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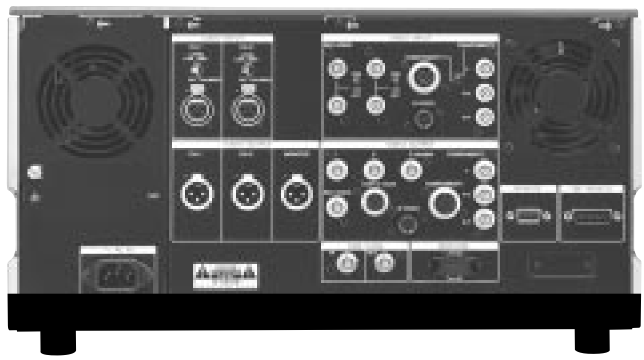
BETACAM SP 2000PRO



Editing Recorder

•Superior picture quality, inherent in the Betacam SP format •More than 90 minutes of recording/playback time using L-size Metal (for both recording and playback) or Oxide (for playback only) cassettes •High speed picture search provides recognizable color pictures at up to 10 times normal speed in forward and reverse (24 times in monochrome) •Two longitudinal audio channels with Dolby C-type NR (Noise Reduction) system •RS-422A 9-pin interface with other RS-422A equipped Sony machines (ex. Betacam/Betacam SP VTRs, BVU series U-matics) •Built-in comprehensive editing facilities •Dynamic Motion Control with memory provides slow-motion editing capability (when used with a player VTR equipped with DT function) •Built-in Time Base Corrector with advanced high quality digital dropout compensator •TBC remote control from an optional UVR-60 •Built-in LTC/VITC/User Bits generator and reader •Built-in character generator •Enhanced serviceability with built-in self-diagnostics •User friendly dial menu operation •Y/R-Y/B-Y component signal inputs and outputs via BNC or 12-pin Betacam DUB connectors •S-video (Y/C separate) input/output connectors •7-pin U-matic DUB output capability (option) •Compact and lightweight (5 unit high, 19-inch rack mountable, approx. 25 kg/55 lb 2 oz) •Low power consumption (150 W)

Supplied accessories: AC power cord (1)
Remote control cable RCC-5G (9-pin) (1)
PSW 4 × 16 screws for rack mounting (4)
Operation manual (1)

Optional accessories: TBC remote controller UVR-60
Component color corrector BVX-10
Control panel extention kit BKW-2010
U-matic DUB out kit BKW-2020
Control panel case BK-803
12-pin dubbing cable VDC-C5 (5 m)
Remote control cable RCC-5G/10G/30G (5 m/10 m/30 m)
Rack mount kit RMM-110
S-video cable SYC-2/5 (2 m/5 m)

Specifications

General

Type: Editing recorder
Video recording system: Rotary 4-head helical scan
Luminance: FM recording
Chrominance: FM recording (CTDM recording)
Video signal system: EIA monochrome/NTSC color
Operating temperature: 5 to 40°C (41 to 104°F)
Storage temperature: –20 to 60°C (–4 to 140°F)
Power requirements: AC 90 to 132 V, 48 to 64 Hz
Power consumption: 150 W
Humidity: Less than 80 % (relative humidity)
Mass: Approx. 25 kg (55 lb 2 oz)
Dimensions: 427 (W) × 237 (H) × 549 (D) mm (16⅞ × 9⅜ × 21⅝ inches) (including projecting parts)
Tape speed: 118.6 mm/s
REC/Playback time: More than 90 min with BCT-90MLA
More than 30 min with BCT-30MA
Fast Foward/Rewind time: Less than 3 min with BCT-90MLA
Search speed:
SHUTTLE: 19 steps, still to 24 times normal speed, forward and reverse
JOG: Frame by frame, forward and reverse

	Metal Particle Tape	Oxide Tape*
Video performance		
Bandwidth:		
Luminance (50% modulation)	30 Hz to 4.5 MHz $^{+0.5}_{-4.0}$ dB	30 Hz to 4.0 MHz $^{+0.5}_{-6.0}$ dB
Color difference (50% modulation)	30 Hz to 1.5 MHz $^{+0.5}_{-3.0}$ dB	30 Hz to 1.5 MHz $^{+0.5}_{-3.0}$ dB
S/N ratio:		
Luminance (COMPONENT IN/OUT)	More than 51 dB	More than 48 dB
Chrominance		
AM	More than 53 dB	More than 50 dB
PM	More than 53 dB	More than 50 dB
Differential gain	Less than 3 %	Less than 3 %
Differential phase	Less than 3°	Less than 3°
K-factor (2T pulse)	Less than 2 %	Less than 3 %
Y/C delay	Less than 20 ns	Less than 20 ns
Audio performance		
Frequency response (20dB below peak level)	50 Hz to 15 kHz $^{+1.5}_{-3.0}$ dB	50 Hz to 15 kHz ±3.0 dB
S/N ratio (at 3% distortion level)	More than 72 dB	More than 50 dB (Dolby NR OFF)
Distortion T.H.D. (at 3% distortion level)	Less than 1.0 %	Less than 2.0 %
Wow and flutter	Less than 0.1 % rms	Less than 0.1 % rms

Signal inputs

REF VIDEO IN (BNC): 1.0 Vp-p, 75 Ω
VIDEO IN (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative
COMPONENT IN 1 (12-pin male):
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y: 0.7 Vp-p, 75 Ω, B-Y: 0.7 Vp-p, 75 Ω
COMPONENT IN 2 (BNC (3)):
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y: 0.7 Vp-p, 75 Ω, B-Y: 0.7 Vp-p, 75 Ω
S-VIDEO IN: Y: 1.0 Vp-p, 75 Ω
C: 0.286 Vp-p (burst), 75 Ω
AUDIO IN CH-1/2 (XLR 3-pin female):
LOW: –60 dBu, 3 kΩ, balanced
HIGH: +4 dBu, 600 Ω/10 kΩ selectable, balanced
Time code IN (BNC): 0.5 V to 18 Vp-p, 10 kΩ

Signal outputs

VIDEO OUT 1 (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT 2 (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT 3 (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative with or without character insertion
COMPONENT OUT 1 (12-pin male):
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y: 0.7 Vp-p, 75 Ω, B-Y: 0.7 Vp-p, 75 Ω
COMPONENT OUT 2 (BNC (3)):
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y: 0.7 Vp-p, 75 Ω, B-Y: 0.7 Vp-p, 75 Ω
AUDIO LINE OUT (XLR 3-pin male) CH-1/2: +4 dBu, 600 Ω, balanced
AUDIO MONITOR OUT (XLR 3-pin male) CH-1/2: +4 dBu, 600 Ω, balanced
U-matic DUB OUT (with an optional BKW-2020): Y: 1.7 Vp-p, 51 Ω, C: 0.9 Vp-p, 51 Ω
S-VIDEO OUT: Y: 1.0 Vp-p, 75 Ω, C: 0.286 Vp-p (burst), 75 Ω
Time code OUT (BNC): 1.2 Vp-p, 75 Ω

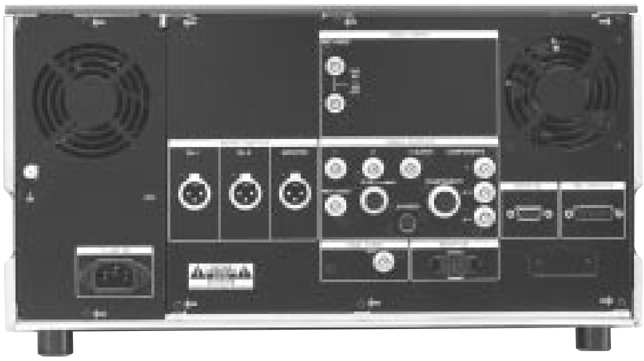
* The specifications of “video/audio performance oxide tape” were measured by playing back material on a standard PVW series VTR that had been recorded on a standard BVW series Betacam SP VTR.

PVW-2600

BETACAM SP 2000PRO

Editing Player

•Superior picture quality, inherent in the Betacam SP format •More than 90 minutes of playback time using the L-size Metal or Oxide cassettes •High speed picture search provides recognizable color pictures at up to 10 times normal speed in forward and reverse (24 times in monochrome) •Two longitudinal audio channels with the Dolby C-type NR (Noise Reduction) system •RS-422A 9-pin interface with other RS-422A equipped Sony machines (ex. Betacam/ Betacam SP VTRs, BVU series U-matics) •Built-in Time Base Corrector with advanced high quality digital dropout compensator •TBC remote control from an optional UVR-60 •Built-in LTC/VITC/User Bits reader •Built-in character generator •Enhanced serviceability with built-in self-diagnostics •User friendly dial menu operation •Y/R-Y/B-Y component signal outputs via BNC or 12-pin Betacam DUB connectors •S-video (Y/C separate) output connector •7-pin U-matic DUB output capability (option) •Compact and lightweight (5 unit high, 19-inch rack mountable, approx. 24.5 kg/54 lb) •Low power consumption (120 W)



Supplied accessories: AC power cord (1)
Remote control cable RCC-5G (9-pin) (1)
PSW 4 × 16 screws for rack mounting (4)
Operation manual (1)

Optional accessories: TBC Remote Controller UVR-60
Component color corrector BVX-10
Control panel extention kit BKW-2010
U-matic DUB out kit BKW-2020
Control panel case BK-803
12-pin dubbing cable VDC-C5 (5 m)
Remote control cable RCC-5G/10G/30G (5 m/10 m/30 m)
Rack mount kit RMM-110
S-video cable SYC-2/5 (2 m/5 m)

Specifications

General

Type: Editing player
Video recording system: Rotary 4-head helical scan
Luminance: FM recording
Chrominance: FM recording (CTDM recording)
Video signal system: EIA monochrome/NTSC color
Operating temperature: 5 to 40°C (41 to 104°F)
Storage temperature: –20 to 60°C (–4 to 140°F)
Power requirements: AC 90 to 132 V, 48 to 64 Hz
Power consumption: 120 W
Humidity: Less than 80 % (relative humidity)
Dimentions: 427 (W) × 237 (H) × 549 (D) mm
(16⅞ × 9⅜ × 21⅝ inches)
(including projecting parts)
Mass: Approx. 24.5 kg (54 lb)
Tape speed: 118.6 mm/s
Playback time: More than 90 min with BCT-90MLA
More than 30 min with BCT-30MA
Fast Foward/Rewind time:
Less than 3 min with BCT-90MLA
Search speed:
SHUTTLE 19 steps, still to 24 times normal speed, forward and reverse
JOG Frame by frame, forward and reverse

	Metal Particle Tape	Oxide Tape*
Video performance		
Bandwidth:		
Luminance (50% modulation)	30 Hz to 4.5 MHz $^{+0.5}_{-4.0}$ dB	30 Hz to 4.0 MHz $^{+0.5}_{-6.0}$ dB
Color difference (50% modulation)	30 Hz to 1.5 MHz $^{+0.5}_{-3.0}$ dB	30 Hz to 1.5 MHz $^{+0.5}_{-3.0}$ dB
S/N ratio:		
Luminance (COMPONENT IN/OUT)	More than 51 dB	More than 48 dB
Chrominance		
AM	More than 53 dB	More than 50 dB
PM	More than 53 dB	More than 50 dB
Differential gain	Less than 3 %	Less than 3 %
Differential phase	Less than 3°	Less than 3°
K-factor (2T pulse)	Less than 2 %	Less than 3 %
Y/C delay	Less than 20 ns	Less than 20 ns
Audio performance		
Frequency response (20dB below peak level)	50 Hz to 15 kHz $^{+1.5}_{-3.0}$ dB	50 Hz to 15 kHz ±3.0 dB
S/N ratio (at 3% distortion level)	More than 72 dB	More than 50 dB (Dolby NR OFF)
Distortion T.H.D (at 3% distortion level)	Less than 1.0 %	Less than 2.0 %
Wow and flutter	Less than 0.1 % rms	Less than 0.1 % rms

Signal inputs

REF VIDEO IN (BNC): 1.0 Vp-p, 75 Ω

Signal outputs

VIDEO OUT 1 (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT 2 (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT 3 (BNC): Composite video, 1.0 Vp-p, 75 Ω, sync negative with or without character insertion
COMPONENT OUT 1 (12-pin male):
Luminance 1.0 Vp-p, 75 Ω, sync negative
Color difference R-Y: 0.7 Vp-p, 75 Ω, B-Y: 0.7 Vp-p, 75 Ω
COMPONENT OUT 2 (BNC (3)):
Luminance 1.0 Vp-p, 75 Ω, sync negative
Color difference R-Y: 0.7 Vp-p, 75 Ω, B-Y: 0.7 Vp-p, 75 Ω
AUDIO LINE OUT (XLR 3-pin male) CH-1/2:
+4 dBu, 600 Ω, balanced
AUDIO MONITOR OUT (XLR 3-pin male) CH-1/2:
+4 dBu, 600 Ω, balanced
U-matic DUB OUT (with an optional BKW-2020):
Y: 1.7 Vp-p, 51 Ω, C: 0.9 Vp-p, 51 Ω
S-VIDEO OUT: Y: 1.0 Vp-p, 75 Ω, C: 0.286 Vp-p (burst), 75 Ω
Time code OUT (BNC): 1.2 Vp-p, 75 Ω

* The specifications of “video/audio performance oxide tape” were measured by playing back material on a standard PVW series VTR that had been recorded on a standard BVW series Betacam SP VTR.

PVV-3

Dockable Recorder

•Superior picture quality, inherit in the Betacam SP format •Compact and light-weight design •Low power consumption •Directly connected with DXC-637/537A/327A via the Pro 50-pin connector •Supplied with 20-pin connector for full color playback in field through the optional VA-300 •More than 30 minutes of recording time using the S-size cassette (Metal particle tape only) •Two longitudinal audio channels with the Dolby C-type Noise Reduction system •Luminance or CTDM viewfinder •Full range of control provided (Fast forward/Rewind/Play/Stop/Eject) •Record review function •Built-in LTC/VITC/User Bits generator and LTC reader with external time code lock capability •Frame accurate back space editing without time code discontinuity at the transition points (even after once the power is turned off) •8-digit LCD display • Remaining tape quantity and battery capacity can be displayed via a bargraph meter on the LCD display •Real time and date recording function •Built-in loud speaker •Digital hours meter •Built-in microphone external power supply (+48 V, CH-1/2) •Built-in self diagnostics with character display on TV monitor •Easy system integration with Anton/Bauer equipment •Enhanced serviceability

Supplied accessories:	Shoulder belt (1)
	Screws M4 × 12 (2)
	M4 × 6 (2)
	Operation manual (1)
	Handle (1)
	Lithium button cell (CR2025) (1)
Optional accessories:	NiCd Rechargeable Battery NP-1B, BA-90A
	Battery case (for BP-90A) DC-500
	Battery case (for NP-1B) DC-520
	Battery charger BC-1WD
	Battery charger BC-410
	Camera adaptor CMA-8A
	Camera adaptor (for BVP series) CA-514
	Power cable (for CMA-8ACE) CCQX-3

Specifications

General

Type: Dockable recorder
Operating temperature: 0 to 40°C (32 to 104°F)
Storage temperature: –20 to 60°C (–4 to 140°F)
Power requirements: DC 12 V $^{+5.0}_{-1.0}$ V
Power consumption: 10 W
Humidity: Less than 85 % (relative humidity)
Mass: Approx. 2.8 kg (6 lb 2 oz)
Tape speed: 118.6 mm/s
REC/Playback time: More than 30 min with BCT-30MA/UVWT-30MA
Fast Forward time: Less than 7.5 min with BCT-30MA/UVWT-30MA
Rewind time: Less than 5.5 min with BCT-30MA/UVWT-30MA
Continuous operating time:
Approx. 60 min with NP-1B
(PVV-3 and DXC-637)

Video performance (Metal Particle Tape only)*1

Bandwidth:
Luminance (50% modulation):
30 Hz to 4.5 MHz $^{+0.5}_{-4.0}$ dB
Color difference (50% modulation):
30 Hz to 1.5 MHz $^{+0.5}_{-3.0}$ dB
S/N ratio:
Luminance (Component IN/OUT):
More than 51 dB
Chrominance (AM/PM):
More than 53 dB
K-factor (2T pulse): Less than 2 %
Y/C delay: Less than 20 ns

Audio performance (Metal Particle Tape only)*1

Frequency response: 50 Hz to 15 kHz $^{+1.5}_{-3.0}$ dB
S/N ratio (at 3% distortion level):
More than 72 dB (CCIR-ARM/AVE)*2
Distortion T.H.D. (at 1kHz reference level):
Less than 1.5 %
Wow and flutter (DIN weighted):
Less than 0.15 %rms

Signal inputs/outputs

VIDEO (from the camera head, Pro 50-pin)*2:
Luminance:1.0 Vp-p, 1 kΩ
Color difference:
B-Y/R-Y: 0.7 Vp-p, 1 kΩ
GEN LOCK VIDEO IN (BNC):
1.0 Vp-p, 75 Ω
AUDIO IN CH-1/2 (XLR 3-pin female):
–60 dBu/+4 dBu selectable, high impedance, balanced
TIME CODE IN (BNC): 0.5 V to 18 Vp-p, 10 kΩ
ENCODED VIDEO OUT (Camera Video Out, BNC):
1.0 Vp-p, 75 Ω
TIME CODE OUT(BNC):
1.0 Vp-p, 75 Ω

Others

EARPHONE OUT: Mini jack
PLAYBACK ADAPTOR: 20-pin
REMOTE: Stereo Mini Jack

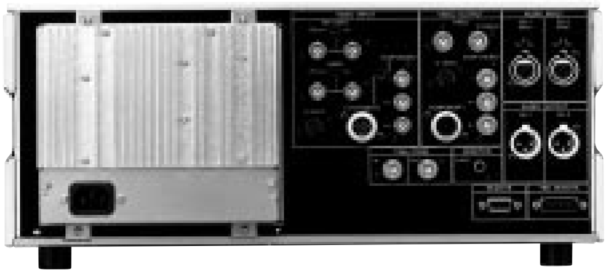
*1 The specifications of "video/audio performace" were measured by playing back material recorded on a PVV-3 on a standard PVW series VTR
*2 Peak level: +8dB above operational level

VIDEOCASSETTE RECORDERS

UVW-1800

Editing Recorder

•Outstanding picture quality, thanks to Betacam SP format •More than 90 minutes of recording/playback time using L-size metal Betacam SP cassettes •Two longitudinal audio channel with the Dolby C-type Noise Reduction system shown in unique bargraph indicators •Frame accurate editing: assemble and insert (video, audio CH-1, audio CH-2 and time code) editing capability when controlled from optional RS-422A equipped editing controller unit •Dedicated longitudinal time code track •Built-in Time Base Corrector with advanced high quality digital dropout compensation •Built-in SMPTE time code (LTC/User-bit) generator and reader •RS-422A 9-pin interface •Y/R-Y/B-Y component signal input and output via BNC or 12-pin DUB connectors •S-video (Y/C separate) input/output connectors •Optional TBC Remote Control Unit UVR-60 •High speed picture search provides recognizable color picture at up to 5 times normal speed in forward and reverse (16 times in monochrome) •Built-in character generator to monitor display information such as VTR status, time code, self-diagnostic message, setup menu, and so on •Initial setup menu to preset various detailed operational parameters •Digital hours meter •Built-in self diagnostics with detailed warning messages •Compact and lightweight (4 units high, approx. 19 kg), 19-inch rack mountable and low power consumption (85 W)



Supplied accessories: AC power cord (1)
Remote control cable RCC-5G (9-pin) (1)
Operation manual (1)

Optional accessories: TBC Remote controller UVR-60
Component color corrector BVX-10
Remote control cable RCC-5G/10G/30G (5 m/10 m/30 m)
12-pin dubbing cable VDC-C5 (5 m)
Remote control unit DSRM-10
Rack mount unit RMM-130

Specifications

General

Type: Editing recorder
Video recording system:
Rotary 4-head helical scan
Luminance: FM recording
Chrominance: FM recording (CTDM recording)
Video signal system: EIA monochrome/NTSC color
Power requirements: AC 90 to 132 V, 48 to 64 Hz
Power consumption: 85 W
Operating temperature: 5 to 40°C (41 to 104°F)
Storage temperature: –20 to 60°C (–4 to 140°F)
Humidity: Less than 80 % (relative humidity)
Mass: Approx. 19 kg (41 lb 14 oz)
Dimensions: 427 (W) × 193 (H) × 474 (D) mm (16⅞ × 7⅝ × 18¾ inches)
Tape speed: 118.6 mm/s
Recording/playback time:
More than 90 min with UVWT-90MLA
More than 30 min with UVWT-30MA
Fast forward time: Less than 3 min with UVWT-90MLA
Rewind time: Less than 3 min with UVWT-90MLA
Search speed (with optional DSRM-10)*1:
Shuttle: 15 steps, still to 16 times normal speed, forward and reverse
Jog: Frame by frame to ×2, forward and reverse

Video performance (Metal particle tape)

Bandwidth (50% modulation):
Luminance: 30 Hz to 4.0 MHz $^{+1.0}_{-4.0}$ dB
Color difference: 30 Hz to 1.5 MHz $^{+1.0}_{-4.0}$ dB
S/N ratio: Luminance (Component in/out): More than 49 dB
Chrominance: AM; More than 52 dB
PM; More than 52 dB
K-factor (2T pulse): Less than 3 %
Y/C delay: Less than 30 ns

Audio performance (Metal particle tape)

Frequency response: 50 Hz to 15 kHz $^{+2.0}_{-3.0}$ dB
S/N ratio (at 3 % distortion level):
More than 70 dB
Distortion T.H.D. (at 1 kHz/reference level):
Less than 1.5 %
Wow and flutter: Less than 0.18 % rms

Signal inputs

REF VIDEO IN: BNC, 1.0 Vp-p, 75 Ω
VIDEO IN: BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative
COMPONENT IN-1: 12-pin male,
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y; 0.7 Vp-p, 75 Ω
B-Y; 0.7 Vp-p, 75 Ω
COMPONENT IN-2: BNC (3),
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y; 0.7 Vp-p, 75 Ω
B-Y; 0.7 Vp-p, 75 Ω
S-VIDEO IN: Mini DIN 4-pin,
Y: 1.0 Vp-p, 75 Ω
C: 0.286 Vp-p (burst), 75 Ω
AUDIO IN CH-1/2: XLR 3-pin female, 4 dBu, 600 Ω/10 kΩ selectable, balanced
Time code IN: BNC, 0.5 V to 18 Vp-p, 600 Ω

