

7205 Model 440 Digital Linear Tape Drive

7205 Model 440

Digital Linear Tape Drive  
Setup and Operator Guide

SA41-0050-01







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**Note!**

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

**Second Edition (March, 2001)**

This edition, SA41-0050-01, applies to Model 440 of the 7205 Digital Linear Tape 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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### Danger Notices

A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people.

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.

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

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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**

In the United States, IBM has established a collection process for reuse, recycling, or proper disposal of used IBM batteries and battery packs. For information on proper disposal of the batteries in this unit, please contact IBM at 1-800-426-4333. Please have the IBM part number that is listed on the battery available when you make your call. For information on battery disposal outside the United States, contact your local waste disposal facility.

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- 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.
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Responsible Party:

International Business Machines Corporation  
New Orchard Road  
Armonk, NY 10504

Telephone: 1-919-543-2193

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

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**Germany Only:** This product is in conformity with the EN55022 Class B emission limits.

**Japanese Voluntary Control Council for Interference (VCCI) Statement**

This product is a Class B Information Technology Equipment and conforms to the standards set by the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). This product is aimed to be used in a domestic environment. When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

**Korean Government Ministry of Communication (MOC) Statement**

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## About This Guide

This guide describes how to install and use the 7205 Digital Linear Tape Drive. It contains the following chapters:

Chapter 1, “General Information,” describes the 7205 Digital Linear Tape Drive, gives the system requirements, and lists hardware specifications.

Chapter 2, “Setting Up the 7205 Digital Linear Tape Drive,” tells how to install the tape drive.

Chapter 3, “Using the 7205 Digital Linear Tape Drive,” describes the operator controls and indicator lights on the tape drive. It also tells how to load and unload a tape cartridge.

Chapter 4, “Removing the 7205 Digital Linear Tape Drive,” tells how to remove the tape drive after it has been installed.

Chapter 5, “Using the Media,” describes the media to use in the 7205 Digital Linear Tape Drive.

Appendix A, “Power Cables,” provides power cable information for different countries.

Appendix B, “Ordering Tape Cartridges,” provides information about ordering tape cartridges for use in the 7205 Model 440 Digital Linear Tape Drive.

Store this guide with your system manuals.

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## Related Publications

- *7205 Model 440 Digital Linear Tape Drive Service Guide, SY44-0077*, provides service and maintenance information for the 7205 Digital Linear Tape Drive.
- *IBM Externally Attached Devices Safety Information SA26-2004*, provides translations of danger notices.

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Be sure to include the following:

- The name of the book.
- 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 7205 Digital Linear Tape Drive is a high-performance, high-capacity, streaming tape drive that connects to the host computer to provide additional external storage of data.

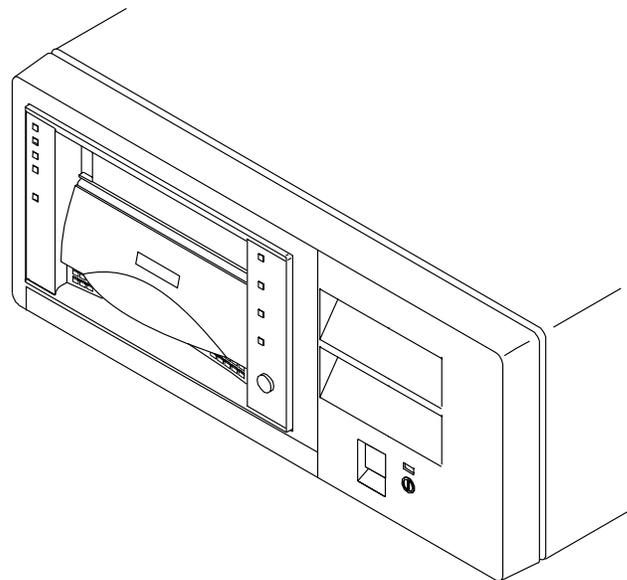
This device is available as a desktop model, attaching to selected host computers using a SCSI-II, 68-pin, low voltage differential (LVD) interface.

The 7205 Digital Linear Tape Drive is a half-inch tape drive that can:

- Perform unattended backup of files
- Archive important records

The sections that follow describe the operator controls and indicator lights on the 7205 Digital Linear Tape Drive. This chapter also shows connector locations, lists hardware specifications, and describes how to clean the tape drive.

Figure 1 shows the front view of the 7205 Digital Linear Tape Drive.



RBRTL504-0

Figure 1. Front View of 7205 Model 440 Digital Linear Tape Drive

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## Product Features

The 7205 Model 440 Digital Linear Tape Drive features the following:

- Drive capacity of up to 80GB<sup>1</sup> per cartridge (at 2:1 compression ratio)

**Note:** The actual capacity per cartridge varies, depending on the type of data, block size, and streaming. Small block sizes have a significant negative impact on performance and only a minimal negative impact on capacity; therefore 32KB block sizes or greater are recommended for optimum performance.

- Data transfer rate of up to 12MB<sup>2</sup> per second (at 2:1 compression ratio)
- A read/write data cache of up to 8MB for high data rate
- Downward read and write compatibility with tape formats of 10, 15, 20, and 35GB
- Embedded diagnostic software that indicates when cleaning is required, gives diagnostic results, and describes the operating status

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## System Requirement

The system requirement for the 7205 Digital Linear Tape Drive is a pSeries platform or RS/6000 host system with any AIX operating system at level 4.3.3, or higher and an LVD SCSI adapter.

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1. 1 GB = 1 000 000 000 bytes.

2. 1 MB = 1 000 000 bytes.

## Specifications

The specifications related to the 7205 Digital Linear Tape Drive are illustrated in the following table:

*Table 1. Specifications for the 7205 Digital Linear Tape Drive*

<b>Physical Specifications</b>			
Width	250 mm (9.8 in.)		
Depth	290 mm (11.5 in.)		
Height	122 mm (4.8 in.)		
Weight	6.0 kg (13 lb)		
<b>Power Specifications</b>			
kVA	0.047		
V ac	100 to 127, or 200 to 240		
Hertz	50 to 60		
Btu Maximum (watts)	150 Btu/hr (44 watts)		
Power Factor	0.90		
<b>Other Specifications</b>			
Altitude	2135 m (7000 ft.)		
<b>Recommended Environment</b>			
<b>Environmental Factor</b>	<b>Operating</b>	<b>Storage</b>	<b>Shipping</b>
Temperature	16 to 32°C (60 to 90°F)	-40 to 60°C (-40 to 140°F)	-40 to 60°C (-40 to 140°F)
Relative Humidity	20 to 80%	10 to 90%	10 to 90%
Maximum Wet Bulb	23°C (73°F)	46°C (115°F)	46°C (115°F)
<b>Note:</b> The operating limits include media. The storage and shipping limits do not include media. For media storage see "Storage and Shipping Environments" on page 30.			

## Environment and Usage Guidelines

It is the goal of IBM to provide you with a product that you can configure and use reliably. Tape drives require specific maintenance and environmental conditions to operate optimally over time. Using high quality, data grade media, handling and storing this media properly, operating the tape drive in a clean environment, and keeping the tape drive properly cleaned can help you to avoid problems with your IBM tape drive.

Use the following sections as guidelines when using the 7205 Digital Linear Tape Drive.

## Media Grades

IBM uses two different grades of media. Program Transmittal Fixes (PTFs) are supplied on a tape that is designed to be written to only once and read from several times. This tape is not designed to be used as a backup medium.

IBM also sells media designed to be used for storage. The data grade tape sold by IBM is the medium recommended and supported for use in the 7205 Digital Linear Tape Drive. If IBM service personnel analysis indicates a problem with non-IBM media it may be necessary for the customer to replace the media.

## Tape Handling and Storage

Most tape is supplied in a sealed cartridge. It is provided this way so that the tape will remain in a clean environment. The tape also is held under proper tension inside the cartridge. If the cartridge is dropped, this tension can be relaxed. Inserting a dropped cartridge into a tape drive can cause incorrect loading and result in a jam. This will ruin the tape and can cause physical damage if the cartridge is not removed properly.

When the tapes are stored, they must be replaced in their protective containers and stored on their end. The storage area must be clean, dry, normal room temperature and away from any magnetic fields. For guidelines to be followed when using DLT tape cartridges, see “Chapter 5. Using the Media” on page 27.

## Environmental Issues

Tape drives are designed to operate in a clean environment. Dirt, dust, fibers, and airborne particles can cause problems if allowed to contaminate the tape drive or cartridges. Airborne particles are the most difficult to control. When a tape is installed in the tape drive, the clearance between the heads and the tape is smaller than the width of a speck of dust. Particles can damage the tape or the head if they come in contact with either. IBM offers a tape drive filter enclosure for some systems to solve this problem. The enclosure draws air in through a filter and supplies the tape drive with clean air. Customers are responsible to provide a clean operating environment for the tape drive and system.

