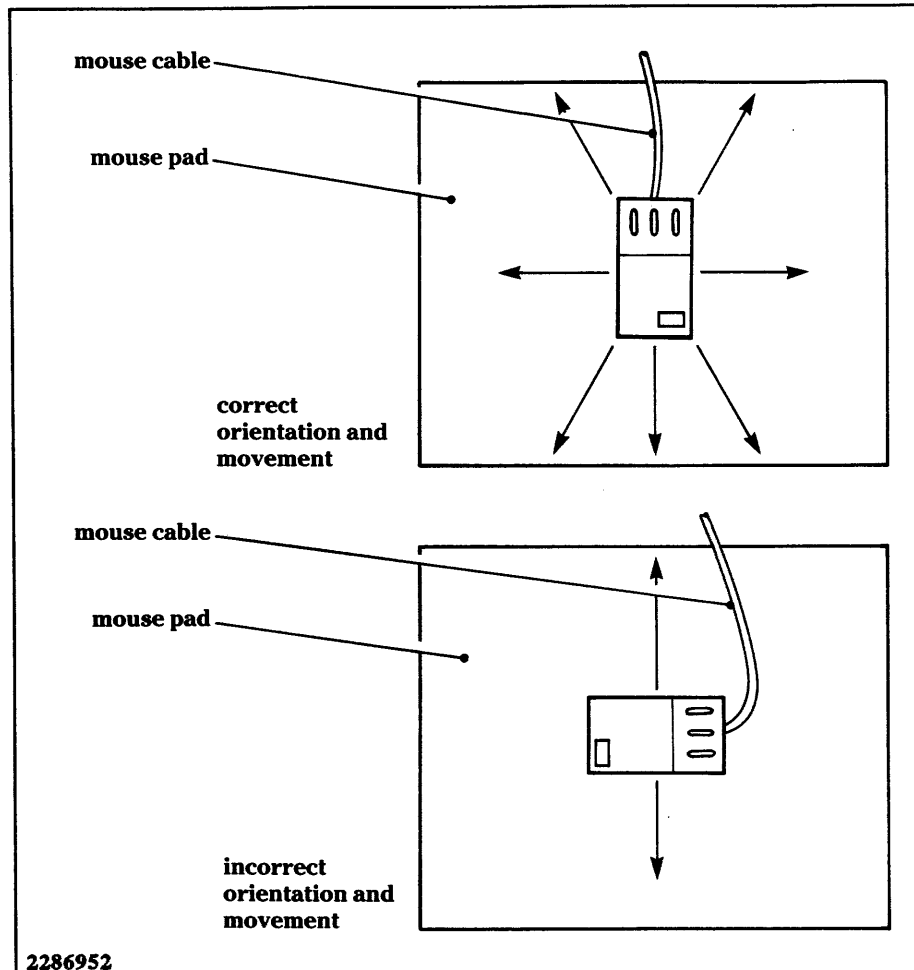
Figure 4-11

Mouse Cable Connection on Monochrome Console

NOTE: On early model system enclosures with an 80-ampere power supply, the display monitor can be temporarily connected to the auxiliary ac power receptacles until a longer power cord is available. For all new 7-slot enclosures with 80-ampere power supplies or 110-ampere power supplies, the display monitor power cord must be connected to a wall outlet.

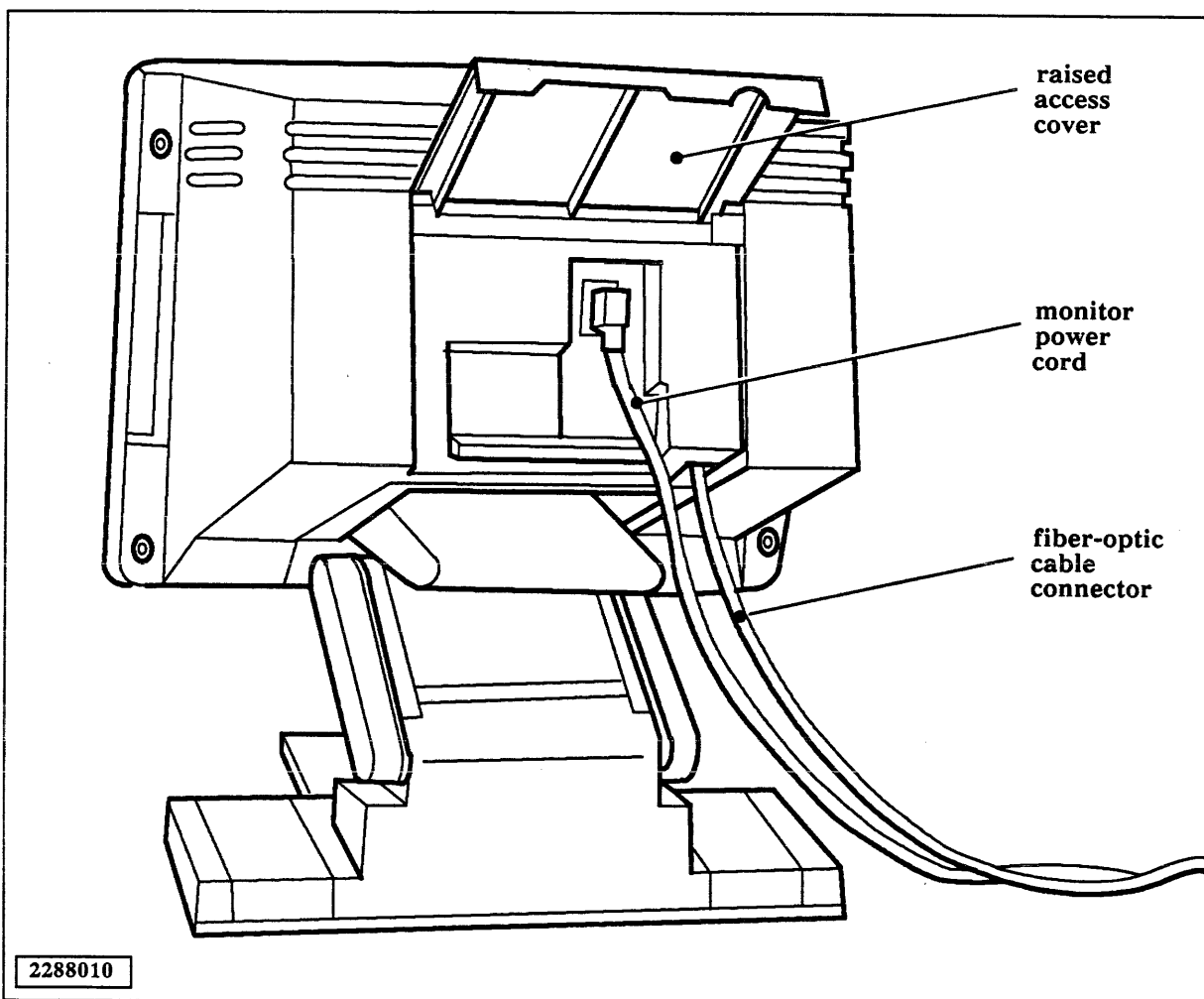
Figure 4-12

Mouse-to-Pad Orientation (Optical Mouse Only)



4. When connecting the display monitor to ac power, use one of the following substeps (see Figure 4-13):
 - a. To use a system enclosure auxiliary receptacle for power to the display monitor, lift the access cover at the back of the display monitor and connect the female end of the ac power cord, TI part number 2247530-0001, to the ac receptacle at the rear of the display unit. Thread the other end of the ac power cord alongside the power cord of the primary MSU, through the same cable notch in the cable access panel, and down through the cable trough to the second auxiliary receptacle. Insert the male end of the ac power cord into the ac outlet.

Figure 4-13 Cable Routing at Rear of Monochrome Monitor



- b. To use a wall receptacle for ac power to the display monitor, lift the access cover at the back of the display monitor and connect the female end of the power cord shipped with your display monitor to the ac receptacle at the rear of the monitor. Ensure that the power switch to the display monitor is set to off (in the out position); then, connect the male end of the ac power cord to the wall receptacle. Note that the appearance and part number of the standard power cords are different for 120-volt, 220-volt, and 240-volt configurations. The power cord part numbers and lengths are as follows:

System	TI Part Number	Length
120-volts	2247530-0004	2 m (6.5 ft)
220-volts	2210558-0002	2.5 m (8 ft)
240-volts	2247599-0002	2.5 m (8 ft)

CAUTION: The 50-foot fiber-optic cable shipped with the system is coiled inside a cardboard container. Observe the following precautions when you are handling or pulling fiber-optic cables:

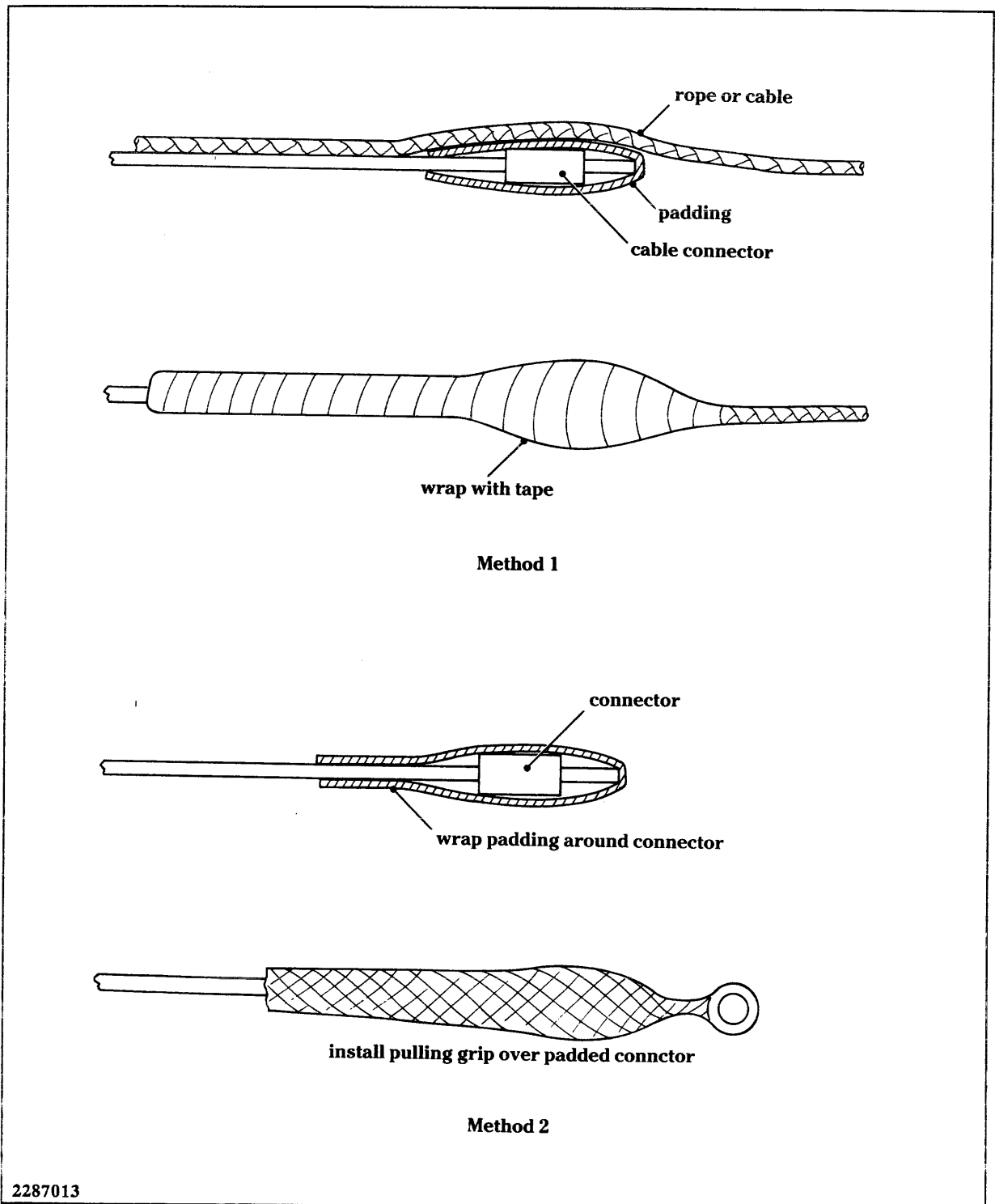
- Route the cable where it will not be stepped on or otherwise subjected to physical damage.
- Avoid sharp bends in the cable. Maintain a bend radius greater than two inches. A good method for maintaining this radius is to tape the cable to a short segment of a four-inch diameter plastic pipe at sharp turn points, such as the entry and exit points from an overhead false ceiling. The pipe can be hidden from view in the false ceiling.
- Avoid using excessive force when pulling the cable. Do not pull on the cable connector when you are pulling the fiber-optic cable through a conduit or cable tray. Two methods of pulling fiber-optic cables (illustrated in Figure 4-14) are as follows:
 - Tape a rope or steel cable to the fiber-optic cable. Place padding between the pulling rope or cable and the fiber-optic connector, and extend the tape over the connector to protect it.
 - Use a braided stainless-steel pulling grip with padding between the connector and the pulling grip.

-
5. From either end of the coiled fiber-optic cable, unwind enough cable to reach the fiber-optic receptacle on the back of the display monitor (see Figure 4-13). Remove the black cover from the end of the fiber-optic cable, then insert the keyed cable connector into the fiber-optic receptacle. Close the access cover on the back of the display monitor.
 6. Observe the cautions for handling the fiber-optic cable. From either end of the coiled fiber-optic cable, unwind the cable until the still unconnected cable connector reaches the system enclosure. Coil the excess cable into its container and store in a convenient place.

CAUTION: Do not attempt to cut a fiber-optic cable to length. Fiber-optic connector replacement is an exacting task that requires special tools and training.

7. Thread the unconnected end of the fiber-optic cable to connector P2 of the fiber-optic board either through the cable access panel at the top of the system enclosure or through the space underneath the system enclosure back door. The fiber-optic board is installed in backplane connector P35 (see Figure 4-3 or 4-4).
8. Remove the black cover from the end of the fiber-optic cable; then, insert the keyed cable connector into fiber-optic board connector P2. P2 is the top connector as shown in Figure 4-7 or 4-8. This step completes the installation of the display unit.

Figure 4-14 Fiber-Optic Cable Pulling Techniques

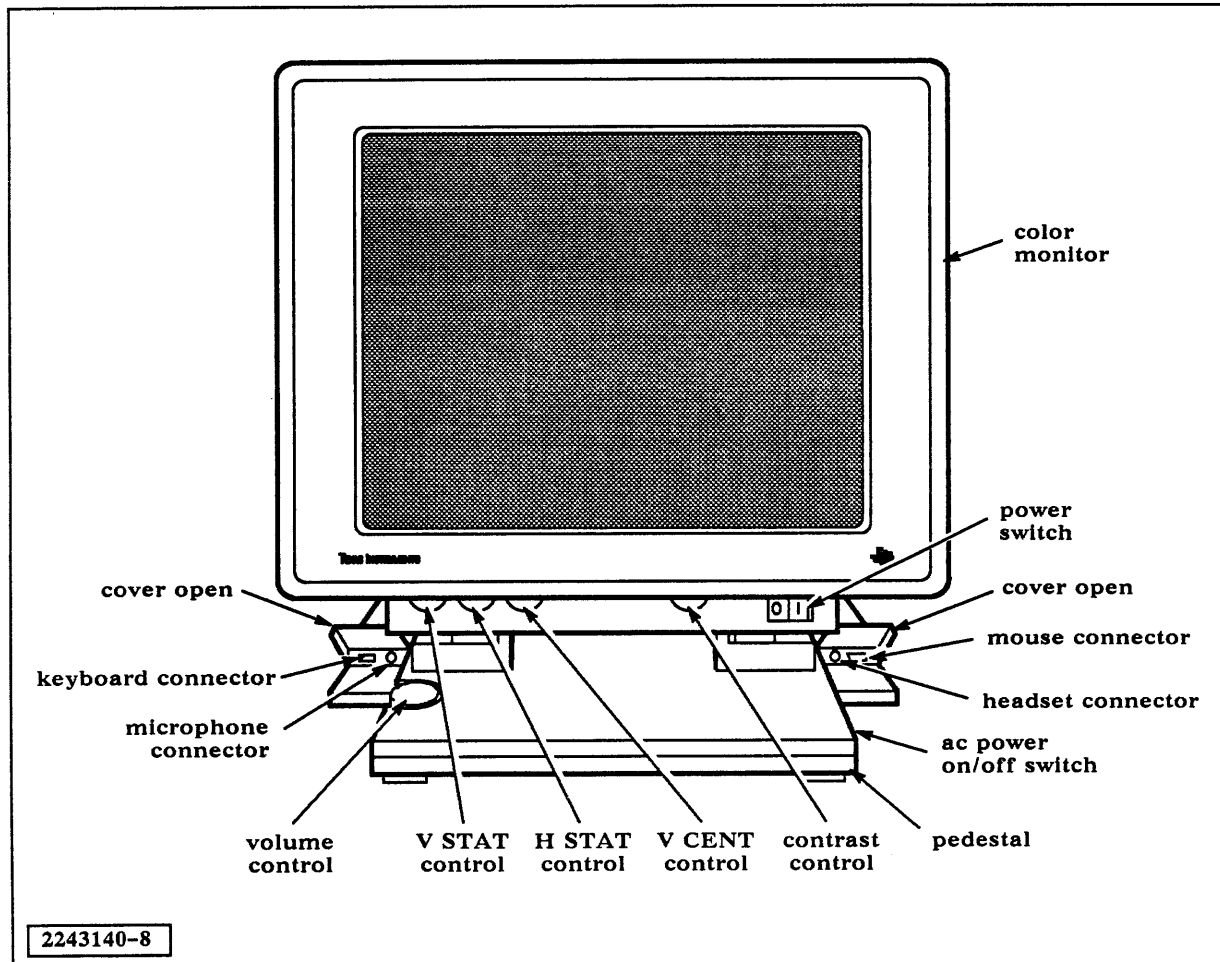


Color Console Installation

4.5 Place the color monitor, the mouse assembly, and the keyboard on the desktop or table top area you selected. Install the color console monitor as follows:

1. Lift the cover on the left side of the pedestal (Figure 4-15) and plug the keyed keyboard cable into the rectangular keyboard connector, making sure that the connector pins are oriented correctly.
2. Lift the cover on the right side of the pedestal and plug the mouse cable into the rectangular mouse connector.

