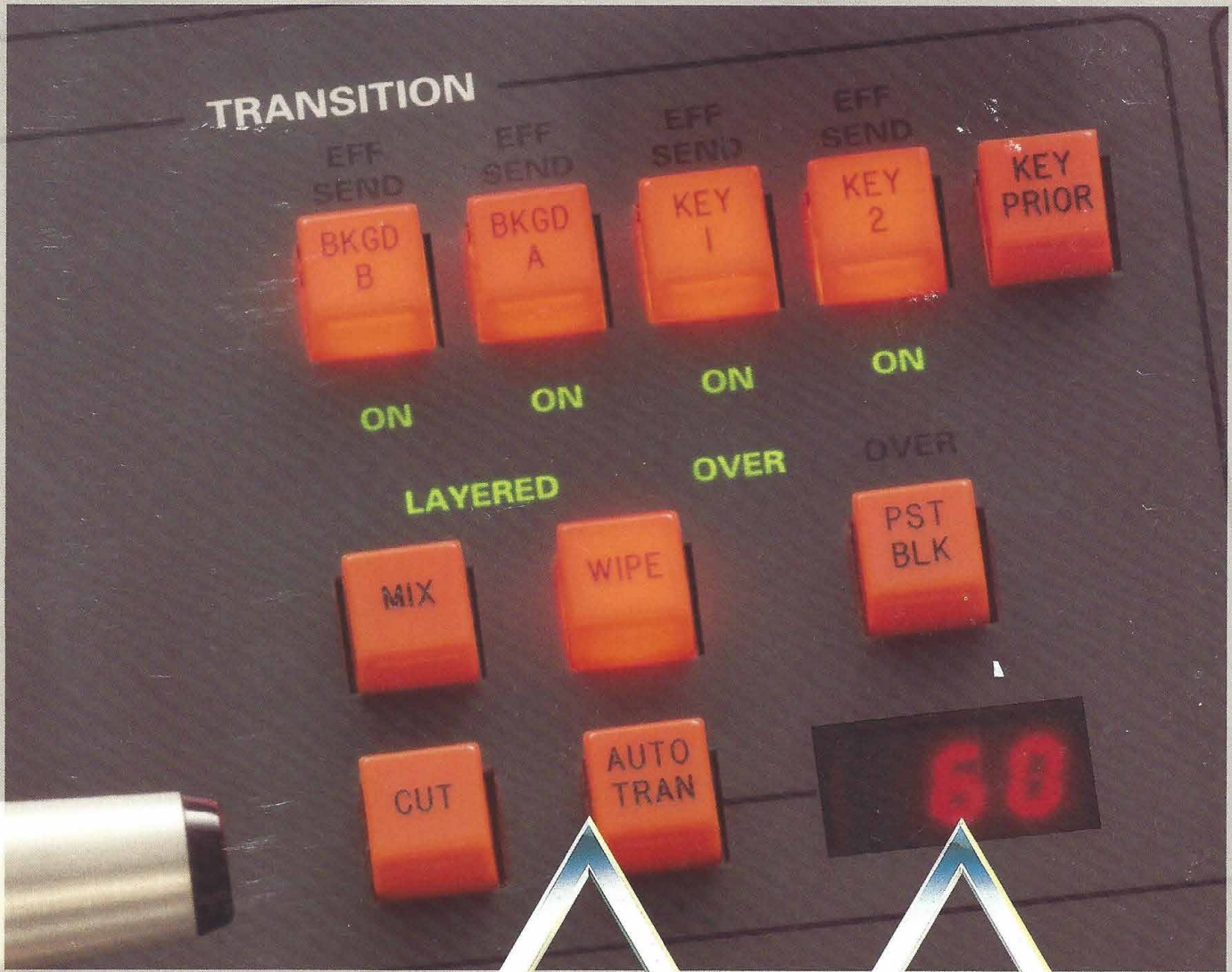


Grass Valley Group[®] Production Systems



At the heart of Television

Contents



2-5

Digital production systems



6-7

Composite analog production systems



8-9

Component analog production systems



10-12

Applications



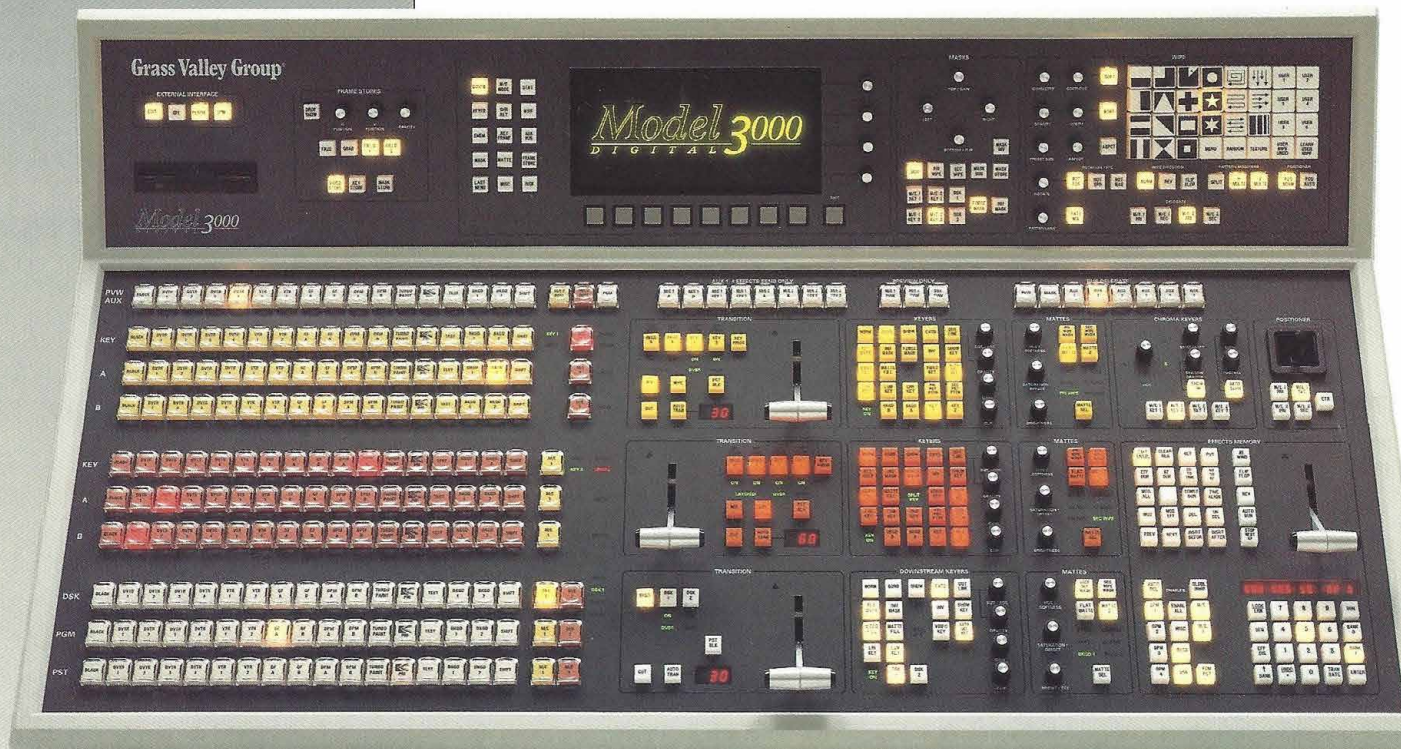
13-16

Product matrix/sales offices



At the heart of TELEVISION

Digital production systems



Model 3000

Only once in a generation, you see a new product with the power to revolutionize an entire industry. A product which doesn't merely advance the state-of-the-art, but rewrites the rules.

The Model 3000 Digital Production Switcher will redefine the world of video production. You'll see its quality, video fidelity, and creative control will change the way you look at television.

More Inputs: Up to 64 inputs. Every video input can have a companion key input. Inputs can be analog, parallel digital or serial digital.

Improved Key Processing: Gives you near-component quality - virtually eliminating chroma dot crawl.

Enhanced E-MEM System for Keyframing: Gives you the creative power to consolidate switcher and digital effects.

Lamina Image Layering: Each of the two M/Es provides layering for real-time compositing of multiple picture elements.

"Effects Send": Lets you insert a digital effects system into the middle of an M/E, allowing transformation of an image prior to layering.

Improved Key Masking: More masking capability than ever before, from either of two wipe patterns in the M/E, the unique mask framestore, a rectangular shutter mask for each key or a video source.

Video, Key, and Mask Framestore: Gives you the ability to grab four-field video and its key signal, making layering of stills fast and easy.



