

## SECTION 3 NON-LINEAR/EDITOR/DME/SWITCHER

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# 1 Non-linear Editing system

## ES-7

### EditStation™

•The digital system for power production •Direct Digital Link with DVCAM DSR-60/80/85 VTR •x4 Transfer capability when combined with the DSR-85 VTR •High picture quality •Hybrid operation capability including the unique Disk B-roll™ operation •SDI and SDTI (QSDI) digital interface capability with optional boards •2-channel playback and 1-channel recording for real-time layering •All-in-one concept •Sophisticated Graphical User Interface (GUI) provided for efficient operation •ClipLink™ operation to save valuable disk space and time •Superb performance DME Switcher •Multiple input/output formats •Direct touch graphics function to enable graphics creation to be performed directly on the live video •Project file exchange capability •Variable compression rate •Optional ESDraw kit available in addition to the standard TextComposer •Control panel available for intuitive operation •Fixed speed DMC •16:9 editing mode •User Programmable Effect •Movie/Animation file import/export •Narration recording •16:9 Mode •Effects rubber band •Waveform monitor and vector scope display

Supplied accessories	Power cord
	Mouse
Optional accessories	Keyboard
	Extension cable for keyboard and mouse (4 m)
	Parallel GPI D-sub 15-pin connector
	Software and online manual (CD-ROM)
	WindowsNT package (CD-ROM) and manual
	Operating instructions
	Control Panel ESBK-7011
	Basic DME Switcher Board ESBK-7021
	3D Effect Board for Basic DME Switcher Board ESBK-7022
	Advanced DME Switcher Board ESBK-7023
Optional accessories	3D Effect Board for Advanced DME Switcher Board ESBK-7024
	SDTI (QSDI) Interface Board ESBK-7031
	SDI Interface Board ESBK-7032
	Disk Recorder Board ESBK-7041
	Disk Unit ESBK-7045
	SCSI Option ESBK-7051
	Ethernet Option ESBK-7052
	SCSI Cable ESBK-7053
	Additional Memory Set ESBK-7054
	ESDraw ESBK-7071
	EditStation Operation Manual ESBK-7091E
	ESDraw Operation Manual ESBK-7092E
	Rack Mount Kit for ES-7 RMM-ES7
	Rack Mount Kit for ESBK-7045 RMM-ES701

### Specification

#### General

Power requirement	AC 120V, 50/60Hz
Operating voltage	AC 90 to 132V, 48 to 63Hz
Power consumption	Main Unit (ES-7): Approx. 450W Disk Unit (ESBK-7046): Approx. 100W
Operating temperature	5 to 35°C (41 to 95°F)
Dimensions	Main Unit (ES-7): 424 (W) × 431.6 (H) × 478 (D) mm (16 <sup>3</sup> / <sub>4</sub> × 17 × 18 <sup>7</sup> / <sub>8</sub> inches) Disk Unit (ESBK-7045): 424 (W) × 88 (H) × 478 (D) mm (16 <sup>3</sup> / <sub>4</sub> × 3 <sup>1</sup> / <sub>2</sub> × 18 <sup>7</sup> / <sub>8</sub> inches) Control Panel (ESBK-7011): 372 (W) × 76 (H) × 228 (D) mm (14 <sup>3</sup> / <sub>4</sub> × 3 × 9 inches)
Mass	Main Unit (ES-7): 35kg (77 lb 3 oz) Disk Unit (ESBK-7045): 14kg (30 lb 14 oz) Control panel (ESBK-7011): 1.7kg (3 lb 12 oz)

#### PC

CPU	Pentium 200MHz MMX
OS	Windows NT 4.0
Memory	64MB
Hard disk drive	2 GB
Floppy disk drive	1 × 720KB/1.44MB



Rear Panel of ES-7

# 1 Non-linear Editing system



ESBK-7011



ESBK-7046

CD-ROM drive	1 × ATAPI, Quadruple (x24) speed
Card slot	32-bit PCI bus (33MHz) and 16-bit ISA bus
VGA	1024 × 768, 65K colors
Mouse	1 × Mini Din 6-pin
Keyboard	1 × Mini Din 6-pin

## Video

Analog video inputs	3 sources (P1/P2/R) selectable from Y/R-Y/B-Y, Composite or Y/C BNC: Y/R-Y/B-Y, Composite MiniDin 4-pin: Y/C 1 sources (AUX) selectable from Composite Y/R-Y/B-Y, or G/B/R/Sync., BNC 1 × Gen. Lock IN, BNC
Digital video inputs	2 (P1, P2/R) × SDTI (QSDI), BNC 3 (P1, P2, R) × SDI, BNC
Analog video outputs	PGM & MONITOR outputs, Y/R-Y/B-Y, G/B/R/Sync., Composite and Y/C BNC: Y/R-Y/B-Y, G/B/R/Sync., Composite MiniDin 4-pin: Y/C
Digital video outputs	4 × Black Burst output, BNC 1 × SDI PGM output (R), BNC 1 × SDTI (QSDI) PGM output (R), BNC

## Audio

Audio	Up to 22-ch input and 4-ch output
Analog audio inputs	4-ch × 3 sources (P1/P2/R), XLR 3-pin 2-ch × 1 source (AUX), XLR 3-pin
Digital audio inputs	2-ch × 1 source (AUX), selectable from AES/EBU or IEC-958
Analog audio outputs	LINE OUT: 4-ch, XLR 3-pin MONITOR OUT: 2-ch (1/3 & 2/4), Pin-jack
Digital audio outputs	Multiplied as SDI/SDTI (QSDI)

## Compression

Compression scheme	DV Compression
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## DME Switcher

Basic DME Switcher (ESBK-7021)	Y:R-Y:B-Y=4:1:1, 13.5MHz, 8-bit Chromakey & luminance key: 1 bit (linear key) Downstream keyer: 8 bit
Advanced DME Switcher (ESBK-7023)	Y:R-Y:B-Y=4:2:2, 13.5MHz, 8-bit Chromakey & luminance key: 8 bit (linear key) Downstream keyer: 8 bit

## Control

P1, P2, AUX & R	RS-422A, D-Sub 9-pin
GPI (Serial)	RS-232C, D-Sub 9-pin
GPI (Parallel)	Active low TTL, D-Sub 9-pin
Control Panel	D-Sub 15-pin

## Graphics/title

Pixel format	4:2:2:4 (Y/R-Y/B-Y/Alpha)
Font	True type
Import/Export format	BMP, TGA, TIFF, PICT, JPEG

## Others

EDL import/export format	Sony BVE-9100 Format
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# 1 Non-linear Editing system

