

# **TEAC®**

**INTERNAL DRIVE INSTALLATION GUIDE**

**CD RECORDER 4 x 12**

**CD-R55S**

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## Introduction

Thank you for purchasing the TEAC CD-R55S CD Recorder. The CD-R55S can read CD-ROM discs at 12X and write to CD-R discs at 4X speed, as well as 2X and 1X speeds. This product is designed for use in IBM PC or compatible computers. It features a 5.25-inch standard chassis and a convenient power tray for disc loading.

## Recommended System Requirements

- ❑ IBM PC-compatible computer, Pentium 133MHz or higher
- ❑ Sufficient hard disk drive capacity for software installation (see the documentation for the recording software)
- ❑ A hard drive that meets or exceeds the following minimum specifications: 1GB hard disk space; 1.2MB/second data transfer rate; 12ms seek time.
- ❑ DOS version 6.0 or higher
- ❑ Windows 3.1, Windows 95, or Windows NT
- ❑ PCI compatible SCSI adapter card
- ❑ One available PCI bus slot
- ❑ 16MB of RAM
- ❑ One available 5.25 inch drive bay (if drive is to be installed internally)

## Front Panel



- Figure A -

**Disc Tray Cover:** The disc tray cover prevents dust from entering the drive chassis. It opens and closes in an interlocked motion with the disc tray during loading and unloading.

**Caution:** Do not use your fingers to open or close the disc tray cover or you may damage the unit or cause it to fail.

**Headphone Jack:** You can connect headphones or external speakers to this jack. Use a 3.5 mm stereo mini-plug. For external speakers, connect a stereo adapter to split the output into separate cables for the left and right channels. These adapters convert a male stereo mini-jack to two female phono jacks.

**Volume Control:** Use the volume control to adjust the volume. Turning the control to the right increases the volume.

**Emergency Eject Mechanism:** If the eject button fails, when the power is turned off you can insert a small, thin rod (such as a straightened paper clip) into the emergency eject mechanism hole and press firmly to eject the disc.

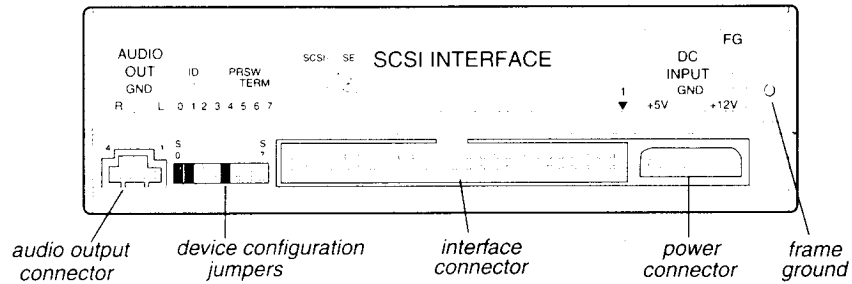
**Caution:** Do not attempt to use the emergency eject mechanism when the power is on or when the On/Busy indicator is lit or you may seriously damage the CD-ROM disc or drive.

**Eject Button:** Press this button to open or close the disc tray. (Some CD-ROM titles disable the manual eject button and rely on software commands to eject the disc. Refer to the documentation for these titles.)

**Busy Indicator:** The Busy indicator LED indicates whether the drive is powered off, seeking, reading, or writing data as per the following table:

Indicator Status	Meaning
Continuously lit	Seeking data or busy
Flashing at intervals of 0.8 seconds	Drive powering up or error detected
Flashing at intervals of 1.6 seconds	Audio being played
Flashing at intervals of 3.2 seconds	Recording data
Off	Power off

## Rear Panel



-Figure B-

**Audio output connector:** Connect this connector to the audio input connector on a sound card using an audio cable to drive external speakers. Pin assignments are described in the following table:

Pin Number	Audio Signal
1	Left signal
2	Ground
3	Ground
4	Right signal

**Device configuration jumpers:** The CD-R55S features a block of eight (S0 - S7) pairs of jumper pins. These jumpers allow you to set the SCSI ID number, enable or disable termination, set the parity check, set the logical block size, or place the drive in test mode.

