TEAC®

CD-Rewritable Drive

SCSI Interface

12x10x32

CD-W512S

① *disc tray*

② *headphone jack*

③ *volume control*
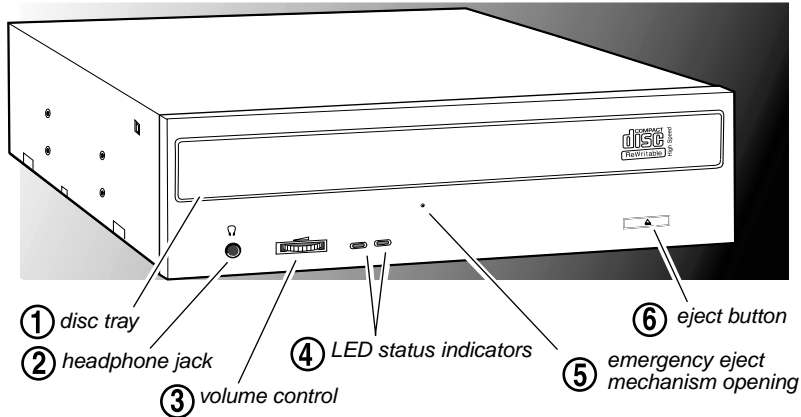
④ *LED status indicators*

⑤ *emergency eject mechanism opening*

⑥ *eject button*

Introduction

The TEAC CD-RW drive can write to CD-R discs at a maximum of 12X speed, re-write to CD-RW discs at 10X speed, and read CD-ROM discs at 32X speed. (It is also capable of operating at slower speeds, if preferred.) CD-R discs enable you to create audio or data discs for permanent archival storage. They cannot be overwritten. You can overwrite CD-Rewritable (CD-RW) discs, typically up to 1,000 times.

The TEAC CD-RW drive is a SCSI device designed for use in IBM PC or compatible computers that feature a SCSI adapter card. The drive features a 5.25-inch standard chassis and a powered tray for convenient disc loading.

Recommended System Requirements

❏ IBM PC-compatible computer, Pentium 300MHz or higher
❏ PCI SCSI host adapter card (see "Recommended Adapters" on page 8)
❏ CD-ROM drive with DAE support for disc-to-disc audio recording
❏ One available 5.25 inch drive bay
❏ 64MB of RAM
❏ A hard drive that meets or exceeds the following minimum specifications:
  ❏ 1GB hard disk space (or more)
  ❏ 1.2MB/second data transfer rate (or faster)
  ❏ 12ms average access time (or less)
❏ Sufficient hard disk space for software installation (see the documentation for the recording software)
❏ Windows 95/98/Me/2000-Professional and NT
❏ Recording software (see "Recommended Software" on page 8)

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Front Panel

① **disc tray:** Use the disc tray to load CDs into the drive. You can open the tray by pressing the eject button or by using the emergency eject mechanism. You can close the tray by pressing the eject button.

Note: Press the eject button to eject or retract the tray. Please do not push the tray in to close it.

② **headphone jack:** You can connect headphones or external speakers to this jack to listen to an audio CD being played on your TEAC drive. 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. Such adapters convert a male stereo mini-jack to two female phono jacks.

③ **volume control:** Use the volume control to adjust the volume. Turning the control to the right increases the volume. (Lower the volume before you start a CD-ROM audio program to protect your hearing and the audio speakers.)

④ **LED indicators:** The drive features two LED indicator lights on the front panel. Various operations are indicated as per the following table:
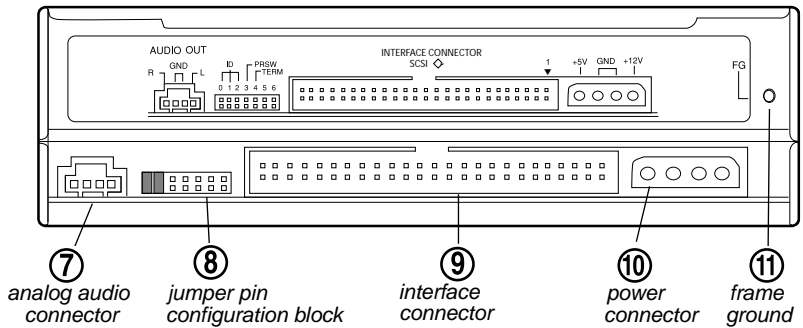
Operation	Left LED	Right LED
At tray loading	*off*	*green LED flashes*
At tray eject	*off*	*green LED flashes*
During write/erase	*green LED flashes*	*off*
During audio play	*off*	*green LED flashes*
During seek/data transfer	*off*	*green LED lights*

⑤ **emergency eject mechanism:** If the eject button fails, you can *turn off the power to the CD-RW drive* and insert a small, thin rod (such as a straightened paper clip) into the emergency eject mechanism opening and press firmly to eject the disc.