## ES-3

### EditStation

•Flexible non-linear editing system •Offers DV compression operation and uncompressed operation (option) •Direct Digital Link with DVCAM VTR •High picture quality •SDI and SDTI(QSDI) digital interface capability with option  
•Sophisticated Graphical User Interface (GUI) provided for efficient operation •ClipLink operation to save valuable disk space and time •Multiple input/output formats provided  
•Video special effects (including third-party effect software)  
•Standard Titler •Control panel available for intuitive operation •Text EDL output •Open software architecture  
•Support of QuickTime/AVI file format •Multiple Languages for GUI

Supplied items:

- Main unit
- PCI interface board
- ES-3 application software
- Title software
- Installation instructions
- AC power code
- Modular cable
- Cable splitter

### Specifications

#### General

##### Main Unit

Power Requirements: AC 120 V, 50/60 Hz  
Power Consumption: 100 W  
Operating Temperature: 5~35°C (41~95°F)  
Dimensions: 442 (W) × 134 (H) × 365 (D) mm (without projection)  
(17 1/2 × 5 3/8 × 14 3/8 inches)  
Mass: 11 kg (24 lb 4 oz)  
Video Signal Standard: NTSC  
Video Processing: Y:R-Y:B-Y=4:2:2, 13.5 MHz, 8-bit  
Audio Processing: 48 kHz, 16-bit  
Compression Scheme: DV compression (fixed 25 Mbit/s)

#### PCI Interface Board

Standard: PC/AT PCI Rev 2.1  
Dimensions: PCI Full size

#### Signal Connectors

##### Analog Inputs

COMPOSITE: BNC  
Y, R-Y, B-Y: BNC  
S VIDEO: Mini-DIN 4-pin  
GEN LOCK IN, THRU OUT: BNC  
AUDIO CH-1, 2, 3, 4: XLR 3-pin

##### Analog Outputs

COMPOSITE: BNC  
Y, R-Y, B-Y: BNC  
S VIDEO: Mini-DIN 4-pin  
B.B. OUT: BNC  
MONITOR: Mini-DIN 4-pin (at PCI interface board)  
AUDIO CH-1, 2: XLR 3-pin (2)  
AUDIO MONITOR: Stereo Mini Jack (at Cable splitter)

##### Digital Inputs

SDI/SDTI(QSDI): BNC \*ESBK-3031 is required.  
DV IN: DV-type 4-pin Jack  
AES/EBU: XLR 3-pin

##### Digital Outputs

SDI/ SDTI(QSDI): BNC \*ESBK-3031 is required.  
AES/EBU: XLR 3-pin

##### Digital Input/Output

DV IN/OUT: DV-type 4-pin Jack

#### Control Connectors

PLAYER REMOTE: D-sub 9-pin, RS-422A  
RECORDER REMOTE: D-sub 9-pin, RS-422A  
PC INTERFACE: Modular Jack 8-pin  
MAIN UNIT I/F: Modular Jack 8-pin  
(at PCI interface board)  
CONTROL PANEL: D-sub 15-pin (at PCI interface board)



#### Titler

Pixel Format: Y/R-Y/B-Y/Alpha = 4:2:2:4  
Display Area: 720x480 for NTSC  
Font: True type  
Import Format: BMP, TGA, TIFF

## 2 Editing control units

### RM-450A

#### Editing control unit

•Can be connected to 9-pin equipped editing VTRs on both the player side and recorder side •The RM-450A not only allows CTL based editing but also makes Time Code editing possible •Provides the Relative Time Code (RTC) editing mode, in which time code is used as an edit reference and time code progress is like CTL on the LED counter •The AUDIO COUNTER RESET function automatically sets the editing point first designated to "0:00:00:00" •Can use the Assemble and Insert (V/A1/A2) edit modes, and provides editing functions such as editing IN-POINT/OUT-POINT ENTRY, PREVIEW, TRIM, AUTO EDIT/END, REVIEW/JUMP, GO TO, AUDIO SPLIT, and LAST EDIT •The function keys are laid out to enable easy operation •Provides the JOG/SHUTTLE dials on both the player side and recorder side •Accepts REF. VIDEO IN (reference video input) for synchronized operation •Can memorize the pinch on delay and adjust the editing in-point automatically •Mode setting is very easy and convenient when using the preset switches on the front panel •A cue pulse out is provided for external equipment •Indicates the "Error" and error number on the LED counter along with a warning sound •A built-in self-diagnostic function improves serviceability and make maintenance easy

Supplied accessories: AC power cord  
Error message chart  
Operation manual

Optional accessories: 9-pin remote control cable RCC-5G/10G/30G  
Rack mount kit RMM-450  
(for 19-inch EIA and SONY SU-512 rack)

#### Specifications

Power requirements: AC 108 to 132V, 48 to 63Hz  
Power consumption: 11W  
Mass: Approx. 3.1 kg (61 lb 13 oz)  
Dimensions: 390(W) × 93(H) × 265(D) mm  
(15 × 3<sup>3</sup>/<sub>4</sub> × 10<sup>1</sup>/<sub>2</sub> inches)  
Operating temperature: 0 to 40°C (32 to 104°F)  
Edit reference: CTL, SMPTE/EBU LTC, VITC  
Reference video input: 0.5Vp-p to 2.0Vp-p, negative, 75Ω, unbalanced  
External sync input: 0.5Vp-p to 5.0Vp-p, negative, 75Ω, unbalanced  
Cue pulse signal: Active low: low level 0 to 0.5V/high 3.5 to 5.0V



NON-LINEAR/EDITOR/  
DINE/SWITCHER

## 2 Editing control units

### PVE-500

#### Editing control unit

•Three VTR control capability in A/B roll editing •Serial switcher interface via 9-pin RS-422A connection •Both parallel and serial audio mixer interface capability •Handles TC (Time Code), CTL (Control Track Signal), and RTC (Relative Time Code) as editing reference •Assemble and Insert (V, A1, A2) editing capability •Features variable speed control over VTRs equipped with Dynamic Tracking function •Up to 99 edits can be stored in the built-in EDL memory •Audio split edit capability offers effective insertion of sound effects •Snapshot memory number in the DFS-500/DFS-300 can be stored and recalled by the Edit Number •Reference video input allows synchronized operation with other equipments •Equipped with an RS-232C interface allowing SAVE/LOAD of the EDL data onto a floppy disk •A GPI output enables basic control of peripheral equipments such as audio tape recorders and title generators which cannot be directly interfaced with the PVE-500 •The two search dial operation enables quick and easy access to the edit points

Supplied accessories: AC power cord  
Operation manual

Optional accessories: Audio mixer control cable RCC-5AA  
9-pin remote control cable RCC-5G/10G/30G  
Rack mount metal RMM-500