Signal outputs

VIDEO OUT-1: BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT-2: BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative, with or without character insertion
COMPONENT OUT-1: 12-pin female,
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y; 0.7 Vp-p, 75 Ω
B-Y; 0.7 Vp-p, 75 Ω
COMPONENT OUT-2: BNC (3),
Luminance: 1.0 Vp-p, 75 Ω, sync negative
Color difference: R-Y; 0.7 Vp-p, 75 Ω
B-Y; 0.7 Vp-p, 75 Ω
AUDIO LINE OUT CH-1/2:
XLR 3-pin, male, 4 dBu, 600 Ω, balanced
AUDIO MONITOR OUT CH-1/2:
Phono, –6 dBu
S-VIDEO OUT: Mini DIN 4-pin,
Y: 1.0 Vp-p, 75 Ω
C: 0.286 Vp-p (burst), 75 Ω
Time code OUT: BNC, 2.2 Vp-p, 600 Ω

Others

REMOTE IN/OUT: 9-pin female
TBC REMOTE: 15-pin male
CONTROL-S: Mini jack
HEADPHONES: JM-60 headphone stereo jack

Processor adjustment range (with optional UVR-60)

Video level: ±3 dB
Chroma level: ±3 dB
Setup level: 0 to +15 IRE
HUE: ±15°
System SC phase: 360°p-p*2
System sync phase: –1 to 3µs*3
Y/C delay: ±100ns

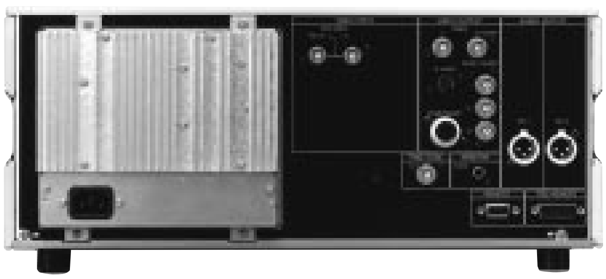
*1 Without DSRM-10 attached, search speed is 16 times forward and reverse with "REW/FFWD" button continuously depressed.
*2 With or without UVR-60 attached
*3 Without UVR-60 attached: ±300 ns

1-2 Betacam SP UVW series VTRs

UVW-1600

Editing Player

•Outstanding picture quality, thanks to Betacam SP format •More than 90 minutes of playback time using L-size metal Betacam SP cassettes •Two longitudinal audio channel with the Dolby C-type Noise Reduction system shown in unique bargraph indicators •Dedicated longitudinal time code track •Built-in Time Base Corrector with advanced high quality digital dropout compensation •Built-in SMPTE time code (LTC/User-bit) reader •RS-422A 9-pin interface •Y/R-Y/B-Y component signal output via BNC or 12-pin DUB connector •S-video (Y/C separate) output connector •Optional TBC Remote Control Unit UVR-60 •High speed picture search provides recognizable color picture at up to 5 times normal speed in forward and reverse (16 times in monochrome) •Built-in character generator to monitor display information such as VTR status, time code, self-diagnostic message, setup menu, and so on •Initial setup menu to preset various detailed operational parameters •Digital hours meter •Built-in self diagnostics with detailed warning messages •Compact and lightweight (4 units high, approx. 18 kg), 19-inch rack mountable and low power consumption (65 W)



Supplied accessories:	AC power cord (1)
	Remote control cable RCC-5G (9-pin) (1)
	Operation manual (1)
Optional accessories:	TBC Remote controller UVR-60
	Component color corrector BVX-10
	Remote control cable RCC-5G/10G/30G (5 m/10 m/30 m)
	12-pin dubbing cable VDC-C5 (5 m)
	Remote control unit DSRM-10
	Rack mount unit RMM-130

Specifications

General

Type:	Editing player
Video recording system:	Rotary 4-head helical scan Luminance: FM recording Chrominance: FM recording (CTDM recording)
Video signal system:	EIA monochrome/NTSC color
Power requirements:	AC 90 to 132 V, 48 to 64 Hz
Power consumption:	65 W
Operating temperature:	5 to 40°C (41 to 104°F)
Storage temperature:	–20 to 60°C (–4 to 140°F)
Humidity:	Less than 80 % (relative humidity)
Dimensions:	427 (W) × 193 (H) × 474 (D) mm (16⅞ × 7⅝ × 18¾ inches)
Mass:	Approx. 18 kg (39 lb 10 oz)
Tape speed:	118.6 mm/s
Playback time:	More than 90 min with UVWT-90MLA More than 30 min with UVWT-30MA
Fast forward time:	Less than 3 min with UVWT-90MLA
Rewind time:	Less than 3 min with UVWT-90MLA
Search speed (with optional DSRM-10)*1:	Shuttle: 15 steps, still to 16 times normal speed, forward and reverse Jog: Frame by frame to ×2, forward and reverse

Video performance (Metal particle tape)

Bandwidth (50% modulation):	Luminance: 30 Hz to 4.0 MHz $^{+1.0}_{-4.0}$ dB Color difference: 30 Hz to 1.5 MHz $^{+1.0}_{-4.0}$ dB
S/N ratio:	Luminance (Component out): More than 49 dB Chrominance: AM; More than 52 dB PM; More than 52 dB
K-factor (2T pulse):	Less than 3 %
Y/C delay:	Less than 30 ns

Audio performance (Metal particle tape)

Frequency response:	50 Hz to 15 kHz $^{+2.0}_{-3.0}$ dB
S/N ratio (at 3% distortion level):	More than 70 dB
Distortion T.H.D. (at 1 kHz at reference level):	Less than 1.5 %
Wow and flutter:	Less than 0.18 % rms

Signal inputs

REF VIDEO IN:	BNC, 1.0 Vp-p, 75 Ω

Signal outputs

VIDEO OUT-1:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT-2:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative, with or without character insertion
COMPONENT OUT-1:	12-pin female, Luminance: 1.0 Vp-p, 75 Ω, sync negative Color difference: R-Y; 0.7 Vp-p, 75 Ω B-Y; 0.7 Vp-p, 75 Ω
COMPONENT OUT-2:	BNC (3), Luminance: 1.0 Vp-p, 75 Ω, sync negative Color difference: R-Y; 0.7 Vp-p, 75 Ω B-Y; 0.7 Vp-p, 75 Ω
AUDIO LINE OUT CH-1/2:	XLR 3-pin male, 4 dBu, 600 Ω, balanced
AUDIO MONITOR OUT CH-1/2:	Phono, –6 dBu
S-VIDEO OUT:	Mini DIN 4-pin, Y: 1.0 Vp-p, 75 Ω C: 0.286 Vp-p (burst), 75 Ω
Time code OUT:	BNC, 2.2 Vp-p, 600 Ω

Others

REMOTE IN/OUT:	9-pin female
TBC REMOTE:	15-pin male
CONTROL-S:	Mini jack
HEADPHONES:	JM-60 headphone stereo jack

Processor adjustment range (with optional UVR-60)

Video level:	±3 dB
Chroma level:	±3 dB
Setup level:	0 to +15 IRE
Hue:	±15°
System SC phase:	360°p-p*2
System sync phase:	–1 to 3 µs*3
Y/C delay:	±100 ns

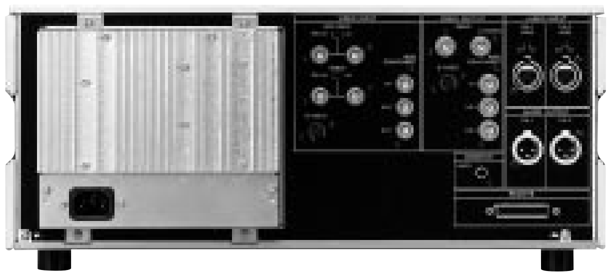
*1 Without DSRM-10 attached, search speed is 16 times forward and reverse with "REW/FFWD" button continuously depressed.
*2 With or without UVR-60 attached
*3 Without UVR-60 attached: ± 300ns

1-2 Betacam SP UVW series VTRs

UVW-1400A

Recorder

•Outstanding picture quality, thanks to Betacam SP format •More than 90 minutes of recording/playback time using L-size metal Betacam SP cassettes •Two longitudinal audio channel with the Dolby C-type Noise Reduction system shown in unique bargraph indicators •Dedicated longitudinal time code track •Built-in Time Base Stabilizer with advanced high quality digital dropout compensation •Built-in SMPTE time code (LTC/User-bit) generator and reader •25-pin remote control interface complied with RS-232C interface for external computer operation •Y/R-Y/B-Y component signal inputs and outputs via BNC connectors are switchable to RGB input/output connector • Both separate sync and a sync on green channel connectors •S-video (Y/C separate) input/output connectors •Foot switch control capability for scientific research • Trigger remote out for video printers (stereo mini jack) •Back space editing for smooth transitions between scenes with optional remote controller or computer via RS-232C interface •High speed picture search provides recognizable color picture at up to 5 times normal speed in forward and reverse (16 times in monochrome) •Built-in character generator to monitor display information such as VTR status, time code, self-diagnostic message, setup menu, and so on •Auto repeat function •Initial setup menu to preset various detailed operational parameters •Digital hours meter •Built-in self diagnostics with detailed warning messages •Compact and lightweight (4 units high, approx. 19 kg), 19-inch rack mountable and low power consumption (85 W)



Supplied accessories:	AC power cord (1) Operation manual (1), RS-232C protocol manual (1)
Optional accessories:	Component color corrector BVX-10 S-video cable SYC-2/5 (2 m/5 m) Remote control unit SVRM-100A Rack mount unit RMM-130 Foot switch FS-20

Specifications

General

Type:	Recorder
Video recording system:	Rotary 4-head helical scan Luminance: FM recording Chrominance: FM recording (CTDM recording)
Video signal system:	EIA monochrome/NTSC color
Power requirements:	AC 90 to 132 V, 48 to 64 Hz
Power consumption:	85 W
Operating temperature:	5 to 40°C (41 to 104°F)
Storage temperature:	–20 to 60°C (–4 to 140°F)
Humidity:	Less than 80 % (relative humidity)
Dimensions:	427 (W) × 193 (H) × 474 (D) mm (16 7/8 × 7 5/8 × 18 3/4 inches)
Mass:	Approx. 19 kg (41 lb 14 oz)
Tape speed:	118.6 mm/s
Playback time:	More than 90 min with UVWT-90MLA More than 30 min with UVWT-30MA
Fast forward time:	Less than 3 min with UVWT-90MLA
Rewind time:	Less than 3 min with UVWT-90MLA
Search speed:	Shuttle: 15 steps. still to 16 times normal speed, forward and reverse (with optional SVRM-100A)*1: 17 steps. still to 16 times normal speed, forward and reverse (when controlled via RS-232C) Jog: Frame by frame to ×2, forward and reverse

Video performance (Metal particle tape)

Bandwidth (50% modulation):	Luminance: 30 Hz to 4.0 MHz $^{+1.0}_{-4.0}$ dB Color difference: 30 Hz to 1.5 MHz $^{+1.0}_{-4.0}$ dB
S/N ratio:	Luminance (Component in/out): More than 49 dB Chrominance (1.0 MHz LPF): AM; More than 52 dB PM; More than 52 dB
K-factor (2T pulse):	Less than 3 %
Y/C delay:	Less than 30 ns

Audio performance (Metal particle tape)

Frequency responce:	50 Hz to 15 kHz $^{+2.0}_{-3.0}$ dB
S/N ratio:	More than 70 dB (at 3 % distortion level)*2
Distortionm T.H.D (at 1 kHz reference level):	Less than 1.5 %
Wow and flutter:	Less than 0.15 % rms

Signal inputs

REF VIDEO IN:	BNC, 1.0 Vp-p, 75 Ω
VIDEO IN:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative
RGB/COMPONENT IN:	BNC (3), Y/Sync on G:1.0 Vp-p, 75 Ω, sync negative R-Y/R: 0.7 Vp-p, 75 Ω B-Y/B: 0.7 Vp-p, 75 Ω
RGB SYNC IN:	Sync negative, 0.2 Vp-p to 5 Vp-p, 75 Ω (at RGB composite sync)
S-VIDEO IN:	Mini DIN 4-pin, Y: 1.0 Vp-p, 75 Ω C: 0.286 Vp-p (burst), 75 Ω
AUDIO IN CH-1/2:	XLR 3-pin female, 4 dBu, 600 Ω/10 kΩ selectable, balanced

Signal outputs

VIDEO OUT-1:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT-2:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative, with or without character insertion
RGB/COMPONENT OUT:	BNC (3), Y/Sync on G: 1.0 Vp-p, 75 Ω, sync negative R-Y/R: 0.7 Vp-p, 75 Ω B-Y/B: 0.7 Vp-p, 75 Ω
AUDIO LINE OUT CH-1/2:	XLR 3-pin, male, 4 dBu, 600 Ω, balanced
AUDIO MONITOR OUT CH-1/2:	Phono, –6 dBu
S-VIDEO OUT:	Mini DIN 4-pin, Y: 1.0 Vp-p, 75 Ω C: 0.286 Vp-p (burst), 75 Ω
SYNC OUT:	BNC, composite sync (no burst) 2.0 Vp-p, 75 Ω, negative

Others

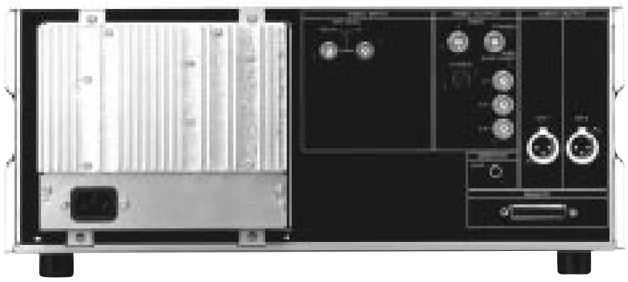
REMOTE IN/OUT:	25-pin female complied with RS-232C
REMOTE OUT:	Mini lack
REMOTE 2:	Mini jack
CONTROL-S:	Mini jack
HEADPHONES:	JM-60 headphone stereo jack

*1 Without SVRM-100A attached, search speed is 16 times forward and reverse with “REW/FFWD” button continuously depressed.
*2 Peak level: +8 dB above operational level

UVW-1200

Player

•Outstanding picture quality, thanks to Betacam SP format •More than 90 minutes of playback time using L-size metal Betacam SP cassettes •Two longitudinal audio channel with the Dolby C-type Noise Reduction system •Dedicated longitudinal time code track •Built-in Time Base Stabilizer with advanced high quality digital dropout compensation •Built-in SMPTE time code (LTC/User-bit) reader •25-pin remote control interface complied with RS-232C interface for external computer operation •Y/R-Y/B-Y component signal outputs via BNC connectors are switchable to RGB output connector •S-video (Y/C separate) output connector •High speed picture search provides recognizable color picture at up to 5 times normal speed in forward and reverse (16 times in monochrome) •Built-in character generator to monitor display information such as VTR status, time code, self-diagnostic message, setup menu, and so on •Auto repeat function •Initial setup menu to preset various detailed operational parameters •Digital hours meter •Built-in self diagnostics with detailed warning messages•Compact and lightweight (4 units high, approx. 17.5 kg), 19-inch rack mountable and low power consumption (63 W)



Supplied accessories:	AC power cord (1)
	Operation manual (1)
	RS-232C protocol manual (1)
Optional accessories:	Component color corrector BVX-10
	Remote control unit DSRM-10
	Rack mount unit RMM-130

Specifications

General

Type:	Player
Video recording system:	Rotary 4-head helical scan
	Luminance: FM recording
	Chrominance: FM recording (CTDM recording)
Video signal system:	EIA monochrome/NTSC color
Power requirements:	AC 90 to 132 V, 48 to 64 Hz
Power consumption:	63 W
Operating temperature:	5 to 40°C (41 to 104°F)
Storage temperature:	–20 to 60°C (–4 to 140°F)
Humidity:	Less than 80 % (relative humidity)
Dimensions:	427 (W) × 193 (H) × 474 (D) mm
	($16\frac{7}{8} \times 7\frac{5}{8} \times 18\frac{3}{4}$ inches)
Mass:	Approx. 17.5 kg (38 lb 9 oz)
Tape speed:	118.6 mm/s
Playback time:	More than 90 min with UVWT-90MLA
	More than 30 min with UVWT-30MA
Fast forward time:	Less than 3 min with UVWT-90MLA
Rewind time:	Less than 3 min with UVWT-90MLA
Search speed (with optional DSRM-10)*:	
	Shuttle: 15 steps, still to 16 times normal speed, forward and reverse
	Jog: Frame by frame to ×2, forward and reverse

Video performance (Metal particle tape)

Bandwidth (50% modulation):	
	Luminance: 30 Hz to 4.0 MHz $^{+1.0}_{-4.0}$ dB
	Color difference: 30 Hz to 1.5 MHz $^{+1.0}_{-4.0}$ dB
S/N ratio:	Luminance (Component out): More than 49 dB
	Chrominance: AM; More than 52 dB
	PM; More than 52 dB
K-factor (2T pulse):	Less than 3 %
Y/C delay:	Less than 30 ns

Audio performance (Metal particle tape)

Frequency response:	50 Hz to 15 kHz $^{+2.0}_{-3.0}$ dB
S/N ratio (at 3 % distortion level):	
	More than 70 dB
Distortion T.H.D. (at 1 kHz at reference level):	
	Less than 1.5 %
Wow and flutter:	Less than 0.18 % rms

Signal inputs

REF VIDEO IN:	BNC, 1.0 Vp-p, 75 Ω

Signal outputs

VIDEO OUT-1:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative
VIDEO OUT-2:	BNC, Composite video, 1.0 Vp-p, 75 Ω, sync negative, with or without character insertion
RGB/COMPONENT OUT:	
	BNC (3),
	Y/Sync on G: 1.0 Vp-p, 75 Ω, sync negative
	R-Y/R: 0.7 Vp-p, 75 Ω
	B-Y/B: 0.7 Vp-p, 75 Ω
AUDIO LINE OUT CH-1/2:	
	XLR 3-pin male, 4 dBu, 600 Ω, balanced
AUDIO MONITOR OUT CH-1/2:	
	Phono, –6 dBu
S-VIDEO OUT:	Mini DIN 4-pin,
	Y: 1.0 Vp-p, 75 Ω
	C: 0.286 Vp-p (burst), 75 Ω

Others

REMOTE IN/OUT:	25-pin female complied with RS-232C
CONTROL-S:	Mini jack
HEADPHONES:	JM-60 headphone stereo jack

* Without DSRM-10 attached, search speed is 16 times forward and reverse with “REW/FFWD” button continuously depressed.

1-3 Betacam SP accessories

UVR-60

TBC Remote Controller

•Designed to remotely control the TBC for the PVW and UVW series VTRs
•19-inch rack mountable: Can be installed individually with the supplied blank panel or with another UVR-60

Power requirements:
DC 12 V, 9 V (supplied from VTR)
Power consumption:
840 mW
Mass: 1.3 kg (2 lb 13 oz)
Dimension: 215 (W) × 44 (H) × 101 (D) mm
($8\frac{1}{2} \times 1\frac{3}{4} \times 4$ inches)

Supplied accessories:
Remote control cable (5 m)
Rack mount bracket
Blank panel
Screw
Operation manual

BVX-10

Component Color Corrector

•Component signal color corrector for Betacam VTR
•Preset/manual control of Gain, Black level and Gamma on R, G, B signals
•Easy connection—12-pin multi cables for component input and output, BNC connectors for component input and output (Y, B-Y, R-Y)
•Remote controller supplied (BVR-58)
•19-inch rack mountable

Power requirements:
AC 90 to 132 V, 50/60 Hz
Power consumption: 40 W
Mass: Main unit: 6.1 kg (13 lb 7 oz)
Remote controller:
0.9 kg (1 lb 15 oz)
Dimensions: Main unit:
424 (W) × 44 (H) × 410 (D) mm
($16\frac{3}{4} \times 1\frac{3}{4} \times 16\frac{1}{4}$ inches)
Remote controller:
212 (W) × 44 (H) × 110 (D) mm
($8\frac{3}{4} \times 1\frac{3}{4} \times 4\frac{3}{8}$ inches)
Supplied accessories:
Rack mount units (2)
Remote control cable
(5 m, 25-pin)
Operation and maintenance manual

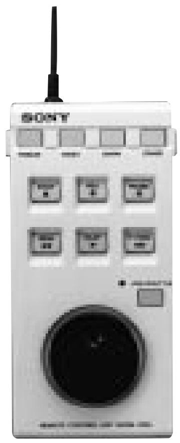
SVRM-100A

Remote Control Unit

•Designed to remotely control the UVW-1400A
•Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD/FREEZE
•JOG/SHUTTLE operation •Enables ±16 times normal speed in search operation
•×1/30 times normal speed in jog mode*1

Power requirements:
DC 5 V (supplied from the VTR)
Power consumption:
Less than 50 mW
Remote control:
Stereo mini plug
Control signal: Control-S
Dimensions: 90 (W) × 39 (H) ×182 (D) mm
($3\frac{5}{8} \times 1\frac{9}{16} \times 7\frac{1}{4}$ inches)
Mass: 250 g (8.8 lb)

*1: The speed varies depending on the VTRs.



