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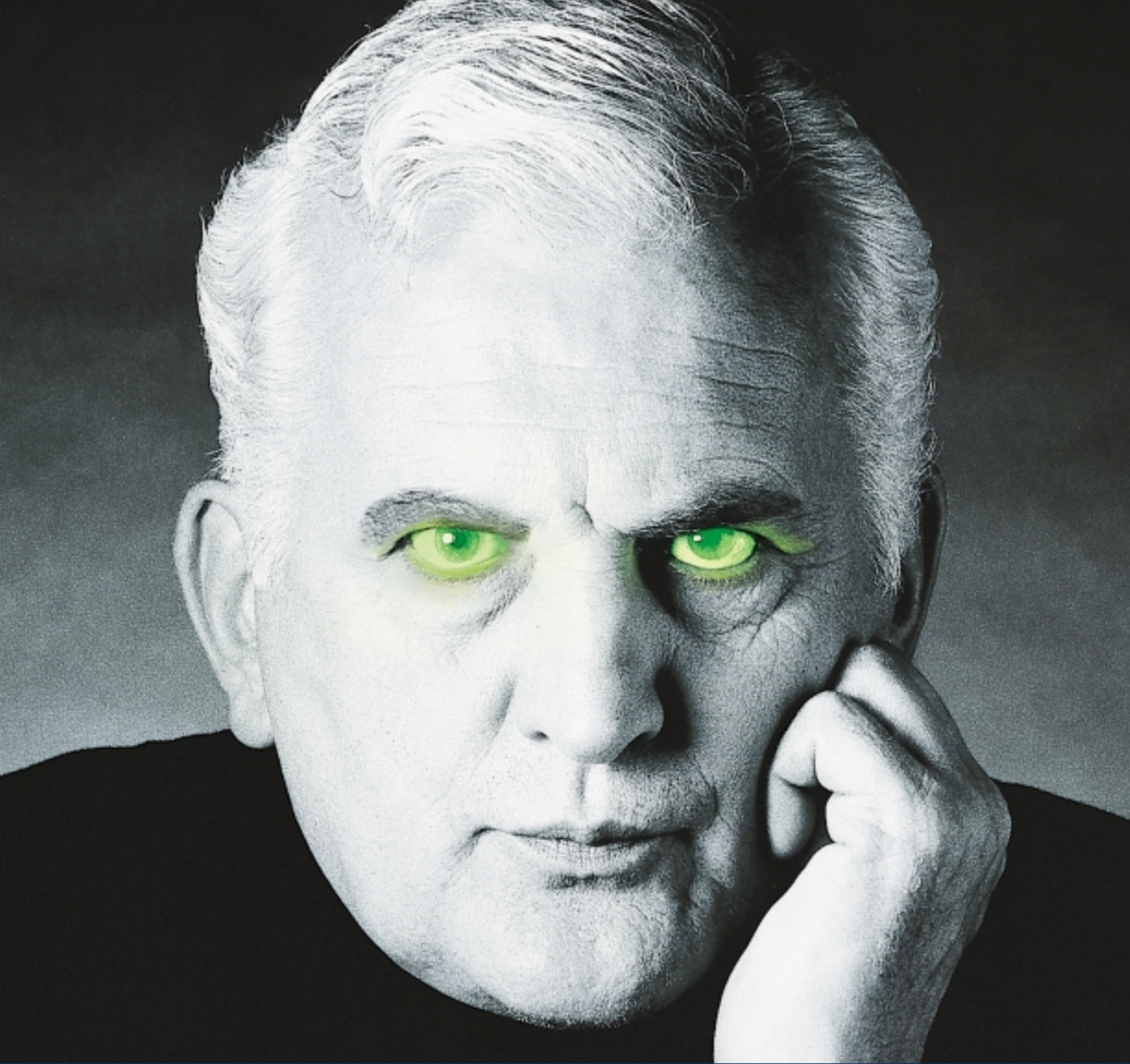Tel: +7 095 248 3443, Fax: +7 095 248 1104

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ち | SNELL & WILCOX ⊙
Engineering with Vision

Magic DaVE
by Snell & Wilcox

Magic DaVE digital video effects from Snell & Wilcox are redefining the concept of DVE equipment

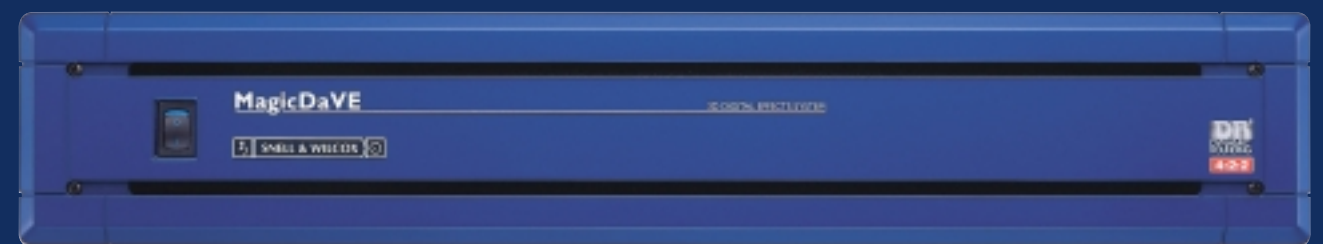ち | SNELL & WILCOX ⊙
Engineering with Vision

Magic DaVE
I can give you amazing powers

Magic DaVE digital video effects systems from Snell & Wilcox are redefining the concept of digital effects equipment. Snell & Wilcox has long been known for superior quality and innovative design in the field of image processing. Brought to the world of digital video effects, this world-leading expertise has produced a range of equipment that is as astonishing in its versatility as it is in its performance. Whatever your broadcast requirements, whatever your post-production requirements, Magic DaVE will provide all the creative capabilities you desire in a system you can tailor to your needs - and expand as your needs develop. And it does so in a very compact, cost-effective package, with the superb quality of picture processing you expect from Snell & Wilcox engineering.