#### Specifications

##### General

Power requirements: AC 100/120/220 to 240 V  $\pm 10\%$ , 47.5 to 63 Hz  
Power consumption: 11W maximum  
Operating temperature: 5 to 40°C (41 to 104°F)  
Storage temperature: -20 to 60°C (-4 to 140°F)  
Dimensions: 390(W)  $\times$  93(H)  $\times$  265(D) mm  
(15 $\frac{3}{8}$   $\times$  3 $\frac{3}{4}$   $\times$  10 $\frac{1}{2}$  inches)  
Mass: 3.2 kg (7 lb 8 oz)

##### Systems

Editing reference: CTL, RTC, SMPTE/EBU Time Code  
Edit accuracy:  $\pm 0$  frame with time code  
 $\pm 1$  frame with CTL  
Memory capacity: 99 events

##### Controls

VTR interface: RS-422A 9-pin remote connector  
Switcher interface: RS-422A 9-pin remote connector  
Mixer interface: 9-pin serial/parallel switchable  
Controllable VTRs: 1 recorder and up to 2 players



## 2 Editing control units

### FXE-120

#### Video Editing System

- Integration of an editing controller, video switcher, audio mixer and digital effects generator
- Three VTR control (RS-422A/RS-232C)
- LANC (Local Application Control bus system) interface for controlling home-use LANC VTRs and camcorders as player VTRs
- Time code based editing
- Equipped with two buses
- GPI input/output
- 8-bit quantizing, 4:1:1 digital processing
- Built-in Frame Synchronizers allow editing without a Time Base Corrector
- 140 wipe patterns
- Digital effects (Mix Effect/Fade Effect/ Input Effects)
- Built-in chromakeyer and luminance keyer
- Color correction capability
- 25 different color background
- Editing memory for 99 events
- Saving/ loading of EDL Data is possible

Supplied Accessories	AC power cord (1)
	Instruction manual (1)
Optional Accessories	User's guide (1)
	LANC cord (2)
	RCC-5/10/30G RS-422A remote cable
	SMF-3036C (RS-232C remote cable, 9-pin to 25 -pin)

#### Specifications

##### General

Signal system:	NTSC
Power requirements:	AC 120 V $\pm$ 10%, 50/60Hz $\pm$ 5%
Power consumption:	Maximum 57 W
Operating temperature:	5 to 40°C (41 to 104°F)
Storage temperature:	-20 to 60°C (-4 to 140°F)
Dimensions (W x H x D):	424 x 138.5 x 437.5 mm (16 3/4 x 5 1/2 x 17 1/4 inches)
Mass:	Approx. 7.3 kg (16 lb 1 oz)

##### Systems

Time counter:	Internal time counter (3)
Time count display range:	Time code: 00:00:00:00 to 3:59:59:29 CTL: $\pm$ 9:59:59:29 Full edit mode
Editing mode:	Assemble edit: Video, Audio 1/2 Insert Edit: Video Audio 1/2 First edit, Time code insert Split edit, Dynamic Motion Control (DMC)
Edit type:	MIX, WIPE, SYNC-ROLL, CUT, MANUAL 1st Edit, Audio Split Edit, DMC Control
Edit reference:	CTL, LTC, SMPTE/EBU time code, 8mm time code, RC time code, DV time code
Edit Accuracy:	RS-422A: $\pm$ 0 frame with TC, $\pm$ 1 frame with CTL RS-232C: $\pm$ 1 frame with TC LANC: $\pm$ 5 frame with RC time code
Transition time range:	0 to 999 (unit: frames)
Pinch-on Delay:	Simultaneous measurement of pinch-on delay for up to three VCRs connected to RS-422A/RS-232C/ LANC connectors
EDL memory capacity:	99 edits
Split edit reference:	Audio or Video input

##### Control

VTR Interface:	RS-422A: 9-pin RS-232C: D-sub 9-pin LANC: stereo mini-mini jack
Controllable VTR:	1 recorder, up to 2 players
GPI interface:	GPI IN (BNC) GPI OUT (BNC) (2)
EDL Interface:	EDL IN/OUT (D-sub 9-pin)

##### Video

Video inputs	
Composite:	BNC (4), unbalanced (PLAYER 1, PLAYER 2, AUX1, RECORDER) Video: 1.0 Vp-p, 75 $\Omega$ Sync: 0.286 Vp-p Burst: 0.286 Vp-p
S-Video	4-pin (4), unbalanced (PLAYER 1, PLAYER 2, AUX1, RECORDER) Y: 1.0 Vp-p, 75 $\Omega$ , sync negative C: 0.286 Vp-p, 75 $\Omega$ Sync: 0.286 Vp-p



##### Video Outputs

Composite:	BNC (3), unbalanced (PGM 1, 2, MONITOR) Video: 1.0 Vp-p, 75 ohms Sync: 0.286 Vp-p Burst: 0.286 Vp-p
S-Video	4-pin (2), unbalanced Y: 1.0 Vp-p, 75 $\Omega$ , Sync negative C: 0.286 Vp-p, 75 $\Omega$ Sync: 0.286 Vp-p
Black bust out:	BNC (4), unbalanced Sync: 0.286 Vp-p Burst: 0.286 Vp-p

##### Audio

Audio Inputs (stereo):	AUDIO L/R INPUT (PIN jack), (2 channels (5)) PLAYER 1 MAIN (2), SUB (2) PLAYER 2 MAIN (2), SUB (2) RECORDER (2) AUX 1 (2) AUX 2 (2) Input impedance: selectable with 600 $\Omega$ terminal switch
	Input level: -7.5 dBs (input impedance 47 k $\Omega$ or above, 600 k $\Omega$ switch OFF) +4dBs (input impedance 600 $\Omega$ , 600 $\Omega$ switch ON)
Mic Input (monaural):	PIN (1), unbalanced Input level: -60 dBs, Input impedance: more than 4.3 k $\Omega$ or above
Audio Outputs (stereo):	AUDIO L/R OUTPUT (PIN jack) (6) PGM 1(2), PGM 2(2), MONITOR (2) Output level: -7.5 dB/+4.0 dB selectable Output Impedance: 47k $\Omega$ (-7.5 dBs/+4.0dBs)

##### Signal Processing

Sampling rate:	Y: 910 fH (fH = 15,734kHz) R-Y/ B-Y: 1/4 x 910 fH
Quantization:	Y/R-Y/B-Y: 8-bit
Frequency response:	0 to 5 MHz $\pm$ 1dB/ -1dB
Signal to noise ratio:	More than 53 dB
Y/C delay:	Less than 50 ns (Composite)

##### Recommended LANC VTRs

Camcorders:	CCD-VX1, CCD-TR3300, CCD-TR3200, CCD-TR3100, CCD-TRV300, DCR-VX1000, DCR-PC7, DCR-PC10, DCR-SC100, DCR-TRV7, DCR-TRV9, DCR-TRV900, DSR-200, DSR-200A, DSR-PD1, DSR-PD100
Player VTR:	EV-S9000, EV-C2000, DHR-1000, DSR-20, DSR-V10, DSR-30
Recorder VTR:	DSR-30

## 2 Editing control units

### IF-FXE2

#### LANC Interface Box

- Converts the RS-422A protocol to LANC protocol
- Supports connection between recorder LANC VTR's and FXE-100UPG(\*1)/FXE-120
- Supports connection between player LANC VTR's and RM-450A/PVE-500

(\*1) FXE-100UPG is an FXE-100 which is upgraded with FXE-KIT1.  
Please contact your nearest Sony office.

