

# **DECsystem 5500 Installation**

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**Digital Equipment Corporation  
Maynard, Massachusetts**

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## Preface

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This manual tells you how to install your DECsystem 5500 system. The installation includes the following steps.

1. Check site preparation
2. Check the shipment
3. Position the system
4. Open the system door
5. Install the console terminal
6. Set system controls
7. Connect additional devices to the system
8. Make the system-expander connections, if required
9. Connect the system power cable
10. Turn on the system and select a language
11. Close the system door

**CAUTION:** *Before installing the system, review your system warranty. The terms of that agreement with Digital may require that a Digital service representative install your system. Contact your local Digital representative if you have any questions.*

*Prestoserve™ software, included in your operating system, requires a special CPU configuration. If that configuration will be set up during system installation and you are not a licensed self-maintenance customer, your system should be installed by a Digital service representative.*

If you are installing an expander with your system:



1. Use this manual to begin the installation of the system.
2. After you complete step 7, install the expander as described in the installation document (addendum or manual) shipped with the expander.

3. Return to this manual (step 8) to complete the installation of the expander and the system.

A glossary in the *Operation* manual will help you understand new words and acronyms that appear in this manual.

## Conventions

The following conventions are used in this manual.

Convention	Meaning
	A terminal key used in text and examples. For example,  indicates that you press the Break key on your terminal keyboard.
<b>NOTE</b>	Provides general information about the current topic.
<b>CAUTION</b>	Provides information to prevent damage to equipment or software.
<b>WARNING</b>	Provides information to prevent personal injury.

The following warning symbols appear on the power supply. Please review their meaning:



Indicates the risk of electric shock.



To reduce the risk of injury, do not remove modules, Integrated Storage Elements (ISEs), or the power supply. No user-serviceable parts are inside. Refer servicing questions to your Digital service representative or your qualified self-maintenance personnel.

The equipment is not designed for connection to an IT power system (a power system without a directly grounded neutral conductor). The equipment should be plugged into a dedicated (isolated) ground circuit.

The system contains an automatic voltage-selection power supply. Voltage selection is not required prior to installation.

## 1 Check Site Preparation

You may have received a copy of the *Site Preparation* manual, which describes the physical, environmental, and electrical requirements for your system. For your convenience, a copy of that manual is also included in your Customer Hardware Information Kit. If you have not done so, read that manual and follow its instructions for preparing your site.

- The installation instructions that follow assume your site meets all the installation requirements listed in the *Site Preparation* manual.
- These instructions also assume all terminal data lines, telephone lines, and network lines that you plan to connect to your system are in place and clearly labeled.

You will need the following tools to install your system. They are not included in your shipment.

- Scissors
- Flat blade screwdriver
- Phillips (cross point) screwdriver
- Adjustable wrench

## 2 Check the Shipment

Before unpacking your system, find the Product Delivery Document. It is attached to the outside of a carton and is labeled with a blue "i" symbol. That document lists your order and how it breaks out into the items shipped.

Your shipment may include several cartons:

- One carton contains the system.
- A smaller carton contains the console terminal.
- Another carton contains hardware documentation, software documentation, system software, diagnostic software, and software licenses.

Depending on your order, your shipment may also include cartons containing:

- Additional terminal(s)
- Printer(s)
- Modem(s)
- Expander(s)

Make sure your shipment is complete by checking that each item listed as shipped on the Product Delivery Document appears on a Content Listing or on a barcode label on the outside of one of the cartons in your shipment.

**NOTE:** *Save all packing materials until you are sure you will not reship any items in the shipment.*

Use the unpacking illustrations on the cartons as a guide to unpack your shipment, one carton at a time. Check the contents of each carton against the Content Listing on its side to ensure you received all items.

**WARNING:** *The system weighs 68 kg (150 lb) with all options installed. Use two or more people to move the system.*

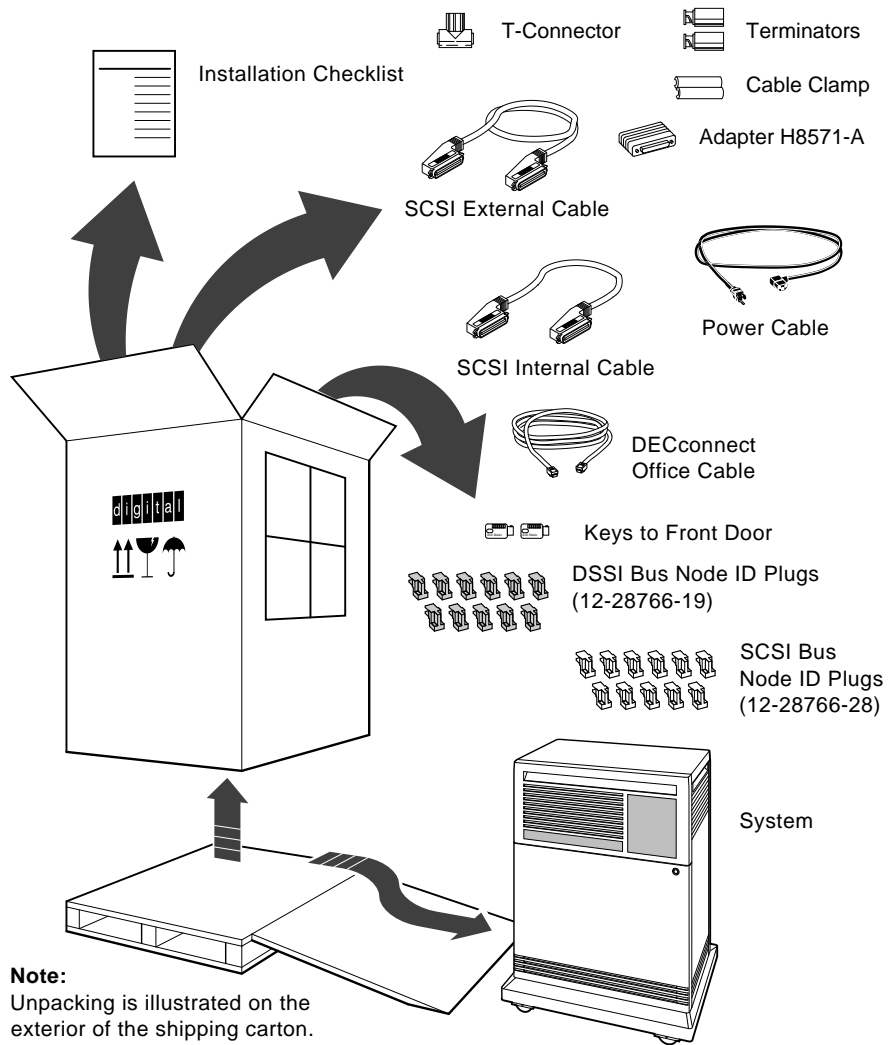
If any item is missing or damaged:

- Contact your delivery agent.
- Contact your Digital sales representative.

The carton containing your system has unpacking instructions on its side. Follow those instructions when unpacking the system. Figure 1 shows the contents of the shipping carton.

## 2 DECSYSTEM 5500 Installation

**Figure 1: Shipping Carton Contents**



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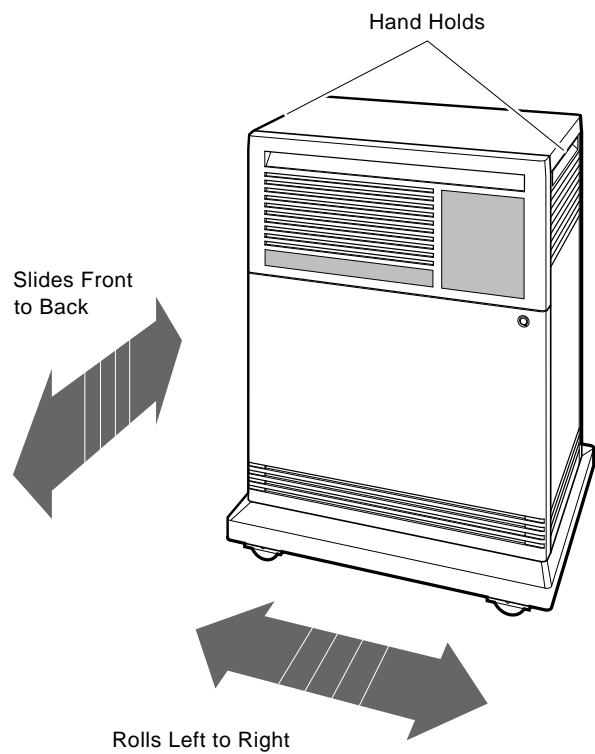
### 3 Position the System

You can move your system into position in one of two ways as shown in Figure 2.

- Roll it sideways.
- Slide or walk it backward or forward by gripping the hand holds on the side.

**WARNING:** *Do not use the hand holds to lift the system.*

**Figure 2: Sliding the System into Position**



Leave space behind the system for routing cables. Once installation is complete, you can place the system base directly against a wall. The oversized base ensures enough space for proper ventilation.

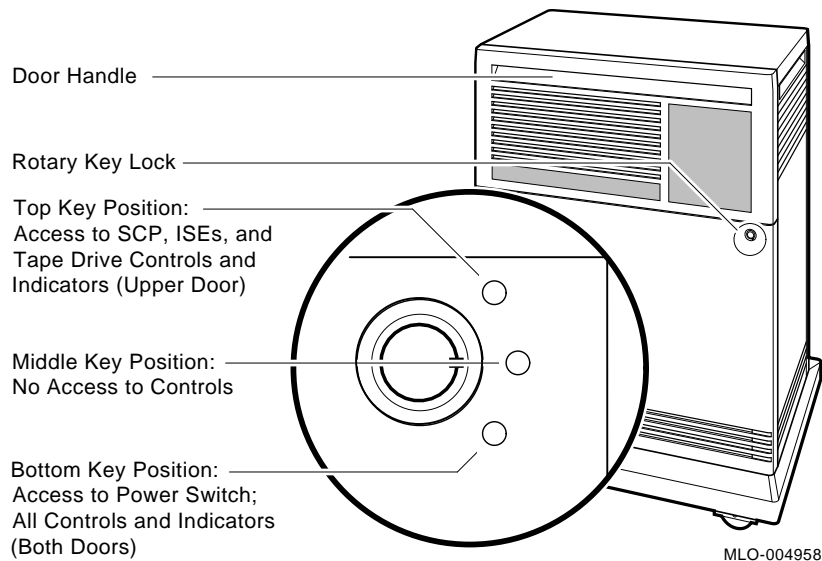
### 4 DECsystem 5500 Installation

## 4 Open the System Door

The system door is locked. To unlock and open it:

1. Find the key in the shipping carton (Figure 1). Two keys are provided, one to keep as a spare.
2. Insert the key in the three-position rotary lock shown in Figure 3. Turn the key to the bottom position to open the upper and lower parts of the door as a single unit.
3. Open the door by pulling on the handle on the upper door. Figure 3 shows the door handle.

