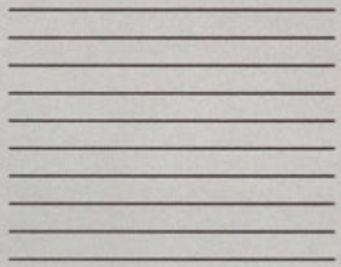


VPR-5

TYPE C QUALITY
THAT GOES ANYWHERE



AMPEX

*Video capabilities
you'd expect only
in a studio recorder*

Despite its compact size, the VPR-5 offers a full range of features needed for sophisticated production. To begin, you're in C-format, which pays off in the quality of your material. Added to that are some other VPR-5 amenities, such as its exclusive dual-cue editing that allows studio-type control. Four edit-related functions characterize this VTR's professional ability: from "let's see it" reviews and precise returns to the next edit point, to total control when replacing undesired material, and even mid-segment edits to new material.

*Audio in the best tradition
of Nagra/Kudelski*

By jointly developing the VPR-5 with Kudelski SA,



Ampex capitalized on over 30 years of leadership in high quality audio acquisition. The Nagra brand is known worldwide for small, rugged high quality audio recorders.

Advanced audio technology is built into the VPR-5. You'll find features like a variety of interfaces available for microphone types and/or line inputs. And seven built-in switch-selectable filters to match scene acoustics, particularly low frequency reverberation cancellation.

You'll find a unique display using LCD for VU or PPM level. Even full individual record channel lockouts for two audio channels and standard time code channel.

You'll also discover that the VPR-5 features an audio confidence playback selector independent of the video.

VPR-5 users have found that for the highest quality audio recording with video, no audio recorder does the job better than the VPR-5.

*Ampex Nagra VPR-5
Type C Video Quality from Ampex,
Nagra Audio Quality, all in the
world's finest field recorder.*

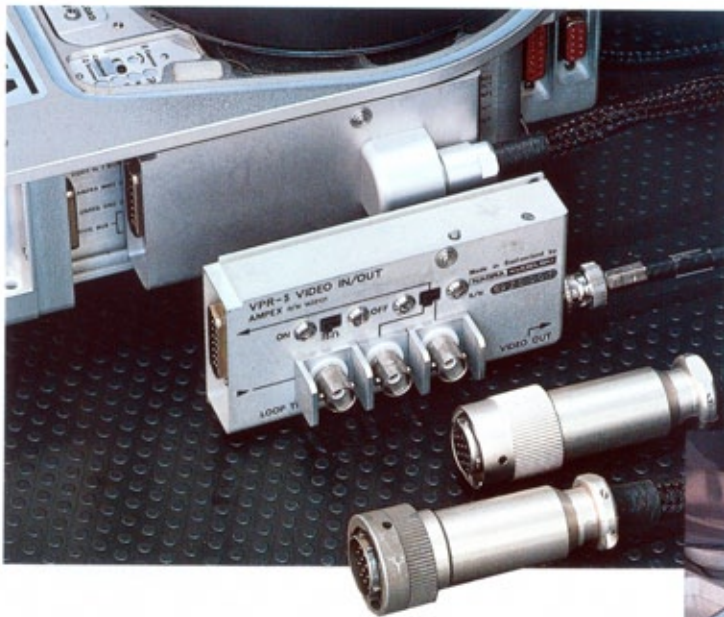
Unique. The word truly applies to the Ampex Nagra VPR-5. Combined in this Emmy-award-winning machine are the quality and features of an Ampex one-inch type C VTR with world-renowned Nagra audio quality from Kudelski SA. All this in the most practical field acquisition recorder you've ever seen, no bigger than a briefcase and weighing only 6.8 kg (15 lb).



With the quality and editing capability of a type C recorder, the VPR-5 lets you go from start to finish in one-inch. You can have the immediacy of video without compromise, yet without restriction on field acquisition. No matter how remote or difficult the terrain, one person can carry it anywhere and still operate a camera if necessary.