DSRM-10

Remote Control Unit

•Designed to remotely control the UVW-1800/1600/1200
• Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD
• JOG/SHUTTLE operation
• Enables ±16 times normal speed in search operation

Specifications

Power requirements:
DC 5 V (supplied from the connected VTR)
Power consumption:
50 mW
Remote control:
Stereo mini-plug (with attached cable, length 3 m (10 ft))
Dimensions: 90 (W) × 46 (H) × 182 (D) mm
($3\frac{5}{8} \times 1\frac{13}{16} \times 7\frac{1}{4}$ inches)
Mass: Approx. 360 g (12 oz)
Supplied accessory:
Operating manual (1)

1-3 Betacam SP accessories

BKW-2010

Control Panel Extension Kit

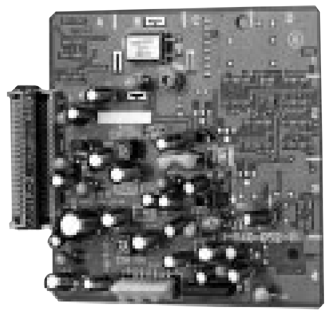
•Designed to remotely control the PVW-2800/2650/2600
•Composition—Blank panel
15-pin remote control cable
Cable for the internal circuits

BKW-2020

U-matic DUB Output Kit

•Enables transformation of Betacam SP material from a PVW VTR to a U-matic VTR

Dimension:	100 (W) × 104 (H) × 15 (D) mm (4 × 4⅛ × 9⁄32 inches)
Mass:	70 g (2.5 oz)

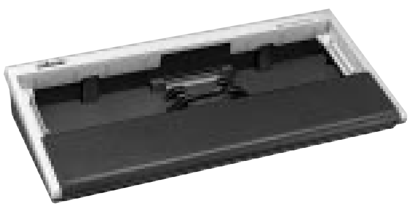


BK-803

Control Panel Case

•Mounts the control panel which is removed from PVW-2800/2650/2600
•Used with BKW-2010

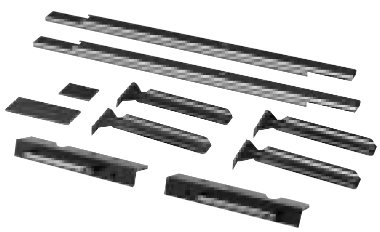
Dimension: 448 (W) × 56.5 (H) × 218 (D) mm
(17¾ × 2¼ × 8⅝ inches)



RMM-110

Rack Mount Kit

•Designed for use in mounting PVW-2800/2650/2600 into 19-inch rack

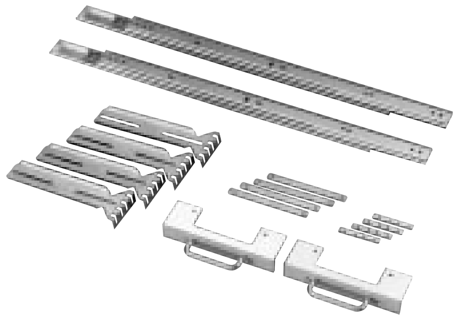


1-3 Betacam SP accessories

RMM-130

Rack Mount Kit

•Designed for use in mounting UVW-1800/1600/1400A/1200 into 19-inch rack



DSR-2000

Editing Recorder

•Superb picture quality of the DVCAM format •Playback capability of all DV (25 Mb/s) recorded tapes including DV tapes recorded in LP mode and DVCPRO*1 tapes without any mechanical adaptor •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •Preread editing capability*2 to perform A/B roll editing*3 with two VTRs and sound-on-sound capability as well as audio mix/swap and over-dubbing of audio without the delay between video and audio •Audio cross-fade function for clean audio transitions at editing points •VTR-to-VTR editing without external controllers •Wide range of digital slow speed from –1 to +1 times normal speed •Jog audio capability •DMC (Dynamic Motion Control) to provide noiseless slow-motion playback •High-speed picture search over a range of 60 times normal speed, in both forward and reverse •Versatile digital interfaces: SDI, SDTI (QSDI™)*4, i.LINK™ (DV In/Out)*5, SDTI-CP (MPEG Out)*6 and AES/EBU digital audio •Extensive analog interfaces: composite, component, S-Video and XLR audio •RS-422A remote control interface •Frame accurate editing capability •ClipLink™ operation •Full tape dubbing with ClipLink Log Data via SDTI (QSDI) and RS-422A interfaces •16:9 aspect ID signal recording •Process control for highly stable video signals •Built-in SMPTE time code and VITC generator/reader •Channel condition monitoring function •Built-in signal generator •Audio level control in both recording and playback modes •Dial menu operation •Key Inhibit and Rec Inhibit functions to prevent accidental operation •Flexible input selection between video and audio*7 •Universal powering system from AC 100 V to 240 V •Closed caption function •Triple-size cassette compartment to ensure compatibility with DV (25 Mb/s) recorded tapes of all sizes and types •DSBK-200 Control Panel for remote operation from a distance of up to 10 meters

*1 Not compatible with the SDTI (QSDI) and i.LINK interfaces.
*2 Not available through the SDTI (QSDI) and i.LINK interfaces.
*3 MIX and WIPE only
*4 The SDTI (Serial Data Transport Interface) is defined as SMPTE 305M.
The SDTI (QSDI) is the DV compressed signal interface which is defined as SMPTE 322M.
*5 i.LINK stands for IEEE1394-1995 standards and their revisions.
i is the logo for products that implement i.LINK.
The optional DSBK-190 i.LINK/DV Input/Output Board is required.
*6 The optional board will be available in the future.
*7 i.LINK cannot be combined with other signal interfaces.
When SDTI (QSDI) is selected as the audio input, the video signal is assumed to be SDTI (QSDI).
However, when it is selected as the video input, other signal interfaces can be selected for the audio input.

Supplied Accessories:	AC power cord Operating instructions RCC-5G 9-pin remote control cable
Optional Accessories:	i.LINK/DV Input/Output Board DSBK-190 Control Panel DSBK-200 Control Panel Case BKNW-121 Rack Mount Kit RMM-130 TBC Remote Control Unit UVR-60 Remote Control Cable RCC-5G/10G/30G (5 m/10 m/30 m) DV Cable CCF-3L (6-pin - 6-pin), CCFD-3L (6-pin - 4-pin)

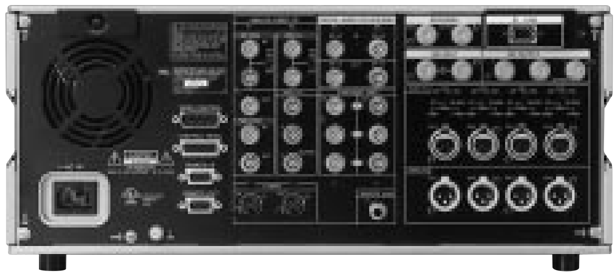
Specifications

General

Power requirements:	AC 100 to 240 V, 50/60 Hz
Power consumption:	110 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)
Operating humidity:	Less than 80%
Storage humidity:	Less than 90%
Mass:	18 kg (39 lb 10 oz)
Dimensions:	427 (W) × 175 (H) × 496.5 (D) mm (16⅞ × 7 × 19⅝ inches)
Tape speed:	28.193 mm/s
Recording/Playback time:	
Standard size:	184 min. with PDV-184ME/184N/184MEM
Mini size:	40 min. with PDVM-40ME/40N/40MEM
Fast forward/Rewind time:	
Standard size:	Less than 3 min. with PDV-184ME/184N/184MEM
Mini size:	Less than 1 min. with PDVM-40ME/40N/40MEM
Search speed:	
Shuttle mode:	Still to ±60 times normal speed in forward and reverse
Digital slow mode:	±1 times normal speed in forward and reverse

Video Performance

Band width (via analog component I/O):	
Luminance:	30 Hz to 5.0 MHz ±1.0 dB 5.75 MHz +0/-3.0 dB (Typical measurement)
Chrominance:	30 Hz to 1.5 MHz +1.0/-5.0 dB
S/N ratio (via analog component I/O):	More than 55 dB



K-factor (K2T, KPB):	Less than 2.0%
Y/C delay:	Less than 30 ns

Audio Performance

Frequency response:	
2CH mode (48 kHz/16-bit):	20 Hz to 20 kHz +0.5/-1.0 dB
4CH mode (32 kHz/12-bit):	20 Hz to 14.5 kHz +0.5/-1.0 dB
Dynamic range:	More than 85 dB
Distortion (THD + N):	Less than 0.05%

Input Signals

Video (Analog)

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):	
Y:	1.0 Vp-p, 75 Ω, sync negative
R-Y:	0.7 Vp-p, 75 Ω (75%)
B-Y:	0.7 Vp-p, 75 Ω (75%)
S-Video (DIN 4-pin x1):	
Y:	1.0 Vp-p, 75 Ω, sync negative
C:	0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)

SDI (BNC x2, active-through connection):	Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI) (BNC x1):	Conforms to SDTI (270 Mb/s), SMPTE 305M/322M
i.LINK (DV In/Out) (6-pin x1):	IEEE1394-based * Using optional DSBK-190 i.LINK/DV Input/Output Board

Audio (Analog)

Audio (XLR 3-pin female x4):	-6/0/+4 dBu, 600 Ω on/off/-60 dBu, high impedance

Audio (Digital)

AES/EBU (BNC x2):	75 Ω, unbalanced

Time Code

Time Code In (BNC x1):	0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced

Output Signals

Video (Analog)

REF. Video (BNC x1):	0.286 Vp-p, 75 Ω, sync negative
Video 1/2/3(SUPER) (BNC x3):	Composite, 1.0 Vp-p, 75 Ω, sync negative
Component (BNC x3):	
Y:	1.0 Vp-p, 75 Ω, sync negative
R-Y:	0.7 Vp-p, 75 Ω (75%)
B-Y:	0.7 Vp-p, 75 Ω (75%)
S-Video (DIN 4-pin x1):	
Y:	1.0 Vp-p, 75 Ω, sync negative
C:	0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)

SDI (BNC x3):	Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI) (BNC x1):	Conforms to SDTI (270 Mb/s), SMPTE 305M/322M
i.LINK (DV In/Out) (6-pin x1):	IEEE1394-based * Using optional DSBK-190 i.LINK/DV Input/Output Board

Audio (Analog)

Audio (XLR 3-pin male x4):	+4/0/-6 dBu (selectable by menu)
Monitor (RCA x1):	-11 dBu, 47 kΩ, unbalanced (-18 dBFS)
Headphone (JM-60 headphone jack x1):	-∞ to -13 dBu, 8 Ω, unbalanced (-18 dBFS)

Audio (Digital)

AES/EBU (BNC x2):	75 Ω, unbalanced

Time Code

Time Code Out (BNC x1):	2.2 Vp-p, 75 Ω, unbalanced

Remote

RS-422A:	D-sub 9-pin (female) (2)
Video Control:	D-sub 15-pin (male) (1)
Control Panel:	D-sub 15-pin (female) (1)

DSR-85

High-speed Editing Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •Versatile digital interfaces: SDI*[1], SDTI (QSDI) and AES/EBU digital audio •Extensive analog interfaces: composite, component, S-Video and XLR audio •RS-422A remote control interface •High-speed data transfer at four times normal speed via SDTI (QSDI) interface •High-speed tape dubbing with ClipLink Log Data at four times normal speed via SDTI (QSDI) and RS-422A interfaces •ClipLink operation •Frame accurate editing capability •Built-in SMPTE time code generator/reader •Time base corrector •High-speed picture search over a range of 32 times normal speed, in both forward and reverse •Digital slow function over a range from 0 to 0.24 times normal speed, in both forward and reverse •Jog audio capability •SIRCS (Sony Integrated Remote Control System) interface for the DSRM-10 Remote Control Unit

*1 The optional DSBK-120 SDI Input/Output Board is required.

Supplied accessories	AC power cord Remote control cable RCC-5G Operation instructions ClipLink Guide
Optional accessories	SDI Input/Output Board DSBK-120 Time Code Input/Output Board DSBK-130 Remote Control Unit DSRM-10 Rack Mount Kit RMM-130 TBC Remote Control Unit UVR-60 Remote Control Cable RCC-5G/10G/30G (5 m/10 m/30 m)

Specifications

General

Power requirements: AC 100 to 120 V, 50/60 Hz
Power consumption: 185 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)
Operating humidity: Less than 80%
Storage humidity: Less than 90%
Mass: 21 kg (46 lb 4 oz)
Dimensions: 427 (W) × 174 (H) × 494 (D) mm ($16\frac{7}{8} \times 6\frac{7}{8} \times 19\frac{1}{2}$ inches) excluding external projections
Tape speed: 28.193 mm/s
Recording/playback time: 184 min. with PDV-184ME/184N/184MEM
40 min. with PDVM-40ME/40N/40MEM
Fast forward/Rewind time: Less than 3 min. with PDV-184ME/184N/184MEM
Less than 1 min. with PDVM-40ME/40N/40MEM
Search speed:
When controlling via RS-422A:
Search speed is up to 32 times in forward and reverse.
When controlling via DSRM-10:
Jog mode: Still to ×2, forward and reverse
Shuttle mode: 8 steps, still to ×16, forward and reverse
Digital slow: 3 steps, still, ×1/5 and x1/10, forward and reverse

Video Performance

Band width (via analog component I/O):
Luminance: 30 Hz to 5.0 MHz ±1.0 dB
5.75 MHz +0/-3.0 dB (Typical measurement)
Chrominance: 30 Hz to 1.5 MHz +1.0/-5.0 dB
S/N ratio (via analog component I/O):
More than 55 dB
K-factor (K2T, KPB): Less than 2.0%
Y/C delay: Less than 30 ns

Audio Performance

Frequency response:
2CH mode (48 kHz/16-bit):
20 Hz to 20 kHz +0.5/-1.0 dB
4CH mode (32 kHz/12-bit):
20 Hz to 14.5 kHz +0.5/-1.0 dB
Dynamic range: More than 85 dB
Distortion (THD + N): Less than 0.05%

Signal Inputs

Video (Analog)

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):
Y: 1.0 Vp-p, 75 Ω, sync negative
R-Y: 0.7 Vp-p, 75 Ω (75%)
B-Y: 0.7 Vp-p, 75 Ω (75%)
S-Video (DIN 4-pin x1):
Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)

SDI*[1] (BNC x2, active-through connection):
Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI) (BNC x1): Conforms to SDTI (270 Mb/s), SMPTE 305M/322M

Audio (Analog)

AUDIO (XLR 3-pin female x4):
-6/0/+4 dBu, 600 Ω on/off/-60 dBu, high impedance

Audio (Digital)

AES/EBU (XLR 3-pin female x2):
110 Ω, balanced

Signal Outputs

Video (Analog)

REF.VIDEO (BNC x1): 0.286 Vp-p, 75 Ω, sync negative
VIDEO 1/2(SUPER) (BNC x2):
Composite, 1.0 Vp-p, 75 Ω, sync negative
COMPONENT (BNC x3):
Y: 1.0 Vp-p, 75 Ω, sync negative
R-Y: 0.7 Vp-p, 75 Ω (75%)
B-Y: 0.7 Vp-p, 75 Ω (75%)
S-Video (DIN 4-pin x1):
Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)

SDI*[1] (BNC x2): Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI) (BNC x1): Conforms to SDTI (270 Mb/s), SMPTE 305M/322M

Audio (Analog)

AUDIO (XLR 3-pin male x4):
4 dBu, 600 Ω loading, low impedance, balanced
AUDIO MONITOR (RCA phono jack x1):
-6 dBu, 47 kΩ, unbalanced
HEADPHONES (JM-60 headphone jack x1):
-16 dBu, 8 Ω, unbalanced

Audio (Digital)

AES/EBU (XLR 3-pin male x2):
110 Ω, balanced

Time Code*[2]

Time code In (BNC x1): 0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced
Time code Out (BNC x1): 2.2 Vp-p 75 Ω, unbalanced

Remote

RS-422A: D-sub 9-pin (female) (1)
TBC: D-sub 15-pin (male) (1)
CONTROL-S (SIRCS): Stereo mini jack (1)

*1 using an optional DSBK-120 (SDI Input/Output Board)
*2 using an optional DSBK-130 (Time Code Input/Output Board)

DSR-80

Editing Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •Versatile digital interfaces: SDI*1, SDTI (QSDI) and AES/EBU digital audio •Extensive analog interfaces: composite, component*2, RGB*2, S-Video and XLR audio •RS-422A remote control interface •ClipLink operation •Full tape dubbing with ClipLink Log Data via SDTI (QSDI) and RS-422A interfaces •Frame accurate editing capability •Built-in SMPTE time code generator/reader •Time base corrector •High-speed picture search over a range of 32 times normal speed, in both forward and reverse •Digital slow function over a range from 0 to 0.39 times normal speed, in both forward and reverse •Jog audio capability •Closed caption function •SIRCS (Sony Integrated Remote Control System) interface for the DSRM-10 Remote Control Unit

*1 The optional DSBK-120 SDI Input/Output Board is required.
*2 Selectable by a switch on the rear panel

Supplied accessories: AC power cord
Remote control cable RCC-5G
Operation instructions
ClipLink Guide

Optional accessories: SDI Input/Output Board DSBK-120
Time Code Input/Output Board DSBK-130
Remote Control Unit DSRM-10
Rack Mount Kit RMM-130
TBC Remote Control Unit UVR-60
Remote Control Cable RCC-5G/10G/30G
(5 m/10 m/30 m)

Specifications

General
Power requirements: AC 100 to 120 V, 50/60 Hz
Power consumption: 140 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)
Operating humidity: Less than 80%
Storage humidity: Less than 90%
Mass: 19 kg (41 lb 14 oz)
Dimensions: 427 (W) × 174 (H) × 494 (D) mm
(16 7/8 × 6 7/8 × 19 1/2 inches)
excluding external projections
Tape speed: 28.193 mm/s
Recording/playback time: 184 min. with PDV-184ME/184N/184MEM
40 min. with PDVM-40ME/40N/40MEM
Fast forward/Rewind time: Less than 3 min. with PDV-184ME/184N/184MEM
Less than 1 min. with PDVM-40ME/40N/40MEM
Search speed:
When controlling via RS-422A:
Search speed is up to 32 times in forward and reverse.
When controlling via DSRM-10:
Jog mode: Still to ×2, forward and reverse
Shuttle mode: 8 steps, still to ×16, forward and reverse
Digital slow: 3 steps, still, ×1/5 and ×1/10, forward and reverse

Video Performance
Band width (via analog component I/O):
Luminance: 30 Hz to 5.0 MHz ±1.0 dB
5.75 MHz +0/-3.0 dB (Typical measurement)
Chrominance: 30 Hz to 1.5 MHz +1.0/-5.0 dB
S/N ratio (via analog component I/O):
More than 55 dB
K-factor (K2T, KPB): Less than 2.0%
Y/C delay: Less than 30 ns

Audio Performance
Frequency response:
2CH mode (48 kHz/16-bit):
20 Hz to 20 kHz +0.5/-1.0 dB
4CH mode (32 kHz/12-bit):
20 Hz to 14.5 kHz +0.5/-1.0 dB
Dynamic range: More than 85 dB
Distortion (THD + N): Less than 0.05%

Signal Inputs
Video (Analog)
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
RGB/COMPONENT*1 (BNC x3):
Y/R-Y/B-Y: Y:1.0 Vp-p, 75 Ω, sync negative
R-Y/B-Y: 0.7 Vp-p, 75 Ω (75%)
R.G(w/o sync).B: 0.7 Vp-p, 75 Ω
G(w/sync): 1.0 Vp-p, 75 Ω, sync negative
S-Video (DIN 4-pin x1):
Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)
SDI*2 (BNC x2, active-through connection):
Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI) (BNC x1): Conforms to SDTI (270 Mb/s), SMPTE 305M/322M

Audio (Analog)
AUDIO (XLR 3-pin female x4):
-6/0/+4 dBu, 600 Ω on/off/-60 dBu, high impedance

Audio (Digital)
AES/EBU (XLR 3-pin female x2):
110 Ω, balanced

Signal Outputs
Video (Analog)
REF.VIDEO (BNC x1):
Black burst: 0.286 Vp-p, 75 Ω, sync negative
Composite sync: 2.0 Vp-p, 75 Ω, sync negative*3
VIDEO 1/2(SUPER) (BNC x2):
Composite, 1.0 Vp-p, 75 Ω, sync negative
RGB/COMPONENT*1 (BNC x3):
Y/R-Y/B-Y: Y:1.0 Vp-p, 75 Ω, sync negative
R-Y/B-Y: 0.7 Vp-p, 75 Ω (75%)
R.G(w/o sync).B: 0.7 Vp-p, 75 Ω
G(w/sync): 1.0 Vp-p, 75 Ω, sync negative
S-Video (DIN 4-pin x1):
Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)
SDI*2 (BNC x2): Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI) (BNC x1): Conforms to SDTI (270 Mb/s), SMPTE 305M/322M

Audio (Analog)
AUDIO (XLR 3-pin male x4):
4 dBu, 600 Ω loading, low impedance, balanced
AUDIO MONITOR (RCA phono jack x1):
-6 dBu, 47 kΩ, unbalanced
HEADPHONES (JM-60 headphone jack x1):
-16 dBu, 8 Ω, unbalanced

Audio (Digital)
AES/EBU (XLR 3-pin male x2):
110 Ω, balanced

Time Code *4
Time code In (BNC x1): 0.5 Vp-p to 18 Vp-p, 3 kΩ, unbalanced
Time code Out (BNC x1): 2.2 Vp-p 75 Ω, unbalanced

Remote
RS-422A: D-sub 9-pin (female) (1)
TBC: D-sub 15-pin (male) (1)
CONTROL-S (SIRCS): Stereo mini jack (1)

*1 selectable
*2 using an optional DSBK-120 (SDI Input/Output Board)
*3 when not adding sync to RGB output
*4 using an optional DSBK-130 (Time Code Input/Output Board)

DSR-60

Editing Player

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Versatile digital interfaces: SDI*1 and SDTI (QSDI)*2 •Extensive analog interfaces: composite, component*3, RGB*3, S-Video and XLR audio •RS-422A remote control interface •ClipLink operation •Frame accurate editing capability •Built-in SMPTE time code reader •Time base corrector •High-speed picture search over a range of 32 times normal speed, in both forward and reverse •Digital slow function over a range from 0 to 0.32 times normal speed, in both forward and reverse •Jog audio capability •Auto repeat/Power-on playback function •Closed caption function •SIRCS (Sony Integrated Remote Control System) interface for the DSRM-10 Remote Control Unit

*1 The optional DSBK-100 SDI Output Board is required.
*2 The optional DSBK-110 QSDI Output Board is required.
*3 Selectable by a switch on the rear panel

Supplied accessories	AC power cord Remote control cable RCC-5G Operation instructions ClipLink Guide
Optional accessories	SDI Output Board DSBK-100 QSDI Output Board DSBK-110 Time Code Input/Output Board DSBK-130 Remote Control Unit DSRM-10 Rack Mount Kit RMM-130 TBC Remote Control Unit UVR-60 Remote Control Cable RCC-5G/10G/30G (5 m/10 m/30 m)

Specifications

General

Power requirements:	AC 100 to 120 V, 50/60 Hz
Power consumption:	85 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)
Operating humidity:	Less than 80%
Storage humidity:	Less than 90%
Mass:	18 kg (39 lb 10 oz)
Dimensions:	427 (W) x 174 (H) x 494 (D) mm (16⅞ × 6⅞ × 19½ inches) excluding external projections
Tape speed:	28.193 mm/s
Playback time:	184 min. with PDV-184ME/184N/184MEM 40 min. with PDVM-40ME/40N/40MEM
Fast forward/Rewind time:	Less than 3 min. with PDV-184ME/184N/184MEM Less than 1 min. with PDVM-40ME/40N/40MEM
Search speed:	
When controlling via RS-422A:	Search speed is up to 32 times in forward and reverse.
When controlling via DSRM-10:	
Jog mode:	Still to ×2, forward and reverse
Shuttle mode:	8 steps, still to ×16, forward and reverse
Digital slow:	3 steps, still, ×1/5 and ×1/10, forward and reverse

