SONY

NTSC

Digital Videocassette Recorder

DSR-40

DVCAM

Digital technology has opened up new opportunities in virtually every business arena, and professional video production has been no exception. The migration toward digital has brought about great advances in image quality and equipment functionality. The DVCAM™ format, an extension of the home-use DV format, was launched in 1996. With its professional reliability and system flexibility, the DVCAM format meets the demanding requirements of video professionals for operational efficiency, superb editing capabilities and multi-generation quality.

SUPERIOR QUALITY PICTURE and SOUND

The DVCAM Digital Component Recording Format

The DSR-40 adopts the DVCAM format which uses 8-bit digital component recording with a 5:1 compression ratio and 4:1:1 sampling to provide excellent picture quality and superb multi-generation performance.

Playback Compatibility with the DV Format

The DVCAM format is the professional extension of the home-use DV format. This means that the DSR-40 is capable of playing back DV recorded tapes* without any special adaptor. This is very convenient, for instance, when playing back DV recorded tapes as source material.

** SP mode only*

184-minute Recording

There are two sizes of DVCAM videocassettes; standard and mini. A maximum of 184 minutes of recording is available with a standard size cassette (PDV-184ME) and 40 minutes with a mini size cassette (PDVM-40ME). Despite a narrow tape width (1/4-inch or 6.35 mm) and compact cassette size, long recording times are achieved by the use of advanced ME (Metal Evaporated) tape technology.

High Quality Digital Audio

The DSR-40 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 its PCM (Pulse Code Modulation) digital stereo recording system, the DSR-40 offers superior digital audio performance with a wide dynamic range and an excellent signal-to-noise ratio, comparable to CD quality audio.

EDITING PERFORMANCE

RS-422A

Equipped with an RS-422A interface, the DSR-40 can perform as the editing player in a professional A/B roll editing system* or cut editing system. It is also possible to add the DSR-40 to a current analog editing system. For example, in an A/B roll editing system, an S-VHS feeder could be replaced by a DSR-40. This can be very convenient when DV or DVCAM recorded tapes are to be used as source material.

** The DSR-40 is not equipped with a synchronization capability, the editing accuracy is performed by pre-roll and play.*

i.LINK™ (DV In/Out)*

The DSR-40 also has an i.LINK (DV In/Out) interface based on the IEEE1394 standard. When connected to other i.LINK interface equipped DVCAM VTRs, the DSR-40 offers digital dubbing of video, audio and data, without virtually no detectable deterioration in image and sound quality. In addition, cost-effective non-linear editing systems can be configured by connecting the DSR-40 with i.LINK equipped non-linear editing systems such as the Sony ES-3 EditStation™ system. When the DVCAM cassette with IC memory is loaded into the DSR-40, the ClipLink™ Log Data recorded on the cassette can be uploaded into the ES-3.

** i.LINK stands for IEEE1394-1995 standards and their revisions.*
i is the logo for products that implement i.LINK.

VERSATILE INTERFACES

Analog Component Output

The DSR-40 provides a full range of analog video outputs; composite, S-Video and component outputs are all available. In addition, it is also equipped with an analog audio outputs via XLR connectors. These connections make the DSR-40 easy to integrate into a current analog-based system, with its i.LINK interface ready for a smooth transition to a digital system at some time in the future.

REF Input

The DSR-40 has an external reference input for playback synchronization with other VTRs. With this reference, H-sync and SC phase can be adjusted through the menu. This is convenient when a number of machines are played back in turn, or when a DSR-40 is one of a number of playback sources in an editing system.

Control S

The DSR-40 incorporates a Control S interface for remote control operation. It allows the unit to be controlled via the optional DSRM-20 Remote Control Unit.

DSR-40

DIGITAL VIDEOCASSETTE RECORDER

The DSR-40 is a new DVCAM videocassette recorder that includes versatile interfaces in its compact body. Through its RS-422A interface, the DSR-40 could perform as the editing player in current analog systems. Its i.LINK™ interface makes it possible to copy digital video, audio and data with virtually no quality deterioration. With many other useful features, combined with the superior image and sound quality inherent in the DVCAM format, the DSR-40 is an ideal VTR for a wide range of video professional applications including liner editing, non-linear editing, duplication, demonstrations and so on.

USER-FRIENDLY FEATURES

Compact Size and Lightweight

The DSR-40 is both compact and lightweight. Two units can be mounted side-by-side in a 19-inch equipment rack, where they occupy just two units of rack height. A DSR-40 weighs only 5 kg.

Dual-size Cassette Mechanism

In spite of its small dimensions, the DSR-40 has a dual-size cassette mechanism which accepts both mini and standard DVCAM cassette tapes without any special adaptor.

Cassette Memory Search

The DSR-40 is capable of searching for Index points. These are recorded on the tape as in-point marks at the start of every recording. It can also search for the photo data recorded on cassettes by DSR-200A or DSR-PD100 camcorders, or the point where the recording date has been changed. These operations are controlled from the DSRM-20 Remote Control Unit.

Auto Repeat Function

When this mode is set to REPEAT, the DSR-40 goes to the beginning of an inserted tape and starts playing back the program the moment power is turned on. Then just after it reaches the end of the tape / the first complete blank portion / the first index point, it automatically rewinds the tape and starts playing back the same segment again.

