

SONY®

PAL

Digital Videocassette Recorder

DSR-20P

DVCAM™



DSR-20P

The Digital Recorder for A Wide Range of Applications

Digitization is opening up new avenues to success in many business areas.

Nowhere is this more true than in professional video production, where evolving digital technology is bringing proven advances in image quality and equipment versatility as well as reducing operating costs.

DVCAM was born in 1996 as an extension of the consumer DV format, with which it is compatible. With its superb picture quality, excellent editing capabilities and multigeneration performance, DVCAM offers the versatility required in the highly competitive world of professional video.

The DSR-20P is a new, compact DVCAM videocassette recorder with a variety of convenient functions. These include auto repeat playback, power-on recording/playback, RS-232C interface, AC/DC inputs, and so on. Of course, the DSR-20P also enjoys the advantages of both LANC and i.LINK (DV In/Out). The superior image and sound quality provided by the DVCAM format combined with convenient operational functions for recording, playback and simple editing make the DSR-20P an attractive VTR for a wide range of video professionals.

SUPERIOR QUALITY PICTURE and SOUND

■ The DVCAM Digital Component Recording Format

The DSR-20P employs the DVCAM format. Thanks to its excellent performance made possible by digital technology, the DSR-20P offers superb picture and sound quality and high reliability for professional use. The DVCAM format uses 8-bit digital component recording with a 5:1 compression ratio and sampling at the rate of 4:2:0 to provide high picture quality and multigeneration performance.

■ Playback Compatibility with the DV Format

The DVCAM format is an extension of the consumer DV format with which it maintains playback compatibility. This means that the DSR-20P is capable of playing back DV recorded tapes* without any special adaptor, an advantage to users who wish to play back their DV recorded tapes as source material.

* Except LP mode

■ Long-duration Recording Capability

There are two sizes of DVCAM video cassette tapes; standard size and mini size. A recording time of up to 184 minutes is provided with a standard size cassette (PDV-184ME) and up to 40 minutes with a mini size cassette (PDVM-40ME). The use of ME (Metal Evaporated) tape technology means that these long recording times can be achieved with a tape width of 1/4 inch (6.35 mm), resulting in very compact cassettes.

■ High Quality Digital Audio

The DSR-20P provides two selectable audio channel modes; a two channel

mode with 48 kHz/16-bit recording and a four channel mode with 32 kHz/12-bit recording. Thanks to the PCM (Pulse Code Modulation) digital stereo recording system, the DSR-20P offers superb audio performance with a wide dynamic range and an excellent signal-to-noise ratio.

SIMPLE EDITING OPERATION

■ LANC Editing

The DSR-20P is equipped with a LANC interface. Connecting the DSR-20P to other LANC-based equipment such as a DSR-30P, DSR-200AP or DSR-PD1P provides TC-based editing. With the optional FXE-120P Video Editing System or ES-3 EditStation System connected, the DSR-20P can serve as a feeder player in a professional A/B roll editing system.

■ i.LINK (IEEE1394 based)

The DSR-20P has an i.LINK (DV In/Out) interface based on IEEE1394. When connected to another i.LINK interface equipped machines such as a DSR-30P, DSR-200AP or DSR-PD1P, the DSR-20P offers digital dubbing of video, audio and data, virtually without any deterioration of image and sound quality. In the "Digital dubbing including T/C copy" mode, all video, audio and time code information of an original tape is copied to another tape. This function is useful for making work tapes.

VERSATILE RECORDING/PLAYBACK FUNCTIONS

■ Auto Repeat Function

The DSR-20P is equipped with an Auto Repeat Function which enables a programme to be repeatedly played back. Just after the DSR-20P reaches the end of the tape, the first complete blank portion or the first index point, it automatically rewinds the tape and then starts playing back the segment again.

* The DSR-20P ignores any blank or index point in the first 20 seconds of the tape.



Front panel

Power-on Recording/Playback Capabilities

The DSR-20P is capable of external timer recording when an external timer is connected. With the TIMER switch on the front panel set to its REC position, the DSR-20P automatically starts recording as soon as the AC power is turned on. Furthermore, if the TIMER switch is set to the REPEAT position, the DSR-20P goes into the Auto Repeat mode and starts playing back a programme the moment the power is turned on. These convenient features enable the DSR-20P to be used in unattended automatic VTR applications.

External Sync In for Synchronized Playback

The DSR-20P is equipped with an External Sync input, which enables synchronized playback with other VTRs. This allows synchronized playback of multiple VTRs.

* The DSR-20P locks to H-sync or V-sync.

Remote Control via RS-232C and Control S

The DSR-20P incorporates both RS-232C and Control S interfaces for remote control operation. Using the RS-232C interface, basic VTR functions can be controlled. Control S allows the unit to be controlled from the optional DSRM-10 Remote Control Unit. The inclusion of Control S input/output connector enables two or more VTR units to be remotely controlled from one remote control unit at the same time.

AC/DC Operation

The DSR-20P has both AC and DC inputs. The ability of the DSR-20P to operate on a 12 V DC power source makes it ideal for use as a backup VTR for actuality shooting.

Search for Index Points

The DSR-20P can search for the Index Points which are recorded on the tape as "in-point" marks every time a recording starts. The DSR-20P can also search for the photo data recorded on a cassette by the DSR-200AP or DSR-PD1P, or the point where the recording date has been changed.

Wireless Remote Controller

The Wireless Remote Controller RMT-DS20 supplied with the DSR-20P can be used for basic function control. When two or more DSR-20P are connected via the Control S terminals, they can be controlled by simply sending one command to the master deck.



