

RT30A, RT960A High Density Video Cassette Recorder

- Up to 30 hr 'Real-Time' and 960 hr Time-Lapse Recording
- High Density Recorder Providing High Quality Images
- High Speed Rewind
- On-screen Menus in 7 Languages
- Auto Record After Power Failure
- Audio Recording and Playback
- Alarm and Power Fail Review



When a VCR is required for backup to your observation and monitoring practices, you no longer have to worry about missing a thing. With the RT30A and RT960A Series 30hr and 960hr High Density Video Cassette Recorders you have superior video and audio quality with the versatility to best suit your application needs.

The high density RT30A and RT960A feature gives you double (PAL) / triple (NTSC) the number of picture updates per second than conventional VCRs, ensuring you do not miss an incident, yet keeping the high quality picture. Highly developed compact mechanical components ensure long lasting reliability even with the high speed rewind of less than 70 sec.

The RT30A gives the option of recording events with 6, 18 or 30 hrs of real-time video. The RT960A provides the same real-time video plus up to 960 hrs of time-lapse video. Audio recording and playback is also available in the 6, 18 and 30 hour modes.

Special features like the superimposed on-screen menu in 7 languages provide easy setup. Other features include built-in time/date generator, a built-in back-up battery that provides time/date/settings backup during power loss for up to 2 weeks, jog/shuttle for instant picture retrieval, tape remaining indication and automatic recording after power failure. The list is endless, ensuring that these VCRs can meet your required application specification.

Technically the RT30A and RT960A are the most advanced Real-Time video recorders available. V-Sync selection, "video-through", security-lock, video-loss, Vext-pulse and V-Lock functions are just a few features that will enhance the functions that need special attention.

Alarm detection is operational from the recording or ready modes and will turn on the alarm indicator and "Alarm-On" output. It also inserts an Alarm-Code in the on-screen display for easy location during later alarm search. The selected alarm recording speed can be programmed to continue for a period of 30 seconds, 1, 3, 5, 10 minutes or until tape end.

Whatever your needs are for recording and monitoring, the RT30A and RT960A will provide you with a trouble free, easy-to-use advanced real-time video recording for your specific application area.

SPECIFICATIONS

Electrical

Model No.	Rated Voltage	Voltage Range	Power at Min. Voltage
RT30A/50	230 Vac, 50 Hz	90 to 264	22 W
RT960A/50	230 Vac, 50 Hz	90 to 264	22 W
RT30A/60	120 Vac, 60 Hz	90 to 264	22 W
RT960A/60	120 Vac, 60 Hz	90 to 264	22 W

Tape Format: Standard 12.7 mm (0.5 inch) VHS tape.

Video Recording System: VHS

Rotary Heads: Four head helical scan azimuth system.

Luminance: FM recording.

Color: Converted subcarrier, direct recording.

Selectable Speeds (Recording & playback):

RT30A/50: 6, 18, and 30 hours on E-180 tape.

RT960A/50: 6, 18, 30, 72, 96, 120, 168, 240, 480 and 960 hours on E-180 tape.

RT30A/60: 6, 18, and 30 hours on T-120 tape.

RT960A/60: 6, 18, 30, 72, 96, 120, 168, 240, 480 and 960 hours on T-120 tape.

Tapes recorded on a conventional time-lapse recorder can be reviewed only in 3 hours for -/50 models and 2 hours for -/60 models.

Alarm Record Speeds:

RT30A/50 & RT960A/50: 6, 18, and 30 hour modes.

RT30A/60 & RT960A/60: 6, 18, and 30 hour modes.

High Speed Video Scan:

RT30A/50 & RT960A/50: 9 x 6-hour speed.

RT30A/60 & RT960A/60: 9 x 6-hour speed.

Rewind/Fast Forward Time: Less than 70 seconds (E-180 or T-120 tape).

Alarm Command:

From the Recording or Ready Mode:

Turns on Alarm Indicator and "Alarm-On" output.

Inserts Alarm-Code in on-screen display for easy location during later visual search.

The selected alarm recording speed can be programmed to continue for a period of 30 seconds, 1, 3, 5, 10 minutes or until tape end.

Typical Delay Time Before Alarm Recording:

From STOP Mode: Approx. 3 sec.

From RECORD Mode: Less than 1 sec.

Video:

RT30A/50 & RT960A/50: PAL color/ CCIR monochrome.

RT30A/60 & RT960A/60: NTSC color/EIA monochrome.

Input: 1.0 Vp-p, 75 ohm, unbalanced.

Output: 1.0 Vp-p, 75 ohm, unbalanced.

