



**60 GIGABYTE
HARD DISK**



DV-RA1000HD Records to internal Hard Disk, DVD or CD



TASCAM  **DV-RA1000 / DV-RA1000HD** Audio/DSD Master Recorders

DV-RA1000 and DV-RA1000HD are professional solutions for recording high-definition audio at up to 192kHz/24bit to inexpensive DVD media. Both models also feature DSD, the basis for the audiophile Super Audio CD (SACD), as an available recording format.

As sophisticated CD recorders, DV-RA1000 and DV-RA1000HD are able to create standard audio CDs (CD-DA) in studios or meeting room installations. When operated as professional master recorders, users can record WAV and DSDIFF files directly to CD and DVD discs and transfer such files via USB 2.0 connection to and from a computer.

Professional inputs and outputs include balanced analogue XLR and unbalanced analogue RCA connections, digital AES/EBU I/O (running at normal, double-speed or double-wire formats) and SDIF-3 I/O (for external conversion and processing of DSD audio).

Advanced features like Word Sync In, Out and Thru, Wired remote control, RS-232 serial control and multiband compression and EQ establish both models as the new standard for studio mastering recorders.

DV-RA1000/DV-RA1000HD:

- ▶ Recording at up to 192kHz/24bit or in DSD format (2.822 MHz/1 Bit)
- ▶ Records to DVD+RW and CD-R/RW media
- ▶ Records standard CD-DA to CD-R/RW media, and Broadcast Wave and DSDIFF files to DVD+RW media
- ▶ Multiband compression and 3-band EQ effects
- ▶ ±6% pitch control
- ▶ Various playback modes including auto cue, auto ready and A/B play
- ▶ Fade in/out and editing functions
- ▶ USB 2.0 port for use as DVD data drive
- ▶ Balanced AES/EBU I/O, running at normal, double-speed and double-wire formats
- ▶ Balanced XLR and unbalanced RCA I/O
- ▶ DSD I/O (SDIF-3) for external conversion and DSD audio processing

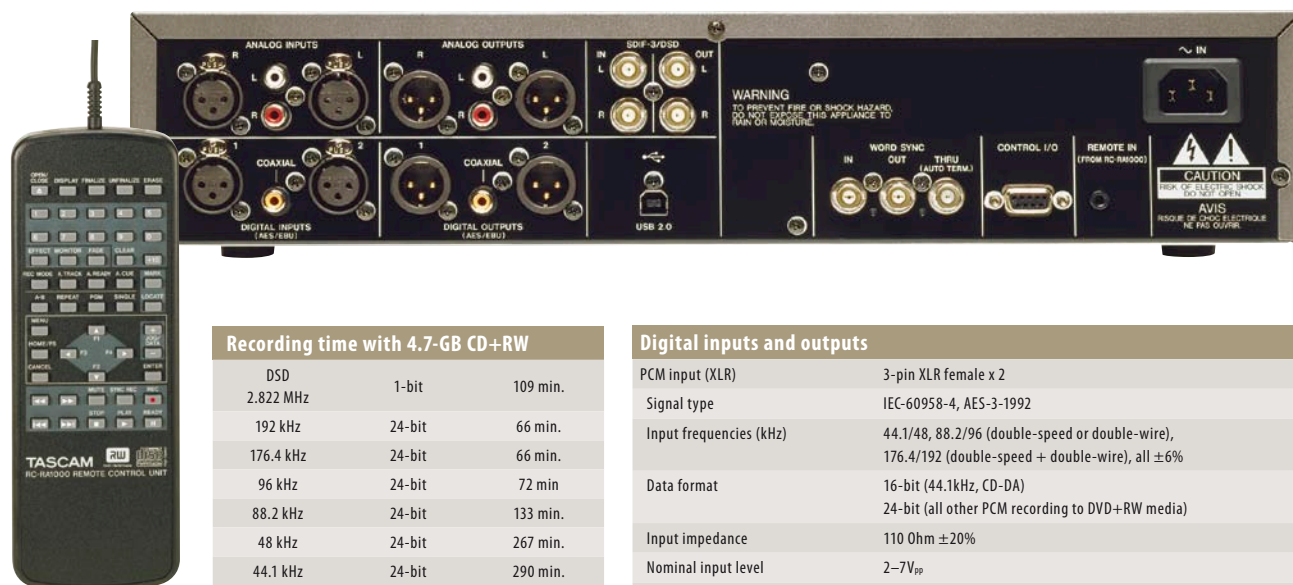
- ▶ Wordclock In, Out, Thru
- ▶ RS-232C serial control
- ▶ Computer keyboard connector for easy title editing
- ▶ User-definable function keys
- ▶ Headphones output
- ▶ Supports UDF disk format for cross platform computer compatibility
- ▶ Wired remote control included

DV-RA1000HD only:

- ▶ Records audio data directly to internal 60-Gigabyte hard disk drive
- ▶ Records to DVD±RW and CD-R/RW media
- ▶ Copies audio files between optical discs and the hard disk drive
- ▶ Copies audio data from HDD to DVD±R for archiving purposes
- ▶ DVD+RW recordings are fully compatible with DV-RA1000 and vice-versa

DV-RA1000 / DV-RA1000HD

Audio/DSD Master Recorders



Recording time with 4.7-GB CD+RW

DSD	1-bit	109 min.
2.822 MHz		
192 kHz	24-bit	66 min.
176.4 kHz	24-bit	66 min.
96 kHz	24-bit	72 min.
88.2 kHz	24-bit	133 min.
48 kHz	24-bit	267 min.
44.1 kHz	24-bit	290 min.