VPE-241 Edit Controller

The VPE-241 Editing System provides full automation of the post production process. With a brand new hardware design and the latest version of GVG's exclusive Super Edit software, the VPE-241 provides advanced features (including BINS and SWAP, powerful tools in layering work) needed in demanding applications. GVG editing systems have been used in hundreds of leading post production facilities for many years. Continuously improved and enhanced during that time, Super Edit offers a unique balance between proven stability and innovative features.

The design philosophy of all GVG editing systems is that

whenever possible, the editing system should store and reproduce every element of an edit decision. With the appropriate peripheral equipment, the VPE-241 can automate and reproduce switcher setups, audio mixer setups, VTR motion effects, TBC setups, Dubner Graphics and C.G. effects, and digital effects. All of this is accomplished with what many believe to be the most efficient, easy to use interface in the industry.



MAX-9000

The complete and economical range of terminal equipment for digital and mixed digital/analog installations.

The MAX-9000 series includes serial digital distribution amplifiers, serializers, and deserializers plus digital to analog and analog to digital converters for both 525

and 625 line standards.

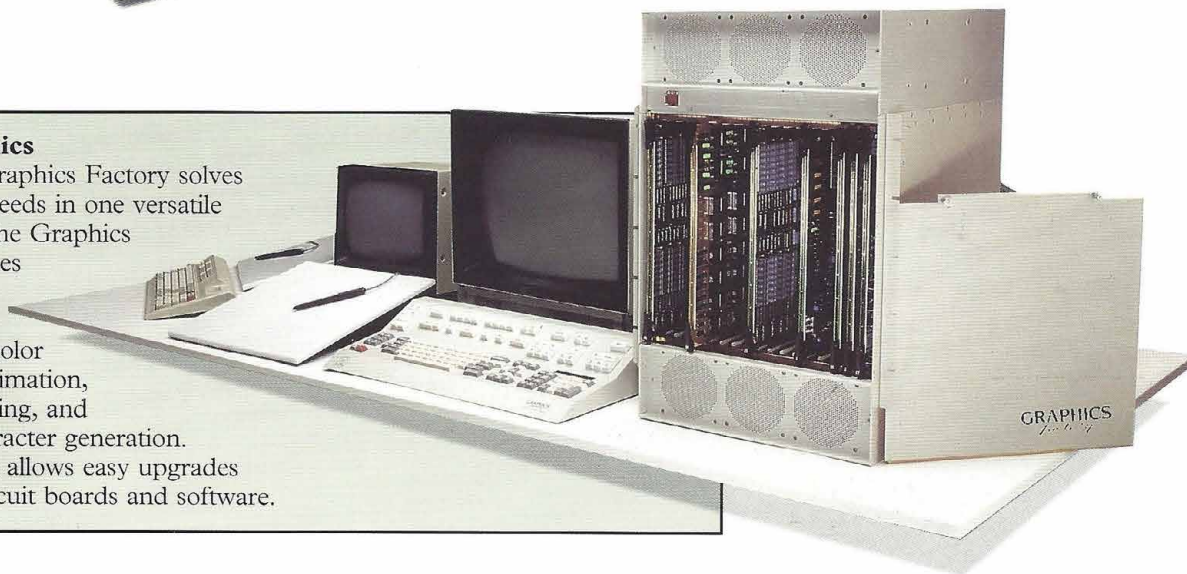
MAX-9000 modules can be mixed with analog devices in the popular MAX-900 3RU mounting frames. It's the route to MAXimum flexibility, MAXimum space saving and minimum cost.



