InfoServer 150

Installation and Owner's Guide

Order Number: EK–INFSV–OM–001

This manual describes how to install, test, operate, and maintain the InfoServer 150 system.

Digital Equipment Corporation
Maynard, Massachussets

October 1991

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Preface

Document Purpose

This document describes how to install, test, operate, and maintain the InfoServer 150 system. This system is a general-purpose disk storage server that quickly and efficiently transfers data between disks connected to the server and remote network client systems.

For information on session management and software commands, see the *InfoServer System Operations Guide*.

Intended Audience

This document addresses persons responsible for installing, operating, or maintaining the InfoServer 150 system.

Document Structure

This document is organized as follows:

- Chapter 1 provides an overview of the InfoServer 150 system.
- Chapter 2 provides instructions for installing new InfoServer 150 systems.
- Chapter 3 provides information on installing and using add-on storage devices and software-loading devices such as compact disc drives.
- Chapter 4 explains how to connect your system to a ThinWire Ethernet or standard Ethernet network. The chapter also explains how to connect systems into a simple ThinWire work group.
- Chapter 5 provides troubleshooting information.

Appendixes provide information on the following topics:

- Setting SCSI ID numbers on drives for custom configurations
- System specifications

The glossary explains technical terms used in the document.

Related Documents

Consult your Digital sales representative for information on obtaining the documents listed in Table 1.

Table 1 Related Documents

Titles	Order Number
InfoServer Documentation	
InfoServer System Operations Guide	AA–PJXJA–TE
InfoServer 100 Installation and Owner's Guide	EK–DIS1K–IN
Client Documentation	
VMS LAD Control Program Manual	AA–PD1LB–TE
SCSI Device Documentation	
RRD40 Disc Drive Owner's Manual	EK–RRD40–OM
RRD42 Disc Drive Owner's Manual	EK–RRD42–OM
TK50Z User's Guide	EK–OTK50–UG
DECconnect System Documentation	
DECconnect System General Description	EK–DECSY–GD
DECconnect System Requirements Evaluation Workbook	EK–DECSY–EG
DECconnect System Installation and Verification Guide	EK–DECSY–VG
DECconnect System Standalone ThinWire Networks: Planning and Installation Guide	EK–DECSY–TG
DECconnect System Planning and Configuration Guide	EK–DECSY–CG

Conventions

The following conventions are used in this document:

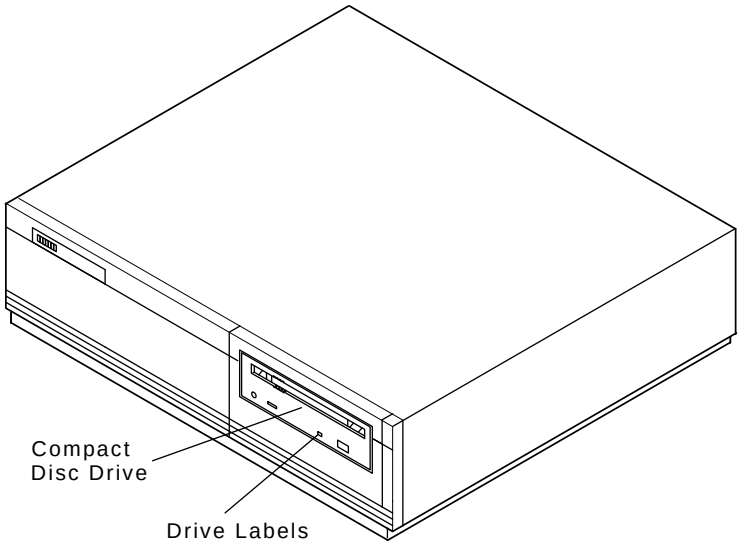
Return	A key name is shown enclosed to indicate that you press a key on the keyboard.
I O	The on/off power switch on equipment. You press I to turn power on, or O to turn power off.
red ink	Red ink indicates information that you must enter from the keyboard or a screen object that you must choose or click on. For online versions of the book, user input is shown in **bold**.
boldface text	Boldface text represents the introduction of a new term defined the glossary or a phrase that is emphasized in text. Boldface text is also used to show user input in online versions of the book.
italic text	Italic text represents information that can vary. (for example, *device*).
UPPERCASE TEXT	Uppercase letters indicate that you must enter a command (for example, enter TEST 50).
numbers	Unless otherwise noted, all numbers in the text are assumed to be decimal. Nondecimal radixes—binary, octal, or hexadecimal—are explicitly indicated.