Video Performance

Band width (via analog component I/O):	
Luminance:	30 Hz to 5.0 MHz ±1.0 dB 5.75 MHz +0/-3.0 dB (Typical measurement)
Chrominance:	30 Hz to 1.5 MHz +1.0/-5.0 dB
S/N ratio (via analog component I/O):	More than 55 dB
K-factor (K2T, KPB):	Less than 2.0 %
Y/C delay:	Less than 30 ns

Audio Performance

Frequency response:	
2CH mode (48 kHz/16-bit):	20 Hz to 20 kHz +0.5/-1.0 dB
4CH mode (32 kHz/12-bit):	20 Hz to 14.5 kHz +0.5/-1.0 dB
Dynamic range:	More than 85 dB
Distortion (THD + N):	Less than 0.05%

Signal Inputs

REF.VIDEO (BNC x2, loop-through connection):	Composite, 1.0 Vp-p, 75 Ω, sync negative

Signal Outputs

Video (Analog)

REF.VIDEO (BNC x1):	
Black burst:	0.286 Vp-p, 75 Ω, sync negative
Composite sync:	2.0 Vp-p, 75 Ω, sync negative*1
VIDEO 1/2(SUPER) (BNC x2):	Composite, 1.0 Vp-p, 75 Ω, sync negative
RGB/COMPONENT*2 (BNC x3):	
Y/R-Y/B-Y:	Y:1.0 Vp-p, 75 Ω, sync negative R-Y/B-Y: 0.7 Vp-p, 75 Ω (75%)
R.G(w/o sync).B:	0.7 Vp-p, 75 Ω
G(w/sync):	1.0 Vp-p, 75 Ω, sync negative
S-Video (DIN 4-pin x1):	
Y:	1.0 Vp-p, 75 Ω, sync negative
C:	0.286 Vp-p, 75 Ω (at burst level)

Video (Digital)

SDI*3 (BNC x2):	Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M
SDTI (QSDI)*4 (BNC x1):	Conforms to SDTI (270 Mb/s), SMPTE 305M/322M

Audio (Analog)

AUDIO (XLR 3-pin male x4):	4 dBu, 600 Ω loading, low impedance, balanced
AUDIO MONITOR (RCA phono jack x1):	-6 dBu, 47 kΩ, unbalanced
HEADPHONES (JM-60 headphone jack x1):	-16 dBu, 8 Ω, unbalanced

Time Code *5

Time code Out (BNC x2):	2.2 Vp-p 75 Ω, unbalanced

Remote

RS-422A:	D-sub 9-pin (female) (1)
TBC:	D-sub 15-pin (male) (1)
CONTROL-S (SIRCS):	Stereo mini jack (1)

*1 when not adding sync to RGB output
*2 selectable
*3 using an optional DSBK-100 (SDI Output Board)
*4 using an optional DSBK-110 (QSDI Output Board)
*5 using an optional DSBK-130 (Time Code Input/Output Board)

DSR-40

Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •RS-422A remote control interface to make this unit perform as the editing player in an A/B roll editing system*1 or cut editing system •i.LINK (DV In/Out) interface providing a single cable connection to transfer digital video and audio with virtually no generation loss •Full range of analog video outputs: composite, component, S-Video and audio •Control S interface for remote control operation •External Sync In connector for synchronized playback •Auto repeat function •Compact and lightweight (half-rack width) •Index Points search functions (when using a cassette with IC Cassette Memory)

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

Supplied accessories:	Cleaning cassette AC power cord Operation instructions
Optional accessories:	Remote Control Unit DSRM-20 VMC-IL4415 i.LINK Cable VMC-IL4435 i.LINK Cable VMC-IL4615 i.LINK Cable VMC-IL4635 i.LINK Cable

Specifications

General

Type:	Recorder
Video signal standard:	EIA standards, NTSC color
Power requirements:	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:	212 (W) × 98 (H) × 392 (D) mm (8⅜ × 3⅞ × 15½ inches) (including external projections)
Tape speed:	
DVCAM mode:	28.193 mm/s
DV SP playback mode:	18.812 mm/s
Recording/Playback time:	
Standard size:	184 min. with PDV-184ME/184N/184MEM
Mini size:	40 min. with PDVM-40ME/40N/40MEM
Tape rewind time:	Less than 2 min. with PDV-184ME/184N/184MEM
Search speed (via DSRM-20):	
Shuttle mode:	±1/10, 1/5, 1, 2, approx. 10, approx. 14 times
Jog mode:	±1/10, 1/5, 1, 2 times

Signal Inputs

Video (Analog)

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

Audio (Analog)

Audio (RCA phono jack x2/stereo L/R):	2 Vrms (full bit)

Signal outputs

Video (Analog)

Video (BNC x1):	Composite, 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-Video (Mini DIN 4-pin x1):	Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative C: 0.286 Vp-p (subcarrier), 75 Ω, unbalanced
Component (BNC x3):	Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative R-Y/B-Y: 0.7 Vp-p (with 75% color burst)
Monitor (BNC x1):	Composite, 1.0 Vp-p, 75 Ω, unbalanced, sync negative

Audio (Analog)

Audio (XLR 3-pin male x2, stereo L/R):	4 dBu, balanced
Monitor (Phono jack x2, stereo L/R):	2 Vrms

Digital Input/Output

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

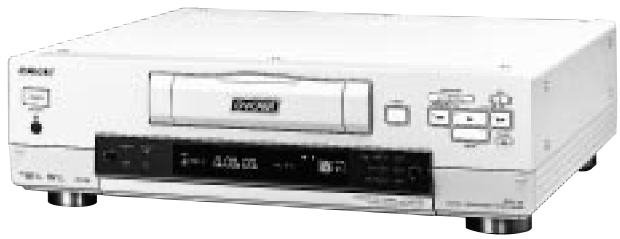
OTHERS

RS-422A:	D-sub 9-pin (female) (1)
Control S IN:	Stereo mini jack (1)
Headphone:	Stereo mini jack (1)

DSR-30

Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •i.LINK (DV In/Out) interface providing a single cable connection to transfer digital video and audio with virtually no generation loss •LANC interface for simple editing with a LANC-equipped recorder or editing system •Auto repeat function •One-program playback function to automatically rewind to the beginning of a tape and enter Standby mode •Power-on playback/recording capabilities •External timer recording •Duplication mode with original time code •Function lock to avoid accidental operation •Built-in control tray with a Jog/Shuttle dial with a range of 1/5 to 15 times normal speed, in both forward and reverse •Index Points search functions (when using a cassette with IC Cassette Memory) •Clear frame picture •RMT-DS30 Wireless Remote Controller (supplied accessory) for control of basic functions •Headphone/microphone connections



Supplied accessories	Wireless remote controller RMT-DS30 R6 batteries LANC cable Cleaning cassette DCM12CL AC power cord Operation instructions
Optional accessories	VMC-IL4415 i.LINK cable VMC-IL4435 i.LINK cable VMC-IL4615 i.LINK cable VMC-IL4635 i.LINK cable LANC Interface Box IF-FXE2

Specifications

General

Type:	Recorder
Power requirements:	AC 120 V, 50/60 Hz
Power consumption:	32 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. 9.2 kg (20 lb 4 oz)
Dimensions:	430 (W) × 129 (H) × 374 (D) mm (17 × $5\frac{1}{8}$ × $14\frac{3}{4}$ inches)
Tape speed:	28.193 mm/s (DVCAM mode) 18.812 mm/s (DV playback mode)
Recording/playback time:	184 min. with PDV-184ME/184N/184MEM 40 min. with PDVM-40ME/40N/40MEM
Tape rewind time:	Less than 2 min. with PDV-184ME/184N/184MEM
Search speed:	-2, -1, -$\frac{1}{5}$, still, $\frac{1}{5}$, 1, 2, Cue/Review (10 or 15 times)

Signal Inputs

Video (Analog)

VIDEO (BNC x1 for rear) (Pin jack x1 for front):
Composite, 1.0 Vp-p, 75 Ω, sync negative

S-Video (Mini DIN 4-pin x2, front x1/rear x1):
Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p (subcarrier burst), 75 Ω unbalanced

Video (Digital)

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

Audio (Analog)

AUDIO (Phono jack x2/stereo L/R, front x1/rear x1):
2 Vrms (full bit)

Signal Outputs

Video (Analog)

VIDEO (BNC x2 for rear) (Pin jack x1 for front):
Composite, 1.0 Vp-p, 75 Ω, sync negative

S-Video (Mini DIN 4-pin x2):
Y: 1.0 Vp-p, 75 Ω, sync negative, unbalanced
C: 0.286 Vp-p (subcarrier burst), 75 Ω unbalanced

Video (Digital)

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

Audio (Analog)

AUDIO (Phono jack x1, stereo L/R):
2 Vrms (full bit)

Remote

LANC:	Stereo mini jack (2) (front x1 rear x1, priority on the front)
CONTROL-S input:	Mini jack (1)
CONTROL-S output:	Mini jack (1)

Other connectors

Headphone:	Stereo mini jack (1)
Trigger input:	Phono jack (1) (active shot)
Microphone input:	Mini jack (1)

*Shared with input connector.

DSR-20

Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •i.LINK (DV In/Out) interface providing a single cable connection to transfer digital video and audio with virtually no generation loss •LANC interface for simple editing with a LANC-equipped recorder or editing system •RS-232C and Control S interfaces for remote control operation •External Sync*1 In connector for synchronized playback •Auto repeat function •Power-on playback/recording capabilities •Duplication mode with original time code •Compact and lightweight (half-rack width) •AC/DC operation •Index Points search functions (when using a cassette with IC Cassette Memory) •RMT-DS20 Wireless Remote Controller (supplied accessory) for control of basic functions

*1 The DSR-20 locks to V-sync only.

Supplied accessories	Wireless remote controller RMT-DS20 R6 batteries Cleaning cassette DCM12CLE AC power cord Operation instructions RS-232C protocol manual
Optional accessories	LANC Interface Box IF-FXE2 Remote Control Unit DSRM-10 VMC-IL4415 i.LINK Cable VMC-IL4435 i.LINK Cable VMC-IL4615 i.LINK Cable VMC-IL4635 i.LINK Cable

Specifications

General

Type: Recorder
Video signal standard: EIA standards, NTSC color
Power requirements: 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: 212 (W) × 98 (H) × 392 (D) mm ($8\frac{3}{8} \times 3\frac{7}{8} \times 15\frac{1}{2}$ inches) (including external projections)
Tape speed:
- DVCAM mode: 28.193 mm/s
- DV SP playback mode: 18.812 mm/s

Recording/Playback time:
- Standard size: 184 min. with PDV-184ME/184N/184MEM
- Mini size: 40 min. with PDVM-40ME/40N/40MEM

Tape rewind time: Less than 2 min. with PDV-184ME/184N/184MEM
Search speed (via RMT-DS20 or DSRM-10): -2, -1, -1/5, Still, 1/5, 1, 2, Cue/Review (10 or 15times)

Signal Inputs

Video(ANALOG)

VIDEO (BNC x1)*1: Composite, 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-Video (Mini DIN 4-pin x1): Y:1.0 Vp-p, 75 Ω, unbalanced, sync negative; C:0.286 Vp-p (subcarrier), 75 Ω, unbalanced

Video(DIGITAL)

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

Audio(ANALOG)

AUDIO (Phono jack x2/stereo L/R): 2 Vrms (full bit)

Signal outputs

Video(ANALOG)

VIDEO (BNC x1, monitor OUT x1): Composite, 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-Video (Mini DIN 4-pin x1): Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative; C: 0.286 Vp-p (subcarrier), 75 Ω, unbalanced

Video(DIGITAL)

i.LINK (DV In/Out)(4-pin x1)*2: IEEE1394-based

Audio(ANALOG)

AUDIO (Phono jack x1, stereo L/R): 2 Vrms (full bit)

OTHERS

LANC	Stereo mini-mini jack (1)
RS-232C	D-sub 9-pin (male) (1)
Control S	Stereo mini jack (IN x1/OUT x1)
DC IN (12 V)	Canon 4-pin (1)
Headphone jack	Stereo mini jack (1)

*1 Shared with the External Sync IN
*2 Shared with input connector

DSR-1

Dockable Recorder

•Compact and lightweight: 2.85 kg (6 lb 4 oz) including battery •Perfect camcorder operation by docking with the DXC-D30 Digital Video Camera •Dual-size cassette mechanism: both standard- and mini-size cassettes accepted •Dual interface mechanism: Pro 76-pin Digital and Pro 50-pin interfaces for direct connection with both Sony digital and analog cameras •Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •ClipLink operation •Full color picture playback capability without any playback adaptor •Record review function •Frame accurate back space editing •Built-in SMPTE time code generator/reader •Time base stabilizer •Full VTR function control (Fast Forward/Rewind/Play/Stop/Eject) •Comprehensive 8-digit LCD

Supplied accessories	Shoulder strap Connector cap Lithium battery (type CR2032) M4 ×6 screws M4 ×12 screws Operation instructions ClipLink Guide
Optional accessories	NiCd Rechargeable Battery NP-1B NiCd Rechargeable Battery BP-90A Lithium-ion Rechargeable Battery BP-L60/L90 Battery Case for NP-1B batteries DC-520 Battery Case for BP-90A DC-500 Battery Case for BP-90A (waist belt type) DC-210 Battery Charger for NP-1B BC-1WD Battery Charger for NP-1B and BP-90A BC-410 Battery Charger for BP-L60/L90 BC-L100 AC Power Adaptor CMA-8A AC Power Adaptor AC-550 Power Supply Cable for CMA-8A CCQX-3

Specifications

General

Power requirement:	DC 12 V, +5/-1 V
Power consumption:	12 W (10 W in recording mode with the DXC-D30)
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 85%
Storage humidity:	Less than 90%
Mass:	2.85 kg (6 lb 4 oz) (including NP-1B Battery)
Dimensions:	118 (W) × 185 (H) × 210 (D) mm (4¾ × 7⅜ × 8⅜ inches)
Tape speed:	28.193 mm/s
Recording/playback time:	184 min. with PDV-184ME/184N/184MEM 40 min. with PDVM-40ME/40N/184MEM
Fast forward/Rewind time:	Less than 12 min. with PDV-184ME184N/184MEM Less than 3 min. with PDVM-40ME/40N/40MEM
Continuous recording mode:	Approx. 60 min. w/NP-1B (DSR-1 + DXC-D30)

Video Performance*3

Band width:	
Luminance:	30 Hz to 5.0 MHz ±1.0 dB 5.75 MHz +0/-3.0 dB (Typical measurement)
Chrominance:	30 Hz to 1.5 MHz +1.0/-5.0 dB
S/N ratio:	More than 55 dB
K-factor (K2T, KPB):	Less than 2.0%
Y/C delay:	Less than 30 ns

Audio Performance*3

Frequency response:	
2CH mode (48 kHz/16-bit)	20 Hz to 20 kHz +0.5/-1.0 dB
4CH mode (32 kHz/12-bit)	20 Hz to 14.5 kHz +0.5/-1.0 dB
Dynamic range:	More than 80 dB
Distortion (THD + N):	Less than 0.08%

Signal Inputs

GEN LOCK VIDEO IN (BNC):	1.0 Vp-p, 75 Ω
EXT AUDIO IN CH-1/2 (XLR 3-pin female):	-60 dBu, 3 kΩ/+4 dBu, 10 kΩ
TIME CODE IN (BNC):	0.5 Vp-p to 18 Vp-p, 10 kΩ

Signal Outputs

VIDEO OUT (BNC):	1.0 Vp-p, 75 Ω
S-VIDEO (DIN 4-pin):	
Y:	1.0 Vp-p, 75 Ω, sync negative
C:	0.286 Vp-p, 75 Ω
AUDIO OUT CH-1/2 (RCA pin):	-10 dBu, 47 kΩ
TIME CODE OUT (BNC):	1.0 Vp-p, 75 Ω

Others

ANALOG I/F:	Pro 50-pin (1)
DIGITAL I/F:	Pro 76-pin Digital (1)
DC 12 V:	XLR 4-pin (male) (rear) (1)
DC OUT:	XLR 4-pin (female) (1)
EARPHONE OUT:	Stereo mini jack (1)

*1 only CH-1 & CH-2
*2 available when docked with the DXC-D30
*3 The specifications of “Video/Audio performance” were measured by playing back material on a DSR-85 (via analog component out) that had been recorded on the DSR-1.

DSR-70

Portable Editing Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •Compact, all-in-one package including a 6.4-inch VGA LCD monitor, a full cut-editing controller with a Jog/Shuttle dial and an audio speaker •VTR-to-VTR editing as a double deck editor by docking two DSR-70 units or a DSR-70 and a DNW-A25 Betacam SX® portable editing recorder •Two-camera switching recording*[1] •Sequential recording up to max. six hours in the double deck configuration •Parallel-run recording to make two docked DSR-70 units record simultaneously •Audio mix/swap recording •ClipLink operation: cue up to Mark In/Cue address, change of Mark In/Out points, change of OK/NG status and creation of new Mark In/Out points •Full tape dubbing with ClipLink Log Data via SDTI (QSDI) and RS-422A interfaces •Versatile digital interfaces: SDI*[2], SDTI (QSDI)*[3] and i.LINK (DV In/Out)*[4] •Extensive analog interfaces: composite, component*[5], S-Video and XLR audio •RS-422A remote control interface •Frame accurate editing capability •Built-in SMPTE time code generator/reader •Process control for highly stable video signals •High-speed picture search over a range of 32 times normal speed, in both forward and reverse •Digital slow function over a range of 0 to 0.5 times normal speed, in both forward and reverse •Jog audio capability •Two-way power supply system for operation on either AC or DC power •16:9 and 4:3 switchable

*1 The optional DSBK-180 Dual Video Input Board is required.
*2 The optional DSBK-160 SDI Input/Output Board is required.
*3 The optional DSBK-150 SDTI (QSDI) Input/Output Board is required.
*4 The optional DSBK-140 i.LINK/DV Input/Output Board is required.
*5 The optional DSBK-170 Analog Component Input/Output Board is required.
Note: Optional interface boards (DSBK-140/150/160/170) cannot be used in combination with each other.
However, these boards can be used together with the optional DSBK-180.

Supplied accessories: Carrying belt
Operation instructions
Connector cap (x1) per interface)

Optional accessories: i.LINK/DV Input/Output Board DSBK-140
SDTI(QSDI) Input/Output Board DSBK-150
SDI Input/Output Board DSBK-160
Analog Component Input/Output Board DSBK-170
Dual Video Input Board DSBK-180
Rechargeable Lithium-ion Battery BP-L60A/L90A
Battery Charger for BP-L60A/L90A BC-L50
Battery Charger for BP-L60A/L90A BC-L100
AC Adaptor AC-DN2A
AC Adaptor AC-550
AC Adapror CMA-8A
Remote Control Cable (5 m, 10 m, 30 m) RCC-5G/10G/30G
Docking Kit BKNW-225
Carrying Case LC-DN220

SPECIFICATIONS

GENERAL
Power requirements: DC 12 V
Power consumption: 46 W (without options)
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: 5.8 kg (12 lb 12 oz)
Dimensions: 211 (W) × 149 (H) × 443 (D) mm
(8 3/8 × 5 7/8 × 17 1/2 inches)
Tape speed: 28.193 mm/s
Recording/Playback time:
Standard size: 184 min. with PDV-184ME/184N/184MEM
Mini size: 40 min. with PDVM-40ME/40N/40MEM
Fast forward/Rewind time:
Standard size: Less than 3 min. with PDV-184ME/184N/184MEM
Mini size: Less than 1 min. with PDVM-40ME/40N/40MEM
Search speed: x32, forward and reverse

Signal Inputs
Video (ANALOG)
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)*[1]: Y: 1.0 Vp-p, 75 Ω, sync negative
R-Y: 0.7 Vp-p, 75 Ω (75%)
B-Y: 0.7 Vp-p, 75 Ω (75%)
S-Video (DIN 4-pin x1): Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (DIGITAL)
i.LINK (DV In/Out) (6-pin x1)*[2]:
IEEE1394-based
SDTI (QSDI) (BNC x1)*[3]: Conforms to SDTI (270 Mb/s), SMPTE 305M/322M
SDI (BNC x1)*[4]: Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M

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

Signal Outputs
Video (ANALOG)
Ref. Video (BNC x1): 0.286 Vp-p, 75 Ω, sync negative
Video 1/2(SUPER) (BNC x2):
Composite, 1.0 Vp-p, 75 Ω, sync negative
Component (BNC x3)*[1]: Y: 1.0 Vp-p, 75 Ω, sync negative
R-Y: 0.7 Vp-p, 75 Ω (75%)
B-Y: 0.7 Vp-p, 75 Ω (75%)
S-Video (DIN 4-pin x1): Y: 1.0 Vp-p, 75 Ω, sync negative
C: 0.286 Vp-p, 75 Ω (at burst level)

Video (DIGITAL)
i.LINK (DV In/Out) (6-pin x1)*[2] *[5]:
IEEE1394-based
SDTI (QSDI) (BNC x1)*[3]: Conforms to SDTI (270 Mb/s), SMPTE 305M/322M
SDI (BNC (2))*[4]: Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M

Audio (ANALOG)
Audio (CH-1,2 or CH-3,4):
XLR 3-pin female (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 (1)

Others
DC 12 V input: XLR 4-pin (male) (1)

*1 Using optional DSBK-170 Analog Component Input/Output Board
*2 Using optional DSBK-140 (i.LINK/DV Input/Output Board)
*3 Using optional DSBK-150 (SDTI (QSDI) Input/Output Board)
*4 Using an optional DSBK-160 (SDI Input/Output Board)
*5 Shared with input connector
note: Optional interface boards (DSBK-140/150/160/170) cannot be used in combination with each other. However, these boards can be used together with the optional DSBK-180 Dual Video Input Board.

DSR-V10

DVCAM Video Walkman® Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •40 minutes recording time with a mini-size cassette*1 •Compact and lightweight: 970 g (2 lb 2 oz) without battery and tape •Built-in 5.5-inch LCD monitor •InfoLITHIUM™ battery system: Lithium-ion battery power system which shows the amount of power remaining in the battery, to within an accuracy of one minute •i.LINK (DV In/Out) interface providing a single cable connection to transfer digital video and audio with virtually no generation loss •LANC interface for simple editing with a LANC-equipped recorder or editing system •Assemble editing with up to 99 events x four programs by using the optional DSRM-E1 Edit Adaptor •Auto repeat function •Duplication mode with original time code •Hands-free shooting capability with the optional CVX-V1/V3/V18NS Mini Camera

*1 The DSR-V10 accepts only mini-size DVCAM and DV cassettes.