## Tape Drive Cleaning

No matter how clean the environment, debris may build up on the heads of any tape drive. Every time tape motion occurs, some of the media surface comes off on the heads. Over time, this builds up and causes errors in reading and writing. Customers are responsible to clean the tape drive in accordance with the cleaning information provided with the tape drive.

IBM only recommends and supports the use of IBM cleaning cartridges for IBM tape drives.

Cleaning cartridges can be used a limited number of times. Once a cleaning cartridge has been used to its maximum number of times, the cartridge is considered expired. When cartridges expire, they must be replaced. Never reuse an expired cleaning cartridge as this can allow previously removed dirt to be reintroduced to the tape drive. When you have cleaned the tape drive, mark the usage on the cartridge in order to best determine when your IBM cleaning cartridge has expired.

See “Cleaning the Tape Drive” on page 22 for the proper procedures to be used to clean the 7205 Digital Linear Tape Drive.

## SCSI Hardware Issues

SCSI bus cables and terminators may affect tape drive performance. IBM cables and terminators are designed specifically to keep the SCSI bus as free of noise as possible. Use of non-IBM cables or terminators may adversely affect the SCSI bus performance. If IBM service personnel analysis indicates a problem with non-IBM cables, it may be necessary for the customer to replace them with the appropriate IBM cables.

## Microcode Updates

IBM constantly works to provide the best possible tape drive products. To make certain that the drives work their very best, IBM occasionally releases changed microcode for the tape drives. When a microcode change is developed, IBM makes it available to you through the service organization or by electronic delivery.

RS/6000 customers can download microcode changes from the following IBM Web site:

<http://www.rs6000.ibm.com/support/micro>

Microcode can be installed by your authorized IBM Customer Service Representative or your system administrator.

## Summary

Your tape drive must be installed in the cleanest possible environment. Additionally, IBM tape drives require high quality, data grade tapes and cleaning on a regular basis. Media must also be stored and handled properly. Improper use, storage or handling of tape drives or media may void your IBM warranty or service agreement.

If a tape drive stops functioning due to a component failure during the tape drive warranty or maintenance time, IBM will replace the tape drive unit. IBM will replace any defective tape drive under the terms and conditions of the IBM warranty or service agreement. It is our objective to work with you to identify the cause of any tape drive problems and provide a solution.



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## Chapter 2. Setting Up the 7205 Digital Linear Tape Drive

This chapter provides step-by-step instructions on how to properly install the 7205 Model 440 Digital Linear Tape 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)**

**Note:** If the package arrives damaged, contact your shipper immediately.

**Attention:** The 7205 Digital Linear Tape Drive is a precision device that requires reasonable care in handling to prevent data loss or permanent damage. Avoid bumping or dropping the 7205 Digital Linear Tape Drive.

To unpack the 7205 Digital Linear Tape Drive, simply remove the packing material from the box it was shipped in.

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## Performing the Installation

To install the 7205 Digital Linear Tape 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 the appendix, "Power Cables," on page "Appendix A. Power Cables" on page 37)

The *External Devices Warranty Information* (U.S., Canada, and Puerto Rico only)

The *7205 Model 440 Digital Linear Tape Drive Setup and Operator Guide* (this guide)

The *7205 Model 440 Digital Linear Tape Drive Service Guide*

The *IBM Externally Attached Devices Safety Information* manual

One of the following:

- A system-to-device SCSI bus cable and a terminator (if the 7205 Digital Linear Tape Drive is the first external device on the SCSI bus)
- A device-to-device SCSI bus cable (if the 7205 Digital Linear Tape Drive is to be connected to another SCSI device)

Data cartridge

Test cartridge

Cleaning cartridge

## Step 2. Checking the Electrical Outlets

### 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)

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

## Step 3. Assembling the Materials

Refer to your system management or system hardware manuals to locate the information that you need to connect the 7205 Digital Linear Tape Drive.

**Get your system unit books now.** You may find the needed information under the topics:

- Installing an external SCSI tape drive
- SCSI adapters
- External SCSI devices

**Do not continue** until you have located the manual that describes how to:

1. Determine where the SCSI adapter is located (where you make the cable connection).

Record the adapter location here

4310002

2. Determine an unused SCSI address for the 7205 Digital Linear Tape Drive.

Record the SCSI address here

4310002

### Notes:

- a. IBM recommends that you set the SCSI address for the 7205 Digital Linear Tape Drive in the range of 0 through 6. The SCSI address priorities range from highest to lowest as 7, 6, 5, 4, 3, 2, 1, 0, then 15, 14, 13, 12, 11, 10, 9, 8.
- b. If you change the SCSI address, you must power off the 7205 Digital Linear Tape Drive, then power on again in order for the new SCSI address to take effect.

## Step 4. Setting the SCSI Address

The SCSI address is a unique address that identifies the 7205 Digital Linear Tape Drive to your system unit. Use the SCSI address switch **1** to set the SCSI address of the 7205 Digital Linear Tape Drive. The switch is located on the rear of the tape drive (see Figure 2 on page 9). When setting a SCSI address, do not select one that is already in use.

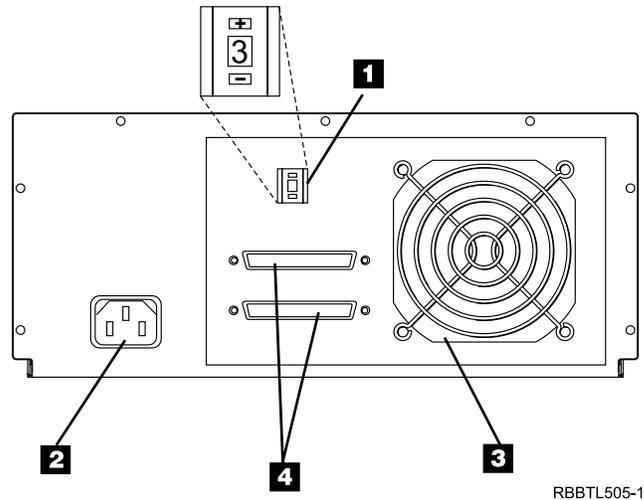


Figure 2. Rear View of the 7205 Model 440 Digital Linear Tape Drive

To set the SCSI address, do the following:

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 8.

**Notes:**

1. IBM recommends that you set the SCSI address for the 7205 Digital Linear Tape Drive in the range of 0 through 6. The SCSI address priorities range from highest to lowest as 7, 6, 5, 4, 3, 2, 1, 0, then 15, 14, 13, 12, 11, 10, 9, 8.
2. If you change the SCSI address, you must power off the 7205 Digital Linear Tape Drive, then power on again in order for the new SCSI address to take effect.

## Step 5. Placing the 7205 Digital Linear Tape Drive

The 7205 Digital Linear Tape 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 location that is table height
- In a horizontal position (IBM does not support placing the tape drive vertically)
- Where the tape cartridge can be easily inserted
- Where the indicator lights can be easily viewed (for information about indicator lights, see “Chapter 3. Using the 7205 Digital Linear Tape Drive” on page 15)
- In an environment that is free from excessive dust

**CAUTION:**

**Be careful when removing or installing this part or unit. This part or unit is heavy, but has a weight smaller than 18 kilograms (39.7 pounds). (RSFTC201)**

To place the 7205 Digital Linear Tape Drive, do the following in sequence:

1. Set the tape drive in the location that you have previously determined.
2. Connect the power cable to the 7205 Digital Linear Tape Drive. **(Do not plug it into the electrical outlet at this time.)**

Some of the external devices that attach to the system unit can be stacked. When stacking external devices, do not place more than 30 pounds on top of the 7205 Digital Linear Tape Drive.

## Step 6. Performing a System Shutdown

**Attention:** Do not attach the 7205 Digital Linear Tape Drive to a system unit that is powered on. This can damage the 7205 Digital Linear Tape 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, do a controlled fast shutdown of the system unit by typing **shutdown -F** from the system console. (You must have root authority to perform the shutdown; see your system administrator.) Depending on your system configuration, the shutdown may take several minutes.

**Note:** For additional information about doing a controlled shutdown, refer to your system documentation or see your system administrator.

2. When the message **Halt Completed** displays on the system console, turn off the power to the system unit (this may occur automatically).
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 for all external devices and the system unit from their electrical outlets.

## Step 7. Connecting the SCSI Bus Cable

To connect the SCSI bus cable, do the following:

1. On the rear of the 7205 Digital Linear Tape Drive (1 in Figure 3 on page 11), insert the device connector end of the SCSI bus cable (3) into one of the connectors (3). See Figure 3 on page 11.
2. Push in until the cable is seated.
3. Tighten the two thumbscrews (4) (finger tight).