S0, S1, S2	Set SCSI ID number
S3	Parity check
S4	Enable or disable termination
S5	Reserve
S6	Logical block size
S7	Test mode

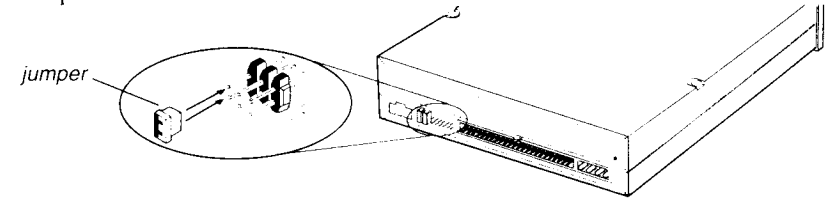
**Interface connector:** Use a 50-pin interface cable (ribbon cable) to connect the interface connector to a SCSI adapter card.

**Power connector:** Connect the power connector to the +5VDC and +12VDC power sources. The +5VDC terminal is on the left as you face the rear panel; the +12VDC terminal is on the right. The two center terminals are ground terminals.

**FG:** Frame ground. This is a ground connection for the CD-R55S.

## Setting the Jumpers

The following paragraphs provide information on how to configure the jumpers by placing jumpers (short plugs) in various combinations on the jumper pins on the rear panel.



-Figure C-

## Setting the SCSI ID Number

You set the SCSI ID number for the CD-R55S by placing jumpers in various combinations on jumper pin pairs S0, S1, and S2. The following table indicates the appropriate pin combinations. "Close" indicates that you should place a jumper on the specified jumper pins. "Open" indicates that you should not place a jumper on the specified pins. For example, to set the CD-R55S to SCSI ID 5, you would place jumpers on jumper pins S0 and S2.

The factory default setting is SCSI ID 3.

SCSI ID	S0	S1	S2
0	Open	Open	Open
1	Close	Open	Open
2	Open	Close	Open
3	Close	Close	Open
4	Open	Open	Close
5	Close	Open	Close
6	Open	Close	Close
7	Close	Close	Close

## Setting the Parity Switch

If jumper pin S3 is open, an odd parity check is performed for the input data. If S3 is closed, no parity check is performed. The factory default setting is open.

## Termination

If jumper pin S4 is open, the CD-R55S is terminated; if S4 is closed, the CD-R55S is not terminated. You must terminate the end of the SCSI bus; however, do not terminate drives that are not located at the end of the SCSI bus. The factory default setting is open.

## Logical Block Size

If jumper pin S6 is open, the drive will operate at 2,048 bytes per logical block. If S6 is closed, it will operate at 512 bytes per logical block. The number of bytes per logical block can be changed using Mode Select command. The factory default setting is open.

## Test Mode

If jumper pin S7 is closed, the drive will enter test mode upon power up. This jumper pin is intended for TEAC factory use only.

## Drive Mounting Orientation

The TEAC CD-R55S drive should be mounted in your personal computer horizontally. Install the drive horizontally so that the eject button is located on the right side of the unit.

## About SCSI Adapter Cards

You require a SCSI host adapter card to install the CD-R55S in your computer. TEAC does not include a SCSI adapter card with the CD-R55S.

A SCSI adapter card serves as the interface between your computer and various peripheral devices. Numerous cards are available from several manufacturers, each providing various levels of performance and features. TEAC recommends PCI SCSI adapters for use with the CD-R55S.

If you plan to add additional peripheral devices to your PC system, you will require a more capable host adapter card. If you plan to connect only the CD-R55S to the adapter card, a less capable (and generally less expensive) card is required.

SCSI adapter cards available from Adaptec, AdvanSys, and BusLogic will function correctly with the CD-R55S. Refer to the following table for the telephone numbers of these recommended adapter card manufacturers.

Manufacturer	Telephone
Adaptec, Inc.	800-442-7274
AdvanSys (Advanced System Products, Inc.)	800-525-7443
BusLogic (Mylex Corporation)	510-608-2400

For additional information on adapter cards, please visit the TEAC website at <http://www.teac.com>.

## Installing the CD-R55S

Install the CD-R55S into an IBM PC-compatible personal computer. Follow the steps below and refer to your computer documentation for information specific to your system.

1. Turn off the power to the computer and all devices connected to the SCSI bus.
2. Configure the jumper pin block on the rear panel of the CD-R55S. (For more information, refer to "Setting the Jumpers" on page 5.)
3. Remove your computer's cover, faceplate, or bay cover, as well as mounting clips, screws, and retaining bracket. Refer to your computer documentation for more information.
4. Determine the appropriate bus slot for the SCSI adapter card you plan to use. Remove the mounting screw that holds the slot cover in place. Insert the card and secure it using the same screw. Refer to your computer documentation for more information.
5. Slide the CD-R55S into the drive bay. Secure it using 3mm screws.

