

# SONY®

NTSC

## DME Switcher DFS-300



The Sony DFS-300, a superb combination of video switcher and Digital Multi Effects (DME) unit, provides powerful edit suite performance and flexible system integration.

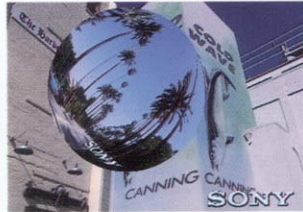
The DFS-300 requires only the addition of VTRs and an edit controller to form a system that gives both creative freedom and optimum video quality. A powerful and affordable production tool, the DFS-300 provides a stunning range of visual effects and switching versatility that makes it equally suitable for simple two-machine editing or complex image creation.



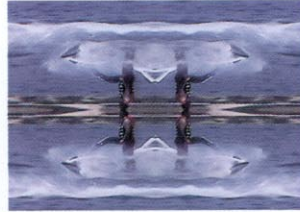
# Powerful, Multiple Effects



Door



Sphere



Mirror



Page Roll



Split Page Turn



Wipe



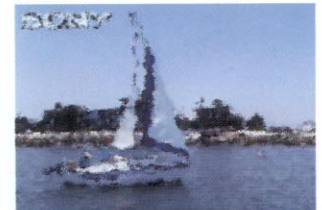
Picture in Picture (Heart)

## User Program for Powerful Effects Creation

The DFS-300 provides very powerful, yet easy to operate effects programming using the positioner and associated controls. Cut, mix, wipe, slide, rotation and many other 2D effects and optional 3D linear (perspective) and non-linear effects such as page turn, roll and sphere can be created with the unit's programming function. Up to 20 created effects are stored in standard user programs for instant recall, and this storage capacity is doubled when the optional 3D board is fitted. The programmed effects can also be edited.

## Preset Patterns

To provide a range of effects for immediate use, 330 factory preset effects are stored in the DFS-300. These include wipe, compression, rotation, slide, split, mirror, stream, etc. as standard. With the optional 3D board installed, preset effects such as twist, page turn, sphere, etc. can be memorized and the storage capacity is increased to 460 effects, all of which can be recalled whenever required.



Solarization



Album



Flip



Matrix Wipe



Wave Modulation



Camera Viewfinder



Stained Glass



### Cut, Mix and Wipe Transition

111 of the most frequently used wipes are available from the preset patterns and 13 of them are directly accessed with a press of the keypad. Mixes, Wipes, as well as digital effects transitions, can all be executed with the fader lever. Auto transition can be activated with a transition time from 0 to 999 frames.

### Convenient Effects Modification

To suit individual tastes in creative program production, effects modification is provided for some of the preset effects such as mosaic, posterization, solarization, wave, multi-picture, strobe, frosted glass, cinema mode, etc. Fine control over various parameters such as size, density and amplitude further enhances effects editing.