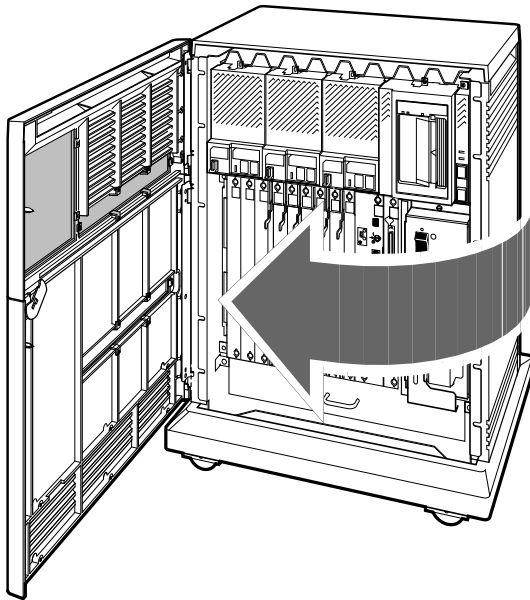
**Figure 3: Lock and Key Positions**



(SCP stands for System Control Panel and ISE stands for Integrated Storage Element.)

4. Swing the door open. Figure 4 shows the system with the upper and lower parts of the door open.

**Figure 4: Opening the System Door**



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**CAUTION:** *Prestoserve™ software, included in your operating system, requires a special CPU configuration. If that configuration will be set up during system installation and you are not a licensed self-maintenance customer, your system should be installed by a Digital service representative.*

The next step in installing your system is to install the console terminal.

## 5 Install the Console Terminal

You will use the console terminal to communicate with your system.

1. Unpack the terminal and documentation. Your console terminal is packed with the following.
  - Video monitor
  - Keyboard and keyboard cable
  - Console terminal power cable
  - Documentation, including a combined installation guide and user's manual
2. Use the instructions in the terminal installation guide to connect the various parts of the terminal.
3. Turn on the terminal.

The console terminal performs a self-test every time you turn it on. The documentation for the terminal describes a successful self-test and error messages you receive if the terminal is not operating properly.

Once the terminal passes its self-test, you are ready to perform set-up operations.

### 5.1 Perform Set-Up Operations

Set-up instructions for terminals vary according to model, or in some cases according to which read-only memory (ROM) is installed in the terminal. Be sure to read the documentation provided with your terminal. The two examples that follow provide set-up instructions for VT300-series and VT200-series terminals.

**NOTE:** *A new terminal from Digital has the baud rate set to 9600. If your terminal is new and you want to use that rate, you can skip the Baud Rate Set-Up section (5.1.1) and go to Global Set-Up (5.1.2).*

### 5.1.1 Baud Rate Set-Up

#### For VT300-Series Terminals:

1. Press **[Set-Up]** to display the Set-Up Directory.
2. Use the arrow keys to select the Communications Set-Up option and press **[Enter]**.
3. Make sure the Transmit Speed option in the Current Setting column is set to 9600. Use the left and right arrow keys to change the setting.
4. Make sure the Receive Speed option in the Current Setting column is set to receive=transmit. Use the down arrow to move the cursor to that option, and the left and right arrows to change the setting.
5. Press **[Select]** to return to the Set-Up Directory.
6. Press **[Set-Up]** to exit the Set-Up Directory.

#### For VT200-Series Terminals:

1. Press **[Set-Up]** to display the Set-Up Directory.
2. Use the arrow keys to select the Default option and press **[Enter]**. Default correctly sets all values except transmit speed.
3. Use the arrow keys to select the Comm option and press **[Enter]** to display the Communications Set-Up menu.
4. Use the arrow keys to select the Transmit option and, using **[Enter]**, set the speed to 9600.
5. Use the arrow keys to select the To Directory option and press **[Enter]**.
6. Use the arrow keys to select the Save option and press **[Enter]**.
7. Press **[Set-Up]** to exit the Set-Up Directory.

### 5.1.2 Global Set-Up

1. Press **[Set-Up]** to display the Set-Up Directory.
2. Use the arrow keys to select the Global Set-Up option. Press **[Enter]** to display that option and use the arrow keys to select the Comm1 Port option.
3. If the port in the Current Setting column is selected for RS-232, press **[Enter]** to select the DEC-423 port.
4. Press **[Select]** to return to the Set-Up Directory.
5. Use the arrow keys to select the Save Current Settings option and press **[Enter]**.
6. Press **[Set-Up]** to exit the Set-Up Directory.

Once you test the terminal and perform set-up operations, you are ready to connect the terminal to your system.

## 5.2 Connect the Console Terminal to the System

Connecting the console terminal to your system involves attaching one end of a cable to the CPU cover panel, and the other end of the cable to a communication port in the back of the terminal.

- The CPU cover panel is on the front of the system and covers backplane slots 2 and 3.
- The port on the back of the console terminal varies with the type of terminal.

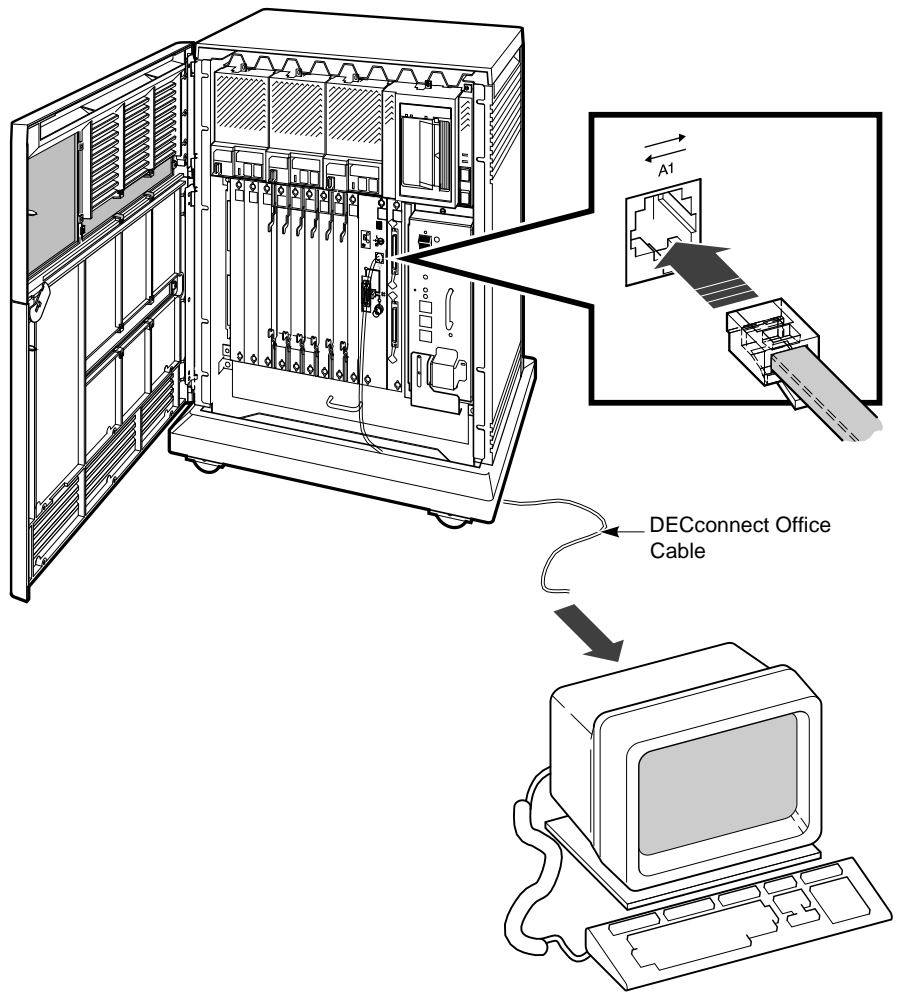
Refer to the separate illustrations and instructions that follow to connect VT300-series and VT200-series terminals.

### 5.2.1 Connecting VT300-Series Terminals

Connect the console terminal to your system as follows.

1. Turn off the console terminal.
2. Find the console terminal cable. It is labeled DECconnect Office Cable and has a DEC-423 modular plug on each end.
3. Connect the terminal cable to the DEC-423 modular jack labeled 1 on the rear of the terminal, according to the instructions in your terminal installation guide.
4. Feed the other end of the cable under the system base, from behind or from the side. Then draw up the cable and insert it in the DEC-423 modular jack, labeled A1 on the CPU cover panel, as shown in Figure 5.

**Figure 5: Connecting a VT300-Series Console Terminal**



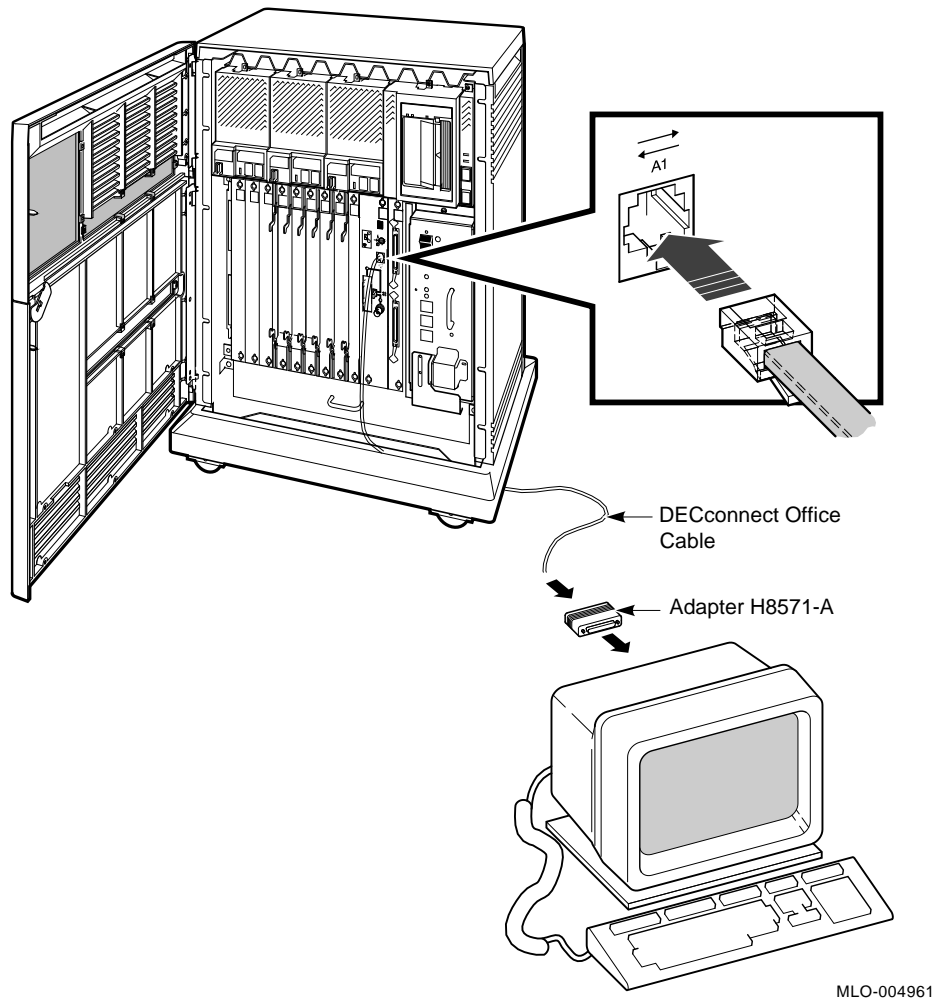
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### 5.2.2 Connecting VT200-Series Terminals

Connect the console terminal to your system as follows.