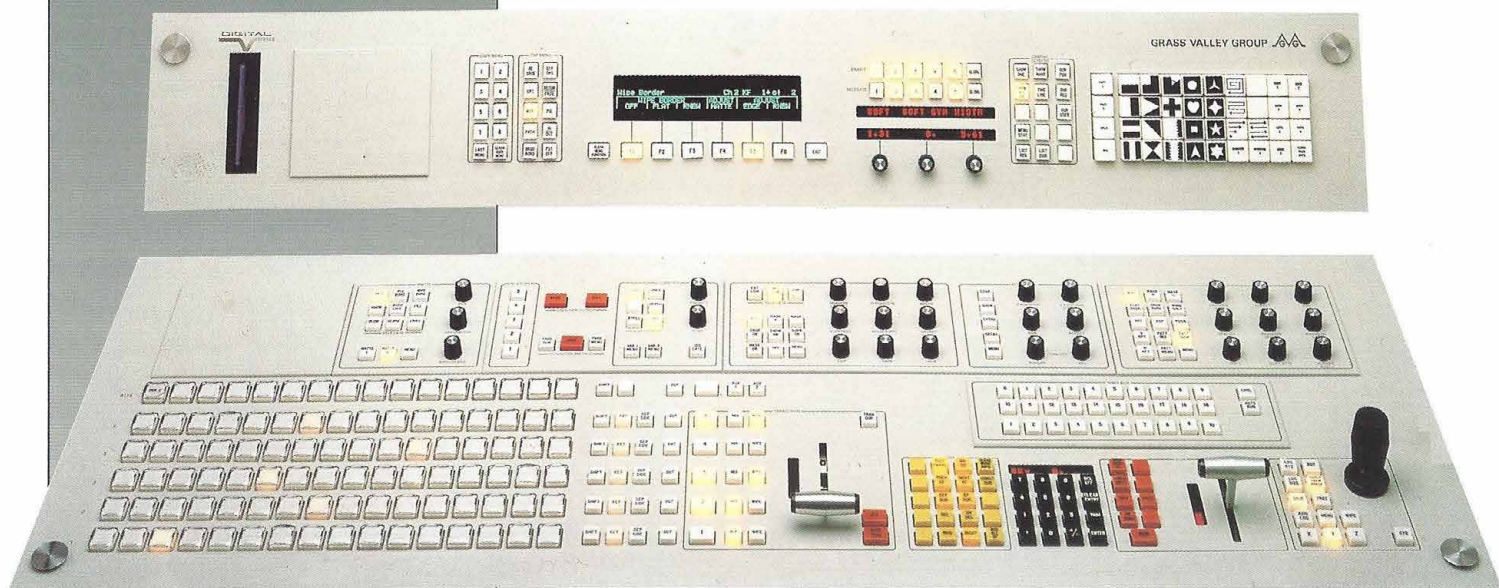
▲ VPE-241

Dubner Graphics

The Dubner Graphics Factory solves your graphics needs in one versatile workstation. The Graphics Factory combines 3-D modeling, rendering, full color painting and animation, still store archiving, and anti-aliased character generation. Modular design allows easy upgrades with plug-in circuit boards and software.



Digital production systems



Kadenza & Kaleidoscope

KADENZA

As with other formats, the GVG commitment is to supply total solutions, switching, digital effects, edit controllers, graphics and a full range of support equipment. GVG digital production equipment is designed either for the fully digital environment, or to help you make a smooth transition through an analog/digital hybrid solution.

The flagship of the digital suite must be the Kadenza DPP-1, a unique combination of Kaleidoscope digital effects and traditional switcher channels. The Kadenza DPP-1 was specifically designed as a real time multilayering tool for the post production environment.

Although a digital device, the Kadenza DPP-1 has the ability to draw together all video formats. The Kadenza DPP-1 also offers all the advantages of modular design. Both digital effects and switcher channels can be 'pooled' between the Kadenza control panels and other Kaleidoscope

control panels, allowing resource sharing throughout your installation.

Its control of focus and depth combined with the Kurl option allow visual effects comparable in quality to film optics. The Kadenza DPP-1 has established itself as the ultimate creative tool in prestige installations throughout the world.



VPE-151

The VPE-151 is the ultimate editing tool at the top end of the VPE range of edit controllers. Dedicated keys cut down on keystrokes and the Jogger knob gives transparent access to the widest selection of VTR and peripherals ever. With the VPE-151, operators can ignore technical barriers and concentrate on giving their clients what they pay for—creative work of the highest possible quality.



VPE-151

Support Equipment

Support equipment for the digital suite includes a comprehensive range of modular units which allow flexible upgrades and system reconfiguration.



ADC-120 component analog to digital translator - converts any of the commonly used analog component video signal formats to 8-bit parallel digital format.

DAC-110 digital to component analog video translator - converts component digital video signals to any of the commonly used analog component formats. Switch selectable 8 or 10-bit resolution. Includes built-in color bar generator for system line-up.

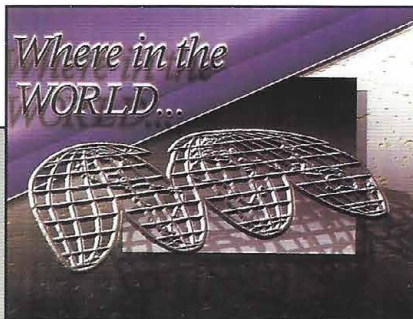
DDA-101 digital distribution amplifier - a 4-output distribution amplifier featuring input video presence detector,

automatic cable equalization, data re-clocking, a full 10-bit data path, and separate drivers for each output.

