

**SONY**<sup>®</sup>

NTSC/PAL

Endless Imagination & Creativity



DME Switcher  
**DFS-700/700P**

# Powerful Digital Performance at Your Fingertips!

What happens when you put superb digital effects and an advanced digital switcher together in a perfectly compact package? You get the Sony DFS-700/P\* — an ideally proportioned, easy-to-operate switcher incorporating the latest digital multi effects. Offering the precision of full component digital processing, all the creativity of hundreds of preset special effects, and the flexibility of 16:9 or 4:3 operation, the DFS-700/P is your promise of top-flight productivity. Cost-effective yet extremely versatile, Sony's DFS-700/P will open up new horizons in digital television performance.

*DME Switcher*  
**DFS-700/P**





\* The DFS-700/P refers to two models: the DFS-700 (NTSC model) and the DFS-700P (PAL model).

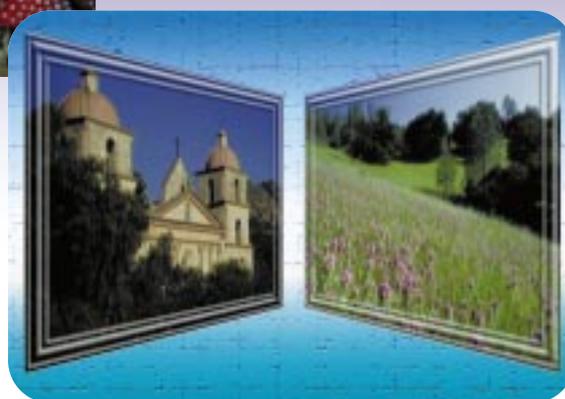


# QUALITY

## by Digitization

### **Digital signal processing**

The world is moving into digital broadcasting. And if you're using the DFS-700/P, it's a great start as it will prepare you for any requirement. Digital broadcasting depends on digital component signals which is why the DFS-700/P is built around full digital component processing from input to output at 4:2:2:4 (video and key). In this way, the DFS-700/P delivers the quality you'll need for digital television broadcasting, digital satellite, DVD, a variety of video contents creation. The built-in chroma keyer and downstream keyer offer full digital signal processing to satisfy the most demanding production needs.



# Bridge to *DIGITAL*

## Wide range of inputs and outputs including SDI

Whether analog or digital, the DFS-700/P accommodates a wide range of signal input/output requirements. The system comes with eight standard inputs — four SDIs\* and four analog components. With the optional BKDF-701 or BKDF-702/P boards, you can add eight or four inputs, making the total number of inputs 16 or 12 respectively, any eight of which can be freely assigned to the

control panel. Four SDIs and four analog components are added with the BKDF-701, and four composites (composite or Y/C) are added with the BKDF-702/P. The system also includes a complete range of outputs: two SDIs, two analog components, two analog composites, and two Y/Cs. This means you can configure the DFS-700/P to match existing equipment and anticipate your future needs!

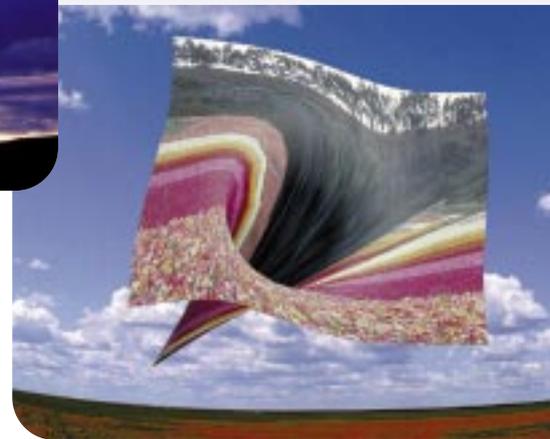
## No need for external A/D converters

Some digital equipment require expensive and cumbersome external analog-to-digital/digital-to-analog converters. But that's something you never have to worry about with the DFS-700/P. Just take out your analog switcher and drop in the DFS-700/P. It's the simple, easy, cost-effective upgrade that transforms a tired, old analog system into a creative, digital powerhouse.

