

SONY®

NTSC

Digital Videocassette Recorder

DSR-20

DVCAM™



DSR-20

The Digital Recorder for A Wide Range of Applications

Digital technology has opened up new opportunities in every business arena, and professional video production is no exception. The migration toward digital was brought about great advances in image quality and equipment versatility. The DVCAM format, an extension of the home use DV format, was born in 1996. The DVCAM format with professional reliability and system flexibility meets the demanding requirements of operational efficiency. Excellent editing capabilities, superb picture and multigeneration quality make this versatile format a top choice for video professionals.

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

SUPERIOR QUALITY PICTURE and SOUND

■ The DVCAM Digital Component Recording Format

The DSR-20 employs the DVCAM format which uses 8-bit digital component recording with a 5:1 compression ratio and sampling at the rate of 4:1:1 to provide high picture quality and multigeneration performance.

■ Playback Compatibility with the DV Format

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

* Except LP mode

■ Long-duration Recording Capability

There are two sizes of DVCAM video cassette tapes; standard size and mini size. Maximum 184-minute recording is possible with a standard size cassette (PDV-184ME) and 40-minute recording with a mini size cassette (PDVM-40ME). In spite of the narrow tape width (1/4-inch or 6.35 mm) and compact cassette size, long recording time is achieved by the use of Sony's advanced ME (Metal Evaporated) tape.

■ High Quality Digital Audio

The DSR-20 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

SIMPLE EDITING OPERATION

■ LANC Editing

The DSR-20 is equipped with a LANC interface. By connecting the DSR-20 to other LANC-equipped VTR such as the DSR-30, DSR-200A or DSR-PD1, it is easy to achieve TC-based editing. With the optional FXE-120 Video Editing System or ES-3 EditStation System connected, the DSR-20 can serve as a feeder player in a professional A/B roll editing system.

■ i.LINK (IEEE1394 based)

The DSR-20 has an i.LINK (DV In/Out) interface based on the IEEE1394 standard. When connected to other i.LINK interface equipped machine such as the DSR-30, DSR-200A or DSR-PD1, the DSR-20 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, full information of video, audio and time code of the original tape can be copied to another tape. This function is ideal when making work tapes and preserving the original master tape.

VERSATILE RECORDING/PLAYBACK FUNCTIONS

■ Auto Repeat Function

The Auto Repeat function enables the DSR-20 to repeatedly play back a program. Just after the DSR-20 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-20 ignores any blank or index point in the first 20 seconds of the tape.



Front panel

Power-on Recording/Playback Capabilities

The DSR-20 is capable of external timer recording when an external timer is connected. When the TIMER switch on the front panel is set to REC, the DSR-20 automatically starts recording as soon as the AC power is turned on.

Furthermore, when the TIMER switch is set to REPEAT, the DSR-20 goes into the Auto Repeat mode and starts playing back a program the moment the power is turned on.

These convenient features enable unattended automatic VTR operation.

External Sync In for Synchronized Playback

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

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

Remote Control via RS-232C and Control S

The DSR-20 incorporates both RS-232C and Control S interfaces for remote control operation. With the RS-232C interface, the basic VTR functions can be controlled. Control S allows the unit to be controlled via the optional DSRM-10 Remote Control Unit. In addition, with the Control S input/output connector, two or more VTRs can be remotely controlled from one remote control unit.

AC/DC Operation

The DSR-20 has both AC and DC inputs. Therefore, the DSR-20 can be easily connected to an AC power supply or to a DC 12 V power supply, which is convenient for mobile applications and general field production.

Search for Index Points

The DSR-20 can search for Index Points, which are recorded on the tape as "in-point" marks every time a recording starts. The DSR-20 can also search for the photo data recorded on a cassette by the DSR-200A or DSR-PD1, or the point where the recording date has been changed.

Wireless Remote Controller

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



RMT-DS20

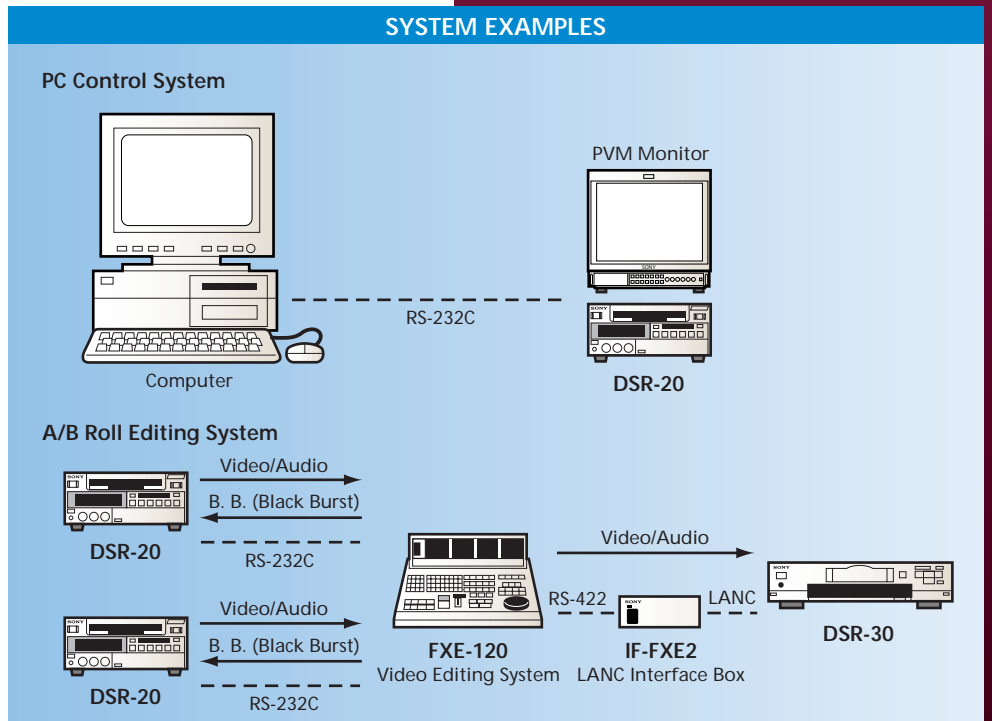
USER-FRIENDLY OPERATIONS

Compact and Lightweight

The DSR-20 is compact and lightweight. It is designed as a half rack size width and two units high, thus allowing two DSR-20s to be installed side by side in one rack space.

Dual-size Cassette Mechanism

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



Rear panel

PERIPHERAL EQUIPMENT



■ DSR-200A Digital Camcorder



■ DSR-PD1 Digital Camcorder



■ ES-3 EditStation



■ FXE-120 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	EIA standards, NTSC color
Power requirement	AC: 120 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:	28.193 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 15 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:	0.286 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:	0.286 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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