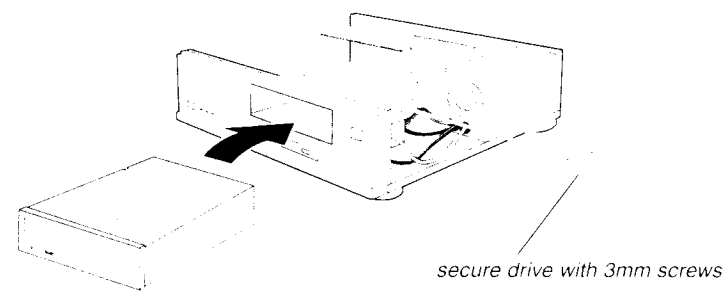
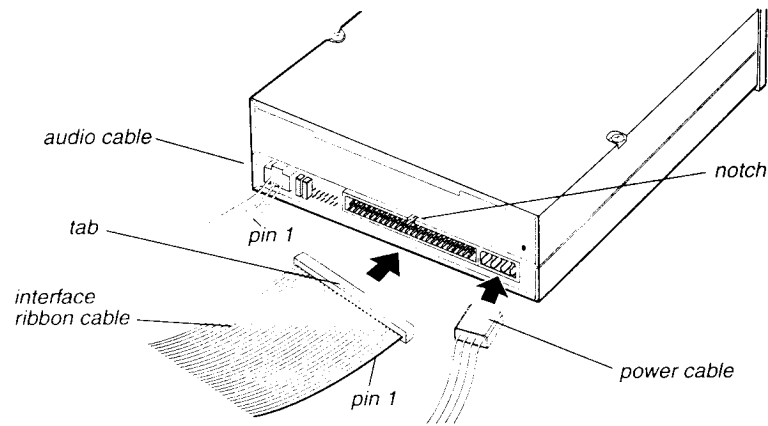


Figure D

6. Connect the interface ribbon cable to the interface connector on the rear panel of the CD-R55S. Be certain to connect pin 1 on the CD-R55S to pin 1 on the SCSI adapter card. (Pin 1 on the interface cable is usually designated by a color stripe along one edge of the cable. Also, the interface ribbon cable connector may feature a tab on one side. Insert the cable so that the tab aligns with the notch in the interface connector. Refer to Figure E.)
7. Connect the power cable to the power connector on the rear panel of the CD-R55S. Be certain to insert the power cable plug in the correct orientation into the power connector. (The plug is shaped so that it can be easily inserted in only one orientation; do not force the plug into the connector.)
8. Re-install your computer's cover, faceplate, or bay cover.



-Figure E-

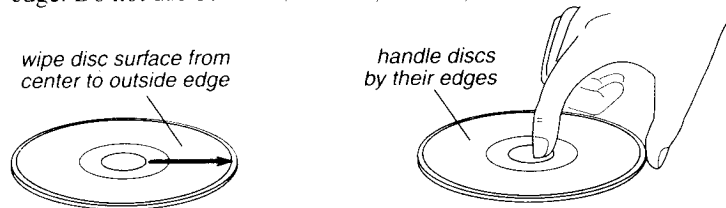
### Installing the Recording Software

Before you can operate the CD-R55S CD Recorder, you must first install CD-ROM recording software onto your computer's hard disk. Refer to the documentation that came with your recording software for additional information.

*Note: The documentation for the recording software is available in a hypertext electronic format on the CD-ROM on which the recording software is shipped. Access the recording software Help menu for more information.*

### Handling Discs

- Handle compact discs only by their edges to avoid getting fingerprints on the surface. Do not touch the disc's data surface (non-label side).
- Do not place discs in direct sunlight, or in locations subject to high humidity, high temperatures, or dusty conditions.
- If cleaning the disc becomes necessary (erratic operation or visible dust or smudges), gently wipe the surface of the disc from the surface to the outside edge. Do not use benzene, alcohol, thinner, or other solvents.

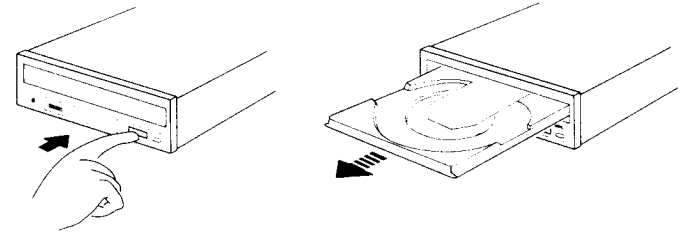


-Figure F-

### Loading and Ejecting Discs

To load a disc, first open the disc tray by pressing the eject button on the front of the drive. Place the disc on the disc tray with its label side facing up. Then press the eject button again to retract the disc tray back into the drive.

