

# *5 1/4" SCSI Disk Drive Installation and Configuration for Sun Office Pedestals*



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## *Preface*

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### *About this Manual*

This document describes configuration and installation of the Sun 5¼-inch embedded SCSI hard disk drives in Sun's 5 and 12-Slot Office Pedestals.

Sun 5¼-inch SCSI hard disk drives provide high performance, speed, and high capacity random-access disk storage. They incorporate an embedded Small Computer System Interface (SCSI) controller and may be connected directly to a standard SCSI bus. The drives covered in this manual include:

- The CDC 327 MB hard disk drive
- The Micropolis 669 MB hard disk drive, and
- The Maxtor 669 MB hard disk drive

### *Intended Audience*

Sun's 5¼-inch SCSI drives are customer-replaceable units. Anyone familiar with standard disk drive installation procedures will be able to use this manual to configure the disk drives and install them in a Sun office pedestal.

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## *Organization of this Manual*

Chapter 1 provides important disk handling information and some mechanical cautions. The next three chapters describe how to configure each of the three disk drives. These chapters explain which of the configuration settings (jumpers) are set by Sun and should not be changed, and which are options which you may want to take advantage of.

Chapters 5 and 6 describe how to install the disk drives in each of the two Office Pedestals; Chapter 5 gives that information for the 5-Slot Office Pedestals, and Chapter 6 for the 12-Slot Office Pedestals.

The last chapter, "Troubleshooting", is for reference; use it as needed.

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**Note** – Some of the drawings in this manual illustrate disk drives that have plastic bezels. These bezels are not required, and in some cases are not illustrated (see the following illustration).

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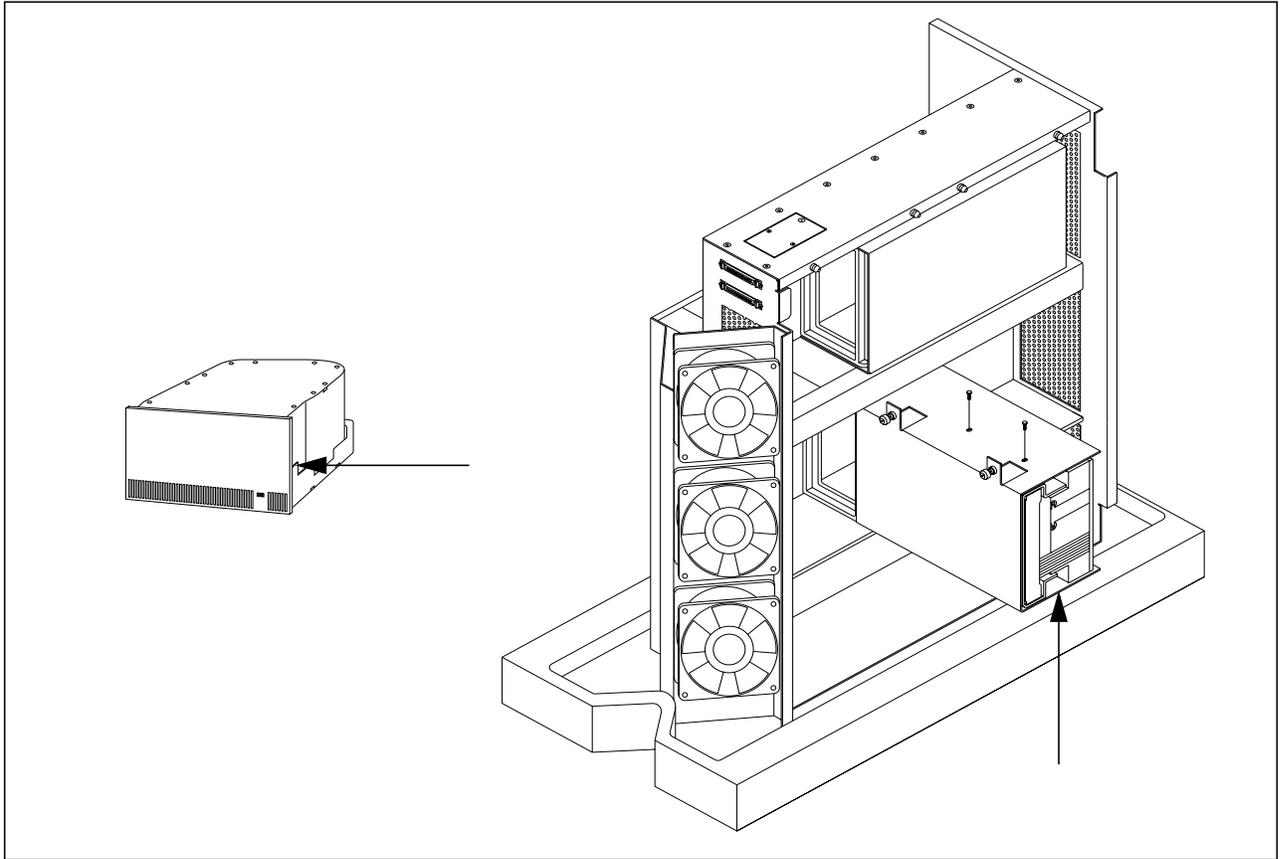


Figure P-1 Disk Drive Illustrated with Bezel (left) and without (right)

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## *When You Need Help with UNIX Commands*

This manual may not include specific software commands or procedures. Instead, the manual names software tasks and refers you to operating system documentation or the handbook that was shipped with your peripheral.

To find information about commands or procedures such as:

- Shutting down the system
- Configuring devices
- Other software procedures

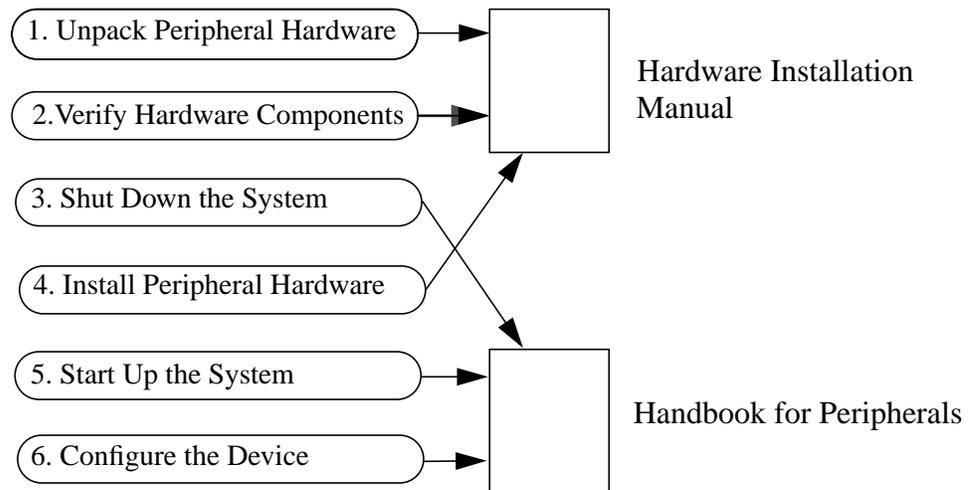
See one or more of the following:

- *Solaris 1.x (SunOS 4.x) Handbook for SMCC Peripherals 801-2424-xx.* (Contains SunOS 4.x software commands.)
- *Solaris 2.x Handbook for SMCC Peripherals 801-2425-xx.* (Contains Solaris 2.x software commands.)
- *On-line AnswerBook.* (Contains the complete set of documentation supporting Solaris 2.x.)
- Other software documentation that you received with your system.

---

## Task Map for Getting Your System Running

The diagram below outlines the tasks you can perform to successfully install a new peripheral. Each numbered item in the diagram represents a procedure and the arrows point to manuals in which these procedures are detailed.



After you perform these tasks, you will be ready to use the new peripheral with your system.



# *Preparation for Configuration*

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## *1.1 The Configuration Process*

In this manual, disk configuration is defined as the process of *physically* jumpering pins and setting switches on the drive to be installed. This procedure is different for each of the three drives covered in this manual. Some of the settings are required and some represent different options that you will choose.

The disk drive should be configured before you install the disk drive; the jumper pins are readily accessible before installation, but not after.

## *1.2 Tools Required for Configuration and Installation*

You should have the following tools on hand to configure the disk drive.

- Jumpers, 0.1-inch span, six maximum (a few jumpers are commonly provided with the disk drive).
- Pliers, needle-nose, 5 to 6 inches long
- Screwdriver, ¼-inch common flat blade

You can use the needle-nose pliers to install and remove jumpers on the disk drive's printed circuit card. These jumpers select the disk drive's options. The ¼-inch screwdriver is for removing the SCSI bus termination pack(s). (You probably will not terminate the SCSI bus at the disk drive.)

## 1.3 *Inspection and Handling*

After you have unpacked your 5¼-inch disk drive, inspect it immediately for any evidence of damage. If damage is evident, keep all contents and packing materials for inspection by the carrier's agent. Notify the carrier of the damage and take the steps necessary to recover losses.

Even if there is no damage, we recommend that you save all packing materials. If you ever need to ship or store the drive for a long time, you should protect the drive by packing it in the original shipping material.

### 1.3.1 *Electrostatic Discharge Cautions*

The disk drive contains printed circuit (PC) cards. Some of the electronic components on a PC card can be permanently damaged by electrostatic discharge (ESD). ESD is generally caused by unnoticed electrostatic charges that accumulate on a person's body which discharge through the card's electronic circuits when that person touches the card.

A sustained voltage greater than 6 to 8 volts can destroy many components on a PC card. A voltage greater than 20 volts can destroy most of the components on the card. In a dry climate, walking across a nylon rug generates a static charge of over 1000 volts. If such a voltage differential exists between you and a PC card, the act of touching the disk drive PC card can destroy many of the card's active components.

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**Note** – An “ESD Kit” is included with many options and upgrades that are shipped separately from your original system. This kit includes a wrist grounding strap, which provides grounding between your body and the disk drive. The kit also includes an antistatic (conducting) mat on which to place the disk drive to prevent any static charge from accumulating on the disk drive itself.

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If you do not have an ESD Kit to use during configuration, you must use some other means to get rid of static electricity. One simple method is to place your hand on a conductive grounded surface (such as the unpainted metal parts of a grounded system chassis, or the metal cover of a properly grounded AC outlet). Do this before handling the drive. This will discharge any static electricity before it could harm the drive. Always set the disk drive on a grounded surface while working on it.



**Caution** – This hard disk drive is an electromechanical device that may be damaged by excessive physical shock. Do not jar this drive or drop it. The drive should be handled only by service personnel who are familiar with the correct methods of working on hard disk drives.

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# Configuring the CDC 327 MB Disk Drive

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## 2.1 Purpose of this Chapter

This chapter describes the configuration procedure for the CDC 327 MB embedded SCSI disk drive. This involves setting the disk drive address, SCSI bus termination state, and the drive options.

Sun 5¼-inch embedded SCSI disk drives come preset with the proper jumper configurations for Sun systems. The SCSI target ID jumper settings are the only exception; they are explained in this chapter. System-specific SCSI target ID requirements are defined in Chapters 5 and 6.

## 2.2 CDC 327 MB Embedded SCSI Disk Drive

### 2.2.1 Configuration Options

The following table lists the required jumper option settings for the CDC 327 MB embedded SCSI disk drive.



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**Warning** – Do not change jumper options that are not listed in Table 2-1. If the jumpers are changed, the drive warranty will be invalid and the drive may not function properly. In addition, the drive will have to be returned to the driver manufacturer for reconfiguration.

---

Table 2-1 Required Jumper Option Settings for the CDC 327 MB Disk Drive

Platform	Bus Terminators	Chasis/Logic Ground	Terminator Power	+5V to Bus	Bus Parity	Spindle Control	SCSI ID
5-Slot Office Pedestal	Removed	Open	From Drive Connector	N/A	Disabled	Spin-up at Power on	As Required
12-Slot Office Pedstal	Removed	Open	From Drive Connector	N/A	Disabled	Spin-up at Power on	As Required
ESM	Removed	Shorted	From Drive Connector	N/A	Enabled	Spin-up at Power on	As Required

### 2.2.2 Configuring a Peripheral Device

The following tables provide system configuration information for the CDC 327 MB embedded SCSI disk drive. The UNIX and Boot IDs are only valid for configuring this SCSI device in the SunOS 4.x operating environment. To determine the device address information in another operating system, see the references listed in the *Preface*, “When You Need Help with UNIX Commands”.