Caution: Do not attempt to use the emergency eject mechanism when either the Power or Busy indicator is lit or you may seriously damage the disc or the CD-RW Drive.

⑥ **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 for more information.)

Rear Panel

⑦ *analog audio connector* ⑧ *jumper pin configuration block* ⑨ *interface connector* ⑩ *power connector* ⑪ *frame ground*

⑦ **analog audio output connector:** You can use an audio cable to connect this connector to the audio input connector on a sound card. Pin assignments are described below:

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

⑧ **jumper pin configuration jumper:** The CD-RW drive includes seven pairs of jumper pins on the rear panel that allow you to set the SCSI ID number, termination, and parity.

⑨ **interface connector:** Use a standard 50-pin SCSI interface cable to connect the CD-RW drive to a SCSI interface adapter card installed in your computer.

⑩ **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.

⑪ **FG:** Frame ground. This is a ground connection for the CD-RW Drive.

Configuring the CD-RW Drive

Before you can install and operate the TEAC CD-W512S CD-RW drive, you need to do the following:

❑ Install a SCSI adapter card in the host computer. For optimum performance, a PCI bus master SCSI adapter card (such as an Adaptec 2940 or equivalent) is recommended. Please refer to the SCSI adapter card documentation for installation instructions.

❑ Set the SCSI ID number on the rear panel of the CD-RW drive

❑ Terminate the CD-RW drive if it is located at the end of the SCSI chain.

Setting the SCSI ID Number

To set the SCSI ID number on the CD-RW drive, you must set jumpers on the rear panel of the unit.
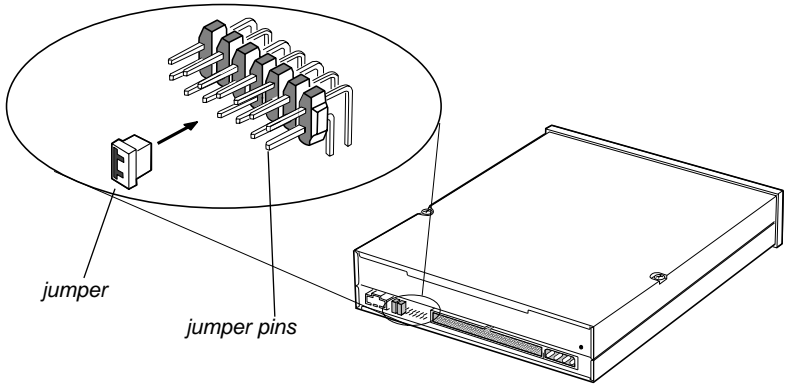
jumper

jumper pins

You set the SCSI ID number for the CD-RW drive by placing jumpers in various combinations on jumper pin pairs S0, S1, and S2. ("S" indicates a jumper pin pair number.) 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 (leaving the connection "open"). For example, to set the CD-Recorder to SCSI ID 5, you would place jumpers on jumper pin pairs S0 and S2.

The factory default setting is SCSI ID 3 (S0 and S1 closed).

SCSI ID	0	1	2
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

jumper pin configuration block
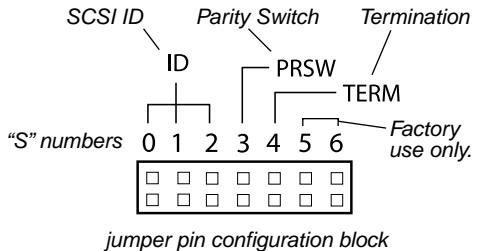
Terminating the CD-RW Drive

If you position the CD-RW drive at the end of a SCSI chain, you must "terminate" the CD-RW drive; however, do not terminate the CD-RW drive if it is not physically connected at the end of the SCSI chain.

If jumper pin S4 is closed (that is, if the jumper is seated on both pins), the CD-RW drive is terminated. If S4 is open (i.e., the jumper is not seated on both pins), the CD-RW drive is not terminated. **The factory default setting for the CD-RW drive is closed (terminated).**

Warning: Failure to correctly terminate the SCSI bus may result in malfunction to the CD-RW drive.