1

InfoServer 150 System Overview

The InfoServer 150 system is a general-purpose disk storage server that quickly and efficiently transfers data between disks connected to the server and remote network **client systems**. It provides users with a low-cost data sharing capability that is flexible and easy to manage. Figure 1–1 shows the InfoServer 150 system enclosure.

Figure 1–1 InfoServer 150 System Enclosure



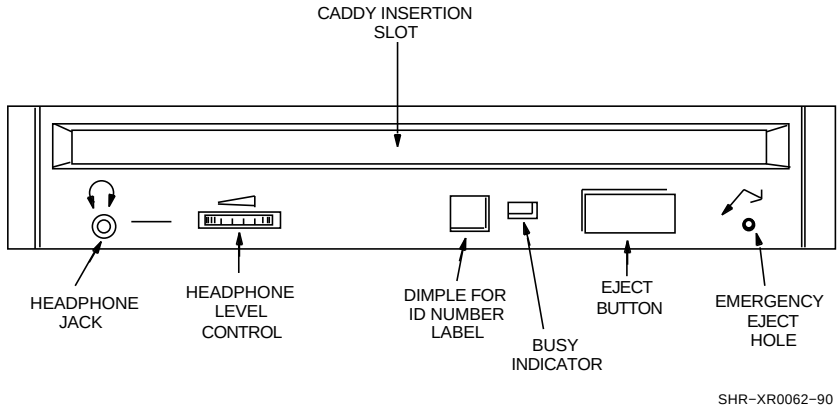
The InfoServer system can support many diverse applications. For example, VMS and other client systems can share software distribution and documentation on compact discs connected to the server. Some VAX systems can use the server to load their **bootstrap** program and then to perform a VMS operating system installation from a compact disc in the server.

1.1 System Highlights

Your InfoServer 150 system has many special features:

- **Memory**
  The system comes with 4 MB of internal random access memory (RAM).
- **ThinWire and standard Ethernet connectability**
  You can connect the InfoServer system to standard Ethernet or ThinWire Ethernet work groups and networks but not to both types at the same time.
- **RRD42 compact disc drive**
  One RRD42 compact disc drive is mounted at the front on the server. Figure 1–2 shows the drive's front panel.

Figure 1–2 Front Panel of Embedded RRD42 Drive



- **Internal hard disk drive**
  The InfoServer 150 system includes one internal disk drive. This drive stores server configuration information. The drive can also be served to client nodes as writable storage. The InfoServer 150 system configuration comes with an RZ23L drive; the InfoServer 150VXT system configuration comes with an RZ24 drive.
- **Self-sensing power supply**
  The system power supply accepts power inputs in the ranges of 100 Vac to 120 Vac and 200 Vac to 240 Vac, at 50 or 60 Hertz. A selection switch is not needed.

- **Communication ports**
  A single DEC-423 asynchronous port (with MMJ connector for VT series terminals) is provided as standard. You can use this port to connect a terminal to the server to establish a local server management session. (See Section 2.3.6 and the *InfoServer System Operations Guide* for more information). This port is preset to run at 9600 baud, so any terminal connected to this port must be set at 9600 baud.
- **SCSI connectability**
  The small computer systems interconnect (SCSI) is an industry standard for connecting mass storage devices.
- **Add-on storage devices**
  You can purchase external expansion boxes to provide added storage capability. These external boxes must be qualified by Digital in order to meet the system requirements. You can connect up to 12 external drives to the server, provided you observe SCSI bus length guidelines.

1.2 Storage Devices

The InfoServer 150 system uses the following internal storage devices:

- RZ23L hard disk (InfoServer 150 system configuration)
- RZ24 hard disk (InfoServer 150VXT system configuration)
- RRD42 compact disc drive

Figure 1–1 shows the location of the RRD42 compact disk drive in the system enclosure.

1.2.1 Internal RZ Hard Disk

The server has one internal RZ drive. After the initial system bootstrap, the server uses this drive as its primary bootstrap device. For the initial bootstrap, the server uses the software compact disc supplied with the system.

The server also uses the RZ drive to save server characteristics and network configuration information for use at subsequent server bootstraps.