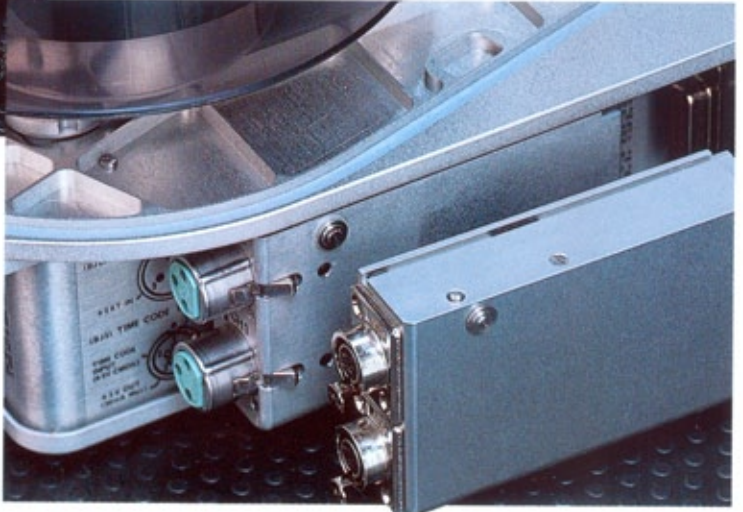
The VPR-5 adapts to all kinds of situations, thanks to its own versatility and a full complement of options and accessories. It adapts to the user's working style, rather than the other way around. One person can handle both a camera and the VPR-5, or the VPR-5 can be manned by a dedicated operator, with the recorder connected to either a shoulder-held or fixed camera. The machine also conveniently fits into any kind of field production vehicle or aircraft.

You have to see and touch the VPR-5 to appreciate its design and manufacture. Users all over the world attest to its quality and versatility. It is truly a remarkable achievement.



Video Interface

For maximum versatility when operating with video sources, the VPR-5 has optional, pluggable modules for most EFP applications. All popular shoulder-held and field production cameras can be interfaced through "personality modules" that are specifically designed for each, and come with an interconnect cable terminated with the appropriate camera connector. A general purpose module with standard BNC connectors and switchable terminations allows customizing the video and sync connections, either in the field or a studio.

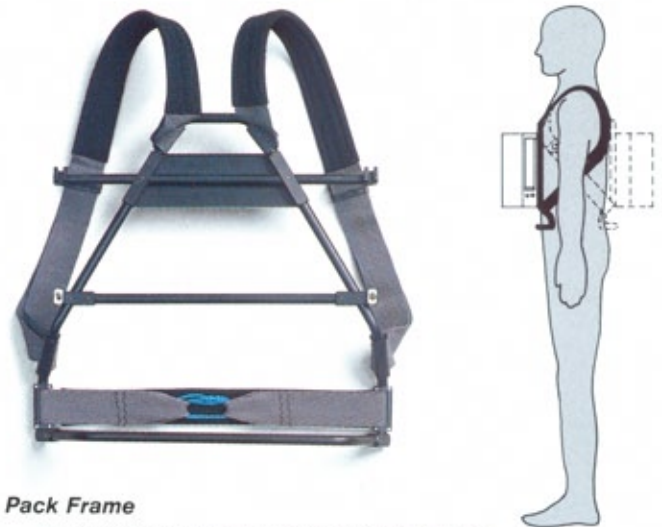


Audio Inputs

A modular approach has been taken for audio inputs of the VPR-5, so that field reconfigurations dictated by audio sources can be quickly accommodated. Available pluggable modules include two-channel line-level input with standard XLR connectors, two-channel dynamic microphone with mini-XLR, two-channel condenser microphone with phantom power, and a two-channel line/mic switchable version with XLR.

Carrying Aids

The VPR-5, with its light weight and compact size, is easy to take where C-format has never gone before. To enhance this portability, a protective soft case and a pack frame with carrying harness are available. The fabric case encloses the VPR-5 and protects it from both physical and environmental hazards while offering access to all operating controls and displays. It also has extra storage pockets for accessories.



