SONY

PAL

Digital Videocassette Recorder

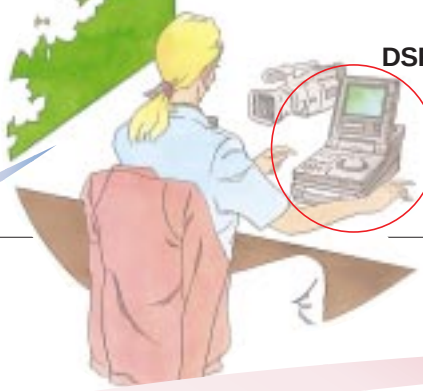
DSR-70P

DVCAM™

Preliminary

Video Journalist
Acquisition

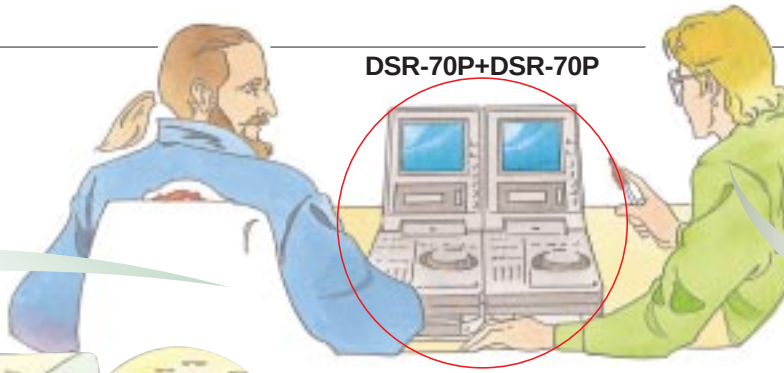
Field Editing with
DV Camcorder



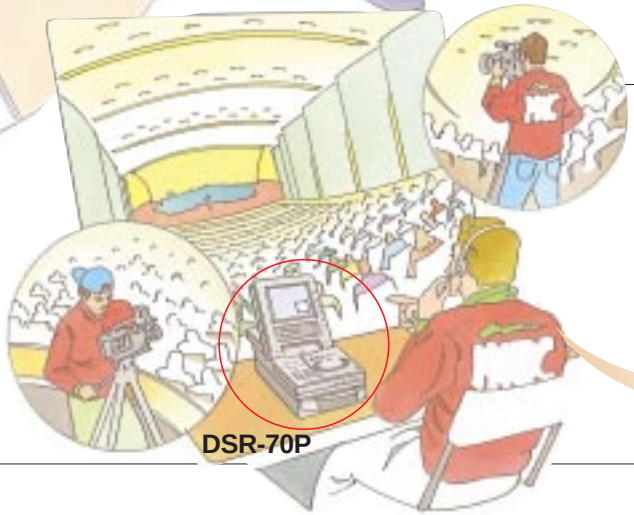
DSR-70P