1. Turn off the console terminal.
2. Find the console terminal cable, and modular-jack to 25-pin adapter.
  - The cable is labeled DECconnect Office Cable and has a DEC-423 modular plug on each end.
  - The adapter is labeled H8571-A.
3. Insert one end of the cable in the 25-pin adapter. Then connect the adapter to the 25-pin communication port labeled COMM on the rear of the terminal, according to the instructions in your terminal installation guide.
4. Feed the other end of the cable under the system base, from behind or from the side. Then draw up the cable and insert it in the DEC-423 modular jack, labeled A1 on the CPU cover panel, as shown in Figure 6.

**Figure 6: Connecting a VT200-Series Console Terminal**



You are now ready to set the controls on your system.

## **6 Set System Controls**

The system controls are on the mass storage devices, the system control panel (SCP), the CPU cover panel, and the power supply panel. The mass storage devices include Integrated Storage Elements (ISEs) and the tape drives.

### **6.1 Setting Controls on the System Power Supply**

Check the setting of the power switch on the system power supply shown in Figure 7.

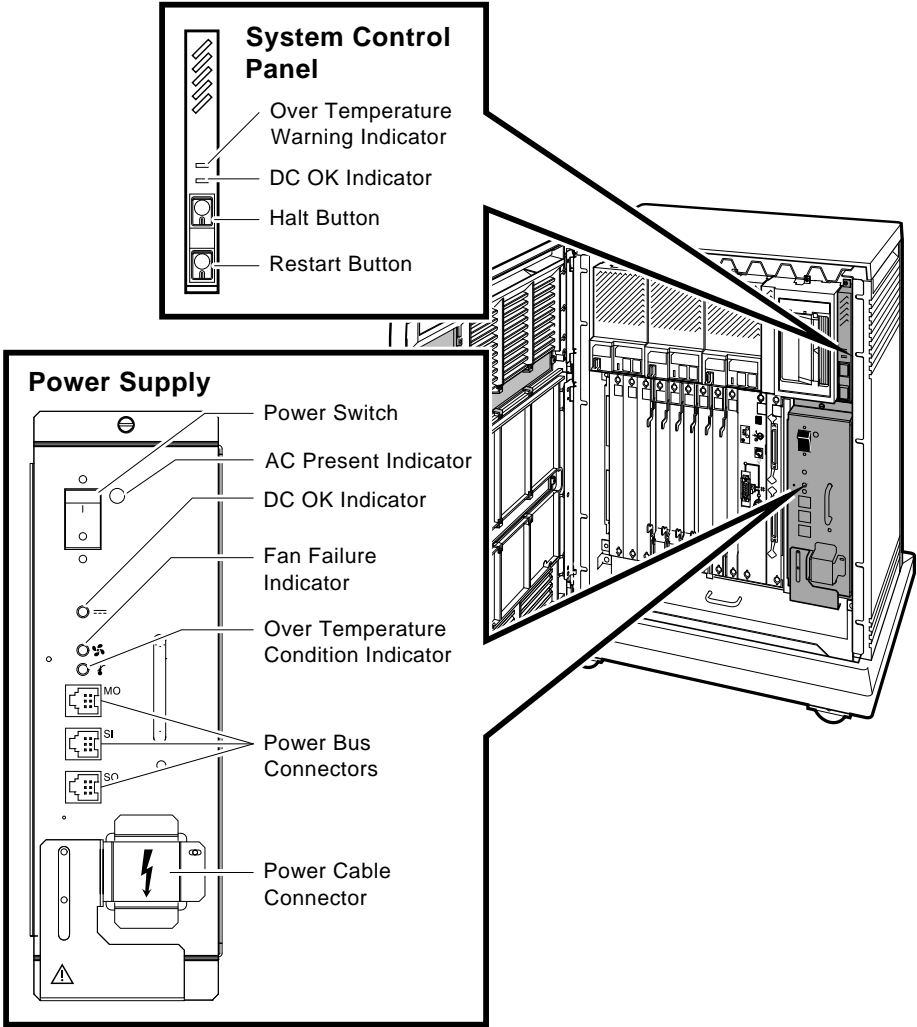
The power switch is near the top. It should be off (set at 0).

### **6.2 Setting Controls on the System Control Panel (SCP)**

Check the setting of the Halt button on the SCP shown in Figure 7.

The Halt button is to the right of the mass storage devices. That button should be set to the out position.

**Figure 7: System Controls and Indicators—Power Supply and System Control Panel**



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### 6.3 Setting Controls on the RF-Series Integrated Storage Elements (ISEs)

Check the settings on each RF-series ISE. One such ISE is shown in Figure 8.

- Write-Protect button.

The Write-Protect button is on the right side of each front panel. Make sure that button is in the out (write-enabled, button not lit) position.

- Run/Ready button.

The Run/Ready button is to the left of the Write-Protect button. Make sure that button is in the in (on-line, button lit) position.

RZ-series ISEs do not have Write-Protect and Run/Ready buttons.

### 6.4 Setting Controls on the CPU Cover Panel

Check the settings on the CPU cover panel shown in Figure 8. That panel covers backplane slots 2 and 3.

- Operation switch.

That three-position rotary switch determines how your system powers up. The factory setting is Normal mode, indicated by an arrow. Set the switch to the Action mode (the uppermost position, indicated by a human profile) before you turn on your system the first time.

**NOTE:** *If the system self-tests (step 10) complete successfully, set the switch back to Normal.*

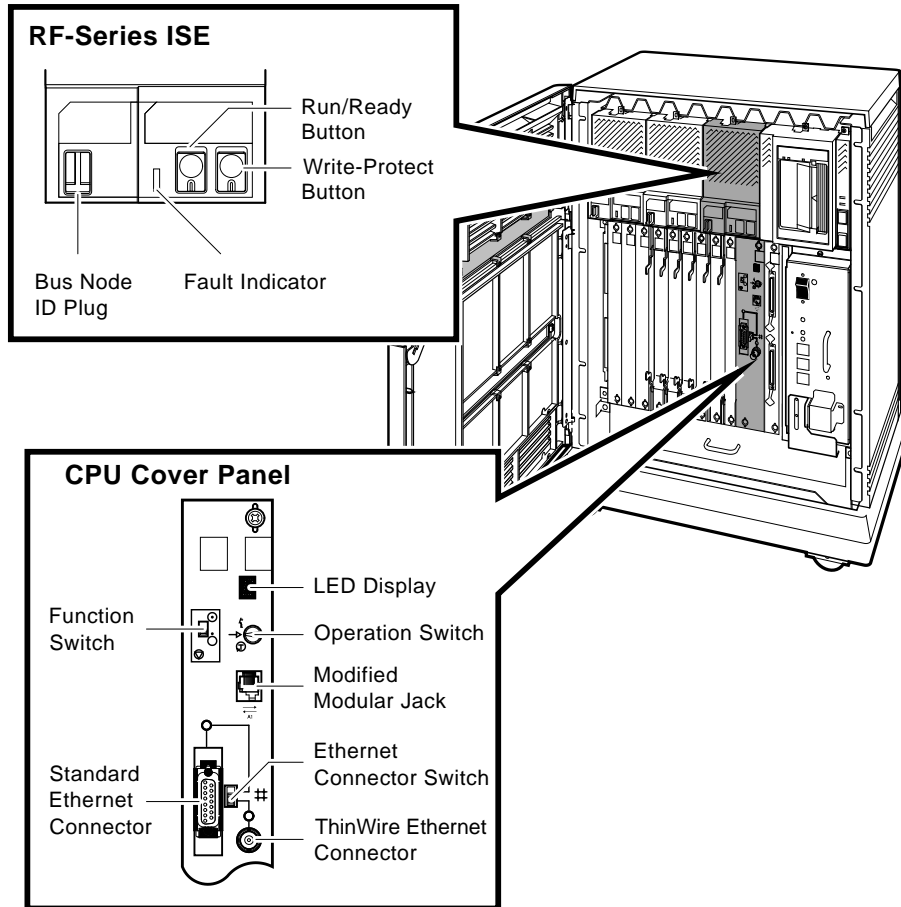
- Baud Rate switch.

The Baud Rate switch is a rotary (dial) switch on the inside of the CPU cover panel near the top. The factory setting is position 5 (9600). The system and the console terminal must be set to the same baud rate to communicate.

- Function switch.

The factory setting is break disabled (down), indicated by a dot outside a circle. Leave the switch set to disable while you start the system for the first time and run diagnostic firmware to test the system. Then set the switch to enable (up), indicated by a dot inside a circle. With break enabled (and the Operation switch set to Normal), the system enters Normal mode when powered up, as indicated by the console prompt (>>).

**Figure 8: System Controls and Indicators—RF-Series ISE and CPU Cover Panel**



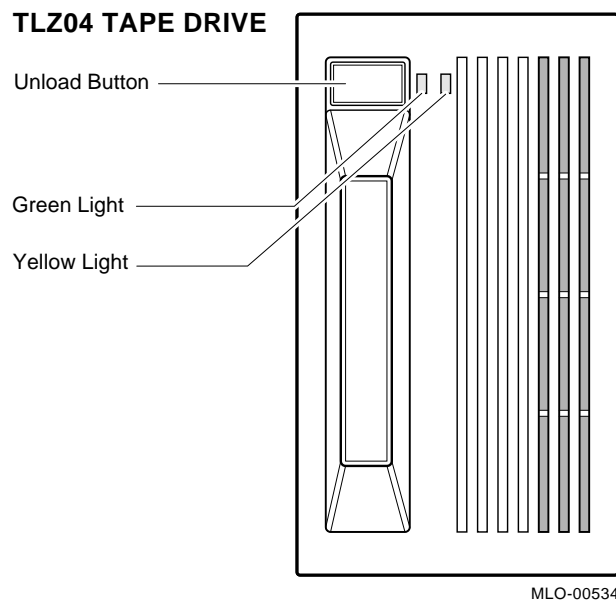
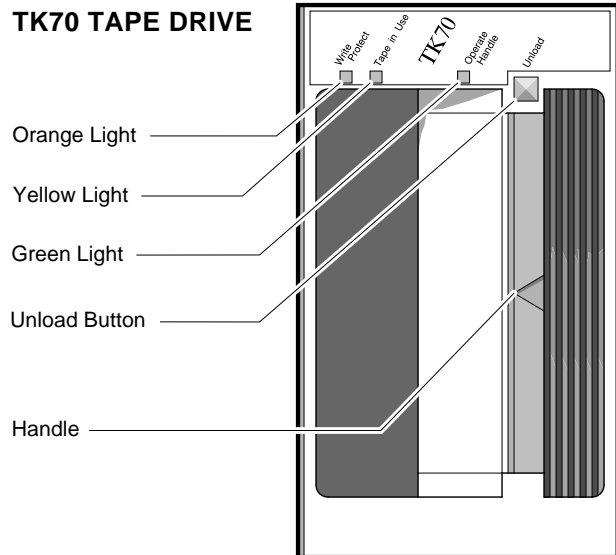
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## 6.5 Setting Controls on the Tape Drive

If a TK70 tape drive is installed, make sure the cartridge insert/release handle, shown in Figure 9, is closed (pushed in).