1.2.2 RRD42 Compact Disc Drive

A compact disc is an optical, read-only storage media. The InfoServer 150 system comes with one RRD42 compact disc drive. The system can bootstrap from compact disc, although the internal RZ hard disk drive is the primary bootstrap device.

You can use the RRD42 drive for many purposes, such as software installation and database storage.

You can increase the number of compact disc drives on your server by using RRD42 expansion boxes. See Chapter 3 for information about these add-on devices.

1.3 Console Terminal

The InfoServer 150 system is designed to require a minimum amount of system management. You normally issue server commands by using a LAT terminal session created to the InfoServer 150 system from a terminal server. In the rare event that your server has problems communicating with client systems, you can connect a terminal to MMJ port 1 on the back of the system unit (see Section 2.3.6) and follow instructions in Chapter 5 to troubleshoot the problem. The recommended console terminal is a VT300 series terminal.

2

Installing Your System

Setting up your InfoServer 150 system is easy. This chapter provides step-by-step instructions on how to perform the following operations:

- Choose the right location for the system
- Unpack and inspect system components
- Connect system components
- Start the system
- Load and unload compact discs
- Connect the system to the network
- Turn off the system
- Bootstrap the system
- Recover from bootstrap failures

2.1 Choosing the Right Location for the System

Use the following checklist to keep your system operating at its best:

- Carefully read all installation instructions before you turn on the power.
- Keep the air well circulated to prevent excess heat and dust from accumulating.
- Keep your equipment away from heaters, photocopiers, direct sunlight, and abrasive particles.
- Before you set up your system, select a surface that is large enough to hold the system unit. Your desk or work table is a good choice.
- Keep the area clean. Do not place food or liquid on or near your equipment, and do not place your system unit directly on the floor. Dust and dirt will damage the system components.

- Keep air vents clear on each side of the system unit for proper ventilation.

  Do not place the system unit on its side. Blocking the air vents can cause the system unit to overheat.

- Connect your system to a dedicated grounded circuit.

  If you have several pieces of equipment that need to be plugged into a power outlet, use a grounded power strip. Many power strips come with an on/off switch and a surge protector.

  Do not exceed the current capacity of the circuit.

- To avoid damaging equipment that has been moved inside from a cold environment, let the equipment warm to room temperature before you turn it on.

2.2 Unpacking and Inspecting System Components

The InfoServer 150 system is shipped in two boxes, one for hardware and one for software. The larger box contains the InfoServer 150 hardware with accessories and documentation. The smaller box, packed inside the larger box, contains the software compact discs with licenses and instructions.

Figure 2–1 shows the components shipped for the InfoServer system. Check the contents of the cartons against the shipping list provided. Expansion devices are packed in separate cartons (Section 3.3), Chapter 3).