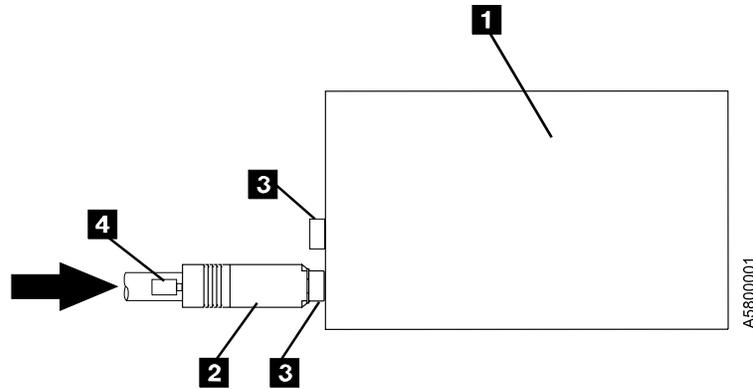


Figure 3. Connecting the SCSI Bus Cable to the 7205 Digital Linear Tape Drive

4. Connect the other end of the SCSI bus cable as follows:
  - If the 7205 Digital Linear Tape Drive is the only device on the SCSI bus, connect the cable to the system unit (see Figure 4).
  - If the 7205 Digital Linear Tape Drive is part of a multiple-device configuration, connect the SCSI cable to the next device (see Figure 5 on page 12).
  - If the 7205 Digital Linear Tape Drive is part of a multiple-device configuration, consisting of both wide and narrow devices, the 7205 Tape Drive must be connected closer to the system on the bus than any narrow devices.

## Step 8. Installing the SCSI Terminator

Make sure to install a terminator on the last device in the configuration and ensure the terminator matches the system SCSI adapter type. For example, if the system is using an LVD SCSI adapter, the terminator must also be an LVD type terminator.

To install the SCSI terminator, do the following:

Align the SCSI terminator with the appropriate connector, push in until the terminator is seated, and tighten the thumbscrews finger tight.

- If the 7205 Digital Linear Tape Drive is the only SCSI device on the SCSI bus, install the terminator on one of the dual connectors of the 7205 Digital Linear Tape Drive (see Figure 4).

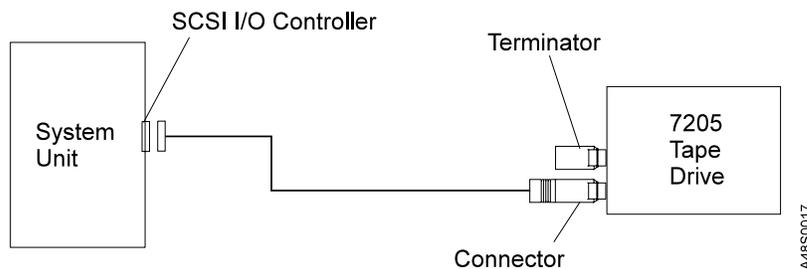


Figure 4. Example of Attaching One SCSI Device to the System Unit

- If there is more than one device on the SCSI bus, move the terminator to the last device as shown in Figure 5.

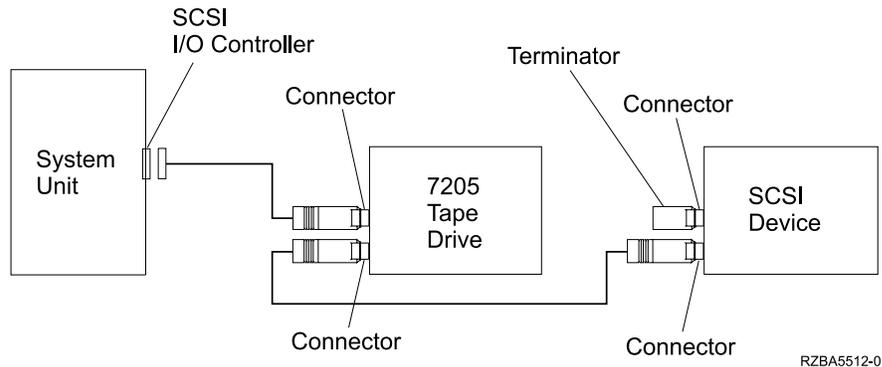


Figure 5. Example of Attaching Multiple SCSI Devices to the System Unit

**Notes:**

1. The terminator and the SCSI bus cable can be connected to either the top or bottom SCSI connector on the 7205 Digital Linear Tape Drive.
2. Only one terminator is required on the last device on the bus to terminate the SCSI bus. You do not need to use the terminator shipped with the 7205 Digital Linear Tape Drive if an IBM terminator has been previously installed.

## Step 9. Connecting the Power Cables

To connect the power cables, do the following:

1. Plug the 7205 Digital Linear Tape Drive power cable into an electrical outlet.
2. Plug the power cables for all other external devices into electrical outlets.
3. Plug the system unit power cable into an electrical outlet.
4. Turn on the power to all of the external devices except for the 7205 Digital Linear Tape Drive.
5. Turn on the power to the 7205 Digital Linear Tape Drive while watching for the following to occur during the Power-On Self Test (POST):
  - a. The lights on the right front panel come on sequentially from top to bottom. All lights stay on for a few seconds.

**Note:** For information about all indicator lights, see Table 2 on page 17.

- b. All lights on the left front panel of the drive turn on at the same time for about 3 seconds, then turn off.
- c. The following lights turn off:
  - Green Operate Handle
  - Green Write Protected
  - Yellow Use Cleaning Tape

The green Tape in Use light blinks while the tape drive initializes.

- d. After initialization, the 7205 Digital Linear Tape Drive is in one of four states:
  - No cartridge is present
  - A cartridge is present and the handle is down
  - A cartridge is present, but the handle is up (not recommended). The blinking green Operate Handle light will display.
  - The 7205 Digital Linear Tape Drive detects an error

**Note:** If the POST does not complete successfully, the 7205 Digital Linear Tape Drive has detected an internal fault. Refer to Chapter 3, “Maintenance Analysis Procedures” in the *7205 Model 440 Digital Linear Tape Drive Service Guide*. **Do not continue with the installation at this time.**

6. Turn on the power to the system unit.

## Step 10. Performing the 7205 Digital Linear Tape Drive Checkout Procedure

**Note:** Use an IBM test cartridge (part number 59H3039) for this procedure. See “Types of Tape Cartridges” on page 28 for more information.

To perform the checkout procedure, do the following:

1. Ensure the 7205 Digital Linear Tape Drive is properly configured to the host system by doing the following:
  - a. Log into the host (AIX operating system).
  - 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. Figure 6 shows an example of the screen that displays. The screen lists:

- 1** Device name
- 2** Device status
- 3** SCSI adapter slot number
- 4** Description of the SCSI device
- 5** SCSI address

<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	00-02-01-11,0	16 Bit SCSI Disk Drive
hdisk3	Available	00-02-01-13,0	16 Bit SCSI Disk Drive
hdisk4	Available	00-02-01-12,0	16 Bit SCSI Disk Drive
rmt0	Available	00-07-01-3,0	Differential SCSI DLT Tape Drive
rmt1	Available	00-07-01-11,0	Differential SCSI DLT Tape Drive
		<b>5</b>	

A48S0029

Figure 6. Screen Display of SCSI Devices Attached to the host

- c. From the list of SCSI devices, identify the 7205 Digital Linear Tape Drive (listed as the Differential SCSI DLT Tape Drive):
  - If the status of the 7205 Digital Linear Tape Drive is displayed as *Available*, the device has successfully been configured.

**Note:** You must have root authority to install or remove the 7205 Digital Linear Tape Drive from the system. To obtain root authority, see your system administrator.

- If the status is not displayed as *Available*, refer to Chapter 3, “Maintenance Analysis Procedures,” in the *7205 Model 440 Digital Linear Tape Drive Service Guide*. For more information about configuring the 7205 Digital Linear Tape Drive to the system software, refer to your AIX or host system manuals.
  - Run systems diagnostics on the drive. Refer to your AIX or host system manuals for this procedure.
- d. This completes the 7205 Digital Linear Tape Drive installation.

Store the test cartridge and the cleaning cartridge for future use.

---

## Chapter 3. Using the 7205 Digital Linear Tape Drive

This chapter describes the operator controls and indicator lights on the 7205 Digital Linear Tape Drive. It also gives instructions for loading and unloading a tape cartridge, describes how to change the density, and tells how to clean the tape path.

---

### Front View

Figure 7 shows the front of the 7205 Digital Linear Tape Drive.