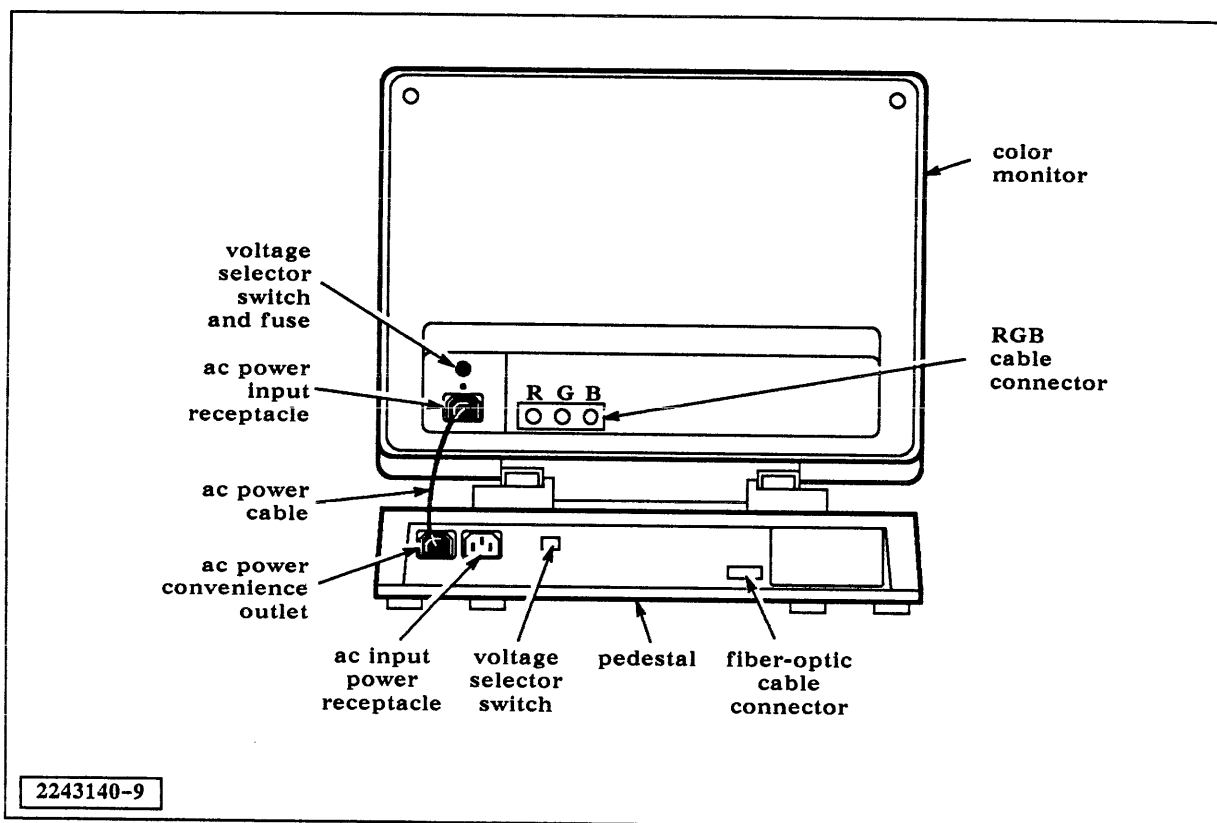
Figure 4-15 Color Monitor Front View



3. Ensure that the power switches on the color monitor and the pedestal are set to off (in the 0 position); then, connect the ac power cord to the ac input power receptacle on the pedestal (Figure 4-16) and to a wall receptacle. Note that the appearances and part numbers of the power cords for 120-volt, 220-volt, and 240-volt configurations are different. The power cord part numbers and lengths are as follows:

Voltage	TI Part Number	Length
120-volts	2247530-0006	2 m (6.5 ft)
220-volts	2210558-0001	2.5 m (8 ft)
240-volts	2247599-0001	2.5 m (8 ft)

Figure 4-16 Color Monitor Rear View



4. Connect the applicable RGB cable between the RGB cable connectors on the color monitor and the RGB cable connectors on the color cable adapter at the CSIB location of the system enclosure backplane. Make sure the red (R), green (G), and blue (B) leads are connected to the associated RGB connectors at both ends. The RGB cable is available in the following lengths:

TI Part Number	Length
2549987-0003	3 m (10 ft)
2549987-0004	8.6 m (28 ft)

5. From either end of the coiled fiber-optic cable, unwind enough cable to reach the fiber-optic receptacle on the back of the pedestal. Remove the black cover from the end of the fiber-optic cable; then, insert the keyed cable connector into the fiber-optic receptacle.

CAUTION: Do not attempt to cut a fiber-optic cable to length. Fiber-optic connector replacement is an exacting task that requires special tools and training.

6. Observe the cautions for handling the fiber-optic cable. From either end of the coiled fiber-optic cable, unwind the cable until the still-unconnected cable connector reaches the system enclosure. Coil the excess cable into its container and store in a convenient place.

CAUTION: The 50-foot fiber-optic cable shipped with the system is coiled inside a cardboard container. Observe the following precautions when you are handling or pulling fiber-optic cables:

- **Route the cable where it will not be stepped on or otherwise subjected to physical damage.**
- **Avoid sharp bends in the cable. Maintain a bend radius greater than two inches. A good method for maintaining this radius is to tape the cable to a short segment of a four-inch diameter plastic pipe at sharp turn points, such as the entry and exit points from an overhead false ceiling. The pipe can be hidden from view in the false ceiling.**
- **Avoid using excessive force when pulling the cable. Do not pull on the cable connector when you are pulling the fiber-optic cable through a conduit or cable tray. Two methods of pulling fiber-optic cables (illustrated in Figure 4-14) are as follows:**
 - **Tape a rope or steel cable to the fiber-optic cable. Place padding between the pulling rope or cable and the fiber-optic connector, and extend the tape over the connector to protect it.**
 - **Use a braided stainless-steel pulling grip with padding between the connector and the pulling grip.**

-
7. Thread the unconnected end of the fiber-optic cable to connector P2 of fiber-optic adapter II either through the cable access panel at the top of the system enclosure or through the space underneath the system enclosure back door. Fiber-optic adapter II is installed in the backplane connector associated with connector P3 on the CSIB.
 8. Remove the black cover from the end of the fiber-optic cable; then, insert the keyed cable connector into fiber-optic adapter II connector P2. P2 is the top connector as shown in Figure 4-7 or 4-8. This step completes the installation of the display unit.

Installation of Optional Peripheral Devices

4.6 The following items provide instructions for connecting the system to a parallel printer, an RS-232-C device, and an existing Ethernet transceiver that is part of an existing local area network. The *NuBus Ethernet Controller General Description* manual that is shipped with the Explorer network computer system and with Texas Instruments Ethernet option kits contains comprehensive Ethernet planning and installation information. Figures 4-1 and 4-2 show the connecting points at the back of the system enclosure for a monochrome console or a color console. Perform the applicable procedures in the list that follows.

NOTE: If your computer system includes both RS-232-C and parallel printer cable connections, install the 40-pin printer cable connector to connector P4 of the fiber-optic adapter before installing the smaller RS-232-C cable connector. The RS-232-C cable connector interferes with the installation and removal of the larger connector.

- To connect a parallel printer, bring the printer cable into the system enclosure through the space underneath the back door of the enclosure. Connect the 40-pin printer cable connector to connector P4 of the fiber-optic adapter installed in the backplane connector associated with connector P3 of the SIB or CSIB.
- To connect an RS-232-C device, bring the RS-232-C cable into the system enclosure through the space underneath the back door of the enclosure. Connect the RS-232-C cable connector to connector P3 of the fiber-optic adapter.
- To connect the Explorer system to your local area network, use the 33-foot Explorer-to-Ethernet transceiver cable, TI part number 2239129-0001, that is shipped with your system. Connect the 18-pin P1 connector of the cable to connector P2 of the Ethernet adapter board, part number 2236400-0001, at the back of the system enclosure (installed in backplane connector P30). Route the cable through the space at the bottom of the back door to your Ethernet transceiver (or transceiver multiplexer). Connect the 15-pin P2 connector of the cable to your Ethernet transceiver or transceiver multiplexer.

Refer to the applicable hardware general description manuals and the appropriate software manuals that are referenced in Section 1 for the installation of other optional peripherals, such as additional mass storage devices, communications equipment, and multiple terminals.

**System Enclosure
Final Position**

4.7 The steps that follow move the 7-slot system enclosure into position and prepare the Explorer system for initial power application.

CAUTION: To ensure adequate air cooling, at least three sides of the system enclosure should remain unobstructed. For example, do not place the system enclosure flush between two filing cabinets.

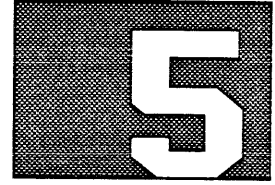
1. Place all external cables behind the cable security bar as shown in Figure 4-7 or 4-8; then, fully close the back plastic door and the front inner metal door of the system enclosure to ensure that all upper and lower interlocks on each door are closed.
2. Locate the ac power cord for your system enclosure and connect the female end of the ac power cord to the ac receptacle at the lower left corner at the back of the system enclosure. The ac power cords for the three voltage configurations are:

System	TI Part Number
120-volts	2249468-0001
220-volts	2249468-0002
240-volts	2249468-0003

3. Set the system enclosure power switch (located at the upper left of the front of the system enclosure) to the off (out) position. See Figure 5-1.
4. Connect the male end of the system enclosure ac power cord to the wall receptacle.

CAUTION: Do not attempt to move the system enclosure with more than one mass storage unit stacked on its top. Be extremely careful when moving the system enclosure if the primary MSU is on top of the system enclosure.