From a single 2U mainframe

Prepare to be astonished…

Magic DaVE Feature List:

- Compact, cost effective, fully-featured DVE and switcher
- Program/preset M/E architecture
- 8-bit, 13.5MHz (4:2:2) processing
- Four video and one key or eight video and two key inputs
- Analog component/composite or D1 SDI interface
- Analog preview output

- Internal pattern generator
- Dual source effects from a single channel
- Dynamic Rounding™
- Warp effects
- Shading and lighting effects
- 4:3 or 16:9 aspect ratio operation

Magic DaVE - everything you need

Magic DaVE was conceived to provide everything you need to form the core of any production or post production facility, at a ratio of price to performance that leaves the competition looking decidedly mundane. Magic DaVE will give you all you want, and a lot more you'll not expect.

As a fully functioned DVE, Magic DaVE provides an astounding array of 2D and 3D effects as standard and allows you easily to create your own dual channel effects from a single channel of processing.

As a switcher, Magic DaVE offers you the choice of four or eight input operation, and a choice of analog or digital I/O and the versatility to work with a mix of composite, Y/C and component signals in the analog versions.

There's no need for external synchronizers - Magic DaVE can provide its own built-in full broadcast specification TBCs, and its own sync pulse generator and test signal generator.

The versatile Magic DaVE can give you two independent chroma keys or upstream and downstream keying as one of its many upgrade possibilities.

All versions of Magic DaVE offer full bandwidth performance, broadcast quality 4:2:2 digital processing, and all versions can squeeze all of the above into just two standard units of rack space.

Magic DaVE Control Panel (Extended Version)
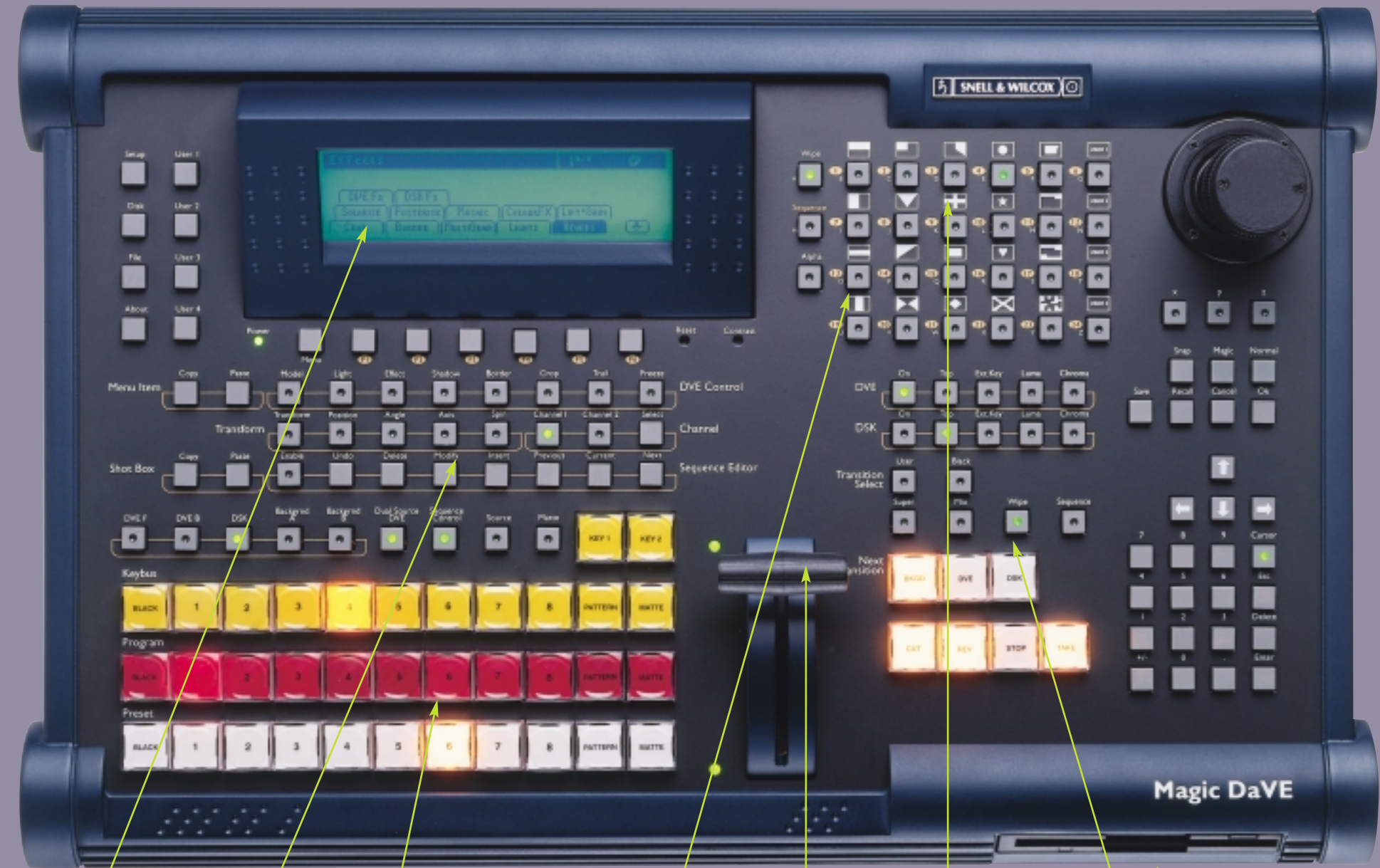
Backlit 256 x 64 pixel liquid crystal display provides at-a-glance information on Magic DaVE's status

Program and preset buttons select from a choice of up to eight channels, plus keys, patterns and mattes.