Twist



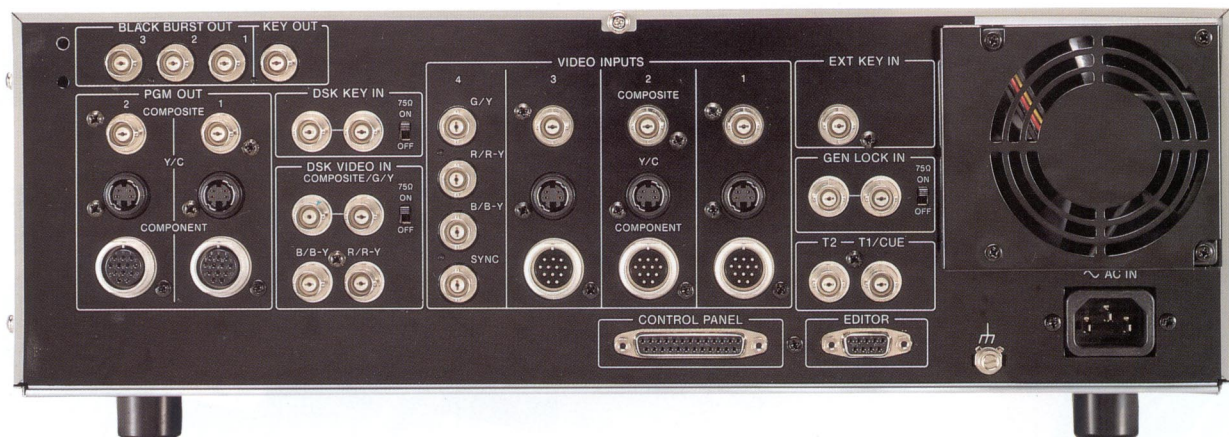
Split Slide



Real Paint



# High Performance Switcher



## Superb Picture Quality and Performance

Using Sony advanced digital processing technologies, all input signals are processed in the digital component domain; therefore signal deterioration is minimized through the effects and switching process.

## Multi-Format Inputs and Outputs

Four primary inputs are provided. Inputs 1-3 accept signals in three different formats, composite, Y/C (S-Video) and component (Y/R-Y/B-Y). The fourth channel accepts either component (Y/R-Y/B-Y), R/G/B/Sync or an R/G/B signal from PCs and other image processing equipment.

Each of the two program outputs provides a set of three output signals in the same formats as those accepted by inputs 1-3. As the four primary inputs allow any combination of the three input signal formats to be used within the DME system, the DFS-300 provides maximum performance and flexibility in multi-format video edit suites.

## Internal Video Generator for Multiple Mattes

A built-in video generator provides a wide range of backgrounds. 31 backgrounds including embossed patterns, variable colors, grid patterns, color bar and black are provided. Three mattes for color background, border and effect can be generated as standard. With the optional DSK board, DSK matte and DSK border matte are also provided, with independent adjustment of luminance, saturation and hue parameters. A matte copy function is also available.

## Primary Busses

The primary busses, Foreground (FRGD) and Background (BKGD), contain up to five sources, four primary inputs plus sources such as background and mattes generated by the internal generator which can be assigned to the busses.



### Standard Key Controls

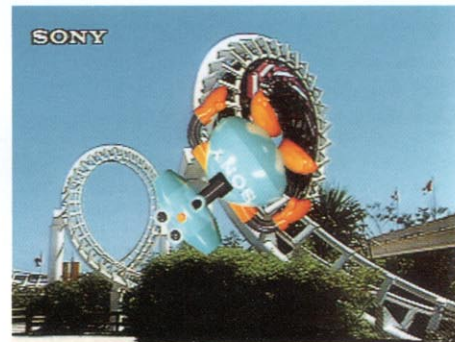
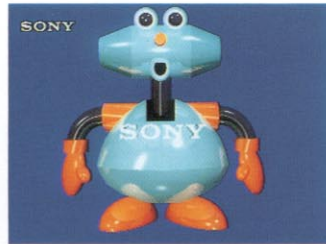
Chroma key and luminance key controls are standard. Convenient keying operation is provided without any external devices.

### Luminance Key

A FRGD source such as a title, caption or figure can be self-keyed over a BKGD source and rotated, compressed and positioned optionally in 3D space. Any of the preset effects can be applied to the keyed picture. An external key input is also provided to accept a key source signal. A box mask is provided for masking an unwanted portion of the FRGD picture. An inverting mask is also available.

### Chroma Key

The built-in chroma keyer superimposes video from a FRGD source onto a BKGD source. Clip and Hue can be controlled to provide clear and sharp key edges. Any of the preset effects can be applied to the chroma keyed picture.



### Color Correction

For white balance adjustment or to give some special tonal effect, color correction of FRGD or BKGD sources is possible. Hue, Offset and Chroma gain of the selected source signal can be controlled independently. If the input signal color level is incorrect, fine adjustment is available in the unit.

