

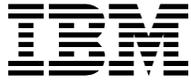
7210 Model 025 External DVD-RAM Drive

7210 Model 025 DVD-RAM Drive  
Setup and Operator Guide

SY44-0079-00







7210 Model 025 External DVD-RAM Drive

7210 Model 025 DVD-RAM Drive  
Setup and Operator Guide

SY44-0079-00

**Note!**

Before using this information and the product it supports, be sure to read the general information under “Notices” on page v.

**First Edition (May 2001)**

This edition, SY44-0079-00, applies to Model 025 of the 7210 External DVD-RAM Drive and to all subsequent releases and modifications until otherwise indicated in new editions. This edition applies only to the specified model of the device.

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Use the following danger notices throughout this book.

#### **DANGER**

**To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)**

#### **DANGER**

**An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

## DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)

## DANGER

To prevent a possible electrical shock when installing the device, ensure that the power cord for that device is unplugged before installing signal cables. (RSFTD204)

## Caution Notices

A caution notice calls attention to a situation that is potentially hazardous to people because of some existing condition.

Use the following caution notices throughout this book.

### CAUTION:

**Do not remove the covers of the unit. An invisible laser beam may be present. The repair of this unit should be performed by trained service personnel only. (RSFTC242)**

## Attention Notices

An attention notice indicates the possibility of damage to a program, device, system, or data.

## Product Recycling and Disposal

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The system unit contains batteries and circuit boards with lead solder. Before you dispose of this unit, these batteries and circuit boards must be removed and discarded according to local regulations or recycled where facilities exist. This book contains specific information on each battery type where applicable.

## Battery Return Program

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these accomplishments include the elimination of the use of Class I ozone-depleting chemicals in the manufacturing process, reductions in manufacturing wastes, and increased product energy efficiency. For more information, contact an IBM account representative.

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

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Responsible Party:

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New Orchard Road  
Armonk, NY 10504

Telephone: 1-919-543-2193

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This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

**Avis de conformité à la réglementation d'Industrie Canada**

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## About This Guide

This guide describes how to install and use the 7210 Model 025 DVD-RAM Drive. It contains the following chapters:

Chapter 1. General Information, describes the 7210 DVD-RAM Drive, gives the system requirement, discusses SCSI bus cables, and lists hardware specifications.

Chapter 2. Setting Up the 7210 DVD-RAM Drive, tells how to install the 7210 DVD-RAM Drive.

Chapter 3. Using the 7210 DVD-RAM Drive, describes the operator controls and indicator lights on the 7210 DVD-RAM Drive. It tells how to load and unload a DVD disc, and gives information about cleaning the drive and the discs.

Chapter 4. Removing the 7210 DVD-RAM Drive, tells how to remove the 7210 DVD-RAM Drive after it has been installed.

The appendix, "Power Cables," provides power cable information for different countries.

Store this guide with your system manuals.

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## Related Publications

- *7210 Model 025 DVD-RAM Drive Service Guide*, SY44-0080, provides service and maintenance information for the 7210 DVD-RAM Drive.
- *IBM Externally Attached Devices Safety Information SA26-2004*, provides translations of danger notices.

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- The publication number of the book.
- The page number or topic to which your comment applies.

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## Chapter 1. General Information

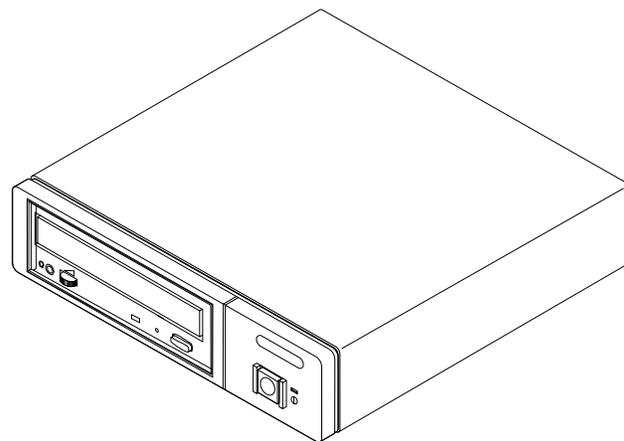
The 7210 Model 025 DVD-RAM Drive is an external storage device that connects to an IBM host system and stores additional data using a small computer system interface-2 (SCSI-2). The 7210 DVD-RAM Drive operates at speeds dependant on the type of media used.

- CD-ROM media maximum speed is 3.6 MB/second
- DVD-ROM media maximum speed is 2.7 MB/second
- DVD-RAM media maximum speed is 1.3 MB/second Write, 2.7 MB/second Read

The media used in this device determines the operations possible. The 7210 DVD-RAM Drive can read and write to DVD-RAM media. The 7210 DVD-RAM Drive can only read media marked as CD-R, CD-R/W, and CD-ROM.

The 7210 DVD-RAM Drive supports the distribution and use of on-line databases, such as an on-line reference for a softcopy publication.

Figure 1 shows a front view of the 7210 Model 025 DVD-RAM Drive.