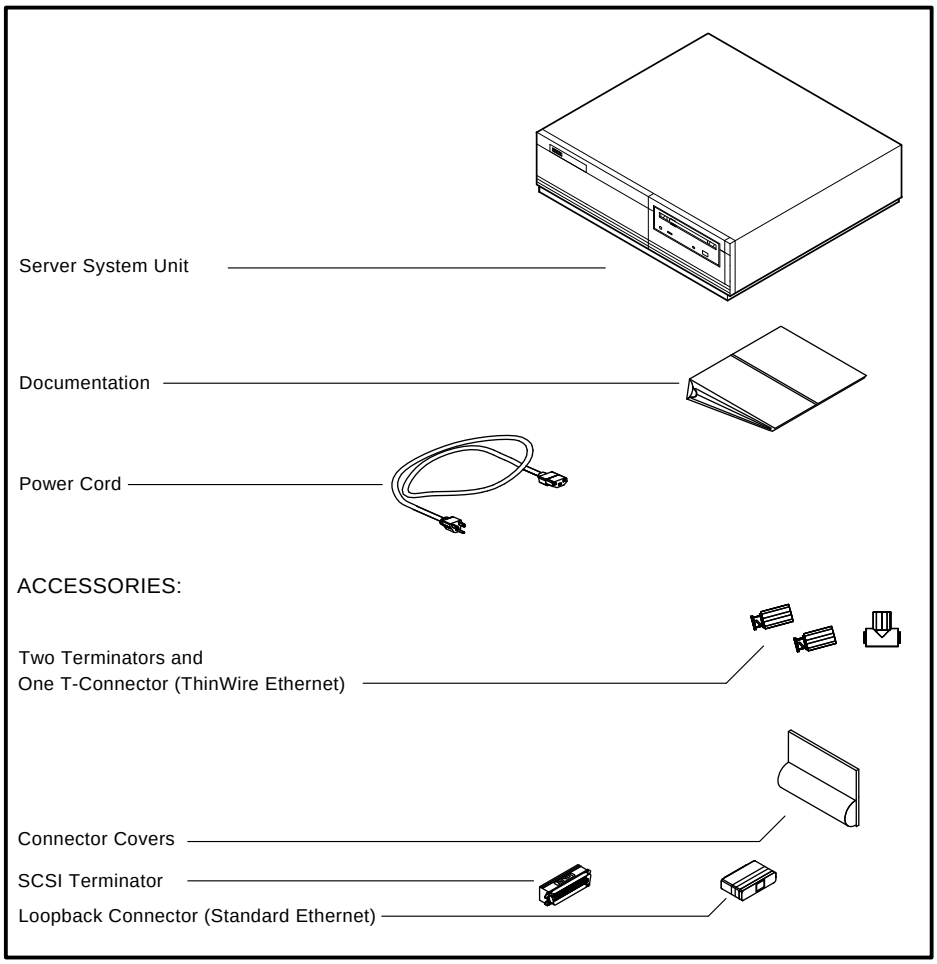
Note

Depending on how you set up your system, you might not use all the components supplied with your system. Store any unused parts safely for future use.

If You Move the System . . .

Always repack the system unit in its original packing material when moving or relocating your system. This precaution will protect the hardware from damage.

Figure 2–1 InfoServer 150 System Components



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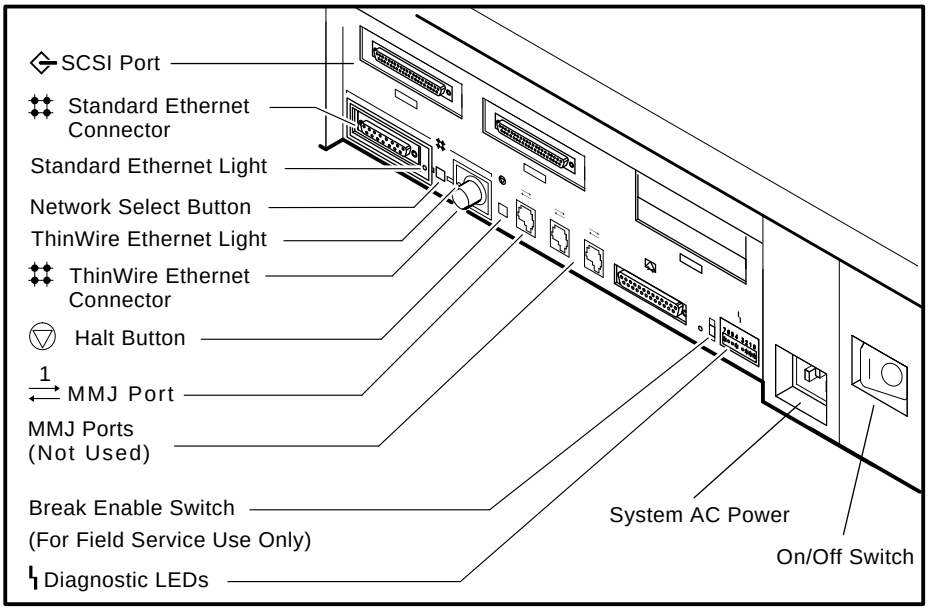
2.3 Connecting System Components

After unpacking, follow the instructions in Sections 2.3.1 through 2.3.7 to connect system components.

2.3.1 Identify the System Unit Ports and Connectors

Figure 2–2 shows all the ports and connectors on the rear of an InfoServer 150 system. Take some time to become familiar with the ports and connectors. Symbols (called icons) identify each port and connector you will use when installing your system. Note that there are two SCSI ports. SCSI port A is at the upper left and SCSI port B is next to it.