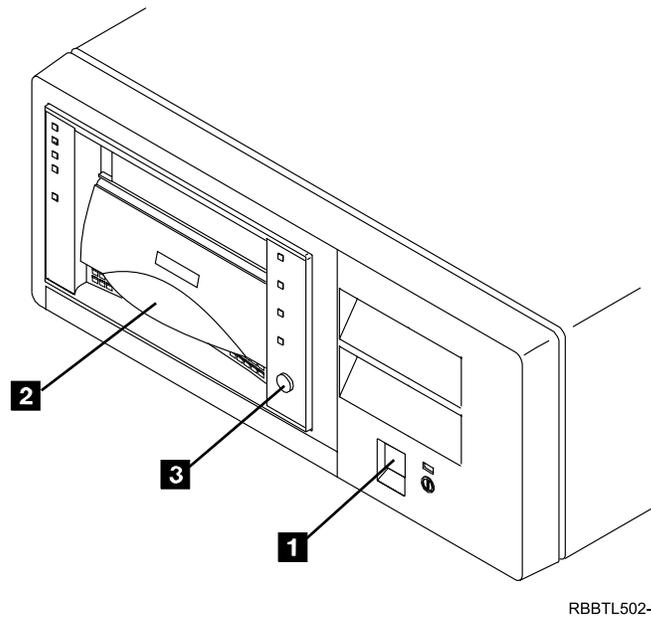


Figure 7. Front View of 7205 Digital Linear Tape Drive

### Status Lights

The following status lights are located on the front panel of the 7205 Digital Linear Tape Drive:

#### Lights on the Left

10.0/15.0 (density)

20.0 (density)

35.0 (density)

40.0 (density)

Compress 

## Lights on the Right

Write Protected 

Tape in Use 

Use Cleaning Tape 

Operate Handle 

The definition of each light is shown in Table 2 on page 17.

## Operator Controls

The 7205 Digital Linear Tape Drive has the following operator controls.

### Power Switch

The power switch (**1** in Figure 7 on page 15) is a push-button switch that enables the power to be turned on or off. When the 7205 Digital Linear Tape Drive is on, the power-on light is on.

**Note:** The  symbol next to the power switch is an International Organization for Standardization (ISO) symbol for a push-button switch.

### Unload Button

**Note:** The unload button operates only when the 7205 Digital Linear Tape Drive power is on.

The unload button (**3** in Figure 7 on page 15) enables a tape cartridge to be removed from the 7205 Digital Linear Tape Drive. To remove a cartridge, press the unload button. After the unload button is pressed, the drive rewinds the tape into the cartridge and illuminates the green Operate Handle light to let you know that the cartridge may be removed.

**Note:** Unloading may take several minutes if the cartridge is at the end of tape.

### Cartridge Insert/Release Handle

The cartridge insert/release handle (**2** in Figure 7 on page 15) enables a cartridge to be loaded or removed. To load a cartridge, lift the handle, insert the cartridge, then lower the handle. To unload the cartridge, reverse this procedure.

**Note:** A tape cartridge cannot be removed until the green Operate Handle light comes on.

## Indicators

The 7205 Digital Linear Tape Drive has a power-on light to indicate when the drive is on.

### Power-On Light

When the 7205 Digital Linear Tape Drive is turned on, the power-on light comes on and stays on.

**Note:** During the power on procedure it is normal to hear several seconds of gear noise. This sound is the drive calibrating to ensure the heads are in the correct position.

## Definition of Status Lights

For a listing of the status lights located on the front panel of the 7205 Digital Linear Tape Drive, see “Status Lights” on page 15. Table 2 gives the definition of each status light.

**Note:** The unload button operates only when the 7205 Digital Linear Tape Drive power is on.

Table 2. Definition of Status Light States

Status Light	Color	State	Operating Condition
<b>Lights on the Left</b>			
10.0/15.0	Green	On	The tape is recorded in 10.0/15.0GB format.
20.0	Green	On	The tape is recorded in 20.0GB format.
35.0	Green	On	The tape is recorded in 35.0GB format.
40.0	Green	On	The tape is recorded in 40.0GB format
Compress	Green	On	The compression mode is enabled.
		Off	The compression mode is disabled.
<b>Note:</b> In a read operation, indicators will reflect the density and compression written on the tape.			
<b>Lights on the Right</b>			
Write Protected	Green	On	The tape is write protected.
		Off	The tape is write enabled.
Tape in Use	Green	Blinking	The tape is moving.
		On	The tape is loaded and ready for use.
		Off	No cartridge is loaded.

Table 2. Definition of Status Light States (continued)

Status Light	Color	State	Operating Condition
Use Cleaning Tape	Yellow	On	The drive needs cleaning, or the data tape is defective.
		Remains on after you unload the cleaning tape.	The cleaning tape failed to clean the drive. Try a new cleaning tape.
		After cleaning, turns on again when you reload the data cartridge.	There is a problem with the data cartridge. Clean the drive again, then try another data cartridge. If the problem persists, refer to “Maintenance Analysis Procedures” in Chapter 3 of the <i>7205 Model 440 Digital Linear Tape Drive Service Guide</i> .
		Comes on after inserting cleaning cartridge.	The cleaning cartridge has expired. Replace the cleaning cartridge.
		Off	The cleaning is complete, or cleaning is unnecessary.
Operate Handle	Green	On	It is safe to operate the cartridge insert/release handle.
		Off	Do not operate the cartridge insert/release handle.
<b>All Lights</b>			
All Lights on the Left		Blinking	An internal error has occurred. Refer to “Maintenance Analysis Procedures” in Chapter 3 of the <i>7205 Model 440 Digital Linear Tape Drive Service Guide</i> for more information.
All Lights on the Right		Blinking	An internal error has occurred. Refer to “Maintenance Analysis Procedures” in Chapter 3 of the <i>7205 Model 440 Digital Linear Tape Drive Service Guide</i> .
All lights on the Left AND Right		On	The Power-On Self Test (POST) is starting.
		Blinking	An internal error has occurred. Refer to “Maintenance Analysis Procedures” in Chapter 3 of the <i>7205 Model 440 Digital Linear Tape Drive Service Guide</i> .

## Loading and Unloading the Tape Cartridge

Before loading the tape cartridge:

- Make sure that the 7205 Digital Linear Tape Drive power is on (the power-on light should be on). For power switch information see “Power Switch” on page 16.
- Make sure that the Operate Handle light is on.
- Be aware that the 7205 Tape Drive may take a long time to calibrate a new tape and become ready. During this time, the cleaning light may be illuminated, but should turn off when the drive is ready. Make sure that you allow enough time for the drive to complete its calibrations.

## Loading the Tape Cartridge

Figure 8 shows the procedure for loading the tape cartridge:

**Note:** Before loading the tape cartridge, check the tape leader to ensure it is in the correct position and is not damaged. Refer to “Tape Cartridge Inspection” on page 31 for information on inspecting the tape cartridge leader.

- 1** Grasp the cartridge insert/release handle at its center and lift it up.
- 2** Grasp the tape cartridge by the outer edges, with the write-protect switch facing you, and slide the cartridge completely into the opening on the front of the 7205 Digital Linear Tape Drive.
- 3** Push down the cartridge insert/release handle.

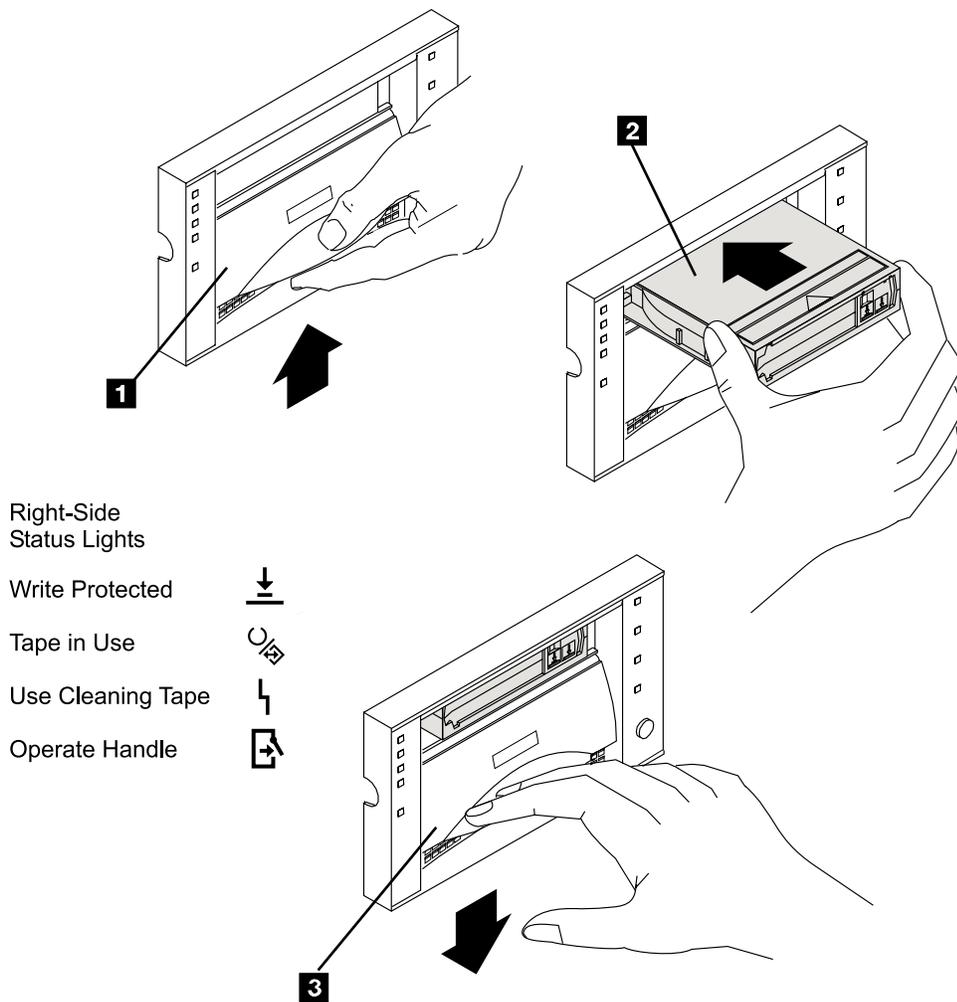


Figure 8. Loading the Tape Cartridge

After the cartridge insert/release handle is closed, the Operate Handle light goes off and the green Tape in Use light (see “Status Lights” on page 15) starts blinking. When loading is complete, the green Tape in Use light comes on solid.