You do not have to set controls on the TLZ04 tape drive for system installation.

**Figure 9: System Controls and Indicators—Tape Drives**



You are now ready to connect additional devices to the system.

## 7 Connect Additional Devices to the System

You can connect additional devices at this time, or you can complete the installation and load system software before connecting additional devices.

- If you have devices that must be installed before you install software, install them now.
- Otherwise, skip to Section 8 if you prefer to connect additional devices later.

Use the following instructions when you are ready to connect the devices.

**CAUTION:** *To prevent equipment damage, make sure the power switch on the system power supply is set to off (0).*

Make all connections directly to the appropriate module cover.

- Begin with the module at the far right.
- As you complete connections for each module, move left to the next module.

The following numbered sections explain how to connect each type of device.

To help you make the proper connections, each module cover has an identifying label at the top. That label contains the option number and module number. Table 1 lists the identifying labels for all modules you may see on your system. Use the table to identify the modules as you connect additional devices to your system. Not all modules require additional connections.

**Table 1: Module Identification Labels**

Module Number	Option Number	Description
M7637	KN220-AA	System CPU module
M7638	KN220-AA	System I/O module
M7639-AA	MS220-AA	System memory, 32 megabytes
M3127-PA	DESQLA	Ethernet adapter
M3118-YA	CXA16	16-line asynchronous serial interface (RS-423-A, no modem support)
M3118-YB	CXB16	16-line asynchronous serial interface (RS-422, noise immune)
M3119-YA	CXY08	8-line asynchronous serial interface (full modem support)
M7957	DSV11	2-line synchronous serial interface (full modem support)
M7164, M7165	KDA50	Intelligent board controller (RA-series disks)
M7559-PA	TQK70	TK70 tape drive controller
M7546-PA	TQK50	TK50 tape drive controller
M7206-PA	TSV05	TS05 tape drive controller (old)
M7530	TSV05	TS05 tape drive controller (new)
M7740-PA	KLESI	RV20 optical disk or TU81E tape controller
M7552-PA	KRQ50	RRD40 CDROM tabletop controller
M7769	KFQSA	DSSI mass-storage (RF-series ISE) adapter
M5976-SA	KZQSA	Q-bus Small Computer System Interface (SCSI) controller
M8086-SA	LPV11	Dual parallel printer interface

**CAUTION:** *Do not operate the system without Digital module covers. They are required to protect the equipment and to meet international regulatory standards. Do not substitute other covers as they may not meet the required specifications.*

Operating the system without the module covers has the following consequences.

- The system may overheat due to inadequate air circulation.
- The system will not comply with FCC and VDE requirements for electrostatic shielding and may produce electrical interference that affects other equipment.
- The system is susceptible to electrical interference or damage from external sources.

## 7.1 Connect Terminals and Serial Printers

You can connect up to 16 terminals and/or serial printers for each CXA16 or CXB16 module installed in the system. If your site was prepared properly, the lines for the additional terminals and printers are clearly labeled and terminate near the system.

- You do not connect the terminals and printers directly to the system, but to a cable concentrator (H3104) which has connections for up to eight terminals and printers.
- You then connect the cable concentrator to the system with a BC16D cable.

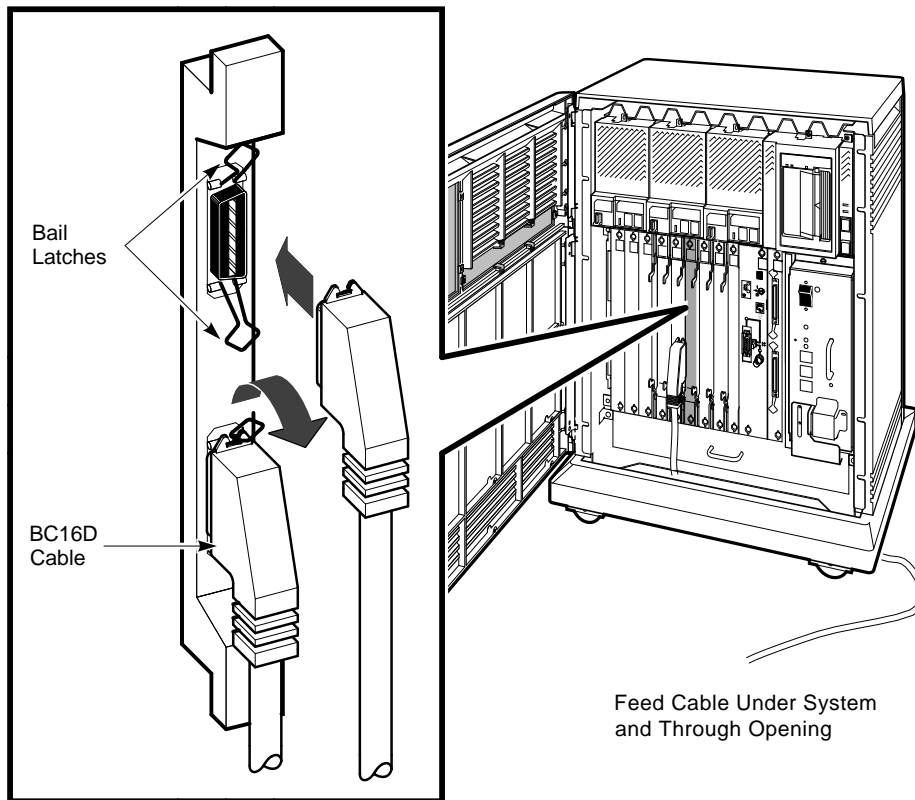
Two H3104 cable concentrators and two BC16D cables for each CXA16 module are shipped with the system.

Connect the additional terminals and printers as follows.

1. Find the H3104 cable concentrator and BC16D cable.
2. Feed one end of the BC16D cable under the system from the back or side and insert it in the connector.
  - If you are connecting both BC16D cables, connect the first to the connector labeled 8–15 on the CXA16 module cover.
  - If you are connecting only one BC16D cable, connect that cable to the connector labeled 0–7.

Lock the connector in place by using the bail latches shown in Figure 10.

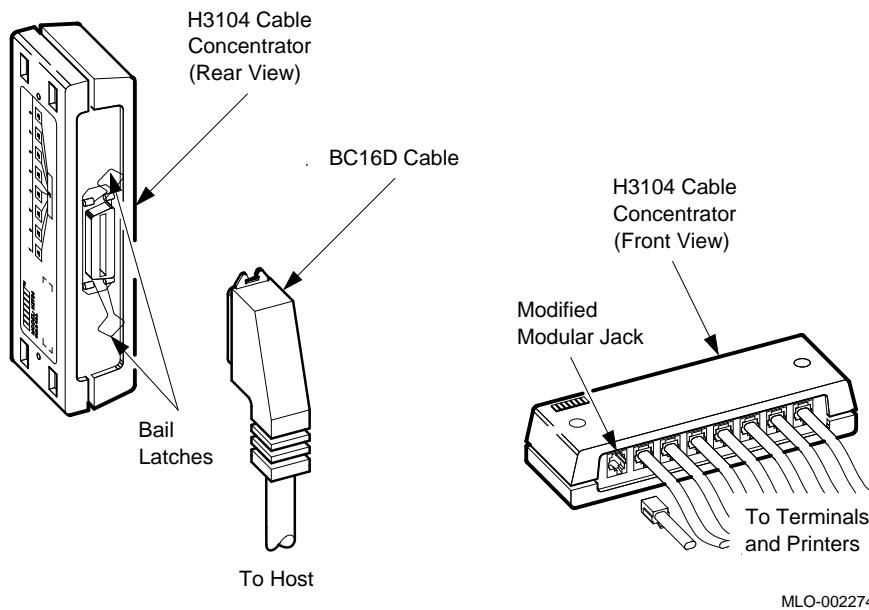
**Figure 10: Connecting Devices to the CXA16 Module**



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3. Insert the other end of the BC16D cable in the cable concentrator shown in Figure 11. Lock the connector in place by using the bail latches.

**Figure 11: Connecting Devices to the Cable Concentrator**

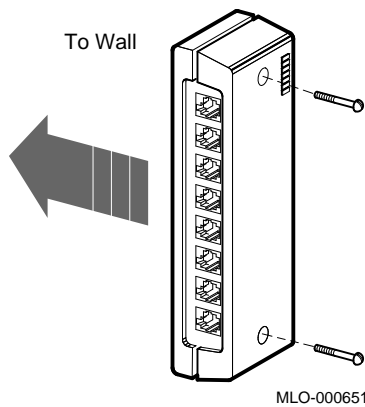


4. Connect each printer and terminal cable to one of the modified modular jacks on the cable concentrator as shown in Figure 11.
5. If you have not done so, connect the remote terminal or printer to the other end of the cable. Your terminal or printer documentation shows how to connect the cable. If the printer or terminal does not have a modified modular jack connection, use a passive adapter (H8571-A), available in 25-pin and 9-pin models.

Follow the same procedure for connecting a second BC16D cable to the CXA16 module, except insert the cable in the connector labeled 0-7.

You can mount the cable concentrator on a wall. Wall mounting keeps cables off the floor. Use two screws as shown in Figure 12.

**Figure 12: Mounting the Cable Concentrator**



**NOTE:** Be sure you mount the cable concentrator less than 7.6 meters (25 feet) from the system, to ensure the BC16D cable reaches the system.

## 7.2 Connect Parallel Printers to the System

You can connect up to two parallel printers for each LPV11 module installed in your system.

Connect parallel printers to the LPV11 module as follows.

1. Find the BC27L-30 cable(s).
2. Feed one end of the first BC27L cable under the system from the back or side. Then insert it in the connector labeled J1 on the LPV11 module cover. Lock the connector in place by using the bail latches.
3. Insert the other end of the BC27L cable in the printer.

Follow the same procedure for connecting a second printer to the LPV11 module, except insert the cable in the connector labeled J2 on the LPV11 module cover.