Alphanumeric keypad allows direct, precise entering of effects parameters, and lets you name sequences for future recall.

An array of pushbuttons with industry standard symbols for fast access to up to a hundred wipe patterns.

Accessible floppy disk drive (DOS) for easy storage and retrieval of sequences.

Button for function operation gives instant access to Magic DaVE's powerful range of digital effects functions.

High quality T-bar for totally accurate control in a familiar format.

Instant choice of transition modes.

Magic DaVE - the choice is yours

Whatever configuration you choose, Magic DaVE offers an array of astounding 2D and 3D effects installed as standard: warps, wipes and two-sided page turns are all there and ready to go. And all Magic DaVE systems allow the user total control over the creation, editing and storage of their own effects and sequences.

Eight Channels

Both analog and digital versions of the eight channel unit come fully configured with all functions as standard. And to ease the path to the digital studio, the Magic DaVE 8D digital unit can be wired to an external I/O box to accommodate four YPbPr analog inputs plus a keyer, and to provide an analog output. Yet despite all their amazing powers, no Magic DaVE box will require any more than two units of precious rack space.
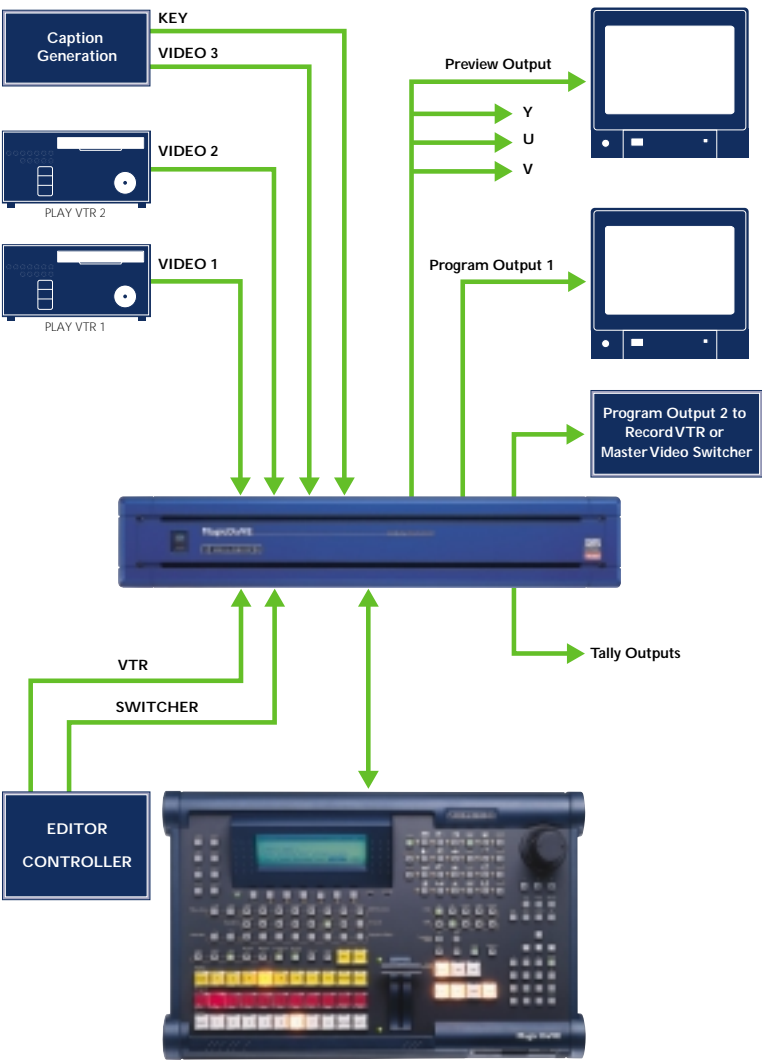
Four Channels

Magic DaVE four input versions are available with either serial digital (Rec 656) inputs and outputs, or composite, Y/C and YPbPr analog, for either PAL and NTSC standards, naturally. Still more capability can be added to a four input Magic DaVE with the installation of an options card, giving a hundred wipe patterns in total and adding yet more sophisticated effects. The options card also adds an extra layer of keyer/chroma keyer, and an extra two frame synchronizers to allow four live sources on the screen simultaneously.
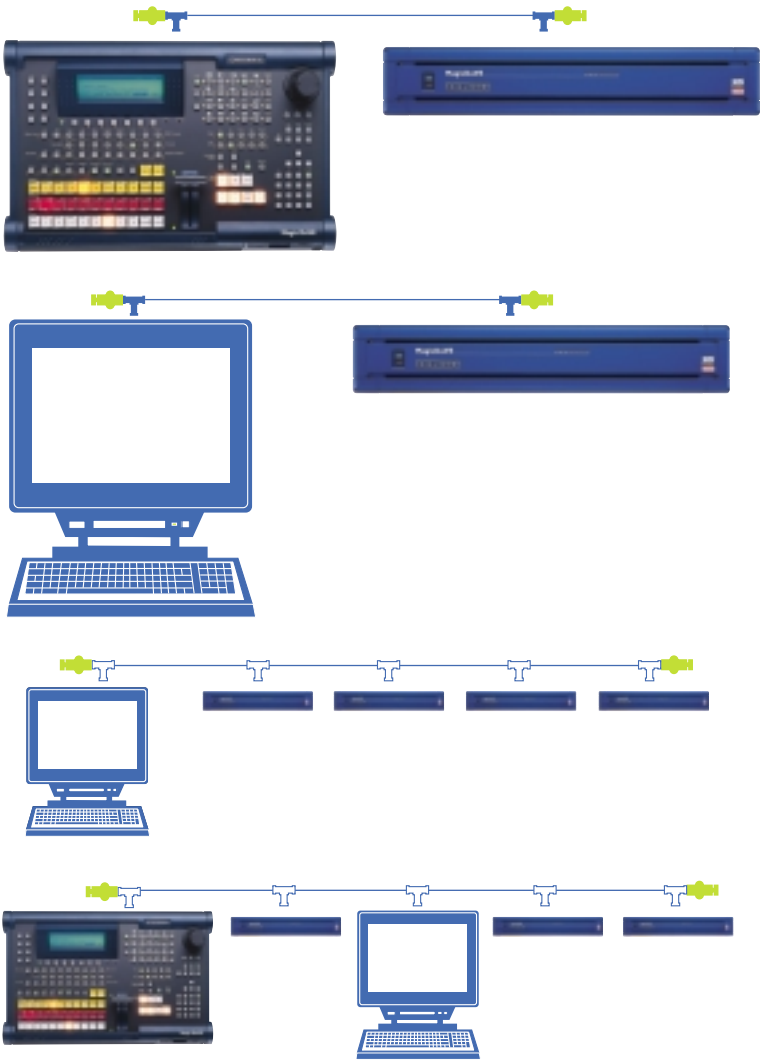
Control Panels