5. If your system has a secondary mass storage unit stacked on the system enclosure, disconnect the power cord and one end of the daisy-chain cable from the secondary mass storage unit. Carefully remove the secondary mass storage unit from its location on top of the primary mass storage unit.
6. Taking care not to dislodge the primary mass storage unit, move the system enclosure to its desired location.
7. If applicable, reposition the secondary mass storage unit on the primary mass storage unit and reconnect the power cord and the daisy-chain cable.
8. Refer to Section 5, Power-Up and Self-Test, for initial power-up procedures.



POWER-UP AND SELF-TEST

Introduction

5.1 This section contains the procedures for initial application of power to the Explorer system and for verifying that self-test of the system has been successfully completed.

NOTE: If you are installing an Explorer LX system, refer to the *Explorer LX System Installation Guide* and the *Explorer LX User's Guide*, rather than this section, for complete instructions on power-up and self-test.

NOTE: If you are installing a new system with the Explorer II processor or if this is a system upgrade to the Explorer II processor, be sure Explorer Release 3.2 software is installed per the instructions in the *Explorer System Software Installation Guide* before you power-up your system. Also, when the Release 3.2 software is installed, refer to *Introduction to the Explorer System* for power-up and self-test instructions in addition to those provided in this section.

This section also provides procedures for removing power from the system and for initial mechanical adjustment for the display monitors and the keyboard. The general description manuals that are packed with the display units contain complete adjustment procedures for the display monitors and the keyboard. This section contains information on the following topics:

- System self-test features
- Power-up and self-test procedures
- Monochrome monitor adjustments
- Color console adjustments
- Keyboard adjustments
- Power-down procedures

System Self-Test

5.2 Self-test of the computer system occurs automatically at initial power-up. Results of the self-tests are provided by messages displayed on the display monitor and also by red fault light-emitting diodes (LEDs).

WARNING: Do not use neon lamp DS1 on the system power supply as an indication of an earth ground connection to the 7-slot system enclosure. Neon lamp DS1 indicates only that an unqualified earth ground path exists. Special instruments are required to determine if the earth ground connection is a qualified safety ground.

The LEDs are located on the front edges of the individual circuit boards installed in the 7-slot system enclosure. At power-up, all red LEDs are lighted. As a board passes its self-test, the red fault LED for that board extinguishes. If a red fault LED remains lit, that board has failed its self-test. Other indicating lamps on the boards provide failure information to technical persons.

Additionally, as the self-test of the system begins, a message indicating that the processor is testing the system is displayed on the video display. Then, as the circuit board in each slot is tested, the display shows either a message indicating that the board passed the self-test or a short message indicating that it failed and the reason for the failure.

At the completion of the self-test, a menu with four options is displayed. By pressing one of four keys shown on the menu, you can initiate a default load, a menu load, a retest of the system, or an extended test of the system. By initiating a retest, the tests conducted at power-up are repeated. By initiating an extended test, a more extensive test of the system is forced, and messages displayed at the video display facilitate troubleshooting by pointing to specific functional failures of a board. After system installation, an extended test should be performed as part of the initial power-up and self-test procedures.

If no keys are pressed within a short time after the menu is displayed upon completion of the power-up self-test, the system automatically performs the default load operation. It loads two items: a system image partition called the load (LOD) band and a microcode partition called the microcode (MCR) band. The LOD and MCR bands (also called partitions) are segments of data on the disk that together provide a working software system. The disk also contains other partitions that are essential to effective operation of the system: a PAGE band for virtual memory, a FILE band for system and user software, and other support partitions. See the *Introduction to the Explorer System* and the *Explorer System Software Installation Guide* for more detail.

Power-Up and Self-Test Procedures

5.3 Perform the power-up and self-test procedures that follow after you complete the installation of the Explorer system, as described in Section 4 of this manual.

NOTE: Though a self-test of the computer system occurs automatically at initial power-up, a self-test of the system can be forced at any time after initial power-up, by either turning the system power off and then on, or by entering a command from the keyboard. Procedures for performing the self-test from either a power-off or power-on condition are provided.

1. Open the outer cosmetic cover or door at the front of the system enclosure so that you can observe the red fault LEDs on the logic boards through slots in the internal metal door. Do not open this metal door.
2. Ensure that the rear door of the system enclosure is closed. If this door is not closed, the upper and lower interlock switches will not be closed, and you will be unable to power-up the system.
3. Set the ac power switches of the display units, mass storage enclosures, and other peripherals to the on (1 or in) position. Note that the power switches on the color monitor and the pedestal must be on (1 position) to supply power to the complete color console.
4. To begin the self-test with power initially off, set the power switch at the upper left corner of the system enclosure to the on (in) position and proceed to the next step. To initiate a self-test after initial power-up, force a system reset by performing one of the two following substeps before proceeding to the next step:
 - a. Turn the enclosure power off and then on.
 - b. Enter the system reset chord sequence at the keyboard. (The chord sequence is simultaneous META-CTRL-META-CTRL-ABORT.)
5. Verify by listening that the fan in the system enclosure is running. If the fan fails to run, make sure that ac power is available to the system enclosure. If the fan fails to run and ac power is available to the system enclosure, set the system enclosure power switch to the off (out) position and observe the caution that follows.

CAUTION: Remove power from the system enclosure if the fan fails to operate properly. Continued operation with a failed fan can cause overheating and possible damage to circuits within the system enclosure. Logic circuits within the enclosure automatically shut down the system in the presence of abnormally high temperatures. However, you can prevent this abnormal temperature buildup by manually shutting down the system when you observe that the fan is not running.

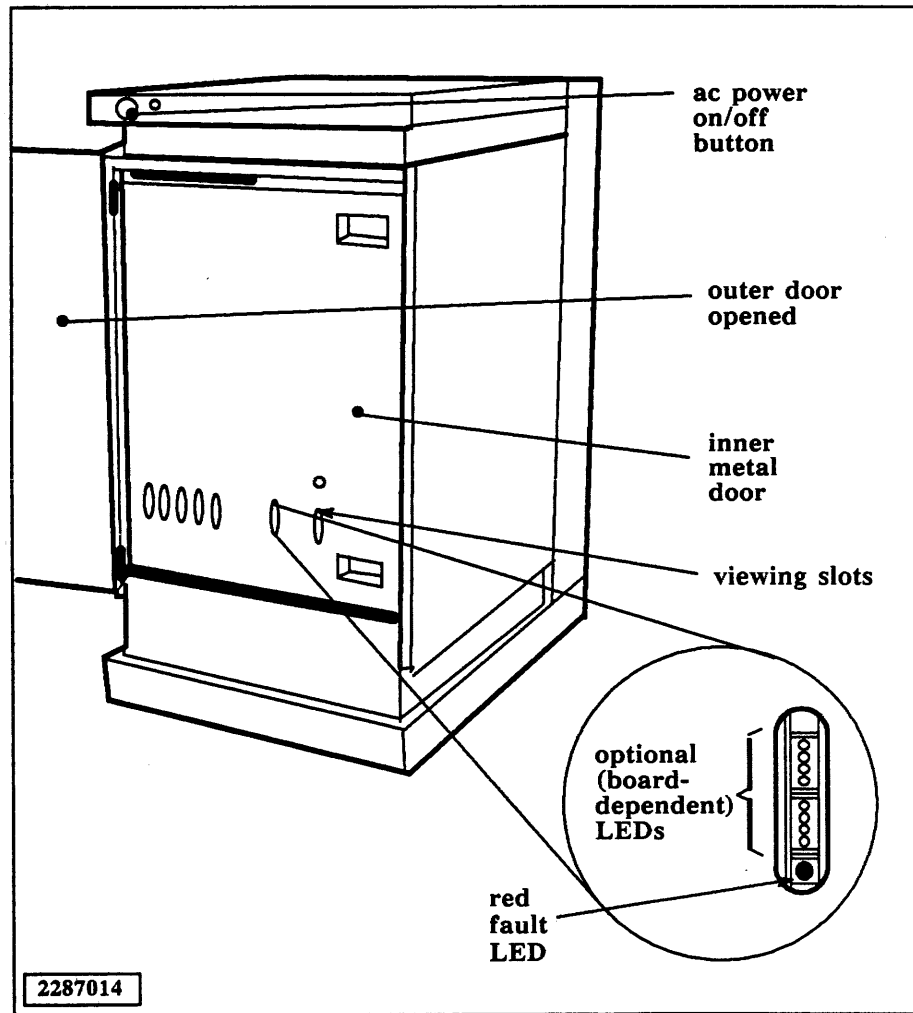
6. At power-up, observe that the red fault LED on each circuit board installed in the system enclosure lights to indicate that self-tests for the boards are in operation. The red fault LEDs are found along the lower edge of the circuit boards installed in the enclosure board slots (see Figure 5-1), as viewed from the front of the system enclosure.
7. When the red fault LED on the processor extinguishes, the processor has successfully completed its self-test. The processor then tests the other boards in the system enclosure.
8. If any red fault LED remains lit and a failure message appears, a circuit board has a fault. See the following note and then call your Texas Instruments customer representative for instructions.

NOTE: Your Explorer system was thoroughly tested as a complete system at the factory. If the system fails to perform properly after installation at your site, carefully check through the installation procedures to ensure that they were properly performed. In particular, check that all interface cables are connected to the right connectors and that each cable is making good connections at both ends. Also, check that all ac power receptacles are providing proper power.

If your system still fails to perform properly, refer to the *Explorer Diagnostics* for additional information on fault isolation and troubleshooting of your system.

Figure 5-1

Example of Red Fault LED Locations



9. Upon successful completion of system tests (no red fault LEDs remain lit and messages on the video display indicate all boards have successfully completed their tests), a four-option menu appears on the video display. At the keyboard, press the letter E (as shown by the menu) to begin the extended test of the system.

