

## PRODUCT OVERVIEW

TASCAM's CD-RW2000 builds on the success of the CD-RW5000 and the CD-RW700, and is the most advanced stand alone CD-Recorder on the market. At the heart of this recorder is a TEAC CD-RW mechanism, one of the most reliable and robust systems available. The audio I/O section leaves no format out, and the unit can be controlled via the included wired remote or parallel control. When you need the very best, get the CD-RW2000.



- 2-U Rack Mount Design
- Uses Professional CD-R and CD-RW discs
- Records and plays 74min and 80min CDs
- Analog Unbalanced RCA I/O
- Analog Balanced XLR I/O with Output Attenuation
- AES/EBU Digital Input and Output
- SPDIF Digital Coax and Optical I/O
- Word Sync Input
- Built-in RAM Buffer for Precise ID Marks
- Parallel Control I/O for Custom Remotes & Tallies
- Call Function for Checking Play Cues
- Event Start Function (In Parallel Control)
- Digital Gain Adjustment Function
- User Selectable Digital Fade In/Fade Out
- Headphone Output w/ Level Control
- Wired Remote Included

## APPLICATIONS

The CD-RW2000's feature set is complete enough for many high end applications, yet the machine is affordable enough for the average user.

### Personal Studio - Project Studio - Production Studio

In personal studios, budget is key. The average home user tends to have a mixture of professional and consumer gear, and often find himself struggling to get the pro gear and consumer gear connected. The project studio is usually stocked with pro gear, but they have to interface with consumer gear brought in by clients. The CD-RW2000 offers every two channel I/O format: balanced and unbalanced analog I/O, SPDIF coax and optical I/O, and AES/EBU I/O. No matter what level your studio is, you won't have to go looking for any format converters or adapters.

The CD-RW2000 also offers a word sync in port, allowing the CD-RW2000 to integrate into a large digital environment as a CD player without having to be the word clock master. To solve track ID problems when performing digital transfers from a DAT, MiniDisc, or other digital format, a RAM buffer has been added to ensure tight ID markers without fear of clipping the start of the audio. Also, the SCMS code status menu allows the user to select between SCMS free, allow one copy, or copy prohibit modes. Plus, digital gain adjustment and fades allow you to boost low recordings without going back to analog, and to provide smooth programmable fades.

### DJs - Live Sound Applications - Radio Broadcast - Show Control

The CD-RW2000 is not only a highly advanced recorder, it is also the first CD Recorder to incorporate live CD player functions. This design offers engineers the ability to use the same unit for producing and playing their sound cues, promotional spots, or background tracks.

The CD-RW2000 offers an auto cue function to locate right to the start of the audio in the track, rather than the ID number. (This means that there is no lag from when you hit play until you hear audio.) The call function allows the user to check the cue before playing it for the audience. Fader start and other functions are all available through the parallel port, offering control directly from a broadcast console, or show control systems. An Auto Ready function instructs the CD-RW2000 to stop playing at the next start ID, so radio situations don't accidentally roll into the next tune. Live sound users like the automatic cueing for the next track.

## SPECIFICATIONS

### Performance Specifications:

Recording Media:	CD-R, CD-RW, CD-RDA, CD-RWDA
Recording Resolution:	16 bit
Recording Sample Rate:	44.1kHz
Sample Rate Conversion From:	32kHz-48kHz (with bypass capability)
Frequency Response:	20Hz-20kHz $\pm 0.5$ dB (Rec $\pm 1$ dB)
Signal to Noise Ratio:	>98dB Playback >92dB Recording
Total Harmonic Distortion:	<0.004% Playback <0.005% Recording
Wow and Flutter:	Unmeasurable (<0.001%)
Channel Separation:	>90dB Playback (1kHz) >80dB Rec (1kHz)
Input RCA:	-10dBV, 33kOhm (-16dB Full Scale) +6dBV Maximum
Input XLR:	+4dBu, 10kOhm (-16dB Full Scale) +20dBV Maximum
Output RCA:	-10dBV, 800 Ohm (-16dB Full Scale) +6dBV Maximum
Output XLR:	+4dBu, 75 Ohm (-16dB Full Scale) +20dBu Maximum
AES/EBU I/O:	XLR-type, AES3-1992
SPDIF Coaxial I/O:	RCA pin, IEC60958 Type II
SPDIF Optical I/O:	TOSLINK, EC60958 Type II