Horizontal Resolution:

Monochrome: 320TV lines.

Color: 270 TV lines.

Signal-to-Noise: more than 43 dB (6-hour mode).

Audio:

Audio Recording possible in 6, 18, 30 hours mode*

Input: -6.0 dBm, 47 kohm, unbalanced.

Output: -9.0 dBm, 1.5 kohm unbalanced.

Frequency Range 100 Hz to 5 kHz. (6-hour mode)

Signal-to-Noise: more than 43 dB (6-hour mode)

* Recommend to record audio in 6 or 18 hour mode.

Time/Memory Power-Loss Backup: 2 weeks

Indicators:

VCR speed

Alarm

Series

Record

Timer

Cassette

Index

Power failure

Key lock

Repeat

Function (clock, tapecounter, error)

VCR function

Controls:

Power

Record

Joggle Shuttle

Play

Stop/Eject

Still

Clear

Clock

Menu

Key lock

Tracking

V-lock

Connectors:

VIDEO IN: 1; BNC.

VIDEO OUT: 1; BNC.

AUDIO IN: RCA Phono jack.

AUDIO OUT: RCA Phono jack.

EXTERNAL INTERFACE*: 12-pin terminal strip adapter.

* Alarm In/Out; Series In/Out; VEXT; Tape End Out; I-Shot Record In.

Mechanical

Finish: Mushroom

Dimensions (w x d x h): 360 x 270 x 94 mm (14.2" x 10.6" x 3.7")

Weight: Approximately 3.8 kg (8.4lbs)

Environmental

Temperature: +5 °C to +40 °C (+41 °F to +105 °F).

Humidity: Less than 80% RH

Electromagnetic Compatibility

EMC Requirements:

50 Hz Models: 89/336/EEC.

Immunity: EN50130-4.

Emission: EN55022 Class B.

Harmonics: EN61000-3-2.

Voltage Fluctuations: EN61000-3-3.

60 Hz Models: U.S.A. and Canada.

FCC Part 15, Class B.

Safety:

50 Hz Models: CE.

LYD Requirements: 73/23/EEC; EN60065.

60 Hz Models: UL & cUL.

UL: UL 1492.

CSA: CSA 22.2, No.1.

Accessories (only -/60 NTSC models)

TC1350 Video Cassettes: 10 pack VHS T-120.

TC1355 Video Cassettes: 10 pack VHS T-160.

Recording Times: PAL models (-/50)

Record Mode		Actual hrs		Tape Speed	Recording Fields	Drive	Audio
RT30A	RT960A	E-180	E-240				
6H	6H	6H	8H	11.69mm/sec	50fields/sec	Continuous	Yes
18H	18H	18H	24H	3.90mm/sec	16.67fields/sec	Continuous	Yes
30H	30H	30H	40H	2.34mm/sec	10fields/sec	Continuous	Yes
	72H	78H	104H	0.90mm/sec	3.85fields/sec	Intermittent	No
	96H	102H	135H	0.69mm/sec	2.95fields/sec	Intermittent	No
	120H	126H	168H	0.56mm/sec	2.38fields/sec	Intermittent	No
	168H	174H	232H	0.40mm/sec	1.73fields/sec	Intermittent	No
	240H	246H	328H	0.29mm/sec	1.22fields/sec	Intermittent	No
	480H	486H	648H	0.14mm/sec	0.62fields/sec	Intermittent	No
	960H	966H	1288H	0.07mm/sec	0.31fields/sec	Intermittent	No

Recording Times: NTSC models (-/60)

Record Mode		Actual hrs		Tape Speed	Recording Fields	Drive	Audio
RT30A	RT960A	T-120	T-160				
6H	6H	6H	8H	11.12mm/sec	60fields/sec	Continuous	Yes
18H	18H	18H	24H	3.71mm/sec	20fields/sec	Continuous	Yes
30H	30H	30H	40H	2.22mm/sec	12fields/sec	Continuous	Yes
	72H	78H	104H	0.93mm/sec	5fields/sec	Intermittent	No
	96H	102H	135H	0.70mm/sec	3.75fields/sec	Intermittent	No
	120H	126H	168H	0.56mm/sec	3fields/sec	Intermittent	No
	168H	174H	232H	0.40mm/sec	2.14fields/sec	Intermittent	No
	240H	246H	328H	0.28mm/sec	1.5fields/sec	Intermittent	No
	480H	486H	648H	0.14mm/sec	0.75fields/sec	Intermittent	No
	960H	966H	1288H	0.07mm/sec	0.38fields/sec	Intermittent	No

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