

MD-3000

MEDICAL VIDEOCASSETTE RECORDER **S VHS**



Incorporates Advanced Digital Electronic Components For Enhanced Performance And Reliability



SUPER HIGH PICTURE QUALITY

Only with S-VHS Superior Image Reproduction and Consistency

- Over 400 lines of horizontal resolution even with VHS tape
- With the built-in digital frame memory, exquisite still & slow-motion reproduction is achieved

S-ET PLAYBACK COMPATIBILITY

Recorded tape	Playback VCR	S-VHS VCR	VHS VCR
S-VHS Playback (recorded on S-VHS tape)	●	●	○*
S-ET Playback (recorded on VHS tape)	●	●	○*
VHS Playback (recorded on VHS tape)	○	○	○

* need SQPB function
 ● 400 lines resolution, S-VHS quality
 ○ 240 lines resolution, VHS quality

SUPER-FAST DRIVE

Easy-to-Operate Recording and Play Functions

- Quick fast-forward & rewind (entire tape within approx. 120 seconds)
- A quick-action high-speed mechanism results in fast recording start time (drum motor on)

ENERGY-EFFICIENT, LIGHTWEIGHT AND COMPACT
Impressive Operation Ease even in Special-Use Environments

- Amazingly low electricity use (approx. 0.4-0.2A)
- Lightweight & compact for easy system integration

The MD-3000 Medical Videocassette Recorder incorporates advanced digital technologies for superior image quality in real time, and exceptional ease of operation. The S-VHS ET function ensures 400 lines of razor-sharp resolution on a standard VHS videocassette tape. The MD-3000 is designed specifically for image-critical medical applications and delivers digitally enhanced high quality recordings. It incorporates a wide range of advanced features such as a jog/shuttle dial for easy programming; built-in digital TBC (time base corrector) which eliminates jitter, skew and color blurring during playback; *3-D digital noise reduction (DNR)*; *3-D digital Y/C separation*; *digital frame memory (field/frame selectable)*; and a rotary erase head which ensures a cleaner start after recording pause. A RS-232C/USB board and 34-pin parallel interface board are also available as options.

MD-3000

MEDICAL VIDEOCASSETTE RECORDER **SVHS**



Operation Ease And Convenience Is A Step Above the Rest With An Impressive Lineup Of Advanced Functions

SELF-DIAGNOSTIC SYSTEM

Automatically detects abnormal operation

Checks for abnormal internal operations automatically. If a malfunction in operation occurs within the unit, information about the abnormality is displayed on the LCD panel or monitor screen.

HI-FI AUDIO RECORDING AND EDITING (NARRATION)

Insert narration with images

The VCR is equipped with two-channel Hi-Fi recording and has one additional monotone channel for the addition of narration for images after initial recording has been completed (use microphone plugged into mic terminal on the front of the unit).

FLYING ERASE HEAD

Smooth, clean frames transition

After recording has been stopped, the flying erase head traces back over the image track and erases rainbow noise and distorted images before beginning to record again, thus ensuring smooth, clean connection of image recordings.

DUAL JOG DIAL SHUTTLE

Quickly search for recorded images

Use the inner jog dial to control forward and reverse frame movement and outer dial to control search speed. Combine the two and quick search of specific images is easier than ever. Setting the menu is easy, too.

LINEAR TAPE COUNTER/END-OF-TAPE DISPLAY

Easily check remaining tape time

Tape usage is monitored and displayed an easy to read hr:min:sec format. A bar-type display indicator also shows the amount of tape remaining, which helps to prevent recording mistakes due to shortage of tape.

MULTIPLE SEARCH PATTERNS

Quick leader tape search

"Blank Search" searches for sections of tape that have not been recorded automatically. "Time/Date Search" searches recorded data by time and date imprints. "Index Search" quickly searches for the leader tape at the start of each recording session. Choose the search method most convenient for the purpose at hand.