### General:

Power Requirements:	120/230V AC, 60Hz (General Export) 120V AC, 60Hz (USA/Canada Model) 230V AC, 50Hz (UK/Europe Model) 240V AC, 50Hz (Australia Model)
Power Consumption:	30W
Applicable Electromagnetic Environment:	E4
Dimensions:	483 x 98 x 317.5 mm 19" x 3 7/8" x 12 1/2"
Weight:	7Kg, 15.4 lbs.
Standard Accessories:	Wired Remote (RC-RW2000) 2m (6') AC cord Rack mount screws

## THE CD-RW2000 ADVANTAGE

The CD-RW2000 was designed to be more than just a professional CD-Recorder, it was designed to serve double duty as an advanced CD player for live or studio applications. This dual function design makes it highly advantageous in live theaters, radio production and broadcast environments, as well as recording studio environments.

Rugged reliability is key in a product for these users, and to ensure the best reliability and longevity we have used the very best CD-R technology in the business. It just so happens that our parent company TEAC is one of the world's leading data storage manufacturers, and is consistently winning awards for their CD-R design and products.

The CD-RW2000 truly delivers the best performance, features, and quality at any price point.

Advanced Live Functions

**Incremental Play Function** - This function automatically advances to the next track when stop or play are pressed.

**Auto Ready Function** - This function is used in live production environments like theater and radio environments frequently. Auto Ready will play one track at a time, pausing at each track start ID it finds. This function saves a tremendous amount of time for engineers, since each sequential sound cue is automatically loaded.

**Call Function** - Pressing call stops the CD, and returns it to the time location where play began. This is typically used for checking a cue point, allowing you to be sure you are recalling the exact position you started from.

**Auto Cue** - Auto cue allows the CD mechanism to cue to the first audio in the track, not the location of the start ID. This means better response time at the start of the track, since dead space is eliminated.

**Selectable SCMS** - SCMS codes are used on consumer grade CD-Recorders to limit the unauthorized distribution of recorded material. In professional environments, duplication of digital program is a regular necessity. The CD-RW2000 allows the user to select the SCMS status written from Allow One Copy, Allow No Copies, or SCMS Free (No Restriction.)

**Input Monitor** - You can monitor the inputs of the CD-RW2000 without engaging the CD-RW mechanism. This is useful when setting levels, or using the CD-RW2000 for it's high quality A/D and D/A converters.

**Professional I/O** - We have just about every two track I/O format available, including AES/EBU and balanced analog. For precise analog integration, the analog I/O has attenuation ports for properly aligning meters. For digital studios, Word Clock In is provided, allowing the CD-RW2000 to play CDs without needing to be the clock master.

**Digital Level Adjustment and Digital Fades** - The CD-Recorder will frequently be used to transfer audio from DAT, MiniDisc, or another CD. If the originally material was produced too quietly, the CD-RW2000 has the ability to boost the recording level. Also, built in digital fade in and fade outs can be used to ensure smooth fade curves.

**Sample Rate Conversion** - Since CDs must be recorded at 44.1kHz, most machines include a sample rate converter to allow digital links, even if the original is not at the right sample rate. The CD-RW2000 also allows the user to bypass the converter, should the original recording be already made at 44.1kHz. This improves the sound quality by eliminating any conversion processing.