Pack Frame

The pack frame provides the operator a very secure method of carrying the VPR-5. It can be mounted on the operator's back, out of the way of a shoulder-held camera for a one-person camera/VTR crew. The operation of the VPR-5 is removed to the camera in this application. For hands-on operation, as with a two-person crew, the pack frame allows the VPR-5 to be slung safely and comfortably in front of the sound/VTR operator, allowing easy access to all controls.



Shipping Cases

For protection while transporting or shipping the VPR-5 and accessories, a set of hard-shell cases are optionally available. The VTR case encloses the VPR-5, with storage space for battery packs, a tape supply, and cables. A second case will hold the A/C ADAPTER, the CHARGER UNIT, more battery packs, and additional system cables and accessories.



knocks. The VPR-5 operates in any position, and produces stable recordings in spite of gyroscopic forces caused by hand carrying or vehicle motion.

Features you'd expect in a studio recorder

The VPR-5 features full video and audio confidence playback, state-of-the-art audio processing, a sophisticated editor, a high level of camera/VTR operator interface, and remote capabilities.

Full setup of VTR operational functions is available from the control panel. On-board performance monitoring and diagnostic software give enhanced confidence for each remote taping.

Standard tape length is 20 minutes, but one-hour reels can also be accommodated in a matter of seconds. Naturally, the VPR-5 features SMPTE/EBU time code, and it is available in all world standards.

T.M. NATAS/ATAS



An engineering masterpiece

To meet the challenge of designing a truly portable but full-featured C-format VTR, Nagra and Ampex design engineers had to take some revolutionary approaches. Power efficiency and weight reduction were accomplished by turning to low-power, high speed dual microprocessors, and aerospace design and machining techniques based on lightweight aluminum alloy. A new C-format scanner was developed, and the very latest SMD (surface mounted device) electronic components were used. Every gram of unneeded weight was eliminated, resulting in a VTR weighing less than 15 lb (6.8 kg) including 20-minute tape reels, battery and cover.

Rugged performance worldwide

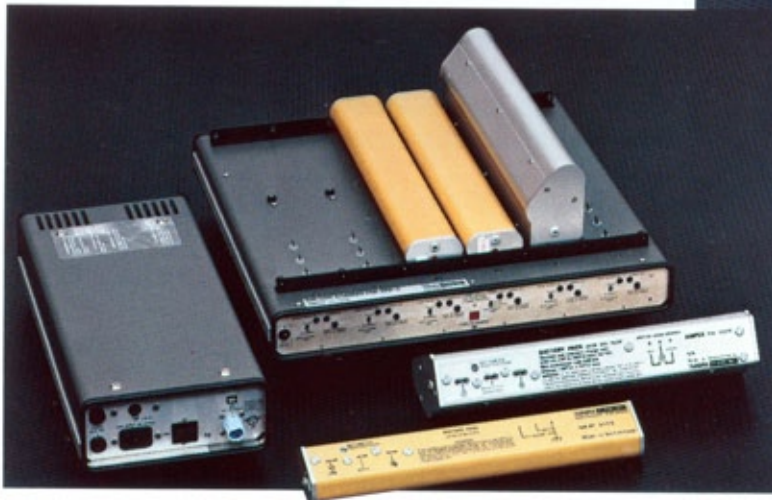
The VPR-5 recorder performs reliably under extreme environmental conditions ... from -10 to $+45$ degrees C. Its aluminum case and sealed cover resist the abuses of moisture, dust and hard



Accessories

Extended Record/Play

When a production calls for recording times longer than the standard 20-minute reels, the VPR-5 can be converted in a matter of seconds to hold NAB 9-inch, one hour tapes. An optional larger cover kit can be installed for complete tape protection and to provide silent operation if "quiet" scenes are being taped. The optional Extended Battery Pack is an ideal complement for this long-play application.