Digital inputs and outputs

PCM input (XLR)	3-pin XLR female x 2
Signal type	IEC-60958-4, AES-3-1992
Input frequencies (kHz)	44.1/48, 88.2/96 (double-speed or double-wire), 176.4/192 (double-speed + double-wire), all $\pm 6\%$
Data format	16-bit (44.1kHz, CD-DA) 24-bit (all other PCM recording to DVD+RW media)
Input impedance	110 Ohm $\pm 20\%$
Nominal input level	2–7V _{pp}
Minimum signal level	200mV _{pp}
Intrinsic jitter	<0.025UI (4ns @ 48kHz)
PCM input (RCA)	RCA connector x 1
Signal type	IEC-60958-3
Input frequencies (kHz)	44.1/48, 88.2/96 (double-speed), all $\pm 6\%$
Data format	16-bit (44.1kHz, CD-DA), 24-bit (44.1kHz/48kHz, 88.2/96kHz to DVD+RW media)
Input impedance	75 Ohm $\pm 20\%$
Nominal input level	0.5V _{pp}
Minimum signal level	0.2V _{pp}
Intrinsic jitter	<0.025UI (4ns @ 48kHz)
DSD input (BNC)	BNC connectors x 2
Signal type	Sony/Philips SDIF-3 format / DSD-Raw
Signal level	2–5V (equivalent to 5V TTL)
Input impedance	75 Ohm, $\pm 10\%$
Clock synchronization	44.1kHz at WORD SYNC IN or internal clock at 44.1kHz
PCM output (XLR)	3-pin XLR male x 2
Signal type	IEC-60958-4, AES-3-1992
Output frequencies (kHz)	44.1/48, 88.2/96 (double-speed or double-wire) 176.4/192 (double-speed + double-wire) all $\pm 6\%$
Data format	16-bit (44.1kHz, CD-DA), 24-bit (all other PCM recording to DVD+RW media)
Output impedance	110 Ohm $\pm 20\%$
Nominal output level	2–5V _{pp}
Intrinsic jitter	<0.025UI (4ns @ 48kHz)
PCM output (RCA)	RCA connector
Signal type	IEC60958-3
Output frequencies (kHz)	44.1/48, 88.2/96 (double-speed), all $\pm 6\%$
Data format	16-bit (44.1kHz, CD-DA), 24-bit (44.1kHz/48kHz, 88.2/96kHz to DVD+RW media)
Output impedance	75 Ohm $\pm 20\%$
Nominal output level	0.5V _{pp} (typical)
Intrinsic jitter	<0.025UI (4ns @ 48kHz)
DSD output (BNC)	BNC connectors x 2
Signal type	Sony/Philips SDIF-3 format / DSD-Raw
Signal level	2–5V (equivalent to 5V TTL)
Output impedance	10 Ohm
Clock synchronization	44.1kHz at WORD SYNC IN or internal clock

Audio performance

Frequency response, all modes	20 Hz – 20kHz (± 0.5 dB)
F _s = 88.2/96kHz	at 40kHz –1dB (± 1 dB)
F _s = 176.4/192kHz	at 80kHz –3dB (+1dB/–2dB)
DSD mode	at 50kHz –3dB (± 1 dB)
THD (inputs at maximum level, 1kHz, AES-17 LPF), DV-RA1000	<0.005% (PCM), <0.007% (DSD)
THD (inputs at maximum level, 1kHz, AES-17 LPF), DV-RA1000HD	<0.004% (PCM, DSD, A/D to D/A)
Signal-to-noise ratio (AES-17 LPF), DV-RA1000	>103dB(A) (DVD)
Signal-to-noise ratio (AES-17 LPF), DV-RA1000HD	>110 dB(A) (DVD, A/D) >120 dB(A) (DVD, D/A)
Crosstalk (1kHz, AES-17 LPF)	>97dB (DVD)
Difference between channel levels (1kHz, 0dBFS)	<1,0dB

Analogue inputs and outputs

Balanced input	3-pin XLR female x 2
Input impedance	>10 kOhm @ 1kHz
Nominal input level	+4dBu
Maximum input level	+20dBu, +22dBu, +24dBu (switchable)
Unbalanced input	RCA connectors x 2
Input impedance	>10 kOhm @ 1kHz
Nominal input level	–10dBV
Maximum input level	+6dBV
Balanced output	3-pin XLR male x 2
Output impedance	220 Ohm
Nominal output level	+4dBu
Maximum output level	+20dBu, +22dBu, +24dBu (switchable)
Unbalanced output	RCA connectors x 2
Output impedance	220 Ohm
Nominal output level	–10dBV
Maximum output level	+6dBV
Phones output (stereo)	6.3-mm stereo jack x 1
Max output power	50mW + 50mW (30 Ohm)

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