Advanced Recording Functions

## APPROVED MEDIA LIST

### Notes on CD-R media:

Quality and recording characteristics of media from different manufacturers will vary from brand to brand. This has to do with different manufacturing processes of both the CD-R media and the CD-R mechanism. (Some media that does not work well with one CD-R mechanism may work reasonably with another.)

In order to take the guesswork out of selecting the media, we are posting an approved list of media for use. Media from each of these manufacturers was written to and verified. The media listed as OK is preferred. The media listed as NR typically worked but had a higher error rate, so it is not recommended. Mitsui media is used as the target media reference, so you're always safe with those.

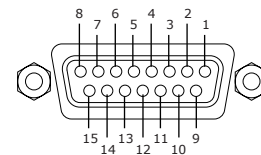
We have tested the CD-RW700 for compatibility with 74 minute and 80 minute CD media, and the mechanisms will recognize and use the full length of the CD.

Brand	Manufacturer	Pigment	Disc Color	Use
TEAC	Mitsui Chemical	Phthalo Cyanine	Yellow Gold	OK
	Mitsui & CMC	Cyanine	Blue Silver	OK
Apogee	Mitsui Chemical	Phthalo Cyanine	Yellow Gold	OK
HHB	Mitsui Chemical	Cyanine	Blue Silver	OK
Mitsui	Mitsui Chemical	Phthalo Cyanine	Yellow Gold	OK
Quantegy	Mitsui Chemical	Phthalo Cyanine	Yellow Gold	OK
SONY	Taiyo Yuden	Cyanine	Green Gold	OK
3M	Taiyo Yuden	Cyanine	Green Gold	OK
Imation	Taiyo Yuden	Cyanine	Green Gold	OK
TDK	TDK	Cyanine	Green Gold	OK
		Cyanine	Blue Silver	OK
Ricoh	Ricoh	Phthalo Cyanine	Yellow Silver	OK
		PC & Cyanine	Green Gold	NR
Verbatim	Mitsubishi Chemical	AZO	Blue Silver	OK
KODAK	KODAK	Phthalo Cyanine	Yellow Gold	OK
Pioneer	Pioneer Video	Cyanine	Green Gold	OK
DOT	Pioneer Video	Cyanine	Green Gold	OK
Maxell	Maxell	Cyanine	Green Gold	NR
		Cyanine	Blue Silver	NR
Fuji Film	Fuji Film	Cyanine	Green Gold	NR
		Cyanine	Green Silver	NR

## CONTROL I/O

- | Pin | Function            |
|-----|---------------------|
| 1   | STOP tally out      |
| 2   | REC/PLAY tally out  |
| 3   | SKIP FORWARD in     |
| 4   | SKIP BACK in        |
| 5   | REC/PAUSE tally out |
| 6   | RECORD in           |
| 7   | TRACK INCREMENT in  |
| 8   | GND                 |
| 9   | PLAY tally out      |
| 10  | PAUSE tally out     |
| 11  | FADER START/STOP in |
| 12  | STOP in             |
| 13  | PLAY in             |
| 14  | PAUSE in            |
| 15  | +5V (50mA max)      |