### 7.3 Connect Synchronous Modems to the System

You can connect up to two synchronous modems for each DSV11 module installed in your system.

Connect a synchronous modem to a DSV11 module using the protocol adapter and extension cables as follows.

1. Feed the socket end of the 0.6-meter (24-inch) adapter cable (BC19–B/D/E/F) under the system from the back or side and connect it to the DSV11 module. Tighten the two screws on the cable connector using the screwdriver shipped with your system.
2. Connect the extension cable (BC55D, BC22F or BC19L) to the other end of the adapter cable. Secure the cables by tightening the two screws at the connection.
3. Connect the other end of the extension cable to the modem. Refer to your modem documentation for the location of the connector and for instructions on using the modem.

### 7.4 Connect Asynchronous Modems to the System

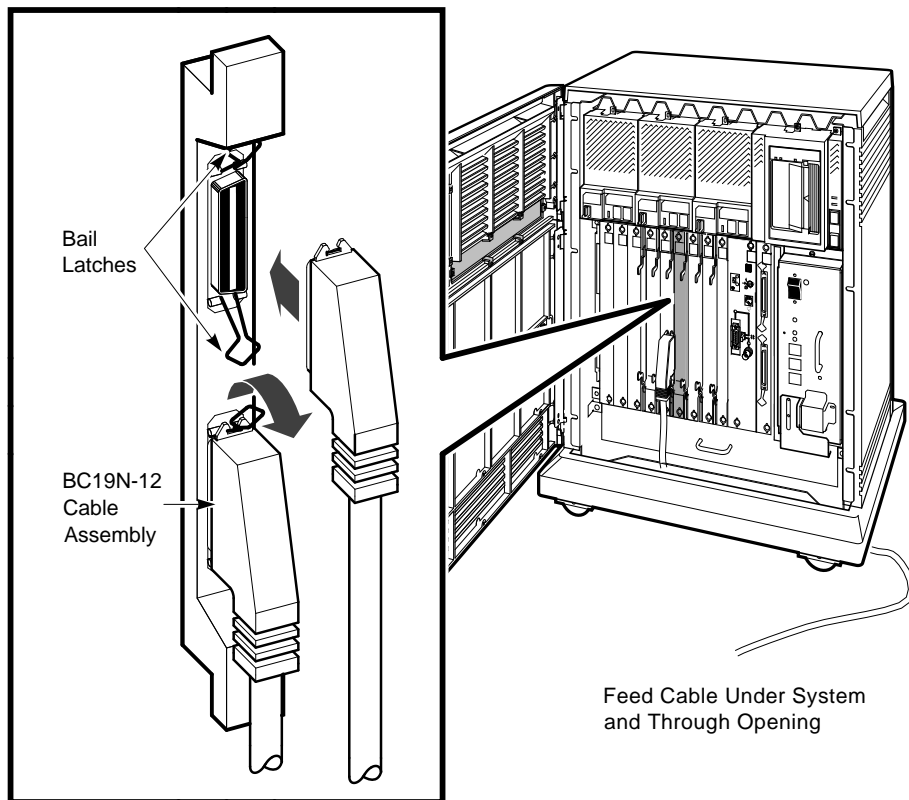
You connect asynchronous modem lines to the CXY08 module which supports up to eight lines.

To connect a modem to a CXY08 module:

1. Find the BC19N–12 cable.
2. Feed one end of the cable under the system and insert it in the connector as shown in Figure 13.
  - If you are connecting both BC19N–12 cables, connect the first to the connector labeled 4–7 on the CXY08 module cover.
  - If you are connecting only one cable, connect the cable to the connector labeled 0–3.

Lock the connector in place with the bail latches.

**Figure 13: Connecting a Modem to a CXY08 Module**



MLO-004964

3. Attach a modem to one of the four connectors at the opposite end of the cable. If you want to place the modem farther away from the system, attach a BC22F modem cable between the cable assembly and the modem. Refer to your modem documentation for the location of the connector and for instructions on using the modem.

Repeat the same procedure for connecting a second BC19N cable, except insert the cable in the connector labeled 0-3.

## 7.5 Connect to an Ethernet Network at the CPU Cover Panel

The system CPU module contains an Ethernet controller. By way of the CPU cover panel, you can connect the system to a network using standard or ThinWire Ethernet cabling.

The Ethernet Connector switch on the CPU cover panel activates a standard or ThinWire connector.

- To select standard Ethernet, slide the switch up.
- To select ThinWire Ethernet, slide the switch down.

The indicator next to the selected connector should be lit when the system is powered up, indicating an active connection.

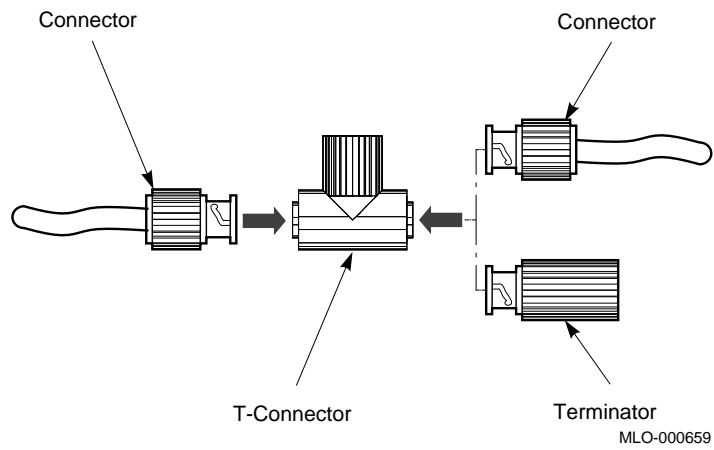
**CAUTION:** *To avoid disrupting the network, turn off the system before you select a connector.*

### 7.5.1 ThinWire Network Connection at the CPU Cover Panel

Make a ThinWire network connection at the CPU cover panel as follows.

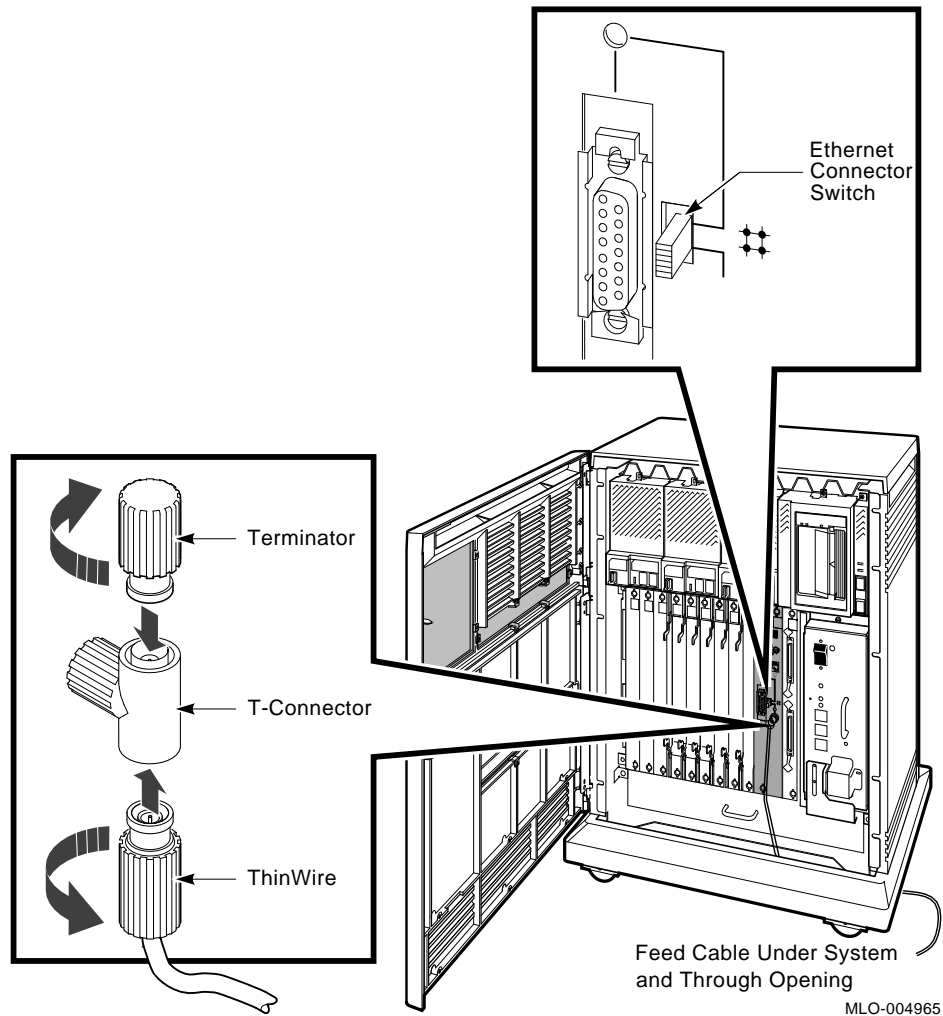
1. Find the T-connector, terminators, and cable clamp shown in Figure 1.  
Figure 14 shows how the T-connector, terminators, and ThinWire cable connectors fit together.

**Figure 14: ThinWire Cable, T-Connector, and Terminator**



2. Plug the T-connector into the ThinWire connector on the CPU cover panel. Turn the T-connector clockwise until it locks in place.
3. Connect the ThinWire Ethernet cable to the T-connector as shown in Figure 15.

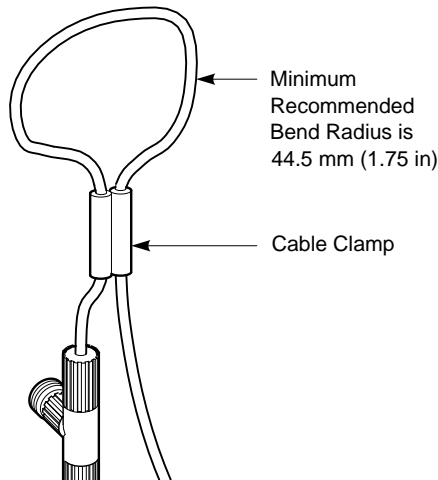
**Figure 15: Making a ThinWire Ethernet Connection at the CPU Cover Panel**



- If your system requires one connection to the network, connect the ThinWire cable to the lower end of the T-connector and connect a terminator to the other end of the T-connector. Push in and turn the connector or terminator clockwise until it locks in place.

- If your system is a link in a network and connects to two additional components, connect one ThinWire cable to one end of the T-connector and connect a second ThinWire cable to the other end. Push in and turn the connectors clockwise until they lock in place.
4. Use the cable clamp to form the upper cable in a loop approximately 10 centimeters (4 inches) in diameter as shown in Figure 16.