Table 2-2 Sun 5-Slot Office Pedestal Configuration

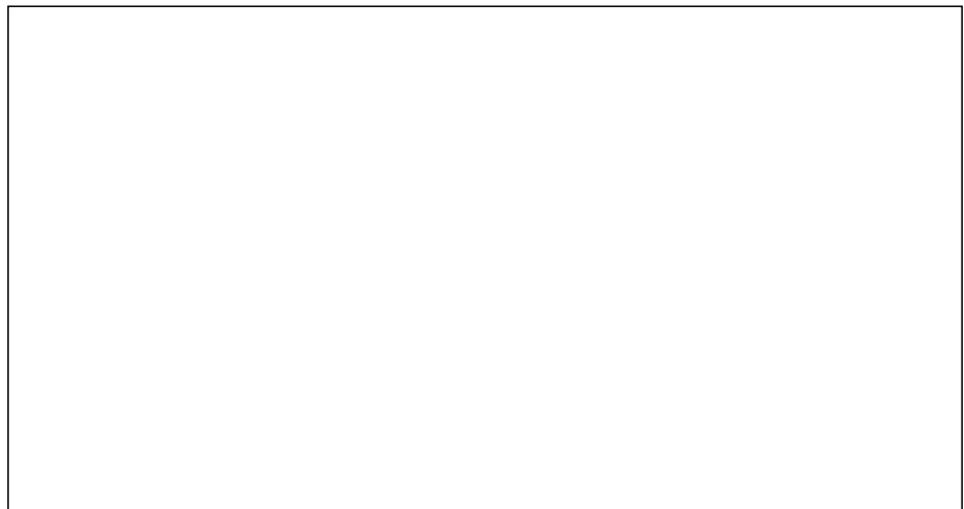
SCSI Disk	Target ID	UNIX ID	Boot ID
1st Internal Disk	3	sd6	sd(0,18,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
1st ESM Disk	0	sd0	sd(0,0,0)
2nd ESM Disk	2	sd4	sd(0,10,0)

*Table 2-3 Sun 12-Slot Office Pedestal Configuration*

<b>SCSI Device</b>	<b>Target ID</b>	<b>UNIX ID</b>	<b>Boot ID</b>
1st Internal Disk	0	sd0	sd(0,0,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
3rd Internal Disk	2	sd4	sd(0,10,0)
4th Internal Disk	3	sd6	sd(0,18,0)

### *2.2.3 CDC 327 MB Embedded SCSI Disk Drive Physical Description*

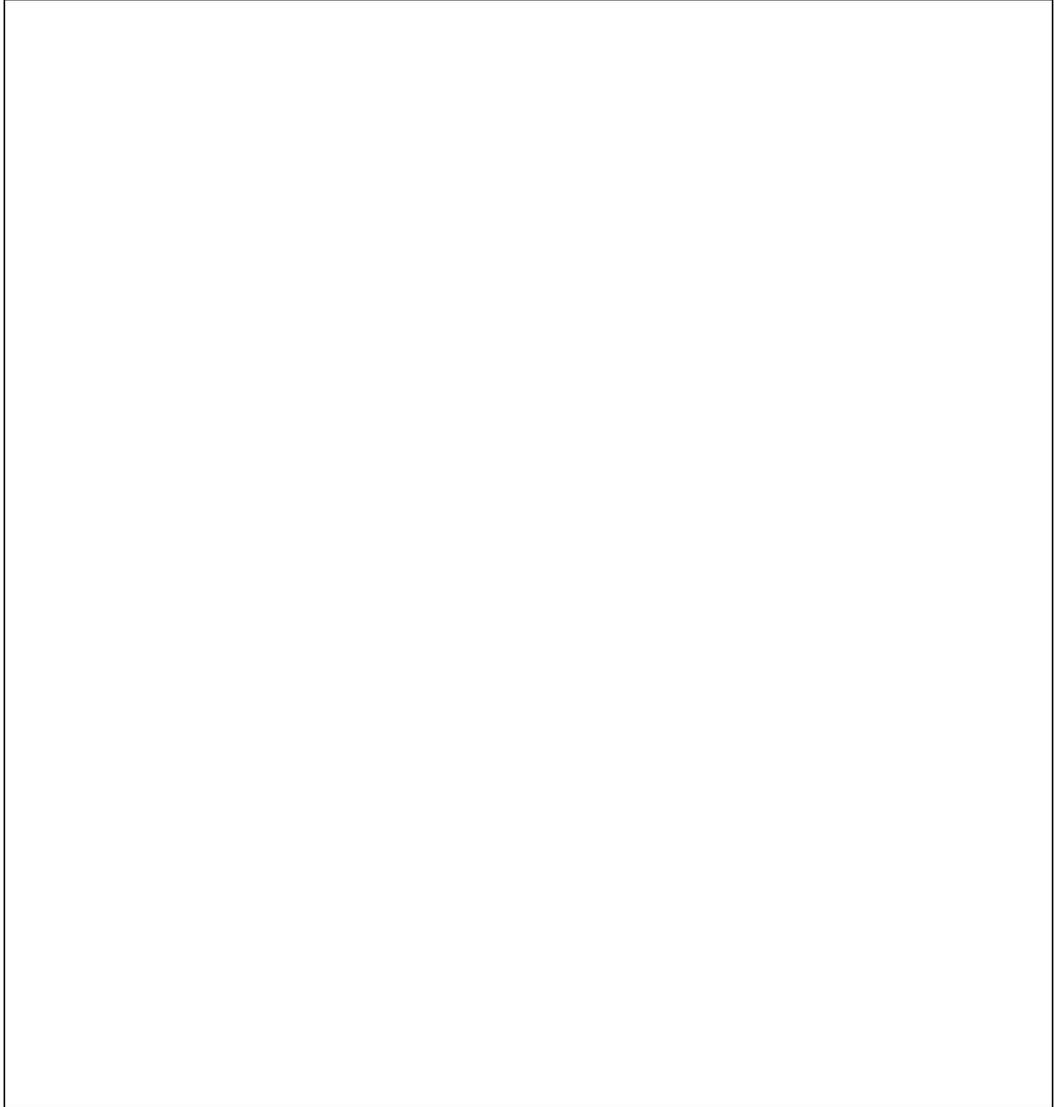
The following figure shows the CDC 327 MB disk drive.

*Figure 2-1 CDC 327 MB Embedded SCSI Disk Drive*

The disk drive must rest on its mounting bracket to match the orientation of the following description. The head-disk assembly (HDA) of the disk drive is the sealed enclosure that is shock mounted to the mounting bracket. The front of some disk drives may be identified by an operation status light fixed to the

mounting bracket or front bezel. The rear of the disk drive can be readily identified by the electrical connectors and jumper pins located on the PC card(s) fastened to the HDA.

The following illustration shows the jumper locations on the CDC 327 MB embedded SCSI disk drive.



*Figure 2-2 CDC 327 MB Disk Drive Jumper Locations*

From left to right, the jumper pins for the CDC 327 MB embedded SCSI disk drive are as follows:

The first block (five pairs of pins) contains:

- Bus parity check option select pins
- Spindle control option select pins
- SCSI ID select pins (rightmost 3-pin pairs)

On the center block:

- Ground select pins (2-pin pairs)

The terminator power source select jumpers are located below the SCSI target ID jumpers.

## *2.2.4 CDC 327 MB Embedded SCSI Disk Drive Option Descriptions*

The following sections describe the jumper options for the CDC 327 MB embedded SCSI disk drive.

### *2.2.4.1 Bus Parity Check Option*

Parity checking provides error detection on a byte-by-byte basis at the SCSI bus. To enable parity checking on the CDC 327 MB embedded SCSI disk drive, install the jumper.

### *2.2.4.2 Spindle Control Option*

If all peripherals start simultaneously at system power-up, the current draw will be much greater than during normal operation. To prevent an overload condition on some system power supplies, the peripheral devices may be started sequentially. When selected, the spindle control option causes the disk drive motor not to start until it receives a start command from the SCSI host adapter.

- Install the jumper if you want the drive to wait for a Start Unit Command from the SCSI host adapter before starting the motor.
- Remove the jumper if you want the motor to start upon system power up.

### 2.2.4.3 SCSI Target ID

Figure 2-2 shows the drive select jumper pins for the binary coded SCSI target IDs. The most significant digit corresponds to the leftmost set of pins. From the most significant digit to the least significant digit, the binary values of the pin pairs are four, two, and one. Table 2-4 and Table 2-4 show which jumpers should be installed to select a device target (0-6). Note that the system SCSI host adapter reserves target 7; therefore, no device may use target 7.

Table 2-4 Drive ID Jumper Settings in 12-Slot Office Pedestals

Drive Number	ID 2	ID 1	ID 0	Drive Target
1st Disk Drive	out	out	out	0
2nd Disk Drive	out	out	in	1
3rd Disk Drive	out	in	out	2
4th Disk Drive	out	in	in	3

Table 2-5 Drive ID Jumper Settings in 5-Slot Office Pedestals

Drive Number	ID 2	ID 1	ID 0	Drive Target
1st Disk Drive	out	in	in	3
2nd Disk Drive	out	out	in	1

### 2.2.4.4 Ground Select Jumpers

If the disk drive installation kit includes a Quick Connect (QC) ground wire, the ground select jumpers must be configured. Figure 2-2 illustrates the pin numbering.

- If you want QC signal ground, install a jumper across pins 1 and 2 of J3. The right pin pair (pin numbers 1 and 2) connects the QC lug E1 to SIGNAL (Logic) GROUND.
- If you want QC chassis ground, install a jumper across pins 3 and 4 of J3. The left pin pair (pin numbers 3 and 4) connects the QC lug E1 to CHASSIS GROUND.
- If you do not want either QC ground option, remove all jumpers at J3.

**Note** – If the disk drive installation hardware kit does not contain a QC ground wire, configure this option by removing all jumpers at J3.

---

#### **2.2.4.5 *SCSI Bus Termination Power***

The termination power source select pins are near the SCSI bus connector. The letters TP will identify these option select pins. Use these pins to select the termination power source. Refer to Figure 2-2 for the location of these pins.

- If termination power is to be drawn from the disk drive power connector, install the jumper on the leftmost pair of pins (jumper vertical).
- If termination power is to be drawn from the SCSI bus, install the jumper on the lower horizontal pair of pins (jumper horizontal).
- If the SCSI bus should not be terminated, all jumpers must be removed from the termination power selection pins on drives as shown in Figure 2-2.

#### **2.2.4.6 *SCSI Bus Termination Power Resistor Packs***

Sockets for termination resistor packs are located near either side of the 50 pin SCSI bus connector. To terminate the SCSI bus at the disk drive, install the Dual In-line Package (DIP) resistor modules (termination resistor packs) in the sockets located near the connector. See Figure 2-2 for the location of the termination resistor packs.

#### **2.2.4.7 *For Sun Applications:***

Remove the termination resistor packs if they are installed and you do not intend to terminate the SCSI bus at the disk drive. If necessary, the termination packs may be loosened by gentle prying with a screwdriver (or similar tool) and are then easily removed from the sockets. Take special care not to scratch or damage the printed circuit card or any components mounted on the card.

# *Configuring the Micropolis 669 MB Drive*

---

## *3.1 Purpose of this Chapter*

This chapter describes the configuration procedure for the Micropolis 669 MB embedded SCSI disk drive. This includes setting the disk drive address, SCSI bus termination state, and the drive options.

Sun 5¼-inch embedded SCSI disk drives come preset with the proper jumper configurations for Sun systems. The SCSI target ID jumpers are the only exception; they are described in this chapter. System-specific SCSI target ID requirements are defined in Chapters 5 and 6.

## *3.2 Micropolis 669 MB Embedded SCSI Disk Drive*

### *3.2.1 Configuration Options*

The following table lists the required jumper option settings for the Micropolis 669 MB embedded SCSI disk drive.