## Unloading the Tape Cartridge

Use the following procedure to unload the tape cartridge:

**Note:** Remove the cartridge from the drive before turning off the 7205 Digital Linear Tape Drive power. Failure to remove a cartridge can result in cartridge and drive damage. When you remove the cartridge from the drive, return the cartridge to its plastic case to prolong the cartridge life.

1. Press the unload button (see **3** in Figure 9 on page 21) or issue the appropriate system or application software command, such as `tctl -f/dev/rmt1 offline`.

**Note:** This software command offloads the tape from the tape path. The green Operate Handle light comes on and you must manually remove the tape.

2. When the green Operate Handle light (**2** in Figure 9 on page 21) comes on, lift the cartridge insert/release handle to eject the cartridge.
3. Grasp the tape cartridge and remove it from the tape drive (see **4** in Figure 9 on page 21).
4. Push down the cartridge insert/release handle (**5** in Figure 9 on page 21).
5. Return the cartridge to its plastic case to prolong the cartridge life. Refer to “Chapter 5. Using the Media” on page 27 for information on storage and inspection of the tape cartridges.

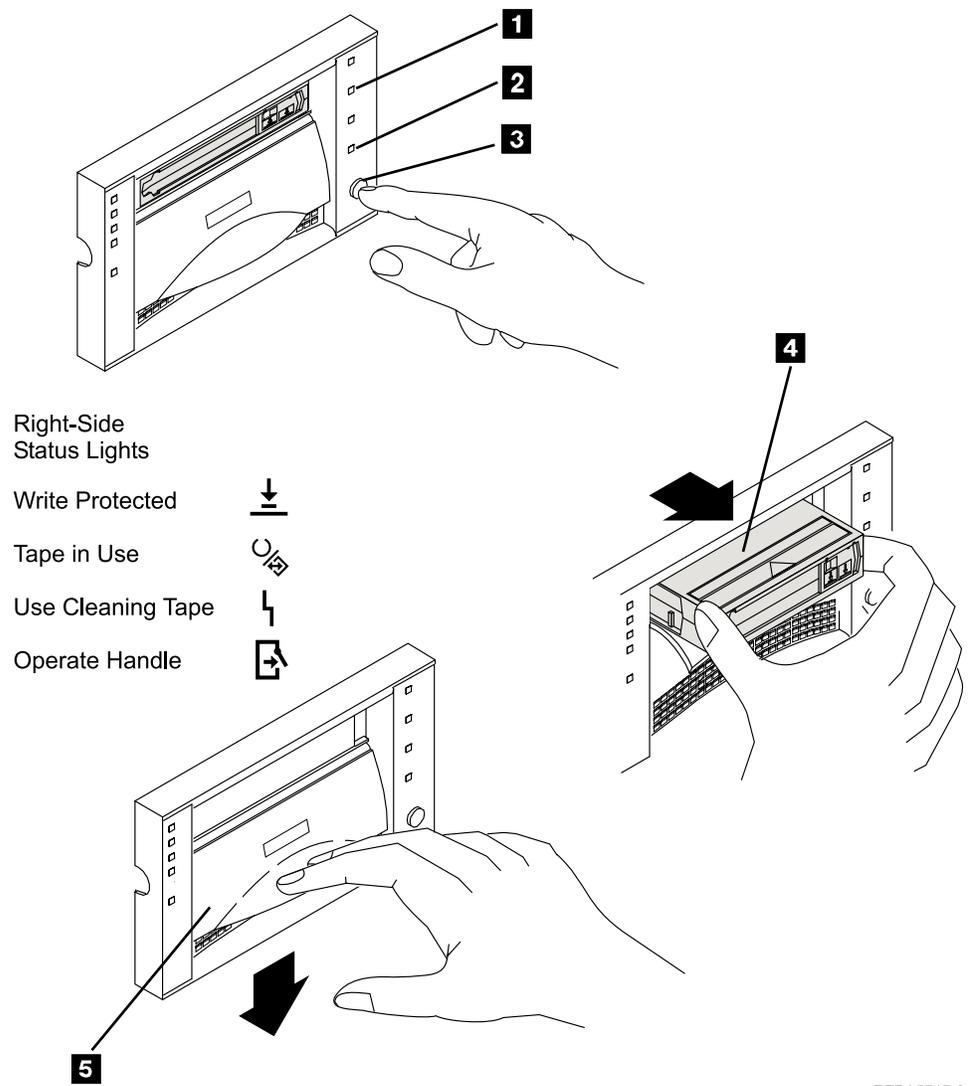


Figure 9. Unloading the Tape Cartridge

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## Cleaning the Tape Drive

**Attention:** The 7205 Digital Linear Tape Drive is designed to determine its own cleaning requirements. It is unnecessary to clean the tape drive unless indicated by the LED.

Use an IBM cleaning cartridge (part number 59H3092) for this procedure. Clean the tape drive when the Use Cleaning Tape light comes on (see Table 2 on page 17).

**Notes:**

1. Cleaning cartridges used with the 7205 Digital Linear Tape Drive are good for a maximum of 20 uses.
2. Over cleaning can damage the tape drive. Cleaning should only be performed when the drive indicates it is needed by illuminating the Use Cleaning Tape LED.
3. Do not operate the 7205 Digital Linear Tape Drive in a poor air-quality environment. An environment which contains an excessive amount of particulates can damage the drive and media, causing poor performance of the 7205 Digital Linear Tape Drive.

**Note:**

The IBM DLT cleaning cartridge is shipped with labels to be used for tracking the number of times the cartridge has been used. Each label has 20 small boxes. Slide the label into the edge of the cartridge (see Figure 11 on page 28) and each time the cartridge is used, mark a box with a pen. When all of the boxes have been marked (indicating 20 uses), the cartridge should be discarded.

## Loading and Unloading the Cleaning Cartridge

To load the cleaning cartridge:

1. Make sure that the 7205 Digital Linear Tape Drive power is on (the power-on light **1** should be on).
2. Make sure that the Operate Handle light **2** is on.
3. Check the cleaning cartridge to determine whether the maximum number of uses has been reached. If the label indicates that the cartridge has reached the maximum number of uses, discard the cleaning cartridge and use a new cleaning cartridge.
4. Grasp the cartridge insert/release handle **4** at its center and lift it up.
5. If a tape cartridge was in the drive, remove the cartridge from the drive.
6. Grasp the cleaning cartridge by the outer edges, with the write-protect switch **5** facing you.

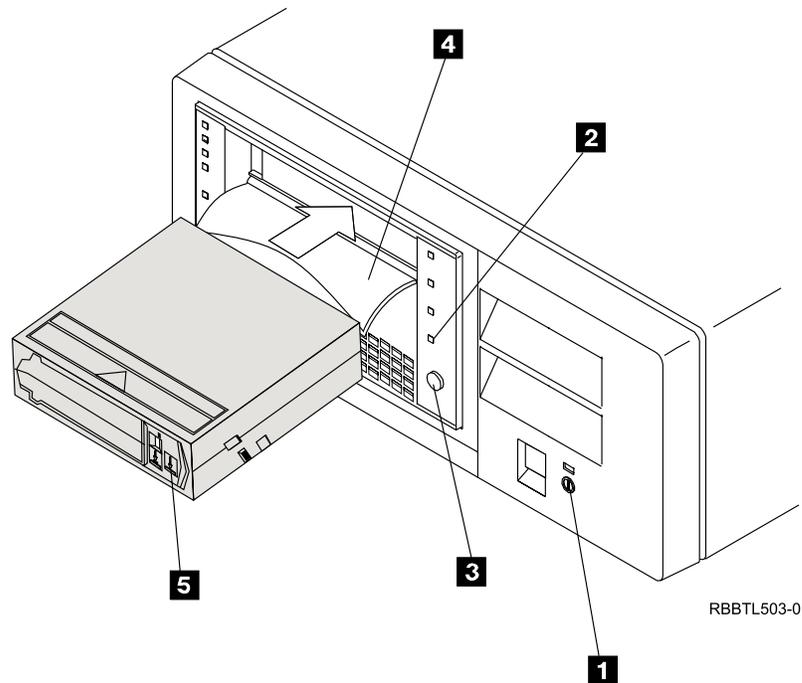


Figure 10. Loading the Cleaning Cartridge

7. Slide the cartridge completely into the opening on the front of the 7205 Digital Linear Tape Drive.
8. Push down the cartridge insert/release handle **4**.