Figure 2–2 Ports and Connectors



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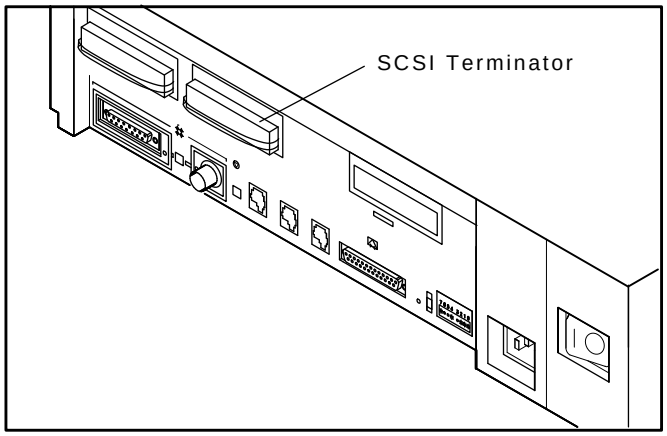
Note

Not all of the connectors shown are usable. In particular, MMJ ports 2 and 3 and the modem port (to the left of MMJ port 1) are not supported by the server.

2.3.2 Install the SCSI Terminators

If you do not intend to connect additional drives to your system, be sure that the SCSI terminators are installed on the SCSI ports at the rear of the system unit, as shown in Figure 2–3.

Figure 2–3 Rear Panel with SCSI Terminators Installed



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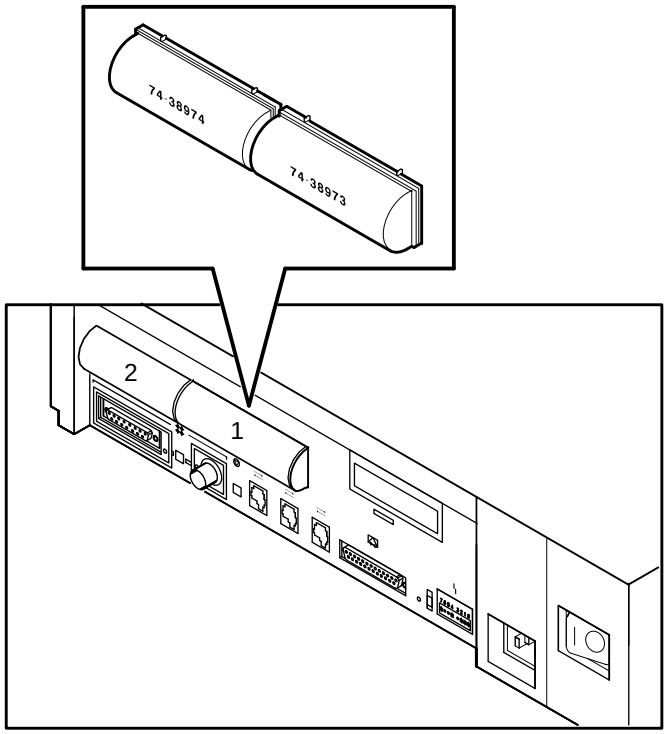
2.3.3 Install the Connector Covers

You system comes with two connector covers to protect the unused connectors on the rear panel of the system unit, as shown in Figure 2–4

Figure 2–4 Connector Covers



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2.3.4 Attach the Ethernet Terminators

You must connect the T-connector, two Ethernet terminators, and the loopback connector (Figure 2–1) to the system unit, so that you can run diagnostic tests to verify the Ethernet circuits.

Note

The system does not boot if the power-up self-test detects an Ethernet error.

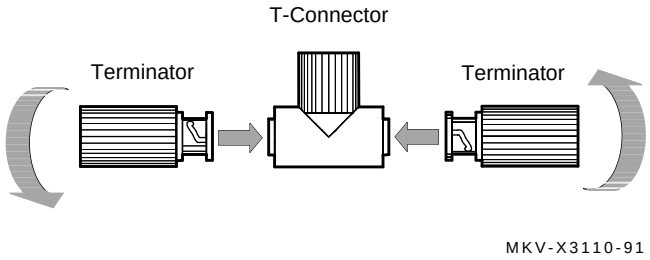
For diagnostic purposes, note the following:

- The T-connector and two terminators complete the ThinWire Ethernet circuit. Later, when you decide to connect to a network, you exchange ThinWire cable sections for one or both terminators, depending on your network setup.
- The loopback connector completes the standard Ethernet circuit.