RBBT0502-0

Figure 1. The 7210 Model 025 DVD-RAM Drive

The 7210 Model 025 DVD-RAM Drive features the following:

- CD-ROM speeds of up to 3600KB/sec
- DVD-ROM speeds of up to 8115KB/sec
- DVD-RAM speeds of 1352 to 2705KB/sec (dependant on media type)
- Capacity of approximately 2 to 5 Gigabytes (GB) per DVD (dependant on media type)
- Fast access times
- SCSI-2 that supports synchronous and asynchronous data transfer modes

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## System Requirement

The following sections describe the system requirements for the 7210 Model 025 DVD-RAM Drive:

## RS/6000 or pSeries Systems

The 7210 Model 025 DVD-RAM Drive requires a host system platform with an AIX operating system at level 3.2.5.1 or higher.

For a list of supported processors and adapters, contact your IBM marketing representative or business partner.

## AS/400 or iSeries Systems

The 7210 Model 025 DVD-RAM Drive requires only a supported AS/400 or iSeries system processor with an OS/400 operating system at level V5R1 (or higher).

For a list of supported processors, contact your IBM marketing representative or business partner.

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## SCSI Bus Cables

A variety of SCSI bus cables are available for use with the 7210 Model 025 DVD-RAM Drive. To determine the appropriate cable, refer to Chapter 4, "Parts Diagram and Parts List," in the *7210 Model 025 DVD-RAM Drive Service Guide*

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## Specifications

Table 1. Specifications for the 7210 Model 025 DVD-RAM Drive

Physical Specifications		
Width	250 mm (9.8 in.)	
Depth	275 mm (10.8 in.)	
Height	55 mm (2.2 in.)	
Weight	3.6 kg (8.0 lb)	
Power Specifications <sup>1</sup>		
kVA	0.023 @ 120 V AC	
V AC	100 to 125, or 200 to 240	
Hertz	50 to 60	
Btu Maximum (watts)	41.6 Btu/hr (12.2 watts) @ 240 V AC	
Power Factor	0.4 to 0.6	
Altitude	2135 m (7000 ft)	
Performance Specifications		
Dependant on media type.		
Recommended Environment		
Environmental Factor	Operating	Non-operating
Temperature	16 to 32°C (60 to 90°F)	10 to 52°C (50 to 126°F)
Relative Humidity (noncondensing)	20 to 80%	8 to 80%
Maximum Wet Bulb	23°C (73°F)	23°C (73°F)

---

## Chapter 2. Setting Up the 7210 DVD-RAM Drive

This chapter provides step-by-step instructions on how to properly install the 7210 Model 025 DVD-RAM Drive.

### DANGER

**To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)**

**Attention:** The 7210 DVD-RAM Drive is a precision device that requires reasonable care in handling to prevent data loss or permanent damage to the device. Avoid bumping or dropping the 7210 DVD-RAM Drive. Ensure all media is removed from the device before the drive is moved.

To unpack the 7210 DVD-RAM Drive, simply remove the packing material from the box it was shipped in.

---

## Performing the Installation

To install the 7210 Model 025 DVD-RAM Drive, complete the following steps.

### Step 1. Using the Inventory Checklist

Make sure that you received the following items:

- Power cable (for the appropriate cable see “Appendix. Power Cables” on page 19)
- The *External Devices Warranty Information* (U.S., Canada, and Puerto Rico only)
- The *7210 Model 025 DVD-RAM Drive Setup and Operator Guide* (this guide)
- The *7210 Model 025 DVD-RAM Drive Service Guide*
- The *IBM Externally Attached Devices Safety Information* manual
- Data DVD disc
- Test DVD disc
- CD Diagnostic disc
- Cleaning Kit
- SCSI bus cable
- Terminator (optional, depending on the cable feature selected)

**Note:** For the part numbers of the items in this list, see Chapter 4, “Parts Diagram and Parts List,” in the *7210 Model 025 DVD-RAM Drive Service Guide*.

## Step 2. Checking the Electrical Outlets

Make sure that the electrical outlets you use are properly grounded.

### DANGER

**An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

## Step 3. Assembling the Materials

Refer to your system management or system hardware manuals to locate the information that you need to install the 7210 DVD-RAM Drive.

1. **Get your system unit manuals now.** You may find the needed information under the topics:
  - Installing an external SCSI DVD-RAM drive
  - SCSI controllers
  - External SCSI devices
2. **Do not continue** until you have located the manual that describes how to determine where the SCSI controller is located (where you make the cable connection).

Record the controller location here

4310002

## Step 4. Determining the SCSI Address (for RS/6000 or pSeries Systems Only)

Before you install the 7210 DVD-RAM Drive, you must find a SCSI address that is not an address being used by another device. To find an unused SCSI address, you must:

- Identify the name and the port of the host system SCSI I/O controller to which you want to attach the 7210 DVD-RAM Drive
- Identify the SCSI address of that SCSI I/O controller
- Identify the SCSI addresses of other devices connected to that SCSI I/O controller

**Note:** If you attach to a wide bus, SCSI addresses 0-15 are available but only addresses 0-7 can be used as addresses for the 7210 DVD-RAM Drive. Even though the 7210 DVD-RAM Drive uses only the range of addresses for a narrow bus, it is designed to not impact the function of the other devices on the wide bus; they still negotiate a wide attachment and run at appropriate data rates.