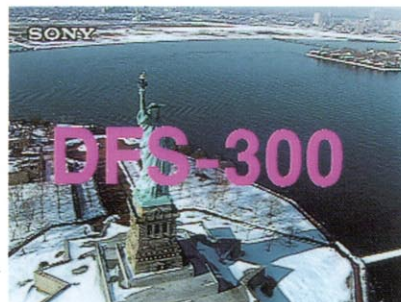
### Optional Down Stream Keyer

The optional BKDF-504 8-bit linear DSK (Down Stream Keyer) board is available to introduce captions, characters, etc. with clear edge quality, after mix/effects processing. The DSK key input accepts either composite, component or RGB signals. The position and type of the DSK border are selectable and a box mask is provided to mask unwanted areas of the FRGD picture. An inverting mask is also possible.

### Snapshot Function

The DFS-300 has a snapshot function which stores the panel status for subsequent recall. Every parameter such as Background color hue, Border width, Shadow density, Key clip level, etc.\* can be stored and recalled at any time. Up to 99 snapshots can be stored.

\*Color correction parameter settings cannot be stored in the snapshot memory.





# Simple System Integration



## Genlock Capability

The DFS-300 can be locked to other equipment such as an editor or VTRs in an edit suite without the need for an external sync generator. This genlock capability also enables the DFS-300 to lock to an external reference signal. Three black burst outputs are provided to distribute an internally generated locking signal.

## Two Frame Synchronizers

The DFS-300 features two frame synchronizers which allow video input signals to the primary inputs to be synchronized automatically. System connection is quite simple and even a VTR without a TBC can be used.

## Two-machine Editing to Component A/B Roll Editing with Effects

When used with a Sony Editing Controller such as the PVE-500 or RM-450, the DFS-300 allows two-machine editing with effects.\* In a simple A-roll system, effects such as a color background or external titles can be keyed in during editing. For more sophisticated program production, the PVE-500, Sony UVW Series Betacam SP<sup>®\*\*</sup> VTRs and the DFS-300 can be interfaced for an enhanced component A/B roll editing system.

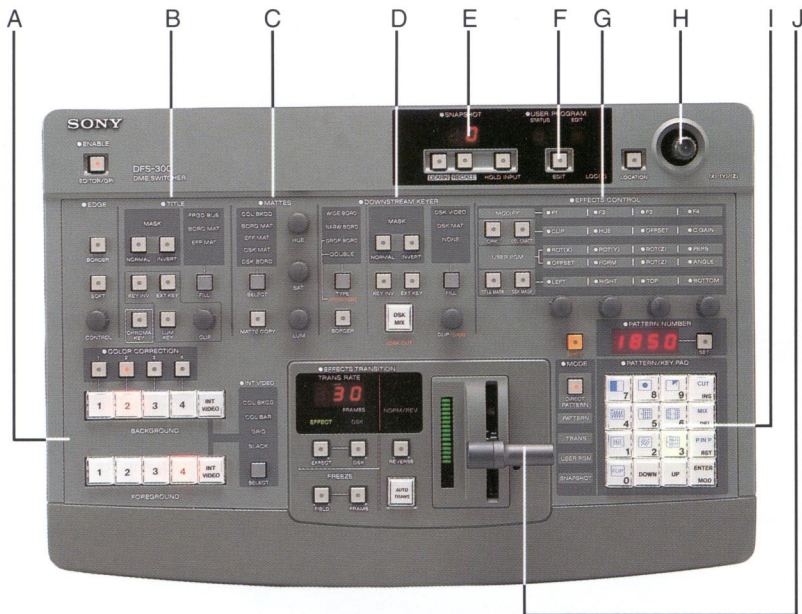
\*During a transition, the FRGD picture is frozen in a two-machine edit system.

\*\*Betacam SP is a registered trademark of Sony Corporation.

## Editing Controller Interface

The DFS-300 provides both serial and General Purpose remote control Interfaces. The unit can be controlled from various Sony Editing Control Units such as the PVE-500, BVE-2000, BVE-910 and etc. through these remote interfaces. Cross points assignment, effects recall, transition time settings, etc. can all be controlled from the PVE-500. Furthermore, snapshot data and user program data can be stored in the EDL of the PVE-500.