Configuring Other Jumpers on the CD-RW Drive

This section explains how to configure the remainder of the jumper pin block on the rear panel of the CD-RW drive.

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.**

Jumper Settings S5 and S6

These jumper pins are intended for TEAC factory use only. **The factory default setting is open.**

Installing the CD-RW Drive

After you install a SCSI adapter card in your computer and configure the jumper pin block on the CD-RW drive, follow the steps below to install the TEAC CD-RW drive into your computer. Refer to your computer documentation for information specific to your system.

Note: A SCSI card is not included with the drive. Please see "Recommended Adapters" on page 8.

1. **Turn off the power to the computer system and any external devices connected to it.**
2. **Touch the exposed metal frame of the computer to ground yourself.**

    This will prevent damage to the computer or CD-RW drive that may be caused by a discharge of static electricity.

3. **Remove your computer's cover, faceplate, or 5.25-inch bay cover, as well as mounting clips, screws, and retaining brackets.**
4. **Slide the CD-RW drive into the empty 5.25-inch drive bay.**

    Install the CD-RW drive in an orientation within ±10˚ of horizontal. The eject button should be located on the right side of the unit. Secure the drive using 3x5mm mounting screws.

*Warning: Do not use mounting screws longer than 3x5mm to secure the CD-RW drive or you may damage the unit.*

secure drive with 3x5mm screws
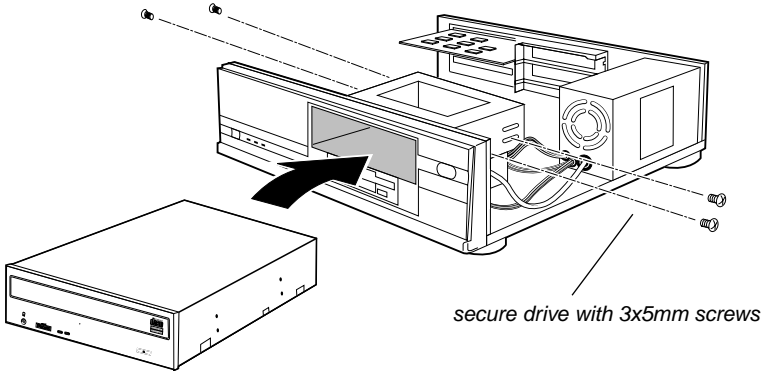
5. Connect the CD-RW drive to the SCSI host adapter card using a 50-pin interface ribbon cable.

Be certain to connect pin 1 on the CD-RW drive 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.)

Connect the opposite end of the interface ribbon cable to the interface connector on the rear panel of the CD-RW drive.

6. If desired, connect an audio cable to the analog audio connector on the rear panel of the CD-RW drive and connect the opposite end to your sound card.

Connect audio connector pin 1 on the CD-RW drive to pin 1 on the sound card.

audio cable

notch

power cable

50-pin interface ribbon cable

pin 1

tab
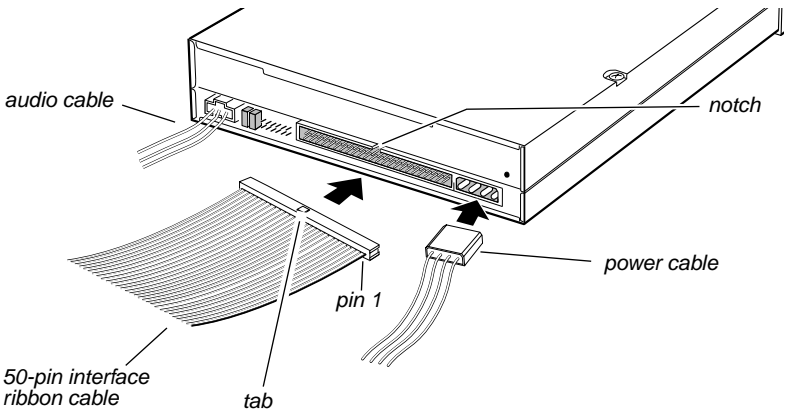
7. Connect the power cable to the power connector on the rear panel of the CD-RW drive.

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.

The +5v terminal is on the left as you face the rear of the panel; the +12v terminal is on the right. The two center terminals are ground terminals.