1. To identify the name and the port of a host system SCSI I/O controller to which you want to attach the 7210 DVD-RAM Drive, at the system prompt type

```
lsdev -C |grep scsi
```

and then press Enter. A list of controllers displays in the following format. The names appear in the first column (for example, scsi0 and scsi2 ). The ports appear in the third column and in the fourth position (highlighted as follows):

```
scsi0    Available 00-00-0S      Standard SCSI I/O Controller
scsi2    Available 00-02      SCSI I/O Controller
```

Note the name and port of the SCSI I/O controller to which you want to attach the 7210 DVD-RAM Drive (for example, the scsi2 controller on port 2 ).

2. To determine the SCSI address of the SCSI I/O controller that you noted in the previous step, type

```
lsattr -El scsix |grep id
```

(where x equals the last character in the name of the SCSI I/O controller), then press Enter. The address of the SCSI I/O controller displays in the following format:

```
id      7      Adapter card SCSI I      True
```

Note the address of the SCSI I/O controller (in this case, 7 ).

3. To identify the SCSI addresses used by all other devices, type

```
lsdev -Cs scsi
```

and then press Enter. A list of devices appears in the following format. In the fourth position of the third column, locate all instances of the port that you chose in step 1. (The list may contain multiple instances of a port. In the following example, for port 2 (identified in step 1), there are three instances.) The addresses of the other SCSI devices appear in the seventh position (highlighted in the example that follows):

```
hdisk0    Available 00-00-0S-0,0    2.0GB SCSI Disk Drive
hdisk1    Available 00-02-01-2,0    4.5GB 16 Bit SCSI Disk Drive
hdisk2    Available 00-02-01-3,0    SCSI Disk Drive
rmt0      Available 00-02-01-4,0    SCSI 8mm Tape Drive
```

For the port chosen in step 1, note the addresses of the other SCSI devices attached to the host system (in this case, for port 2, the addresses are 2 , 3 , and 4 ).

4. Determine an unused SCSI address for the 7210 DVD-RAM Drive (in this case, 0, 1, 5, or 6, because 7 was used by the SCSI I/O controller and 2, 3, and 4 are used by other devices).

Record the address here

4 310002

## Step 5. Setting the SCSI Address

The SCSI address is a unique address that identifies the 7210 DVD-RAM Drive to your system unit. Use the SCSI address switch ( **1** in Figure 2) is located on the rear of the 7210 DVD-RAM Drive. Figure 2 also shows the audio jacks **2**, SCSI bus cable connectors **3**, cooling fan **4**, and power cable connector **5**.

**Note:** Do not select a SCSI address that is already in use.

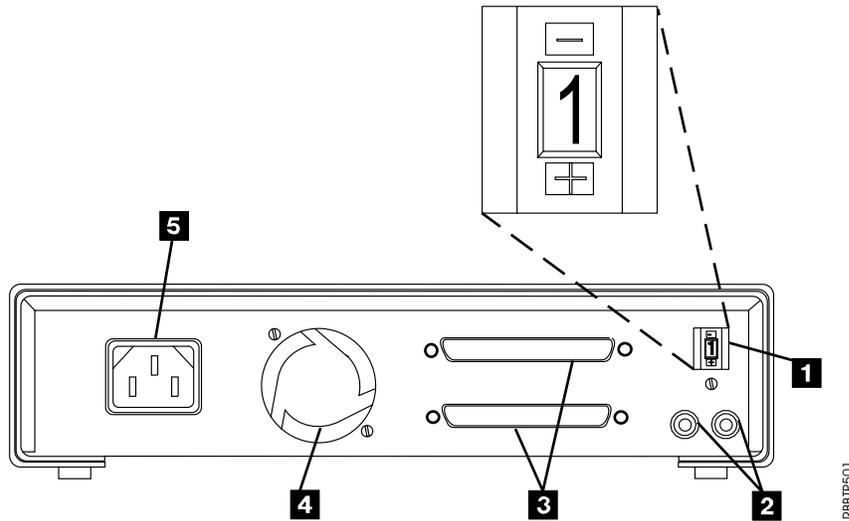


Figure 2. Rear View of the 7210 Model 025 DVD-RAM Drive

### RS/6000 or pSeries Systems

To set the SCSI address, press the + or – push button to set the SCSI address switch to the address that you have previously determined in “Step 3. Assembling the Materials” on page 4.

### AS/400 or iSeries Systems

Set the SCSI address switch to 1 to ensure the 7210 DVD-RAM Drive will operate as an installed device. If the 7210 DVD-RAM Drive is connected in a chain with another device, such as a 7207 Tape Drive, set the tape drive SCSI address to 0. The 7207 Tape Drive should always be connected before the 7210 DVD-RAM Drive when chaining the devices.

To set the SCSI address, press the + or – push button so that 1 appears on the switch.

## Step 6. Placing the 7210 DVD-RAM Drive

The 7210 DVD-RAM Drive can be located anywhere that is convenient to your system unit. The only restrictions are the length of the power cord and the SCSI cable. Recommended locations are:

- Away from the floor
- In a horizontal position
- Where the DVD disc can be easily inserted

To place the 7210 DVD-RAM Drive, do the following:

1. \_\_\_ Set the 7210 DVD-RAM Drive in the location that you have previously determined.
2. \_\_\_ Connect the power cable to the 7210 DVD-RAM Drive. **(Do not plug it into the electrical outlet at this time.)**

The external devices that attach to the system unit can be stacked. The 7210 DVD-RAM Drive should be placed at the top of the stack.