To eject a disc, press the eject button on the front of the drive to extend the disc tray (refer to the illustration on page 9). Remove the disc from the disc tray and put it in its protective case. Then press the eject button again to retract the disc tray back into the drive.



-Figure G-

### Recommended Media

Use only 74-minute blank media from the following manufacturers:

Manufacturer	Telephone
Mitsui Toatsu	800-682-3766
Eastman Kodak	800-235-6325
Taiyo Yuden	800-258-2496
TDK Electronics	800-835-8273
Mitsubishi Chemical America	800-347-5724
Pioneer New Media Technologies	800-444-6784
Ricoh	800-955-3453

### Disc Formats

The CD-R55S utilizes the following disc formats in both read and write operations:

Disc Format	Data Capacity
CD-DA	74 minutes
CD-ROM Mode 1	650MB
CD-ROM XA Mode 2 (Form 1)	650MB
CD-ROM XA Mode 2 (Form 2)	738MB
Multi-session Photo CD	650MB
CD-I	650MB
Video CD	650MB

## Specifications

Model	CD-R55S
Interface	SCSI-2
Transfer Rate	Read: 12X (1.800KBps) Write: 4X (600KBps) (also 2X and 1X)
Access Time	165 msec (1/3 stroke)
Buffer Size	1MB
Formats	Single Session, Multi-Session, and Incremental
Disc Type	8cm/12cm; Audio CD; CD-ROM Mode-1; Mode-2 (Form1, Form2); XA ready; Video CD; CDI; Multi-Session Photo CD
Disc Loading	Power Tray (Caddy not required)
Spindle Motor	Brushless
Front Panel	Built-in Headphone Jack, Volume Control Knob, and Power Eject Button
MTBF	50,000 POH
Dimensions	5.75"(W) x 1.6"(H) x 7.56"(D)
Weight	1.9 lbs
Disc Rotational Speed	Approx. 7,200rpm (innermost tracks); Approx. 2,400rpm (outermost tracks)
Power Supplies	+5VDC, +12VDC
Factory Presets	SCSI ID: 3; Parity check: Performed; Terminator: Enabled
Audio Headphone Line-Out	0.8 ± 0.3Vrms at 32Ω 0.8 ± 0.3Vrms at 47Ω
Headphone Jack	3.5mm diameter stereo mini-headphone jack
Interface	50-pin SCSI connector
Installation	Horizontal, plus or minus 10 degrees
Operating Temperature	5 degrees C to 35 degrees C (41 to 95 degrees F)
Storage Temperature	-30 degrees C to 55 degrees C (-22 to 131 degrees F)
Operating Humidity	20% to 80% (non-condensing)
Storage Humidity	10% to 80% (non-condensing)
Safety Standards	UL, CSA, TUV

## Technical Support

For technical support, please contact the TEAC Service and Support Center nearest you:

### North America:

TEAC America, Inc. (USA)  
 Technical Support  
 Telephone: (213) 727-4860  
 Monday - Friday 8:00 a.m. - 5:00 pm  
 BBS (Bulletin Board Service)  
 (213) 727-7660 (8 bit, 1 stop bit, no parity)  
 24 Hour Fax-on-Demand  
 (213) 727-7629  
<http://www.teac.com>  
 E-mail: [dsptsg@teac.com](mailto:dsptsg@teac.com)

### Europe:

TEAC Deutschland GmbH ICP Division (Germany)  
 Telephone: (611) 71-580  
 Fax: (611) 71-5892  
 BBS: (611) 71-5851  
<http://www.teac.de>

### TEAC UK Ltd.

Telephone: 923-225235 • Fax 923-236290

### TEAC France S.A.

Telephone: (1) 42-37-01-02  
 Fax: (1) 42-37-65-45

### Japan, Asia, Middle East:

TEAC Corporation, 3-7-3 Nakacho,  
 Musashino-shi, Tokyo 180 Japan  
 Field Service and Technical Support Section  
 Data Storage Products Sales and Marketing Division  
 Telephone: (0422) 52-5048  
 Fax-on-Demand (24 hours): (0422) 55-2554  
 BBS: (0429) 62-7498  
 (8 bit, 1 stop bit, no parity. Downloaded files compressed by LHA.)  
<http://www.teac.co.jp>

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