Supplied Accessories: LANC Connecting Cord (Stereo mini-mini) (1)  
AC Power Adaptor (1)  
Instruction Manual (1)  
List of the recommended products (1)

Optional Accessories: RS-422A Remote Control Cable: RCC-5G/10G/30G

#### Specifications

##### General

Mass: Approx. 500 g (17.6 oz)  
Dimensions: Approx. 106 (W) × 40 (H) × 163 (D) mm  
(4<sup>1</sup>/<sub>4</sub> × 1<sup>5</sup>/<sub>8</sub> × 6<sup>1</sup>/<sub>2</sub> inches)  
Power requirements: DC 6 V  
Power consumption: Less than 3W (with the supplied AC power adaptor)  
Operating temperature: 5 C to 40°C  
Storage temperature: -20 C to 60°C  
Operational position: Horizontal or vertical

##### Connectors

RS-422A port: D Sub 9-pin (1)  
LANC port: Stereo mini-mini jack (1)  
DC input: 6V (1)

##### Function Switches

Power: Seesaw Switch (1)  
Learn: Push Switch (1) and LED (1)  
Preset: Dip Switch (4-bit)





## 3-1 Digital multi effects/switcher systems

### DFS-700

#### DME Switcher

- Video switcher equipped with powerful digital multi effector
- Full digital component processing from input to output at 4:2:2:4 (video and key) •No need for external A/D converters
- Incorporates thousands of factory preset effect patterns including non-linear digital effects •The perfect companion for Sony digital VTRs and servers
- Real-time system, capable of delivering effects in an instant •Eight standard inputs include four SDIs and four analog components
- Eight standard outputs include two SDIs, two analog components, two analog composites, and two Y/Cs
- Can be used with Sony BVE-2000 and PVE-500 editors via the serial interface
- Optional boards are prepared to change the types of inputs (BKDF-701/702) •Chroma keyer, Y/U/V color correction, down stream keyer, fade-to-black, and frame memory are included
- 2nd channel DME board prepared as an option (BKDF-711) •3D video mapping effects board prepared as an option (BKDF-712)

Supplied Accessories: D-sub 25-pin control cable (10 m)  
AC cord  
Instruction manual

#### Optional Accessories

BKDF-701	Digital/Analog Input Board for NTSC
BKDF-702	Analog Composite Input Board for NTSC
BKDF-711	2nd Channel DME Board
BKDF-712	3D Video Mapping Effects Board

#### Specifications

##### General

Power requirements:	AC 120 V, 50/60 Hz
Operating voltage:	AC 90 to 130 V, 47 to 63 Hz
Power consumption:	200 W
Operating temperature:	0 to 40 °C (32 to 104 °F)
Dimensions:	Control panel: 440 (W) × 121 (H) × 287 (D) mm 17 1/4 × 4 3/4 × 11 1/4 inches Processor unit: 440 × 132 × 520 mm 17 1/4 × 5 1/4 × 20 1/2 inches
Mass:	Control panel: 3 kg, 6 lb 10 oz Processor unit: 14 kg, 30 lb 14 oz

##### Input Signals

##### VIDEO INPUTS

SDI:	BNC type x 4 270 Mb/s
Component:	BNC type x 4 (Y/R-Y/B-Y) Y: 1.0 Vp-p, 75 Ω, Sync negative R-Y/B-Y: 0.7 Vp-p, 75 Ω
DSK KEY IN:	BNC type x 2, Loop-through, 1.0 Vp-p, 75 Ω
REF VIDEO:	BNC type x 2, Loop-through connection Sync: 0.286 Vp-p Burst: 0.286 Vp-p

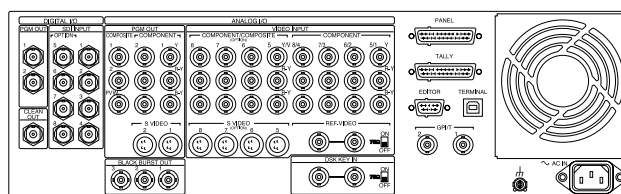
##### Output Signals

##### PGM OUT

SDI:	BNC type x 2 270 Mb/s
Component:	BNC type x 2 (Y/R-Y/B-Y) Y: 1.0 Vp-p, 75 Ω, Sync negative R-Y/B-Y: 0.7 Vp-p, 75 Ω
Composite:	BNC type x 2 Video: 1.0 Vp-p, 75 Ω, Sync negative
S-Video:	DIN type x 2 (Y/C) Y: 1.0 Vp-p, 75 Ω, Sync negative C: 0.286 Vp-p at burst, 75 Ω
CLEAN OUT:	BNC type x 1 SDI: 270 Mb/s
PREVIEW OUT:	BNC type x 1, Composite Video: 1.0 Vp-p, 75 Ω, Sync negative
BLACK BURST OUT:	BNC type x 3 Sync: 0.286 Vp-p, 75 Ω Burst: 0.286 Vp-p, 75 Ω

##### Signal Processing

Sampling rate:	Y: 13.5 MHz R-Y/B-Y: 6.75 MHz
Quantization:	Y/R-Y/B-Y: 8 bits
Linearity (Composite output):	DG: Less than 3.5% (composite input)



	Less than 2% (component, S-Video input)
DP:	Less than 2.5° (composite input)
	Less than 1° (component, S-Video input)
Frequency response	0 to 5 MHz +0.5 dB/-1 dB
S/N	More than 50 dB (composite)
	More than 55 dB (component, S-Video)
Y/C delay	Less than 20 ns (component)
	Less than 50 ns (composite, S-Video)

##### Control Signals

Editor	D-sub 9 pin x 1, RS-422A
GPI/T	BNC type x 2, TTL Level
Panel	D-sub 25-pin x 1
Tally	D-sub 25-pin x 1, Relay contact outputs x 8
Terminal	USB B-type

### BKDF-701

With the BKDF-701, the following 8 inputs can be added to the standard 8 inputs of the DFS-700, making the total number of inputs 16. During use, any 8 of the 16 inputs can be assigned to the control panel.

