

HS-9960U

TIME-LAPSE VIDEO RECORDER

 **MITSUBISHI**
IMAGING PRODUCTS

**Precision Performance,
Greater Reliability, And Easier To Operate**



- High resolution – more than 400 lines horizontal resolution (S-ET Expansion Technology)
- 24-hour real time and up to 960-hour time-lapse recording
- All-new mechanism (including new video heads for improved picture quality) enclosed in an extra-strength load-bearing chassis
- Easily recognizable warning of recording problems reported with both an audible signal and a flashing indicator
- Powerful search function supports searching by data and/or time (to the minute)
- Industry-leading two-year warranty

HS-9960U: 24-HOUR REAL TIME / 960-HOUR TIME-LAPSE VIDEO CASSETTE RECORDER

A new mechanism for more reliable, higher-quality video recording

■ Improved picture quality

The all-new mechanism features newly developed video heads for improved picture quality. Plastic parts have been replaced with metal parts providing further reliability.

■ New load-bearing chassis design

The newly designed chassis can support the weight of a video monitor placed on top.

■ Software servo

The new software servo enables high-precision control of tape drive and drum drive.



Color model shown here

■ Super-fast FF/REW and super-quick response mechanism

One of the quickest machines in the industry, fast-forward and rewind tapes in just 120 seconds with T-120 tape. Quickly switches from STOP to REC mode within 0.3 seconds when the drum is operating.

24-hour real time* and triple-density recording

Three times more picture recording in each mode, compared to the time-lapse video recorders. (*using T-160 cassette)

High resolution – more than 400 lines horizontal resolution (S-ET Expansion Technology)

It enables the HS-9960U to playback images with excellent picture quality when recording using a high-resolution CCTV camera with a VHS tape (HG tape recommended).

Improved record check function provides greater dependability

■ One button recording check

With the press of a button, the record check function enables you to check whether recording is proceeding normally.

■ Video-head clog detection and cleaning

The video-head cleaning function automatically cleans the video heads.

■ New warning system

The new easily recognizable warning system indicates recording problems by means of an audible signal and flashing indicator.

■ Self-diagnosis

Internal problems during recording are automatically detected and displayed.

■ Automatic startup following power failure

Previous settings are automatically restored when power is restored.

New features for greater versatility and ease-of-operation

■ Clock setting

Change the clock settings on the video recorder with the power off (no need to use the screen). Conventional method also available.



■ Daylight savings auto-switcher

Automatically switches from normal time to daylight savings time, and back again, twice per year (function easily disabled if not required).

■ New menu structure

The new menu structure provides additional function settings in all areas, including on-screen display, time, timer record, recording, and maintenance, as well as an easy-to-use front search key.

■ Built-in RS-232C interface

With an RS-232C interface, various time-lapse operations are possible from an external computer.

Greater functionality for more applications

- *Timer-record holiday setting*
- *Jog shuttle*
- *Multiple-language menus (English, Spanish, French)*
- *Choice of search functions*
- *Alarm record list*
- *Software playback (2H mode PB)*
- *Remaining-tape display*
- *Two-way locking*
- *Series recording*

■ Input & output terminal



■ Tape Speed and Recording Time (with T-120 cassette):

Mode	Time (hour:minute)	Speed (mm/s)	Recording interval (s/field)	Recording Fields per Second (fields/s)	Video signal	Audio signal	Tape drive
6H(EP)	6:00	11.12	0.0167	60.00	Continuous	Recordable	Continuous
L18H(EP)	18:00	3.71	0.050	20.00	Time Lapse	Recordable	Continuous (Slow)
L30H(EP)	30:00	2.22	0.083	12.00	Time Lapse	Recordable	Continuous (Slow)
48H(EP)	54:00	—	0.150	6.70	Time Lapse	Not recorded	Time Lapse
72H(EP)	78:00	—	0.217	4.60	Time Lapse	Not recorded	Time Lapse
96H(EP)	102:00	—	0.284	3.50	Time Lapse	Not recorded	Time Lapse
120H(EP)	126:00	—	0.350	2.90	Time Lapse	Not recorded	Time Lapse
168H(EP)	174:00	—	0.484	2.10	Time Lapse	Not recorded	Time Lapse
240H(EP)	246:00	—	0.684	1.50	Time Lapse	Not recorded	Time Lapse
360H(EP)	368:00	—	1.02	0.98	Time Lapse	Not recorded	Time Lapse
480H(EP)	486:00	—	1.35	0.74	Time Lapse	Not recorded	Time Lapse
720H(EP)	726:00	—	2.02	0.50	Time Lapse	Not recorded	Time Lapse
960H(EP)	966:00	—	2.69	0.37	Time Lapse	Not recorded	Time Lapse
0H(EP)	—	—	—	—	Time Lapse	Not recorded	Time Lapse

■ SPECIFICATIONS

Tape Format	VHS, 1/2" width, high-density video cassette tape
Power Source	AC100-230V ± 10%, 50/60 Hz
Power Consumption	Approx. 20 watts
Television System	EIA standard 525 lines, 60 field NTSC-type color system
Fast Forward/Rewind Time	Approx. 120 sec. with T-120 cassette
Heads-Video	4 rotary heads
Audio/Control	1 stationary head
Erase	1 full-track head
Horizontal Resolution	More than 400 lines (color & B/W) (SR mode)
Audio Frequency Response	70 Hz - 4 kHz (6H mode)
Operating Temperature	41°F-104°F (5°C to 40°C)
Relative Humidity	Max. 80%
Dimensions (W x D x H) (Jog dial included)	16.7 x 12.3 x 3.7" (425 x 313 x 95 mm)
Weight	9.7 lbs. (4.4 kg)
Battery Backup	31 day duration
Warranty	Two-year parts and labor; one-year head parts and labor, 90-day over the counter exchange through distribution channels

CONNECTORS

ALM Input	Screw terminal for starting alarm recording
RST Input	Screw terminal for finishing alarm recording or for adjusting on-screen clock
REC Input	Screw terminal for starting/finishing recording, or for series recording
GND	Screw terminal for ground
ALM Output	Screw terminal for output while alarm recording is in progress
CLK Output	Screw terminal to command camera switching
MODE Output	Screw terminal for indication of VCR selected mode
CALL Output	Screw terminal for external warning device or for series recording
REMOTE Jack	Jack for connecting the remote control unit
RS-232C Interface	D-SUB 9 pin connector

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