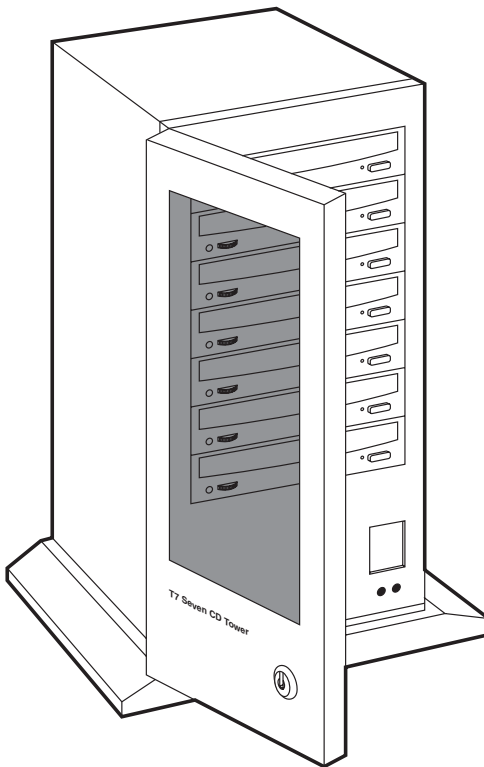




T2, T4, T5, and T7 CD Towers



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FEDERAL COMMUNICATIONS COMMISSION and CANADIAN DEPARTMENT OF COMMUNICATIONS RADIO FREQUENCY INTERFERENCE STATEMENT

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- 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 experienced radio/TV technician for help.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

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Warning!

Use of controls or adjustments, or performance of procedures, other than those specified within may result in hazardous radiation exposure.

Warning!

The laser beam in each CD-ROM drive unit is harmful to the eyes. Do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only. The use of optical instruments with this product will increase eye hazard.

TRADEMARKS USED IN THIS MANUAL

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IBM® is a registered trademark of International Business Machines Corporation.

XA® is a registered trademark of XA Systems Corporation.

Any other trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

1. Specifications

General

Host Interface — SCSI-2; Single-Ended Alternative One

Acceptable Discs — CD-ROM mode 1 or 2 data discs; CD-ROM XA discs; CD-Audio discs; Audio-combined CD-ROM discs; CD-I discs; CD-Bridge discs

Disc Diameter — 4.7 or 3.1 inches (12 or 8 cm)

Drive Speed — 40×

Average Access Time — 220 ms

Reliability

Read Error Rate (includes retry, normal disc) — L-EC on: 1 Block/ 10^{15} bits (normal), 10^{12} bits (double); L-EC off: 1 Block/ 10^{12} bits (normal), 10^9 bits (double)

Audio

Output Level — Line out: 0.85 V at 47K Ω ; Headphone: 0.55 V at 32 Ω

Environmental Conditions

Operating Temperature — 41 to 122°F (5 to 50°C)

Humidity — 10% to 90% (noncondensing)

Vibration Tolerance (Operating) — 0.2 G_{o-p} at 7 Hz to 300 Hz (sweep)

Shock (Non-Operating) — 70 G_{o-p} at 11 ms trapezoidal wave; Transportation: 75-cm drop (with standard package)

Power

Power Input (all models) — Selectable: 115/240 VAC, 60/50 Hz, 3.0/1.5 amps (CDT300A-2-R7 and CDT300A-4-R7 are autoswitching; CDT300A-5-R7 and CDT300A-7-R6 have a manual power selector)

Power Output (all models) — +5 VDC @ 10 A; +12 VDC @ 8 A; 12 A peak; 150 watts total maximum continuous

VA Ratings —

CDT300A-2-R7:	68
CDT300A-4-R7:	136
CDT300A-5-R7:	171
CDT300A-7-R6:	239

Size and Weight

Size —

CDT300A-2-R7:	7.6"H × 7.5"W × 11.7"D (19.2 × 19.1 × 29.7 cm)
CDT300A-4-R7:	11.4"H × 7.5"W × 12.8"D (28.8 × 19.1 × 29.7 cm)
CDT300A-5-R7:	14"H × 7.5"W × 11.7"D (35.6 × 19.1 × 29.7 cm)
CDT300A-7-R6:	19.3"H × 7.5"W × 11.7"D (49 × 19.1 × 29.7 cm)