##### Input Signals

SDI:	BNC type x 4 270 Mb/s
Component:	BNC type x 4 (Y/R-Y/B-Y) Y: 1.0 Vp-p, 75 Ω, Sync negative R-Y/B-Y: 0.7 Vp-p, 75 Ω

### BKDF-702P

With the BKDF-702P, the following 4 inputs (composite or S-Video) can be added to the standard 8 inputs of the DFS-700, making the total number of inputs 12. During use, any 8 of the 12 inputs can be assigned to the control panel.

##### Input Signals

Composite:	BNC type x 4 Video: 1.0 Vp-p, 75 Ω, Sync negative
S-Video:	DIN type x 4 (Y/C) Y: 1.0 Vp-p, 75 Ω, Sync negative C: 0.286 Vp-p at burst, 75 Ω

### BKDF-711

The BKDF-711 adds a second Title Key.

## 3-1 Digital multi effects/switcher systems

### DFS-500

#### DME switcher

- Video switcher equipped with powerful digital multi effector
- More than 300 factory preset effect patterns including non-linear digital effects
- Up to 40 manually created effect patterns can be stored in the User Program memory system for subsequent recall
- Built-in two frame synchronizer accept non time base corrected video signals
- 4:1:1 digital component processing realizes high picture quality
- Accepts component, composite and S-VIDEO signals to be processed simultaneously
- Composed of 2 busses and 4 primary inputs
- 15 Original background patterns
- Up to 99 panel status storage in the Snap Shot memory system
- Equipped with 5 individual color matte generators
- Built-in title keyer
- Equipped with fader lever to allow manual picture transition
- Perfect interface capabilities with BVE-3000 Series
- Simple A/B roll editing system with PVE-500
- Modular design composed of a control panel and a processor unit
- Down stream keyer function available with optional board
- Lighting, trail, shadow and drop border effects are available with optional board

#### Typical preset patterns

mosaic, mirror, negative, solarization, posterization  
picture in picture, ripple wipe, accordion, sphere, page turn, page roll, split slide, melt down, stream, flag

Supplied accessories: AC power cord  
25-pin control cable, 10 m  
Label (1 set)  
Operation Manual

Optional accessories: BKDF-501 Trail and lighting board  
Provides drop border, shadow, trail and lighting effects.  
BKDF-504 DSK board  
Provides 8bit down stream keyer.  
BKDF-503 Rack mount kit  
Enables the control panel to be mounted onto the editing console.

#### Specifications

##### General

Power requirements: AC 100/120V, 50/60Hz  
Operating voltage: AC 85 to 132V, 47 to 63Hz  
Power consumption: 140W  
Operating temperature: 0 to 40°C (32 to 104°F)  
Dimensions: Control Panel: 424(W) × 116(H) × 344(D) mm  
(16<sup>3</sup>/<sub>4</sub> × 4<sup>5</sup>/<sub>8</sub> × 13<sup>3</sup>/<sub>8</sub> inches)  
Processor Unit: 424(W) × 177(H) × 450(D) mm  
(16<sup>3</sup>/<sub>4</sub> × 7 × 17<sup>3</sup>/<sub>4</sub> inches)  
Mass: Control Panel: 3 kg (6 lb 10 oz)  
Processor Unit: 17 kg (37 lb 4 oz)

##### Input Signals

VIDEO INPUTS 1 through 4

Composite: BNC type (1 in each)  
VIDEO: 1.0Vp-p, 75Ω  
SYNC: 0.286Vp-p  
BURST: 0.286Vp-p  
Y/C: 4-pin (1 in each)  
Y: 1.0Vp-p, 75Ω  
C: 0.286Vp-p, 75Ω  
SYNC: 0.286Vp-p  
Component: 12-pin (1 in each)  
Y: 1.0Vp-p, 75Ω  
R-Y/B-Y: 0.7Vp-p, 75Ω

##### DSK VIDEO IN

Composite/G/Y: BNC type  
Composite: VIDEO 1.0Vp-p, 75Ω  
SYNC 0.286Vp-p  
BURST 0.286Vp-p  
Y: 1.0Vp-p, 75Ω  
G: 0.7Vp-p, 75Ω  
B/B-Y: BNC type  
B-Y: 0.7Vp-p, 75Ω  
B: 0.7Vp-p, 75Ω  
R/R-Y: BNC type  
R-Y: 0.7Vp-p, 75Ω  
R: 0.7Vp-p, 75Ω



Rear Panel of Processor



EXT KEY IN: BNC type 1.0Vp-p, 75Ω  
DSK KEY IN: BNC type 1.0Vp-p, 75Ω  
GEN LOCK IN: BNC type  
Sync: 0.286Vp-p  
Burst: 0.286Vp-p

##### Output Signals

PGM OUT 1 and 2  
Composite: BNC type  
VIDEO: 1.0Vp-p, 75Ω  
SYNC: 0.286Vp-p  
BURST: 0.286Vp-p  
Y/C: 4-pin  
Y: 1.0Vp-p, 75Ω  
C: 0.286Vp-p, 75Ω  
SYNC: 0.286Vp-p  
Component: 12-pin  
Y: 1.0Vp-p, 75Ω  
R-Y/B-Y: 0.7Vp-p, 75Ω  
BNC type: 1.0Vp-p, 75Ω  
KEY OUT: BNC type  
BLACK BURST OUT: BNC type  
SYNC: 0.286Vp-p, 75Ω  
BURST: 0.286Vp-p, 75Ω

##### Signal Processing

Sampling Rate: Y: 910fH (fH: 15.625 kHz)  
R-Y/B-Y: 1/4 × 910fH  
Quantization: Y/R-Y/B-Y: 8 bits  
Linearity (Composite output):  
DG: Less than 3.5% composite input  
Less than 2% component/S input  
DP: Less than 2.5° composite input  
Less than 1° component/S input  
Cross talk: Less than -50dB  
Frequency response: 0 to 5 MHz +0.5dB/-1dB  
S/N: More than 51dB (composite)  
More than 55dB (Y/C, component)  
Y/C delay: Less than 20ns (component)  
Less than 50ns (composite)

##### Control Signals

Editor: 9-pin remote  
T1/T2, cue: BNC type  
Control Panel: 25-pin remote

## 3-1 Digital multi effects/switcher systems

### DFS-300

#### DME switcher

- Video switcher equipped with powerful digital multi effector
- More than 300 factory preset effect patterns including 2D digital effects
- With the optional board BKDF-301, 3D linear and non linear factory preset effect patterns can be added
- Up to 20 manually created effect patterns can be stored in the User Programme memory system for subsequent recall
- With the optional board BKDF-301, up to 40 effect patterns can be manually created and stored in the User Programme memory system
- Built-in two frame synchronizers accept non time base corrected video signals
- 4:1:1 digital component processing realizes high picture quality
- Accepts component, composite and S-video signals
- Accepts RGB signals for graphic image data processing
- Composed of two busses and four primary inputs
- 31 original background patterns
- Up to 99 snapshots can be stored in the Snap Shot memory system
- Equipped with five individual color matte generator
- Built-in chromakeyer, title keyer and color correction controller
- Equipped with fader lever to allow manual picture transition
- Provides simple A/B roll or two machine editing system with PVE-500
- Modular design composed of a control panel and a processor unit
- 8-bit Down Stream Keyer function available with optional board BKDF-504
- 3D and non-linear effects are available with optional board BKDF-301