## Step 7. Performing a System Shutdown

**Attention:** Do not attach the 7210 DVD-RAM Drive to an active system unit. This can damage the 7210 DVD-RAM Drive, the system unit, or both.

To perform a system shutdown, do the following:

**Note:** Before doing a controlled shutdown of the system unit, notify other users who may be using the system.

1. \_\_\_ If it is on, perform a controlled shutdown of the system as follows:

**For RS/6000 or pSeries Systems:** To do a fast shutdown, type  
shutdown -F

from the console. (You must have root authority to do the shutdown; see your system administrator.) Depending on the host system configuration, the shutdown may take several minutes. When the message Halt Completed displays on the console, continue with step 2.

**For AS/400 or iSeries Systems:** For instructions about performing a controlled shutdown, refer to the host system documentation, then return here and continue with step 2.

2. \_\_\_ When the shutdown is complete, turn off the power to the system unit.
3. \_\_\_ Turn off the power to all external devices connected to the system unit.

### **DANGER**

**An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

4. \_\_\_ Unplug the power cables to all external devices from their electrical outlets.
5. \_\_\_ Unplug the system unit power cable from the electrical outlet.

## Step 8. Connecting the SCSI Bus Cable

To connect the SCSI bus cable, do the following:

1. \_\_\_ If installed, remove the connector covers.

### DANGER

**To prevent a possible electrical shock when installing the device, ensure that the power cord for that device is unplugged before installing signal cables. (RSFTD204)**

2. \_\_\_ On the rear of the 7210 DVD-RAM Drive ( **1** in Figure 3), insert the device connector end of the SCSI bus cable into one of the SCSI connectors **2**.
3. \_\_\_ Make sure that the connector is fully engaged.
4. \_\_\_ Secure the cable to the 7210 DVD-RAM Drive with the thumb screws provided on the connector (finger tight.)

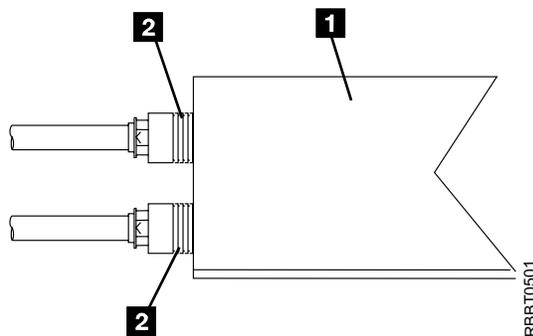


Figure 3. Connecting the SCSI Bus Cable to the 7210 DVD-RAM Drive. The view is from the side.

5. \_\_\_ Connect the other end of the SCSI bus cable as follows:
  - If the 7210 DVD-RAM Drive is the only device on the SCSI bus, connect the cable to the host system (see Figure 4 on page 9). Connect a terminator to the unused SCSI bus cable connector.
  - If the 7210 DVD-RAM Drive is part of a multiple-device configuration, connect the SCSI cable to the next device (see Figure 5 on page 9).

## Step 9. Installing the SCSI Bus Terminator

Make sure to install a terminator on the last device on the SCSI bus.

### AS/400, iSeries, RS/6000, or pSeries

To install the SCSI terminator, do the following:

Align the terminator with the unused SCSI connector on the 7210 DVD-RAM Drive, and push in until the terminator is seated.

- If the 7210 DVD-RAM Drive ( **4** in Figure 4 on page 9) is the only SCSI device attached to the host system **1**, install the terminator **2** on one of the dual connectors **3**.

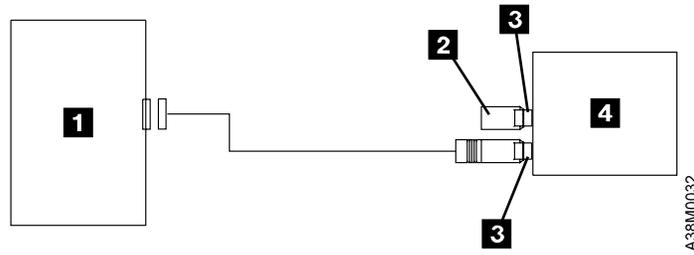


Figure 4. Example of Attaching One SCSI Device to the System Unit. The view is from the side.

- If there is more than one device ( **2** in Figure 5) attached to the host system **1**, move the terminator **3** to the last device.

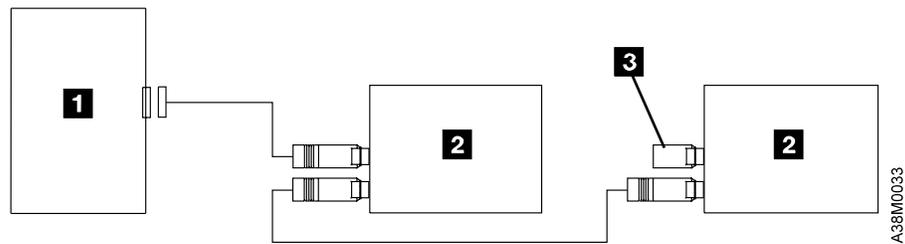


Figure 5. Example of Attaching Multiple SCSI Devices to the System Unit

**Notes:**

1. A SCSI device can have one (single) or two (dual) connectors on the back of the device. Figure 6 on page 10 shows a single-connector device **1** connecting to a dual-connector device **2**. Figure 7 on page 10 shows a dual-connector device **2** connecting to a single-connector device **1**.
2. The AS/400 host system only supports the attachment of specific external storage devices, including the 7210 DVD-RAM Drive. Contact your IBM authorized support personnel for information about valid attached devices and the configurations allowed by the system.
3. When attaching multiple SCSI devices to a host system, ensure that the wide SCSI device, such as a 7207 Tape Drive, is connected first. Any narrow SCSI devices, such as the 7210 DVD-RAM Drive, should be connected after the wide devices to ensure that the wide device is fully enabled.