Weight —

CDT300A-2-R7:	17 lb. (8 kg)
CDT300A-4-R7:	29 lb. (13.5 kg)
CDT300A-5-R7:	32 lb. (14.5 kg)
CDT300A-7-R6:	38 lb. (17.5 kg)

Miscellaneous

Cooling — All models: 33-cfm rear-wall fan; CDT300A-5-R7 and CDT300A-7-R6: Additional 25-cfm power-supply fan

Laser — Type: Semiconductor laser GaAlAs; Wavelength: 780 nm; Output power: 0.6 mW

Termination — External (choice of either SCSI I/O port)

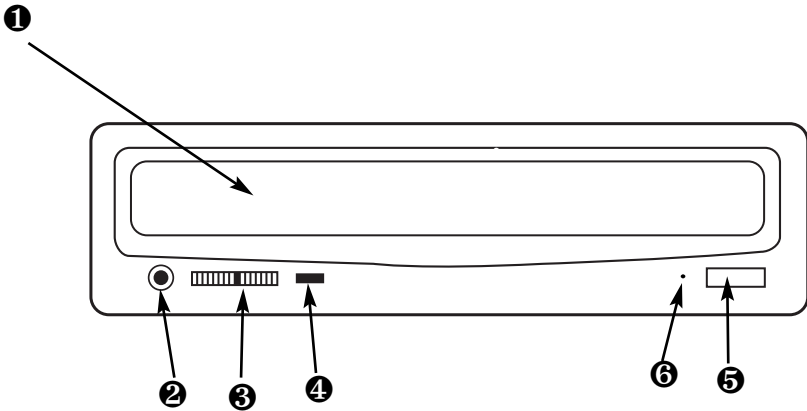
2. Introduction

CD Towers use CD-ROM (Compact Disc Read-Only Memory) discs, each of which can store as much as 660 MB of digital data. Each drive:

- Reads data in both CD-ROM and CD-ROM XA® standard formats.
- Reads data in CD-BRIDGE format, which includes Photo CD® (multisession).
- Reads standard CD-DA (“Red Book”) encoded discs.
- Outputs audio as 16-bit digital data over the SCSI interface.
- Supports real-time error correction at all speeds.
- Provides a parity on/off switch.
- Has an embedded SCSI bus interface (based on SCSI-2).
- Has 256 KB of buffer memory on the SCSI controller.
- Plays standard audio CDs.
- Supports fast access time for high-speed reading operations.
- Loads CDs directly in the tray—no CD caddies.
- Loads and ejects discs with a powered motor.
- Has an emergency eject function, which allows the disc to be ejected manually.

2.1 The Front Panel

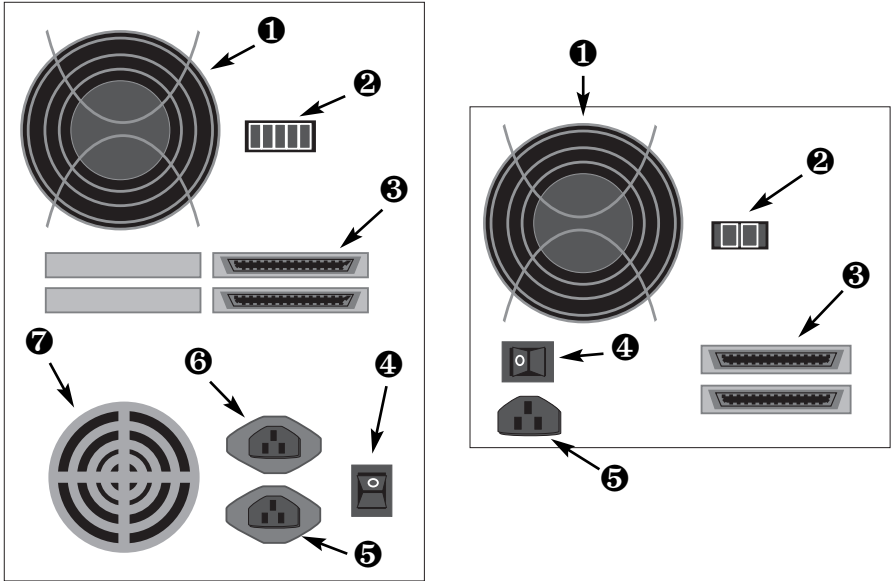
The front panel of one of the drives in a CD Tower looks like this:



- ❶ *Disc tray*—Load a CD-ROM disc here. (See **Section 4.1**.)
- ❷ *Headphone jack*—You can plug in standard stereo headphones here.
- ❸ *Volume control*—Controls the volume for the headphone jack.
- ❹ *Indicator light*—Lights to show what the drive is doing:
 - Power on: Green.
 - Seek and read: Flashing yellow.
 - Error: Steady yellow.
- ❺ *Eject button*—Ejects the disc from the drive.
- ❻ *Emergency eject hole*—If something goes wrong, and you can't use the eject button, you can push a fine rod, such as a paper clip, into this hole to eject a disc manually.

2.2 The Rear Panel

The rear panels of all the CD Tower models are similar. Two examples:



- ❶ *Fan*
- ❷ *SCSI ID push-button address switches*
- ❸ *SCSI I/O ports*
- ❹ *Power switch*
- ❺ *AC In*
- ❻ *AC Out* (not on CDT300A-2-R7)
- ❼ *Power-supply fan* (on CDT300A-5-R7 and CDT300A-7-R6)

3. Installation

3.1 System Requirements

To use a CD Tower, these are the components you need:

- IBM® compatible computer
- Host adapter interface card and software drivers
- Floppy-disk drive
- Interface cable
- Terminator

To read data from CD-ROM discs, you'll need to have the appropriate application software installed on your computer. Most CD-ROM discs come with the software you need to read them.

3.2 Setting the Switches for the SCSI Address

There are 8 SCSI addresses (0-7) for any device on a SCSI bus. The host adapter is always address 7. If the PC's bootable hard drive, *C:*, is a SCSI drive, it will be SCSI address 0.

Other SCSI devices attached to the host adapter must each have a unique SCSI address between 1 and 6. A T7 CD Tower, which includes 7 CD-ROM drives, must be attached to a dedicated SCSI host adapter.

There are SCSI pushbutton address switches on the back of each CD Tower. They make it simple to assign SCSI addresses. The CD-ROM drives, from top to bottom, correspond to the SCSI address switches from left to right.

Set the SCSI addresses by pushing the small button below the switch address indicator until the desired address appears in the window. The upper button reverses the selection.



3.3 Important Precautions

- Avoid placing the CD Tower in a location subject to:
 - high humidity
 - excessive dust
 - mechanical vibration
 - direct sunlight.
- Do not move the CD Tower while it's working—it might malfunction during reading.
- Avoid exposing the CD Tower to sudden changes in temperature—otherwise condensation might form on the lens inside the drive. Should the surrounding temperature suddenly rise while the drive is on, wait at least one hour before you turn off the power. Operating a CD Tower immediately after a sudden increase in temperature might result in a malfunction during reading.
- Keep the original packing materials in case you have to transport the CD Tower.

4. Using the Drive

Make sure that the CD-ROM operating software is installed in the host computer before using the CD Tower.

4.1 Starting Up

1. Turn on the power supply; the green cabinet light indicates power on.
2. Push the eject button to eject the disc tray. Set the disc in the tray with the CD-ROM disc's label facing up, and push the eject button or the tray until the tray is accepted into the drive completely. The busy indicator light changes from green to yellow while the table-of-contents data is being read. When the busy indicator light returns to green, the drive is ready to receive commands, and you can start retrieving data from the CD-ROM disc. From this point on, follow the instructions provided with the CD-ROM application software.

Note:

The yellow "reading" light stays on if the disc is not properly inserted or a malfunction occurs.

In such a case, eject the disc and re-insert it properly. If the busy indicator is still yellow, consult your dealer or qualified service personnel.

The busy indicator also lights yellow when you're playing an audio disc, but this is not a malfunction.

4.2 Ejecting a Disc

Press the eject button on the drive unit (make sure the power is on).

Note:

The eject button does not work if it is disabled by the software.

4.3 Ejecting a Disc Manually in an Emergency

In the event of electrical or mechanical failure of the drive, you can still get the disc out of the drive by pressing the emergency eject.

1. Turn off the power of your CD Tower and computer.
2. Insert a pointed object, such as a paper clip, into the emergency eject hole, and push firmly.

After removing the disc from the drive, consult your dealer or qualified service personnel if the problem continues.



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