TASCAM ⏩

DV-RA1000HD
Technical Documentation

PRODUCT OVERVIEW

The TASCAM DV-RA1000HD features the world's most advanced method of recording high-resolution stereo audio on optical disk or internal 60GB hard drive. The DV-RA1000HD is fitted with digital I/O in all common formats,

including S/DIF3 (Direct Stream Digital), as well as high quality AD and DA conversion. The DV-RA1000HD can be connected to a personal computer, through USB 2.0, where files can be transferred for further processing, editing, and mastering. Edit titles and add project notes with PS/2 keyboard connected to the front panel. The DV-RA1000HD contains an A/C independent clock/calendar which timestamps all files recorded on a DVD/HD that can be viewed when connected to a computer.

The DV-RA1000HD includes DSP for EQ and dynamics processing that can be inserted on recording or playback. The DV-RA1000HD can provide more than 60 hours of recording to hard drive and burn these files to CD or DVD, making it ideal for event recording, archival, and extended playback applications.

MSRP $ 2,499.00

High-quality stereo recording at up to 192kHz/24-bit or DSD format

Records to Built-in 60GB hard drive, DVD+RW, CD-R/RW media

Archives to DVD-R, DVD-RW, DVD+R and DVD+RW discs

Multi-band compression and 3-band EQ mixdown effects

USB 2.0 connection to PC for use as DVD data drive

Balanced AES/EBU inputs and outputs, running at normal, double-speed and double-wire formats

Records to standard CD-DA, Broadcast Wave and DSDIFF formats

Various play and record modes such as auto track increment, auto cue, auto ready, single/continuous play, program A/B play and synchronized recording.

User-definable function keys

Large, backlit LCD display

Word Sync In, Out, Thru

 RS-232C serial control

±6% pitch control

Fade in/out

Jog playback

Power on play feature

Wired remote control (RC-RA1000) included

Headphone output

PS/2 keyboard connector for title editing

TASCAM   7733 Telegraph Road   Montebello, CA 90640 (323) 726-0303 http://www.tascamcontractor.com

All features and specifications are subject to change without notice. Contact your local TASCAM representative for the latest information.

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TASCAM DV-RA1000HD

CONSULTANT'S AND SYSTEM DESIGN SPECIFICATIONS

The DV-RA1000HD, 2U rack-mountable, high definition Audio Master Recorder equipped with an internal 60GB hard disk and a optical drive, which records to CD-R/RW and DVD+RW discs, and archives to DVD-R, DVD-RW, DVD+R, and DVD+RW discs. The unit records high quality stereo up to 192kHz/24bit or DSD format to standard CD-DA, Broadcast Wave, and DSDIFF formats. Multi-band compression and 3-band EQ are included; both assignable to record or playback.

The DV-RA1000HD includes a USB 2.0 connection to PC for use as a DVD data drive and works with the following operating systems; Windows 2000, Windows XP, MacOS 9.22 and above, and MacOS X 10.2 and above. (No driver is required)

Standard features include Pitch Control (+/- 6%), Auto Cue, Timer start, Synchronized Recording, Multiple Playback Modes, copy files and projects between HD and Optical drive, user assignable function keys, Fade I/O, Auto Track Increment, Power On Play, Headphone Out w/level control, monitoring between playback and input, and a built in oscillator.

Word Sync In, Out, and Thru is provided via rear panel BNC connectors as well as RS-232 Serial Control. Also included is a wired RC-RA1000 remote control. A Front Panel PS/2 keyboard input for convenient project notes and titling.

Analog Inputs/Outputs are unbalanced RCA and Balanced XLR and Digital Inputs/Outputs are AES/EBU, S/PDIF and DSD Input/Output SDIF-3 and DSD-raw.