DHX-532 digital routing system - a digital routing system based on the proven Horizon technology. A 32-in by 32-out system occupies only 15RU. Features a full 10-bit data path.

Dubner Graphics

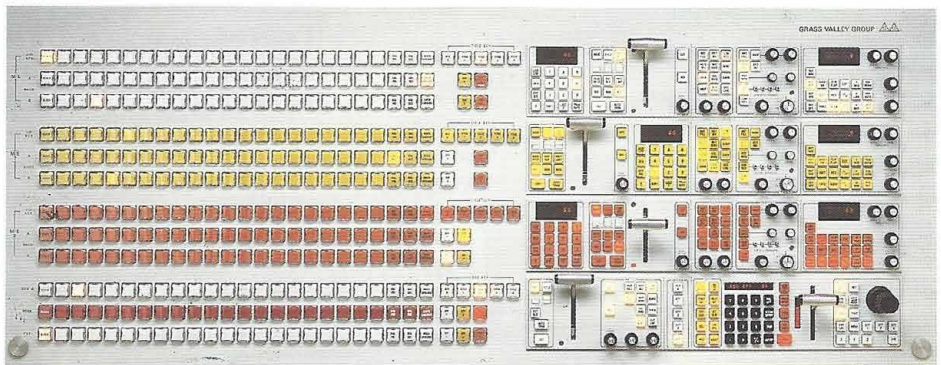
The Dubner D1 Turbo digital paint system is the perfect partner to the Kadenza DPP-1. A powerful creative tool that is refreshingly easy to use. Image enhancement, transformation, and animation tools accessed via on-screen menus for production and post production chores.



Composite analog production systems

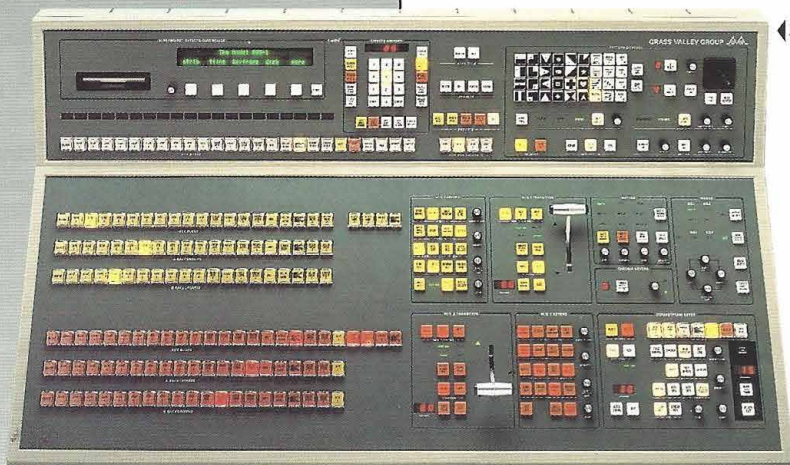
The GVG 30 year pedigree is reflected in a range of products that spans everything between acquisition and transmission of television signals.

GVG is committed to protect the investment of a huge composite analog customer base, constantly enhancing its existing products with new and innovative features.



Model 300

Model 200



Model 110



Model 300

The Model 300 production system, recognized throughout the world as the most powerful broadcast or post production switcher. Now in over one thousand installations worldwide the reputation of the Model 300 continues. Integration of the Kaleidoscope control panel in the Model 300 provides centralized control of both systems. This further enhances the power of the system.

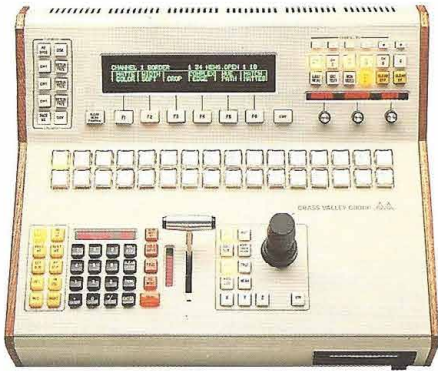
Model 200

Available with one or two mix effects, the Model 200 breaks the price barriers that for so long put big switcher power

out of reach of all but the largest installations. Latest addition to the Model 200 is the Silhouette option, an edge and shadow generator that further enhances the 200's creative power.

Model 110

The Model 110 is a compact low cost switcher that combines the familiar GVG feel with high quality big switcher power. Powerful options on the Model 110 include a downstream keyer with linear Borderline generator, RS232/422 serial interface for control of editors, effects systems, and a pulse regenerator for simplified system timing.