With the four input versions you can choose either the extended control panel with its easy function access, or a compact unit ideal for installations where space is at a premium. Either way, all the power of Magic DaVE will be there at your fingertips. The eight input Magic DaVE comes with the extended control panel.

Magic DaVE has all the connectivity and control to form the core of your system

- Caption Generation
- KEY
- VIDEO 3
- VIDEO 2
- PLAY VTR 2
- VIDEO 1
- PLAY VTR 1
- Preview Output
- Y
- U
- V
- Program Output 1
- Program Output 2 to Record VTR or Master Video Switcher
- Tally Outputs
- VTR
- SWITCHER
- EDITOR CONTROLLER

RollCall and Magic DaVE for Windows offer versatile control options
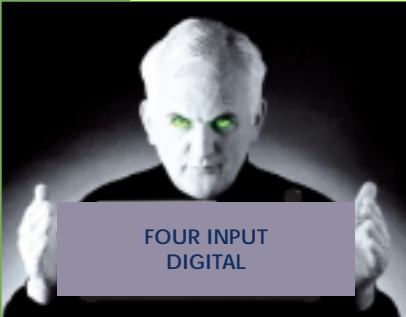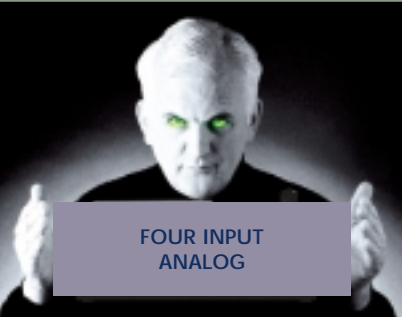

The Magic DaVE Family:

- Magic DaVE 8A - eight analog inputs (see specification for full details)
- Magic DaVE 8D - eight digital inputs (see specification for full details)
- Magic DaVE 4A - four analog inputs; composite, Y/C or YPbPr inputs, PAL or NTSC
- Magic DaVE 4D - four Rec 656 digital inputs
- Options Card (supplied as standard with Magic DaVE 8 series)
- Compact Control Panel (Magic DaVE 4 only)
- Extended Control Panel
- External I/O unit (Magic DaVE 8D only)
- Editor control
- RollCall™ remote control
- Magic DaVE for Windows

Magic DaVE is future proof

An option card full of extra effects, a choice of control panels, computer connectivity and software upgrades all ensure that, however your needs grow, however technology changes, your Magic DaVE system will always be able to grow with you.

FOUR INPUT ANALOG

FOUR INPUT DIGITAL

EIGHT INPUT ANALOG

EIGHT INPUT DIGITAL

WINDOWS '95 OR NT CONTROL

EXTENDED CONTROL PANEL WORKS WITH ANY UNIT

Magic DaVE puts you in control

Extended Control

Magic DaVE isn't just packed with features, it's packed with features you can use easily. An extended control panel provides fast button for function access to all the power of any Magic DaVE, with a back lit LCD display providing constant status feedback to ensure you'll never be overwhelmed by Magic DaVE's versatility. No matter how fast your environment moves, Magic DaVE can keep pace.

Compact Control

Short of space? Four-input Magic DaVE systems can be operated from a compact, professional standard control panel that can be shoe-horned into an unbelievably small desk area, and still provide total access to all system functions.

PC Control

Or you can operate Magic DaVE from a PC. With Magic DaVE for Windows, Magic DaVE can be controlled from a single screen, giving central control of multi-machine facilities, or using multiple machines in unison to create stunning four channel effects.

This can also be achieved with the Control Panel using Rollcall.