---

**Warning** – Do not change jumper options that are not listed in Table 3-1. If the jumpers are changed, the drive warranty will be invalid and the drive may not function properly. In addition, the drive will have to be returned to the driver manufacturer for reconfiguration.

---

Table 3-1 Required Jumper Option Settings for the 669 Micropolis Disk Drive

Platform	Bus Terminators	Chasis/Logic Ground	Terminator Power	+5V to Bus	Bus Parity	Spindle Control	SCSI ID
5-Slot Office Pedestal	Removed	Open	From Drive Connector	N/A	Enabled	Spin-up at Power on	As Required
12-Slot Office Pedestal	Removed	Open	From Drive Connector	N/A	Enabled	Spin-up at Power on	As Required

### 3.2.2 Configuring a Peripheral Device

The following tables provide system configuration information for the 669 MB Micropolis embedded SCSI disk drive. The UNIX and Boot IDs are only valid for configuring this SCSI device in the SunOS 4.x operating environment. To determine the device address information in another operating system, see the references listed in the *Preface*, “When You Need Help with UNIX Commands”.

Table 3-2 Sun 5-Slot Office Pedestal Configuration

SCSI Disk	Target ID	UNIX ID	Boot ID
1st Internal Disk	3	sd6	sd(0,18,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
1st ESM Disk	0	sd0	sd(0,0,0)
2nd ESM Disk	2	sd4	sd(0,10,0)

Table 3-3 Sun 12-Slot Office Pedestal Configuration

SCSI Device	Target ID	UNIX ID	Boot ID
1st Internal Disk	0	sd0	sd(0,0,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
3rd Internal Disk	2	sd4	sd(0,10,0)
4th Internal Disk	3	sd6	sd(0,18,0)

### 3.2.3 Micropolis 669 MB Embedded SCSI Disk Drive Physical Description

The following figure shows the Micropolis 669 MB embedded SCSI disk drive.

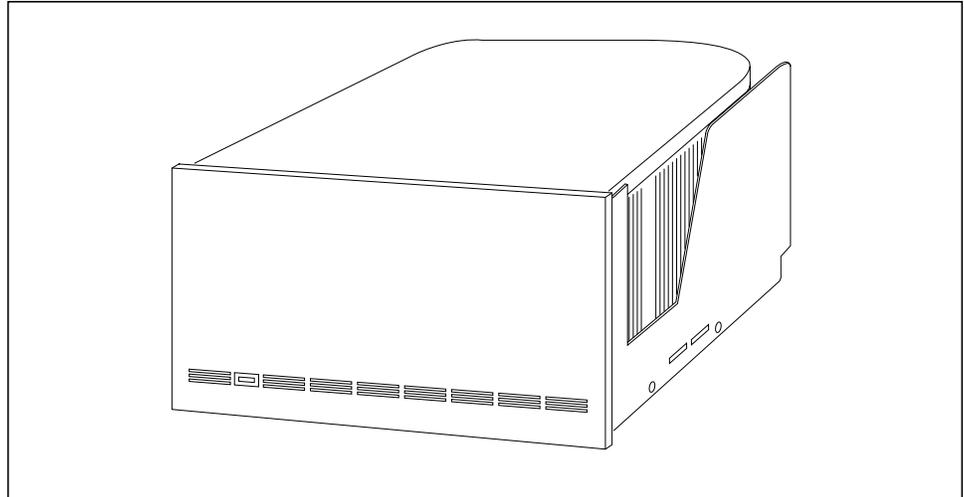


Figure 3-1 Micropolis 669 MB Embedded SCSI Disk Drive

The disk drive must rest on its mounting bracket to match the orientation of the following description. The head-disk assembly (HDA) of the disk drive is the sealed enclosure that is shock mounted to the mounting bracket. The front of some disk drives may be identified by an operation status light fixed to the mounting bracket or front bezel. The rear of the disk drive can be readily identified by the electrical connectors and jumper pins located on the PC card(s) fastened to the HDA.

The following illustration shows the jumper locations on the Micropolis 669 MB embedded SCSI disk drive.

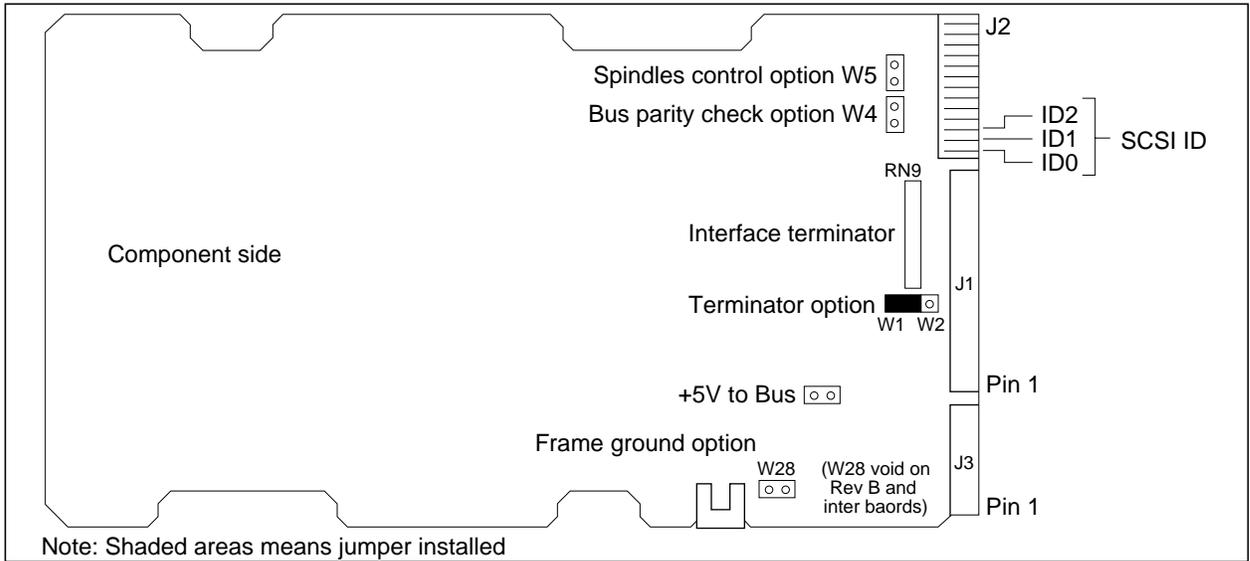


Figure 3-2 Micropolis 669 MB Embedded SCSI Disk Drive Jumper Locations (bottom view)



*Figure 3-3* Micropolis 669 MB Embedded SCSI Disk Drive Jumper Locations

The jumper pins for the Micropolis 669 MB drive shown in Figure 3-2 and Figure 3-3 are located as follows:

- Bus Parity check option - Top right corner of PC card (marked W4)
- Spindle control option - Top right corner of PC card (marked W5)
- SCSI ID - 3-pin pairs nearest the SCSI bus connector
- Chassis/Logic ground option - Bottom right corner of PC card (marked W28)
- Terminator Power Option - Near the J1 SCSI bus connector
- +5V to Bus - Near J1 and J3 connectors

The socket for the termination resistor pack is located near the 50 pin SCSI bus connector on the rear of the drive as shown in Figure 3-2. Terminator power source select pins are shown in Figure 3-3.

### ***3.2.4 Micropolis 669 MB Embedded SCSI Disk Drive Option Descriptions***

The following sections describe the jumper options for the Micropolis 669 MB embedded SCSI disk drive.

#### ***3.2.4.1 Bus Parity Check Option***

Parity checking provides error detection on a byte-by-byte basis at the SCSI bus. To enable parity checking on the Micropolis 669 MB drive, remove the jumper.

#### ***3.2.4.2 Spindle Control Option***

If all peripherals start simultaneously at system power-up, the current draw will be much greater than during normal operation. To prevent an overload condition on some system power supplies, the peripheral devices may be started sequentially. When selected, the spindle control option causes the disk drive motor not to start until it receives a start command from the SCSI host adapter.

- Install the jumper if you want the drive to wait for a Start Unit Command from the SCSI host adapter before starting the motor.
- Remove the jumper if you want the motor to start upon system power up.

#### ***3.2.4.3 SCSI Target ID***

Figure 3-3 shows the SCSI target ID jumper pins for the binary coded SCSI target ID. The most significant digit corresponds to the third set of pins from the right edge of J2. From the most significant digit to the least significant digit, the binary values of the pin pairs are four, two, and one. Table 3-4 and Table 3-5 show which jumpers should be installed to select a device target (0-6). Note that the system SCSI host adapter reserves target 7; therefore, no device may use target 7.

*Table 3-4 Drive ID Jumper Settings in 12-Slot Office Pedestals*

<b>Drive Number</b>	<b>ID 2</b>	<b>ID 1</b>	<b>ID 0</b>	<b>Drive Target</b>
1st Disk Drive	out	out	out	0
2nd Disk Drive	out	out	in	1
3rd Disk Drive	out	in	out	2
4th Disk Drive	out	in	in	3

*Table 3-5 Drive ID Jumper Settings in 5-Slot Office Pedestals*

<b>Drive Number</b>	<b>ID 2</b>	<b>ID 1</b>	<b>ID 0</b>	<b>Drive Target</b>
1st Disk Drive	out	in	in	3
2nd Disk Drive	out	out	in	1

#### **3.2.4.4 Chassis/Logic Ground Option**

Install a jumper at W28 to short chassis and logic ground together. Remove the jumper if the grounds are not to be tied together. Location W28 is shown in Figure 3-2.

#### **3.2.4.5 Terminator Power Option**

The terminator power option pins are near the SCSI bus connector. The letters W1 and W2 will identify these option select pins. Use these pins to select the termination power source. Refer to Figure 3-2 for the location of these pins.

- If termination power is to be drawn from the disk drive power connector, install the jumper on W1.
- If termination power is to be drawn from the SCSI bus, install the jumper on W2.

#### **3.2.4.6 +5 to Bus**

When jumper W11 is installed, the drive provides termination power to the SCSI bus.

### 3.2.4.7 *Bus Terminators*

The socket for a termination resistor pack is located near the 50 pin SCSI bus connector. To terminate the SCSI bus at the disk drive, install the Dual In-line Package (DIP) resistor module (termination resistor pack) in the socket located near the connector.

For Sun Applications: Remove the termination resistor pack if it is installed, and you do not intend to terminate the SCSI bus at the disk drive. If necessary, the termination pack may be loosened by gentle prying with a screwdriver (or similar tool) and is then easily removed from the socket. Take special care not to scratch or damage the printed circuit card or any components mounted on the card.

# Configuring the Maxtor 669 MB Drive

---



## 4.1 Purpose of this Chapter

This chapter describes the configuration procedure for the Maxtor 669 MB embedded SCSI disk drive. This includes setting the disk drive address, SCSI bus termination state, and the drive options.

Sun 5¼-inch embedded SCSI disk drives come preset with the proper jumper configurations for Sun systems. The SCSI target ID jumpers are the only exception; they are described in this chapter. System-specific SCSI target ID requirements are defined in Chapters 5 and 6.

## 4.2 Maxtor 669 MB Embedded SCSI Disk Drive

### 4.2.1 Configuration Options

The following table lists the required jumper option settings for the Maxtor 669 MB embedded SCSI disk drive.



---

**Warning** – Do not change jumper options that are not listed in Table 4-1. If the jumpers are changed, the drive warranty will be invalid and the drive may not function properly. In addition, the drive will have to be returned to the driver manufacturer for reconfiguration.

---

Table 4-1 Required Jumper Option Settings for the 669 MB Maxtor Disk Drive

Platform	Bus Terminators	Chasis/Logic Ground	Terminator Power	+5V to Bus	Bus Parity	Spindle Control	SCSI ID
5-Slot Office Pedestal	Removed	Open	From Drive Connector	N/A	Enabled	Spin-up at Power on	As Required
12-Slot Office Pedestal	Removed	Open	From Drive Connector	N/A	Enabled	Spin-up at Power on	As Required

### 4.2.2 Configuring a Peripheral Device

The following tables provide system configuration information for the Maxtor 669 MB embedded SCSI disk drive. The UNIX and Boot IDs are only valid for configuring this SCSI device in the SunOS 4.x operating environment. To determine the device address information in another operating system, see the references listed in the *Preface*, “When You Need Help with UNIX Commands”.