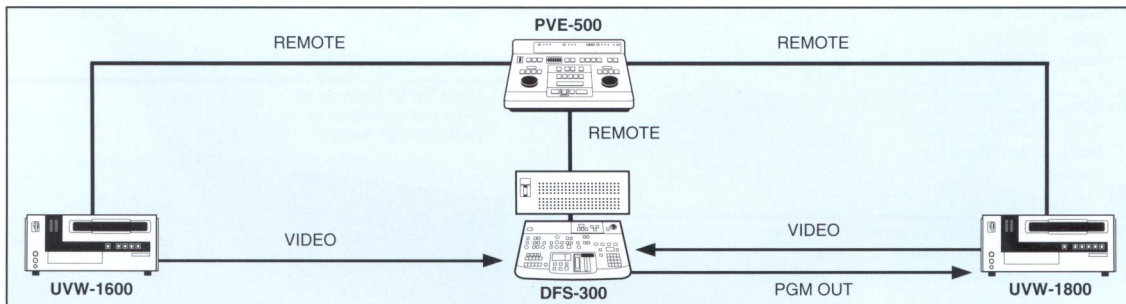
# Control Panel View



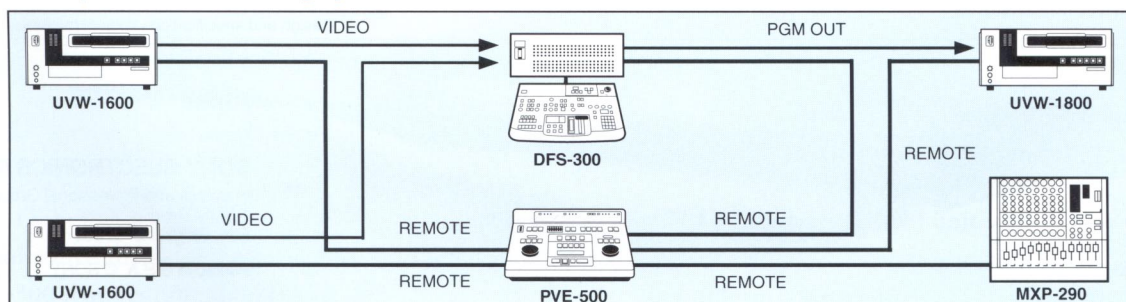
- A: Primary Busses**  
Two busses (Foreground/Background) with four primary inputs and internal video generator (embossed patterns, color backgrounds, grid patterns, color bar and black background).
- B: Title Keyer**  
Enables title with effects. Both chroma key and luminance key controls are possible.
- C: Matte Control Area**  
Hue, saturation and luminance control for the five matte generators.
- D: Down Stream Keyer, Option**  
DSK control area with a DSK mix IN/OUT button.
- E: Snapshot**  
Panel status storage and recall.
- F: User Program**
- G: Effects Control Area**  
Controls page turn, rotation, video modify effects and box mask.
- H: Location Area**  
Controls the FRGD picture along its X, Y and Z axes.
- I: Numeric Keypad Area**  
Used for numeric data entry, preset pattern recall.
- J: Transition Control Area**  
With fader lever and auto transition button.

# System Connections

1. Two-machine Editing System with Effects



2. Component A/B Roll Editing System





# Specifications

## Inputs/Outputs

Primary video inputs 1 to 3/Program video outputs 1, 2:

Composite	
Connector:	BNC type (x 1, each)
Video:	1.0Vp-p, 75Ω
Sync:	0.286Vp-p
Burst:	0.286Vp-p
S-video (Y/C)	
Connector:	DIN-4-pin (x 1, each)
Y:	1.0Vp-p, 75Ω
C:	0.286Vp-p, 75Ω
Sync:	0.286Vp-p
Component (Betacam)	
Connector:	12-pin (x 1, each)
Y:	1.0Vp-p, 75Ω
R-Y/B-Y:	0.7Vp-p (100/7.5/77/7.5 color bars)