**Figure 16: Forming the Upper Cable in a Loop at the CPU Cover Panel**



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5. The ThinWire cable can be connected to one of the following devices.
  - A ThinWire Ethernet Multiport Repeater (DEMPR) connected to a baseband Ethernet cable, which can connect up to eight ThinWire segments in a local area network
  - A ThinWire Ethernet Singleport Repeater (DESPR) connected to a baseband Ethernet cable, which can connect to one ThinWire segment
  - A ThinWire Ethernet adapter in another DECsystem 5500 system

Digital network publications explain the types of network configurations possible.

**NOTE:** *Contact your network manager or Digital service representative if you have questions about network configurations.*

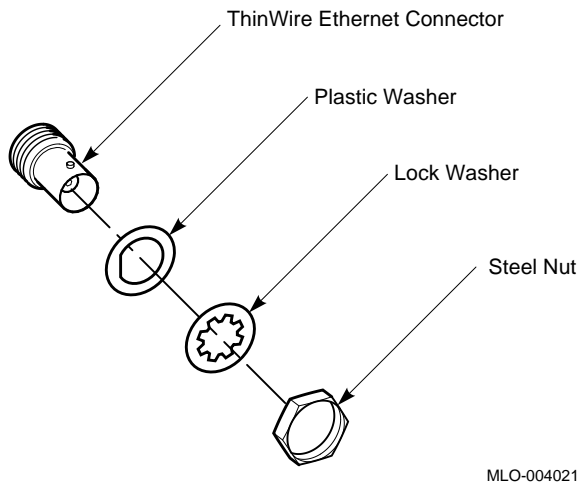
When the ThinWire cable is connected to a DEMPR or DESPR, the ground is provided by the DEMPR or DESPR chassis. If you are using a single-segment ThinWire Ethernet local area network (LAN) with no DEMPR or DESPR, you may need to ground the ThinWire connector on the CPU cover panel.

**CAUTION:** *Each ThinWire Ethernet segment must have only one grounding point.*

To ground a single-segment ThinWire network at the CPU cover panel:

1. Remove the steel nut, lock washer, and plastic washer from the ThinWire Ethernet connector on the CPU cover panel as shown in Figure 17.

**Figure 17: Grounding the ThinWire Ethernet at the CPU Cover Panel**



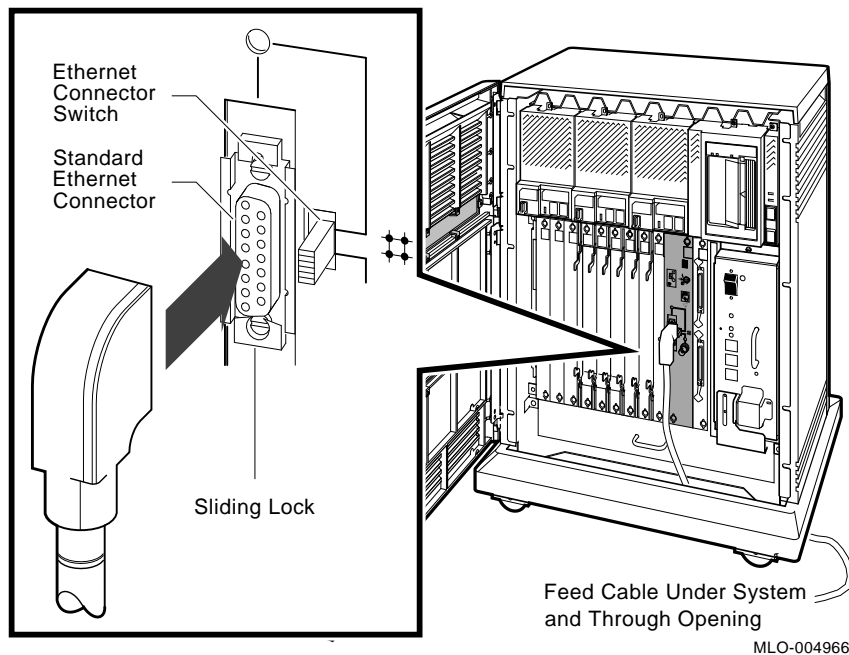
2. Discard the plastic washer.
3. Replace and tighten the lock washer and the steel nut.

### 7.5.2 Standard Network Connection at the CPU Cover Panel

Make a standard network connection at the CPU cover panel as follows.

1. Find the Ethernet transceiver cable. It has a plug at one end and a socket at the other end.
2. Make sure the lock on the standard Ethernet connector on the CPU cover panel is in the up position. Then feed the plug end of the cable under the system and insert it in the connector. Slide down the lock to secure the connection. Figure 18 shows a standard Ethernet connection.

**Figure 18: Making a Standard Ethernet Connection at the CPU Cover Panel**



3. Connect the other end of the cable to one of the following devices.
  - An H4000 or H4005 transceiver located on a traditional baseband Ethernet cable

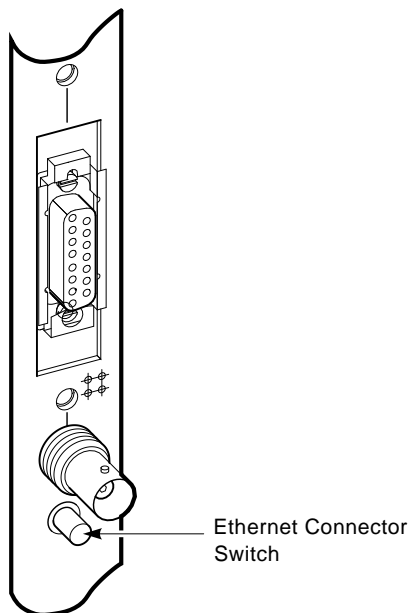
- A DELNI interconnect connected to a baseband Ethernet cable, which connects up to eight systems in a local area network
- A DESTA adapter, which connects the Ethernet transceiver cable to ThinWire Ethernet cabling

Digital network publications explain the types of network configurations possible.

## 7.6 Connect to an Ethernet Network at the DESQA Module

Your system may have a second Ethernet controller, the DESQA module, with an Ethernet Connector switch that lets you accommodate ThinWire or standard Ethernet cabling. Figure 19 shows the location of the Ethernet Connector switch.

**Figure 19: DESQA ThinWire/Standard Ethernet Connector Switch**



MLO-004023

You can use the Ethernet Connector switch to select a ThinWire or a standard Ethernet connector.

- When the switch is set to the out position, the ThinWire connector is selected.
- When the switch is set to the in position, the standard connector is selected.

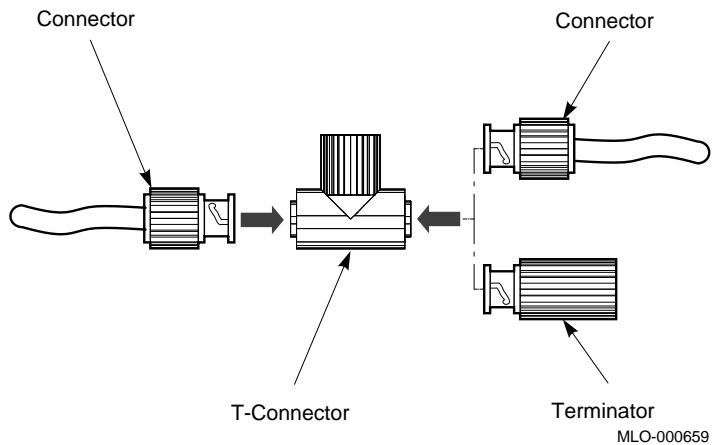
An indicator next to the connector lights when the system is powered up to indicate which connector is selected.

**CAUTION:** *Turn off your system before you select a connector to avoid disrupting the network.*

### 7.6.1 ThinWire Network Connection at the DESQA Module

A T-connector and two terminators are on the DESQA module. Figure 20 shows how the ThinWire cable connectors, T-connector, and terminator fit together.

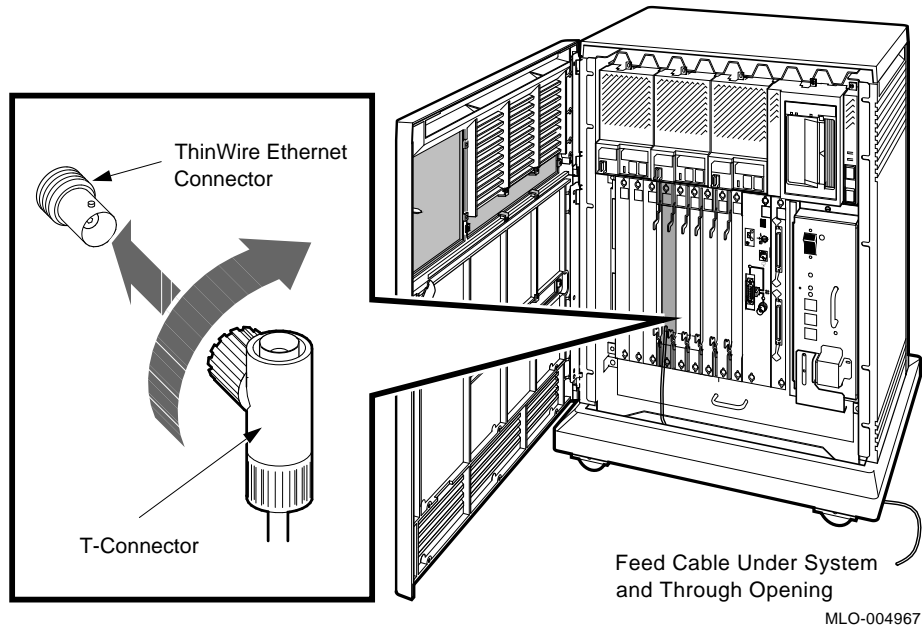
**Figure 20: ThinWire Cable, T-Connector, and Terminator**



Make a ThinWire network connection at the DESQA module as follows.

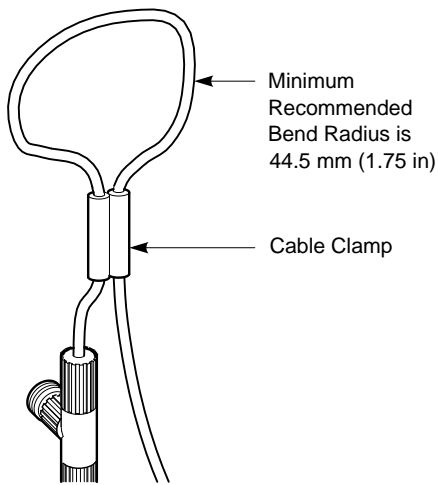
1. Remove the T-connector from the module. Push in and turn it counterclockwise until it unlocks.
2. Remove the terminators from the T-connector. Push in and turn them counterclockwise until they unlock.
3. Connect the ThinWire Ethernet cable to the T-connector as shown in Figure 21.