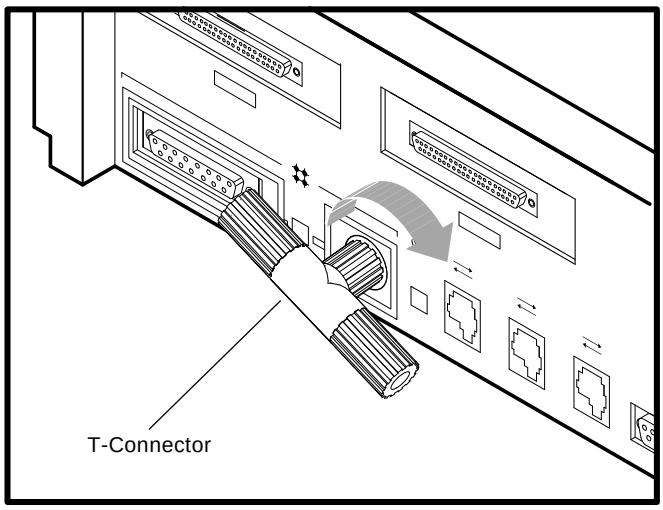
To connect the T-connector and loopback connector, follow these steps:

1. Push one terminator into one side of the T-connector, then turn the terminator clockwise until it locks in place.
2. Push the second terminator into the other side of the T-connector, then turn the terminator clockwise until it locks in place, as shown in Figure 2–5.

Figure 2–5 Attaching T-connectors



3. Connect the T-connector to the ThinWire Ethernet connector on the rear of the system unit by turning the T-connector clockwise until it locks into place.



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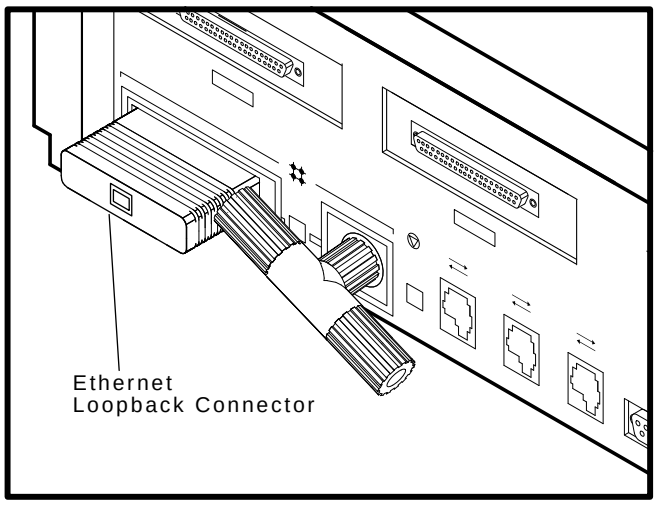
4. Connect the loopback connector to the standard Ethernet port on the back of the system unit. If needed, rotate the T-connector slightly to make room for the loopback connector.



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2.3.5 Connect the System Unit Power Cord

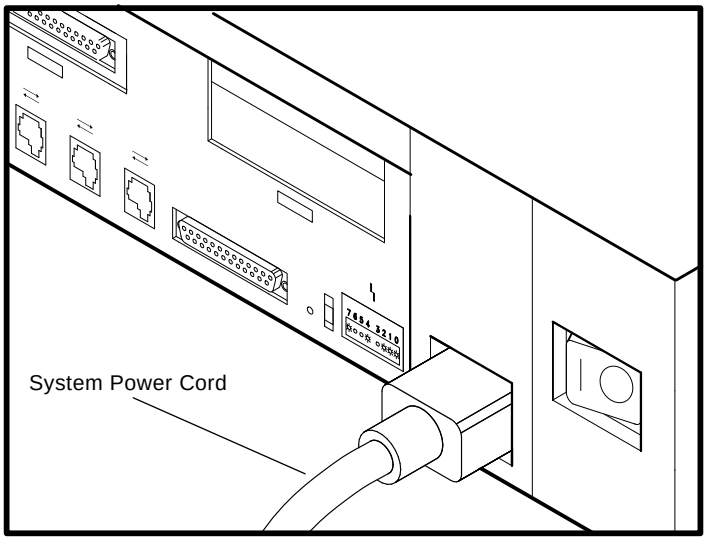
Note

Make sure the | O power switch on the rear panel of the system unit is off (O).