Table 4-2 Sun 5-Slot Office Pedestal Configuration

SCSI Disk	Target ID	UNIX ID	Boot ID
1st Internal Disk	3	sd6	sd(0,18,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
1st ESM Disk	0	sd0	sd(0,0,0)
2nd ESM Disk	2	sd4	sd(0,10,0)

Table 4-3 Sun 12-Slot Office Pedestal Configuration

SCSI Device	Target ID	UNIX ID	Boot ID
1st Internal Disk	0	sd0	sd(0,0,0)
2nd Internal Disk	1	sd2	sd(0,8,0)
3rd Internal Disk	2	sd4	sd(0,10,0)
4th Internal Disk	3	sd6	sd(0,18,0)

### 4.2.3 Maxtor 669 MB Embedded SCSI Disk Drive Physical Description

The following figure shows the Maxtor 669 MB embedded SCSI disk drive.



*Figure 4-1* Maxtor 669 MB Embedded SCSI Disk Drive

The disk drive must rest on its mounting bracket to match the orientation of the following description. The head-disk assembly (HDA) of the disk drive is the sealed enclosure that is shock mounted to the mounting bracket. The front of some disk drives may be identified by an operation status light fixed to the mounting bracket or front bezel. The rear of the disk drive can be readily identified by the electrical connectors and jumper pins located on the PC card(s) fastened to the HDA.

The following illustration shows the jumper locations on the Maxtor 669 MB embedded SCSI disk drive.

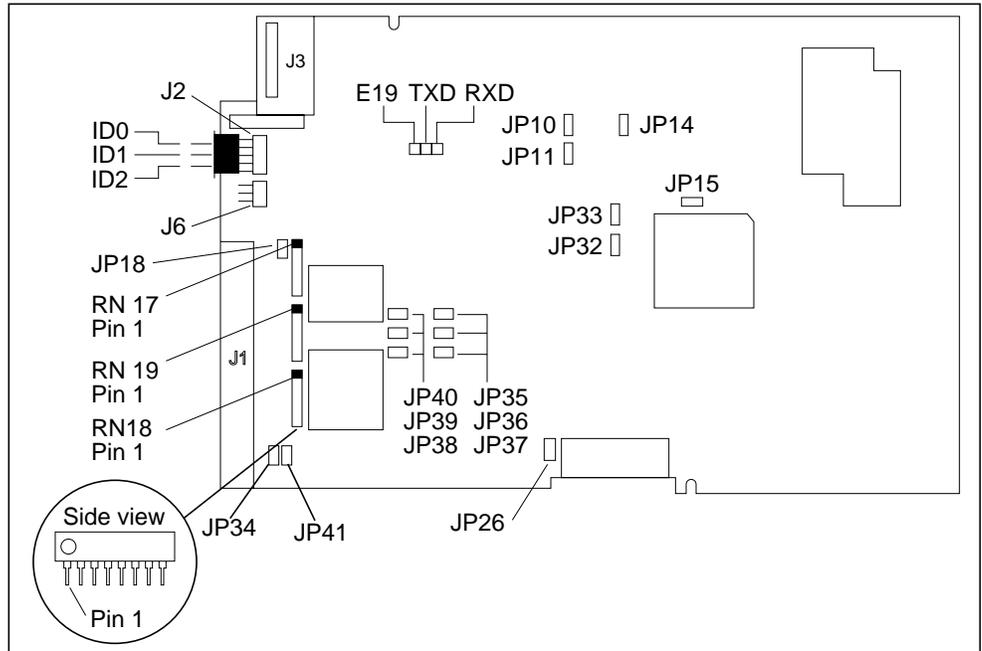


Figure 4-2 Maxtor 669 MB Embedded SCSI Disk Drive Jumper Locations (bottom view)

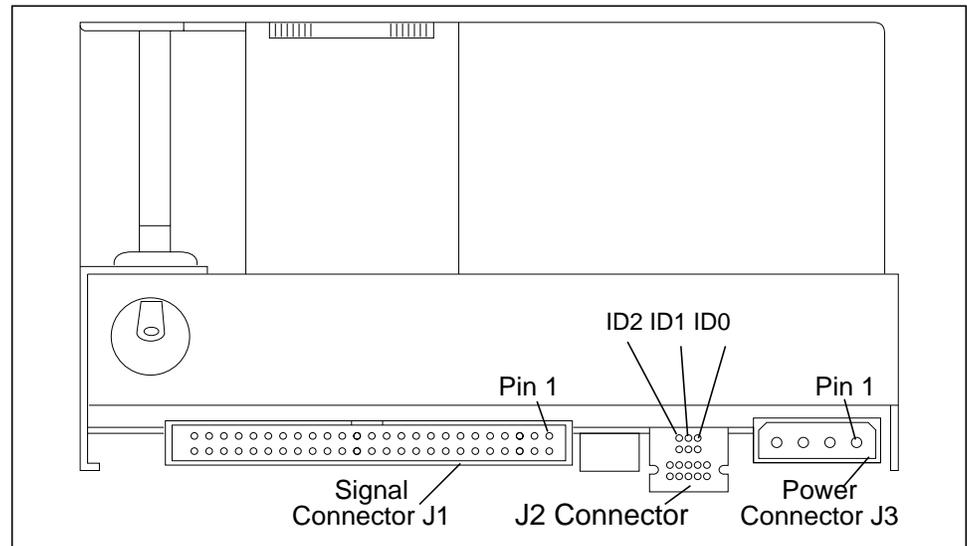


Figure 4-3 Maxtor 669 MB Embedded SCSI Disk Drive Jumper Locations (back view)

The jumper pins for the Maxtor 669 MB drive shown in Figure 4-2 and Figure 4-3 are as follows:

- Bus Parity check option - Bottom left corner of the PC card (marked JP40)
- Spindle control option - Top center of the PC card (marked JP14)
- SCSI ID - 3-pin pairs near the Power Connector (marked J2)
- Chassis/Logic ground option - This option can only be changed by Sun
- Terminator Power Option - Bottom left corner of the PC card (marked JP41 and JP34)
- +5V to Bus - Bottom left corner of the PC card (marked JP34)

The sockets for the termination resistor packs are located near the 50-pin SCSI bus connector, as shown in Figure 4-2.

#### 4.2.4 Maxtor 669 MB Embedded SCSI Disk Drive Option Descriptions

The following sections describe the jumper options for the Maxtor 669 MB embedded SCSI disk drive.

#### 4.2.4.1 Bus Parity Check Option

Parity checking provides error detection on a byte-by-byte basis at the SCSI bus. To enable parity checking on the drive, install the jumper.

#### 4.2.4.2 Spindle Control Option

If all peripherals start simultaneously at system power-up, the current draw will be much greater than during normal operation. To prevent an overload condition on some system power supplies, the peripheral devices may be started sequentially. When selected, the spindle control option causes the disk drive motor not to start until it receives a start command from the SCSI host adapter.

- Remove the jumper if you want the drive to wait for a Start Unit Command from the SCSI host adapter before starting the motor.
- Instal the jumper if you want the motor to start upon system power up.

#### 4.2.4.3 SCSI Target ID

Figure 4-3 shows the SCSI target ID jumper pins for the binary coded SCSI target ID. The most significant digit corresponds to the third set of pins on the left edge of J2. From the most significant digit to the least significant digit, the binary values of the pin pairs are four, two, and one. Table 4-4 and Table 4-5 show which jumpers should be installed to select a device target (0-6). Note that the system SCSI host adapter reserves target 7; therefore, no device may use target 7.

Table 4-4 Drive Jumper Settings in 12-Slot Office Pedestals

Drive Number	ID 2	ID 1	ID 0	Drive Target
1st Disk Drive	out	out	out	0
2nd Disk Drive	out	out	in	1
3rd Disk Drive	out	in	out	2
4th Disk Drive	out	in	in	3

Table 4-5 Drive Jumper Settings in 5-Slot Office Pedestals

Drive Number	ID 2	ID 1	ID 0	Drive Target
1st Disk Drive	out	in	in	3
2nd Disk Drive	out	out	in	1

#### 4.2.4.4 Chassis/Logic Ground Options

Chassis Ground and Logic Ground are not user-selectable.

#### 4.2.4.5 Terminator Power Option

Using this option, power can be supplied to the drive terminators from the drive or the SCSI bus.

- If termination power is to be drawn from the disk drive power connector, install the jumper on JP41.
- If termination power is to be drawn from the SCSI bus, install the jumper on JP34.

#### 4.2.4.6 +5 to Bus

When jumpers JP34 and JP41 are both installed, the drive provides termination power to the SCSI bus.

#### 4.2.4.7 Bus Terminators

The sockets for termination resistor packs are located near the 50 pin SCSI bus connector. To terminate the SCSI bus at the disk drive, install the Single In-line Package (SIP) resistor modules (termination resistor packs) in the sockets located near the connector.

For Sun Applications: Remove the termination resistor packs if they are installed and you do not intend to terminate the SCSI bus at the disk drive. Take special care not to scratch or damage the printed circuit card or any components mounted on the card.

#### 4.2.4.8 Remaining Jumpers

The remaining jumpers are set by the factory and should not be changed. They should be set as follows:

*Table 4-6* Required Jumper Settings

JP10	in	JP33	in
JP11	in	JP35	out
JP15	out	JP36	out
JP18	out	JP37	out
JP26	out	JP39	in
JP32	in	E19/TXD	in

# *5-Slot Office Pedestal Installation Procedure*

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## *5.1 Purpose of this Chapter*

This section describes the procedure for installing/replacing 5¼-inch hard disk drives in Sun's 5-Slot Office pedestal.

This chapter starts with some general information you will need to know before starting the installation procedure, then explains powering-down the system, removing the trim panels, and finally installing or replacing a 5¼-inch hard disk drive in a peripheral enclosure.

## *5.2 General Information*

Be sure you read and understand this section before attempting to install one of the disk drives.

### *5.2.1 Tools Required*

You should have the following tools on hand to install the disk drive:

- A #2 Phillips screwdriver
- A 9-cm (3/8-inch) flat blade screwdriver.

### *5.2.2 Installation Tips*

Use the following "tips" to make an installation easier:

- Have a shorter length cross-head screwdriver available.
- Match the arrow on the drive's SCSI receptacle with the arrow on the SCSI ribbon cable connector that attaches to it.
- Be sure to fold the drive sector flaw record in such a manner that it does not interfere with the ventilation hole on the top of the drive. Air circulation could be blocked if it is inserted between the enclosure and the drive's vent.

### 5.2.3 Verify Device Configuration

Verify that each disk drive is addressed and otherwise correctly configured for the position it will occupy within the 5-Slot Office Pedestal. First determine what the SCSI bus address should be and then refer to Chapter 2, 3, or 4 of this manual to verify that the disk drive configuration matches the desired address.

## 5.3 Shutting Down the System

Before turning off the system power, you must halt the operating system:

1. **Go to the handbook that came with your peripheral to find this procedure.**
2. **See the section about shutting down the system.**
3. **Return to this book after you perform the procedure.**

Power-down the 5-Slot Office Pedestal by shutting off power at the front panel.



---

**Caution** – Use the ESD wrist strap and anti-static mat, as shown in the ESD kit instructions, 800-2206-xx.

Do not disconnect the power cord from the system unit's power outlet and the wall socket. This connection provides the ground path necessary to safely remove and install the disk drives.

---

## 5.4 Trim Removal

The drive enclosures house the disk and tape subsystems. These "swing-out" option trays are located on the left side of the unit if you are looking at it from the front (the front end houses the on/off switch). There is one enclosure located in the upper part of the pedestal, and one just below it.

To gain access to the peripheral trays, remove the top cover and left side panel as illustrated in Figure 5-1, and explained below.