## The perfect companion for Sony digital VTRs and servers

Maybe you're considering digital production system with DVCAM™, Betacam SX™ or Digital Betacam™ recorders or the Sony MAV-555/565 server. And whichever format you choose, the DFS-700/P will complement it perfectly. With this unit, you get full compatibility with analog machines, plus superb component digital performance to maintain digital VTR picture quality. Starting with the DFS-700/P is a cost-effective first step. You can then gradually add Sony digital video cameras, VTRs and servers at your own pace to build an all-powerful, all-digital system!

\*SDI (Serial Digital Interface): serial component digital signal (270Mb/s)



## **SPEED** is Power

### ■Fast response for more productivity

If you've ever been held back by the "rendering" and "processing time" of non-linear editing systems, you'll come to appreciate the performance of DFS-700/P. This is a real-time system, capable of delivering true 3D, page turns and effects in an instant. So there's no drumming your fingers, no looking at your watch, no running for coffee. Operation is also very easy. Addition of optional boards gives you over 700 pre-programmed special effects that you can recall with the numeric keypad. Power-packed yet extremely user-friendly, that's what the DFS-700/P is all about.

### ■Ergonomic control panel

From simple switching to complex effects, the ergonomic control panel makes everything easy. The layout is straightforward and streamlined for maximum efficiency. As a result, the DFS-700/P is a perfect tool for EFP and remote live broadcasting, where split-second timing and instant response are absolute necessities.

### ■The simplicity of pre-programmed effects

Some special effects systems require complex, tedious programming. Not the DFS-700/P. With pre-programmed effect patterns, anyone can create artistic, impressive, amusing, or stunning visuals. You can concentrate on expressing your creativity — and let the DFS-700/P work on the effects. Or if you like, you can execute partial modifications to the preset effect pattern and add your own, personal touch.

## Be **CREATIVE**

### ■Spectacular special effects

The DFS-700/P draws on Sony's expertise in high-end non-linear image processing. This affordable system incorporates the groundbreaking effects and capabilities of Sony's landmark video editing products. Pre-programmed and ready-to-use effects include Fanta Trail and several features from Digital SPARKLE™ (such as ripple and swirl effects). Add optional boards, and you've got over 700 effects to choose from.



# Systematic **PERFORMANCE**

## ■2-channel effects

Adding an optional second channel video board will add a professional touch with two-channel special effects, such as push-in, push-out, Duality™ effect (two-channel picture in picture), combined operations (two-channel intersect) and brick-like effect.

## ■3-dimensional mapping

Three-dimensional special effects can be impressive but they can also be extremely difficult to use. The DFS-700/P makes things easy. The optional 3D Mapping Board delivers 3D effects in a simple, ready-to-use format. Without wasting significant time on programming, you have easy access to 3D effects such as 3D cubes, 3D explosion, 3D vase, and 3D frames. Your productions become more exciting. And most importantly, you become more creative.

## ■Switcher function

You can integrate the DFS-700/P into an existing switcher system, as a powerful digital effects enhancement. But special effects are only part of the story. The integrated switcher functions of the DFS-700/P include chroma keyer, Y/U/V color correction, down stream keyer, fade-to-black, and frame memory.

## ■Editing interface

The DFS-700/P also provides comprehensive interface with Sony editing controllers. For example, you can use the DFS-700/P with Sony BVE-2000/P and PVE-500/P editors via the serial interface. As a post-production tool, the DFS-700/P is an editor's dream.

## ■Live operation

The DFS-700/P cross-point buttons offer broadcast-grade "feel" for extra durability in the most extreme applications. For live operation, the DFS-700/P also offers Preview and Tally outputs.

## ■Perfect for any application

The DFS-700/P is an amazingly powerful integrated switcher with digital multi effects — perfectly suited for newsrooms, post-production, field editing, small studios and outside broadcasting systems. It's the single, simple solution for today's demanding digital requirements.