—For a Variety of Editing Styles From the Field To the

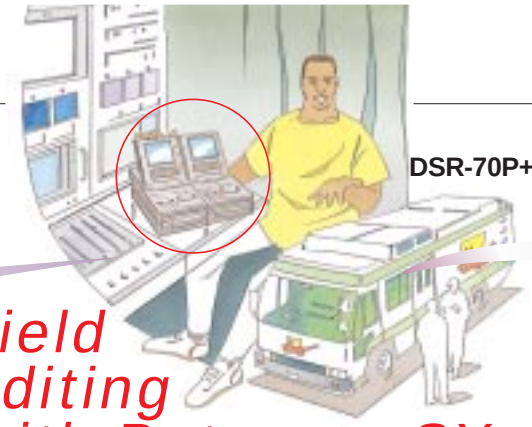
Corporate Video
Production



VTR-to-VTR
Editing



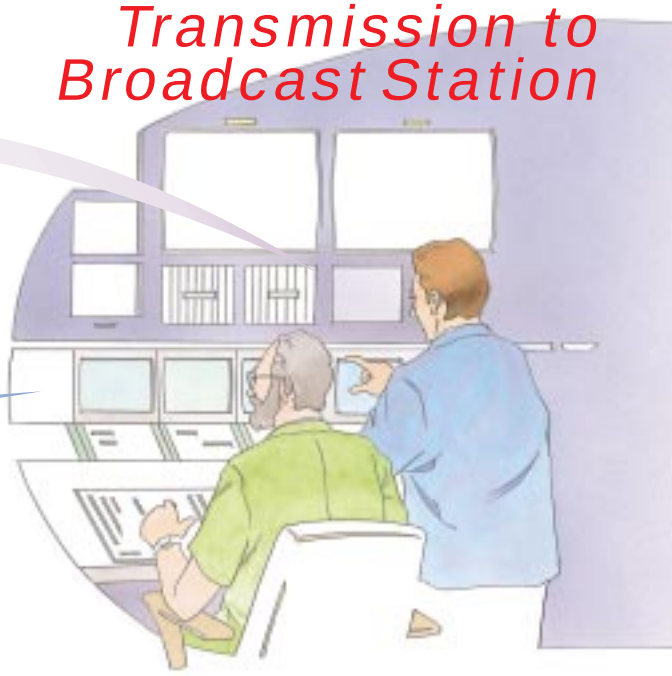
Event
Recording

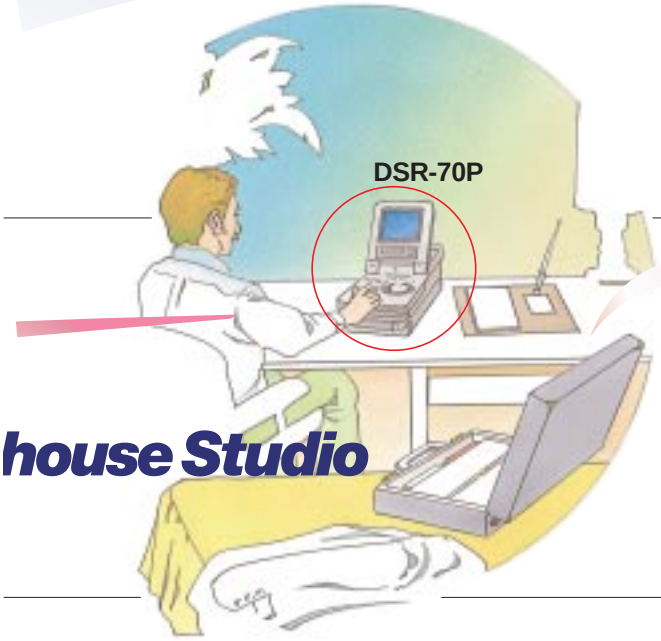


DSR-70P+Betacam SX
(DNW-A25P)