NOTE: If these tests were performed as initial tests after installation, you need to adjust your display monitor and keyboard as described in paragraphs 5.4 through 5.6.

10. Upon successful completion of extended tests, the four-option menu is displayed on the video display, and your Explorer system is ready for operation. If you allow the operation to time out or if you enter D to choose the default load option, the system boots the supplied standard software. If necessary, add the date and time information as indicated by the prompts. The network initialization menu now appears. Refer to the *Explorer System Software Installation Guide* for instructions on network initialization.
11. When the boot completes, the system displays the Lisp listener initial screen, which contains the name of your new system, a list of the software installed and its level, and an indication of available memory size. When the system is ready for your input, the word *keyboard* appears at the bottom center of the screen in an area known as the status line. A blinking cursor indicates the system is ready for your input.
12. Your next step is usually to login. Refer to *Introduction to the Explorer System* for details on logging in and operating your system.

Monochrome Monitor Adjustments

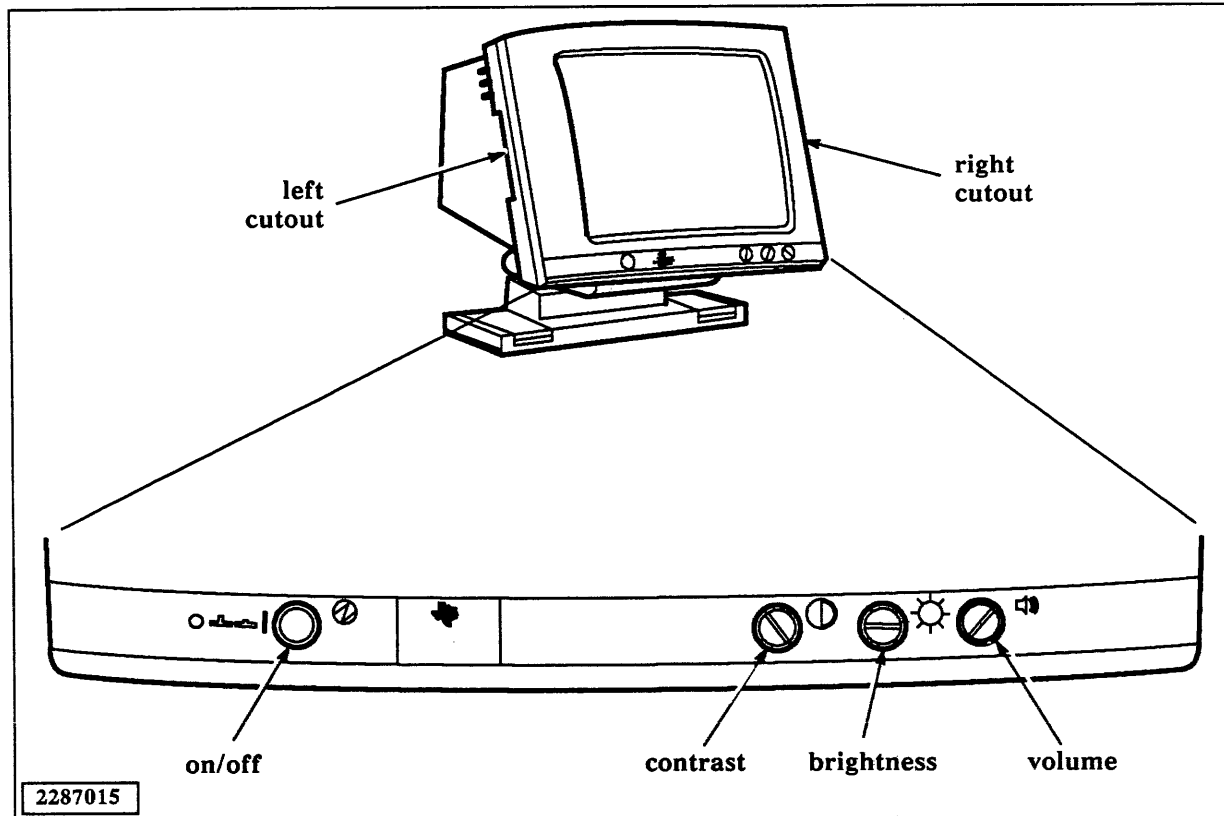
5.4 As shown in Figure 5-2, the monochrome monitor has contrast, brightness, and volume controls in addition to the on/off power switch. Additionally, the height and vertical tilt of the monitor and keyboard can be adjusted.

Instructions for the display monitor adjustments are as follows:

- In normal operating mode, the display monitor displays white characters on a dark background. Adjust the brightness control clockwise to increase the brightness of the white characters. Brightness and contrast interact, and several trial settings for the two controls may be required to gain optimum picture quality. A lower brightness setting during periods of inactive use will prolong the useable lifetime of the cathode-ray tube.
- Adjust the contrast control clockwise to increase the contrast between the white characters and the black background.
- Adjust the volume control clockwise to increase the volume of the audio output from the display monitor speaker.

- To adjust the display monitor height, grasp the cutouts at both outer edges of the front of the monitor case (see Figure 5-2) and raise or lower the monitor to the desired position. To adjust the vertical tilt angle of the display monitor, hold the top front edge of the display monitor housing and pull down or push up for the desired tilt.

Figure 5-2 Monochrome Monitor Adjustment



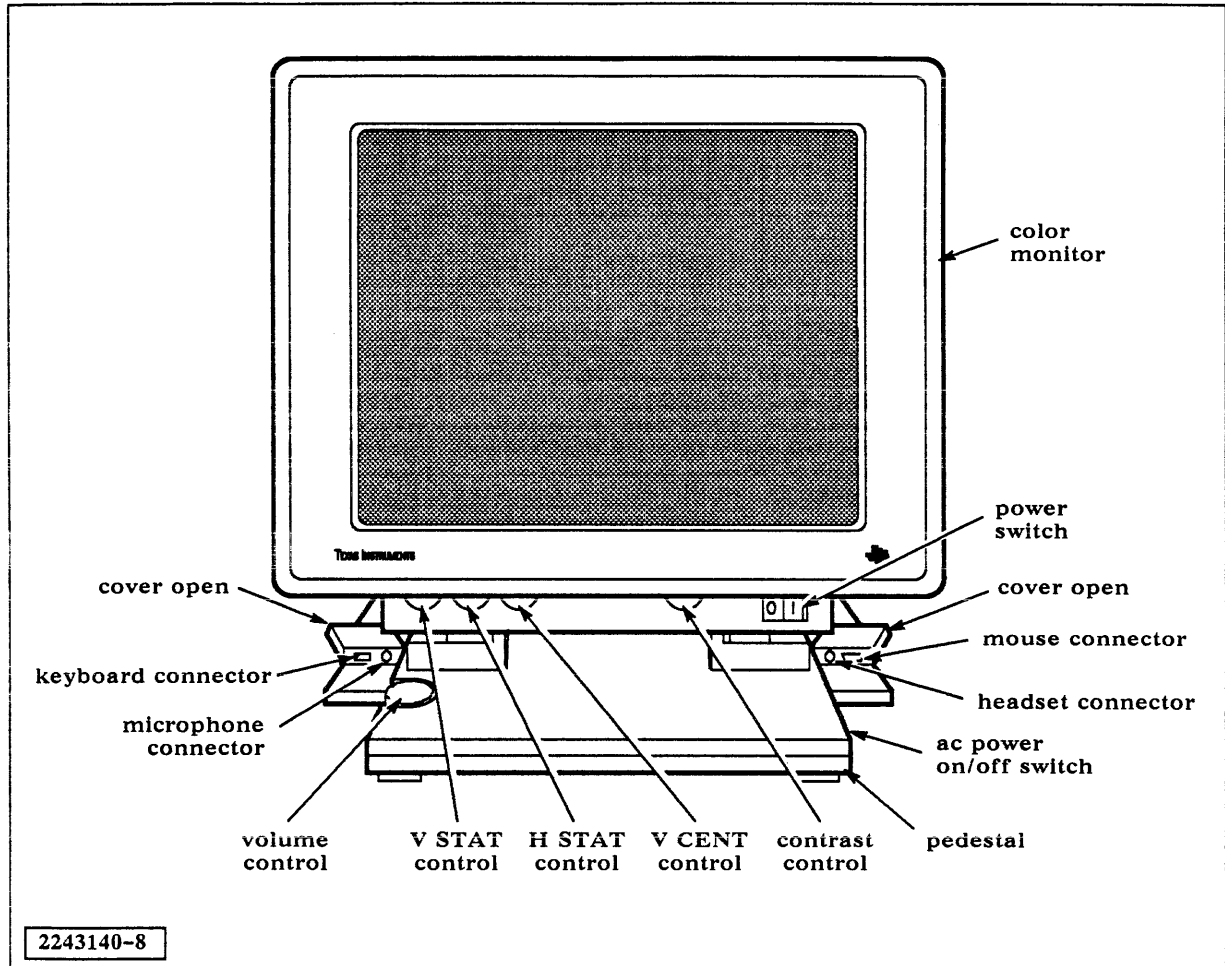
Color Console Adjustments

5.5 The color console (Figure 5-3) has vertical and horizontal static convergence (V STAT and H STAT) controls, a vertical centering (V CENT) control, a contrast control, and a volume control. Also, the vertical tilt of the color monitor is adjustable relative to the pedestal.

- The V STAT control should be adjusted so that the red and blue horizontal lines converge with the green horizontal line.
- The H STAT control should be adjusted so that the red and blue vertical lines converge with the green vertical line.
- The V CENT control should be adjusted to center the picture in the vertical direction.
- The contrast control should be adjusted for best picture contrast.

