

AMPEX

VR-420

1/2-inch Videotape

Color Recorder/Reproducer



VR-420 — New From Ampex and Ready for All Occasions

When the company which developed the Videotape recorder introduces its first 1/2-inch reel-to-reel system, it is reasonable to expect something out of the ordinary. Here it is — the VR-420 Series.

This outstanding recorder is ready to answer any requirement for 1/2" capability for people who are seeking quality performance at low cost.

Extra Advantages for Expanded Capability

The VR-420 Series features superlative performance in all operating modes because of Ampex electronics and engineering. In addition, it provides a number of special "extras" which expand capability, and enable the equipment to perform special functions when the need arises.

Special features include:

- **EIAJ-standards.** Tapes made on the VR-420 are compatible with and playable on all comparable equipment meeting EIAJ Type 1 and recommended M-Type color standards. Tapes made on such machines are playable on the VR-420.
- **Recording flexibility.** The VR-420 is suitable for recording from any standard color or black and white camera, or other recording source. The unit is ideal for use with a low-cost color camera. It is also an

appropriate choice for use with a black and white camera when only monochrome recording is desired. Color programs may be recorded off the air with a modified television receiver or video tuner.

- **A two-channel, stereo audio system.** Use it for stereo sound, or for post production recording on the left channel. Left and right channels may be monitored on a TV receiver either independently, or mixed by means of an audio selector switch.
- **Two motors.** The VR-420 is the only low-cost machine of its type with a two-motor system. That means prolonged reliability, and a more stable picture. The drive system includes an improved capstan, and a direct drive scanner. This eliminates the need of a belt to drive the scanner, thus avoiding belt problems.
- **A tracking meter.** This makes it a simple matter to adjust tracking accurately for optimum picture quality.
- **A rotary transformer.** The signal-to-noise problems which can be caused by slip rings are eliminated in the VR-420 by the use of a rotary transformer, which requires no maintenance.
- **Simple assemble edit capability.** Easy-to-operate edit controls make simple assemble editing an easy matter with a minimum of picture disturbance.
- **Dropout compensator and noise compensator.** Virtually eliminates dropouts and reduces noise, producing a superior picture.

Easy to Use

The VR-420 is compact, lightweight, portable, easy to use. There is no need to be a professional to obtain superlative results with it. The machine features simplified threading, and automatic controls to maintain video and audio record levels. Manual controls are conveniently placed and easy to operate.

Ampex Quality

All features of the VR-420 and other models add up to superlative long-term performance with little need for maintenance. Design, electronics, and engineering are all characterized by the uncompromising excellence associated with all Ampex Videotape products, regardless of price.



SPECIFICATIONS

GENERAL

TAPE: 1/2-inch wide.

TAPE SPEED: 7 1/2 in/s $\pm 0.5\%$ in nominal record tension.

REWIND TIME: 5 1/2 min. max., 2400 ft of tape

FAST FORWARD TIME: 5 1/2 min. max., 2400 ft of tape

RECORDING TIME: 63 minutes with 2400 ft of tape on 7 inch reel.

FORMAT: EIAJ type 1 and recommended EIAJ type M color system.

CASE: Wood with removable lid.

SIZE: 17-1/8" width x 16-5/8" length x 9-1/8" height.

WEIGHT: 37 lbs.

OPERATING POSITION: Horizontal only.

REEL SIZE: Seven inch max.

POWER REQUIREMENTS: Operating voltage and frequency - 120V $\pm 10\%$ at 60 Hz. Power - 55 watts.

PERFORMANCE SPECIFICATIONS

VIDEO

VIDEO RECORDING SYSTEM: Two rotary heads.

FREQUENCY RESPONSE: Color: +2 -6 dB over range of 30 Hz - 2.2 MHz referenced to response at 0.5 MHz.

B/W: +2 -6 dB over range of 30 Hz - 3.0 MHz referenced to response at 0.5 MHz.

SIGNAL-TO-NOISE: B/W: 40 dB minimum, peak to peak video (blanking level to peak white) to rms noise.

HORIZONTAL RESOLUTION:

Color: Minimum 230 lines limiting visual resolution on playback of a monoscope test pattern.

B/W: Minimum 300 lines limiting visual resolution on playback of a monoscope test pattern.

INPUT:	Input	Sensitivity	Impedance
	Line or Camera	0.5V p-p - 1.5V p-p composite	75 ohms unbalanced terminated internally
OUTPUT:	Output	Level	Impedance
	Video out	0.8V p-p - 1.2V p-p composite EE or Playback composite	75 ohms (nominal) unbalanced

PERFORMANCE SPECIFICATIONS

AUDIO

FREQUENCY RESPONSE: 100 Hz to 10 kHz ± 3 dB.

SIGNAL-TO-NOISE: 40 dB minimum measured at 1.0 kHz.

FLUTTER AND WOW: 0.25 rms max. over a range of 0.5 - 250 Hz.

INPUT:	Input	Sensitivity 1 kHz	Impedance Nominal
	Microphone	-70 dB - -50 dB	500 to 50K ohms unbalanced
	Line	-30 dB - -10 dB	min. 500K ohms unbalanced x 2 (Stereophonic Record)
Output (Record/Playback)	Level 1 kHz	Load Impedance	
	Line, T.V.	1.0V $\pm 20\%$	More than 10K ohms unbalanced x 2 (Stereophonic Playback)

Descriptions and specifications subject to change without notice.

Your investment in Ampex equipment yields maximum returns when it is operated and maintained by Ampex-trained people. Seminar and videotape training courses available worldwide. For brochure, write Ampex Technical Institute, M.S. 2-11A, 2685 Bay Road, Redwood City, Ca. 94063, U.S.A.

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