8. Re-install your computer's cover, faceplate, or bay cover.

9. Start your system.

> **Notes:**
>
> ❑ The TEAC CD-RW drive is a true Plug-N-Play device; therefore, it will be detected automatically by Windows 95/98/Me/2000-Professional. There is no need to install any drivers.
>
> ❑ Windows NT 4.0 does not support the Plug-N-Play feature. Therefore, confirm that the proper drivers are installed for your SCSI adapter card. If not, open the Control Panel, double click "SCSI Adapters," click the "Drivers" tab, then click the "Add" button. At the "Select a SCSI Adapter Option" window, select the drivers for your SCSI adapter card. Click "Install" and follow the instructions on screen.
>
> ❑ The drive is recognized by the operating system as a typical CD-ROM drive. Once you confirm that you can read (play) data discs from the CD-RW drive, install your pre-mastering or recording software to enable recording to CD-R and CD-RW discs. Refer to "Recommended Software" on page 8.

Recommended Adapters

You must install a SCSI adapter card in the host computer to utilize the CD-RW drive. For optimum performance, TEAC recommends a PCI bus master SCSI adapter card (such as an Adaptec AHA2940 or equivalent). Please refer to the SCSI adapter card documentation for installation instructions.

Recommended Software

Before you can record data onto CD-R or CD-RW discs using your TEAC CD-RW drive, you must first install pre-mastering or packet-writing software onto your computer's hard disk. TEAC recommends the following applications for Windows 95/98/Me/2000-Professional and NT:

❑ **Adaptec Easy CD Creator, Version 4.02e or higher:** A full-featured premastering software application that enables you to create audio CDs and data CDs.

❑ **Adaptec DirectCD, Version 3.01e or higher:** A "drag & drop" software application that allows you to read and write to your CD-RW as if it were a standard floppy or removable hard drive. It also provides the tools necessary to format the media.

Note: The above mentioned software packages are part of the Easy CD Creator Deluxe Software Suite from Adaptec, Inc. Please ensure the appropriate version is purchased.

For more information, refer to the documentation that accompanies the software.

Recommended Media

Use only 74 or 80-minute blank CD-R and CD-RW media from TEAC or the following manufacturers.

For optimal performance, make sure the CD-R media is rated for 12X speed recording. CD-RW media should be "high-speed" rated (usually 4X – 10X speed).

Disc Type	Manufacturer
CD-R	*Taiyo Yuden*
	Mitsui Toatsu Chemical
	Mitsubishi (Verbatim)
	Ricoh
	TDK Electronics
	Kodak
	Fuji Film
	Hitachi (Maxell)
	Pioneer

Disc Type	Manufacturer
CD-R	*Sony*
	Maxell
	PVC
CD-RW	*Mitsubishi (Verbatim)*
	Ricoh

Note: TEAC media may be purchased online at www.shopteac.com.

Specifications

Model	CD-W512S
Interface	*SCSI-2 (8 bit data bus)*
Transfer Rate	*Write: 12X (1.8MBps)* *Rewrite: 10X (1.5MBps)* *Read: 32X maximum (4.8MBps)*
Digital Audio Extraction Rate	*14X ~ 20X max.*
Access Time	*85 msec (1/3 Stroke)*
Buffer Size	*4MB*
Write Methods	*Track At Once; Disk At Once; Multi-Session; Incremental*
Write Verification	*Running Optimum Power Control to dynamically adjust laser write power*
Logical Recording Format	*IS09660, UDF & CDR-FS Packet Write*
CD Formats Supported	*CD-DA; CD-ROM Mode-1, CD-ROM XA Mode-2 (Form-1 and 2); Multi-session PhotoCD; CD-ROM XA; CD-R; CD-RW; CD-I; Video CD; CD Extra/CD Plus, CD Text.*
Disc Loading	*Power Tray (caddy not required)*
Front Panel	*Built-in Headphone Jack, Dual Status LEDs, Volume Control Knob, and Power Eject Button*
MTBF	*100,000 POH*
Dimensions	*5.75"(W) x 1.63"(H) x 7.56"(D)*
Weight	*2.65 lbs.*
Power Supplies	*+5VDC, +12VDC*

Analog Audio
  Headphone
  Line-Out
	0.65 ± 0.3Vrms at 32Ω
	0.78 ± 0.3Vrms at 47KΩ

Headphone Jack	*3.5mm diameter stereo mini-headphone jack*
Installation	*Horizontal, plus or minus 10°*
Operating Temperature	*5° C to 40° C (41° F to 104° F)*
Storage Temperature	*-30° C to 60° C (-22° F to 140° F)*
Operating Humidity	*20% to 80% (non-condensing)*
Storage Humidity	*10% to 80% (non-condensing)*
Safety Standards	*UL, CSA, TUV*

Technical Support