**Figure 21: Making a ThinWire Ethernet Connection at the DESQA Module**



- If your system requires one connection to the network, connect the ThinWire cable to the lower end of the T-connector and connect a terminator to the other end of the T-connector. Push in and turn the connector or terminator clockwise until it locks in place.
  - If your system is a link in a network and connects to two additional components, connect one ThinWire cable to one end of the T-connector and connect a second ThinWire cable to the other end. Push in and turn the connectors clockwise until they lock in place.
4. Insert the T-connector in the ThinWire connector on the DESQA module as shown in Figure 21. Push in and turn the T-connector clockwise until it locks in place.
  5. Use the cable clamp shown in Figure 1 to form the upper cable in a loop approximately 10 centimeters (4 inches) in diameter as shown in Figure 22.

**Figure 22: Forming the Upper Cable in a Loop at the DESQA Module**



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6. The ThinWire cable can be connected to one of the following devices.
- A ThinWire Ethernet Multiport Repeater (DEMPR) connected to a baseband Ethernet cable, which can connect up to eight ThinWire segments in a local area network
  - A ThinWire Ethernet Singleport Repeater (DESPR) connected to a baseband Ethernet cable, which can connect to one ThinWire segment
  - A ThinWire Ethernet adapter in another DECsystem 5500 system

Digital network publications explain the types of configurations possible.

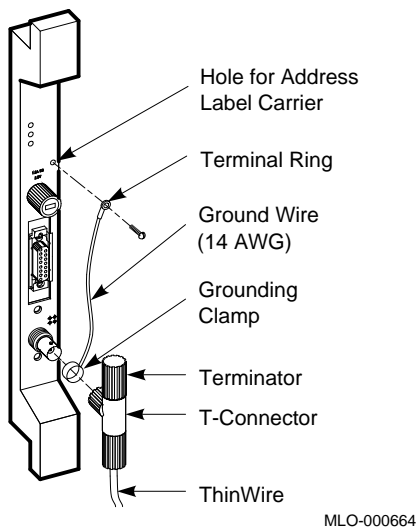
**NOTE:** *Contact your network manager or Digital service representative if you have questions about network configurations.*

When the ThinWire cable is connected to a DEMPR or DESPR, the ground is provided by the DEMPR or DESPR chassis. If you are using a single-segment ThinWire Ethernet local area network with no DEMPR or DESPR, you may need to ground the ThinWire connector on the DESQA module.

**CAUTION:** *Each ThinWire Ethernet segment must have only one grounding point.*

To ground a single-segment ThinWire network on the DESQA module, connect a grounding clamp (90-08927-00) and an unshrouded T-connector (12-25534-01) as shown in Figure 23. Contact your Digital sales representative concerning those parts.

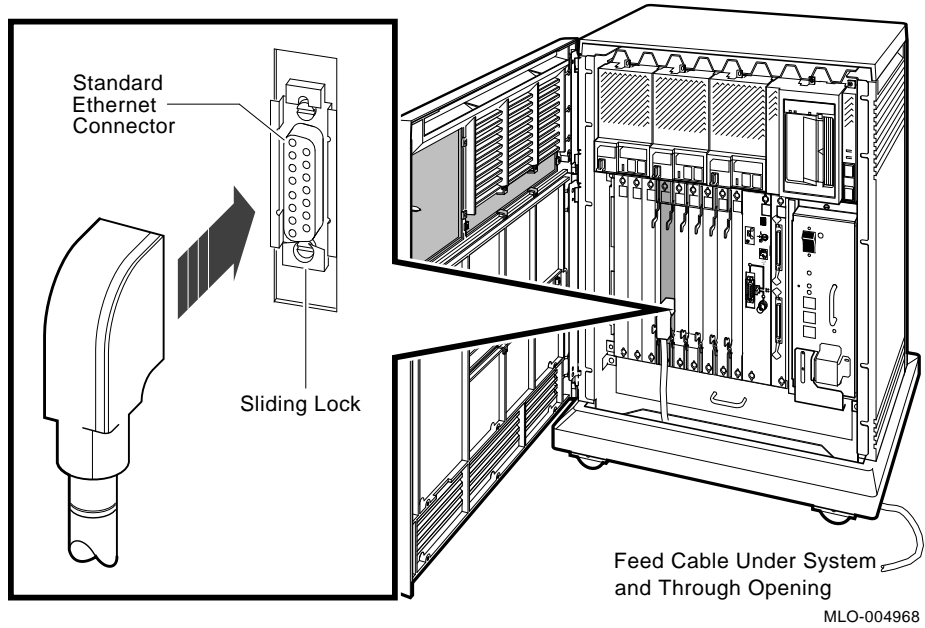
**Figure 23: Grounding the ThinWire Ethernet at the DESQA Module**



### 7.6.2 Standard Network Connection at the DESQA Module

Figure 24 shows a standard Ethernet network connection.

**Figure 24: Making a Standard Ethernet Connection at the DESQA Module**



Make a standard network connection at the DESQA module as follows.

1. Find the Ethernet transceiver cable. It has a plug at one end and a socket at the other end.
2. Make sure the sliding lock on the standard Ethernet connector on the DESQA module is in the up position.
3. Feed the plug end of the cable under the system and insert it in the connector. Slide down the lock to secure the connection.
4. Connect the other end of the cable to one of the following devices.
  - An H4000 transceiver located on a traditional baseband Ethernet cable
  - A DELNI interconnect connected to a baseband Ethernet cable, which connects up to eight systems in a local area network

Digital network publications explain the types of network configurations possible.

## 8 Make the System-Expander Connections, if Required

If you are not installing an expander with your system, skip to step 9.

If you are installing an expander with your system:

1. Install the expander as described in the document (addendum or manual) shipped with the expander.
2. Return to this manual to connect the expander cable(s) to one or more of the system connections shown in Figure 25. Make the following connections as applicable:

- Connect the two (crossed) Q-bus cables to the two Q-bus Out connectors.

The Q-bus connectors should be in the left-most backplane slot.

- Connect the DSSI cable to the DSSI Out connector, after removing the DSSI terminator.

The DSSI Out connector is the lower connector on the left side of the card cage.

- Connect the SCSI cable to the lower SCSI In/Out connector.

The lower SCSI In/Out connector is near the right side of the card cage (next to the power supply). Make sure a SCSI terminator or another SCSI cable is connected to the upper SCSI In/Out connector.

**NOTE:** *The SCSI In connector on the left side of the card cage and the upper SCSI In/Out connector on the right side of the card cage are used for connecting SCSI devices that are installed in the system. If SCSI devices are installed in your system, a cable should be connecting those two connectors.*

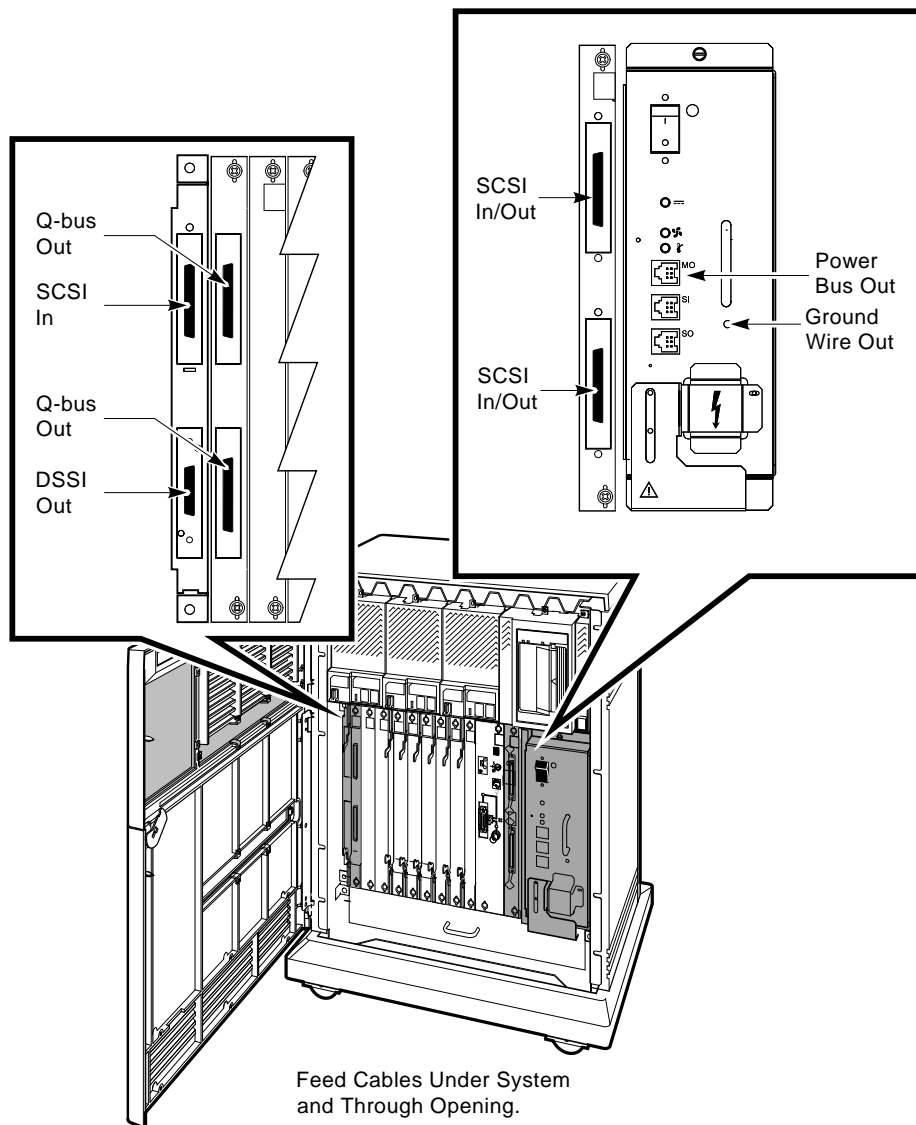
- Connect the Power Control Bus cable to the Power Bus Out (MO) connector.

The Power Bus Out connector is on the power supply. It is the top-most of three connectors stacked below the power (1/0) switch.

- Connect the ground cable to the Ground Wire Out bolt.

The Ground Wire Out bolt is on the power supply. It is to the right of the three power bus connectors.

**Figure 25: System Connections for Expanders**



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3. Complete the installation of the expander as described in the expander document.
4. Complete the installation of your system by completing the steps remaining in this manual.