Field Editing with Betacam SX

Transmission to Broadcast Station





DSR-70P

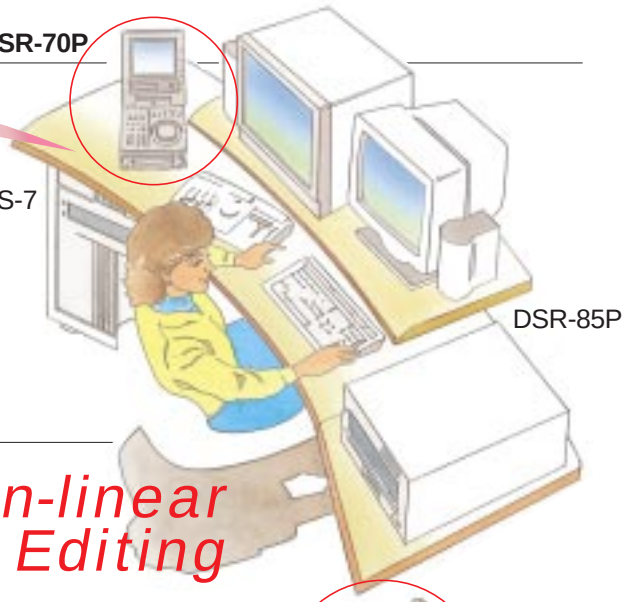
house Studio

Rough Editing using ClipLink

DSR-70P

ES-7

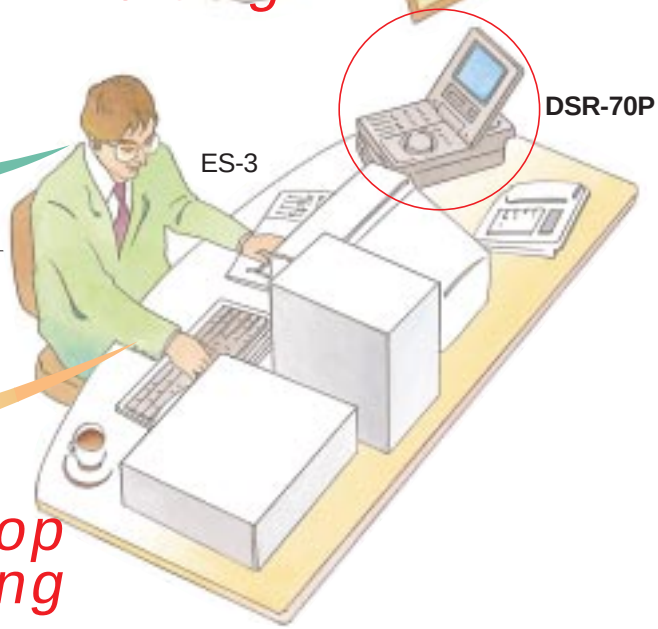
DSR-85P



Non-linear Editing

DSR-70P

ES-3



Desktop Editing

All-in-one Package with a Compact Body

The Sony DSR-70P is a portable editing recorder ideal for video journalist applications. This All-in-one Package includes a 6.4-inch LCD Monitor, Audio Speaker, Jog/Shuttle Dial and Edit Function Keys. After shooting with a DVCAM camcorder such as the Sony DSR-300P or a consumer DV camcorder, you can edit the materials immediately in the field. The DSR-70P has an SDI digital interface*, which allows direct connection with Betacam SX VTRs such as the Sony DNW-A25P, and an RS-422A interface which is used for professional editing. The edited programme can then be transmitted to a broadcast station via microwave or satellite link.
This Compact unit takes up very little space, and its Lightweight Body makes it easy to carry anywhere by hand. It can be used both for shooting and for editing, and it offers an excellent price/performance ratio.
The DSR-70P plays an important role in video journalist applications, particularly those requiring faster-than-real-time operation, because of its flexibility and ease of use.

* The optional Sony DSBK-160P SDI Input/Output Board is required.

i.LINK (DV In/Out) Interface

Many video journalists use consumer DV camcorders for field acquisition because of the compactness and portability of these units. For a professional result, however, a direct digital connection is essential. The DSR-70P has an i.LINK (DV In/Out) interface* based on the IEEE1394 standard, which means it can be directly connected to consumer camcorders such as the Sony DCR-VX1000E. With this connection, you can edit using the source material recorded on DV camcorders with virtually no deterioration of video and audio quality. A further benefit is that there is no cumbersome connection; a single wire connects the DSR-70P to the camcorder.

* The optional Sony DSBK-140P i.LINK/DV Input/Output Board is required.

ClipLink™

Corporate video production refers to the creation of programme material for public relations, sales promotion, corporate communication and similar applications. The operating efficiency of the DSR-70P is of great benefit to these applications. You can review material and prepare for final editing while on location, for example, in a hotel room, taking advantage of the ClipLink feature. By marking the OK/NG status during shooting with a Sony DSR-130P or DSR-300P DVCAM camcorder, you can easily review your material, and Change OK/NG Status on the DSR-70P, while viewing ClipLink Log Data on the LCD screen.
Once back in the studio, the material can be directly uploaded to a non-linear editing system. Rough editing performed in the field makes final editing in the studio more efficient and creative.

Double Deck Editor

Combining two DSR-70P units creates one complete feeder/editor machine. This configuration allows VTR-to-VTR Editing with Jog/Shuttle Dial Operation. In addition, Frame Accurate Editing for both assemble and insert modes is assured by the sophisticated servo control and built-in time code generator/reader. In this configuration, you can easily Cue Up to the Designated Points (Mark In points) while viewing the character display of ClipLink Log Data on the LCD screen. This helps you perform a quick picture search, improving editing efficiency.
Moreover, when recording pictures from the feeder player while adding in point and out point marks from the control panel, the DSR-70P automatically recognizes these as Newly Memorized Mark In/Out Points.
A single digital connection is also available using the i.LINK (DV In/Out) interface*.

* The optional DSBK-140P i.LINK/DV Input/Output Board is required.