External control Interfaces

To allow your Magic DaVE to be fully integrated into a complete studio system, Magic DaVE supports a broad range of industry-standard control interfaces:
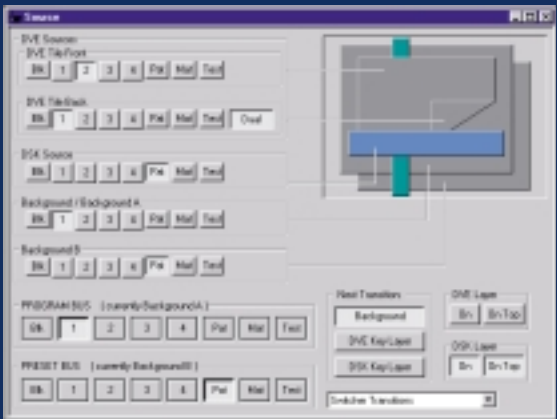
- Grass Valley GVG-100/110

- Grass Valley DPM-100/700
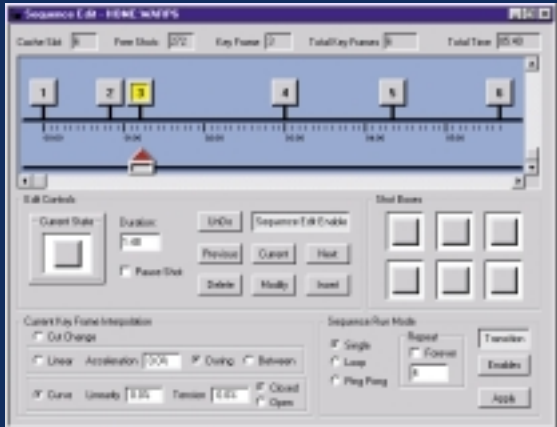
- Sony VTR

- Sony DME

- GPI/O

Extended Control Panel

Compact Control Panel

Layer and source control with Magic DaVE for Windows

Graphic time line control - just one of the features of Magic DaVE for Windows

How can he do it for the price?

As you would expect from a broadcast quality DVE and switcher, Magic DaVE comes ready fitted with an impressive array of two channel 2D and 3D effects. Extensive though this is, Magic DaVE does not limit your creativity by forcing you to exist on a fixed library alone. It gives you the power to create and edit custom sequences of your own, with only your imagination as the limit.

With the help of the LCD menu display, dedicated function buttons and an intuitive operating system, effects can be easily modified, combined and extended, all under total control, at your own pace. All effects parameters are stored on a keyframe-by-keyframe basis with up to 250 keyframes linked into any sequence. Sequences can be reviewed and edited to the last pixel with ease. Once perfected, your creations can be stored in a non-volatile memory with the capacity for over 1000 different sequences.

Beyond the non-volatile store, Magic DaVE also has an integral disk drive, allowing effects and set-ups to be saved to floppy disk. The same drive allows different users to customize a machine's set-up to their individual requirements, and makes sure even stand-alone units can benefit rapidly from new evolutions of the Magic DaVE software.

3D Perspective

Mosaic

Multi-Tile

Vertical Multi-Tile

Powerful Video Effects:

- Dual source page turns/rolls, double page turns/rolls
- Dual source page peels and quad peels
- Dual source spheres, cinema, discs, goblets
- Dual source push on/push off
- Dual source corner pins
- Twin-tile, quad split/tile and multi-tile
- Ripples, pond ripples, blinds, shear and flag wave effects
- Versatile fragment effect
- DVE wipes and mixes
- 3D rotation with perspective
- Bar or spot light sources with highlights and lowlights
- Drop shadow with variable color and transparency
- Front/back source selection
- 1/16th pixel store resolution

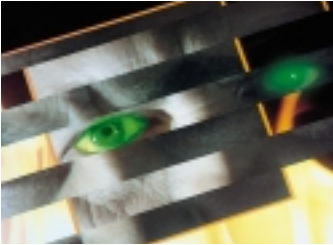Twin Tiles

Sphere Warp

Sine Wave Warp

Sliced Sphere Warp

Mixer Capability:

- Program/preset M/E architecture
- A/B wipe/mix
- DVE wipe on/off, DVE mix
- Fade-to-black

Sphere Warp Over Live Background

Blinds

Ripples

Dual Source Page Peel

Dual Source Page Peel

Dual Source Double Page Roll

Dual Source Quad Peel

Dual Source Quad Peel

Dual Source Cinema Warp

Wipe Generator:

- 40 wipe shapes, including vertical, horizontal, corner, diagonal, split, box, diamond, clock and arrow
- Wipe border size, position, rotation, softness and color control

Sequence Editing:

Full Sequence editing commands are provided, allowing users to easily create new sequences or modify existing ones. Because all calculations are performed in real-time on Magic DaVE, there is never any waiting to see the result of a change. Sequences can be created that are up to 255 keyframes long, and parameters are interpolated either as Step, Linear, or Curved with Variable Tension and Acceleration.

Sequence Library System:

The Sequence Library System built into Magic DaVE provides non-volatile storage for over 3000 keyframes, allowing, for example, over 1500 two keyframe sequences, or 300 ten keyframe sequences to be held on-line. Sequences can be named, and can also be stored under a user name or project name for easy access. Sequences can also be stored on floppy disk using the built-in floppy disk drive.

Magic DaVE has amazing options

In addition to its standard and creative features, any Magic DaVE can be fully configured with the addition of an options board that brings even more creative power to your fingertips. A simple upgrade path will give you a complete switcher and DVE worthy of any post production or broadcast operation. (All eight input Magic DaVEs are supplied fully configured as standard).

- Two additional input processors and framestores provide a total of four simultaneous live sources.

- A downstream keyer (DSK) with linear External Key, Luma Key and Chroma Key modes. The Chroma Key can be quickly and easily set up using the Preview Output Cursor, and the DSK picture area can be cropped to give just the effect desired.

- An advanced mixer allows any combination of DVE, DSK and background to be mixed, wiped or cut, on or off, at the same time. If desired, the DSK can be placed under the DVE layer.

- 60 additional wipe patterns, including circle, heart, star, polygon and matrix wipes such as checkerboard, zigzag, spiral and random.