**Note** – This text refers to the left side panel as viewed from the front of the pedestal.

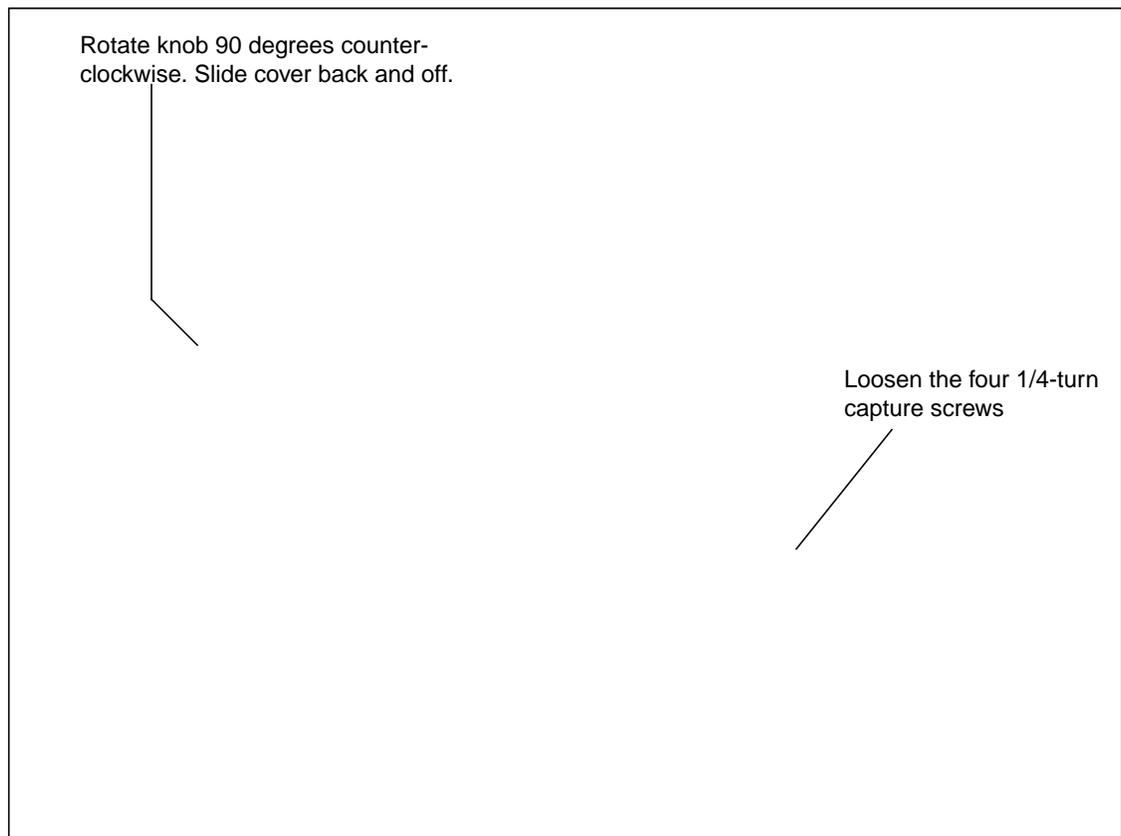


Figure 5-1 5-Slot Office Pedestal Top Cover and Left Side Panel Removal

#### 5.4.0.1 Top Cover and Left Side Removal

1. **Locate the top cover fastener at the opposite end of the system from the On/Off switch.**

2. Turn it counter-clockwise to release the top cover, then slide it back 3 inches (7.6 cm) and lift it away from the unit.
3. Unfasten the four Phillips-head 4-turn fasteners that secure the top of the panel to the pedestal.
4. Move the panel outward and lift it away.

To reinstall the top cover and left side panels, reverse this procedure.

### 5.4.1 Once the Disk Drives are Accessible

You will note that the power supply is located just below the bottom drive enclosure.

Each drive that fits inside the enclosure is secured by four Phillips-head screws. Larger drives use all available space in the drive enclosure while others use only half the available space.

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**Note** – The drives are manufactured by several disk drive vendors; refer to Chapters 2, 3, or 4 for the correct diagrams and instructions.

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**Caution** – These components are sensitive to damage from electrostatic discharge, which can occur when you walk across a carpet and then touch them. Before handling the drives and boards, make sure that you have placed your hand on a conductive surface that is grounded to a common earth ground. Your Office Pedestal should remain plugged in to an AC wall outlet during the installation process. Assuming it is, touching the system chassis will act as an earth ground and safely discharge any static electricity. The metal screw or plate on a common AC wall receptacle is also grounded, and will discharge any static electricity present in your body.

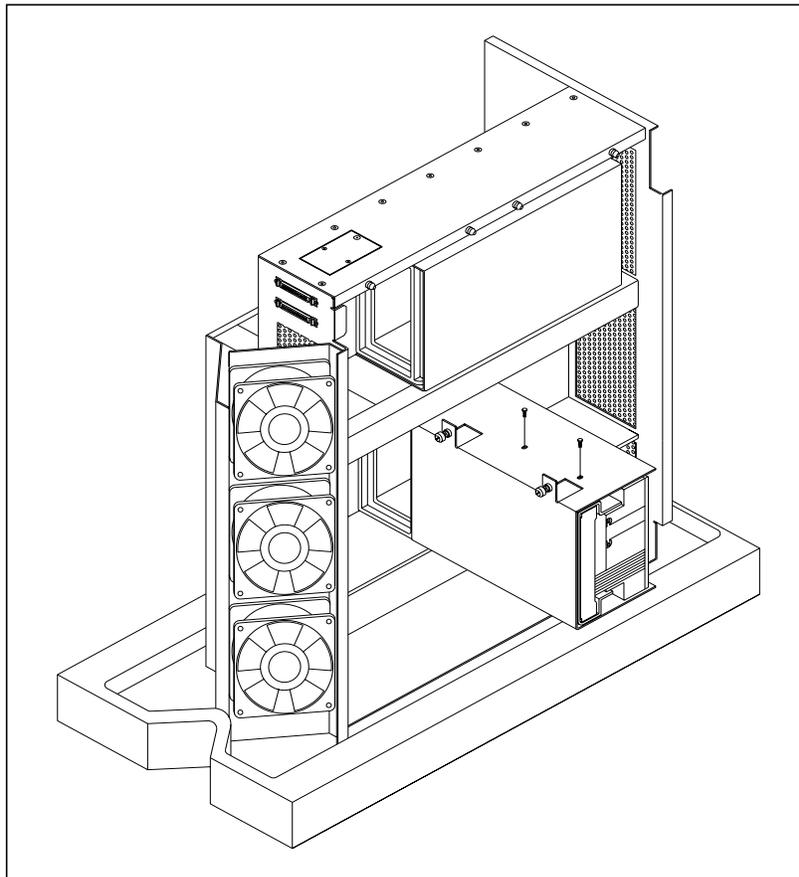
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## 5.5 5 1/4-Inch Hard Disk Removal/Replacement

It is possible, but not recommended to install a 5¼-inch hard disk drive in the upper drive enclosure. The upper enclosure is the only space available for removable media peripherals (tape drives, CD-ROMs, etc.). Such devices

require frequent user access and the upper spot should be reserved for them. The following remove/replace instructions refer to the lower enclosure, but are equally applicable to the upper enclosure.

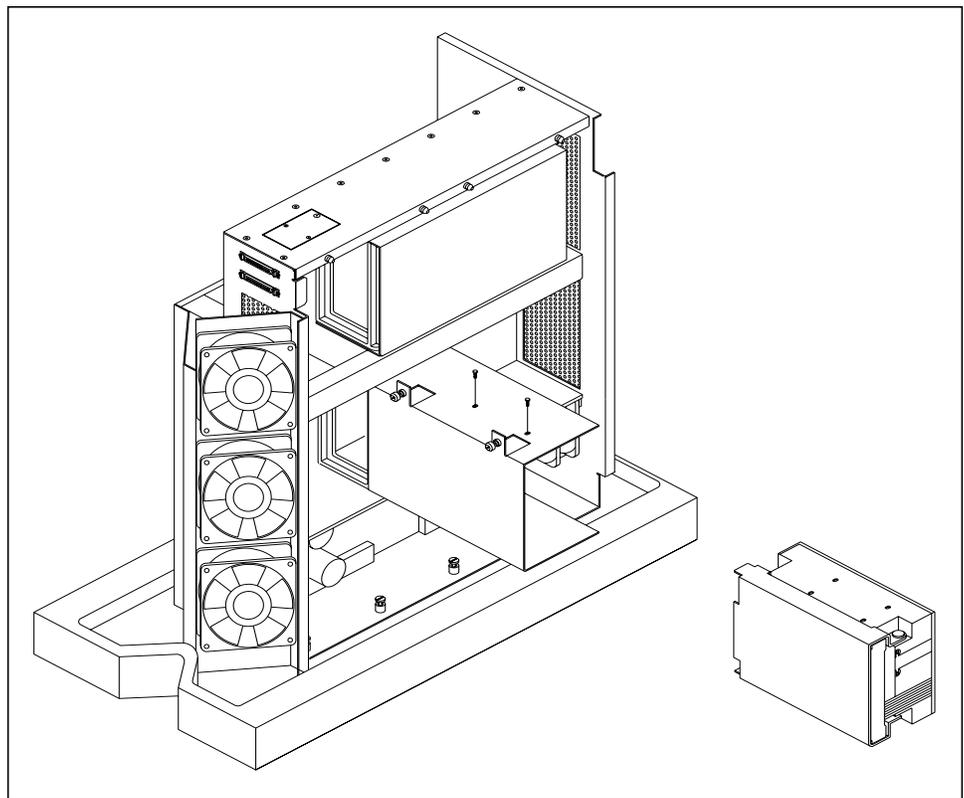
- 1. Undo the three captive slot-head fasteners that secure the swing-out drive enclosure. Use a large flat-blade screwdriver if necessary.**



*Figure 5-2* The Peripheral Tray in a “Swung-Out” Position

- 2. Rotate the drive bracket outward until the enclosure is completely accessible.**

- 3. Using a phillips (cross head) screwdriver, remove the two securing screws on the top of the enclosure**



*Figure 5-3 5 1/4-Inch Disk Drive Removed*

- 4. Remove the two drive-securing screws on the bottom of the enclosure. Note that it may be necessary to use a shorter length screwdriver as clearance between the floor and the enclosure bottom is limited.**
- 5. Remove the power connector from the rear of the drive and carefully disconnect the adjacent SCSI cable connector. Slide the drive out of the enclosure.**

Installation of a new or replacement drive is the reverse of the previous procedure.

### 5.5.1 Installing/Reinstalling a Disk Drive

1. Position the hard disk drive in the drive-mounting bracket. Place the SCSI connector end in the bracket first, with the power connector below the SCSI connector. See Figure 5-4.

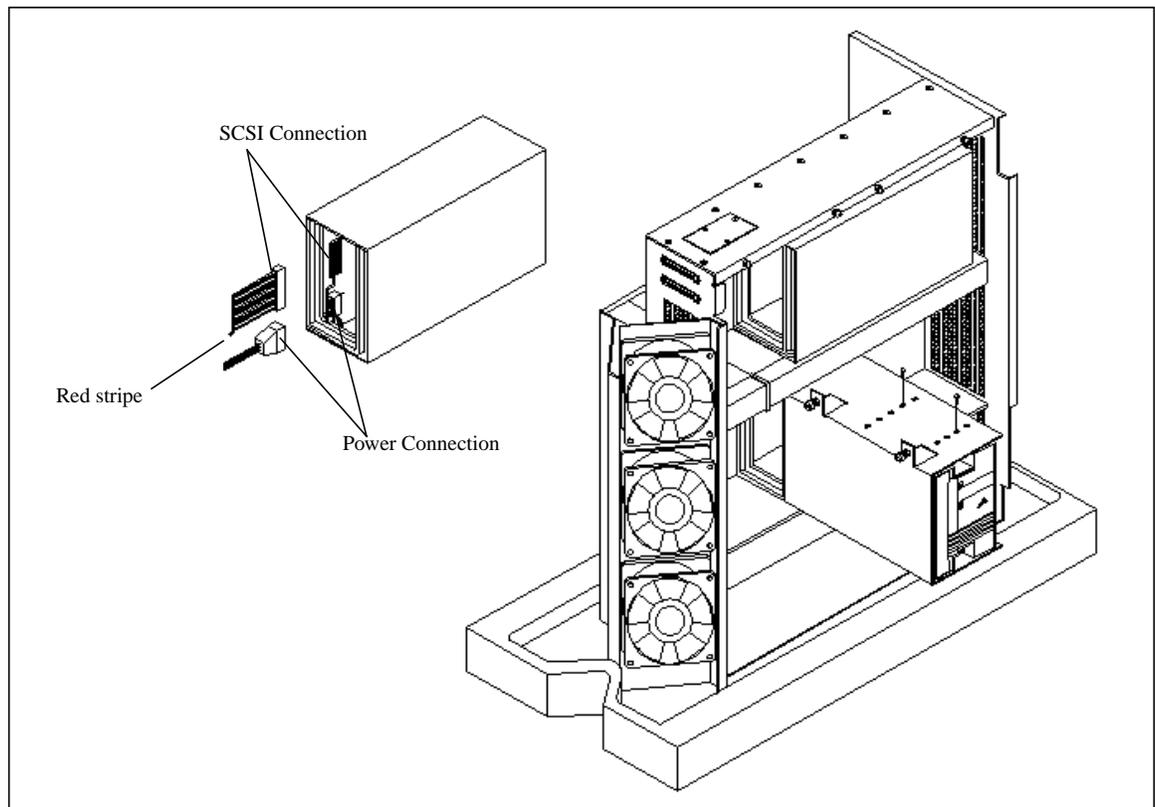


Figure 5-4 SCSI and Power Cable Connections

2. Use four screws to secure the hard disk into the drive-mounting bracket.
3. Connect the SCSI cable (P5) to the hard disk drive. See Figure 5-5.