Two-Camera Recording

For event videography, the DSR-70P offers a unique Two-Camera Recording Capability*, which enables the alternate use of two cameras. When shooting a musical performance, for example, with two cameras at different positions, the DSR-70P displays the pictures from both cameras on its LCD screen with Picture in Picture. At the control panel, you can select which camera picture to record, and switch to the other whenever required. The DSR-70P can Display the Chroma Phase and Level of Zebra Pattern of both cameras on its LCD screen. Therefore by observing this screen, you can see when camera levels need to be adjusted and can direct the camera person via an intercommunication headset. Tape material can be brought to the nearest office and, by combining the DSR-70P and Sony ES-3 EditStation, editing can be completed at the desktop.

* The optional Sony DSBK-180P Dual Video Input Board is required.

Note : Optional interface boards (DSBK-140P/150P/160P/170P) cannot be used in combination with each other. However, these boards can be used together with the optional DSBK-180P Dual Video Input Board.

The DVCAM Digital Component Recording Format

The DSR-70P employs the DVCAM format which 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. In addition, thanks to the PCM (Pulse Code Modulation) digital stereo recording system, the DSR-70P offers superb audio performance with a wide dynamic range and an excellent signal-to-noise ratio, comparable to CD quality audio. There are 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.

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-70P 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 in LP mode

Long-duration Recording Capability

There are two sizes of DVCAM video cassette tapes available: standard size and mini size. A recording time of up to 184 minutes is provided with a standard size cassette (Sony PDV-184ME) and up to 40 minutes with a mini size cassette (Sony 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.

Dual-size Cassette Mechanism

The DSR-70P has a dual-size cassette mechanism which accepts both standard size and mini size DVCAM cassette tapes without any special adaptor.

Versatile Interfaces

In addition to the SDI and i.LINK (DV In/Out) digital interfaces, the DSR-70P is equipped with the SDTI(QSDI™) digital interface*. The SDTI(QSDI) interface allows degradation-free transfer of both video and audio signals. Through the SDTI(QSDI) interface, the DSR-70P can be connected to other SDTI(QSDI)-equipped machines such as the Sony DSR-85P/80P/60P and EditStation, resulting in high quality digital production. Of course, the DSR-70P provides a full complement of analogue video and audio interfaces, allowing perfect integration with current analogue systems. Composite, component** and S-Video connections are available. For audio, two-channel inputs and four-channel selectable outputs are provided.

* The optional Sony DSBK-150P SDTI(QSDI) Input/Output Board is required. The SDTI (Serial Data Transport Interface) is defined as SMPTE 305M. The SDTI(QSDI) is the DV signal interface which conforms to the SDTI.

** The optional Sony DSBK-170P Analogue Component Input/Output Board is required.

Full Tape Dubbing with ClipLink Log Data

The DSR-70P has a full tape dubbing function which allows the dubbing of recorded DVCAM tape information (video/audio/sub code) along with ClipLink Log Data held in the cassette memory. This is achieved via the i.LINK or SDTI(QSDI) interface, together with the RS-422A interface. It is therefore easy to make duplicate tapes with the same ClipLink Log Data as the original master tape.

Flexible Power Supply System

The DSR-70P operates on both AC and battery power. Sony BP-L60A/L90A Lithium-Ion Batteries provide high capacity in a small and compact size. Approximately 90 minutes of operation are provided by a fully charged BP-L90A Battery. When using AC power, low power consumption is just 50 W. There are three types of AC adaptor: the AC-DN2 via the V-shoe attachment; the AC-550CE via the 4-pin XLR connector; and the CMA-8ACE via the 4-pin XLR connector.

Control Panel

Rear Panel

Specifications

GENERAL

Power requirements	DC 12 V
Power consumption	50 W
Operating temperature	0 ˚C to 40 ˚C (32 ˚F to 104 ˚F)
Storage temperature	-20 ˚C to 60 ˚C (-4 ˚F to 140 ˚F)
Operating humidity	Less than 80 %
Storage humidity	Less than 90 %
Mass	5.5 kg (12 lb 2 oz)
Dimensions	211 (W) x 149 (H) x 443 (D) mm (8 3/8 x 5 7/8 x 17 1/2 inches)
Tape speed	28.221 mm/s
Recording/Playback time	
Standard size:	More than 184 min. with PDV-184ME
Mini size:	More than 40 min. with PDVM-40ME
Fast forward/Rewind time	
Standard size:	Less than 3 min. with PDV-184ME
Mini size:	Less than 1 min. with PDVM-40ME
Search speed	x32, forward and reverse