After the cartridge insert/release handle is closed, the Operate Handle light goes off and the green Tape in Use light starts blinking and the cleaning procedure proceeds automatically. When cleaning is complete, the Operate Handle light becomes solid. If the cleaning was successful, the cleaning light be turned off (if it was previously on). If the cleaning operation was not successful, the cleaning light will remain illuminated. If this occurs, remove the cleaning cartridge and retry the procedure using a new cleaning cartridge. To unload the cleaning cartridge:

**Note:** Remove the cartridge from the drive before turning off the drive. Failure to remove a cartridge can result in cartridge and drive damage. When you remove the cartridge from the drive, return the cartridge to its plastic case to prolong the cartridge life.

1. When the green Operate Handle light (**2** in Figure 10) comes on, lift the cartridge insert/release handle (**4** in Figure 10) to unload the cartridge.
2. Remove the cartridge.
3. Use a pen to mark one of the use boxes on the cleaning cartridge label. This will help in determining when the usefulness of the cartridge has been depleted.
4. Push down the cartridge insert/release handle (**4** in Figure 10).



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## Chapter 4. Moving or Removing the 7205 Digital Linear Tape 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:** Damage as a result of improper handling may void your equipment warranty.

---

### Removal Checklist

When moving or removing the 7205 Model 440 Digital Linear Tape Drive, perform the following steps:

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

**Note:** If loaded, remove the tape cartridge from the drive by pressing the unload button while the 7205 Digital Linear Tape Drive power is **on**. If the cartridge does not unload, see “Manually Removing a Tape Cartridge” in Chapter 4 of the *7205 Model 440 Digital Linear Tape Drive Service Guide*, SY44-0077.

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

1. Remove the 7205 Digital Linear Tape Drive from the system configuration (for instructions, refer to your system manuals).
2. If it is on, do a controlled shutdown of the system unit. See “Step 6. Performing a System Shutdown” on page 10.
3. Turn off the power to the system unit.
4. Turn off the power to the 7205 Digital Linear Tape Drive.
5. Turn off the power to all external devices attached to the system.
6. Unplug the system unit power cable from the electrical outlet.
7. Unplug the power cable for all external devices, including the 7205 Digital Linear Tape Drive, 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.

8. Disconnect the SCSI bus cable from the 7205 Digital Linear Tape Drive.
9. Ensure that the terminator is on the last device on the SCSI bus (see “Step 8. Installing the SCSI Terminator” on page 11).
10. Remove the 7205 Digital Linear Tape Drive and place it in the new location.
11. Reinstall the 7205 Digital Linear Tape Drive (see “Chapter 2. Setting Up the 7205 Digital Linear Tape Drive” on page 7).



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## Chapter 5. Using the Media

**Note:** If a prerecorded tape is used and the Write From Beginning of Tape (BOT) command is issued, all data that was on the tape before the write command was issued will be lost. Density settings will also be lost, because new settings will be set when the Write from BOT command is issued.

For read operations of prerecorded tape media, the recorded density will be read back. For write operations, the tape media can be recorded using any of the supported densities of the loaded tape type from BOT, or the default density of the loaded tape type. For write append operations (adding new data to the end of the prerecorded data), the prerecorded data density will be used.

Table 3 gives tape cartridge densities and capacities.

Table 3. Tape Cartridge Capacity and Density

Type of Cartridge Supported	Density Format	Native Data Capacity	Compressed** Data Capacity	Density Setting in Decimal	Density in Hexidecimal (Reference Only)
DLTtapeIII	DLT2000	10.0GB	20.0GB (default for drive)	25	19h
DLTtapeIIIxt	DLT2000xt	15.0GB	30.0GB (default for drive)	25	19h
DLTtapeIV	DLT4000	20.0GB	40.0GB	26	1Ah
	DLT7000	35.0GB	70.0GB	27	1Bh
	DLT8000	40.0GB	80.0GB (default for drive)	65	41h

**Note:** This drive is very sensitive to block size. For example, using a block size of 1024 and backing up 32GB of data will take approximately 22 hours. 32GB of data backed up at a block size of 30,000 will take approximately 2 hours. Small block sizes have a significant impact on performance, but only a minimal impact on capacity.

Users should ensure the block size they select is supported by their application.

\*\* Compression will depend upon the type of data. A compression ratio of 2:1 is assumed for this compressed capacity.

**Note:** The 7205 Tape Drive only supports the data densities listed in Table 3. Data cartridges written in other formats will not be recognized by the drive and these cartridges will not be readable by the 7205 Model 440 Digital Linear Tape Drive. The 7205 Tape Drive will also overwrite any existing unrecognized format data when a write command is issued.

---

### Changing Tape Density

**Note:** Refer to *AIX V4 System Management Guide: Operating Systems and Devices* for more information on changing the tape density.

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## Types of Tape Cartridges

The 7205 Digital Linear Tape Drive is shipped with a data cartridge (part number 59H3040), a test cartridge (part number 59H3039), and a cleaning cartridge (part number 59H3092).

**Note:** IBM only supports the use of IBM media.

### Data Cartridge

Use the data cartridge for saving or restoring your programs or data. Place the label in location **1** as shown in Figure 11.

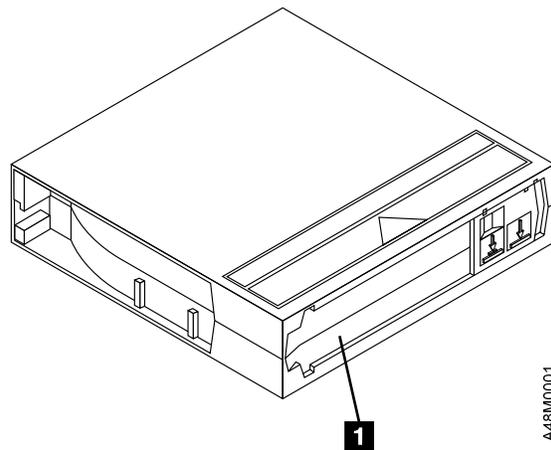


Figure 11. Placement of Label on the Data Cartridge

### Test Cartridge

Reserve the specially labeled test tape cartridge for use on the drive while performing diagnostics. Do not use it to save or restore programs or data.

### Cleaning Cartridge

Use the specially labeled cleaning cartridge to clean the 7205 Digital Linear Tape Drive. For more information see “Cleaning the Tape Drive” on page 22.

**Note:** Cleaning cartridges are good for a maximum of 20 uses.

To order additional cartridges, refer to “Appendix B. Ordering Tape Cartridges” on page 39.

---

## Recommendations for Data Cartridge Usage

Use the following handling guidelines and conduct careful inspections of the tape cartridges on a regular, ongoing basis. By adhering to these guidelines and making sure that the tape cartridges are stored within the specified environmental limits, the chance of experiencing problems due to tape cartridges will be greatly minimized.

- Use only recommended data cartridges with the 7205 Digital Linear Tape Drive.
- **Before using a DLT cartridge, inspect it carefully as described in “Tape Cartridge Inspection” on page 31.**
- Do not drop or bump the data cartridge; this may dislodge or damage its internal components. Cartridges that have been dropped should be thoroughly inspected prior to insertion into a tape drive.
- Store data cartridges vertically and in their plastic cases.
- When carrying the tape cartridges in their cases, always orient the cases so that the grooves in the cases interlock. This prevents the cases from slipping apart and falling.
- Do not carry tape cartridges loosely in a box or any other container. Allowing cartridges to hit together exposes the cartridges to unnecessary physical shock(s).
- Never stack the tape cartridges in stacks of more than five (5).
- Do not place data cartridges near electromagnetic interference sources, such as terminals, motors, and video or X-ray equipment; data on the tape may be altered.
- Avoid opening the cartridge door; this may expose the tape to contamination or physical damage.
- Do not touch the tape or tape leader. Natural skin oils can contaminate the tape and impact tape performance.
- Always observe the proper environmental conditions for the storage of tape cartridges. Refer to the cartridge reference card supplied with each cartridge.
- Do not expose the tape cartridge to excessive moisture or prolonged direct sunlight.
- Do not operate in a dusty environment.
- Clean the 7205 Digital Linear Tape Drive whenever the Use Cleaning Tape light comes on. For more information, see “Cleaning the Tape Drive” on page 22.
- Do not adhere labels to a cartridge anywhere except in the slide-in slot (see Figure 11 on page 28). Never apply adhesive labels or POST-IT notes on the top, side, or bottom of the tape cartridge. Only use the slide-in type labels provided with each cartridge.