- The volume control should be adjusted for the desired sound level from the speaker in the pedestal.
- The color monitor tilt should be adjusted by physically moving the color monitor relative to the tilt base mechanism on the pedestal.

Figure 5-3 Color Console Operating Controls

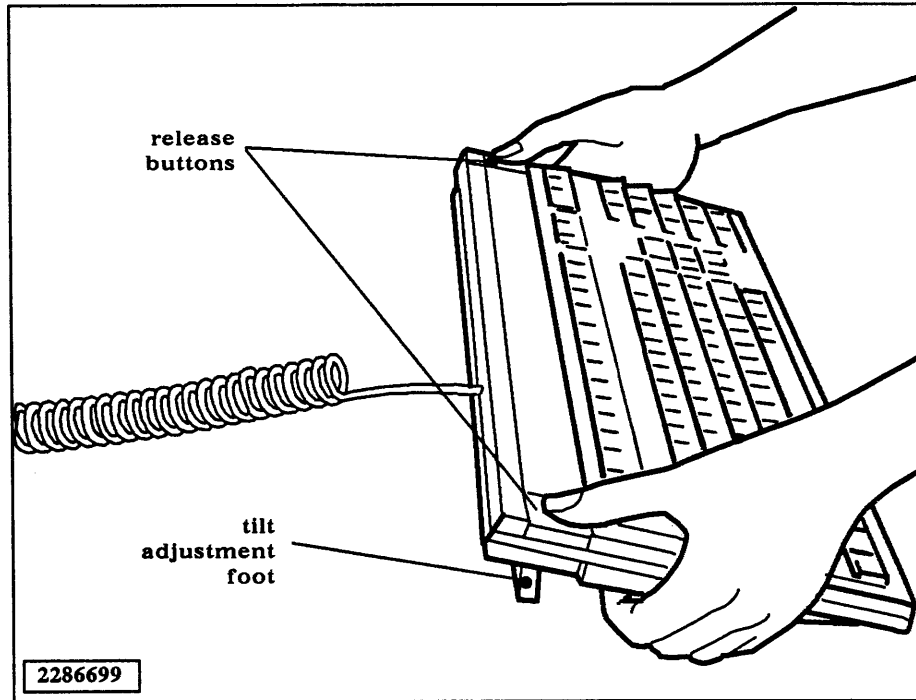


Keyboard Adjustments

5.6 To adjust the keyboard height (see Figure 5-4), press both release buttons on the keyboard and set the tilt adjustment foot to the desired position.

Figure 5-4

Keyboard Adjustment



Power-Down Procedure for Monochrome Consoles

5.7 Refer to the instructions on ending a session in the *Introduction to the Explorer System* manual before you turn off the power to your system.

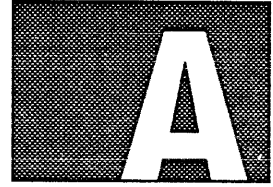
To remove power from the Explorer system, press the system enclosure power switch at the upper left corner of the enclosure to the off (out) position. To remove power from a display unit, a mass storage unit, or a peripheral, press the power switch on the individual unit to the off (out) position.

Power-Down Procedure for Color Consoles

5.8 Refer to the instructions on ending a session in the *Introduction to the Explorer System* manual before you turn off the power to your system.

To remove power from the Explorer system, press the system enclosure power switch at the upper left corner of the enclosure to the off (out) position. To remove power from a color console, a mass storage unit, or a peripheral, set the power switches on the individual units to the off (0 or out) position. Note that the color console has a separate power switch on the color monitor and the pedestal. Both of these switches need to be set to off (0 position) to completely remove power from the color console.

PRODUCT SAFETY INFORMATION (PRODUKT SICHERHEITINFORMATION)



This appendix contains information on the following topics:

- Safety installation and operation instructions for the Model CC100
- Montage- und Bedienungsanleitungen für Texas Instruments Modell CC100
- Safety installation and operation instruction for the Model DT100
- Montage- und Bedienungsanleitungen für Texas Instruments Modell DT100
- Safety installation and operation instruction for the Model DP100
- Montage- und Bedienungsanleitungen für Texas Instruments Modell DP100
- Safety installation and operation instructions for the Models MS100, MS200, and MT3201
- Montage- und Bedienungsanleitungen für Texas Instruments Modells MS100, MS200, und MT3201

NOTE: The model designations have the following general equipment association: CC100 (computer chassis), DT100 (monochrome display terminals), DP100 (color display terminals), MS100 and MS200 (mass storage units), and MT3201 (magnetic tape units).

Safety Installation and Operation Instructions for the Model CC100

Before using your Model CC100, please read and comply with the following instructions:

1. Power Requirements:
 - a. Check the label on the back of the product and ensure that the available power source meets the requirements of the CC100.
 - b. To maintain the safety of the machine use only power cord sets approved by the National Test House for the power source requirements of the product.
 - c. This product is a Safety Class I machine.
 - d. This machine is not designed for connection to an "I.T." power system.
2. Allow at least three inches (7.5 centimeters) of nonobstructed clearance for any ventilation openings on any side of the machine.
3. Ensure the power on/off (1/0) switch is easily accessible.
4. Service of the machine (and the logic boards) must be performed by qualified service personnel. Unauthorized alteration of the machine voids safety agency approvals.
5. When connecting or disconnecting cables to the machine, ensure that the power switch is in the off (0) position. Disconnect the power cord set last.
6. For continuous safe operation of this machine, use fuses of the same type and rating.
7. This machine is stationary. Disconnect the machine from power mains before moving it. When moving the machine, exercise caution and use proper lifting procedures.
8. Consult the available User's Manual, Getting Started, Operating Instructions, or Option Kit Manuals for additional information.
9. This product is not designed for use in a Video Display Work Station.
10. This product is designed for Data Processing use.
11. It is expected that reasonable care will be exercised in the installation and operation of this machine. Neither the manufacturer nor the distributor assumes any liability for the improper installation, application, or use of this machine.
12. **CAUTION:** Fan may still be in motion briefly after opening door. Keep fingers away from fan until fan motion ceases.

Montage- und Bedienungsanleitungen für Texas Instruments Modell CC100

Vor Inbetriebnahme Ihres CC100 bitten wir Sie, die folgenden Hinweise aufmerksam zu lesen und die Instruktionen genauestens zu befolgen:

1. Stromversorgung:
 - a. Vergewissern Sie sich, daß die auf dem Etikett an der Rückwand des Modells CC100 angegebene Spannung mit der Netzspannung am Aufstellungsort übereinstimmt.
 - b. Um die Sicherheit Ihres Gerätes zu gewährleisten, benutzen Sie bitte nur offiziell in Ihrem Lande zugelassene, für die Stromversorgung dieses Gerätes bestimmte Anschlußkabel.
 - c. Dieses Gerät entspricht der Schutzklasse I.
 - d. Dieses Gerät ist nicht zum Anschluß an "I.T." Versorgungssysteme geeignet.
2. Um für eine ausreichende Belüftung des Gerätes zu sorgen, ist beim Aufstellen darauf zu achten, daß zwischen sämtlichen Ventilationsöffnungen auf allen Seiten und den das Gerät eventuell umgebenden Wänden oder Möbelstücken ein Abstand von mindestens etwa 7,5 cm bleibt.
3. Sorgen Sie dafür, daß der Netz-Ein-Aus-Schalter (1/0) leicht zu erreichen ist.
4. Reparaturen und notwendige technische Eingriffe zur Instandhaltung des Gerätes oder zum Auswechseln der Platinen sind ausschließlich von qualifiziertem Service-Personal durchzuführen. Bei nicht autorisierten Modifikationen am Gerät erlischt die Zulassung durch die zuständige Sicherheitsbehörde.
5. Vergewissern Sie sich jedesmal, bevor Sie das Kabel anschließen oder aus der Steckdose ziehen, daß der Netzschalter auf "Aus"-Stellung (0-Stellung) geschaltet ist. Ziehen Sie das Netzanschlußkabel zuletzt aus der Steckdose.
6. Um einen ununterbrochenen sicheren Betrieb des Gerätes zu gewährleisten, verwenden Sie bitten ausschließlich Sicherungen des gleichen Typs mit den gleichen Leistungsangaben.
7. Dieses Gerät ist für stationäre Aufstellung konzipiert. Vor Transport des Gerätes zuerst Verbindung zum Starkstromnetz unterbrechen, dann sachgemäß heben und vorsichtig transportieren.

8. Weitere Informationen finden Sie in den verschiedenen Anleitungsbroschüren: **BEDIENUNGSHANDBUCH, VOR INBETRIEBNAHME, GEBRAUCHSANWEISUNG** oder dem jeweiligen **HANDBUCH FÜR SONDERZUBEHÖR**.
9. Dieses Gerät ist nicht zum Einsatz als Einheit eines Bildschirmarbeitsplatzes konzipiert.
10. Dieses Gerät ist zum Einsatz für die Datenverarbeitung in Büroumgebung konzipiert.
11. Es wird erwartet, daß die bei der Montage und während des Betriebs des Gerätes erforderliche Sorgfalt angewandt wird. Weder der Hersteller noch der Händler haften für Schäden, die durch unsachgemäße Montage oder unsachgemäßen Gebrauch, wie zum Beispiel Betrieb mit falscher Stromart/Spannung, Anschluß an ungeeignete Stromquelle usw., entstehen.
12. **VORSICHT:** Nach Öffnen der Tür kann der Ventilator eventuell noch kurzzeitig weiterlaufen. Vermeiden Sie unbedingt jegliche Berührung mit dem Ventilator, bis er zum Stillstand kommt.