The system accepts power inputs in the ranges of 100 Vac to 120 Vac and 200 Vac to 240 Vac, at 50 or 60 Hertz. Within these limits the power supply is self-sensing, so the system unit does not need a voltage selection switch.

Connect the supplied power cord to the power socket on the rear panel of the system unit as shown in Figure 2–6. Connect the other end of the power cord to a grounded power outlet.

Figure 2–6 Connecting the Power Cord



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2.3.6 Connect a Console Terminal

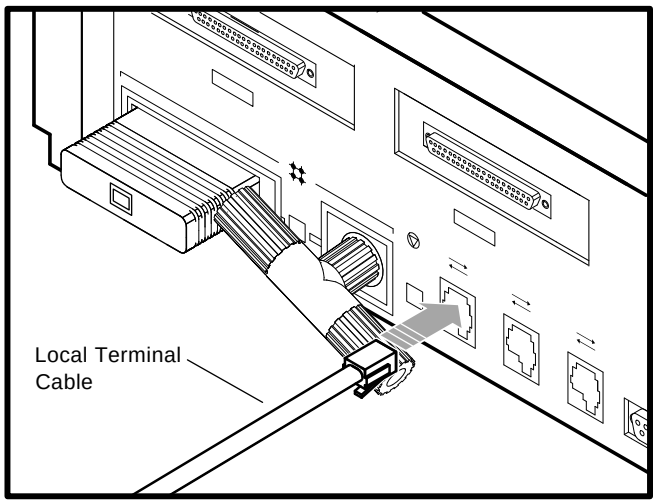
You do not need a locally connected terminal for normal InfoServer operation. However, Digital advises that you connect a local terminal as part of this installation procedure, to ensure that the InfoServer system is operating properly.

The recommended console terminal is a VT300 series terminal. When you connect the terminal cable to one of the MMJ ports on the rear of the VT300 series terminal, the port must be set for DEC-423 operation. See your terminal documentation for details.

To connect a terminal to the server, follow these steps:

1. Make sure the | O | power switch on the terminal is off (O).
2. Connect the terminal cable supplied with the system to MMJ port 1 on the rear panel of the system unit.

Figure 2–7 Connecting the Console Terminal Cable



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3. Connect the other end of the console cable to the communications port on the terminal.
4. The terminal must be set at 9600 baud, with 8 bits, and no parity. See your terminal documentation if you need information on setting up your terminal.

During normal operation, you can control the server through a LAT terminal server session, if terminal servers are available on your network. If terminal server access is not available, or if client systems have trouble accessing server services, then a locally connected terminal is needed to manage the server or diagnose server problems. See the *InfoServer System Operations Guide*.

2.3.7 Connect External Expansion Boxes

If you received expansion boxes with your system, you should connect them to your system unit now. See Chapter 3 for information on connecting external expansion boxes.

2.4 Starting the System

To start your system, follow these steps:

1. Turn on any expansion boxes connected to your system.
2. Turn on the console terminal connected to MMJ port 1. See your terminal documentation. Note that a console terminal is required when the server is first installed, to ensure proper startup and cabling.

   Note

   To view the system power-up self-test display, you must allow time for the console terminal to complete its power-up sequence.

3. Turn on the system unit by setting the | O power switch on the rear of the system unit to the on (|) position.

   The initial power-up display appears on the console terminal in about 1.5 minutes. If you see a display similar to the following, your system has passed all power-up tests, and the terminal's keyboard language has been set:

```
KA41-2  V1.0

F_..E...D...C...B...A...9_..8...7...6...5...4_..3_..2_..1...

?  E  0040  0000.0005
?  C  0080  0000.4001

 83 BOOT SYS
_DKA100
```

The system now boots the internal RZ disc drive. If the boot is successful, the console screen displays a message like the following:

```
DEC InfoServer 150 V2.0
Copyright (c) 1990, 1991 Digital Equipment Corp.
%ESS-I-INITDISK, Disk initialization complete, 14 devices found
```

4. Enter the system password (ESS) when the system displays the `Enter Password:` prompt.

If you do not see the power-up display or the server fails to bootstrap, turn off the system unit and review each installation step. Repeat the power-up procedure. If the problem continues, see Section 2.9.3.