Kaleidoscope DPM-1

The Kaleidoscope digital picture manipulator is the world's most powerful digital effects system.

The Kaleidoscope system's Kurl Option gives you the added creative power of real-time film optical effects.

The Kaleidoscope DPM-1 is the ideal solution for post production, live applications — or both.



DPM-700

The ideal companion for the Models 110 and 200 production systems, the DPM-700 brings the added excitement of 3-D picture manipulation to high quality, low cost post production.

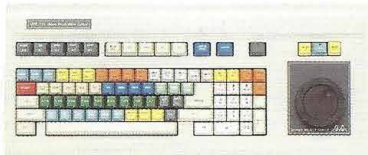
The DPM-700 is not only extremely cost effective, it offers you a winning combination of options for creative power you can't get with other systems.

VPE Range of Edit Controllers

A complete range of editing systems to meet your exact needs and budget. Starting with the new VPE-131 and including the VPE-141, the VPE-241, and the VPE-151, these products are rich in features and capability.

Several choices of control panels and joggers allow you to concentrate on creative decision making.

Each edit controller draws on the experience and reliability of continuously enhanced Super Edit software. With years of experience and evolution, Super Edit allows you to keep pace with new technology and peripheral equipment.



◀ VPE-131



◀ VPE-141



◀ VPE-241



◀ VPE-151

Dubner Graphics

Model 20-K and 30-K are real time broadcast-quality character generators priced to compete in the fast growing corporate television market. The 30-K with dual channel color preview is ideally suited for nightly news and sports reports as well. A built-in programming language tailors the 30-K to unique live applications such as updating scoreboards, running game shows, or displaying election results.



Support Equipment

9500 series sync pulse

generators - provide everything from master reference for an entire facility to specific source equipment

synchronization.

8500 series video, audio and pulse distribution systems - the

byword for price and performance in installations throughout

the world.

20-TEN, TEN-20 and TEN-XL

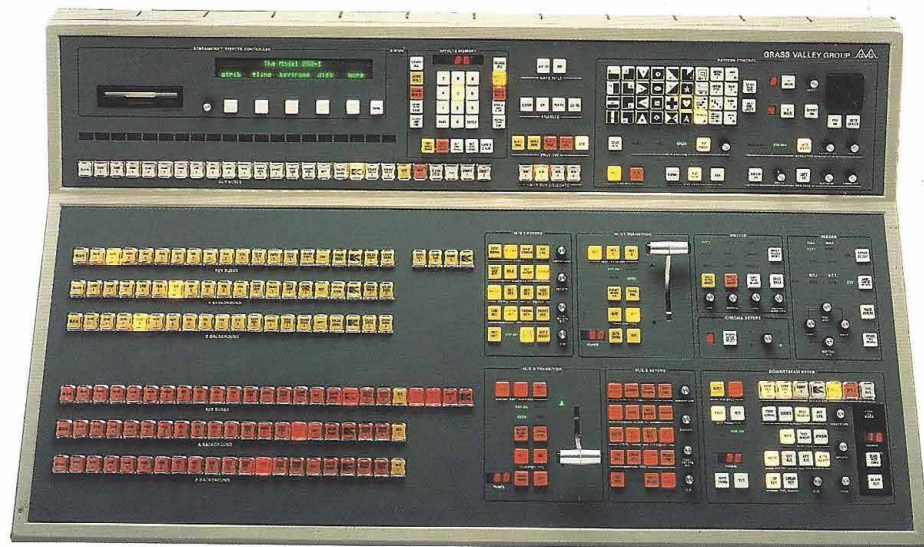
family of compact routing

systems - modular construction, stereo audio breakaway, differential video inputs

and balanced audio inputs have ensured this system's reputation as the best price/performance ratio in the industry.



Component analog production systems



Model 200-2CV



110-CV



DPM-100



DPM-700

Once again a total solution, GVG component analog production equipment capitalizes on the inherent advantages of this format, dramatically increasing the quality of captions, graphics and chroma keys. Component analog also provides a cost effective alternative to digital equipment.

Model 200-2CV

The Model 200-2CV, brings "big-switcher" capability to the component environment.

The 200-2CV gives you the features of the 200-2 composite system in component format. Users will benefit from its combination of power, performance and fast, logical operation.

Model 110-CV

The Model 110-CV gives the same big system performance to the component user as the Model 110 does to the composite user.