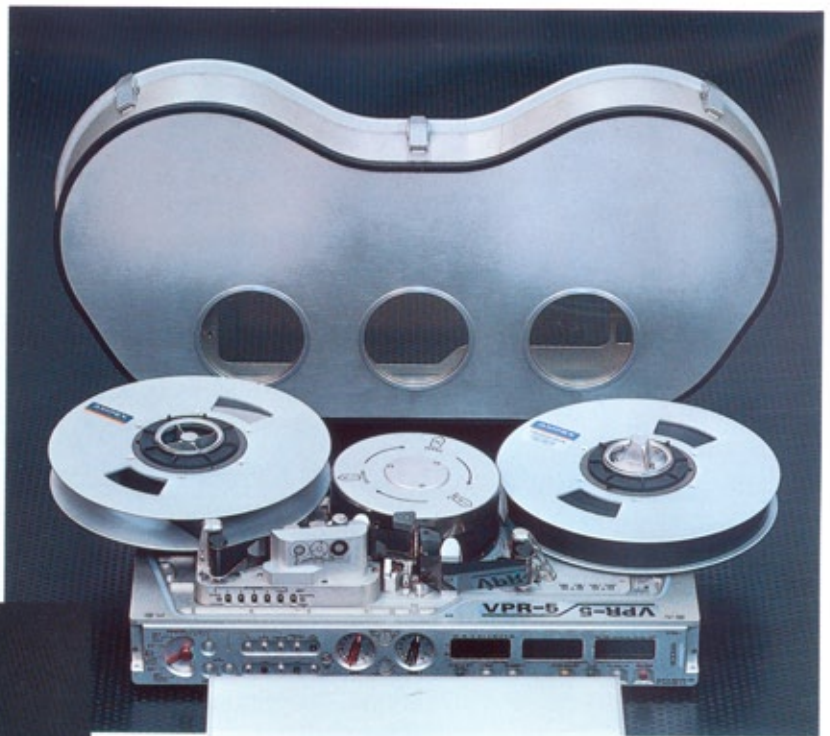


Power Systems

The VPR-5 is powered from a variety of sources. Two on-board, pluggable battery packs of different capacities are available: the lightweight standard capacity version for use with 20-minute tapes, and an extended capacity pack to accommodate one-hour tape operation. Both battery packs feature an internal digital amp-hour capacity meter that is initialized by the charging unit, then monitored and updated by the VPR-5 microprocessor as it is being discharged in use. The VPR-5 indicates to the operator the remaining operating time of the battery, removing all guesswork about battery life.

The Battery Charger Unit can charge six battery packs at one time, with a gentle but "quick" mode that will give a steady supply of charged packs to support the most intensive recording sessions.

An ac power mains adapter that works with all world power standards is also available. The VPR-5 can also be powered from low impedance dc sources of 12 to 18 Vdc, such as vehicle batteries. When connected to either the ac adapter or other external sources of power, the VPR-5 can recharge its installed battery pack overnight.



Field Playback

When the normal monochrome confidence-quality video replay is not satisfactory, the optional Color Stabilizer Unit produces a color-locked signal with excellent color rendition on any monitor or conventional TV receiver. A unique feature of this unit is the two-channel audio mixer that allows playback of recorded Audio 1, Audio 2 or a mix of the two through the audio of the television RF channel. This provides versatile, inexpensive color video and audio playback right at the remote taping site. The Color Stabilizer Unit is surprisingly small and lightweight, and can be operated by its own internal battery or any of the other power sources compatible with the VPR-5.

VPR-5 SPECIFICATIONS

Video and audio specifications are based on replay on VPR-2B

VIDEO AND SYNC

	NTSC 525/60	PAL/SECAM 625/50
Bandwidth	Flat to 4.2 MHz \pm 0.5 dB, -3 dB at 5.0 MHz	Flat to 5.0 MHz \pm 0.5 dB, -3 dB at 6.0 MHz
S/N (Rhode & Schwarz unweighted with bandpass filter Demodulator video output)	-46 dB peak-to-peak video to rms noise on interchange basis	-43 dB peak-to-peak video to rms noise on interchange basis
LF Linearity	2% blanking to white (max)	2% blanking to white (max)
Differential Gain	4% blanking to white (max)	4% blanking to white (max)
Differential Phase (40 IEEE units of subcarrier thru TBC)	4° at 3.58 MHz off-tape (max)	4° at 4.43 MHz off-tape (max)
Chrominance/Luminance Delay	20 n sec (max)	25 n sec (max)
2T sin ² pulse & bar	1% K-factor (max)	1% K-factor (max)
Moire	-40 dB color bars 75% amplitude 3.58 MHz subcarrier	-36 dB color bars 75% amplitude 4.43 MHz subcarrier

