

VPR-250 D-2 FORMAT COMPOSITE DIGITAL RECORDER

General

The VPR-250 recorder is a D-2 format composite digital machine especially adapted for the various VTR applications that are typical of broadcast operations. It shares the robust format, durable transport and exceptional signal system of other Ampex D-2 recorders. Like the other Ampex D-2 recorders, it can be readily integrated into existing broadcast systems without costly signal conversion devices.

Description

The VPR-250 accepts two standard D-2 cassettes: 32-, and 94-minute lengths. For applications that do not require longer record/play times, the VPR-250 is a very cost-effective choice.

With the unique and very logical control panel found on the VPR-250, operators can quickly and easily control the machine even under pressures of time. A unique control system displays machine status-at-a-glance and allows fast and easy setup. If program compression is required to fit a certain time period, the operator need only call up the appropriate display and enter the exact time reduction in seconds per hour.

Features

- Durable, heavy-duty transport with air guides for gentle tape handling and 60X play speed in shuttle
- 20 ms lockup time from Ready Mode

- Accepts two standard D-2 cassette sizes: 32 and 94 minutes
- Easy-to-use control panel with logical displays for error-free operation
- Program compression capability with simple, accurate controls
- Full field store capability
- Audio metering on character generator output
- Internal audio monitoring speakers
- Read-Before-Write capability
- Quick field replacement of all wear components including heads
- Shares critical components with other Ampex VPR-200, VPR-300 and ACR-225 Series recorders, for economies of parts inventory, maintenance and training



VPR-250

NTSC AND PAL SPECIFICATIONS

Specification	NTSC & PAL
General	
Power Requirements:	90 to 135 Volts or 180 to 270 Volts, 48 to 66 Hz 1800 VA Nominal at 115 or 230 Volts, Approx. 1200 Watts
Power Consumption: Avg.	1000 Watts
Operating Environment	
Temperature	5°C-40°C
Humidity	10%-90% noncondensing
Size	
Table Top	597mm H × 432mm W × 705mm D 23 ¹ / ₂ " H × 19" W × 27 ³ / ₄ " D
Rack Mount	578mm H × 432mm W × 705mm D 22 ³ / ₄ " H × 17" × 27 ³ / ₄ " D
Weight	114 kg (250 lbs)
Recording Format	<u>D-2 Composite Digital</u>
Tape Speed	131.7mm/sec
Writing Speed	27.387m/sec NTSC; 30.428 m/sec PAL
Record Time	32 min. small cassette 94 min. medium cassette
Cassette Types	D-2 Series S and M
Recommended Tape	Class 1500 tape Ampeg 319 or equivalent

Transport Characteristics

Shuttle Speed	± 7.9m/sec (60x Play)
Acceleration	3.0m/sec ²
Fast Forward/	38 sec for 32 min. — S cassette
Rewind Speed	100 sec for 94 min. — M cassette
Servo Lock Times	
Color Frame P/B	20 millisecond from Ready On 1 sec from Ready Off
Tape Timer Accuracy	± 1 Frame (with continuous CTL)
Edit Accuracy	± 0 Frame

Video

Sampling Frequency	4FSc
Quantization	8 bits
Channel Coding	Miller ²
Bandwidth	5.5 MHz ± 0.2 dB NTSC; 6.0 MHz ± 0.2 dB PAL 6.0 MHz - 1 dB NTSC; 6.5 MHz - 1 dB PAL
S/N	≥ 54 dB (luminance)
D.G.	≤ 2.0% (ramp with 40 IRE subcarrier)
D.φ	≤ 1.0°
K Factor	≤ 1.0% (2 T)
Y/C Delay	≤ 10 nsec (20 T).
Y/C xtalk	≤ 1.0 IRE
Moire	Not applicable
Line Tilt	≤ 0.5%
Field Tilt	≤ 1.0%
Color Gen. Lock Stability	≤ 0.2°

Analog Multi-Generation

20 Generations (4.5 per CCIR Recommendation 500-3)

Digital Multi-Generation

>20 Generations

Specification **NTSC & PAL**

Audio

Frequency Response	20 Hz - 20 kHz ± 0.5 dB
Dynamic Range	≥ 90 dB (ANSI 'A' weighted, Pre-emphasis ON)
Headroom	20 dB
Distortion	≤ 0.05% (at operating level, Pre-emphasis ON)
Crosstalk	20 Hz to 20 kHz - 80 dB (at 1 kHz)
Operating Level	- 8 dBm to + 8 dBm (1 dB increments)
Input/Output Level Range	- ∞ to + 14 dB
Wow and Flutter	Not applicable

Cue

Frequency Response	300 Hz - 10 kHz + 2/- 3 dB
S/N	≥ 40 dB, 500 Hz, 10 kHz
Distortion	≤ 1.0% (1 kHz @ operating level)
Operating Level	- 8 dBm to + 8 dBm (1 dB increments)

Signal Inputs

Video

Analog	0.5 V to 2.0 V p-p (75 Ω BNC)
Digital	D-2 Parallel Interface
Reference	Composite (Video or Black Burst) (High impedance bridging, BNC)

Audio

Analog	Max. + 28 dBm (50k Ω) Balanced, + 22 dBm Unbalanced (< 30 Ω)
Digital	D-2 Parallel Interface
Optional	AES/EBU format

Cue

Timecode	Max. + 28 dBm (50k Ω) 2.4 V ± 1.4 V p-p (nominal 10k Ω)
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Signal Outputs

Video

Analog	2 each @ 1.0 Volt p-p (75 Ω BNC)
Digital	D-2 Parallel Interface

Audio

Analog	Max. + 28 dBm Balanced + 22 dBm, Unbalanced (< 50 Ω)
Digital	D-2 Parallel Interface
Optional	AES/EBU format

Cue

Timecode	Max. + 14 dBm Balanced, + 8 dBm Unbalanced (< 50 Ω) 2.4 Volt p-p (nominal) (< 300 Ω)
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Character Video

1.0 Volt p-p (75 Ω BNC)

Waveform Monitor

1.0 Volt p-p (75 Ω BNC)

Picture Monitor

1.0 Volt p-p (75 Ω BNC)

Headphones

300 milliwatt (150 Ω)

Audio Monitor

- 16 dBμ (100 Ω source)

Remotes

RS-422 2 each, 9 pin D, Serial

RS-232 2 each, 25 pin D, Serial

GPI 1 each, 25 pin D, Parallel

Specifications subject to change without notice or obligation.