Note

Check the position of the break enable switch on the rear of the system unit (Section 2.3.1). It should be in the down position.

2.5 Loading a Compact Disc

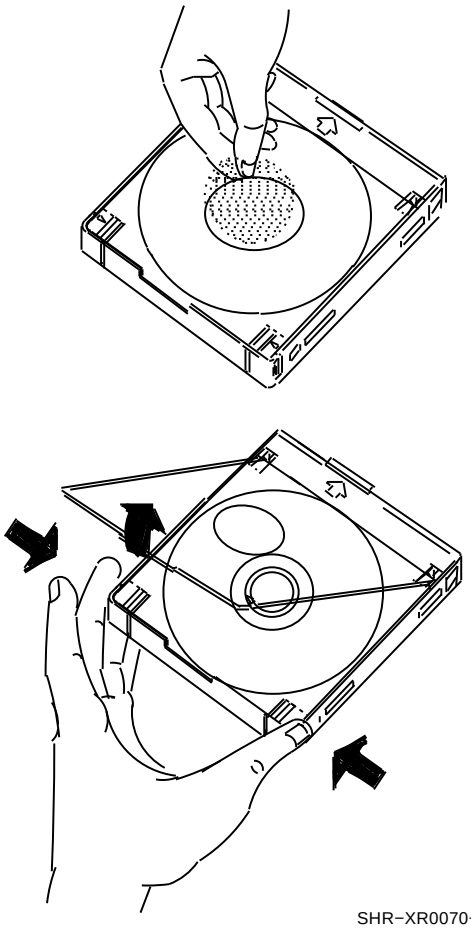
The InfoServer 150 system (Figure 1–1) has one RRD42 compact disc drive on the front of the system unit.

When you load a disc into the compact disc drive, insert the entire disc **caddy** into the disc door on the drive. Do not remove the disc from the caddy.

To load compact discs that you want to serve to the network, follow these steps:

1. Examine the disc caddy. Make sure it is not cracked or damaged. Never load a damaged caddy into a compact disc drive.
2. If a protective film is on the lid of the caddy, remove the film before using the caddy (Figure 2–8).
3. To open the lid of the caddy, press the tabs on both sides and lift the lid (Figure 2–8).

Figure 2–8 Opening the Caddy



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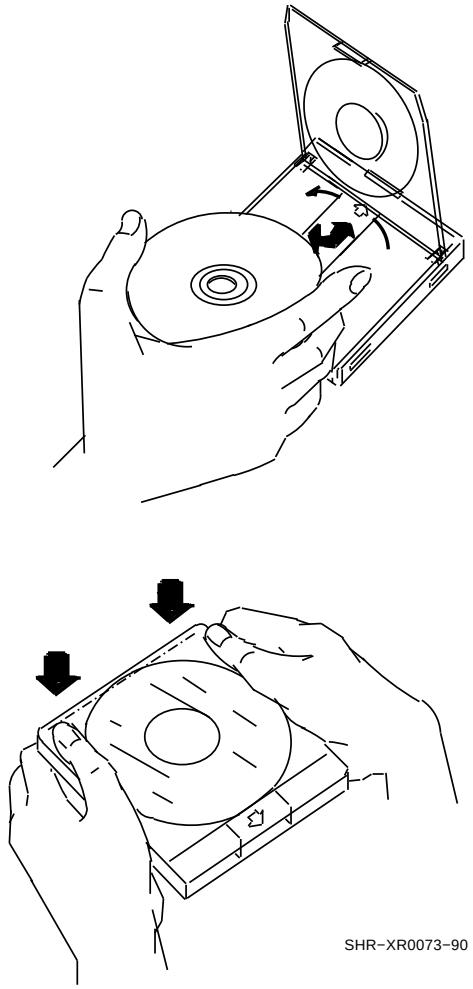
4. To load an empty caddy with a disc, hold the disc by the edges and place the disc (with disc label up) into the caddy (Figure 2–9). Do not touch the surface of the disc. Be sure to place the disc beneath the edge of the caddy.
5. Press both corners firmly to close the lid (Figure 2–9).

Figure 2–9 Loading the Disc



Note

The loading procedure for the RRD42 tabletop and embedded drives is the same with one exception: the tabletop drive requires setting the POWER switch to on. Figure 2–10 shows the tabletop drive.