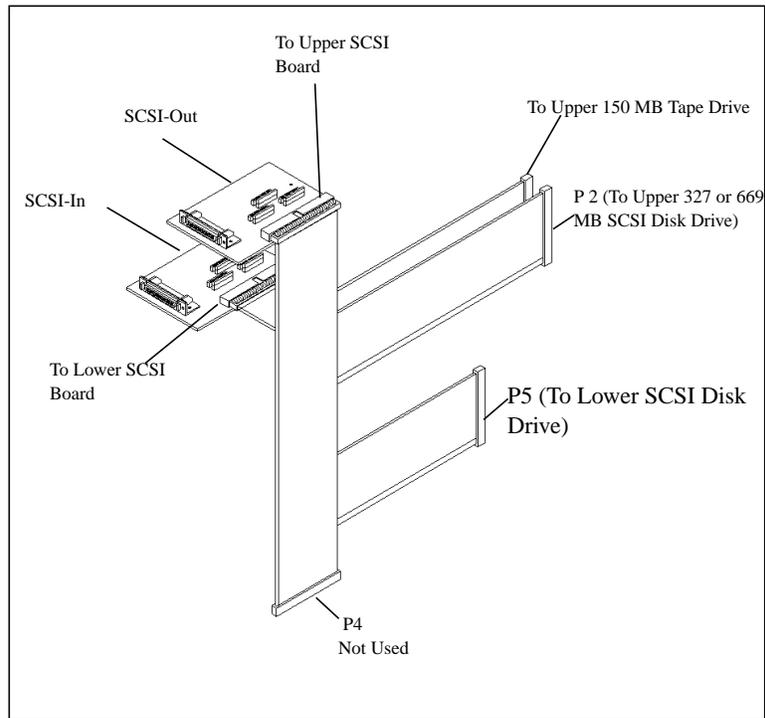


Figure 5-5 SCSI cable attachments (Stylized Drawing)

4. **Connect the power connector to the disk drive.**
5. **Rotate the drive bracket inward and secure it to the chassis with the three captive flat-head fasteners.**
6. **Use tie wraps to secure all loose cables to the center bracket.**

### 5.5.2 *Replace the Left Panel and Top Cover*

1. **Put the left panel back in place and secure it with the four Phillips-head 4-turn fasteners.**
2. **Slide the top cover back in place and secure it by turning the retaining knob counterclockwise 1/4 turn.**

3. **Unfasten the four Phillips-head 4-turn fasteners that secure the top of the panel to the pedestal.**

## 5.6 *Booting the System*

The disk drive installation is now complete and you are now ready to use the Office Pedestal again. Turn on the On/Off switches on the power supply and on the front panel to power up the system.

Boot the system using the procedure that is appropriate for your operating system:

1. **Go to the handbook that came with your peripheral to find this procedure.**
2. **See the section about booting the system.**
3. **Return to this book after you perform the procedure.**

For a newly installed peripheral device to work in a computer system, its device driver must be added or activated. See the *Preface*, “When You Need Help with UNIX Commands” for references to documentation that describes device names and addresses.



# *12-Slot Office Pedestal Installation Procedure*

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## *6.1 Purpose This Chapter*

This chapter explains how to install a 5¼-inch hard disk drive on a Sun 12-Slot Office Pedestal. This chapter starts with some general information you should know before installing a disk drive in a 12-Slot Office Pedestal, then describes disk configuration concerns, and finally explains the installation procedure itself.

## *6.2 General Information*

This section describes the procedure for removing the peripheral tray, removing an existing installed peripheral (if necessary), installing a 5¼-inch hard disk drive, and reinstalling the peripheral tray.

### *6.2.1 The 12-Slot Office Pedestal Physical Description*

The Sun 12-Slot Office Pedestal is a 66-cm (26 inches) high desk-side equipment enclosure that is 43.2-cm (17 inches) wide and 66-cm (26 inches) deep.

This pedestal contains:

- A 12-Slot cardcage
- Two trays for mounting SCSI controlled peripheral devices
- A power supply
- A cooling system

The 12-Slot Office Pedestal provides air circulation for system cooling. Fans in the bottom of the office pedestal draw ambient air into the enclosure through louvers in the front and sides, force this air through the peripheral trays (where a 5¼-inch disk drive will be installed), then through the cardcage where it passes over the circuit cards, and then out the bottom of the office pedestal.

### *6.2.2 Peripheral Tray Physical Description*

The 12-Slot Office Pedestal contains two trays previously wired and drilled to accommodate the installation of SCSI controlled peripheral devices. The peripheral trays measure 17.15-cm (6.75 inches) wide, 14.61-cm (5.75 inches) high, and 50.15-cm (19.75 inches) deep. Each peripheral tray can hold two Sun-approved SCSI controlled peripheral devices. Using both positions in both peripheral trays, a maximum of four 5¼-inch disk drives can be installed within the 12-Slot Office Pedestal.

Both trays plug into connectors that close the circuits of the peripheral device power supply and the SCSI bus. (Both ends of the SCSI bus are terminated within the 12-Slot Office Pedestal.) Routing of power cabling is to each peripheral tray. SCSI cabling is in series through both peripheral trays. Both trays must be installed for proper operation.

### *6.2.3 Tools Required*

You should have the following tools on hand to install the disk drive:

- #2 Phillips screwdriver
- 7mm hex (Allen) wrench or a .9-cm (3/8-inch) flat blade screwdriver.
- A pair of 14-cm (5 or 6-inch) needle-nose pliers (or a jumper installation tool) to remove and install jumpers on the disk drive.

---

## 6.3 Preparation for Installation

**Note** – A hard disk drive is not a front or top-loading peripheral device. Once installed, it requires no operator intervention to perform its job. Therefore, it can be installed in relatively inaccessible places in a system. Other devices, such as tape drives, require regular operator intervention. They must be mounted in highly accessible places in the system. If any front-loading peripheral devices will be installed in the 12-Slot Office Pedestal, they must be installed in the front positions of the peripheral trays. If, for example, you will install a Sun 60 MB tape drive, you must install it in the front position of the left (as viewed from the front) peripheral tray since it must be accessible during operation. If a Sun 150 MB tape drive will be installed, install it in the front position of the right peripheral tray.

---

### 6.3.1 Peripheral Tray Configuration

The configuration of the 12-Slot Office Pedestal peripheral trays is as follows. All references to “right” and “left” positions are as viewed from the front of the 12-Slot Office Pedestal.

- The device installed in the rear position of the right peripheral tray should be configured as the first drive (drive address 0).
- The device installed in the rear position of the left peripheral tray should be configured as the second drive (drive address 1).
- The device installed in the front position of the left peripheral tray should be configured as the third drive (drive address 2).
- The device installed in the front position of the right peripheral tray should be configured as the fourth drive (drive address 3).

Figure 6-1 shows the four mounting positions in the peripheral trays of the 12-Slot Office Pedestal.

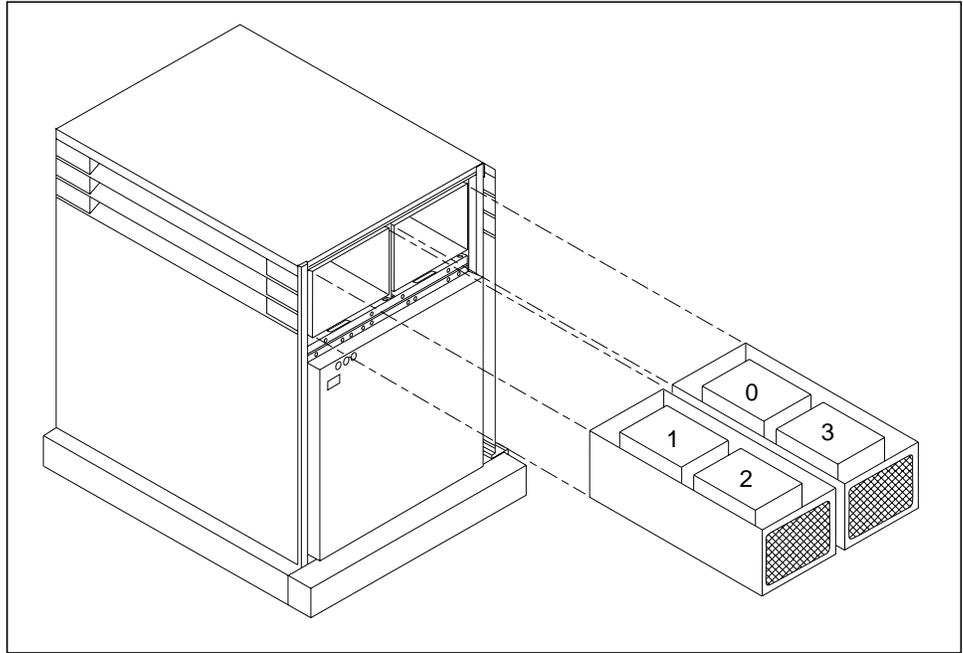


Figure 6-1 Drive Mounting Positions

Figure 6-2 illustrates all 15 recommended combinations of positions for the tape and disk drives in the 12-Slot Office Pedestal.

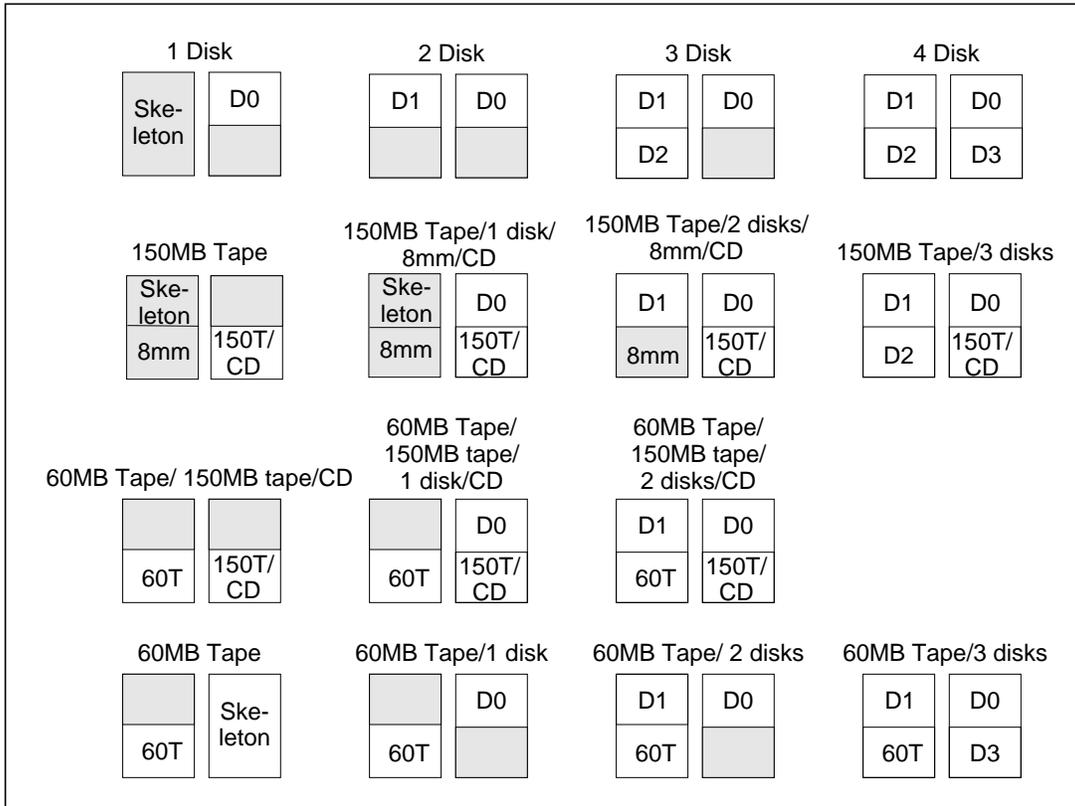


Figure 6-2 Recommended Combinations for Tape/Disk/CD Drive Mounting Positions



**Caution** – There are two types of SCSI ribbon cable in the trays: 530-1500-xx is for disks only. 530-1498-xx is for a tray with a tape and a disk or a tape only.