#### Typical preset patterns

mosaic, mirror, negative, solarization, posterization, split, slide, melt down, stream, etc

Supplied accessories:	AC power cable 25-pin control cable (10m) Operation manual
Optional accessories:	BKDF-301 3D effect board Provides 3D, and non-linear effect BKDF-503 Rack mount kit BKDF-504 DSK board

#### Specifications

##### General

Power requirements:	AC120V, 50/60Hz
Operating Voltage:	AC90 to 132V, 48 to 63Hz
Power consumption:	80W
Operating temperature:	0 to 40°C (32 to 104°F)
Dimensions:	Control panel: 424(W) × 69(H) × 287(D) mm (16 <sup>3</sup> / <sub>4</sub> × 2 <sup>3</sup> / <sub>4</sub> × 11 <sup>3</sup> / <sub>8</sub> inches) Processor: 424(W) × 132(H) × 450(D) mm (16 <sup>3</sup> / <sub>4</sub> × 5 <sup>1</sup> / <sub>4</sub> × 17 <sup>3</sup> / <sub>4</sub> inches)
Mass:	Control panel: 2.3 kg (5 lb 1 oz) Processor: 13.0 kg (28 lb 11 oz)

##### Inputs/Outputs

Primary video inputs 1 to 3/Program video outputs:	
Composite	Connector: BNC type (×1, each) Video: 1.0Vp-p, 75Ω Sync: 0.286Vp-p Burst: 0.286Vp-p
S-video (Y/C)	Connector: DIN-4-pin (×1, each) Y: 1.0Vp-p, 75Ω C: 0.286Vp-p, 75Ω, burst Sync: 0.286Vp-p
Component (Betacam)	Connector: 12-pin (×1, each) Y: 1.0Vp-p, 75Ω R-Y/B-Y: 0.7Vp-p
Primary video inputs 4:	
Y/G	Connector: BNC type Y: 1.0Vp-p, 75Ω G: 0.7Vp-p, 75Ω
R-Y/R	Connector: BNC type R-Y: 0.7Vp-p, 75Ω R: 0.7Vp-p, 75Ω
B-Y/B	Connector: BNC type B-Y: 0.7Vp-p, 75Ω B: 0.7Vp-p, 75Ω
Sync	Connector: BNC type, 0.286 to 4.0Vp-p, 75Ω



Rear Panel of Processor



#### DSK Video Inputs:

Composite/G/Y (NTSC)	
Connector:	BNC type (×2, loop-through)
Video:	1.0Vp-p, 75Ω
Sync:	0.286Vp-p
Burst:	0.286Vp-p
Y:	1.0Vp-p, 75Ω
G:	0.7Vp-p, 75Ω
B/B-Y	
Connector:	BNC type
B-Y:	0.7Vp-p
B:	0.7Vp-p, 75Ω
R/R-Y	
Connector:	BNC type
R-Y:	0.7Vp-p
R:	0.7Vp-p, 75Ω

#### EXT KEY IN/DSK KEY IN/KEY OUT:

Connector:	BNC type (×1, each), 1.0Vp-p, 75Ω
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#### GEN LOCK IN:

Connector:	BNC type (×2, loop-through)
Video:	1.0Vp-p, 75Ω
Sync:	0.286Vp-p
Burst:	0.286Vp-p

#### BLACK BURST OUT 1 to 3:

Connector:	BNC type (×3)
Sync:	0.286Vp-p (75Ω)
Burst:	0.286Vp-p (75Ω)

#### Signal Processing

Frequency response:	0 to 5MHz (Ref. 1MHz) +0.5dB/-1dB
Linearity:	DG 3.5% (composite input) 2.0% (component/S input) DP 2.5" (composite input) 1.0" (component/S input)

#### Crosstalk:

S/N:	-50dB
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#### Y/C delay:

Less than 20ns (component)
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#### Sampling rate:

Y: 910fH (fH: 15.734kHz)
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#### Quantization:

R-Y/B-Y: 1/4 × 910fH
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#### CONTROL SIGNALS

EDITOR:	D-sub 9-pin, 9-pin remote (RS-422A)
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#### T1/CUE IN/T2 IN:

BNC type (×1, each), TTL level
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#### CONTROL PANEL:

D-sub 25-pin, 25-pin remote (RS-422A)
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## 3-2 Composite/Component Video Switchers

### BVS-3200 /3200C

#### Composite/Component Video Switcher

•Choice of composite or component version:

BVS-3200 Composite Video Switcher

—Accepts composite video signals

BVS-3200C Component Video Switcher

—Accepts composite or a combination of RGB, Y/R-Y/B-Y component signals

—12-pin Component Video Connector Inputs/Outputs for Betacam VTRs are provided

•Ten Primary inputs (including color black and color background)

•One M/E and two KEY Busses/Processors (assignable) •KEY OVER function •Two common EXT KEY sources and FILLS available for both KEYERS •One EXT KEY source and FILL available for DSK

•Ten basic and eight matrix wipe patterns with modifiers •Fully adjustable internal BOX MASK and EXT MASK inputs •Four COLOR MATTE GENERATORS for BACKGROUND, EFF/BORDER (KEY 1 and KEY 2), and DSK •CHROMAKEYER (RGB or Y/R-Y/B-Y selectable) •DSK with BORDER, DROP SHADOW, OUTLINE-2H/4H selectable •FADE to BLACK (FTB) function •Auto Transition for M/E, DSK, and FTB •RS-422A interface •Communication of E-File and initial panel information with BVE-2000/9100 •DFS-500 interface •Four Black Burst Outputs •GPI Input port for M/E, DSK, FTB, and SELECT •Four (BVS-3200C)/two (BVS-3200) PGM Outputs and one PVW Output

Supplied accessories: AC power cord  
Control panel cable (5 m)  
Extension board

Optional accessories: SWC-2530D Control panel cable (30 m)  
RMM-3000 Rack mount kit

#### Specifications

Power requirements: AC 100V to 240V  $\pm 10\%$ , 50/60Hz  $\pm 10\%$

Power consumption: BVS-3200: 140W  
BVS-3200C: 180W

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: -20 to 60°C (-4 to 140°F)



#### Dimensions:

Control panel: Approx. 424(W)  $\times$  111(H)  $\times$  440(D) mm  
(16 $\frac{3}{4}$   $\times$  3 $\frac{1}{8}$   $\times$  17 $\frac{3}{8}$  inches)

Processor unit: BVS-3200:  
Approx. 424(W)  $\times$  132(H)  $\times$  397(D) mm  
(16 $\frac{3}{4}$   $\times$  5 $\frac{1}{4}$   $\times$  15 $\frac{3}{4}$  inches)  
BVS-3200C:  
Approx. 424(W)  $\times$  176(H)  $\times$  450(D) mm  
(16 $\frac{3}{4}$   $\times$  7  $\times$  17 $\frac{3}{4}$  inches)

#### Mass:

Control panel: Approx. 4.4 kg (9 lb 11 oz)

Processor unit: BVS-3200:  
Approx. 13 kg (28 lb 11 oz)

BVS-3200C:  
Approx. 18 kg (39 lb 11 oz)

\*For this product, please contact your nearest Sony office.