# Specifications

General	
Model	DFS-700 (NTSC)/DFS-700P (PAL)
Power requirements	AC 100/120 V, 50/60 Hz (DFS-700) AC 220/240 V, 50/60 Hz (DFS-700P)
Operating voltage	AC 90 to 130 V, 47 to 63 Hz (DFS-700) AC 180 to 260 V, 47 to 63 Hz (DFS-700P)
Power consumption	200 W
Operating temperature	0 to 40 °C (32 to 104 °F)
Dimensions (W × H × D)	Control panel: 440 × 121 × 287 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

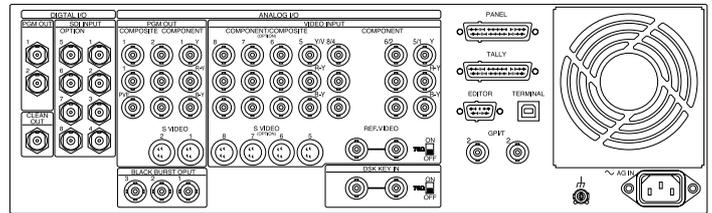
Input Signals	
VIDEO INPUTS	
SDI	BNC type × 4 270 Mb/s
Component	BNC type × 4 (Y/R-Y/B-Y) Y: 1.0 Vp-p, 75 Ω, Sync negative R-Y/B-Y: 0.7 Vp-p, 75 Ω (DFS-700) R-Y/B-Y: 0.525 Vp-p, 75 Ω (DFS-700P)
DSK KEY IN	BNC type × 2, Loop-through, 1.0 Vp-p, 75 Ω
REF VIDEO	BNC type × 2, Loop-through connection Sync: 0.286 Vp-p (DFS-700) Sync: 0.3 Vp-p (DFS-700P) Burst: 0.286 Vp-p (DFS-700) Burst: 0.3 Vp-p (DFS-700P)

Output Signals	
PGM OUT	
SDI	BNC type × 2 270 Mb/s
Component	BNC type × 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 (DFS-700) R-Y/B-Y: 0.525 Vp-p, 75 Ω (DFS-700P)
Composite	BNC type × 2 Video: 1.0 Vp-p, 75 Ω, Sync negative
S-Video	DIN type × 2 (Y/C) Y: 1.0 Vp-p, 75 Ω, Sync negative C: 0.286 Vp-p at burst, 75 Ω (DFS-700) C: 0.3 Vp-p at burst, 75 Ω (DFS-700P)
CLEAN OUT	BNC type × 1 SDI: 270 Mb/s
PREVIEW OUT	BNC type × 1, Composite Video: 1.0 Vp-p, 75 Ω, Sync negative
BLACK BURST OUT	BNC type × 3 Sync: 0.286 Vp-p, 75 Ω (DFS-700) Sync: 0.3 Vp-p, 75 Ω (DFS-700P) Burst: 0.286 Vp-p, 75 Ω (DFS-700) Burst: 0.3 Vp-p, 75 Ω (DFS-700P)

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

# Processor Unit: Rear Panel



# Optional Accessories

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

### ■ BKDF-701

With the BKDF-701, the following 8 inputs can be added to the standard 8 inputs of the DFS-700/P, 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 × 4 270 Mb/s
Component	BNC type × 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 (with DFS-700) R-Y/B-Y: 0.525 Vp-p, 75 Ω (with DFS-700P)

### ■ BKDF-702/P

With the BKDF-702/P, the following 4 inputs (composite or S-Video) can be added to the standard 8 inputs of the DFS-700/P, 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 × 4 Video: 1.0 Vp-p, 75 Ω, Sync negative
S-Video	DIN type × 4 (Y/C) Y: 1.0 Vp-p, 75 Ω, Sync negative C: 0.286 Vp-p at burst, 75 Ω (BKDF-702) C: 0.3 Vp-p at burst, 75 Ω (BKDF-702P)

### ■ BKDF-711

The BKDF-711 adds a second Title Key.

# Product Configuration

Processor unit, Control panel, D-sub 25-pin control cable (10 m), AC cord, Instruction manual



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