## RS/6000 and pSeries Systems Only

The following attachment configuration examples are valid only for RS/6000 or pSeries host system connection.

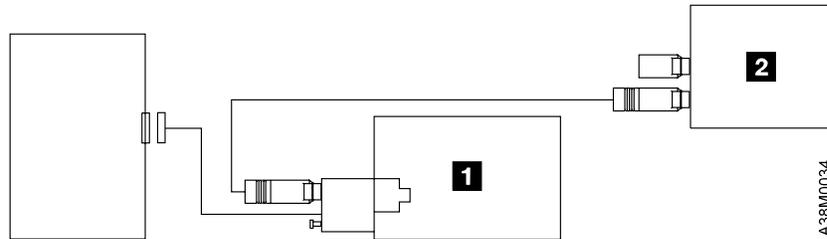


Figure 6. Example of Attaching Multiple Devices, with the Single Connector Device as the First Device in the Sequence of External Devices

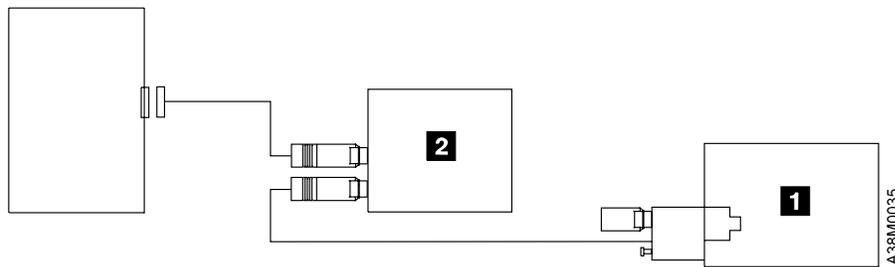


Figure 7. Example of Attaching Multiple Devices, with the Dual Connector Device as the First Device in the Sequence of External Devices

### Notes:

1. The terminator and the SCSI bus cable can be connected to either the top or bottom SCSI connector on the 7210 DVD-RAM Drive.
2. When attaching the 7210 DVD-RAM Drive to the host system, use the terminator that was shipped with the 7210 DVD-RAM Drive.
3. Only one terminator is required to terminate the SCSI bus. You do not need to use the terminator shipped with the 7210 DVD-RAM Drive if a terminator has been previously installed.

## Step 10. Connecting the Power Cables

To connect the power cables, do the following:

### 1. DANGER

**An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

- \_\_\_ Plug the 7210 DVD-RAM Drive power cable into an electrical outlet.
- \_\_\_ Plug the power cables for all external devices and the system unit into electrical outlets.
- \_\_\_ Turn on the power to all of the external devices.

4. \_\_ Review the information in “Indicator Lights” on page 14, then turn on the power to the 7210 DVD-RAM Drive and watch for the following:
  - The status light blinks for about five seconds and goes out, indicating that the Power-On Self Test (POST) has completed successfully.
  - The power-on light comes on and stays on.
5. \_\_ Turn on the power to the system unit.

## Step 11. Performing the Checkout Procedure

### For RS/6000 or pSeries Systems

To perform the 7210 DVD-RAM Drive checkout procedure, do the following:

1. \_\_ Configure the 7210 DVD-RAM Drive to the host system software by doing the following:
  - a. Log into the host system (AIX operating system).

**Note:** You must have root authority to install or remove the 7210 DVD-RAM Drive from the system. To obtain root authority, see your system administrator.

- b. At the system prompt, type

```
lsdev -Cs scsi
```

and press Enter. The command lists all of the SCSI devices that are connected to the host system. Figure 8 shows an example of the screen that displays. The screen lists:

- |          |                                      |
|----------|--------------------------------------|
| <b>1</b> | Device name                          |
| <b>2</b> | Device status                        |
| <b>3</b> | SCSI adapter slot number             |
| <b>4</b> | Description of the SCSI device       |
| <b>5</b> | SCSI address (begins with 7th digit) |

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
hdisk0	Available	00-00-0S-0,0	2.0GB SCSI Disk Drive
hdisk1	Available	00-02-01-2,0	4.5GB 16 Bit SCSI Disk Drive
hdisk2	Available	00-02-01-3,0	16 Bit SCSI Disk Drive
rmt0	Available	00-02-01-4,0	Differential SCSI 8mm Tape Drive
rmt1	Available	00-02-01-5,0	4.0 GB 4mm Tape Drive
cd1	Available	00-03-01-1,0	SCSI Multimedia CD-ROM Drive
		<b>5</b>	

Figure 8. Screen Display of SCSI Devices Attached to the host system

A38M0028

- c. From the list of SCSI devices, identify the 7210 DVD-RAM Drive (listed in AIX version 3.2.5.1 as SCSI Multimedia DVD-RAM Drive; listed in version 3.2.5 as Other SCSI DVD-RAM Drive):
  - If the status of the 7210 DVD-RAM Drive is displayed as *Available*, the device has successfully been configured.
  - If the status is not displayed as *Available*, refer to Chapter 2, “Maintenance Analysis Procedures,” in the *7210 Model 025 DVD-RAM Drive Service Guide*. For more information about configuring the 7210 DVD-RAM Drive to the system software, refer to your AIX or host system manuals.
- d. This completes the 7210 DVD-RAM Drive installation for RS/6000 systems.