Safety Installation and Operation Instructions for the Model DT100

Before using your Model DT100, please read and comply with the following instructions:

1. Power Requirements:
 - a. Check the label on the back of the product and ensure that the available power source meets the requirements of the machine.
 - b. To maintain the safety of the machine use only power cord sets approved by the National Test House for the power source requirements of the machine.
 - c. This product is a Safety Class I machine.
 - d. This machine is not designed for connection to an "I.T." power system.
2. Allow at least three inches (7.5 centimeters) of nonobstructed clearance for any ventilation openings on any side of the machine.
3. Ensure the power on/off (1/0) switch is easily accessible.
4. Service of the machine (and the logic boards) must be performed by qualified service personnel. Unauthorized alteration of the machine voids safety agency approvals.
5. When connecting or disconnecting cables to the machine, ensure that the power switch is in the off (0) position. Disconnect the power cord set last.
6. This machine is stationary. Disconnect the machine from power mains before moving it. When moving the machine, exercise caution and use proper lifting procedures.
7. Consult the available User's Manual, Getting Started, Operating Instructions, or Option Kit Manuals for additional information.
8. It is expected that reasonable care will be exercised in the installation and operation of this machine. Neither the manufacturer nor the distributor assumes any liability for the improper installation, application, or use of this machine.
9. This product is designed for use in a Video Display Work Station.
10. This product is designed for Data Processing use.

11. The anti-glare video display should be cleaned using a neutral cleaner (detergent) and a lint-free cloth. There are several detergent cleaners available and acceptable for cleaning the video display.

CAUTION: Do not use an acid or alkaline cleaner when cleaning the video display as this may damage the screen.

12. In order to satisfy requirements of the German "Safety Regulations for Display Workplaces in the Office Sector," ZH1/618, the following items have been added:

- a. The default video mode must be white characters on a black background. This mode is recommended for extended periods of use to reduce any perception of flicker from the display. To change between video modes use the toggle TERM C.
- b. If you wish to use a larger font that provides even better contrast than the default font of the Explorer, enter the following form:

(TV:SET-DEFAULT-FONT FONTS:MEDFONTB)

To change back to the original default font, enter:

(TV:SET-DEFAULT-FONT FONTS:CPTFONT)

This command changes the font used as the default in all the windows.

Montage- und Bedienungsanleitungen für Texas Instruments Modell DT100

Für Inbetriebnahme Ihres DT100 bitten wir Sie, die folgenden Hinweise aufmerksam zu lesen und die Instruktionen genauestens zu befolgen:

1. Stromversorgung:
 - a. Vergewissern Sie sich, daß die auf dem Etikett an der Rückwand des Gerätes angegebene Spannung mit der Netzspannung am Aufstellungsort übereinstimmt.
 - b. Um die Sicherheit Ihres Gerätes zu gewährleisten, benutzen Sie bitte nur offiziell in Ihrem Lande zugelassene, für die Stromversorgung dieses Gerätes bestimmte Anschlußkabel.
 - c. Dieses Gerät entspricht der Schutzklasse I.
 - d. Dieses Gerät ist nicht zum Anschluß an "I.T." Versorgungssysteme geeignet.
2. Um für eine ausreichende Belüftung des Gerätes zu sorgen, ist beim Aufstellen darauf zu achten, daß zwischen sämtlichen Ventilationsöffnungen auf allen Seiten und den das Gerät eventuell umgebenden Wänden oder Möbelstücken ein Abstand von mindestens etwa 7,5 cm bleibt.
3. Sorgen Sie dafür, daß der Netz-Ein-Aus-Schalter (1/0) leicht zu erreichen ist.
4. Reparaturen und notwendige technische Eingriffe zur Instandhaltung des Gerätes oder zum Auswechseln der Platinen sind ausschließlich von qualifiziertem Service-Personal durchzuführen. Bei nicht autorisierten Modifikationen am Gerät erlischt die Zulassung durch die zuständige Sicherheitsbehörde.
5. Vergewissern Sie sich jedesmal, bevor Sie das Kabel anschließen oder aus der Steckdose ziehen, daß der Netzschalter auf "Aus"-Stellung (0-Stellung) geschaltet ist. Ziehen Sie das Netzanschlußkabel zuletzt aus der Steckdose.
6. Dieses Gerät ist für stationäre Aufstellung konzipiert. Vor Transport des Gerätes zuerst Verbindung zum Starkstromnetz unterbrechen, dann sachgemäß heben und vorsichtig transportieren.
7. Weitere Informationen finden Sie in den verschiedenen Anleitungsbroschüren: **BEDIENUNGSHANDBUCH, VOR INBETRIEBNAHME, GEBRAUCHSANWEISUNG** oder dem jeweiligen **HANDBUCH FÜR SONDERZUBEHÖR**.

8. Es wird erwartet, daß die bei der Montage und während des Betriebs des Gerätes erforderliche Sorgfalt angewandt wird. Weder der Hersteller noch der Händler haften für Schäden, die durch unsachgemäße Montage oder unsachgemäßen Gebrauch, wie zum Beispiel Betrieb mit falscher Stromart/Spannung, Anschluß an ungeeignete Stromquelle usw., entstehen.
9. Dieses Gerät ist zum Einsatz als Einheit eines Bildschirmarbeitsplatzes konzipiert.
10. Dieses Gerät ist zum Einsatz für die Datenverarbeitung in Büroumgebung konzipiert.
11. Der blendfreie Bildschirm darf nur mit einem neutralen Reinigungsmittel und einem sauberen und flusenfreien Staubtuch gereinigt werden. Dazu stehen auf dem Markt verschiedene Reinigungsmittel zur Verfügung, die zur Reinigung von Bildschirmen geeignet sind.

ACHTUNG: Verwenden Sie beim Reinigen des Sichtgerätes auf keinen Fall Reinigungsmittel auf Säure- oder Alkalibasis, da diese den Bildschirm beschädigen können.

12. Um den Sicherheitsanforderungen der deutschen, "Sicherheitsbestimmungen für Bildschirm- Arbeitsplätze im Bürobereich," ZH1/618 zu entsprechen, wird auf die folgenden zusätzlichen Hinweise aufmerksam gemacht.
 - a. Der Standard-Video-Modus (default video mode) muß schwarze Schriftzeichen auf weißem Hintergrund darstellen. Es wird empfohlen, bei länger dauernden Benutzungszeiten in diesem Modus zu arbeiten, um ein eventuell auftretendes Flimmern auf dem Bildschirm zu vermindern. Um von einem Video-Modus in den anderen umzusteigen, wird TERMINAL C eingetippt.
 - b. Haben Sie den Wunsch, zum Zwecke eines noch besseren Kontrastes statt des Standardschriftsatzes des Explorers einen größeren Schriftsatz zu benutzen, tippen Sie einfach den folgenden Befehl in folgender Form:

(TV:SET-DEFAULT-FONT FONTS:MEDFONTB)

Um zum Standardschriftsatz zurückzukehren, tippen Sie

(TV:SET-DEFAULT-FONT FONTS:CPTFONT)

ein. Dieser Befehl erlaubt es Ihnen, von einem Schriftsatz auf einen anderen umzuschalten. Der neue Schriftsatz erscheint dann in allen Fenstern des Explorers.

Safety Installation and Operation Instructions for the Model DP100

Before using your Model DP100, please read and comply with the following instructions:

1. Power Requirements:
 - a. Check the label on the back of the product and ensure that the available power source meets the requirements of the machine.
 - b. To maintain the safety of the machine use only power cord sets approved by the National Test House for the power source requirements of the machine.
 - c. This product is a Safety Class I machine.
 - d. This machine is not designed for connection to an "I.T." power system.
2. Allow at least three inches (7.5 centimeters) of nonobstructed clearance for any ventilation openings on any side of the machine.
3. Ensure the power on/off (1/0) switch is easily accessible.
4. Service of the machine (and the logic boards) must be performed by qualified service personnel. Unauthorized alteration of the machine voids safety agency approvals.
5. When connecting or disconnecting cables to the machine, ensure that the power switch is in the off (0) position. Disconnect the power cord set last.
6. This machine is stationary. Disconnect the machine from power mains before moving it. When moving the machine, exercise caution and use proper lifting procedures.
7. Consult the available User's Manual, Getting Started, Operating Instructions, or Option Kit Manuals for additional information.
8. It is expected that reasonable care will be exercised in the installation and operation of this machine. Neither the manufacturer nor the distributor assumes any liability for the improper installation, application, or use of this machine.
9. This product is designed for use in a Video Display Work Station.
10. This product is designed for Data Processing use.

11. The anti-glare video display should be cleaned using a neutral cleaner (detergent) and a lint-free cloth. There are several detergent cleaners available and acceptable for cleaning the video display.

CAUTION: Do not use an acid or alkaline cleaner when cleaning the video display as this may damage the screen.

12. In order to satisfy requirements of the German "Safety Regulations for Display Workplaces in the Office Sector," ZH1/618, the following items have been added:

- a. The default system colors are a white background with black characters. This reduces glare and reflections from the screen.
- b. If you wish to use a larger font than the default font of the Explorer, enter the following form:

(TV:SET-DEFAULT-FONT FONTS:MEDFNTB)

To change back to the original default font, enter:

(TV:SET-DEFAULT-FONT FONTS:CPTFONT)

This command changes the font used as the default in all the windows.