### BVS-3100

#### Composite Video Switcher

•Ten Primary inputs (including color black and color background)  
•One M/E and one KEY Bus •Two EXT KEY sources and FILLS available for KEYER •One EXT KEY source and FILL available for DSK •Ten basic and eight matrix wipe patterns with modifiers •Fully adjustable internal BOX MASK and EXT MASK inputs •Three COLOR MATTE GENERATOR for BACKGROUND, EFF/BORDER, and DSK •CHROMAKEYER (RGB or Y/R-Y/B-Y selectable) •DSK with BORDER, DROP SHADOW, OUTLINE (2H/4H) selectable •FADE to BLACK (FTB) function •Auto Transition for M/E, DSK, and FTB •RS-422A interface •Communication of E-File and initial panel information with BVE-910/9000/9100 •DME-450 interface •Four Black Burst Outputs •GPI Input port for M/E, DSK, FTB, and SELECT •Two PGM Outputs and one PVW Output

Supplied accessories: AC power cord  
Control panel cable (5 m)  
Extension board

Optional accessories: Operation and maintenance manual  
SWC-2530D Control panel cable (30 m)  
RMM-3000 Rack mount kit

#### Specifications

Power requirements: AC 100V to 240V  $\pm 10\%$ , 50/60Hz  $\pm 10\%$

Power consumption: 125W

Operating temperature: 0 to 40°C (32 to 104°F)

Storage temperature: -20 to 60°C (-4 to 140°F)

#### Dimensions:

Control panel: Approx. 424(W)  $\times$  111(H)  $\times$  440(D) mm  
(16 $\frac{3}{4}$   $\times$  4 $\frac{3}{8}$   $\times$  17 $\frac{3}{8}$  inches)

Processor unit: Approx. 424(W)  $\times$  132(H)  $\times$  350(D) mm  
(16 $\frac{3}{4}$   $\times$  5 $\frac{1}{4}$   $\times$  15 $\frac{3}{4}$  inches)

#### Mass:

Control panel: Approx. 4.4 kg (9 lb 11 oz)

Processor unit: Approx. 13 kg (28 lb 11 oz)

\*For this product, please contact your nearest Sony office.



## 3-3 Special effects system

### SEG-2550A

### E-File

\*Production of this product has been discontinued. For details, please consult your nearest Sony office.

#### Color special effects generator

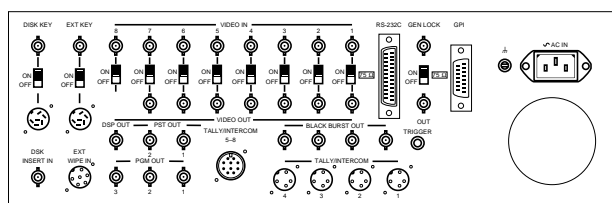
- The SEG-2550A is a compact and cost effective special effects generator for program production and post production
- The E-File function, which memorizes and reproduces the setting of switches and buttons and the movement of the controls, levers and sticks, is adopted
- Interface capability with the BVE-900/910 automatic editing control unit and an external computer
- A total of 137 versatile wipe patterns
- Wipe pattern modifiers such as the positioner, the border wipe, softness border edge, echo/pairing wipe, and mosaic wipe are provided
- 8 video inputs and 4 bus lines (A, B, PGM and PST) for special effects (MIX, WIPE, and EXTERNAL KEY)
- Built-in background color
- Built-in downstream keyer (DSK)
- Independent color generation for the DSK
- Shadow and edge adjustment for the key signal
- Built-in sync generator
- 4 black burst signal outputs for synchronization of video equipment
- SC and H phase indicators for easy phase adjustment
- 19-inch rack mountable
- Torque adjustment of the effects levers



NON-LINEAR/EDITOR/  
DME/SWITCHER

Supplied accessories:

- AC power cord
- Wipe pattern list
- CCJ connector for tally/intercom
- Designation label
- D-sub (15-pin) connector
- Transparent Designation Chips
- White Seal



#### Specifications

Power requirements: AC 120V, 60Hz  
 Power consumption: 82W  
 Operating temperature: 0 to 40°C (32 to 104°F)  
 Dimensions: Approx. 481(W) × 155.5(H) × 310.4(D) mm  
 (19 × 6 1/8 × 12 1/4 inches)  
 Mass: Approx. 14.5 kg (31 lb 15 oz)  
 Video signal system: NTSC color  
 Switching system: Vertical blanking switcher  
 Effects: MIX  
     Mixing by PGM/PST MIX lever and the EFF lever  
 WIPE  
     137 wipe patterns (selectable)  
     Wipe edge: The softness is continuously variable  
     Border: Hue, chroma, luminance and width are continuously variable  
     Pairing: Scanning lines 2 lines/3 lines/4 lines (selectable)  
     Echo: Possible  
 EXTERNAL KEY  
     Output signal (DIN, 6-pin)  
         HD, VD, 4Vp-p, 75Ω, unbalanced  
     Input signal (BNC type and DIN, 6-pin)  
         0.714Vp-p (video), 1Vp-p (VS), 75Ω, unbalanced with 75Ω termination switch  
     EXT KEY connector (BNC type and DIN, 6-pin) with 75Ω termination switch  
     Slicer circuit is included (Clip level is variable)  
 DOWNSTREAM KEYER  
     Output signal (DIN, 6-pin)  
         HD, VD, 4Vp-p, 75Ω, unbalanced  
     Input signal (BNC type and DIN, 6-pin)  
         0.714Vp-p (video), 1Vp-p (VS), 75Ω, unbalanced  
     DSK KEY connector: (BNC type and DIN, 6-pin) with 75Ω termination switch  
     Shadow: Wide and narrow (selectable)  
     Edge: Variable  
     Color matte: Continuously variable  
     Chroma: Approx. 0 to 700mVp-p (variable according to the hue level)  
     Hue: 0 to 360°  
     Luminance (Y): Approx. 50 to 700mV continuously variable  
 BACKGROUND COLOR  
     Chroma: Approx. 0 to 700mVp-p (variable according to the hue level)  
     Hue: 0 to 360°