### Control I/O Legend

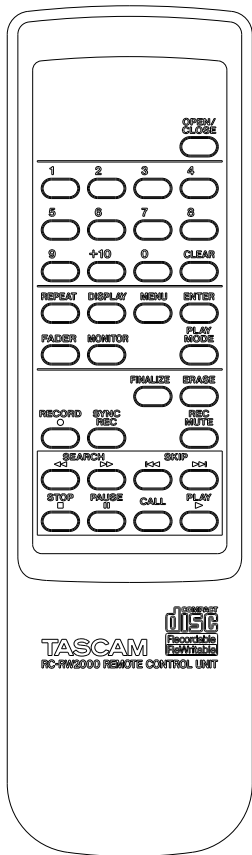
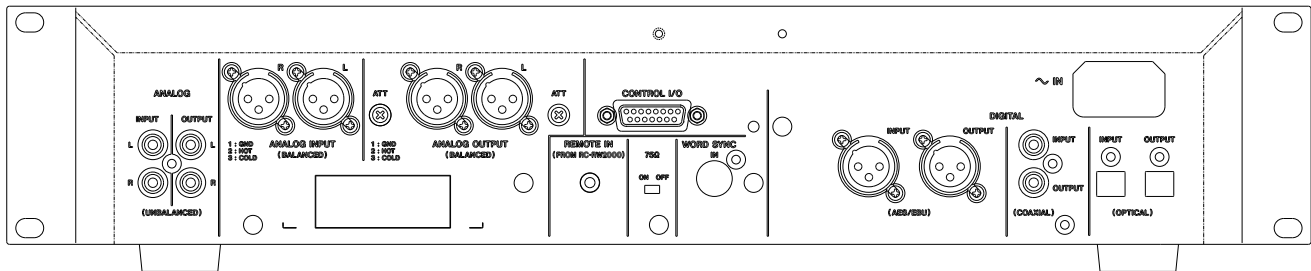
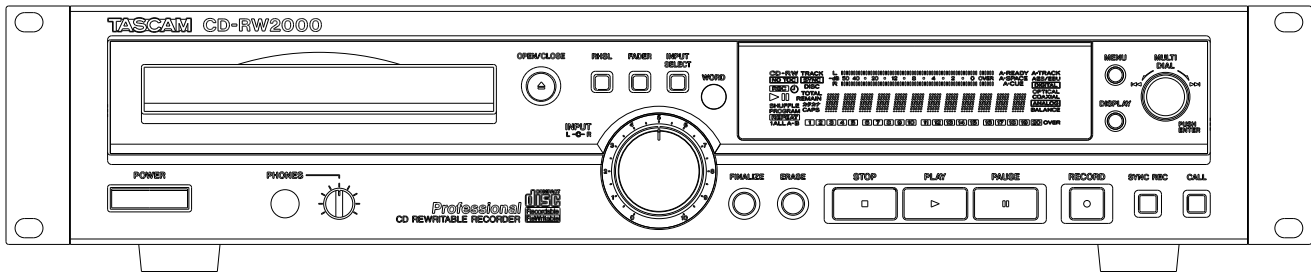


### Notes:

Tally signals are open collector, with a maximum of 50mA. Input signals are active when low (ground) for >30ms.

With the fader start function, a grounded circuit indicates play, and an open circuit indicates stop.

### PANELS AND REMOTE



### ARCHITECT'S SPECIFICATIONS

The CD mechanism shall be a CD-ReWriter design that can mount in a standard 19" rack mount form. Dimensions shall be 19" x 3.9" x 12.5" (W x H x D).

*Metric measurements: 483x98x317.5mm.*

The CD recorder shall record to standard CD-R and CD-RW media. Consumer media (CD-RDA and CD-RWDA) shall not be required, however the CD recorder shall be compatible with consumer media as well. The recorder shall support 74 minute and 80 minute CD lengths. Erasing capabilities associated with the CD-RW media shall include erasing an entire CD, just one track, or removing the finalizing data for further recording.

A RAM buffer shall be utilized for optimized marking of track IDs on auto ID and sync start modes.

Analog audio inputs and outputs shall be provided

on balanced XLRs and unbalanced RCA connections. Digital audio inputs and output shall be provided on AES/EBU format on XLR connectors, and in SPDIF format on both coaxial and optical connectors. A word sync port shall be provided for allowing the unit to act as a word clock slave when playing CDs.

Cueing and playback functions shall include user adjustable autocue for locating the first audio of a track, call function, and incremental play. A parallel control port shall be provided for remote control and tallies. An additional port shall be provided for compatibility with the TASCAM RC-RW2000 wired remote.

**The CD Recorder shall be a TASCAM CD-RW2000.**

*NOTE: This text is available in a standard text file on TASCAM's Systems Contractor CD-ROM. Contact TASCAM for details.*