### For AS/400 or pSeries Systems

Verify that the host system software configured the 7210 DVD-RAM Drive automatically by doing the following:

1. \_\_ Log into the host system (OS/400 operating system).
2. \_\_ At the command line, type  

```
wrkhdwsc *stg
```

and then press Enter. The Work with Storage Resources screen displays.

3. \_\_ In the Type-Model column, find the 2718-001 or 2768-001 adapter to which the 7210 DVD-RAM Drive has just been attached.
4. \_\_ In the Opt column, type **9** next to the adapter, then press Enter. The Work with Storage Controller Resources screen now displays the adapter on the first row. The 7210 DVD-RAM Drive should be listed below. In the Type-Model column, the 7210 DVD-RAM Drive displays as 6330-002 . In the Resource column, the 7210 DVD-RAM Drive displays as OPTxxx, where xxx is a number that is assigned automatically by the host system. If the 7210 DVD-RAM Drive displays below the adapter, then the host system software has configured it automatically.

**Note:** If the 7210 DVD-RAM Drive that you are configuring does not appear below the adapter, contact your trained service personnel.

5. \_\_ Press F12 until you return to the Main Menu.
6. \_\_ (Optional) To verify that the 7210 DVD-RAM Drive can process the DVD-RAM correctly, perform the following:
  - a. At the command line, type  

```
vfyopt
```

and then press Enter. The Verify Optical (VFYOPT) screen displays.
  - b. In the Device field, type the name of the device (for example, OPT16 ), then press Enter. The Optical Device Test Menu displays.
  - c. Follow the instructions on the screen to complete the test for the device.

This completes the 7210 DVD-RAM Drive installation for AS/400 or iSeries systems.

---

## Chapter 3. Using the 7210 DVD-RAM Drive

This chapter describes the operator controls and indicator lights on the 7210 Model 025 DVD-RAM Drive. It gives instructions for loading and unloading a DVD disc, and provides information about cleaning the drive and the discs.

Figure 9 shows a front view of the 7210 Model 025 DVD-RAM Drive.

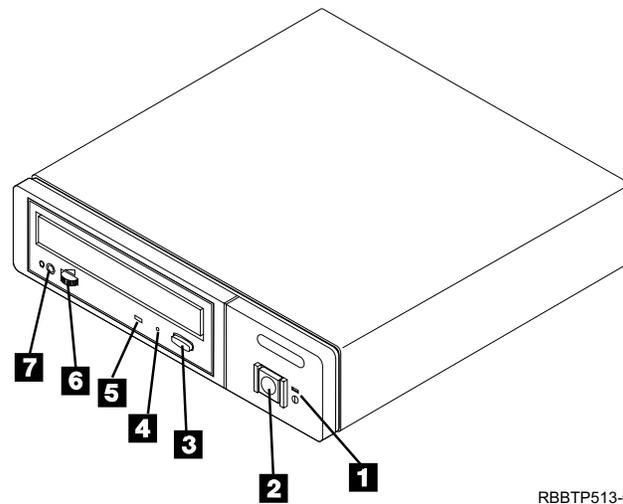


Figure 9. Front View of the 7210 Model 025 DVD-RAM Drive

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### Operator Controls

The 7210 Model 025 DVD-RAM Drive has the following operator controls.

#### Power Switch

The power switch ( **2** in Figure 9) is a push button switch that enables the power to be turned on or off. When the 7210 DVD-RAM Drive is on, the power-on light **1** is on and is green.

**Note:** The  $\text{\textcircled{1}}$  symbol under the power-on light is an International Organization for Standardization (ISO) symbol for a push button switch.

#### Load/Unload Button

The load/unload button **3** enables the DVD-RAM tray to be inserted or ejected. To insert or eject the tray, press and hold the load/unload button for about one second. The load/unload button operates only when the 7210 DVD-RAM Drive power is on.

#### Manual Unload Hole

When a power failure or a DVD-RAM drive failure prevents the disc from ejecting, the disc can be removed manually. First, unplug the device from the power source. Insert a solid metal rod (such as a paper clip or bristol wrench) into the manual unload hole **4** until resistance is met, then gently push to unlatch the DVD-RAM disc tray (this will take several attempts to unlatch the tray.)

## Volume Control

For headphones, the volume control **6** raises or lowers audio volume. Rotate the volume control to the right to increase the volume, and rotate it to the left to decrease the volume.

## Headphone Jack

The 7210 DVD-RAM Drive has a standard miniature stereo headphone jack **7** located next to the volume control.

## Audio Jacks

On the rear panel, the 7210 DVD-RAM Drive has left and right audio jacks that can be cabled to a stereo amplifier.

---

## Indicator Lights

The 7210 Model 025 DVD-RAM Drive has the following indicator lights.