RMT-DS20

USER-FRIENDLY OPERATIONS

Compact and Lightweight

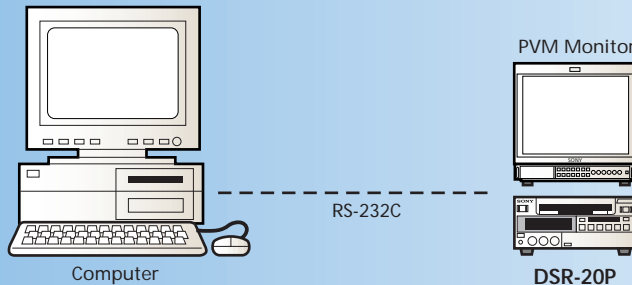
The DSR-20P is compact and lightweight. Its half rack width means that two DSR-20P units can be installed side by side in just two units of rack space.

Dual-size Cassette Mechanism

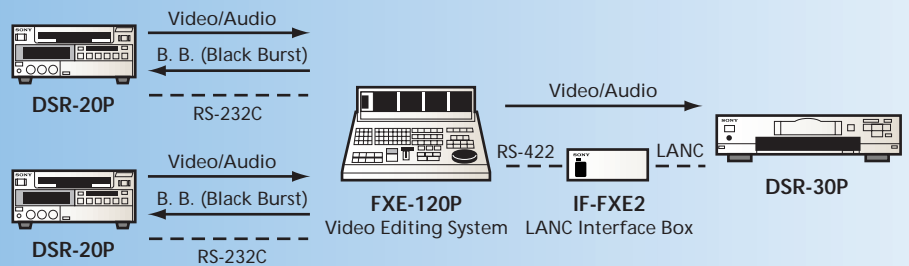
The DSR-20P has a dual-size cassette mechanism which accepts both mini size and standard size DV CAM cassette tapes without any special adaptor.

SYSTEM EXAMPLES

PC Control System



A/B Roll Editing System



Rear panel

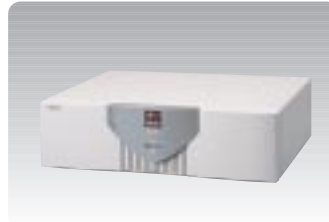
PERIPHERAL EQUIPMENT



■ DSR-200AP Digital Camcorder



■ DSR-PD1P Digital Camcorder



■ ES-3 EditStation



■ FXE-120P Video Editing System



■ DSRM-10 Remote Control Unit



■ VMC-2DV/4DV DV Cable



■ PDVM-12ME/22ME/32ME/40ME
Digital Video Cassette
(Mini size)
■ PDV-34ME/64ME/94ME/124ME/184ME
Digital Video Cassette
(Standard size)



■ PDVM-32N/40N
Digital Video Cassette
(Non IC type)
(Mini size)
■ PDV-64N/124N/184N
Digital Video Cassette
(Non IC type)
(Standard size)

SPECIFICATIONS

GENERAL

Video signal standard	CCIR standards, PAL colour
Power requirement	AC: 220 to 240 V, 50/60 Hz DC: 12 V
Power consumption	AC: 28 W DC: 2.0 A (4.0A PEAK)
Operating temperature	5 °C to 40 °C (41 °F to 104 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Mass	Approx. 5.0 kg (11 lb)
Dimensions	215 (W) x 98 (H) x 392 (D) mm (8 1/2 x 3 7/8 x 15 1/2 inches) (including external projections)
Tape speed	
DVCAM mode:	28.221 mm/s
DV SP playback mode:	18.79 mm/s
Recording/Playback time	
Standard size:	More than 184 min. with PDV-184ME
Mini size:	More than 40 min. with PDVM-40ME
Tape rewind time	Less than 2 min. with PDV-184ME
Search speed (via RMT-DS20 or DSRM-10)	-2,-1,-1/5,Still,1/5,1,2,Cue/Review (10 or 18 times)

INPUTS/OUTPUTS

Video inputs	
Composite (BNC x1)*	1.0 Vp-p, 75 Ω, unbalanced, sync negative * shared with the External Sync IN
S-Video (DIN 4-pin x1)	
Luminance:	1.0 Vp-p, 75 Ω, unbalanced, sync negative
Chrominance:	0.3 Vp-p (subcarrier), 75 Ω, unbalanced

Video outputs

Composite (BNC x1, monitor OUT x1)

1.0 Vp-p, 75 Ω, unbalanced, sync negative

S-Video (DIN 4-pin x1)

Luminance: 1.0 Vp-p, 75 Ω, unbalanced, sync negative

Chrominance: 0.3 Vp-p (subcarrier), 75 Ω, unbalanced

Audio inputs

AUDIO (phono jacks (L&R) x1)

2 Vrms (full bit)

Audio outputs

AUDIO (phono jacks (L&R) x2)

2 Vrms (full bit)

L: CH1, CH3, or CH1/3 mix

R: CH2, CH4, or CH2/4 mix

Digital inputs/outputs

i.LINK (DV In/Out) IEEE1394 based (4-pin x1)

OTHERS

LANC	Stereo mini-mini jack (x1)
RS-232C	D-sub 9-pin (cross) (x1)
Control S	Stereo mini jack (IN x1 / OUT x1)
DC IN	12 V, Canon 4-pin (x1)
Headphone jack	Stereo mini (x1)

SUPPLIED ACCESSORIES

AC power cord (x1)
RMT-DS20 Wireless Remote Commander (VTR 4 mode) (x1)
Size AA (R6) batteries (x2)
DVM12CLE Cleaning Cassette (x1)
RS-232C Protocol Manual (x1)
Operation Manual (x1)

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