The 110-CV is compatible with analog component VTRs, and the DPM-100 or DPM-700 digital picture manipulators.

DPM-100

Equally at home in a broadcast environment or doing sophisticated post production transition effects, the DPM-100 brings the cost of quality digital effects within the reach of all users. The DPM-100 is available for composite, component and digital formats.

DPM-700

The DPM-700 brings the excitement of 3-D picture manipulation to high quality, low cost digital video effects. The DPM-700 offers you a dramatic combination of 3-D rotation effects and variable perspective, with superior picture quality. Loaded with creative options, the DPM-700 is one of GVG's best production values.

Kaleidoscope DPM-1

Kaleidoscope digital effects is the world's most powerful digital effects system for component analog applications.



The Kaleidoscope system's modular design means you can configure it to your exact needs, expanding to up to four control locations and eight video effects processors.

The Kaleidoscope DPM-1 is the ideal solution for post production, live applications — or both.

VPE Range of Edit Controllers

The complete line of VPE edit controllers assures complete control of the creative process with all GVG production equipment, regardless of format mix, as well as the widest selection of peripheral devices in the industry.

The new VPE-241 introduces the powerful concept of EDL bins and other proven features in a cost-effective package. Other standard VPE-241 features include over 8000 EDL lines, Swap, Trace and 409 list cleaning.



MAX-900

Maximum flexibility and space saving are the benefits of this new range of component analog terminal equipment. All modules are mounted vertically into a 3RU frame and include distribution amplifiers, format translators, monitor selectors, test signal generators and source timing modules.

TEN-XLCV

An expandable video and stereo audio compact routing system in a three rack unit package. Being modular the TEN-XLCV can be upgraded quickly and easily with plug-in modules.



EMPHASYS

These digital encode systems ensure that your NTSC and PAL signals, analog or composite digital, retain the same crisp, clean look as the RGB or color difference originals.

← VPE-131



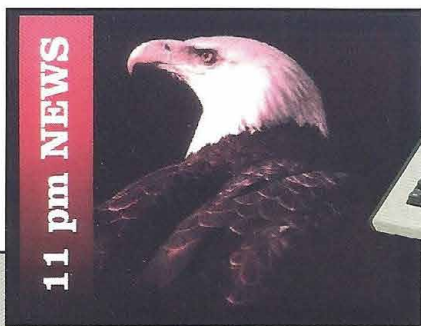
← VPE-141



← VPE-241

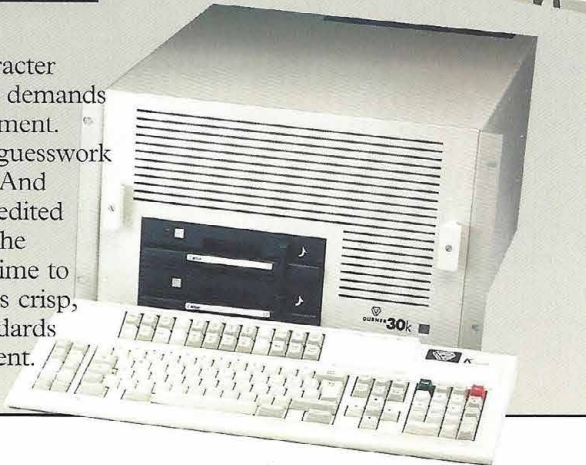


↑ VPE-151

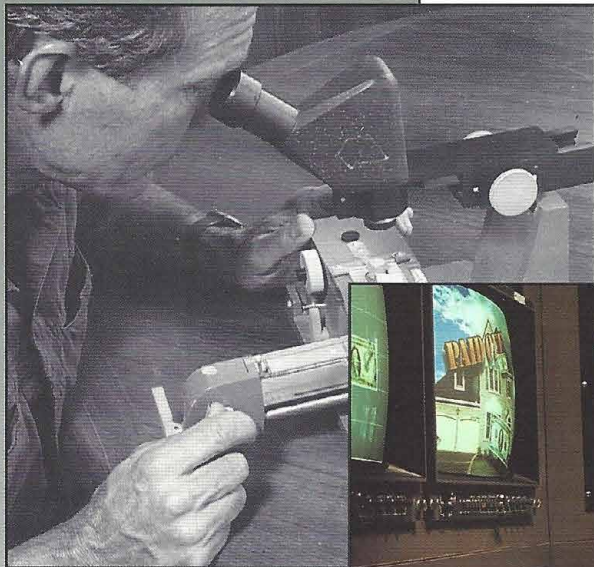


Dubner Graphics

The dual-channel 30-K character generator is designed for the demands of today's broadcast environment. Full color preview takes the guesswork out of late breaking stories. And instant take to on-air brings edited text on line *on time*. When the pressure is off, and there is time to appreciate quality, the 30-K's crisp, clean graphics meet the standards of any production environment.