---

## Storage and Shipping Environments

Before using a tape cartridge, let it acclimate to the operating environment by placing the cartridge in the operating environment for as long as it has been away from the environment or for 24 hours, whichever is less. (To determine the appropriate operating environment, see “Specifications” on page 3.)

Acclimation is necessary for any data cartridge exposed to a different humidity environment or to temperature changes of 11°C (20°F) or more.

The recommended environment for storage and shipment of data cartridges is shown in Table 4.

Table 4. Recommended Environment for Data Cartridges

Environmental Factor	Storage	Shipping
Temperature	5°C to 45°C (41° to 113°F)	-17 to 49°C (-1 to 120°F)
Relative Humidity (noncondensing)	20 to 80%	20 to 80%
Maximum Wet Bulb	26°C (79°F)	26°C (79°F)

---

## Setting the Write-Protect Switch

The position of the write-protect switch on the tape cartridge determines when you can write to the tape.

- When you slide the switch **1** to the left, data can be read, but not be written, to the tape.
- When you slide the switch **1** to the right, data can be written to and read from the tape.

Figure 12 shows the write-protect switch on the tape cartridge.

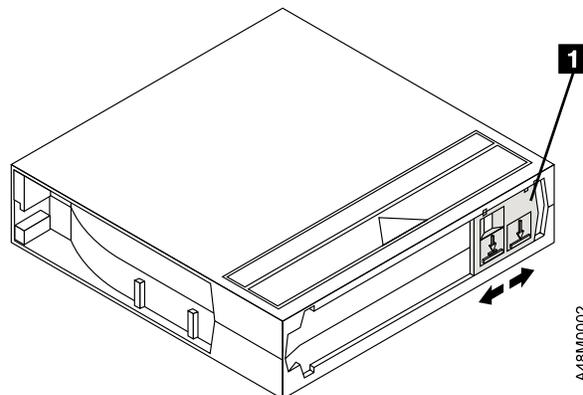


Figure 12. Setting the Write-Protect Switch

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## Tape Cartridge Inspection

Tape cartridges should be inspected for damage and proper tape leader alignment before each use. Use the following sections as guidelines for inspecting the DLT tape cartridge.

### Inspection Frequency

DLT tape cartridges should be inspected:

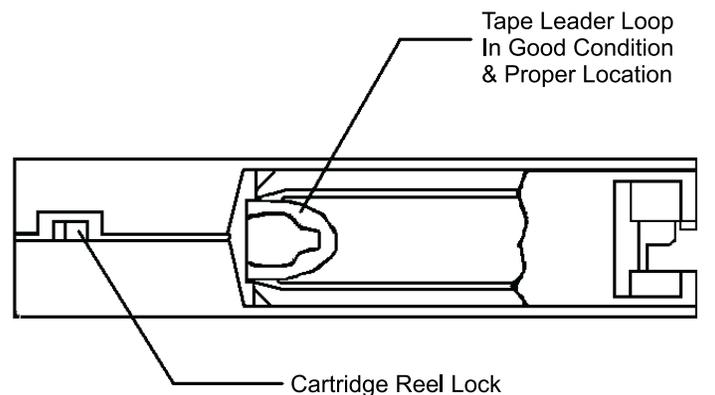
- Before being inserted into a tape drive.
- If a cartridge has been dropped or subjected to a hard physical shock.
- If a tape drive becomes inoperable after loading a tape cartridge.
- If a shipment of tape cartridges is received that shows any signs of shipping damage.

### Inspection Procedure

Use the following steps to inspect the DLT tape cartridge:

1. Check for proper operation of the tape cartridge Write Protect Switch. This sliding switch should move back and forth with a definite snap. The orange tab should be visible when the tape cartridge is set to enable Write Protection.
2. Look at the tape cartridge for any obvious signs of cracks or physical damage. Look for broken or missing parts.
3. Gently shake the tape cartridge. Listen for any rattling or sounds of any loose pieces inside the cartridge. If sounds of loose parts are heard, dispose of the cartridge and do not use it.
4. Hold the tape cartridge so that the end of the cartridge that is normally inserted into the tape drive is facing you (as shown in Figure 13). Inspect the small opening on the left-hand side of the tape cartridge. In the opening, you should see a small plastic tab (typically white colored). This tab is one of two cartridge reel locks. The reel locks can be damaged if a cartridge is dropped or mishandled.

**Note:** If either reel lock is not visible, dispose of the cartridge and do not use it.



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Figure 13. Checking the Cartridge Reel Lock

5. Look at the bottom of the tape cartridge as shown in Figure 14. Inspect the small opening on the right-hand side of the tape cartridge. In the opening, you should see a small plastic tab (typically white colored). This tab is one of two cartridge reel locks. The reel locks can be damaged if a cartridge is dropped or mishandled.

**Note:** If either reel lock is not visible, dispose of the cartridge and do not use it.

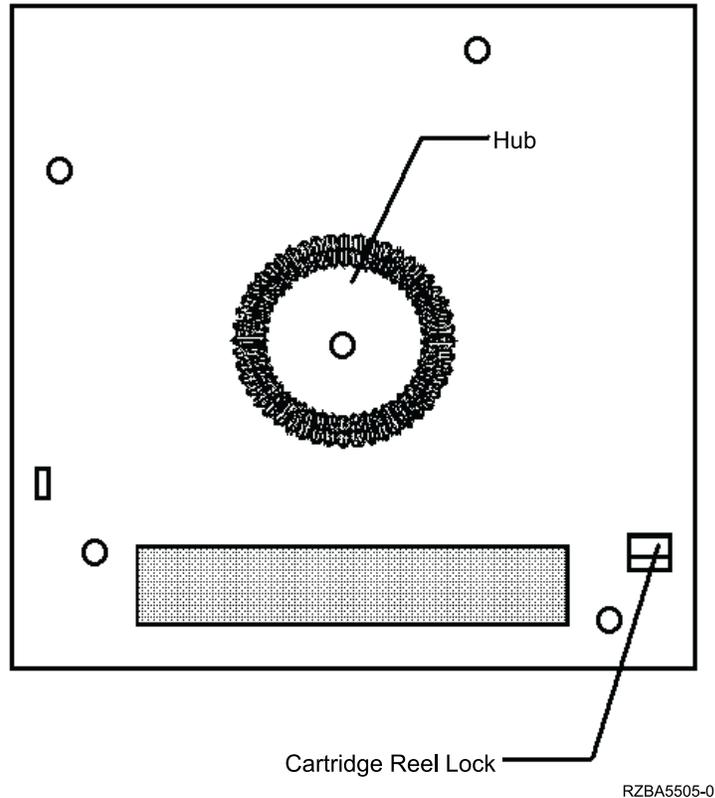
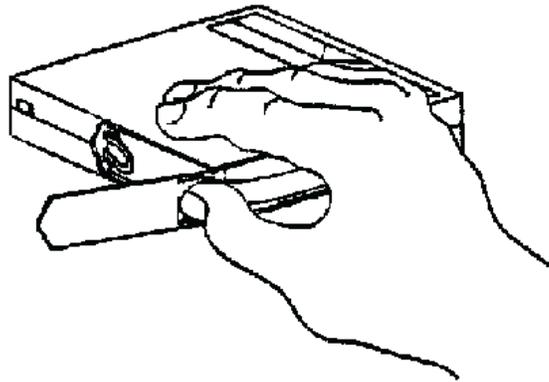


Figure 14. Checking the Cartridge Reel Lock

6. Make sure the spring loaded cartridge hub is centered within the circular opening of the cartridge. Gently press the hub and make sure it springs back into place and is centered.

**Note:** If the hub is not centered or does not spring back, dispose of the cartridge.

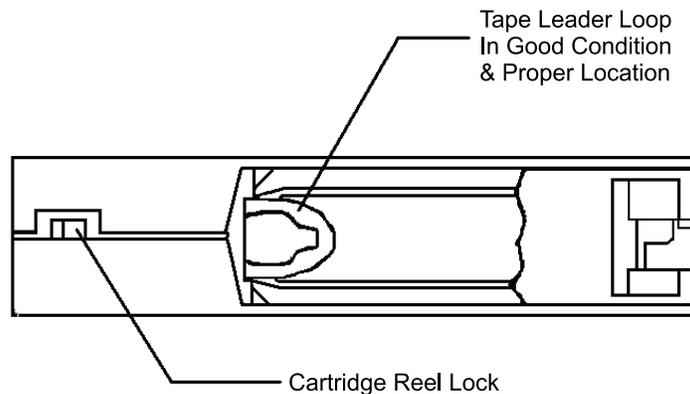
7. Inspect the tape leader that is inside the cartridge. To enable inspection, the cartridge door must be opened. Open the door by using your thumb to gently depress the door locking tab located at the corner of the cartridge. With the tab depressed, gently swing open the cartridge door. With the door open, you should be able to see the tape leader (see Figure 15 on page 33).