- SuperMix facility on the extended control panel allows a Mix transition from one source to another by way of a matte or with a variable profile.

- Extra dual channel and slab models allow two channels of DVE at once for newsroom shots.

- JPEG still-store allows grab, recall and storage of up to 40 images, depending upon compression ratio. When used with Magic DaVE for Windows, full uncompressed 4:2:2 images can be transferred over RollCall™ to the PC.

- A DSK ChromaFX feature allows a specific color to be replaced with another (or monochrome), and/or all other colors in the scene to be replaced with another (or monochrome) at the same time.

- Additional chroma keyer for the DVE layer allows the DVE content to also be luma or chroma keyed. This is completely independent of, and can be used with, the DSK keyer.

- Advanced DVE anti-aliasing.

- Both DVE and DSK Chroma Keys can have chroma effects simultaneously.

Chroma Key with Four Live Sources

DSK Over Twin Tiles

Chroma Key with Four Live Sources

DSK Chroma Key Over DVE

DVE with Trails

Variable Sparkles

Trail with Decay

DVE Crop with Sparkles


Textured Trail

Textured Sparkles

I/O Interface

Aiding the path to digital television, an I/O option allows the Magic DaVE 8D to bridge the analog and digital domains. Realized as a single board and mounted in a box requiring only 2U of rack space, the unit provides five analog inputs - including a key - and will permit the usually digital 8D to run an analog output, giving the widest possible choice of interfaces to other studio equipment.

RollCall™ with Twin Channel Control

Using RollCall™ - Snell & Wilcox's equipment control network - multiple Magic DaVE mainframes, control panels, and PCs running Windows '95 or NT can be connected together in a single network using 75ohm video cable. Any controller (a panel or a PC) can choose to control any mainframe on the network.

A mainframe can be simultaneously controlled by up to two controllers (panels or PCs) via the network, plus another panel via the traditional serial cable arrangement. A control panel can control any two mainframes at once, swapping between them with just two keystrokes at the most.
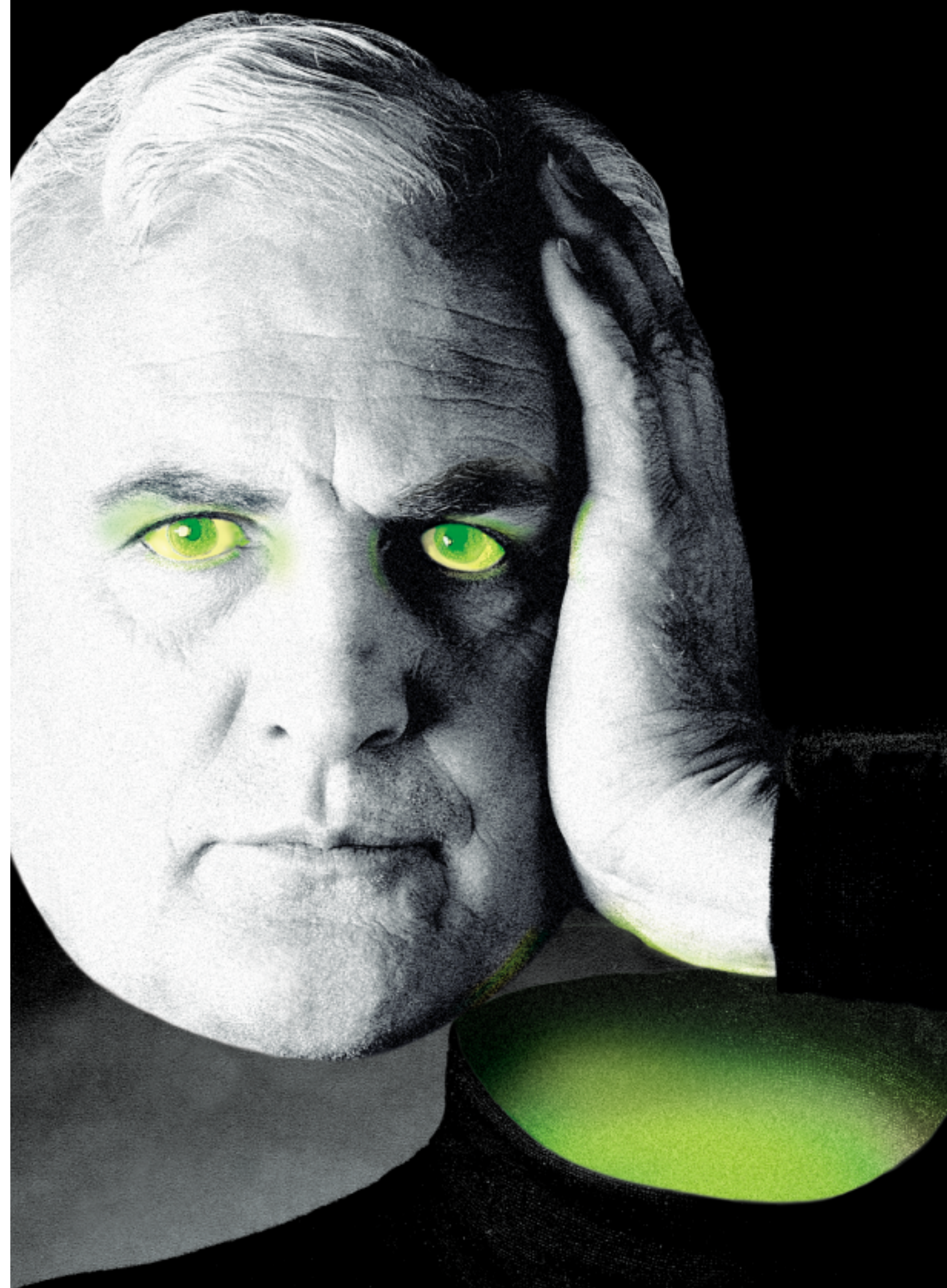
Model 4A
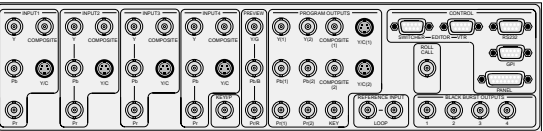
Video Inputs:

- Four sets of analog video inputs, each providing composite, Y/C and component (YPbPr) formats on separate connectors
- One key input
- Horizontal overscan
- Proprietary gate decoding technology
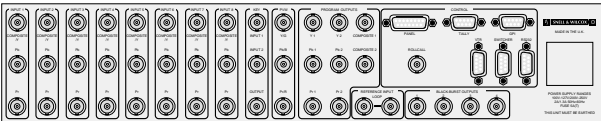- PAL, NTSC, PAL-M and PAL-N (specify when ordering) - dual-standard 525 and 625 in component only

Video Outputs:

- Program video outputs in composite (2), Y/C (2) and component (YPbPr) (2) formats
- One preview video output in component format (YPbPr or RGB)
- One key output
- Composite output standard choice as input standard provided line-standard is the same

Model 8A

Note that the Model 8A includes the Magic DaVE Options Package.
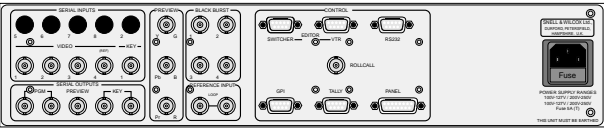
Video Inputs:

- Eight sets of analog video inputs, each providing composite and component (YPbPr) formats
- Two key inputs
- Horizontal overscan
- Proprietary gate decoding technology
- PAL, NTSC, PAL-M and PAL-N (specify when ordering) - dual-standard 525 and 625 in component only

Video Outputs:

- Program video outputs in composite (2) and component (YPbPr) (2) formats
- One preview video output in component format (YPbPr or RGB)
- One key output
- Composite output standard choice as input standard provided line-standard is the same
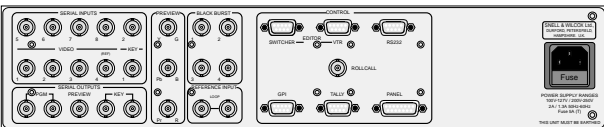
Model 4D

Video Inputs:

- Four SDI video inputs
- One SDI key input
- Dual-standard 525 and 625 on-line switchable
- 10-bit inputs are dynamically rounded™ to 8-bits

Video Outputs:

- Two SDI program video outputs
- Two SDI program key outputs
- One SDI preview video output
- One component analog preview output (YPbPr or RGB)
- SDI program video output switchable between 8-bit and 10-bit

Model 8D

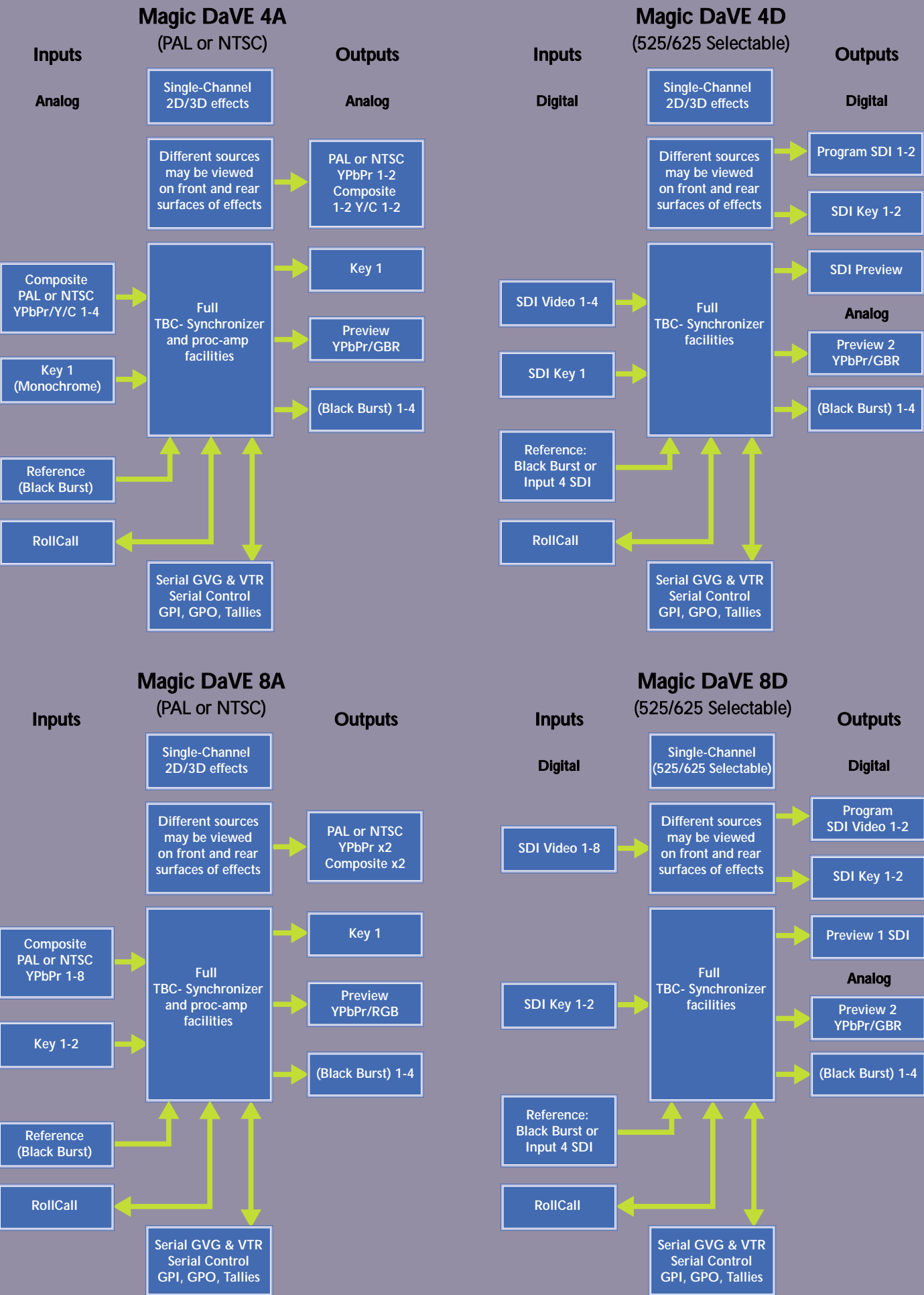Note that the Model 8D includes the Magic DaVE Options Package.