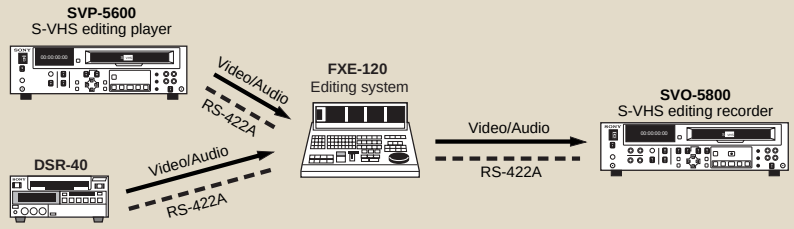
Simple Recording Function*

Although the DSR-40 is designed as a player, it has a simple recording function which can be controlled either manually or via its RS-422A connection.

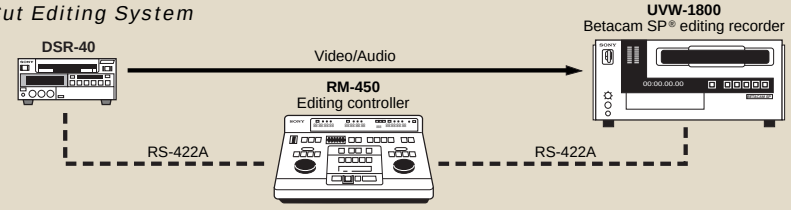
** Insert recording is not possible.*

SYSTEM EXAMPLES

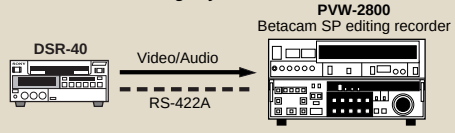
■ *Linear A/B Roll Editing System*



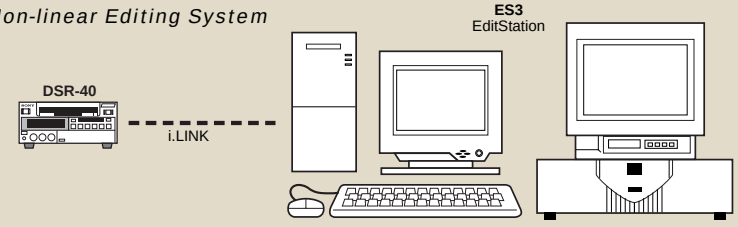
■ *Cut Editing System*



■ *VTR-to-VTR Editing System*



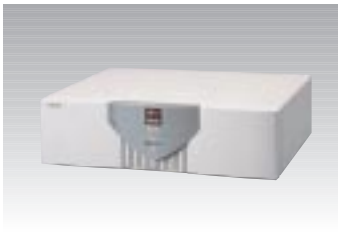
■ *Non-linear Editing System*



PERIPHERAL EQUIPMENT

DSR-200A *Digital Camcorder*

DSR-PD100 *Digital Camcorder*



ES-3 *EditStation*

FXE-120 *Video Editing System*

DSRM-20 *Remote Control Unit*

VMC-IL4415/IL4435
VMC-IL4615/IL4635
i.LINK Cables

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
Power consumption	40 W
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	Approx. 212 (W) x 98 (H) x 392 (D) mm (8 3/8 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 cassette:	184 min. with a PDV-184ME/184N
Mini cassette:	40 min. with a PDVM-40ME/40N
Tape rewind time	Less than 2 min. with a PDV-184ME/184N
Search speed (via DSRM-20)	
Shuttle:	±1/10, 1/5, 1, 2, approx.10, approx.14
Jog:	±1/10, 1/5, 1, 2

SIGNAL INPUTS

Video Inputs

Composite (BNC x1)	1.0 Vp-p, 75 Ω, sync negative
S-Video (4-pin mini DIN x1)	
Y:	1.0 Vp-p, 75 Ω
C:	0.286 Vp-p (subcarrier burst), 75 Ω
REF Video (BNC x1)	
Black burst:	75 Ω, sync negative

Audio Inputs

PIN jack x2 (stereo L, R)	2 Vrms(full bit)

Video outputs

Composite (BNC x1, BNC for monitor OUT x1)	1.0 Vp-p, 75 Ω, sync negative
S-Video (4-pin mini DIN x1)	
Y:	1.0 Vp-p, 75 Ω
C:	0.286 Vp-p (subcarrier), 75 Ω
Component (BNC x3)	
Y:	1.0 Vp-p, 75 Ω, sync negative
R-Y:	0.7 Vp-p, 75 Ω (with 75 % color bars)
B-Y:	0.7 Vp-p, 75 Ω (with 75 % color bars)

Audio outputs

PIN jack for monitor OUT x2 (stereo L, R)	2 Vrms(full bit)
XLR 3-pin x2 (stereo L, R)	+4 dBu, balanced

Digital inputs/outputs

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

OTHERS

RS-422A	D-sub 9-pin (x1)
Control S	Stereo mini jack (IN x1)
Headphone jack	Stereo mini (x1)

SUPPLIED ACCESSORIES

AC power cord (x1)
Cleaning cassette (x1)
Operation manual (x1)

OPTIONAL ACCESSORIES

DSRM-20 remote control unit
RCC-5G/10G/30G 9-pin remote control cable

OPTIONAL CONSUMER ACCESSORIES

VMC-IL4415/4435/4615/4635 i.LINK cables

VIDEOCASSETTES

PDVM-12ME/22ME/32ME/40ME (Mini size)
PDV-34ME/64ME/94ME/124ME/184ME (Standard size)
PDVM-32N/40N (Non-IC type/Mini size)
PDV-64N/124N/184N (Non-IC type/Standard size)

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