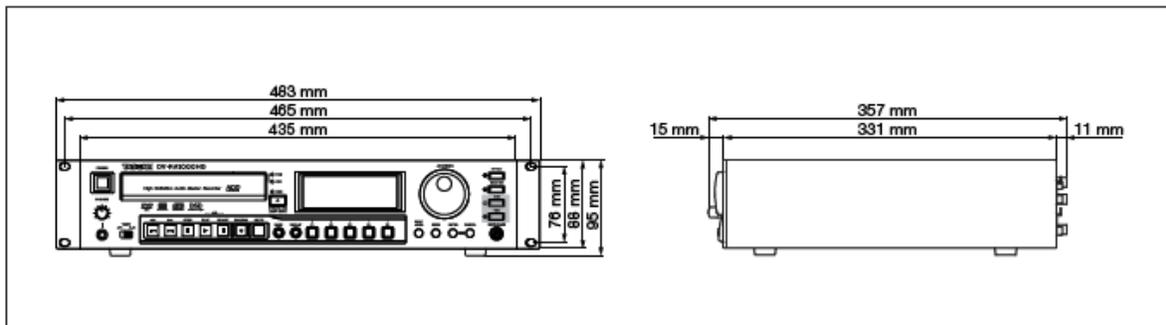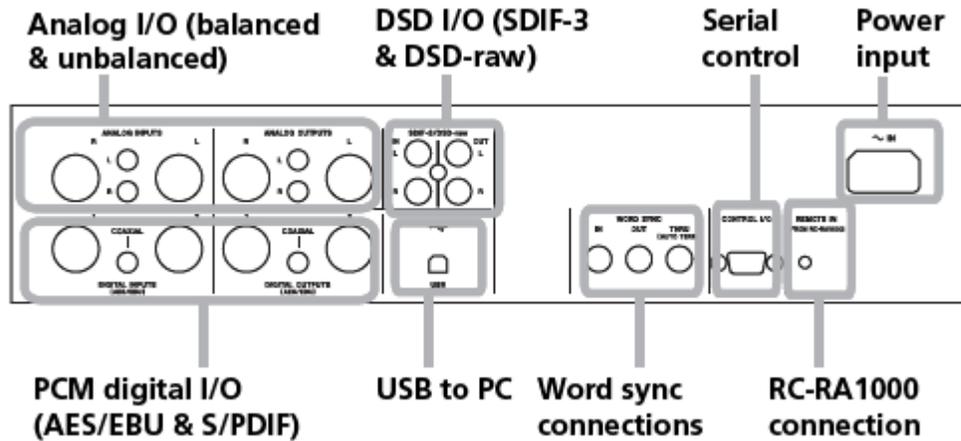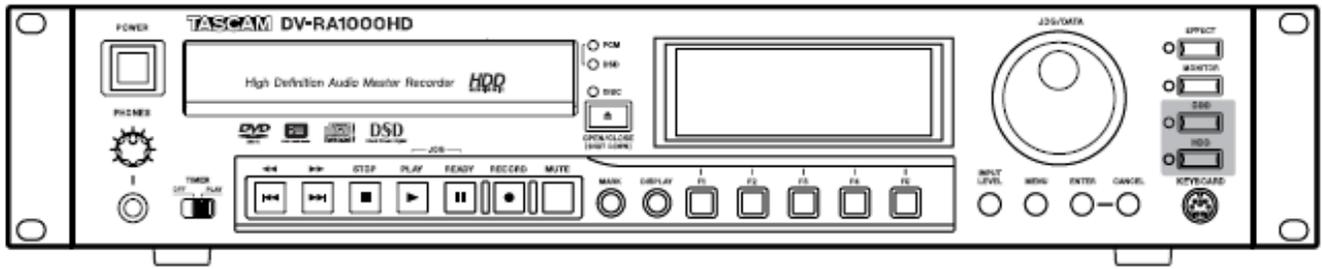## RECORDING TIMES AND TRACK TIME LENGTHS

HD Recording

Sampling frequency	Recording type	Maximum project length	Maximum recordable time on the HD (60 GB)
44.1 kHz	PCM	811 minutes (13.5 hours)	3779 minutes (62.9 hours)
48.0 kHz	PCM	745 minutes (12.4 hours)	3472 minutes (57.8 hours)
88.2 kHz	PCM	405 minutes (6.7 hours)	1889 minutes (31.4 hours)
96.0 kHz	PCM	372 minutes (6.2 hours)	1736 minutes (28.9 hours)
176.4 kHz	PCM	202 minutes (3.3 hours)	944 minutes (15.7 hours)
192.0 kHz	PCM	186 minutes (3.1 hours)	868 minutes (14.4 hours)
2.8224 MHz	DSD	811 minutes (13.5 hours)	1417 minutes (23.6 hours)

DVD +/- RW Discs Recording

Sampling frequency	Recording type	Disc time (minutes)	Maximum track length (minutes)
44.1 kHz	PCM	290	135
48 kHz	PCM	268	124
88.2 kHz	PCM	144	67
96 kHz	PCM	133	62
176.4 kHz	PCM	70	33
192 kHz	PCM	68	30
2.8224 MHz	DSD	107	50

Analog I/O (balanced & unbalanced)

DSD I/O (SDIF-3 & DSD-raw)

Serial control

Power input

PCM digital I/O (AES/EBU & S/PDIF)

USB to PC

Word sync connections

RC-RA1000 connection

APPROVED MEDIA

Certain brands of disc have been tested with the unit and are therefore listed as "supported."

DVD±RW
Ricoh,Verbatim,TDK,Philips,Sony 2x - 6x

DVD±R
Ricoh,Verbatim,TDK,Maxell,Sony 4x - 16x

The use of these discs is strongly recommended in order to achieve optimum results.

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Audio performance

These figures all measure analog-to-analog performance.

Frequency response
All modes	20 Hz — 20 kHz (±0.5 dB)
at 40 kHz –1 dB (±1 dB)	Fs = 88.2/96 kHz
at 50 kHz –3 dB (±1 dB)	DSD mode
at 70 kHz –3 dB (+1 dB/–2 dB)	Fs=176.4/192 kHz

Total Harmonic Distortion (typical)
PCM, DSD	0.004% (f=1 kHz, AES-17LPF, AD to DA)

Signal-to-noise ratio (typical)
ADC	110 dB (A-weighting, AES-17LPF, DVD recording)
DAC	120 dB (A-weighting, AES-17LPF, DVD recording)
Crosstalk	>97 dB, f=1 kHz, AES17-LPF, DVD±RW/HD recording
Click noise	<0 dB = –16 dBFS
Difference between channel levels	<1.0 dB, 1 kHz, 0 dBFS

Physical, etc. specifications

CONTROL I/O (serial) connector	Connector 'D'-sub 9-pin female
Control protocol	TASCAM optical disc control protocol a
Communication protocol	RS-232C
REMOTE IN (from RC-RA1000)	
Connector 2.5 mm stereo mini-jack	
KEYBOARD	
Connector	Standard PS/2 mini-DIN connector
Compatibility	101-key (US) keyboard or 106-key (Japanese) PS/2 keyboard
Voltage requirements	AC100-240 V, 50/60 Hz
Power consumption	33 W
Dimensions (w x h x d)	483 x 95 x 357 (mm)
	19 x 3.75 x 14.1 (in)
Weight	6.8 kg (15 lbs), excluding remote control unit
Operating temperature	5°C to 35°C (41°F to 95°F)

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