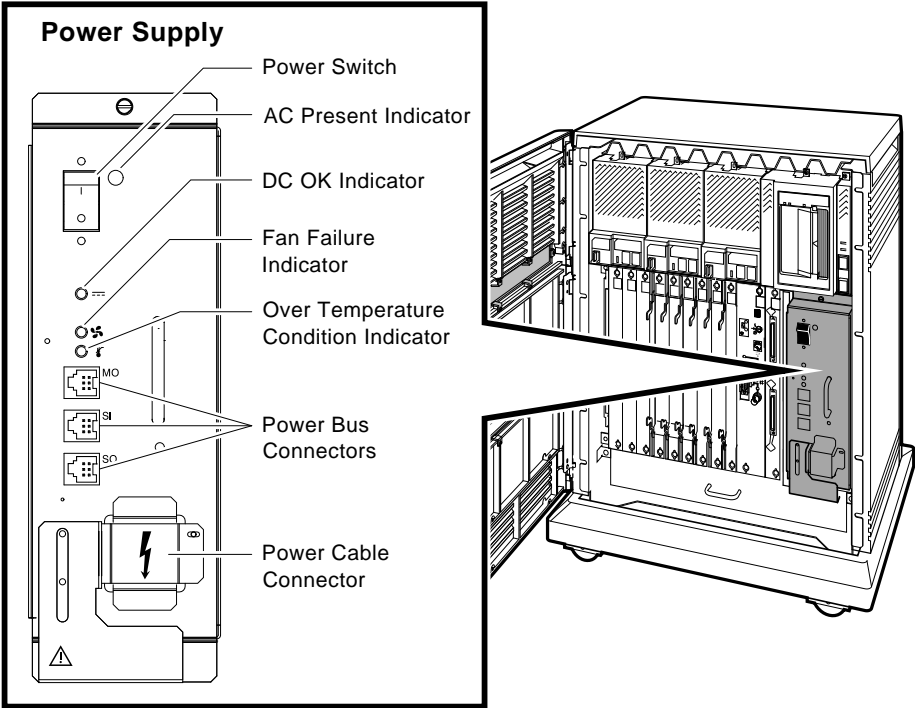
## 9 Connect the System Power Cable

**NOTE:** *This system contains an automatic voltage-selection power supply. Voltage selection is not required prior to installation.*

Connect the power cable to the system as follows.

1. Make sure the system power (I/O) switch, shown in Figure 26, is set to off (0), and make sure all devices connected to the system are turned off.

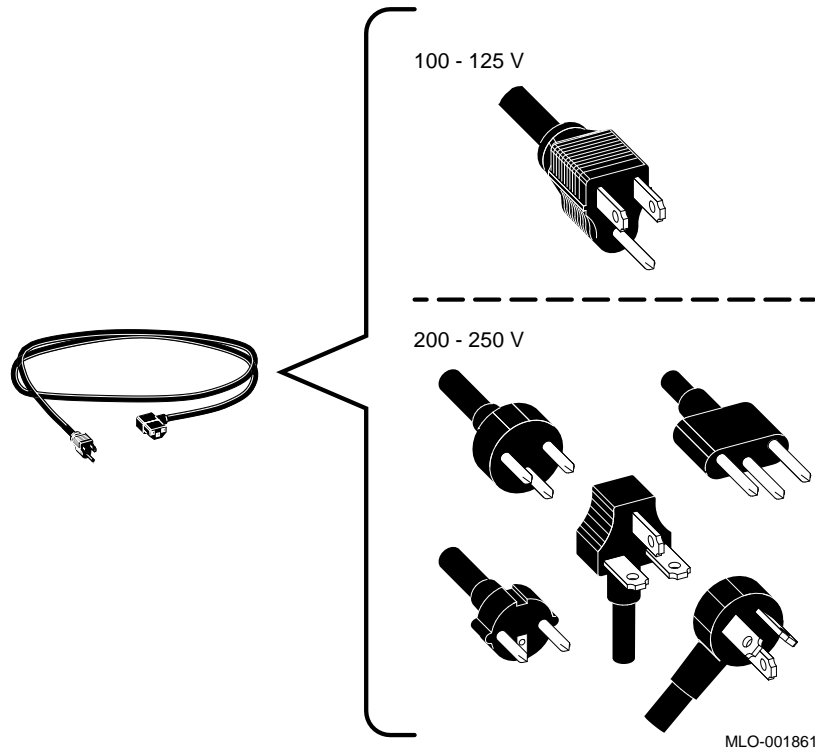
**Figure 26: Power Supply Panel**



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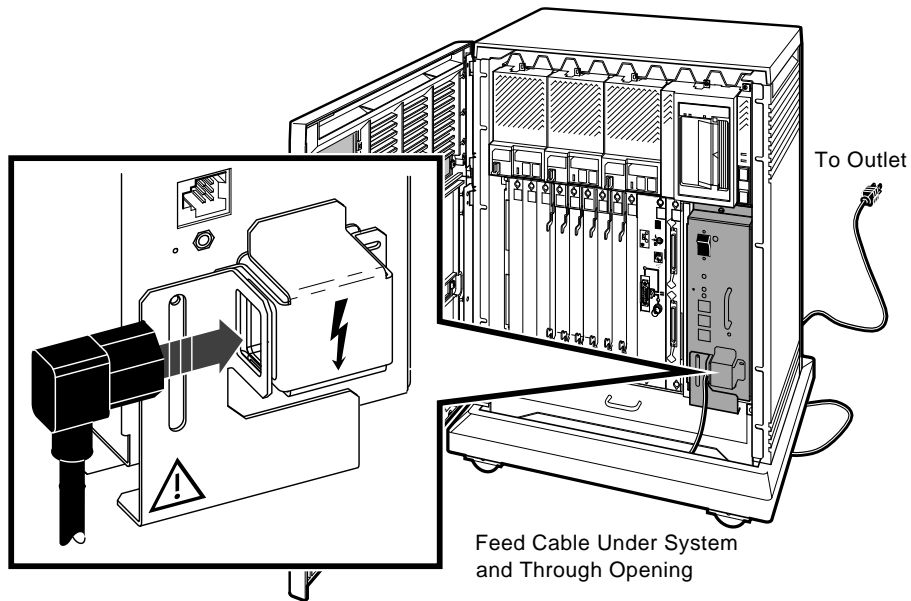
2. Find the system power cable.
3. Make sure the plug end of the power cable matches your wall outlet.  
Several types of plugs are shown in Figure 27.

**Figure 27: Power Cables**



4. Feed the opposite end of the cable under the system from the rear or left and attach it to the power supply as shown in Figure 28.

**Figure 28: Attaching the Power Cable to the System**



MLO-004970

5. Insert the plug end of the power cable in your wall outlet.

You are now ready to turn on the system and select a language.

## 10 Turn On the System and Select a Language

The language you select controls only the language of the system messages in the console program which is a part of the firmware in the CPU. That firmware lets you give commands to the system and also generates error messages. CPU firmware is described in your *Technical Information* manual which is included in the Customer Hardware Information Kit.

Turn on your system and select a language as follows.

1. Turn on the console terminal and wait until it performs its self-tests successfully.
2. If a B400X or R400X expander is connected to your system, turn on the expander.

The AC indicator on the expander power supply should glow orange.

3. Turn on the system by setting the power switch to on (1).

The AC Present indicator, next to that switch, should glow orange.

**NOTE:** *If your system uses a B400X or R400X expander linked by a Power Control Bus cable, the system power switch sends a power control signal to the expander. Setting the power switch to on (1) causes the expander to turn on as well.*

Within a few moments, a Language Selection Menu should appear on the console terminal as shown in Figure 29.

**Figure 29: Language Selection Menu**

KN220-A Vn.n

```
1) Dansk
2) Deutsch (Deutschland/Osterreich)
3) Deutsch (Schweiz)
4) English (United Kingdom)
5) English (United States/Canada)
6) Español
7) Français (Canada)
8) Français (France/Belgique)
9) Français (Suisse)
10) Italiano
11) Nederlands
12) Norsk
13) Português
14) Suomi
15) Svenska
(1..15):
```

4. Select a language by typing the number corresponding to your choice and pressing `Return`.

**NOTE:** *If you do not select a language within 30 seconds, the system defaults to English (United States/Canada). If you have an older terminal that does not support multiple languages, the Language Selection Menu does not appear and the system defaults to English.*

After you select a language, the system runs its power-up self-tests. Within a few moments the console terminal should display a series of numbers as the system tests itself. The example in Figure 30 shows that display after successful power-up tests.

**Figure 30: Successful Power-Up Tests**

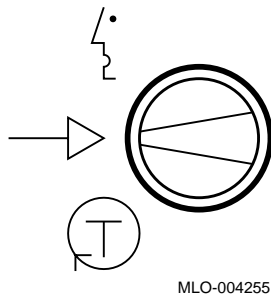
```
KN220-A Vn.n
Performing normal system tests.
83..82..81..80..79..78..77..76..75..74..73..72..71..70..69..68..67..
66..65..

?79 1 0A FF 0000 0000
64..63..62..61..60..59..58..57..56..55..54..53..52..51..50..
49..48..47..46..45..44..43..42..41..40..39..38..37..36..35..34..33..
32..31..30..29..28..27..26..25..24..23..22..21..20..19..18..17..16..
15..14..13..12..11..10..09..08..07..06..05..04..03..
Tests completed.
Memory Size: 67108864 (0x4000000) bytes
Ethernet Address: 08-00-2b-17-e9-60
>>
```

If the self-tests do not start or do not complete successfully, as shown in Figure 30, your system may have a problem. For instructions on finding the source of the problem, refer to your *Troubleshooting and Diagnostics* manual which is included in the Customer Hardware Information Kit.

5. If the self-tests complete successfully, turn the Operation switch to Normal, indicated by an arrow on the CPU cover panel as shown in Figure 31. That saves the language you selected.

**Figure 31: Setting the Operation Switch**

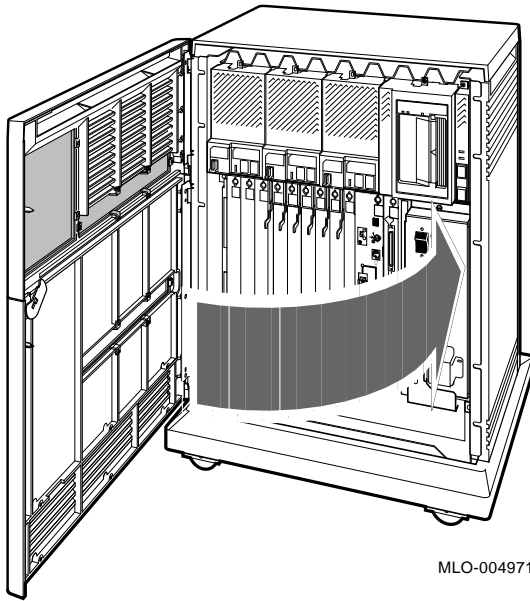


The final step of the installation is closing the system door.

## 11 Close the System Door

If you plan to run the diagnostic software immediately following the installation, leave the upper door open. If not, close the door as shown in Figure 32.

**Figure 32: Closing the Door**



1. Push gently at the top right of the upper door and the bottom right of the lower door.
2. Turn the key to the middle or top position.

## 12 After Installation

You should now read your system *Operation* manual to learn how to use the system. You must know how to operate the system controls and the tape drive before you install system software or run diagnostic software.

While optional, Digital strongly recommends that you run the diagnostic software supplied with your system before you install system software. The diagnostics:

- Verify the system configuration.
- Check to see if each device is working properly.

The diagnostic software is on a CDROM disk or on a tape cartridge labeled MV DIAG CUST TK50. Your system *Troubleshooting and Diagnostics* manual tells you how to run the diagnostic software.

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