### Power-On Light

When the 7210 DVD-RAM Drive is turned on, the power-on light **1** comes on and is green.

### Status Light

The status light **5** can be in one of several states:

- The light is off when the DVD-RAM drive is on but not in use (with or without the DVD-RAM disc loaded).
- The light is green:
  - After the DVD-RAM tray has been inserted and while the drive is running the Power-On Self Test (POST).

**Note:** When the POST completes successfully, the light goes out.

- During data transfer operations.
- When the DVD-RAM drive is playing audio through the front headphone jack or rear audio jacks.
- The light is flashing amber when a DVD-RAM drive error exists.

---

## Loading and Unloading a DVD-RAM Disc

Use the following instructions to load or unload a DVD-RAM disc.

### Loading a Disc

When loading a DVD-RAM disc, make sure that the text on the disc faces up.

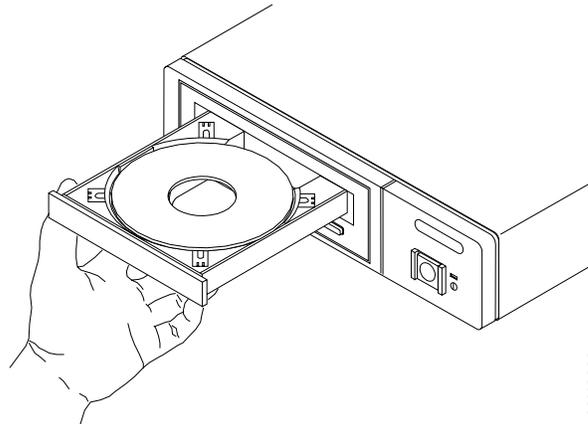


Figure 10. Loading a DVD-RAM Disc

To load a DVD-RAM disc:

1. Press the load/unload button to eject the disc tray (see Figure 10).
2. Place the disc onto the disc tray.
3. Do one of the following:
  - Press the load/unload button.
  - Gently push the disc tray completely into the disc opening.

### Unloading a Disc

To unload a DVD-RAM disc:

1. Press the load/unload button to eject the disc tray.
2. Remove the disc from the disc tray.
3. Do one of the following:
  - Press the load/unload button.
  - Gently push the disc tray completely into the disc opening.

If the DVD disc fails to eject, refer to the procedure for manually removing a disc in the *7210 Model 025 DVD-RAM Drive Service Guide*.

---

## Cleaning the DVD-RAM Drive

The DVD-RAM drive is designed to limit air flow in the area where the optical components are located. However, the DVD media and drive heads occasionally need to be cleaned. Use the IBM DVD cleaning kit shipped with the device, which includes a cloth and cleaning disc, to clean the media and drive heads.

To avoid fingerprints, always handle DVD discs by the edges. Wipe the discs with a soft, lint-free cloth or a lens tissue, always wiping in a straight line from the inner hub to the outer rim. Do not rub in a circular motion.



---

## Chapter 4. Removing the 7210 DVD-RAM Drive

This chapter describes how to remove the 7210 Model 025 DVD-RAM Drive after it has been installed.

### DANGER

**To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)**

---

## Removal Checklist

To remove the 7210 DVD-RAM Drive, perform the following steps:

**Attention:** Failure to perform the following steps in sequence before you add or delete a device may result in data loss or system failure.

1.  If loaded, remove the DVD disc from the 7210 DVD-RAM Drive by pressing the load/unload button while the power is on.
2.  Remove the 7210 DVD-RAM Drive from the system configuration (for instructions, refer to your system manuals).

**Attention:** Failure to inform the operating system before you add or delete a device may result in data loss or a system fault.

3.  If it is on, perform a controlled shutdown of the system unit. Refer to “Step 7. Performing a System Shutdown” on page 7.
4.  Turn off the power to the 7210 DVD-RAM Drive.
5.  Turn off the power to all external devices attached to the system.
6.  Turn off the power to the system unit.

### DANGER

**An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer’s responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)**

7.  Unplug the power cable for the 7210 DVD-RAM Drive from the electrical outlet.
8.  Unplug the system unit power cable from the electrical outlet.

**Attention:** When SCSI bus cables are connected to a system unit, they **must** also be connected to a device. Do not leave the SCSI bus cable connected to the system if the device for that cable has been removed.

## **DANGER**

**To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)**

9.  Disconnect the SCSI bus cable from the system unit.
10.  Disconnect the SCSI bus cable from the 7210 DVD-RAM Drive.
11.  Ensure that the terminator is on the last device on the SCSI bus (see “Step 9. Installing the SCSI Bus Terminator” on page 8).

## **CAUTION:**

**Do not remove the covers of the unit. An invisible laser beam may be present. The repair of this unit should be performed by trained service personnel only. (RSFTC242)**

12.  Remove the 7210 DVD-RAM Drive and place it in the new location.
13.  Reinstall the 7210 DVD-RAM Drive (see “Chapter 2. Setting Up the 7210 DVD-RAM Drive” on page 3).

## Appendix. Power Cables

To avoid electrical shock, a power cable with a grounded attachment plug has been provided. Use only properly grounded outlets.