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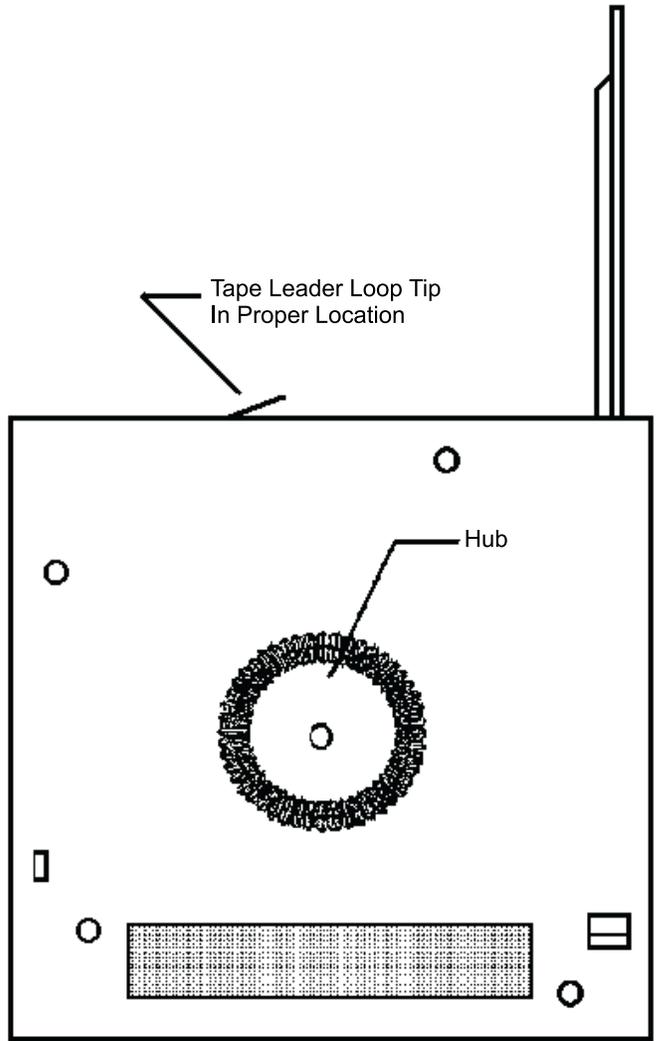
Figure 15. Opening the Tape Cartridge Door

8. Ensure the tape leader is not pulled too far into the tape cartridge. If the tape leader has been pulled into the cartridge, the DLT drive cannot hook the tape and use the cartridge. Also, make sure the tape is not loosely wound on the cartridge reel (see Figure 16).
9. The tape leader loop should be in the correct position (see Figure 16) and sticking out about  $\frac{1}{4}$  inch from the tape reel outer diameter (see Figure 17 on page 34).



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Figure 16. Cartridge Leader in Correct Position

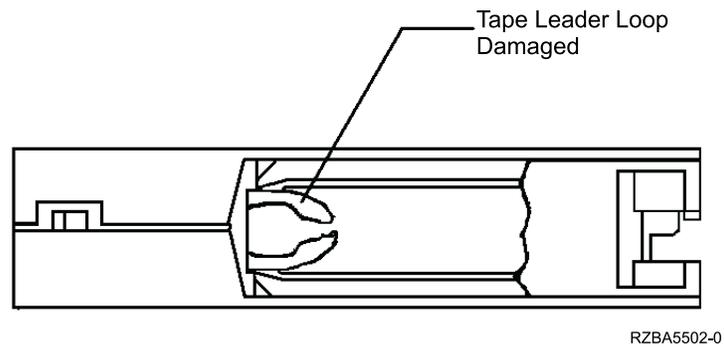


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Figure 17. Side View of Leader Loop in the Correct Position

10. Inspect the tape leader and ensure that it is not damaged, torn, or bent.

**Note:** If the tape or leader appears to be damaged (see Figure 18), dispose of the cartridge and do not use it.



*Figure 18. Damaged Leader Loop on a Tape Cartridge*



## Appendix A. 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'.”

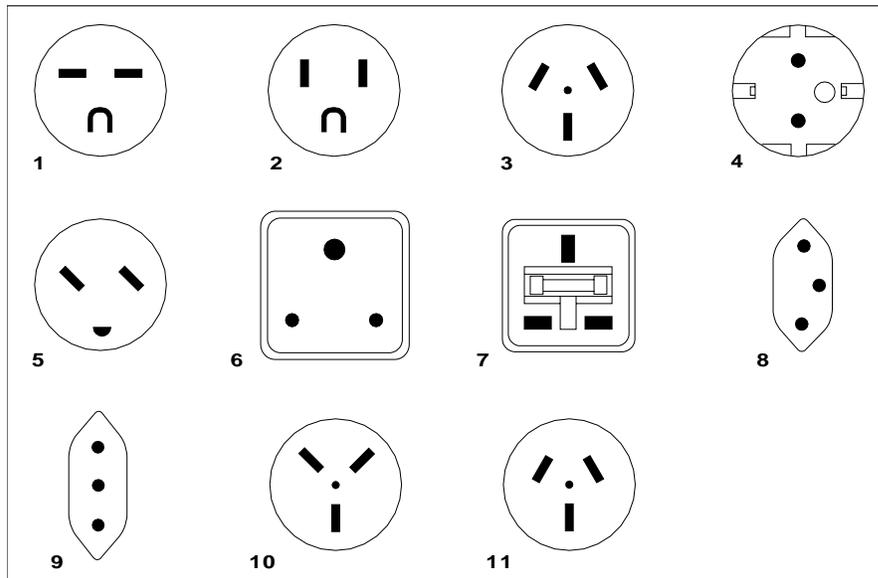
Table 5 lists the power cable part number, the country where the power cable can be used, and an index number to be matched with the receptacles shown in Figure 19 on page 38. If your power cable does not match this information, contact your local dealer.

*Table 5. 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
6952301 6 ft Chicago	Chicago, U.S.A.	2
13F9940 Australia	Argentina, Australia, New Zealand, Uruguay	3

Table 5. Power Cable Information (continued)

Part Number	Country	Index
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 19. Types of Receptacles

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## Appendix B. Ordering Tape Cartridges

Table 6 lists the tape cartridges that you can order for the 7205 Model 440 Digital Linear Tape Drive. IBM Media Distribution North America will serve the U.S., Canada, Latin America, and Asia Pacific. IBM Supplies Distribution will serve Europe, the Middle East and Africa. To order media or to obtain the name of the nearest authorized distributor or dealer, IBM customers should call 1-888-IBM-MEDIA.

*Table 6. Tape Cartridges for the 7205 Model 440 Digital Linear Tape Drive*

<b>IBM Part Number</b>	<b>Type of Cartridge</b>	<b>Length</b>
59H3411	DLTtapeIIIxt Cartridge	549 m (1800 ft)
59H3040	DLTtapeIV Cartridge	549 m (1800 ft)
59H3092	Cleaning Cartridge	--



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

7205 Model 440 Digital Linear Tape Drive  
7205 Model 440  
Digital Linear Tape Drive  
Setup and Operator Guide

Publication No. SA41-0050-01

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	<input type="checkbox"/>				

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	<input type="checkbox"/>				
Complete	<input type="checkbox"/>				
Easy to find	<input type="checkbox"/>				
Easy to understand	<input type="checkbox"/>				
Well organized	<input type="checkbox"/>				
Applicable to your tasks	<input type="checkbox"/>				

Please tell us how we can improve this book:

Thank you for your responses. May we contact you?  Yes  No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Company or Organization

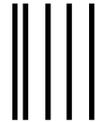
\_\_\_\_\_  
Phone No.



Fold and Tape

Please do not staple

Fold and Tape



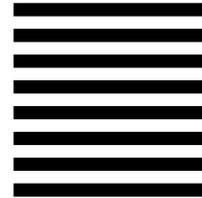
NO POSTAGE  
NECESSARY  
IF MAILED IN THE  
UNITED STATES

# BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

International Business Machines Corporation  
Information Development  
Department 542  
3605 Hwy 52 North  
Rochester, Minnesota 55901-7829



Fold and Tape

Please do not staple

Fold and Tape





Part Number: 19P3327

Printed in U.S.A.

SA41-0050-01



(1P) P/N: 19P3327