ILLUMINATED KEYS

Lighted keys for easy operation in the dark

Large numerical display, easy-to-read panel and illuminated keys provide easy recognition in the dark.

OTHER FUNCTIONS

- Digital Tracking
- Automatic Head Cleaning
- Used Time Display
- Long Pause
- Automatic Replay
- 2-Way Mode Lock

GENERAL	
Power Input	AC100-230V +/- 10% @ 50/60Hz
Power Consumption	0.4-0.2 amps
Video Signal	HS-MD3000U: EIA standard NTSC color signal HS-MD3000E: CCIR standard PAL color signal
Head	4 video heads, 2 Hi-Fi audio heads, 1 flying erase head
Dimensions (WxDxH)	10.6" x 14.4" x 4.9" (270 x 366 x 125 mm)
Weight	14.3 lbs. (6.5 Kg)
Operating Condition	Temperature: 41-104° F (5-40° C) RH: Max. 80%
Regulatory	Safety: UL2601-1, CSA C22.2 No.601-1, EMI: FCC part 15 subpart B class B
Battery Backup	More than 3 years

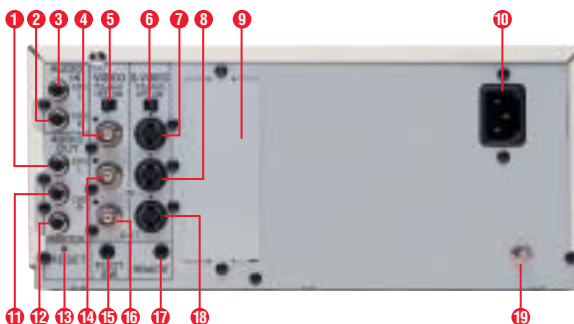
VIDEO SIGNAL	
Input	BNC, 1.0Vp-p, 75 ohms S-video, Y/C connector, 75 ohms
Output	BNC, 1.0Vp-p, 75 ohms S-video, Y/C connector, 75 ohms
Signal-to-Noise Ratio	More than 42 dB
Horizontal Resolution	More than 400 lines (S-VHS, VHS-ET mode); more than 240 lines (VHS mode)

AUDIO SIGNAL	
Channels	2 Hi-Fi, 1 normal
Input	CH1 & CH2: 308mV(rms), 50K ohms, 2 RCA plugs Microphone: 0.326mV(rms), 600 ohms mini jack
Output	CH1 & CH2: 308mV(rms), 1K ohm, 2 RCA plugs Monitor out: 308mV(rms), 1K ohm, RCA plug
Freq. Response	50 Hz to 12K Hz (normal audio) 20 KHZ to 20 KHZ (Hi-Fi audio)
Signal-to-Noise Ratio	More than 43 dB
Dynamic Range	More than 90 dB

TAPE TRANSPORT	
Tape Format	S-VHS/VHS 1/2" width high-density videocassette
Tape Speed	33.35mm/sec
Recording Time	120 min. with T-120 cassette tape
Fast Forward/Rewind Time	110 seconds with T-120 cassette tape

OPTIONS	
RS-232C/USB	R-3002
Wired Remote	R-3001
34-pin Parallel Board	R-3003

REAR PANEL



1. Audio output connector (CH-1/L)
2. Audio input connector (CH-2/R)
3. Audio input connector (CH-1/L)
4. Loop through connector (BNC)
5. 75 ohm termination switch for video input (BNC-in)
6. 75 ohm termination switch for video input (S-in)
7. Loop through connector (S)
8. Video in connector (S-in)
9. Compartment for option board and battery
10. AC power socket
11. Audio output connector (CH-2/R)
12. Monitor output connector (mono)
13. Reset button
14. Video connector (BNC-in)
15. Foot switch jack
16. Video out connector (BNC-out)
17. Remote connector
18. Video out connector (S-out)
19. Equipotential terminal

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