INPUT SIGNALS

VIDEO (ANALOGUE)

Ref. Video (BNC x2, loop-through connection)
Composite, 1.0 Vp-p, 75 Ω, sync negative

Video (BNC x2, loop-through connection)
Composite, 1.0 Vp-p, 75 Ω, sync negative

Component (BNC x3)*

Luminance:	1.0 Vp-p, 75 Ω, sync negative
Chrominance:	0.7 Vp-p, 75 Ω (100%)

* Using optional DSBK-170P Analogue Component Input/Output Board

S-Video (DIN 4-pin x1)

Y:	1.0 Vp-p, 75 Ω, sync negative
C:	0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

i.LINK (DV In/Out) (6-pin x1)	IEEE1394-based

* Using optional DSBK-140P i.LINK/DV Input/Output Board

SDTI(QSDI) (BNC x1)*	Conforms to SDTI (270 Mbps)

* Using optional DSBK-150P SDTI(QSDI) Input/Output Board

SDI (BNC x1)*	Conforms to Serial Digital Interface (270 Mbps), ITU-R BT. 656

* Using optional DSBK-160P SDI Input/Output Board

AUDIO (ANALOGUE)

Audio (CH-1,2)	XLR 3-pin female x2

OUTPUT SIGNALS

VIDEO (ANALOGUE)

Ref. Video (BNC x1)	0.3 Vp-p, 75 Ω, sync negative
Video 1/2 (SUPER) (BNC x2)	Composite, 1.0 Vp-p, 75 Ω, sync negative
Component (BNC x3)*	
Luminance:	1.0 Vp-p, 75 Ω, sync negative
Chrominance:	0.7 Vp-p, 75 Ω (100%)

* Using optional DSBK-170P Analogue Component Input/Output Board

S-Video (DIN 4-pin x1)

Y:	1.0 Vp-p, 75 Ω, sync negative
C:	0.3 Vp-p, 75 Ω (at burst level)

VIDEO (DIGITAL)

i.LINK (DV In/Out) (6-pin x1)	IEEE1394-based

* Using optional DSBK-140P i.LINK/DV Input/Output Board

SDTI(QSDI) (BNC x1)*	Conforms to SDTI (270 Mbps)

* Using optional DSBK-150P SDTI(QSDI) Input/Output Board

SDI (BNC x2)*	Conforms to Serial Digital Interface (270 Mbps), ITU-R BT. 656

* Using optional DSBK-160P SDI Input/Output Board

AUDIO (ANALOGUE)

Audio (CH-1/3, 2/4)	XLR 3-pin male x2
Audio monitor (R/L)	RCA phono jack x1
Headphones	JM-60 stereo phone jack x1

TIME CODE

Time code input	BNC x1
Time code output	BNC x1

LCD

LCD display (x1)	6.4-inch VGA, 640 (H) x 480 (V)

SPEAKER

Built-in speaker (x1)	Monaural

REMOTE

RS-422A	D-sub 9-pin (x1)

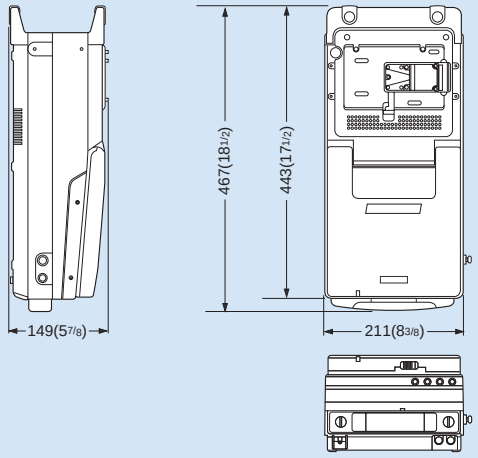
OTHERS

DC input (XLR 4-pin x1)	DC 12 V

SUPPLIED ACCESSORIES

Operation manual (x1), Carrying belt (x1)

DIMENSIONS



unit: mm (inches)

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