Supplied Accessories:	AC-V700 AC Adaptor/Charger
	Carrying belt
	Operating instructions
	i.LINK (DV) Cable
Optional Accessories	DSRM-E1
	CVX-V1
	CVX-V3
	CVX-V18NS
	AC-V700 AC Adaptor/Charger
	VMC-IL4415 i.LINK Cable
	VMC-IL4435 i.LINK Cable
	VMC-IL4615 i.LINK Cable
	VMC-IL4635 i.LINK Cable

Specifications

GENERAL

Video signal system:	EIA standards, NTSC color
Power requirements:	DC: 7.2 V (battery operation)
	DC: 8.4 V (AC adaptor operation)
Power consumption:	11.5 W (with LCD panel ON)
Operating temperature:	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature:	-20 °C to 60 °C (-4 °F to 140 °F)
Tape speed:	28.193 mm/s (DVCAM mode)
LCD screen:	5.5-inch
Mass:	970 g (2 lb 2 oz)
	(without a tape and battery)
Dimensions:	148 (W) × 62 (H) × 135 (D) mm
	(5 7/8 × 2 1/2 × 5 3/8 inches)

VIDEO

Video Input/Output:	
Composite (RCA phono jack x1)	
	1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-Video (Mini DIN 4-pin x1)	
	Y : 1.0 Vp-p, 75 Ω,unbalanced, sync negative
	C : 0.286 Vp-p (subcarrier burst), 75 Ω, unbalanced
Digital Input/Output:	
i.LINK(DV In/Out)	4-pin jack (x1), IEEE1394-based

AUDIO

Audio signals:	Recording:	48 kHz/16-bit, 32 kHz/12-bit,
	Playback:	48 kHz/16-bit, 32 kHz/12-bit,
		32 kHz/16-bit, 44.1 kHz/16-bit
Audio Input/Output:	RCA phono jack (2) (L, R):	
		-7.5 dBs, (0 dBu=0.775 Vrms)

OTHER CONNECTORS

LANC:	Stereo mini-mini jack
Headphone:	Stereo mini jack
Camera/Editor connector:	20-pin

DRV-1000

DVCAM Drive

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Designed to fit in a standard 5.25-inch disk drive PC bay •i.LINK (DV In/Out) interface providing a single cable connection to transfer digital video and audio with virtually no generation loss •LANC interface for simple editing with a LANC-equipped recorder or editing system •Analog video and audio outputs •DC power operation

SPECIFICATIONS

GENERAL

Mass:	Approx. 1.4 kg (3 lb 1 oz)
Dimensions:	149.2 (W) × 42.8 (H) × 225 (D) mm (5⅞ × 1¹¹⁄₁₆ × 8⅞) inches
Maximum dimensions (unload)	149.2 (W) x 68.0 (H) x305 (D) mm
Power requirement:	5 V: 5 A (Max) /700 mA (Stop) 12 V: 0.8 A (Max) /130 mA (loading/unloading)
Power consumption:	5 V: 25 VA (Max) 12 V: 9.6 VA (Max)
Operating temperature:	5 °C to 40 °C (41 °F to 104 °F)
Storage Temperature:	-20 °C to 60 °C (-4 °F to 140 °F)
Tape Speed:	28.193 mm/s. (DVCAM mode)

VIDEO

Video Signal:	EIA standards, NTSC color
Video Output:	Composite (RCA pin) 1.0 Vp-p, 75 Ω, unbalanced, sync negative S-Video (Mini DIN 4-pin) Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative C: 0.286 Vp-p (subcarrier burst), 75 Ω, unbalanced

AUDIO

Audio Signals:	48 kHz/16-bit, 32 kHz/12-bit, 32 kHz/16-bit 44.1 kHz/16-bit (depending on input signals)
Output:	PIN jacks (L&R x 1)
Output Level:	327 mV with 47 kΩ load or more Impedance: 2.2 kΩ
Digital IN/OUT:	i.LINK (DV In/Out), IEEE1394-based, 4-pin x 1
Other Connectors:	LANC: stereo mini-mini jack EJECT: monaural mini jack, TTL input low active (more than 100 ms) DC IN: PC-standard, +5 V/12 V/GND
Supplied Accessories:	Operation instructions DV cable (4p - 4p, 50 cm) Stereo AV cable S-Video cable Mounting Screw

2-2 DVCAM VTR accessories

DSBK-100

SDI Output Board (for DSR-60)

•When installed in the DSR-60, this board enables digital video and audio signals in the D1 format to be output to other SDI-equipped devices such as Digital Betacam and Betacam SX
•Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M

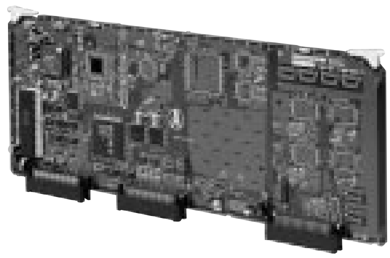
Connector: Output : BNC (2)

DSBK-110

QSDI Output Board (for DSR-60)

• When installed in the DSR-60, this board enables SDTI (QSDI)-format digital video, audio and time code signals to be transferred to other SDTI (QSDI)-equipped devices such as the DSR-2000, DSR-85, DSR-80 or EditStation
• Conforms to SDTI (QSDI)-format (270 Mb/s)

Connector: Output : BNC (1)



DSBK-120

SDI Input/Output Board (for DSR-80 and DSR-85)

• When installed in the DSR-80 or DSR-85, this board enables digital video and audio signals in the D1 format to be input to the unit and output from other SDI-equipped devices such as Digital Betacam and Betacam SX
• Conforms to Serial Digital Interface (270 Mb/s), SMPTE 259M

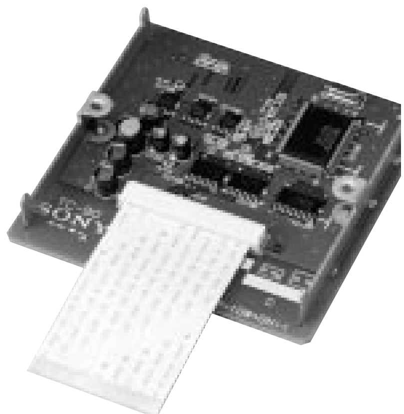
Connector: Input : BNC (2)
Output : BNC (2)

DSBK-130

Time Code Input/Output Board (for DSR-60, DSR-80 and DSR-85)

• When installed in the DSR-60, DSR-80 or DSR-85, this board enables SMPTE-format time code to be input to the unit and output from other equipment

Connector: Input : BNC (1)
Output : BNC (1)



2-2 DVCAM VTR accessories

DSBK-140

i.LINK/DV Input/Output Board (for DSR-70)

This board enables frame accurate editing between the DSR-70 and a consumer DV camcorder*[1] or between two DSR-70 units via i.LINK interface. This i.LINK interface treats compressed DV audio/video and control signals, which allows the single cable connection with no deterioration of video and audio quality.

*1 Sony DV camcorders only

Connector:	Input/Output : 6-pin (1)
Supplied Accessories:	DV Cable : 6-pin-4-pin (1 m/3.3 ft) (1)
	DV Cable : 6-pin-6-pin (35 cm/1.1 ft) (1)
	Connector cap (1)
	Operation instructions

DSBK-150

SDTI (QSDI) Input/Output Board (for DSR-70)

This board enables a direct digital connection with other SDTI (QSDI)-equipped machines such as the DSR-2000/85/80/60 DVCAM VTRs and EditStation systems. This interface also allows source material to be dubbed and edited with no deterioration of video and audio quality.

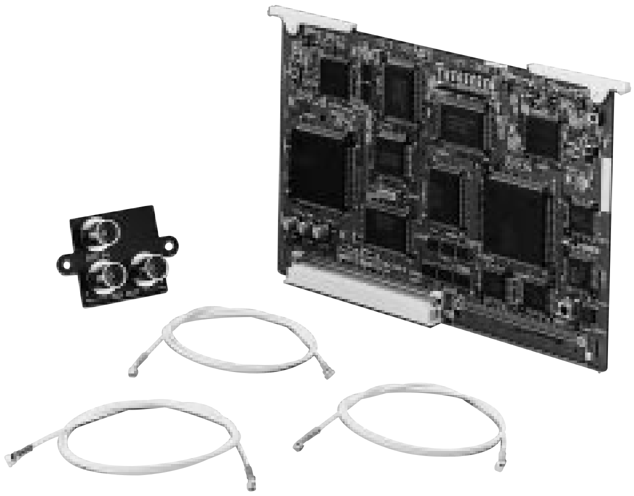
Connector:	Input : BNC (1)
	Output : BNC (1)
Supplied Accessories:	Connector cap (2)
	Operation instructions

DSBK-160

SDI* Input/Output Board (for DSR-70)

This board enables a digital connection with a DNW-A25 Betacam SX portable editing recorder or other SDI-equipped machines. When the DSR-70 is connected with DNW-A25, not only DVCAM-to-Betacam SX editing, but Betacam SP-to-DVCAM editing is also available because of the analog playback capability of the DNW-A25.

Connector:	Input : BNC (1)
	Output : BNC (2)
Supplied Accessories:	Connector cap (3)
	Operation instructions

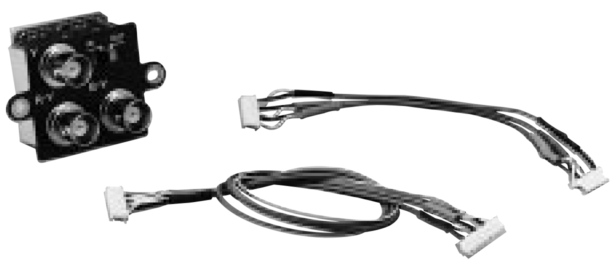


DSBK-170

Analog Component Input/Output Board (for DSR-70)

This board enables analog component signals to be used to work with the conventional analog component editing systems.

Connector:	Input/Output : BNC (3) (selectable by switching)
Supplied Accessories:	Connector cap (3)
	Operation instructions



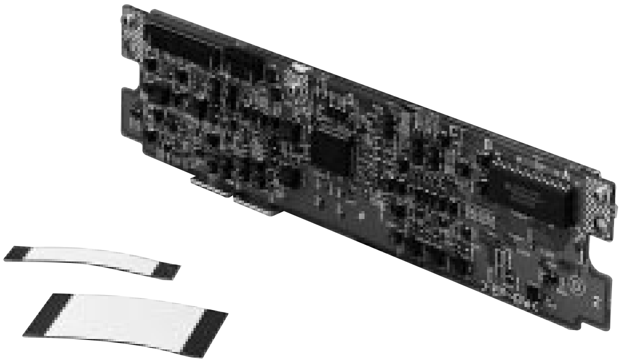
2-2 DVCAM VTR accessories

DSBK-180

Dual Video Input Board (for DSR-70)

This board enables two cameras to be connected to the DSR-70 via analog composite with composite signal. The output of either one is selected to be recorded.

Supplied Accessory: Operation instructions



DSBK-190

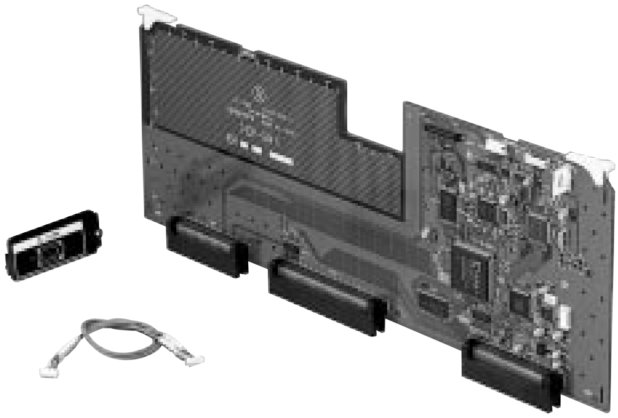
i.LINK/DV Input/Output Board (for DSR-2000)

•This board enables frame accurate editing between the DSR-2000 and the DSR-500WS DVCAM Camcorder, DSR-70 DVCAM Portable Editing Recorder or a consumer DV camcorder*1 via i.LINK interface.

•This i.LINK interface treats compressed DV audio/video and control signals, which allow the single cable connection with no deterioration of video and audio quality.

Connector:	Input/Output: 6-pin (1)
Supplied accessories:	Connector cap (1)
	Operation instructions

*1 Sony DV camcorders only



DSBK-200

Control Panel (for DSR-2000)

Designed to remotely control the DSR-2000 from a distance of up to 10 meters (approx. 33 ft.).

DSRM-10

Remote Control Unit

•Designed to remotely control the DSR-85/80/60
•Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD
•JOG/SHUTTLE operation
•Enables ±16 times normal speed in search operation

Specifications

Power requirements:	DC 5 V (supplied from the connected VTR)
Power consumption:	50 mW
Remote control:	Stereo mini-plug (with attached cable, length 3 m (10 ft))
Dimensions:	90 (W) × 46 (H) × 182 (D) mm ($3^5/_8 \times 1^{13}/_{16} \times 7^1/_4$ inches)
Mass:	Approx. 360 g (12 oz)
Supplied accessory:	Operation instructions

2-2 DVCAM VTR accessories

DSRM-20

Remote Control Unit

•Designed to remotely control the DSR-40 •Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD •JOG/SHUTTLE operation •Enables ±17 times normal speed in search operation •Index/Date/Photo search function •Displays tape information during playback when using the tape recorded on the DSR-200A/PD100A DVCAM Camcorders.

Specifications

Power requirements:	DC 5 V (supplied from the DSR-40)
Power consumption:	50 mW
Remote control:	Stereo mini-plug (with attached cable, length 3 m (10 ft))
Dimensions:	90 (w) × 46 (h) × 182 (d) mm (3⅝ × 1¹³⁄₁₆ × 7¼ inches)
Mass:	Approx. 360 g (12 oz)
Supplied accessories:	Operating instructions

UVR-60

TBC Remote Controller

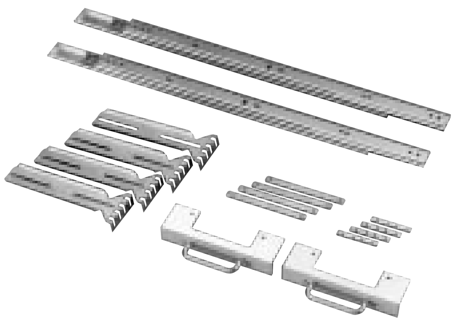
•Designed to control the built-in TBC for DSR-2000/85/80/60 •19-inch rack mountable: can be installed individually with the supplied blank panel or with another UVR-60

Power requirements:	DC 12 V, 9 V (supplied from VTR)
Power consumption:	840 mW
Mass:	1.3 kg (2 lb 13 oz)
Dimensions:	215 (W) × 44 (H) × 101 (D) mm ($8^1/_2$ × $1^3/_4$ × 7 inches)
Supplied accessory:	Remote control cable (5 m) Rack mount bracket Blank panel Screw Operation instructions

RMM-130

Rack Mount Kit

•Designed for use in mounting the DSR-2000/85/80/60 into 19-inch rack.



BKNW-121

Control Panel Case

Case for the DSBK-200 Control Panel

2-2 DVCAM VTR accessories

BKNW-225

Docking Kit

This docking kit enables two DSR-70 units or the DSR-70 and a DNW-A25 to be docked together. This configuration provides VTR-to-VTR editing with Jog/Shuttle dial operation.

Supplied Accessories:	Carrying Handle (1)
	BNC Cable (34 cm/1.1 ft) (1)
	9-pin Remote Cable (34 cm/1.1 ft) (1)
	Joint Panels with Screws (3)

LC-DN220

Carrying Case (Hard type)

•Carrying case for two DSR-70 units or the DSR-70 and DNW-A25

DSRM-E1

Edit Adaptor

•Direct connection to the DSR-V10 via a 20-pin connector •Controls LANC VTRs as players (DSR-20/DSR-30) •Built-in Jog/Shuttle dial •Assemble editing with up to 99 events x 4 programs

GENERAL

Power requirements:	DC: 7.2 V (supplied from the DSR-V10)	
	DC: 8.4 V (AC adaptor operation)	
Power consumption:	Approx. 1.8 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)	
Mass:	Main Unit:	160 g (5.6 oz)
	Controller:	340 g (12 oz)
Dimensions:	Main Unit:	134.4 (W) × 69.2 (H) × 60.6 (D) mm (5 3/8 × 2 3/4 × 2 1/2 inches)
	Controller:	128.1 (W) × 184 (H) × 42 (D) mm (5 1/8 × 7 1/4 × 1 11/16 inches)

CONNECTORS

DSR-V10:	20-pin
Control Unit:	Mini DIN 8-pin
LANC:	Stereo mini-mini jack

MONITOR OUTPUT

Video Output:	Composite (RCA phono jack (1)): 1.0 V p-p, 75 Ω, unbalanced, sync negative
Audio Output:	RCA phono jack (2) (L, R): 0.327 V, impedance 470 Ω or less

2-2 DVCAM VTR accessories

CVX-V1

Color Video Camera

•Thumb-sized and lightweight (Camera head: 25 g, CCU: 135 g) •1/4-inch CCD Camera (410k pixels) •Directly attached to the Video Walkman 20-pin connector (via the supplied Video Walkman Attachment) •F1.8/f=3.9mm lens with manual focus/iris •Cable length : 2 m

SUPPLIED ACCESSORIES

Video Walkman attachment unit
Operating instructions

GENERAL

Video signal:	EIA standards, NTSC color	
Power requirements:	DC: 7.2 V (battery operation)	
	DC: 8.4 V (AC adaptor operation)	
Power consumption:	1.8 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)	
Mass:	Camera unit:	25 g (0.85 oz)
	CCU:	135 g (4.8 oz) (without a battery)
Dimensions:	Camera head:	22 (W) × 18 (H) × 60 (D) mm
		(7/8 × 23/32 × 2 3/8 inches)
	CCU:	35 (W) × 110 (H) × 60 (D) mm
		(1 7/16 × 4 3/8 × 2 3/8 inches)

CAMERA

Image device:	1/4-inch Interline Transfer CCD
Picture elements:	Total: 410k
	Effective: 380k
Lens:	F1.8
Focal length:	f=3.9 mm (35 mm conversion : 38 mm)
Minimum illumination:	2 lux
Gain selection:	AUTO/Hold
White balance:	AUTO/Hold
Shutter speed:	AUTO,1/60,1/100,1/250,1/500,1/2000,1/10000

VIDEO

Video Output (on CCU):
Composite (RCA pin x1)
1.0 V p-p, 75 Ω, unbalanced, sync negative
S-Video (Mini DIN 4-pin x1)
Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C: 0.286 Vp-p (subcarrier burst), 75 Ω, unbalanced

AUDIO

Audio Input/Output (RCA phono jack x2 (L, R)):
-7.5 dBs, (0 dBs=0.775 Vrms)

OTHER CONNECTORS (on CCU)

External mic IN:	Stereo mini-mini jack(1)
Multi connector:	20-pin(1)
Battery connector	

CVX-V3

Color Video Camera

•Small and lightweight (Camera head: 75 g, CCU: 135 g) •1/4-inch CCD camera (410k pixels) •x3 Zoom lens •Built-in stereo microphone •Splash-proof camera head •Directly attached to the Video Walkman 20-pin connector (via the supplied Video Walkman Attachment) •Cable length : 2 m

SUPPLIED ACCESSORIES

Video Walkman attachment unit
Operating instructions

GENERAL

Video signal system:	EIA standards, NTSC color	
Power requirements:	DC: 7.2 V (battery operation)	
	DC: 8.4 V (AC adaptor operation)	
Power consumption:	1.8 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)	
Mass:	Camera head: 75 g (2.6 oz)	
	CCU: 135 g (4.8 oz)(without a battery)	
Dimensions:	Camera head:	36 (W) × 40 (H) × 70 (D) mm
		(1 7/16 × 1 5/8 × 2 7/8 inches)
	CCU:	35 (W) × 110 (H) × 60 (D) mm
		(1 7/16 × 4 3/8 × 2 3/8 inches)

CAMERA

Image device:	1/4-inch Interline Transfer CCD
Picture elements:	Total: 410k
	Effective: 380k
Lens	F 2.8 to 4
Focal length:	f=3.5 mm to 10.5 mm
	(35 mm conversion: 35mm to 105mm)
Minimum illumination:	5 lux
Gain selection:	AUTO
White balance:	AUTO

VIDEO

Video Output (on CCU):
Composite (RCA pin x1)
1.0 V p-p, 75 Ω, unbalanced, sync negative
S-Video (Mini DIN 4-pin x1)
Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C: 0.286 Vp-p (subcarrier burst), 75Ω, unbalanced

AUDIO

Audio Input/Output (RCA phono jack x2 (L, R)):
-7.5 dBs, (0 dBs=0.775 Vrms)

OTHER CONNECTORS (on CCU)

External mic IN:	Stereo mini-mini jack(1)
Multi connector:	20-pin(1)
Battery connector	

CVX-V18NS

Color Video Camera

•NightShot™ function which enables recording in 0 lux conditions •1/4-inch precision CCD •Independent camera head and compact CCU •CCU directly attachable to the DSR-V10 DVCAM Video Walkman •Built-in 18x zoom lens •Manual camera controls via CCU: Focus, Shutter speed, Exposure •Date/Time or Title superimposed onto image •SteadyShot® •Long-life lithium-ion battery system

Supplied accessories:	Walkman attachment unit Operating instructions
Optional accessories:	NP-F530/F550/F730/F750/F930/F950 Rechargeable Battery Pack AC-V700 AC Adaptor/Charger AC-VQ800 AC Adaptor/Charger DC-V700 DC Adaptor/Charger DC-VQ800 DC Adaptor/Charger CCN-10 Camera Cable (10 m)

Specifications

GENERAL

Video signal:	EIA standards, NTSC color	
Power requirements:	DC: 7.2 V (battery operation) DC: 8.4 V (AC adaptor)	
Power consumption:	2.2 W (using the IR light, 3.2 W)	
Operating temperature:	0 C˚ to 40 C˚ (32 ˚F to to 104 ˚F)	
Storage temperature:	-20 C˚ to 60 C˚ (-4 ˚F to 140 ˚F)	
Mass:	Camera unit:	343 g (12 oz)
	CCU:	153 g (5 oz)(without a battery)
Dimensions:	Camera head:	63(W) × 66(H) × 115(D) mm (2 ½ × 2 ⅝ × 4 ⅝ inches)
	CCU:	50(W) × 59(H) × 110(D) mm (2 × 2 ⅜ × 4 ⅜ inches)

CAMERA

Image device:	1/4-inch Interline Transfer CCD
Picture element:	Gross: 470 k Actual: 300 k
Lens:	F1.4
Focal Length:	f=4.1 to 73.8 (35 mm conversion: 41 to 738 mm)
Filter Diameter:	ø37 mm
Focus:	Auto, Manual, Infinity
Minimum illumination:	0.7 lux
Shutter Speed:	AUTO, 1/4, 1/8, 1/15, 1/30, 1/60, 1/90, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000
NightShot:	IR light effective distance: 20 m (w/ slow shutter ON) 5 m (w/o slow shutter)