Montage- und Bedienungsanleitungen für Texas Instruments Modell DP100

Vor Inbetriebnahme Ihres DP100 bitten wir Sie, die folgenden Hinweise aufmerksam zu lesen und die Instruktionen genauestens zu befolgen:

1. Stromversorgung:
 - a. Vergewissern Sie sich, daß die auf dem Etikett an der Rückwand des Gerätes angegebene Spannung mit der Netzspannung am Aufstellungsort übereinstimmt.
 - b. Um die Sicherheit Ihres Gerätes zu gewährleisten, benutzen Sie bitte nur offiziell in Ihrem Lande zugelassene, für die Stromversorgung dieses Gerätes bestimmte Anschlußkabel.
 - c. Dieses Gerät entspricht der Schutzklasse I.
 - d. Dieses Gerät ist nicht zum Anschluß an "I.T." Versorgungssysteme geeignet.
2. Um für eine ausreichende Belüftung des Gerätes zu sorgen, ist beim Aufstellen darauf zu achten, daß zwischen sämtlichen Ventilationsöffnungen auf allen Seiten und den das Gerät eventuell umgebenden Wänden oder Möbelstücken ein Abstand von mindestens etwa 7,5 cm bleibt.
3. Sorgen Sie dafür, daß der Netz-Ein-Aus-Schalter (1/0) leicht zu erreichen ist.
4. Reparaturen und notwendige technische Eingriffe zur Instandhaltung des Gerätes oder zum Auswechseln der Platinen sind ausschließlich von qualifiziertem Service-Personal durchzuführen. Bei nicht autorisierten Modifikationen am Gerät erlischt die Zulassung durch die zuständige Sicherheitsbehörde.
5. Vergewissern Sie sich jedesmal, bevor Sie das Kabel anschließen oder aus der Steckdose ziehen, daß der Netzschalter auf "Aus"-Stellung (0-Stellung) geschaltet ist. Ziehen Sie das Netzanschlußkabel zuletzt aus der Steckdose.
6. Dieses Gerät ist für stationäre Aufstellung konzipiert. Vor Transport des Gerätes zuerst Verbindung zum Starkstromnetz unterbrechen, dann sachgemäß heben und vorsichtig transportieren.
7. Weitere Informationen finden Sie in den verschiedenen Anleitungsbroschüren: **BEDIENUNGSHANDBUCH, VOR INBETRIEBNAHME, GEBRAUCHSANWEISUNG** oder dem jeweiligen **HANDBUCH FÜR SONDERZUBEHÖR**.

8. Es wird erwartet, daß die bei der Montage und während des Betriebs des Gerätes erforderliche Sorgfalt angewandt wird. Weder der Hersteller noch der Händler haften für Schäden, die durch unsachgemäße Montage oder unsachgemäßen Gebrauch, wie zum Beispiel Betrieb mit falscher Stromart/Spannung, Anschluß an ungeeignete Stromquelle usw., entstehen.
9. Dieses Gerät ist zum Einsatz als Einheit eines Bildschirmarbeitsplatzes konzipiert.
10. Dieses Gerät ist zum Einsatz für die Datenverarbeitung in Büroumgebung konzipiert.
11. Der blendfreie Bildschirm darf nur mit einem neutralen Reinigungsmittel und einem sauberen und flusenfreien Staubtuch gereinigt werden. Dazu stehen auf dem Markt verschiedene Reinigungsmittel zur Verfügung, die zur Reinigung von Bildschirmen geeignet sind.

ACHTUNG: Verwenden Sie beim Reinigen des Sichtgerätes auf keinen Fall Reinigungsmittel auf Säure- oder Alkalibasis, da diese den Bildschirm beschädigen können.

12. Um den Sicherheitsanforderungen der deutschen, "Sicherheitsbestimmungen für Bildschirm-Arbeitsplätze im Bürobereich," ZH1/618 zu entsprechen, wird auf die folgenden zusätzlichen Hinweise aufmerksam gemacht.
 - a. Der Standard-Video-Modus muss schwarze Schriftzeichen auf weißem Hintergrund darstellen um flimmern auf dem Bildschirm zu vermindern.
 - b. Haben Sie den Wunsch einen größeren Schriftsatz zu benutzen, tippen Sie einfach den folgenden Befehl in folgender Form:

(TV:SET-DEFAULT-FONT FONTS:MEDFNTB)

Um zum Standard Schriftsatz zurückzukehren, tippen Sie

(TV:SET-DEFAULT-FONT FONTS:CPTFONT)

Der neue Schriftsatz erscheint dann in allen Fenstern des Explorers.

Safety Installation and Operation Instructions for the Models MS100, MS200, and MT3201

Before using your Models MS100, MS200, and MT3201, please read and comply with the following instructions:

1. Power Requirements:
 - a. Check the label on the back of the product and ensure that the available power source meets the requirements of the MS100, MS200, and/or the MT3201.
 - b. To maintain the safety of the machine use only power cord sets approved by the National Test House for the power source requirements of the product.
 - c. This product is a Safety Class I machine.
 - d. This machine is not designed for connection to an "I.T." power system.
2. Allow at least three inches (7.5 centimeters) of nonobstructed clearance for any ventilation openings on any side of the machine.
3. Ensure the power on/off (1/0) switch is easily accessible.
4. Service of the machine (and the logic boards) must be performed by qualified service personnel. Unauthorized alteration of the machine voids safety agency approvals.
5. When connecting or disconnecting cables to the machine, ensure that the power switch is in the off (0) position. Disconnect the power cord set last.
6. For continuous safe operation of this machine, use fuses of the same type and rating.
7. This machine is stationary. Disconnect the machine from power mains before moving it. When moving the machine, exercise caution and use proper lifting procedures.
8. Consult the available User's Manual, Getting Started, Operating Instructions, or Option Kit Manuals for additional information.
9. This product is not designed for use in a Video Display Work Station.
10. This product is designed for Data Processing use.
11. It is expected that reasonable care will be exercised in the installation and operation of this machine. Neither the manufacturer nor the distributor assumes any liability for the improper installation, application, or use of this machine.

Montage- und Bedienungsanleitungen für Texas Instruments Modells MS100, MS200, and MT3201

Vor Inbetriebnahme Modells MS100, MS200, und MT3201 bitten wir Sie, die folgenden Hinweise aufmerksam zu lesen und die Instruktionen genauestens zu befolgen:

1. Stromversorgung:
 - a. Vergewissern Sie sich, daß die auf dem Etikett an der Rückwand des Modells MS100, MS200, und MT3201 angegebene Spannung mit der Netzspannung am Aufstellungsort übereinstimmt.
 - b. Um die Sicherheit Ihres Gerätes zu gewährleisten, benutzen Sie bitte nur offiziell in Ihrem Lande zugelassene, für die Stromversorgung dieses Gerätes bestimmte Anschlußkabel.
 - c. Dieses Gerät entspricht der Schutzklasse I.
 - d. Dieses Gerät ist nicht zum Anschluß an "I.T." Versorgungssysteme geeignet.
2. Um für eine ausreichende Belüftung des Gerätes zu sorgen, ist beim Aufstellen darauf zu achten, daß zwischen sämtlichen Ventilationsöffnungen auf allen Seiten und den das Gerät eventuell umgebenden Wänden oder Möbelstücken ein Abstand von mindestens etwa 7,5 cm bleibt.
3. Sorgen Sie dafür, daß der Netz-Ein-Aus-Schalter (1/0) leicht zu erreichen ist.
4. Reparaturen und notwendige technische Eingriffe zur Instandhaltung des Gerätes oder zum Auswechseln der Platinen sind ausschließlich von qualifiziertem Service-Personal durchzuführen. Bei nicht autorisierten Modifikationen am Gerät erlischt die Zulassung durch die zuständige Sicherheitsbehörde.
5. Vergewissern Sie sich jedesmal, bevor Sie das Kabel anschließen oder aus der Steckdose ziehen, daß der Netzschalter auf "Aus"-Stellung (0-Stellung) geschaltet ist. Ziehen Sie das Netzanschlußkabel zuletzt aus der Steckdose.
6. Um einen ununterbrochenen sicheren Betrieb des Gerätes zu gewährleisten, verwenden Sie bitte ausschließlich Sicherungen des gleichen Typs mit den gleichen Leistungsangaben.
7. Dieses Gerät ist für stationäre Aufstellung konzipiert. Vor Transport des Gerätes zuerst Verbindung zum Starkstromnetz unterbrechen, dann sachgemäß heben und vorsichtig transportieren.

8. Weitere Informationen finden Sie in den verschiedenen Anleitungsbroschüren: **BEDIENUNGSHANDBUCH, VOR INBETRIEBNAHME, GEBRAUCHSANWEISUNG** oder dem jeweiligen **HANDBUCH FÜR SONDERZUBEHÖR**.
9. Dieses Gerät ist nicht zum Einsatz als Einheit eines Bildschirmarbeitsplatzes konzipiert.
10. Dieses Gerät ist zum Einsatz für die Datenverarbeitung in Büroumgebung konzipiert.
11. Es wird erwartet, daß die bei der Montage und während des Betriebs des Gerätes erforderliche Sorgfalt angewandt wird. Weder der Hersteller noch der Händler haften für Schäden, die durch unsachgemäße Montage oder unsachgemäßen Gebrauch, wie zum Beispiel Betrieb mit falscher Stromart/Spannung, Anschluß an ungeeignete Stromquelle usw., entstehen.

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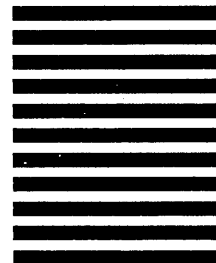
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