Video Inputs:

- Eight SDI video inputs
- Two SDI key inputs
- Dual-standard 525 and 625 on-line switchable
- 10-bit inputs are dynamically rounded™ to 8-bits

Video Processing

- Routing matrix of all inputs onto foreground and background
- Two live sources at any one time
- Full frame-synchronizing TBC on each source
- Switchable 4-line or 2-line (digital I/O models only) minimum delay mode for pre-read VTRs
- Genlock to analog reference input - digital I/O models can also genlock from SDI video input 4
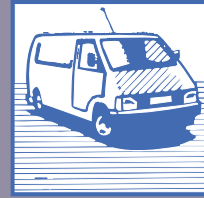- 8-bit 4:2:2 13.5MHz processing with Dynamic Rounding™

All Models

- Preview output cursor (for DVE manipulation and chroma key set-up) and safe area display
- Four analog black-burst outputs

Magic DaVE 4A
(PAL or NTSC)

Inputs — Analog

Outputs — Analog

- Single-Channel 2D/3D effects
- Different sources may be viewed on front and rear surfaces of effects
- PAL or NTSC YPbPr 1-2 Composite 1-2 Y/C 1-2
- Composite PAL or NTSC YPbPr/Y/C 1-4
- Key 1 (Monochrome)
- Full TBC- Synchronizer and proc-amp facilities
- Key 1
- Preview YPbPr/GBR
- (Black Burst) 1-4
- Reference (Black Burst)
- RollCall
- Serial GVG & VTR Serial Control GPI, GPO, Tallies

Magic DaVE 4D
(525/625 Selectable)

Inputs — Digital

Outputs — Digital

- Single-Channel 2D/3D effects
- Different sources may be viewed on front and rear surfaces of effects
- Program SDI 1-2
- SDI Key 1-2
- SDI Video 1-4
- SDI Key 1
- Full TBC- Synchronizer facilities
- SDI Preview
- Analog
- Preview 2 YPbPr/GBR
- (Black Burst) 1-4
- Reference: Black Burst or Input 4 SDI
- RollCall
- Serial GVG & VTR Serial Control GPI, GPO, Tallies

Magic DaVE 8A
(PAL or NTSC)

Inputs — Digital

Outputs — Digital

- Single-Channel 2D/3D effects
- Different sources may be viewed on front and rear surfaces of effects
- PAL or NTSC YPbPr x2 Composite x2
- Composite PAL or NTSC YPbPr 1-8
- Key 1-2
- Full TBC- Synchronizer and proc-amp facilities
- Key 1
- Preview YPbPr/RGB
- (Black Burst) 1-4
- Reference (Black Burst)
- RollCall
- Serial GVG & VTR Serial Control GPI, GPO, Tallies

Magic DaVE 8D
(525/625 Selectable)

Inputs — Digital

Outputs — Digital

- Single-Channel (525/625 Selectable) effects
- Different sources may be viewed on front and rear surfaces of effects
- Program SDI Video 1-2
- SDI Key 1-2
- SDI Video 1-8
- SDI Key 1-2
- Full TBC- Synchronizer facilities
- Preview 1 SDI
- Analog
- Preview 2 YPbPr/GBR
- (Black Burst) 1-4
- Reference: Black Burst or Input 4 SDI
- RollCall
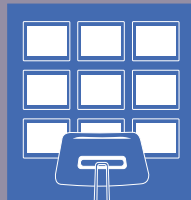- Serial GVG & VTR Serial Control GPI, GPO, Tallies

Typical Applications

Outside Broadcast

Ultra-compact packaging and a comprehensive range of effects - including slabs and page turns - are ideal for use in the fast-paced world of outside broadcasting.

Newsrooms

Extra dual channel and slab models allow two basic channels of DVE at once - ideal for newsroom shots, while JPEG still-store allows grab, storage and recall of up to forty images.

Corporates

Compact size, ease of use and an intuitive control system make Magic DaVE the ideal choice for adding eye-catching effects to corporate productions, at a ratio of performance to cost that cannot be bettered.

Magic DaVE Gives You Amazing Powers

If you are considering how best to upgrade your facility and want to add a little magic to your productions....

- If you want superb picture processing and full broadcast quality 4:2:2 operation…

- If you want a DVE/Switcher system tailored to your needs

- If you don't want to find yourself shopping for all sorts of extras

- If you want the ability to mix input sources of different formats

- If you want key controls and rapid button for function operation

- If you want to create dual channel effects on a single channel

- If you don't want to be limited to pre-installed effects

- If you want a versatile, future-proof solution…

you want Magic DaVE.