**DO NOT MIX THE CABLES WHILE INSTALLING THE DRIVES.**

## 6.3.2 Device Configuration Options

Configure the disk drives as follows:

1. See Figure 6-2 to determine which of the 15 recommended combination of positions for the tape and disk drives you will be using. Determine the position (D0, D1, D2, or D3) where you will mount the 5¼-inch disk drive.
2. Configure each device according to its position within the peripheral trays. The device address (either 0, 1, 2, or 3) must be consistent with the position of the device. Refer to Chapters 2, 3, and 4 for instructions on configuring the disk drive to a particular drive address. It is important that this be done *before* installing the drives in the peripheral tray.

### 6.3.2.1 SCSI Bus Termination

In the 12-Slot Office Pedestal system, termination of both ends of the SCSI bus cable is within the 12-Slot Office Pedestal. The SCSI bus physically begins at the SCSI card, is daisy-chained through both peripheral trays, and returns to the SCSI card. Because the SCSI card provides bus termination, all SCSI bus termination resistors must be removed from all SCSI controlled devices installed in the peripheral trays.



---

**Caution** – You must ensure that the SCSI bus is not terminated at any peripheral device installed in the 12-Slot Office Pedestal. Failure to remove SCSI bus termination from all installed peripherals may cause degraded performance, intermittent errors, and even system failures. Refer to Chapters 2, 3, and 4 for the information necessary to verify that the SCSI bus is not terminated at a 5¼-inch disk drive.

---

### 6.3.3 Verify Device Configuration

Verify that each disk drive is addressed and otherwise correctly configured for the position it will occupy within the 12-Slot Office Pedestal. First determine what the SCSI bus address should be and then refer to Chapter 2, 3, or 4 of this manual to verify that the disk drive configuration matches the desired address. At this stage of the installation, you should also verify the configuration of any other devices installed in the peripheral trays.

## 6.4 *The Installation Procedure*

The following section explains the installation procedure, which can be broken down into the following steps:

- A graceful power-down, which does not surprise any of the server clients, and does not lose any data
- Remove a peripheral tray
- Remove an installed peripheral from the tray (if necessary)
- Install a disk drive in the peripheral tray
- Reinstall the peripheral tray in the enclosure

### 6.4.1 *Shutting Down the System*

Before turning off the system power, you must halt the operating system:

- 1. Go to the handbook that came with your peripheral to find this procedure.**
- 2. See the section about shutting down the system.**
- 3. Return to this book after you perform the procedure.**

Power-down the 12-Slot Office Pedestal by shutting off power both at the front panel and at the main power switch located on the rear panel. (If you are not familiar with the power-down procedure, refer to the system manuals for the complete procedure.)



**Caution** – Use the ESD wrist strap and anti-static mat, as shown in the ESD kit instructions, 800-2206-xx.

Do not disconnect the power cord from the system unit's power outlet and the wall socket. This connection provides the ground path necessary to safely remove and install the disk drives.

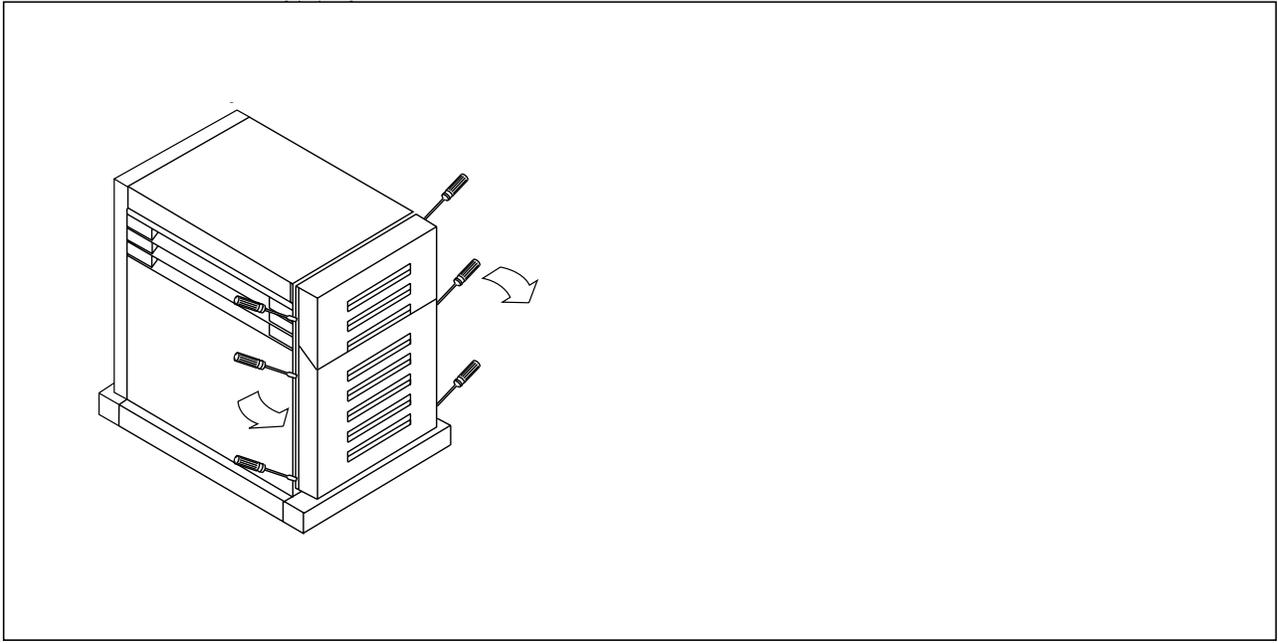
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### *6.4.2 Peripheral Tray Removal*

- 1. The peripheral trays are located in the top portion of the pedestal. To access the trays, remove the front panel using the recessed grips to pull the panel firmly enough to release the panel from its ball stud retainers (refer to Figure 6-3). If necessary, a large flat screwdriver may be used to carefully pry the front panel from its retaining ball studs.**

**Note that the hand grips are located underneath the front panel access door. If you pull on the front panel access door instead of the hand grips, you may damage the door hinge.**

- 2. If one or two front panel bezels are mounted on the chassis over the peripheral trays, pull each one straight out and allow it to pop off the chassis. After removal, set the panels aside.**



*Figure 6-3* 12-Slot Office Pedestal Front Panel Removal

- 3. The four hex (Allen) head screws that secure the peripheral tray in the pedestal can now be seen on the front of the tray. Use a 7mm hex (Allen) wrench or a 3/8-inch flat blade screwdriver to remove the four hex-head peripheral tray retaining screws.**
- 4. Refer to Figure 6-4. Using the peripheral tray handle, pull (small tug) on the tray to disconnect its SCSI connectors from the mating connectors in the pedestal. Remove the peripheral tray completely by firmly, but smoothly, pulling the peripheral tray straight out of its rails.**

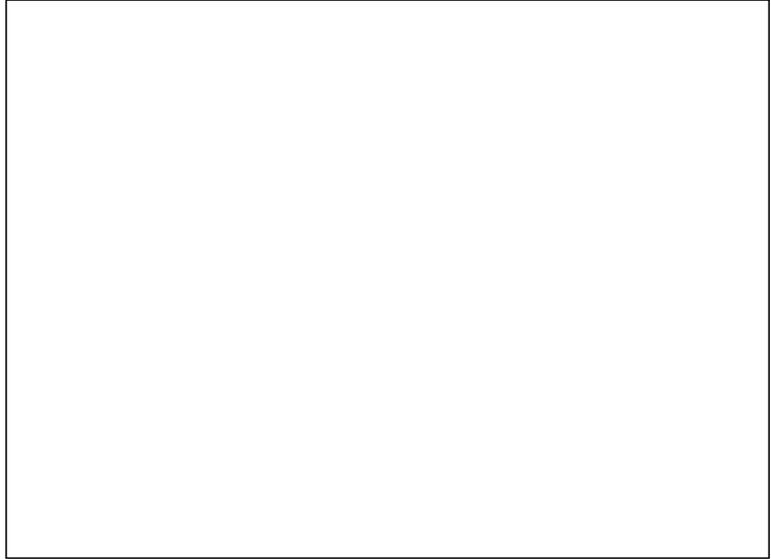


Figure 6-4 Peripheral Tray Removal

**5. Place the peripheral tray on a convenient work surface.**

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**Note** – Sun recommends that you remove only one peripheral tray at a time and reinstall it before removing the other tray. This method precludes any chance of reversing the physically identical trays and thereby inadvertently installing a device at the wrong SCSI address. The peripheral trays are physically identical and can interchange, but the SCSI addresses are discrete to a particular position within the 12-Slot Office Pedestal. Refer to Section 6.4.6, “Peripheral Tray Installation”, for tray installation procedures.

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### *6.4.3 Removing the Disk Drive from the Peripheral Tray*

- 1. Refer to Figure 6-5. Using a #2 Phillips screwdriver, remove the eight screws that secure the tray’s top cover to the peripheral tray. Set the top cover and its screws aside.**



*Figure 6-5* Removing the Peripheral Tray's Covers

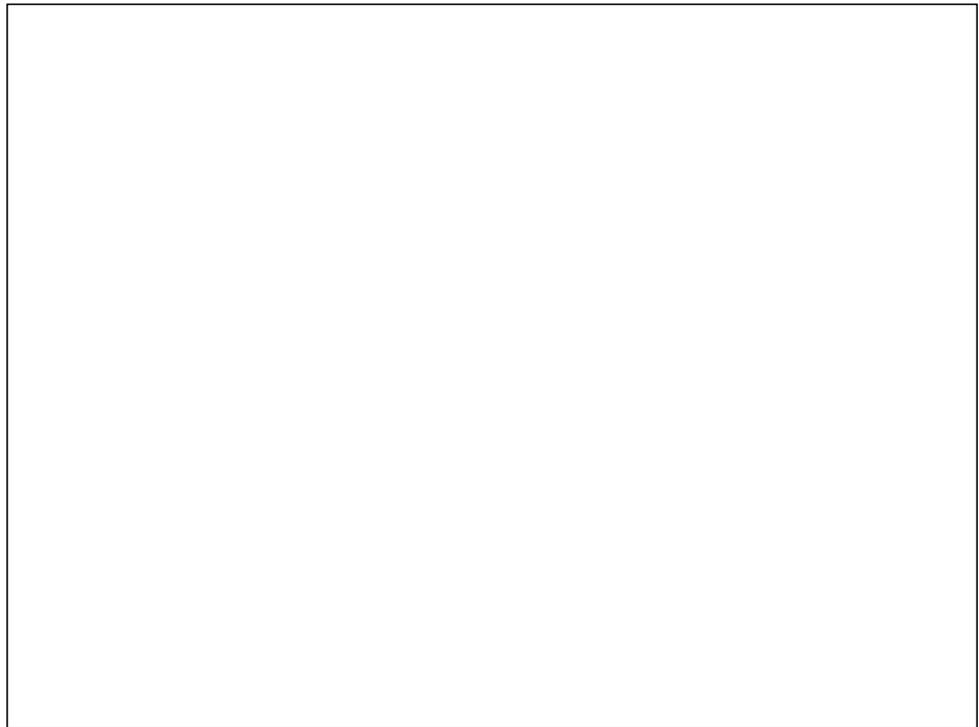
- 2. If you are also installing a device in the front of the peripheral tray, remove the six screws that secure the tray's front cover. Set the tray front cover and its screws aside.**