Luminance (Y): Approx. 50 to 700mV continuously variable  
 Input signal:  
     VIDEO IN 1 to 8 connectors (BNC type) × 8  
         0.714Vp-p (VB) or 1Vp-p (VBS), 75Ω, unbalanced with 75Ω termination switches  
         (The INDICATION selector does not function with the VB input signal.)  
     GENLOCK IN connector (BNC type) × 1  
         0.286V/0.286V (BS) or 1Vp-p (VBS), with 75Ω termination switch  
     DSK INSERT IN connector (BNC type) × 1  
         1Vp-p (VS)  
     EXT WIPE IN connector (DIN, 6-pin) × 1  
 Output signal:  
     VIDEO OUT 1 to 8 connector (BNC type) × 8  
         1Vp-p (VBS), 75Ω, unbalanced (loop-through output of the corresponding VIDEO IN connector)  
     PGM OUT 1 to 3 connector (BNC type) × 3  
         1Vp-p (VBS), 75Ω, unbalanced  
     PST OUT 1 to 2 connector (BNC type) × 2  
         1Vp-p (VBS), 75Ω, unbalanced  
     GENLOCK OUT connector (BNC type) × 1  
         (loop-through output of GENLOCK IN connector)  
     DSP OUT connector (BNC type) × 1  
         1Vp-p (VS), 75Ω, unbalanced  
     BLACK BURST OUT 1 to 4 connector (BNC type) × 4  
         0.286V/0.286Vp-p (BS), 75Ω, unbalanced  
 Tally/Intercom:  
     TALLY/INTERCOM 1 to 4 connector (DIN, 4-pin) × 4  
     TALLY/INTERCOM 5 to 8 connector (CCJ, 10-pin) × 1  
     Maximum pick-up value in a relay: 24V 200mA DC  
 Trigger:  
     TRIGGER (Special minijack) × 1  
         TAKE function by earth  
         (OPEN: +5V, impedance 65kΩ)  
 GPI:  
     GPI (D-sub, 15-pin) × 1  
         TAKE function, PGM DSK Cut-in/out by earth  
         (OPEN: ±5V, impedance 65kΩ)  
 RS-232C:  
     9600 baud (fixed), DTE (terminal), Signal level ±9V  
 DG:  
     Less than 1%  
 DP:  
     Less than 1°  
 Crosstalk:  
     Over -50dB  
 Frequency response:  
     8MHz ±0.5dB  
 S/N ratio:  
     Over -60dB

# 4 Chromakeyer

## DCK-500

### Digital Chromakeyer

- 8-bit Digital processing for High Picture Quality
- Auto-Chromakey
- Manual Key Control Including Color Cancel
- Digital Color Correction
- Multiple Format Inputs and Outputs
- Snapshot Control from Editing Controller
- Two Frame Synchronizers

Supplied accessories: AC power cable  
Operation manual

Optional accessories: Control panel adopter BKDC-501

### Specifications

#### General

Power requirement: AC 120V, 50/60Hz  
Operating voltage: AC 90 to 132V, 48 to 63Hz  
Power consumption: 65W  
Dimensions: Processor 424 (W) × 132 (H) × 450 (D) mm  
(16<sup>3</sup>/<sub>4</sub> × 5<sup>1</sup>/<sub>4</sub> × 17<sup>3</sup>/<sub>4</sub> inches)  
Control Panel 325 (W) × 52 (H) × 132 (D) mm  
(12<sup>7</sup>/<sub>8</sub> × 2<sup>1</sup>/<sub>8</sub> × 5<sup>1</sup>/<sub>4</sub> inches)  
Mass: Processor Apporx. 12 kg (26 lb 7 oz)  
Control Panel Appox. 1.6 kg (3 lb 8 oz)  
Operating temperature: 0 to 40°C (32 to 104°F)

#### Inputs

Video Inputs 1/2:  
Input 1 Loop through  
Input 2  
Composite BNC type  
Video: 1.0Vp-p, 75Ω  
Sync: 0.286Vp-p  
Burst: 0.286Vp-p  
Y/C (S-video) DIN 4-pin  
Y: 1.0Vp-p, 75Ω  
C: 0.286Vp-p, 75Ω, burst  
Component (Betacam) BNC type  
Y: 1.0Vp-p, 75Ω  
R-Y/B-Y: 0.7Vp-p, 75Ω, 100/7.5/75/7.5  
Component RGB BNC type  
RGB: 0.7Vp-p, 75Ω  
Sync: 0.286 to 4.0Vp-p, 75Ω  
GENLOCK IN BNC type, Loop-through  
Video: 1.0Vp-p, 75Ω  
Sync: 0.286Vp-p  
Burst: 0.286Vp-p

#### Outputs

PGM OUT 1/2  
Composite BNC type  
Video: 1.0Vp-p, 75Ω  
Sync: 0.286Vp-p  
Burst: 0.286Vp-p  
Y/C (S-video)\* DIN 4-pin  
Y: 1.0Vp-p, 75Ω  
C: 0.286Vp-p, 75Ω, burst  
Component 12-pin (for OUTPUT 1), BNC type (for OUTPUT 2)  
Y: 1.0Vp-p, 75Ω  
R-Y/B-Y: 0.7Vp-p, 75Ω, 100/7.5/77/7.5  
KEY OUT 1/2: BNC type  
1.0Vp-p, 75Ω, without sync  
BLACK BURST OUT 1/2/3: BNC type  
Sync: 0.286Vp-p, 75Ω, burst  
Burst: 0.286Vp-p, 75Ω, burst

#### Interface

Editor: D-sub 9-pin, conforming to RS-422A  
GPI: BNC type, TTL level  
Control panel: D-sub 25-pin, conforming to RS-422A  
DFS: D-sub 9-pin, comforting to RS-422A

#### Signal Processing

Sampling Frequency: Y: 910fH (fH: 15.734kHz)  
R-Y/B-Y: 1/2 × 908fH  
Quantization: Y/R-Y/B: 8 bits  
Linearity (Composite output): DP: Less than 2.5° - Composite input  
Less than 1.0° - Y/C, Component input  
DG: Less than 3.5% - Composite input  
Less than 2.0% - Y/C, Component input  
Crosstalk: Less than -50dB  
Frequency response: 0 to 5MHz +0.5dB/-1dB  
Signal to noise ratio: More than 51dB - Composite  
More than 55dB - Y/C, Component  
Y/C delay: Less than 20ns - Component  
Less than 50ns - Y/C, Composite

\*OUTPUT 1 only



Rear Panel of DCK-500