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 (100/7.5/77/7.5 color bars)
R:	0.7Vp-p, 75Ω
B-Y/B	
Connector:	BNC type
B-Y:	0.7Vp-p, 75Ω (100/7.5/77/7.5 color bars)
B:	0.7Vp-p, 75Ω
Sync	
Connector:	BNC type
	0.286 to 4.0Vp-p, 75Ω

DSK video inputs:

Composites/ G/Y	
Connector:	BNC type (x 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 (100/7.5/77/7.5 color bars)
B:	0.7Vp-p, 75Ω
R/R-Y	
Connector:	BNC type
R-Y:	0.7Vp-p (100/7.5/77/7.5 color bars)
R:	0.7Vp-p, 75Ω

EXT KEY IN/DSK KEY IN/KEY OUT:

Connector:	BNC type (x 1, each)
	1.0Vp-p, 75Ω

GEN LOCK IN:

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

## Control Signals

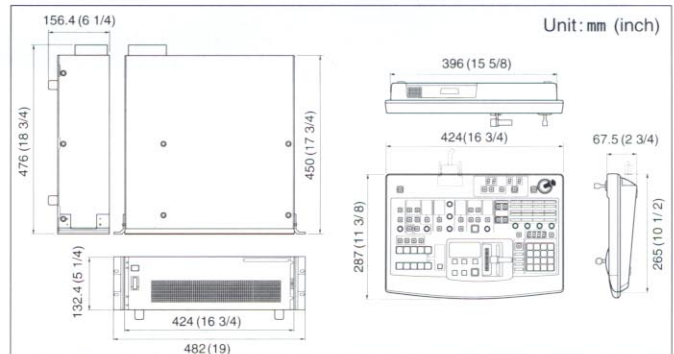
EDITOR:	D-sub 9-pin, 9-pin remote (RS-422A)
T1/CUE IN/T2 IN:	BNC type (x 1, each), TTL level
CONTROL PANEL:	D-sub 25-pin, 25-pin remote (RS-422A)

## Signal Processing

Frequency response:	0 to 5MHz (Ref. 1MHz)+0.5dB/-1dB (Y/C, component)
Linearity:	DG 3.5% (composite input) 2.0% (component/S input)
	DP 2.5" (composite input) 1.0" (component/S input)
Crosstalk:	Less than -50dB
S/N:	51dB (composite) 55dB (Y/C, component)
Y/C delay:	Less than 20ns (component) Less than 50ns (composite)
Sampling rate:	Y: 910fH (fH: 15.734kHz) R-Y/B-Y: 1/4 x 910fH
Quantization:	Y/R-Y/B-Y: 8 bits

## General

Power requirements:	AC120V, 50/60Hz
Operating voltage:	AC 90 to 132V, 48 to 63Hz
Power consumption:	80W
Operating temperature:	0 to 40°C (32 to 104°F)
Dimensions:	Control panel 424(W) x 69(H) x 287(D)mm (16 3/4 x 2 3/4 x 11 3/8 inches) Processor 424(W) x 132(H) x 450(D)mm (16 3/4 x 5 1/4 x 17 3/4 inches)
Mass:	Control panel 2.3kg (5 lb 1 oz) Processor 13.0kg (28 lb 10 oz)

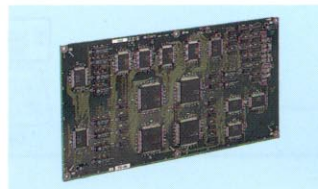


## Supplied Accessories:

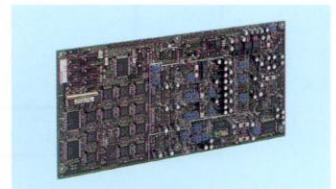
AC power cable
25-pin control cable (10m)
Operation manual

## Optional Accessories:

BKDF-301 3D Effects Board
BKDF-503 Rack Mount Kit
BKDF-504 DSK Board



BKDF-301



BKDF-504

Design and specifications subject to change without notice.

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