VIDEO

Video output (on CCU):

Composite (RCA pin x1):
1.0 V p-p, 75 Ω, unbalanced, sync negative

S-Video (Mini DIN 4-pin x1):
Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C: 0.286 Vp-p (subcarrier burst), 75 Ω, unbalanced

AUDIO

Audio output (on CCU): RCA pin jack (x2) (L & R): -7.5 dBs (0dBs=0.775 Vrms)

OTHER CONNECTORS (on CCU):

External Mic IN:	Stereo mini jack (plug in power)
Multi connector:	20-pin (connecting to Video Walkman)
Camera cable connector:	12-pin (connecting to camera head cable)
Battery connector	

SVO-5800

Editing Recorder

•Superb picture quality with S-VHS recording format and high quality signal processing techniques such as Digital Noise Reducer, Digital Field Dropout Compensator, Digital 3-line Comb Filter and newly developed Chroma Process Improvement •Built-in Time Base Corrector •Four channel audio recording system; two for Hi-Fi (AFM) and two for normal longitudinal audio •Dolby B type Noise Reducer for normal audio •Frame accurate full editing functions (Assemble, video/audio insert and audio split) •Back space editing capability •Built-in SMPTE standard LTC/VITC time code generator/reader •Optional UVR-60 TBC Remote Controller •Field freeze function with the optional UVR-60 or SVRM-100A Remote Control Unit •RS-422A 9-pin interface •Automatic edit select system •Automatic S-VHS record mode •S-video signal IN/OUT •Composite video signal IN/OUT •Y/R-Y/B-Y component video signal OUT with the optional SVBK-170 Component Output Board •Built-in character generator to display VTR status, time code, set-up menu and error message •Quick and smooth picture search up to 10 times normal speed in forward and reverse •User friendly initial set-up menu for a variety of customized VTR mode operations •Cue up point preset •Auto head cleaner •Compact and lightweight (3 units high, approx 11.5 kg), 19-inch rack mountable •Very low power consumption (60 W)

Supplied accessories: AC power cord
Operation instructions

Optional accessories: Component output board SVBK-170
Remote control unit SVRM-100A
TBC remote controller UVR-60
Rack mount kit RMM-980
Remote control cable RCC-5G/10G/30G (5 m/10 m/30 m)
S-video cable SYC-2/5 (2 m/5 m)

Specifications

General

Mass: 11.5 kg (25 lb 6 oz)
Dimensions: 425 (W) × 145 (H) × 457 (D) mm ($16^3/_4 \times 5^3/_4 \times 18$ inches)
Power requirements: AC 120 V, 60 Hz, 3 wire grounded receptacle
Power consumption: 60 W
Operating temperature: 5 to 40°C (41 to 104°F)
Tape speed: 33.35 mm/s
Tape format: S-VHS or VHS
F FWD and REW time: Approx. 2.5 min (with ST-120)

Search speed (with optional SVRM-100A)*:
SHUTTLE: STILL, $^1/_{30}$, $^1/_{10}$, $^1/_5$, $^1/_2$, 1, 2, 10 times normal speed, forward and reverse
JOG: Frame by frame, forward and reverse

Video

Video signal system: NTSC(color)/ EIA(monochrome)
Inputs: REF VIDEO IN (BNC (2), loop-through): Black burst or 1.0 Vp-p, 75 Ω, unbalanced, sync negative
COMPOSITE IN (BNC (2), loop-through): 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-VIDEO IN (Mini DIN 4-pin):
Y; 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C; 0.286 Vp-p (burst), 75 Ω, unbalanced
Outputs: COMPOSITE OUT (BNC): 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-VIDEO OUT (Mini DIN 4-pin (2)):
Y; 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C; 0.286 Vp-p (burst), 75 Ω, unbalanced
COMPONENT OUT (BNC (3), with optional SVBK-170):
Y; 1.0 Vp-p, 75 Ω, unbalanced, sync negative
R-Y; 0.7 Vp-p, 75 Ω, unbalanced
B-Y; 0.7 Vp-p, 75 Ω, unbalanced
VIDEO MONITOR OUT (Super) (BNC):
1.0 Vp-p, 75 Ω, unbalanced, sync negative
Horizontal resolution: VHS: More than 240TV lines
S-VHS: More than 400TV lines
S/N ratio: More than 47 dB (in S-VHS/VHS mode)

Audio

Input: Normal CH-1/2 (XLR): +4/0/–6 dBm selectable, 600 Ω, balanced
Hi-Fi CH-1/2 (XLR): +4/0/–6 dBm selectable, 600 Ω, balanced
Output: Normal CH-1/2 (XLR): +4/0/–6 dBm selectable at 600 Ω load, low impedance, balanced
Hi-Fi CH-1/2 (XLR): +4/0/–6 dBm selectable at 600 Ω load, low impedance, balanced
AUDIO MONITOR OUT (PIN): –5 dBu, at 47 kΩ load, unbalanced
HEAD PHONE OUT (STEREO PHONE): –50 to –18 dBu at 8 Ω load unbalanced
S/N ratio (Normal audio at 3 % distortion, Dolby OFF):
More than 43 dB
Frequency response: Normal: 50 Hz to 12 kHz
Hi-Fi: 20 Hz to 20 kHz
Dynamic range: More than 90 dB (in Hi-Fi mode)

Others

TIME CODE IN (BNC): 0 dBu ± 6 dB, 10 kΩ, unbalanced (0 dBu=1.55 Vp-p PULSE)
TIME CODE OUT (BNC):
0 dBu±3 dB at 10 kΩ load, unbalanced (0 dBu=1.55 Vp-p PULSE)

Remote

TBC REMOTE: 15-pin multi
REMOTE: 9-pin multi, RS-422A standards
WIRED SIRCS: Control-S (Power supplied type)

* Without the SVRM-100A attached, search speed is conducted at ±10 times normal speed by continuously pushing the F FWD or REW button.

SVP-5600

Editing Player

•Superb picture quality with S-VHS recording format and high quality signal processing techniques such as Digital Noise Reducer, Digital Field Dropout Compensator, Digital 3-line Comb Filter and newly developed Chroma Process Improvement •Built-in Time Base Corrector •Four channel audio playback system; two for Hi-Fi (AFM) and two for normal longitudinal audio •Dolby B type Noise Reducer for normal audio •Built-in SMPTE standard LTC/VITC time code reader •Optional UVR-60 TBC Remote Controller •Field freeze function with the optional UVR-60 or SVRM-100A Remote Control Unit •RS-422A 9-pin interface •S-video signal OUT •Composite video signal OUT •Y/R-Y/B-Y component video signal OUT with the optional SVBK-170 Component Output Board •Built-in character generator to display VTR status, time code, set-up menu and error message •Quick and smooth picture search up to 10 times normal speed in forward and reverse •User friendly initial set-up menu for a variety of customized VTR mode operations •Cue up point preset •Auto head cleaner •Compact and lightweight (3 units high, approx 11.5 kg), 19-inch rack mountable •Very low power consumption (53 W)

Supplied accessories:	AC power cord Operation instructions
Optional accessories:	Component output board SVBK-170 Remote control unit SVRM-100A TBC remote controller UVR-60 Rack mount kit RMM-980 Remote control cable RCC-5G/10G/30G (5 m/10 m/30 m) S-video cable SYC-2/5 (2 m/5 m)

Specifications

General

Mass:	11.5 kg (25 lb 6 oz)
Dimensions:	425 (W) × 145 (H) × 457 (D) mm ($16^3/_4 \times 5^3/_4 \times 18$ inches)
Power requirements:	AC 120 V, 60 Hz, 3 wire grounded receptacle
Power consumption:	53 W
Operating temperature:	5 to 40°C (41 to 104°F)
Tape speed:	33.35 mm/s
Tape format:	S-VHS or VHS
F FWD and REW time:	Approx. 2.5min (with ST-120)
Search speed (with optional SVRM-100A)*:	SHUTTLE: STILL, $^1/_{30}$, $^1/_{10}$, $^1/_5$, $^1/_2$, 1, 2, 10 times normal speed, forward and reverse JOG: Frame by frame, forward and reverse

Video

Video signal system:	NTSC (color)/ EIA (monochrome)
Input:	REF VIDEO IN (BNC (2), loop-through): Black burst or 1.0 Vp-p, 75 Ω, unbalanced, sync negative
Outputs:	COMPOSITE OUT (BNC): 1.0 Vp-p, 75 Ω, unbalanced, sync negative S-VIDEO OUT (Mini DIN 4-pin (2)): Y; 1.0 Vp-p, 75 Ω, unbalanced, sync negative C; 0.286 Vp-p (burst), 75 Ω, unbalanced COMPONENT OUT (BNC (3), with optional SVBK-170): Y; 1.0 Vp-p, 75 Ω, unbalanced, sync negative R-Y; 0.7 Vp-p, 75 Ω, unbalanced B-Y; 0.7 Vp-p, 75 Ω, unbalanced VIDEO MONITOR OUT (Super) (BNC): 1.0 Vp-p, 75Ω, unbalanced, sync negative
Horizontal resolution:	VHS: More than 240TV lines S-VHS: More than 400TV lines
S/N ratio:	More than 47 dB (in S-VHS/VHS mode)

Audio

Outputs:	Normal CH-1/2 (XLR): +4/0/–6 dBm selectable at 600 Ω load, low impedance, balanced Hi-Fi CH-1/2 (XLR): +4/0/–6 dBm selectable at 600 Ω load, low impedance, balanced AUDIO MONITOR OUT (PIN): –5 dBu, at 47 kΩ load, unbalanced HEAD PHONE OUT (STEREO PHONE): –50 to –18 dBu at 8 Ω load unbalanced
S/N ratio (Normal audio at 3 % distortion, Dolby OFF):	More than 43 dB
Frequency response:	Normal: 50 Hz to 12 kHz Hi-Fi: 20 Hz to 20 kHz
Dynamic range:	More than 90 dB (in Hi-Fi mode)

Others

TIME CODE OUT (BNC):	0 dBu ± 3 dB at 10 kΩ load, unbalanced (0 dBu=1.55 Vp-p PULSE)

Remote

TBC REMOTE:	15-pin multi
REMOTE:	9-pin multi, RS-422A standards
WIRED SIRCS:	Control-S (Power supplied type)

*1 Without the SVRM-100A attached, search speed is conducted at ±10 times normal speed by continuously pushing the F FWD or REW button.

SVO-9600

Recorder

•High quality S-VHS picture and sound •Four channel audio recording system; two for Hi-Fi (AFM) and two for normal longitudinal audio •Quick response mechanism with two Direct-Drive reel moters to provide smooth opration •Auto head cleaner to provide preventive care of the tape heads •Soft pause for gentle tape operation •Dial menu operations via the search dial for a variety of customized VTR mode settings •Recognizable color picture search: STILL, 1/30, 1/10, 1/5, 1/2, 1, 2, 5 times normal speed in the forward and reverse directions (±10 times with remote control unit) •Frame by frame picture search with the JOG dial •Programed operation with MARK IN A and MARK IN B •Timer Rec and Play function for unattended operations •Sensor recording function •Audio dubbing function for additional audio, such as music or narration, recording •Error code and real time counter indication on the LED display •Auto repeat/auto rewind/counter memory function by programed operation •Optional remote control unit of SVRM-100A and RM-V200 •Optional interface: SVBK-100 for 33-pin interface, SVBK-120 for RS-232C interface, and SVBK-140 for RS-422A 9-pin remote interface •Optional boards: SVBK-150 Digital Noise Reducer and SVBK-160 Time Code Board (used with SVBK-140)

Supplied Accessories:	AC power cord
	Operation instructions
Optional Accessories:	33-pin interface board SVBK-100
	Computer interface board (RS-232C) SVBK-120
	RS-422A interface board SVBK-140
	Digital noise reducer SVBK-150
	Time code board SVBK-160
	Remote control unit DSRM-10
	Remote control unit RM-V200
	Rack mount kit RMM-980
	S-VHS videocassette MQST-30/60/120

Specifications

General

Mass:	14.0 kg (30 lb 14 oz)
Dimensions:	424 (W) × 147 (H) × 452 (D) mm
	($16\frac{3}{4} \times 5\frac{7}{8} \times 17\frac{7}{8}$ inches)
Power requirements:	AC 120 V, 60 Hz, 3 wire grounded receptacle
Power consumption:	Less than 49 W
Operating temperature:	5 to 40°C (41 to 104°F)
REC/PB mode:	SP
Tape Speed:	SP: 33.35 mm/s
Tape format:	S-VHS or VHS
F FWD and REW time:	Max. 2.5 min (with ST-120)

Video

Video signal system:	EIA monochrome, NTSC Color
Input:	BNC: 1.0 Vp-p, 75 Ω, sync negative
	S-VIDEO: Mini DIN 4-pin
	Y: 1.0 Vp-p, 75 Ω, sync negative
	C: 0.286 Vp-p, at burst level, 75 Ω
Output:	BNC: 1.0 Vp-p, 75 Ω, sync negative
	S-VIDEO: Mini DIN 4-pin
	Y: 1.0 Vp-p, 75 Ω, sync negative
	C: 0.286 Vp-p, at burst level, 75 Ω
Horizontal resolution:	More than 400TV lines (S-VHS)
	More than 240TV lines (VHS)
S/N ratio:	46 dB (color)

Audio

Input:	Phono: –6 dBu, 47 kΩ, unbalanced
Output:	Phono: –6 dBu, 10 kΩ, unbalanced
Monitor Output:	Phono: –5 dBu, 10 KΩ
Frequency response:	50 Hz to 12 kHz (in normal mode)
	20 Hz to 20 kHz (in Hi-Fi mode)
Dynamic range:	90 dB (in Hi-Fi mode)

Connectors

Video:	IN (1) with loopthrough out (BNC)
	OUT (1) (BNC)
	SYNC IN (1) (BNC)
Audio:	Hi-Fi (AFM) IN (2) (Phono)
	NORMAL IN (2) (Phono)
	Hi-Fi (AFM) OUT (2) (Phono)
	NORMAL OUT (2) (Phono)
	Monitor OUT (1) (Phono)
S VIDEO:	IN (1) (Mini DIN 4-pin)
	OUT (1) (Mini DIN 4-pin)
TV connector:	OUT (1) (8-pin)

SVP-9000

Player

•High quality S-VHS picture and sound •Four channel audio playback system; two for Hi-Fi (AFM) and two for normal longitudinal audio •Dolby Noise Reducer for normal audio •Quick response mechanism with two Direct-Drive reel moters to provide smooth opration •Auto head cleaner to provide preventive care of the tape heads •Soft pause for gentle tape operation •Dial menu operations via the search dial for a variety of customized VTR mode settings •Recognizable color picture search: STILL, 1/30, 1/10, 1/5, 1/2, 1, 2, 5 times normal speed in the forward and reverse directions (±10 times with remote control unit) •Frame by frame picture search with the JOG dial •Programed operation with MARK IN A and MARK IN B •Timer Rec and Play function for unattended operations •Error code and real time counter indication on the LED display •Auto repeat/auto rewind/counter memory function by programed operation •Optional remote control unit of SVRM-100A and RM-V200 •Optional interface: SVBK-100 for 33-pin interface, SVBK-120 for RS-232C interface, and SVBK-140 for RS-422A 9-pin remote interface •Optional boards: SVBK-150 Digital Noise Reducer and SVBK-160 Time Code Board (used with SVBK-140)

Supplied Accessories:	AC power cord
	Instruction instructions
Optional Accessories:	33-pin interface board SVBK-100
	Computer interface board (RS-232C) SVBK-120
	RS-422A interface board SVBK-140
	Digital noise reducer SVBK-150
	Time code board SVBK-160
	Remote control unit DSRM-10
	Remote control unit RM-V200
	Rack mount kit RMM-980
	S-VHS videocassette MQST-30/60/120

Specifications

General

Mass:	14.0 kg (30 lb 14 oz)
Dimensions:	424 (W) × 147 (H) × 452 (D) mm
	($16\frac{3}{4} \times 5\frac{7}{8} \times 17\frac{7}{8}$ inches)
Power requirements:	AC 120 V, 60 Hz, 3 wire grounded receptacle
Power consumption:	Less than 48 W
Operating temperature:	5 to 40°C (41 to 104°F)
Playback mode:	SP
Tape Speed:	SP: 33.35 mm/s
Tape format:	S-VHS or VHS
F FWD and REW time:	Max. 2.5 min (with ST-120)

Video

Video signal system:	NTSC (color)/EIA (monochrome)
Output:	BNC: 1.0 Vp-p, 75 Ω, sync negative
	S-VIDEO: Mini DIN 4-pin
	Y: 1.0 Vp-p, 75 Ω, sync negative
	C: 0.286 Vp-p, at burst level, 75 Ω
S/N ratio:	46 dB

Audio

Output:	Phono connector (×2)
Frequency response:	50 Hz to 12 kHz (in normal mode)
	20 Hz to 20 kHz (in Hi-Fi mode)
Dynamic range:	90 dB (in Hi-Fi mode)

Connectors

Video:	OUT (1) (BNC)
	SYNC IN (1) (BNC)
Audio:	Hi-Fi OUT (2) (Phono)
	Hi-Fi/NORMAL OUT (2) (Phono)
	Monitor OUT (1) (Phono)
S-VIDEO:	OUT (1) (Mini DIN 4-pin)
TV connector:	OUT (1) (8-pin)

SVO-2100

Recorder

•S-VHS videocassette recorder to provide high picture quality delivering 400 TV lines of horizontal resolution. •Hi-Fi stereo audio (four-channel audio recording) •Auto head cleaner prevents head clogging and deterioration of picture quality •Auto Repeat function (A Feature to automatically play back a tape repeatedly) •Simultaneous recording by multiple SVO-2100s is possible •One-time Playback •Power ON Recording/Playback capability for unattended automtaic VTR operation •Audio Insert Editing •Foot switch control/ Tally out function •With the optional SVBK-10 (RS-232C interface board) installed, the SVO-2100 communicates with external equipment such as computers or Sony's FXE-100/120 editing system. (With the FXE-100/120, frame-accurate (LTC timecode) editing system with functions such as Assmble, Insert, Audio Split, A-roll, and A/B-roll editing is possible.)

Supplied Accessories:	AC Power Cord Operating Instructions
Optional accessories:	SVBK-10 RS-232C Interface Board SVRM-100A Remote Control Unit RM-V200 Remote Control Unit FXE-100 Video Editing System FXE-120 Video Editing System FS-20 Foot Switch RM-81 Remote Switch

Specifications

GENERAL

Mass:	7.0 kg (15 lb. 7 oz)
Dimensions:	420 (W) × 125 (H) × 374 (D) mm (16 5/8 × 5 × 14 3/4 inches)
Power requirements:	AC120 V, 60 Hz
Power consumption:	28 W
Operating temperature:	5°C to 40°C (41°F to 104°F)

SYSTEM

Video signal:	EIA standard (monochrome) / NTSC (color)
Tape speed:	SP: 33.35 mm/s
REC & PB mode:	SP
Fast forward/rewind time:	Approx. 2.5 min. (T-120)

VIDEO INPUT/OUTPUT

Video recording system:	Rotary two-head helical scanning system
Input:	
VIDEO IN:	BNC (1): 1.0 Vp-p, 75 Ω, unbalanced, sync negative
THROUGH:	BNC (1) (loop through)
S-VIDEO IN:	Mini-DIN 4-pin (1) Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative C: 0.286 Vp-p (burst level), 75 Ω
Output:	
VIDEO OUT:	BNC (1): 1.0 Vp-p, 75 Ω, unbalanced, sync negative
VIDEO MONITOR OUT:	BNC (1): 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-VIDEO OUT:	Mini-DIN 4-pin × 1 Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative C: 0.286 Vp-p (burst level), 75 Ω
S/N ratio:	45 dB (S-VHS mode)
Horizontal resolution:	More than 400 lines (S-VHS mode)

AUDIO INPUT/OUTPUT

Audio recording system:	HiFi
Input:	Phono (2): -8 dBs, 47k Ω load, unbalanced MIC: Minijack (1) : -60 dBs, 600 Ω
Output:	Phono (2): -8 dBs, 10k resistance, unbalanced HEADPHONE: Stereo Minijack x 1 : 8 Ω
Frequency response:	20 Hz ~ 20 kHz (HiFi) 50 Hz ~ 10 kHz (normal track)
S/N ratio:	43 dB (S-VHS mode)
Dynamic range:	90 dB (HiFi)
Distortion:	Less than 0.5 % (HiFi) Less than 3.0 % (normal track)
Wow/flutter:	Less than 0.25 % (normal track)

OTHERS

Control S:	Input (1) (Mini jack) Output (1) (Mini jack)
Foot switch conncetor:	(1) (Stereo Mini jack) (including recording tally output)
RS-232C:	(1) (D-sub 9-pin)

3-2 S-VHS VTR accessories

SVBK-10
RS-232C Interface Board for the SVO-2100

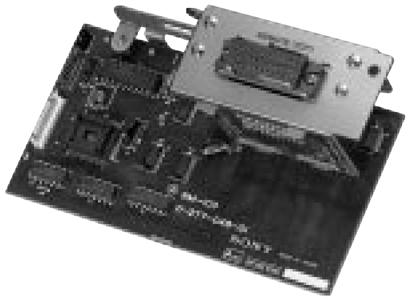
•Provides RS-232C interface which enables direct control of the SVO-2100 from an external computer or from the FXE-100/120

Interface: D-sub (9-pin) connector
Mass: 270 g (9.5 oz)
Dimensions: 83 (W) × 64 (H) × 124 (D) mm ($3\frac{3}{8} \times 2\frac{5}{8} \times 5$ inches)

SVBK-100
Sony 33-pin Interface Board (for SVO-9600/9500MD and SVP-9000)

•When this board installed, basic VTR functions can be remotely controlled via 33-pin parallel interface

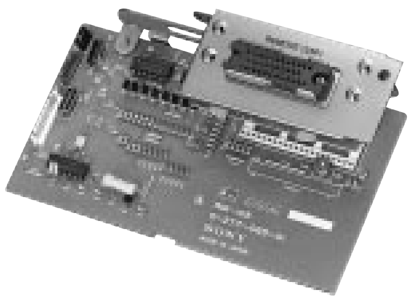
Connector: 33-pin multi connector
Parallel control signal
Dimensions: 168 (W) × 92 (H) × 60 (D) mm ($6\frac{5}{8} \times 3\frac{5}{8} \times 2\frac{3}{8}$ inches)
Mass: 300 g (11 oz)