#### ***6.4.4 Drive Removal***

If you must remove an installed disk drive so that another device (such as the new 5¼-inch disk drive) may be installed in its place, follow these steps:

- 1. Refer to Figure 6-6. Remove the four mounting screws that secure the drive in the peripheral tray.**

2. **Identify the two cables that are connected to the drive. One is a 4-wire power harness that supplies power to the drive. The other is a 50-wire SCSI bus flat ribbon cable.**
3. **Disconnect the 4-wire power harness from the drive to be removed. Be sure that you pull on the plug itself (the body of the connector), and not on the wires. Varying the direction of the pulling force (a slight rocking motion) will help to unseat a tight connector.**
4. **Carefully grasp the edges of the SCSI bus ribbon cable connector and disconnect it from the drive. *Do not pull on the ribbon cable.* Again, a slight rocking motion will be helpful.**
5. **At this point the drive should be free. After verifying that the cabling is not hooked or snagged on the drive, you can lift the drive out of the peripheral tray.**



*Figure 6-6* Removing a Drive from a Peripheral Tray

### 6.4.5 Drive Installation

Prior to installing a 5¼-inch hard disk drive (or any other device) familiarize yourself with the locations of the following items:

- The disk drive's SCSI bus and power connectors
- The peripheral tray's SCSI bus and device power interface board
- The power wiring harness that will connect between the peripheral tray interface board and the disk drive
- The SCSI bus ribbon cable that will connect between the interface board and the disk drive.
- In particular, note the location of pin number 1 on the SCSI bus connectors. Pin 1 is identified by the number 1 on the connector housings. Also note that there is a stripe on the ribbon cable. This stripe identifies conductor (wire) number 1 of the ribbon cable. The SCSI bus ribbon cable is correctly connected when the stripe on the SCSI bus ribbon cable is aligned with pin 1 at every 50-pin SCSI connection.

To install a 5¼-inch disk drive in the peripheral tray, perform the following steps:

1. Use 4 screws to secure the flat cable shield to the disk drive.
2. If you have not already done so, use a #2 Phillips screwdriver to remove the eight screws securing the peripheral tray's top cover. Set the screws and the cover aside.
3. If for any reason the SCSI bus ribbon cable from the peripheral tray interface board is disconnected, re-connect it. Insure that the ribbon cable is connected correctly (pin one of the connector aligned with the stripe on the ribbon cable) and is fully seated into the body of the interface board connector. Neatly fold the ribbon cable within the peripheral tray.



**Warning** – When installing the disk drive, take care to fold the ribbon cable following the set it has taken. Cable or connector damage can result if you reverse the natural folds of the ribbon cable.

There are two types of SCSI ribbon cable in the trays: 530-1500-xx is for disks only. 530-1498-xx is for a tray with a tape and a disk or a tape only!

**DO NOT MIX THE CABLES WHILE INSTALLING THE DRIVES.**

- 4. Plug the appropriate SCSI bus ribbon cable connector into the 5¼-inch disk drive SCSI bus connector, being careful to observe correct (ribbon cable stripe to pin 1) alignment. Refer to Figure 6-7 for an illustration of the correct cabling arrangement within the peripheral tray. In order to avoid confusion, note that connector P2 must be connected to the peripheral installed in the front section of the peripheral tray and connector P3 must be connected to the drive you are now mounting in the rear section of the peripheral tray.**

**For simplicity of installation, the 12-Slot Office Pedestal has been wired so that connectors P2 and P3 of the peripheral tray on the right correspond to device addresses 0 and 3 respectively. In the same manner, connectors P2 and P3 of the peripheral tray on the left correspond to device addresses 1 and 2 respectively. If this order is followed, each device installed in its predetermined tray position will be correctly configured and (barring accident or damage) will operate properly.**



*Figure 6-7* Peripheral Tray Cable Routing

- 5. If it is not already connected, connect one end of the 5¼-inch disk drive power cable to one of the power connectors on the peripheral tray interface board.**
- 6. Connect the other end of the power cable to the disk drive power receptacle.**
- 7. Place the disk drive in its predetermined position in the peripheral tray. Align the mounting screw holes. Insert one of the Phillips head mounting screws through a mounting screw hole in the peripheral tray flange and start it into the respective threaded hole in the disk drive mounting flange.**



**Warning** - If you are mounting a 669 MB drive, use the 1/2-inch long mounting screws that came with the drive. The mounting screws must not be longer than 1.27-cm (1/2-inch) or you will damage the 669 MB drive when you secure the mounting screws. Do not yet tighten the screw. Repeat this process until all four mounting screws are inserted through the peripheral tray flanges and started into the disk drive mounting flange.

8. Insure that the disk drive is properly aligned in the peripheral tray and that no cabling (especially the 4-wire power harness) is pinched between the flanges of the peripheral tray and the disk drive mounting flange.

Figure 6-8 shows an end view of a drive installation in a peripheral tray. In particular, note that the drive does not rest on the floor of the peripheral tray. The mounting screws are perpendicular to the sides of the tray, going through the flanges of the tray into the device mounting bracket.

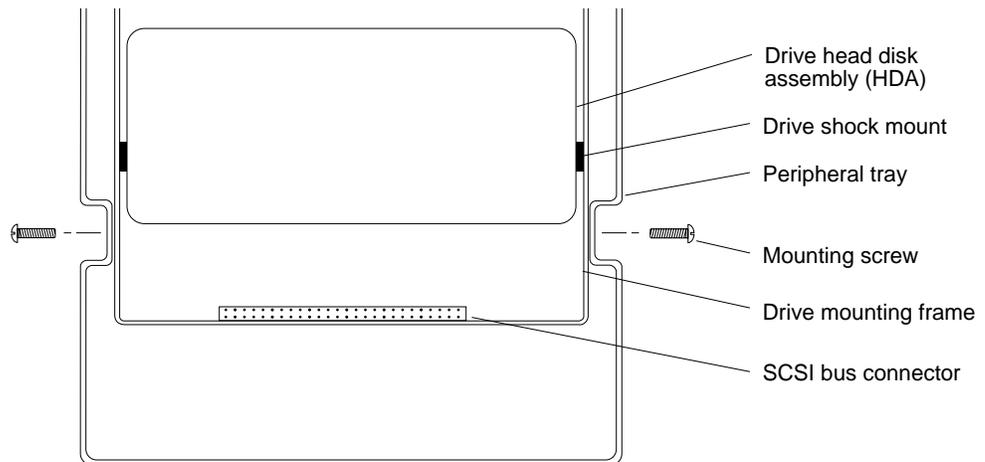


Figure 6-8 Mounting a 5¼-Inch Hard Disk Drive in a Peripheral Tray

9. Using the #2 Phillips screwdriver, tighten the four disk drive mounting screws enough to secure the disk drive in the tray. Repeat the foregoing for all devices to be installed in the peripheral trays.

10. After you have installed all devices in the peripheral tray, reinstall the tray cover(s) that was (were) removed in step 1. If you removed the front cover, note that its hole pattern is not symmetrical. You must align the front cover mounting screw holes. Then you may reinstall the front cover using the six front cover screws that you removed. Reinstall the top cover using the eight screws that you removed when you removed the top cover. Tighten the screws enough to secure the tray cover(s).

### 6.4.6 Peripheral Tray Installation

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**Note** – Although the peripheral trays are physically interchangeable, the device configurations are for discrete positions and the installed devices will not function properly if they are not placed in those discrete positions within the 12-Slot Office Pedestal.

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Perform the following steps to reinstall the peripheral tray into the 12-Slot Office Pedestal:

1. Verify that the 12-Slot Office Pedestal main power switch is off, a grounding strap is connected, and that the power cord is disconnected.
2. Grasp the front handle of the peripheral tray with one hand and support the weight of the tray with the other hand.
3. Slide the peripheral tray into the correct slot (the only open tray slot if you remove only one tray at a time) and firmly seat it in its mating connectors.
4. Secure the peripheral tray in its position in the pedestal using the four Allen head screws.
5. Replace the ElectroMagnetic Interference (EMI) shield and any screws removed when this shield was removed.
6. Replace the front panel on the 12-Slot Office Pedestal.

Connect the 12-Slot Office Pedestal power cord. Remove the grounding strap. This completes a 5¼-inch disk drive installation procedure.



## 7.1 Purpose of this Chapter

This chapter provides information about the most common installation oversights. It is not needed unless you have a problem. For the complete power-up and checkout procedure, refer to the document: *12-Slot Office Pedestal Installation Manual* (Sun document 800-3104-xx).

A 5¼-inch disk drive is formatted and labeled at the factory and is ready to use after installation. However, if you wish to verify correct operation of the drive, you should refer to the format utility information. See the operating system documentation that came with your system for help with this command.

Sun Microsystems has engineered this product for ease of installation and use. There is a very slight possibility of drive damage occurring during either shipping or installation. If your system was functioning properly before the installation of the disk drive but is not functioning properly now, the fault is most likely with the installation or configuration. If your system is not functioning properly, check through the following list of symptoms and take corrective action if necessary before proceeding to the next item in the list.

## 7.2 *If the System is Completely Inoperative*

1. Is the Office Pedestal plugged into the AC wall outlet?
2. Is the 12-Slot Office Pedestal Main Power switched ON?
3. Is the 12-Slot Office Pedestal front power switch ON?
4. Is the 5-Slot Office Pedestal front panel power switch ON?

## 7.3 *If All Peripherals are Inoperative*

If all peripheral devices are inoperative, first remove power from the Pedestal. Remove the pedestal rear cover. Verify that the SCSI bus is continuous from the SCSI host adapter to the rear of the peripheral trays. Ensure that there is no damage to any cabling or connectors, and securely seat all bus connectors.

## 7.4 *If a Drive is Inoperative*

If a drive is inoperative, power down the Pedestal and make the following checks:

1. Check the DC power harness for damaged or recessed connector pins and for damaged conductors.
2. Check the SCSI ribbon cable for damaged conductors and connectors.
3. Recheck cable routing: are all cables correctly connected?
4. Verify the disk drive configuration. Refer to Chapter 2 of this manual to determine what the disk drive configuration should be and to Chapters 2, 3, and 4 for information on how to configure the disk drive.
5. Verify that the SCSI bus is not terminated at any installed device.

Correct any faults you find. If you could find none of the foregoing faults but your system is still not functioning, notify your Sun Field Service Representative.

## *Revision History*

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<b>Revision</b>	<b>Dash</b>	<b>Date</b>	<b>Comments</b>
813-2048-10	-10	December 1989	First Customer Ship (FCS)
813-2048-11	-11	August 1990	2nd Release
813-2048-12	-12	August 1992	3rd Release



### Reader Comments

We welcome your comments and suggestions to help improve the *5 1/4" SCSI Disk Drive Installation and Configuration for Sun Office Pedestals*, part number 813-2048-12. Please take time to let us know what you think about this manual.

- The tasks were well documented and easy to follow.

Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
<input type="checkbox"/>				

Comments \_\_\_\_\_

- The information provided in *5 1/4" SCSI Disk Drive Installation and Configuration for Sun Office Pedestals* was complete.

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Comments \_\_\_\_\_

- The information I needed was easy to find.

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Comments \_\_\_\_\_

- The manual was useful to me.

Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
<input type="checkbox"/>				

Comments \_\_\_\_\_

- Do you have additional comments about the *5 1/4" SCSI Disk Drive Installation and Configuration for Sun Office Pedestals*?

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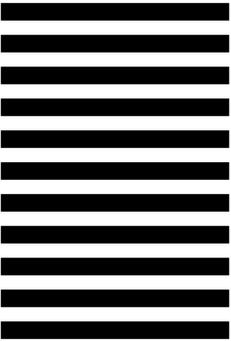
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