AUDIO (Channels 1, 2 & 3)*

Frequency Response (400 Hz Ref) 100 nWb/m	\pm 1 dB 500 Hz to 10 KHz \pm 2 dB 50 Hz to 15 KHz
S/N with respect to 8 dB above reference level	-56 dB Audio 1 & 2 -50 dB Audio 3
Distortion (measured at 1 KHz) @ 100 nWb/m reference level (+8 dBm) @ 251 nWb/m peak level (+16 dBm)	1% (max) 3% (max)
Depth of Erasure on its own recording	-70 dB
Wow & Flutter (NAB unweighted)	0.15% rms
Crosstalk (Audio 1 & 2) 1 kHz referenced to +8 dBm or 100 nWb/m	-50 dB (max)

*Audio 3 input line or time code generator, by PWA replacement.

AUDIO CONTROLS

Channel 1 & 2 controls: Mode	Rotary switches to set: Monaural with manual level; Monaural with AGC; Stereo with AGC; Dual chan. with manual level; Dual chan. with AGC.
AGC	AGC to be of peak compression type with operator control of limiting threshold.
Level controls	Rotary, continuous control
Input filter	Rotary switch selecting: Flat; Seven additional settings increasing low frequency attenuation.
Record enable	Toggle switches provided to individually control enable/disable of recording on each channel. Meters PPM or VU selectable by VTR internal program/jumper. Will indicate AGC limiting action simultaneous with level readings.

SIGNAL INPUTS

Video (75 ohms) BNC Connector	0.5 to 2.0 Volts peak-to-peak
Advanced Sync Reference	1 Volt peak-to-peak
Audio channels 1 & 2 Mic (with optional interface):	150 μ V (min) @ 200 ohms 40 dB above (max) +8 dBm nominal @ 25K ohms bridging
Line (with optional interface):	+24 dBm (max) -20 dBm (min)

SIGNAL OUTPUTS

Video 75 ohms BNC	1 Volt peak-to-peak
Audio Monitor Output Channels 1, 2, & 3	1 Volt peak-to-peak unbalanced, 600 ohms. Balanced or floating optional.
Maximum Output	+16 dBm
RF for ext. DOC use (75 ohm BNC)	0.3V to 1.0V range

GENERAL

Weight: including battery pack and 20 minute reel	6.8 kg (less than 15 lbs.)	
Record Time	20 minutes with special 5.5 inch reels, in portable configuration. Can use 9" reels for 1 hour capacity.	
Battery capacity	1 hour	
Tape Speed (Nominal)	525 9.6 in/s	625 9.44 in/s
Video Writing Speed (Nominal)	1009 in/s	842 in/s
Carrier Frequencies	7.9 MHz blanking level 10.0 MHz peak white	7.68 MHz blanking level 8.9 MHz peak white
Audio Equalization	15 microseconds 3180 microseconds	15 microseconds
Scanner Run-up	Less than 2 seconds	

TEMPERATURE & HUMIDITY

TEMPERATURE -10° to +45° C operating
HUMIDITY 10%-90% RH (non-condensing)

POWER REQUIREMENTS

For AC operation (optional adapter): 50/60 Hz, single phase
105/115 Volts AC at 1.0A Nominal
210/230 Volts AC at 0.6A Nominal
For external DC Operation: 10-18V, 40W Nominal, Record Mode

PHYSICAL DIMENSIONS

Height: 13.7 cm (5.5 inches)
Width: 44.2 cm (17.5 inches)
Depth: 21.5 cm (8.5 inches)

Ampex reserves the right to make product and specification changes at any time without notice.

AMPEX

Ampex Corporation, Audio-Video Systems Division

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