Power cables used in the United States and Canada are listed by Underwriter's Laboratories (UL) and certified by the Canadian Standards Association (CSA). The power cables consist of:

- Electrical cables, type SVT or SJT.
- Attachment plugs complying with National Electrical Manufacturers Association (NEMA) 5-15P, that is:
  - “For 115 V operation use a UL Listed Cable Set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cable a maximum of 15 feet in length and a parallel blade, grounding type attachment plug rated at 15 A, 125 V.”
  - “For 230 V operation in the United States use a UL Listed Cable Set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cable a maximum of 15 feet in length, and a tandem blade, grounding type attachment plug rated at 15 A, 250 V.”
- Appliance couplers complying with International Electrotechnical Commission (IEC) Standard 320, Sheet C13.

Power cables used in other countries consist of:

- Electrical cables, type HD21.
- Attachment plugs approved by the appropriate testing organization for the specific countries where they are used.
  - “For units set at 230 V (outside of U. S.): Use a Cable Set consisting of a minimum 18 AWG cable and grounding type attachment plug rated 15 A, 250 V. The Cable Set should have the appropriate safety approvals for the country in which the equipment is to be installed and marked 'HAR'.”

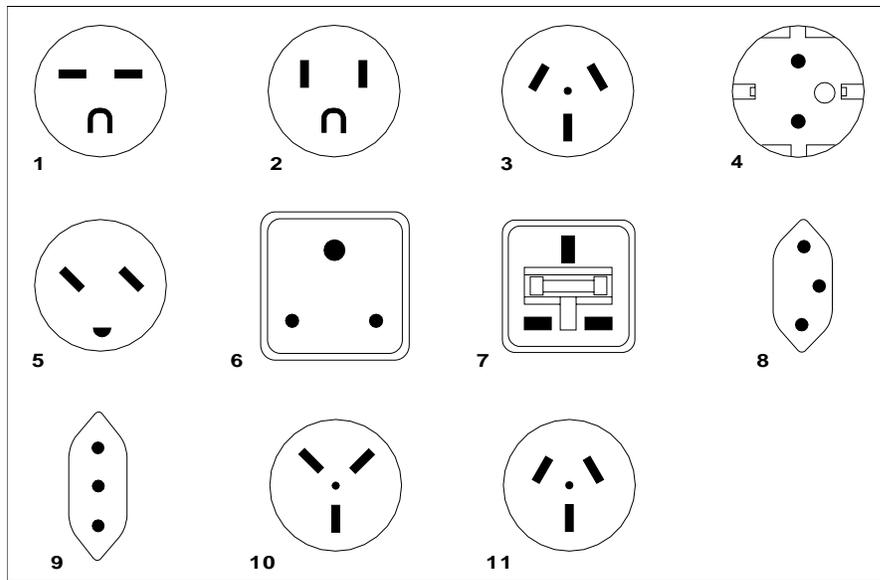
Table 2 lists the power cable part number, the country where the power cable can be used, and an index number to be matched with the receptacles shown in Figure 11 on page 20. If your power cable does not match this information, contact your local dealer.

*Table 2. Power Cable Information*

Part Number	Country	Index
1838574 Japan	Bahamas, Barbados, Bolivia, Brazil, Canada, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Netherlands Antilles, Panama, Peru, Philippines, Taiwan, Thailand, Tobago, Trinidad, U.S.A. (except Chicago), Venezuela	1
6952300 US/Canada	Bahamas, Barbados, Bermuda, Bolivia, Brazil, Canada, Cayman Islands, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Japan, Korea (South), Mexico, Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Puerto Rico, Saudi Arabia, Suriname, Taiwan, Trinidad, U.S.A. (except Chicago), Venezuela	2

Table 2. Power Cable Information (continued)

Part Number	Country	Index
6952301 6 ft Chicago	Chicago, U.S.A.	2
13F9940 Australia	Argentina, Australia, New Zealand, Uruguay	3
13F9979 France	Abu Dhabi, Austria, Belgium, Bulgaria, Botswana, Egypt, Finland, France, Germany, Greece, Iceland, Indonesia, Korea (South), Lebanon, Luxembourg, Macau, Netherlands, Norway, Portugal, Saudi Arabia, Spain, Sudan, Sweden, Turkey, Yugoslavia	4
13F9997 Denmark	Denmark	5
14F0015 South Africa	Bangladesh, Burma, Pakistan, South Africa, Sri Lanka	6
14F0033 United Kingdom	Bahrain, Bermuda, Brunei, Channel Islands, Cyprus, Ghana, Hong Kong, India, Iraq, Ireland, Jordan, Kenya, Kuwait, Malawi, Malaysia, Nigeria, Oman, People's Republic of China, Qatar, Sierra Leone, Singapore, Tanzania, Uganda, United Arab Emirates (Dubai), United Kingdom, Zambia	7
14F0051 Switzerland	Liechtenstein, Switzerland	8
14F0069 Italy	Chile, Ethiopia, Italy	9
14F0087 Israel	Israel	10
6952291 Colombia	Colombia, Paraguay	11



26415-00

Figure 11. Types of Receptacles

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## Readers' Comments — We'd Like to Hear from You

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7210 Model 025 DVD-RAM Drive  
Setup and Operator Guide

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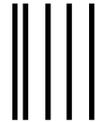
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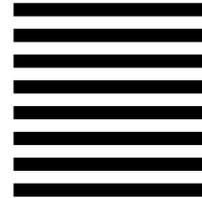
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