SVBK-110
Sony 34-pin Interface Board (for SVO-9500MD)

•When this board installed, the SVO-9500MD can be integrated into the 34-pin based control system

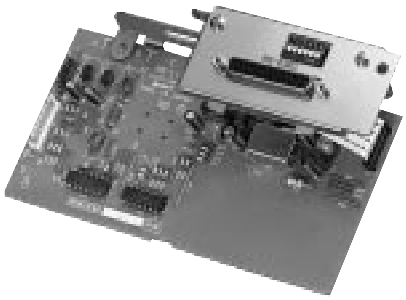
Connector: 34-pin multi connector
Parallel control signal
Dimensions: 168 (W) × 92 (H) × 60 (D) mm ($6\frac{5}{8} \times 3\frac{5}{8} \times 2\frac{3}{8}$ inches)
Mass: 300 g (11 oz)



SVBK-120
Computer Interface Board (for SVO-9600/9500MD and SVP-9000)

•Provides RS-232C interface which enables direct control of a VTR from an external computer

Connector: D-sub 25-pin multi-connector (female)
Parallel control signal
Dimensions: 168 (W) × 92 (H) × 60 (D) mm ($6\frac{5}{8} \times 3\frac{5}{8} \times 2\frac{3}{8}$ inches)
Mass: 300 g (11 oz)



3-2 S-VHS VTR accessories

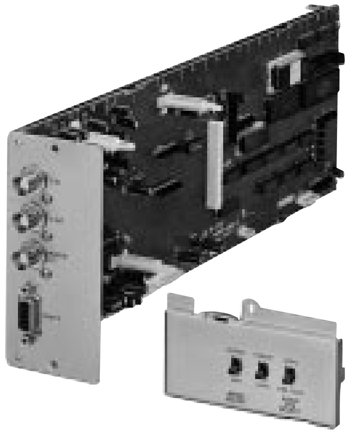
SVBK-140

Sony RS-422A Interface Board (for SVO-9600 and SVP-9000)

•By installing this board, the SVO-9600/ SVP-9000 can be equipped with 9-pin REMOTE (RS-422A) interface to be configured into Sony's 9-pin based control system

Input/Output connector:
- TC IN: BNC (1)
  0 dB ±6 dB (0 dB=1.55 Vp-p), 10 kΩ unbalanced
- TC OUT: BNC (1)
  0 dB ±3 dB, low impedance, unbalanced
- MONITOR OUT: BNC (1)
- REMOTE: D-sub 9-pin (1)

Supplied accessories:
Screw
Operation manual



SVBK-150

Sony Digital Noise Reducer Board (for SVO-9600 and SVP-9000)

•Reduces both Y (luminance) and C (chrominance) noise with its YNR (noise reducer) and CNR
•Provides Y Enhance function, TBS (Time Base Stabilizer), and Field dropout compensation

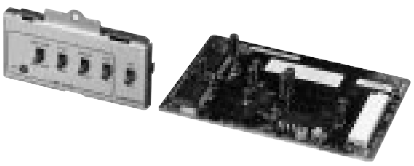
Dimensions: 318 (W) × 106 (H) × 26 (D) mm ($12^5/_8 \times 4^1/_4 \times 1^1/_{16}$ inches)
Mass: 370 g (13 oz)
Supplied accessories:
Operation manual

SVBK-160

Sony Time Code Board (for SVO-9600 and SVP-9000)

•Attaches to the SVBK-140 RS-422A Interface Board
•When this board installed, the VTR can record (SVO-9600 only) and read the SMPTE time code
•Consists of the following components: TC-69 board/Switch panel/Flat cable

Applicable Time code:
SMPTE or EBU longitudinal time code (LTC)
Drop frame (NTSC mode only):
Drop frame or non-drop frame selectable
Dimensions: Board:
118.5 (W) × 85 (H) × 10 (D) mm ($4^3/_4 \times 3^3/_8 \times 1^3/_{32}$ inches)
Panel:
85 (W) × 52.5 (H) × 13 (D) mm ($3^3/_8 \times 2^1/_8 \times 1^7/_{32}$ inches)
Mass: Board: 80 g (2.8 oz)
Panel: 70 g (2.5 oz)

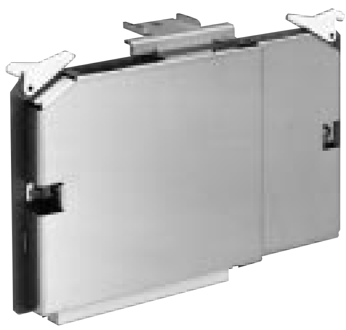


SVBK-170

Component Output Board (for SVO-5800/SVP-5600)

•When this board is installed, the VTR can output component video signal (Y/R-Y/B-Y), which conforms to the Betacam SP format

Dimensions: 177 (W) × 105 (H) × 20 (D) mm ($7 \times 4^1/_4 \times ^3/_{32}$ inches)
Mass: 120 g (4.2 oz)



SVBK-180

RS-232C Interface Board
(for SVO-9600 and SVP-9000)

•Provides an RS-232C interface which enables direct control of a VTR from an external computer •Incorporates an SMPTE standard time code generator/reader •Built-in editing capability (insert/assemble) •Built-in intelligence to support frame by frame editing capability •Capable of changing its communication protocol to the same as that of the SVBK-120 Interface Board

Connector:	RS-232C I/F: D-sub 25-pin (1) Time Code out: BNC (1) Time Code in: BNC (1) Monitor out: BNC (1)
Dimensions:	Board: 62 (W) × 115 (H) × 361 (D) mm ($2\frac{1}{2} \times 4\frac{5}{8} \times 14\frac{1}{4}$ inches) Rear panel: 85 (W) × 52.5 (H) × 13 (D) mm ($3\frac{3}{8} \times 2\frac{1}{8} \times \frac{17}{32}$ inches)

SVRM-100A

Remote Control Unit
(for SVO-5800/9500MD and SVP-5600)

•Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD •JOG/SHUTTLE operation •Enables ±10 times normal speed in search operation •Field freeze operation for SVO-5800/SVP-5600

Features Especially (for SVO-9500MD)

•Index search function •Three freeze mode: frame freeze, first field freeze and second field freeze

Power requirements:	DC 5 V (supplied from the VTR)
Power consumption:	50 mW
Remote control:	Stereo mini plug
Control signal:	Control S
Dimensions:	90 (W) × 39 (H) × 182 (D) mm ($3\frac{5}{8} \times 1\frac{9}{16} \times 7\frac{1}{4}$ inches)
Mass:	250 g (8.8 lb)

DSRM-10

Remote Control Unit
(for SVO-9600/SVP-9000)

•Provides wired remote control operation for STOP/REC/PAUSE/REW/PLAY/FFWD
•JOG/SHUTTLE operation
•Enables ±10 times normal speed in search operation

Specifications

Power requirements:	DC 5 V (supplied from the connected VTR)
Power consumption:	50 mW
Remote control:	Stereo mini-plug (with attached cable, length 3 m (10 ft))
Dimensions:	90 (W) × 46 (H) × 182 (D) mm ($3\frac{5}{8} \times 1\frac{13}{16} \times 7\frac{1}{4}$ inches)
Mass:	Approx. 360 g (12 oz)
Supplied accessory:	Operating manual (1)

SVO-1630

VHS Videocassette Recorder

•HQ circuitry and Double Azimuth PRO 4-head design for superb resolution and excellent color reproduction •APC (Adaptive Picture Control) II feature, which works during both recording and playback to provide the optimum picture quality •Hi-Fi stereo audio recording system •S-VHS quasi playback capability •Auto repeat playback capability •One-time playback capability •Timer recording and playback capability •Sensor recording capability •Multi-language display (E, S, F) •Index search •Dual mode shuttle (DMS) control •Auto daylight saving time •Reliable mechanism to ensure the highly stable operation •Auto tracking •Auto head cleaner •Back-up capability (up to 30 days) •Key inhibit function to prevent accidental operation •Wireless remote-off function to control the specific VTRs without activating the others •Used time of head drum to be shown on the display •Headphone jack •Control S connectors for remote control •BNC connectors •TV tuner

Supplied Accessories:	Wireless remote commander RMT-V190A (1) Size AA batteries (2) AC Power Cord (1) Instruction manual (1)
Optional Accessories:	Remote commander RM-V200

Specifications

GENERAL

Mass:	4 kg (8 lb 13 oz)
Dimensions:	360 (W) × 98 (H) × 295 (D) mm (14 ¼ × 3 ⅞ × 11 ⅝ inches)
Power Requirements:	AC 120 V, 60 Hz, 3 wire grounded receptacle
Power Consumption:	16 W
Operating Temperature:	5°C ~ 40°C (41°F ~ 104°F)

SYSTEM

Video Signal:	VHS NTSC Standard
Tape Speed:	SP: 33.35 mm/sec. EP: 11.11 mm/sec.
Fast Forward/Rewind Time:	Approx. 2 min. 30 sec (with T-120 tape)

VIDEO INPUT/OUTPUT

Video Recording System:	Rotary two-head helical scanning system
Input:	BNC (1): 1 Vp-p, 75 Ω, unbalanced, sync negative
Output:	BNC (1): 1 Vp-p, 75 Ω, unbalanced, sync negative
S/N Ratio:	44 dB (SP)
Horizontal Resolution:	240 lines (SP)

AUDIO INPUT/OUTPUT

Audio Recording System:	HiFi/Normal
Input:	Phono (2): -8 dBs (0 dBs=0.775 Vrms) impedance: more than 47 kΩ
Output:	Phono (2): -8 dBs (0 dBs=0.775 Vrms) impedance : less than 10 kΩ
Frequency Response:	20 Hz ~ 20 kHz (HiFi) 50 Hz ~ 10 kHz (Normal / SP)
Distortion:	Less than 3.5 % (Normal / SP)
Wow / Flutter:	Less than 0.25 % (Normal / SP)
Dynamic Range:	90 dB (Hi-Fi)

OTHERS

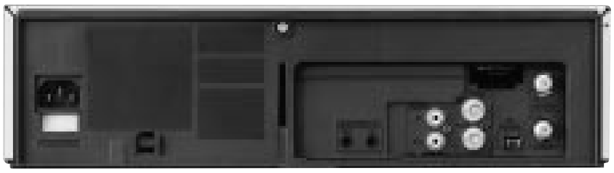
Control S:	Input (1) (Mini jack) Output (1) (Mini jack)
Headphone jack	(1) (Stereo Mini jack)

VIDEOCASSETTE RECORDERS

SVO-1430

VHS Videocassette Recorder

•HQ circuitry and Double Azimuth PRO 4-head design for superb resolution and excellent color reproduction •APC (Adaptive Picture Control) II feature, which works during both recording and playback to provide the optimum picture quality •S-VHS quasi playback capability •Auto repeat playback capability •One-time playback capability •Timer recording and playback capability •Multi-language display (E, S, F) •Index search •Auto daylight saving time •Reliable mechanism to ensure the highly stable operation •Auto tracking •Auto head cleaner •Back-up capability(up to 30 days) •Key inhibit function to prevent accidental operation •Wireless remote-off function to control the specific VTRs without activating the others •Used time of head drum to be shown on the display •Control S connectors for remote control •BNC connectors •TV tuner



Black version of the SVO-1430

Supplied Accessories	Wireless remote commander RMT-V191A (1) Size AA batteries (2) AC Power Cord (1) Instruction manual (1)
Optional Accessories	Remote commander RM-V200

Specifications

GENERAL

Mass:	4 kg (8 lb 13 oz)
Dimensions:	360 (W) × 98 (H) × 295 (D) mm (14 ¼ × 3 ⅞ × 11 ⅝ inches)
Power Requirements:	AC 120 V, 60 Hz, 3 wire grounded receptacle
Power Consumption:	14 W
Operating Temperature:	5°C ~ 40°C (41°F ~ 104°F)

SYSTEM

Video Signal:	VHS NTSC Standard
Tape Speed:	SP: 33.35 mm/sec. EP: 11.11 mm/sec.
Fast Forward/Rewind Time:	Approx. 2 min. 30 sec (with T-120 tape)

VIDEO INPUT/OUTPUT

Video Recording System:	Rotary two-head helical scanning system
Input:	BNC (1): 1 Vp-p, 75 Ω, unbalanced, sync negative
Output:	BNC (1): 1 Vp-p, 75 Ω, unbalanced, sync negative
S/N Ratio:	44 dB (SP)
Horizontal Resolution:	240 lines (SP)

AUDIO INPUT/OUTPUT

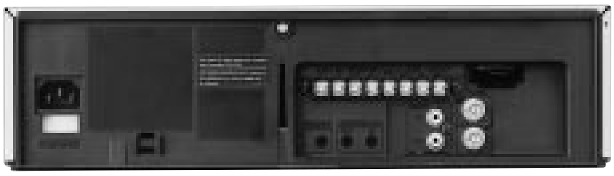
Audio Recording System:	Normal
Input:	Phono (1): -8 dBs (0 dBs=0.775 Vrms) impedance: more than 47 kΩ
Output:	Phono (1): -8 dBs (0 dBs=0.775 Vrms) impedance: less than 10 kΩ
Output:	Phono (1): -8 dBs (0 dBs=0.775 Vrms)
Frequency Response:	50 Hz ~ 10 kHz (SP)
Distortion:	Less than 3.5 % (SP)
S/N Ratio:	40 dB

OTHERS

Control S:	Input (1) (Mini jack) Output (1) (Mini jack)

SVO-1330

VHS Videocassette Recorder



•Ideal for casino surveillance applications where a number of VCRs are used for continuous recording •HQ circuitry and Double Azimuth PRO 4-head design for high resolution and excellent color reproduction •APC II (Adaptive Picture Control II) optimizes both recording and playback •Control-S IN/OUT terminals for remote operation of multiple VCRs with the optional RM-V200 remote control unit •Clock adjustment terminals allow clocks of multiple VCRs to be adjusted simultaneously •Eject terminals allow videocassettes of multiple VCRs to be ejected simultaneously •Timer, Series and SP/EP recording •Frame by frame playback (forward only) •Digital auto tracking •Auto head cleaner

Supplied accessories:	AC power cord (1)
	Operation manual (1)
Optional accessories:	Remote Control Unit SVT-RM10, RM-V200

Specifications

General

Power requirements:	20 V AC, 60 Hz
Power consumption:	4 W (max.)
Operating temperature:	0 to 40°C (41 to 104°F)
Storage temperature:	20 to 40°C (-4 to 140°F)
Mass:	Aprox. 4 kg (8 lb 13 oz)

System

Format:	VHS NTSC standard
Video recording system:	Rotary four-head helical scanning FM system
Video signal:	NTSC color, EIA standard
Tape speed:	SP: 33.35 mm/s (1 3/8 inches/s)
	EP: 11.12 mm/s (7/16 inches/s)
Fast-forward and rewind time:	
	Approx. 2 min. 30 sec (with T-120 tape)
Video resolution:	240 lines (SP mode)
Video S/N:	44 dB (SP mode)
Audio frequency response:	
	50 Hz to 10 kHz

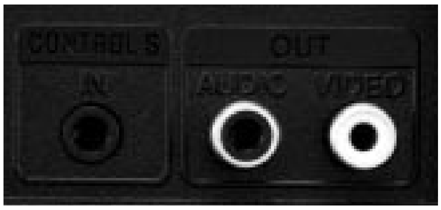
Inputs and outputs

Inputs:	VIDEO IN, BNC jack (1)
Input signal:	1 Vp-p, 75 Ω, unbalanced, sync negative
	AUDIO IN, phone jack (1)
	Input level: - 8 dBs (0 dBs – 0.775 Vrms)
Input impedance:	more than 47 kΩ
Outputs:	VIDEO OUT, BNC jack (1)
Output signal:	1 Vp-p, 75 Ω, unbalanced, sync negative
	AUDIO OUT, phone jack (1)
	Output level: - 8 dBs (0 dBs – 0.775 Vrms)
	Load impedance: 47 kΩ
Output impedance:	less than 10 kΩ
CONTROL S IN/OUT:	Mini-jack (2)
REMOTE:	Stereo mini-jack
WARNING OUT:	+5 V, 5.7 kΩ (Low active)
EJECT IN/OUT:	OUT: + 5 V, kΩ (Low active)
	IN: Low level
SERIES REC IN/OUT:	OUT: + 5 V, kΩ (Low active)
	IN: Low level
CLOACK ADJ IN/OUT:	OUT: + 5 V, kΩ (Low active)
	IN: Low level

SVP-1110A

VHS player

•Extremely compact and light weight: 240 mm (9 $\frac{1}{2}$ inches) in width, 3.3 kg (7 lb 4 oz) in weight •Auto repeat playback •Auto power-on/Auto rewind/Off power eject functions •Optimum Picture Control (OPC) provides optimum picture reproduction regardless of the tape/VTR condition •Long life head •Digital auto tracking •Auto head cleaner •Control S IN terminal



Supplied accessories:	AC power cord Operation manual
Optional accessoies:	Wired/wireless remote control unit RM-V200

Specifications

General

Mass:	3.3 kg (7 lb 4 oz)
Dimensions:	240 (W) × 95 (H) × 300 (D) mm (9 $\frac{1}{2}$ × 3 $\frac{3}{4}$ × 11 $\frac{7}{8}$ inches)
Power requirements:	AC 120 to 240 V, 60 Hz
Power consumption:	12 W
Operating temperature:	5 to 40°C (41 to 104°F)
Storage temperature:	-20 to 60°C (–4 to 140°F)
Videocassette:	Sony T-30/60/120/160
PB mode:	SP/LP/EP
Tape speed:	SP: 33.35 mm/s (1$\frac{3}{8}$ inches/s) LP: 16.67 mm/s ($\frac{11}{6}$ inches/s) EP: 11.11 mm/s ($\frac{7}{16}$ inches/s)
FF/REW time:	Approx. 4 min 15 s (with T-120 tape)

Video

Video signal system:	NTSC (color)/EIA (monochrome)
Video recording system:	Rotary two-head helical scanning system
Output:	PHONO (1), 1.0 Vp-p, 75 Ω, unbalanced, sync negative
S/N ratio:	More than 42 dB (SP), More than 40 dB (LP/EP)
Horizontal resolution:	More than 230 TV lines (SP) More than 210 TV lines (LP/EP)

Audio

Audio playback system:	Monaural
Output:	PHONO (1): –8 dBu, 47 kΩ
Frequency response:	50 Hz to 10 kHz (SP)
Distortion:	Less than 4 % (SP)
Wow and Flutter:	Less than 0.25 % (SP)
S/N ratio:	38 dB

Other

Control S IN:	Mini jack

3-4 VHS VTR accessory

RM-V200

Wired/wireless remote control unit

•VTR operation: STOP/PLAY/REC/PAUSE/FWD SEARCH/REW SEARCH/FF/REW/EJECT/POWER ON & OFF
•High speed rewind button/2 × speed playback/ Frame advance operations for SVO-1610/1550/1500/1450, SVP-1100A
•Either Control-S or Control P control signal selectable

Supplied accessories:	Size AA battery (2) Control S cable (3 m) Control P cable (1.5 m) Operation manual
Mass:	105 g (3 oz) excluding batteries
Dimensions:	65 (W) × 18 (H) × 150 (D) mm ($2^5/_8$ × $2^3/_{32}$ × 6 inches)
Power requirements:	DC 3 V
Operating temperature:	5 to 45°C (41 to 113°F)
Control signal:	Control S (SIRCS) Control P (Inverted SIRCS)

SVO-965

VHS Hi-Fi Duplicator

•Provides both recording and playback modes •High concentration of Silicon is incorporated in the lower drum for improved wear durability •Long-life video Hi-Fi head •High quality picture and sound by wide video/audio track design •Quality construction and durable mechanism for highly reliable operation •Low power consumption of 25W •Compact size and lightweight •Control P IN/OUT connectors for loop-through connection •Loop-through audio/video connectors for simpler system connection •Control S IN connector for VTR operation checking •Auto head cleaner (rotary/stationary) •Automatic check function for reliable recording results (operated from SVRM-901/SVRM-960) •Data set function: VTR ID SET, ID code REC ON/OFF, ID code display ON/OFF, video AGC ON/OFF, audio limiter ON/OFF, Hi-Fi REC ON/OFF etc. •Auto off function for technical difficulties •Convenient front test terminals for easy technical testing •Operation status indicator: TAPE RUN, REC, EJECT/AUTO OFF

Supplied accessories:	AC power cord Instruction manual

Specifications

General

Mass:	7kg (15 lb 7 oz)
Dimensions:	270(W) × 132(H) × 370(D)mm (10$\frac{3}{4}$ × 5$\frac{1}{4}$ × 14$\frac{5}{8}$ inches)
Power requirements:	AC 120V, 60Hz
Power consumption:	27W
Storage temperature:	–20 to 60°C (–4 to 140°F)
Operating temperature:	5 to 40°C (41 to 104°F)
Tape speed:	33.35mm/s (SP mode)
F FWD and REW time:	Within 2.5min (with Sony T-120 tape)
Videocassette:	VHS standard cassette tapes

System

Video signal system:	EIA standard/NTSC color
Video recording system:	Rotary two-head Azimuth recording, VHS standard Luminance: FM recording Color signal: Converted subcarrier phase shift recording
Audio recording system:	Hi-Fi audio: Rotary two-head helical scanning system Normal audio: Stationary head

Video

Input:	Composite video: BNC with loop-through output, 1Vp-p, 75Ω switchable, unbalanced, sync negative
Output:	Composite video: BNC, 1Vp-p, 75Ω, unbalanced, sync negative
Horizontal resolution:	More than 240TV lines
S/N ratio:	45dB

Audio

Input :	SEPARATE/THROUGH switch selectable* Hi-Fi (CH-1/CH-2): Phono (2) Normal (CH-1/CH-2): Phono (2)
Audio level:	-6dBu, 47kΩ, unbalanced
Output:	Phono (2)
Audio level:	-6dBu, 47kΩ, unbalanced
S/N ratio (Dolby off):	43dB (Normal audio)
Dynamic range:	Better than 90dB (Hi-Fi audio)
Frequency response:	Normal: 50Hz to 10Hz Hi-Fi: 20Hz to 20kHz
Audio level adjustment:	Manual (4ch) Limiter on/off selectable (Normal audio)

Remote control

Control S :	IN: Mini jack
Control P :	IN: Phono OUT: Phono

* When switch is in THROUGH position, loop-through output is available.

SVO-915L

VHS Hi-Fi

VHS Hi-Fi Duplicator

•Provides recording mode only for a large size duplication system •High concentration of Silicon is incorporated in the lower head drum scanner for improved wear durability •Long-life video/Hi-Fi head •Quality construction and durable mechanism for highly reliable operation •High quality picture and sound by wide video/audio track design •Low power consumption of 25W •Compact and light-weight •Control P IN/OUT connectors •A 34-pin parallel I/F as standard •Loop-through audio/video connectors for simple system connection •Control S IN connector for VTR operation checking •Data set function: VTR ID SET, ID code REC ON/OFF, ID code display ON/OFF, video AGC ON/OFF, audio limiter ON/OFF, Hi-Fi REC ON/OFF, Dolby NR ON/OFF etc. •Auto off function for technical difficulties •Convenient front test terminals for easy technical testing •Operation status indicator: TAPE RUN, REC, EJECT/AUTO OFF •Audio monitor out for checking the audio recording level

Supplied accessories:	AC power cord
	Instruction manual

Specifications

General

Mass:	7kg (15 lb 7 oz)
Dimensions:	270(W) × 132(H) × 370(D)mm
	($10^3/_4 \times 5^1/_4 \times 14^5/_8$ inches)
Power requirements:	AC 120V, 60Hz
Power consumption:	25W
Storage temperature:	–20 to 60°C (–4 to 140°F)
Operating temperature:	5 to 40°C (41 to 104°F)
Tape speed:	33.35mm/s (SP mode)
F FWD and REW time:	Within 2.5min (with Sony T-120 tape)
Videocassette:	VHS standard cassette tapes

System

Video signal system:	EIA standard/NTSC color
Video recording system:	Rotary two-head Azimuth recording, VHS standard
	Luminance: FM recording
	Color signal: Converted subcarrier phase shift recording
Audio recording system:	Hi-Fi audio: Rotary two-head helical scanning system
	Normal audio: Stationary head

Video

Input:	Composite video: BNC with loop-through output,
	1Vp-p, 75Ω switchable, unbalanced, sync negative
Horizontal resolution:	More than 240TV lines
S/N ratio:	45dB

Audio

Inputs:	SEPARATE/THROUGH switch selectable*
	Hi-Fi (CH-1/CH-2): Phono (2)
	Normal (CH-1/CH-2): Phono (2)
Input level:	-6dBu, 47kΩ, unbalanced
Outputs:	Phono (2)
Output level:	-6dBu, 47kΩ, unbalanced
S/N ratio (Dolby off):	43dB (Normal audio)
Dynamic range:	Better than 90dB (Hi-Fi audio)
Frequency response:	Normal: 50Hz to 10Hz
	Hi-Fi: 20Hz to 20kHz
Audio level adjustment:	Manual (4ch)
	Limiter on/off selectable (Normal audio)

Remote control

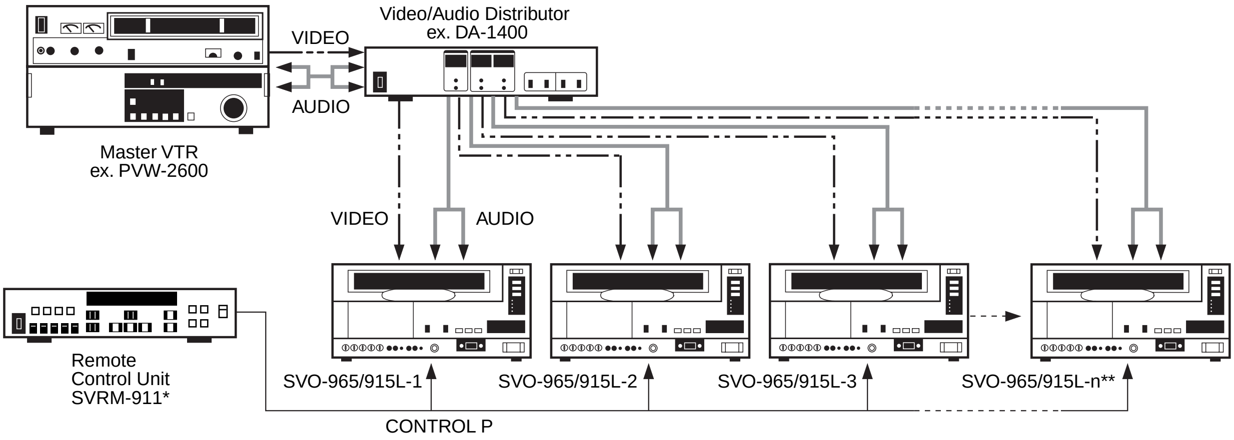
Control S :	IN: Mini jack
Control P :	IN: Phono
	OUT: Phono
34-pin parallel control:	IN/OUT: 34-pin multi

* When switch is in THROUGH position, loop-through output is available.

3-5 VHS Hi-Fi Duplicators

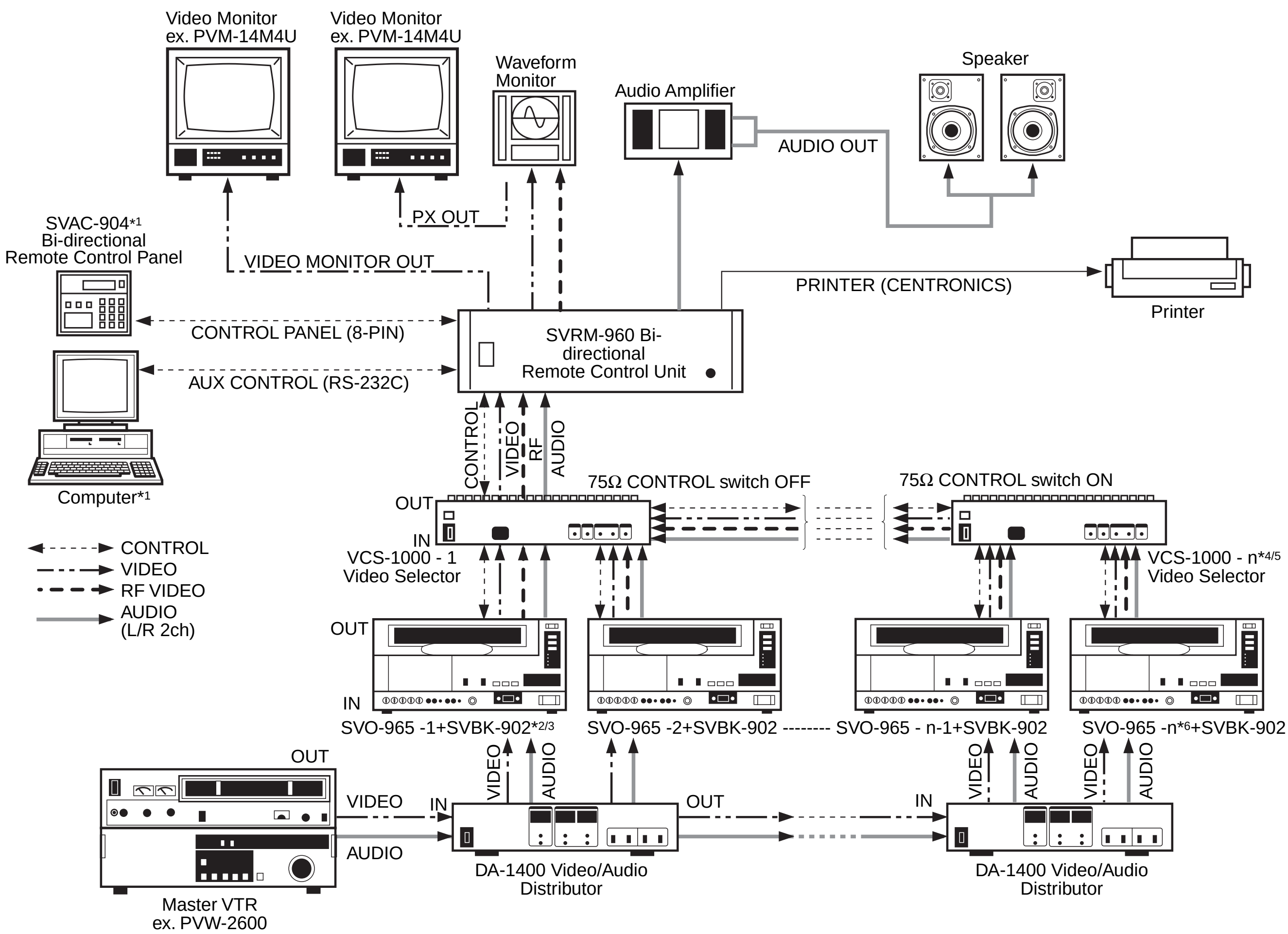
System Configuration

• Controlled by the SVRM-901



* RM-V200 Remote Control Unit can also be used for a master remote control unit.
** Up to 2000 VTRs can be connected.

• Controlled by the SVRM-960 (SVO-965 only)



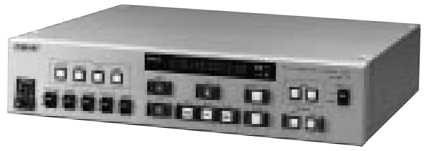
*1 VTR control can be operated either from the SVAC-904 or an external computer.
*2 SVBK-902 Bi-directional Interface Board (optional) must be installed in the SVO-965.
*3 Set the 75Ω switch on all the SVBK-902 used in a system to OFF.
*4 Set the 75Ω switch on the last VCS-1000 to ON.
*5 Up to 50 VCS-1000 can be connected.
*6 Up to 1000 VTRs can be connected.

3-6 VHS Duplicator accessories

SVRM-911

Serial Remote Control Unit

•Duplication VTR control capability: up to 1,000 VTRs
•Individual VTR status monitoring capability
•System management capability
•VTR mode set up capability: VTR ID code REC ON/OFF, video AGC ON/OFF, Hi-Fi Audio ON/OFF, audio limiter ON/OFF, etc.
•Auto Check function for examining secure video/audio recording



RM-V200 (Wired only)

Remote Control Unit

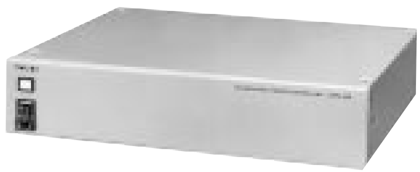
•For simple control of one VTR
•Equipped with control P/S select switch
•Duplication control capability via control P output

SVRM-960(SVO-965 only)

Bi-directional Remote Control Unit

•Control P out connectors for controlling entire duplication VTRs: up to 2,000 VTRs
•VTR mode set up capability: VTR ID code REC ON/OFF, video AGC ON/OFF, Hi-Fi Audio ON/OFF, audio limiter ON/OFF, etc.
•Auto Check function for examining secure video/audio recording
•RS-232C interface for computer control operation
•Centronics compatible printer interface

Mass: 8.0kg (17 lb 10 oz)
Dimensions: 424(W) × 88(H) × 350(D)mm
($13^{3}/_{4} \times 3^{1}/_{2} \times 13^{7}/_{8}$ inches)



SVAC-904(SVO-965 only)

Bi-directional Remote Control Panel (for SVRM-960)

•To operate a duplication system with the SVRM-960 Bi-directional remote control unit

Mass: 0.8kg (1 lb 12 oz)
Dimensions: 180(W) × 53(H) × 220(D)mm
($7^{1}/_{8} \times 2^{1}/_{8} \times 8^{3}/_{4}$ inches)

3-6 VHS Duplicator accessories

SVBK-902(SVO-965 only)

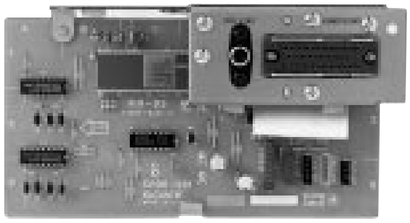
Bi-directional Interface Board

•To enable two way communication between duplication VTRs and the SVRM-960

SVBK-901

34-pin Parallel Interface Board

•To meet 34-pin based control system
•Control P serial control signal output connector



SVCC-960

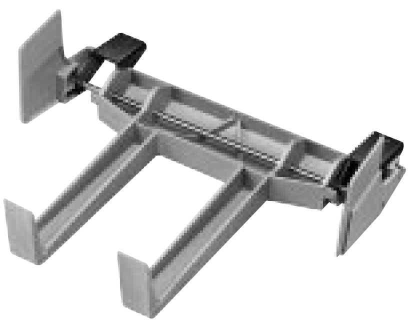
Automatic Cassette Changer

•Automatic cassette loading and ejecting for efficient duplication operation: Up to 5 cassettes

SVAC-902

Cassette Holder

•To hold cassettes ejected by the SVCC-960
•Using with the SVCC-960



3-6 VHS Duplicator accessories

SVAC-901

Audio Meter Unit

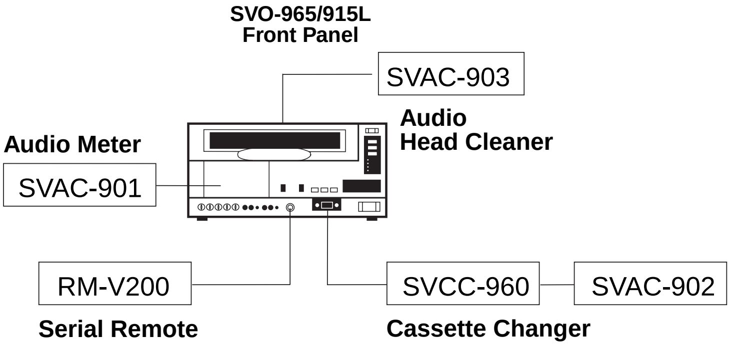
•For monitoring audio recording level

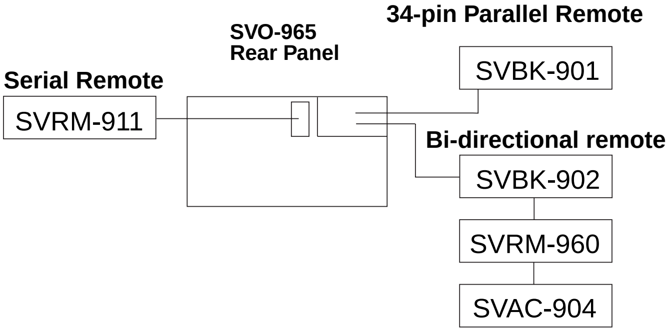
SVAC-903

Audio Head Cleaner

•For cleaning a stationary audio head in the SVO-965/915L

Optional Accessory Allocations





DSR-20MD

DVCAM Recorder

•Superb picture quality of the DVCAM format •Playback capability of DV recorded tapes (SP mode only) •Long recording time: up to 184 minutes with a standard-size cassette and 40 minutes with a mini-size cassette •i.LINK (DV In/Out) interface providing a single cable connection to transfer digital video and audio with virtually no generation loss •Foot switch control capability •LANC interface for simple editing with a LANC-equipped recorder or editing system •RS-232C and Control S interfaces for remote control operation •Frame still picture •External Sync*1 In connector for synchronised playback •Auto repeat function •Power-on recording capabilities •Duplication mode with original time code •Compact and lightweight (half-rack width) •AC/DC operation*2 •Index Points search functions (when using a cassette with IC Cassette Memory) •RMT-DS20 Wireless Remote Controller (supplied accessory) for control of basic functions •UL listed for the UL-2601 medical safety regulation

*1 The DSR-20MD locks to V-sync only.
*2 The DSR-20MD can be used for outdoor operation, but is designed for stationary use. Vibration resistance is not guaranteed.

Supplied accessories: Wireless Remote Commander RMT-DS20 (1)
AC power cord (1)
Cleaning cassette (1)
Operation manual (1)
Optional accessories: Remote Control Unit DSRM-10
Foot Control Unit FS-20
DC power cord CCDD-X2

Specifications

GENERAL

Video signal standard: EIA standard, NTSC color
Power requirements: AC: 120 V, 50/60 Hz DC: 12 V
Power consumption: AC: 28 W DC: 2.0 A
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) × 98 (H) × 395 (D) mm
($8\frac{3}{8} \times 3\frac{7}{8} \times 15\frac{5}{8}$ inches)
(including external projections)
Tape speed:
DVCAM mode: 28.2 mm/s
DV SP playback mode:
18.79 mm/s
Recording/Playback time:
Standard cassette: 184 min. with a PDV-184ME/184N/184MEM
Mini cassette: 40 min. with a PDVM-40ME/40N/40MEM
Tape rewind time: Less than 2 min. with a PDV-184ME/184N/184MEM
Search speed (via RMT-DS20 or DSRM-10):
-2, -1, -1/5, -1/10, still, 1/10, 1/5, 1, 2, Cue/Review
(10 or 15 times)

SIGNAL INPUTS

Video Inputs

Composite (BNC)(1)*: 1.0 Vp-p, 75 Ω, unbalanced, sync negative
*Shared with the External Sync IN
S Video (4-pin mini DIN)(1):
Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C: 0.3 Vp-p (subcarrier burst), 75 Ω, unbalanced

Audio Inputs

RCA pin (2) (stereo L/ R):
2 Vrms (full bit)

Video outputs

Composite (BNC)(1), (BNC for monitor OUT)(1):
1.0 Vp-p, 75 Ω, unbalanced, sync negative
S-Video (4-pin mini DIN)(1):
Y: 1.0 Vp-p, 75 Ω, unbalanced, sync negative
C: 0.3 Vp-p (subcarrier burst), 75 Ω, unbalanced

Audio outputs

RCA pin (2) (stereo L/ R) 2 Vrms (full bit)
L: CH1, CH3 or CH1/3 mix
R: CH2, CH4 or CH2/4 mix

Digital input/output

i.LINK (DV IN/OUT) (4-pin) (1):
IEEE1394-based

OTHERS

LANC: Stereo mini-mini jack (1)
DC IN: 12 V XLR 4-pin (1)
Control S: Stereo mini jack (IN) (1)
Headphone jack: Stereo mini jack (1)
RS-232C: D-sub 9-pin, male (1)
Foot Switch: Stereo Mini Jack (1)
Equal Potential Terminal (1)

SVO-3500MD

VHS Videocassette Recorder

•Reality Regenerator provides clearer, more accurate pictures during playback •Picture capture function •APC (Adaptive Picture Control) optimizes both recording and playback •Dual Mode Shuttle (DMS) control •High speed FF/Rewind •Control S IN connector •Foot switch/Tally out •Index search function •Auto head cleaner •UL2601-1 listed

Specifications

General

Mass:	4.3 kg (9 lb 5 oz)
Dimensions:	420(W) × 100(H) × 300(D) mm (16 5⁄8 × 4 × 11 7⁄8 inches)
Power requirements:	AC 120 V 60 Hz, 3 wire grounded receptacle

System

Video Signal:	VHS NTSC standard
Tape Speed:	SP only
FF/Rew time:	100 s with T-120 tape

Video Input/Output

Video recording system:	Rotary two-head helical scanning system
Input:	BNC (1): 1 Vp-p, 75Ω, unbalanced, sync negative
Output:	BNC (1): 1 Vp-p, 75Ω, unbalanced, sync negative
S/N Ratio:	More than 44 dB (with high grade tape)
Horizontal resolution:	300 TV lines (color) 350 TV lines (b/w)

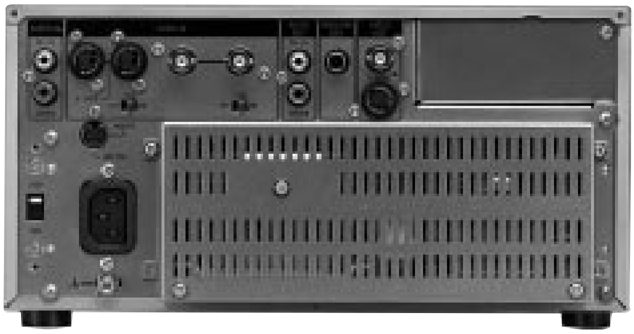
Other

Control S IN:	mini jack, input (1)
Audio IN/OUT:	RCA (1)
Foot SW/Rec Tally:	stereo mini pin (1)
MIC IN:	mini pin (1)
Print remote:	stereo mini pin (1)

SVO-9500MD

S-VHS videocassette recorder

•High quality picture and sound by S-VHS format and wide video/audio track design •Digital Chroma Noise Reducer (CNR) to provide highly stable picture •Clear and crisp freeze pictures in either frame or field mode thanks to built-in digital frame memory •Quality construction and durable mechanism for highly reliable operation •Quick response mechanism for immediate operation •±10 times picture search •Blank search function for quick searching of blank part on the tape •Index search function for rapid point location •Programmed operation •Tape remain indicator to show the amount of tape remaining •Auto head cleaner •Compact size and lightweight •Hi-Fi stereo audio recording system •Hi-Fi ON/OFF switch •VTR mode setting menu •SVRM-100A optional remote control unit •SVBK-100 33-pin interface board/SVBK-110 34-pin interface board/SVBK-120 Computer interface board (RS-232C) for wide system versatility •Compliance with medical safety regulation: UL-2601-1



Supplied accessories:	Instruction manual AC power cord
Optional accesories:	Remote control unit SVRM-100A 33-pin interface board SVBK-100 34-pin interface board SVBK-110 Computer interaface board SVBK-120 Indicator unit SVAC-100

Specifications

General

Video recording system:	Two rotary heads helical scanning system
Video signal system:	EIA monochrome/NTSC color
Operating temperature:	5 to 40 °C (41 to 104 °F)
Power requirements:	AC 120 V
Power consumption:	55 W
Dimensions:	270 (W) × 144 (H) × 370 (D)mm (10 3/4 × 5 3/4 × 14 5/8 inches)
Mass:	12 kg (26 lb 7 oz)

Video signal

Input:	BNC: 1.0 Vp-p, 75 Ω, sync negative S-VIDEO: Mini DIN 4-pin Y: 1.0 Vp-p, 75 Ω, C: 0.286 Vp-p, 75 Ω
Output:	BNC: 1.0 Vp-p, 75 Ω, sync negative S-VIDEO: Mini DIN 4-pin Y: 1.0 Vp-p, 75 Ω, C: 0.286 Vp-p, 75 Ω
S/N ratio:	Better than 46 dB

Audio signal

Input:	LINE IN: CH-1/CH-2: –10 dBu, 47 kΩ, unbalanced Microphone: CH-2: –60 dBu, 3 kΩ, unbalanced
Output:	LINE OUT: CH-1/CH-2: –10 dBu, 1 kΩ, unbalanced
S/N ratio:	40 dB (standard)
Dynamic range:	Better than 90 dB (Hi-Fi)
Frequency response:	15 Hz to 15 kHz (standard), 20 Hz to 20 kHz (Hi-Fi)

Tape transport

Tape speed:	33.35 mm/s
F FWD and REW time:	2.5 min (MQST-120)
Videocassette:	S-VHS cassette tapes