Teleproduction



◀ Teleproduction c. 1960



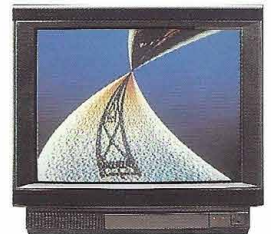
▼ Teleproduction c. 1990

Grass Valley Group innovation has shaped the way TV programs are made.

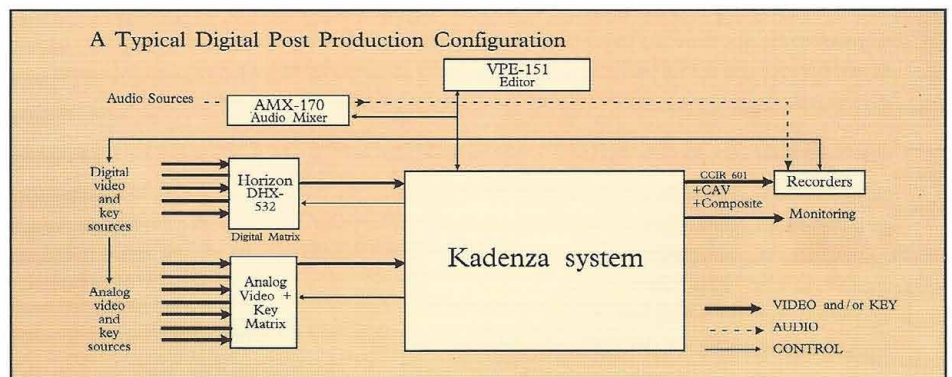
Remember when program production was pretty much a matter of "What you see is what you get?" Well, that just isn't the case any more. Today, post production is the name of the game.

The modern post suite is a complex, highly creative environment. And for more than 30 years, Grass Valley Group innovations have shaped that environment into the powerful tool it is today.

Our pioneering work in production switcher automation and serial control opened the door to unlimited creative freedom; our award winning E-MEM Effects Memory System is the standard of comparison. GVG editing systems provide complete control over all peripherals including the switcher, digital video effects, and virtually all makes of VTRs. We tie it ALL together into a fully integrated, user friendly system.



Digital production, a highly competitive environment where success means top creative talent giving their clients up to the minute solutions to the age old challenge of original creativity.



Broadcast



Grass Valley Group innovation has shaped the way we look at our world.

Broadcast television is our window on the world, and for more than 30 years, Grass Valley Group innovation has shaped the images we see through that window.

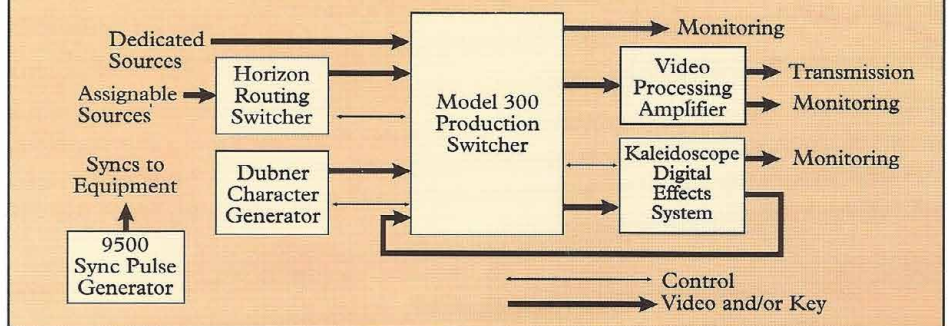
As the world's foremost production switcher manufacturer, GVG has led the way with innovations like Borderline key edging, shadow chroma key and E-MEM Effects Memory System, the standard of comparison in effects memory systems. We were the first with fully integrated digital video effects and production switcher control. The list goes on and on.

Behind the scenes, GVG support equipment is hard at work in television facilities all over the world. Ensuring that the quality and the integrity of the original image is preserved.



Broadcast production, there is no second chance in a live situation, equipment must be easy to use, powerful and above all totally reliable.

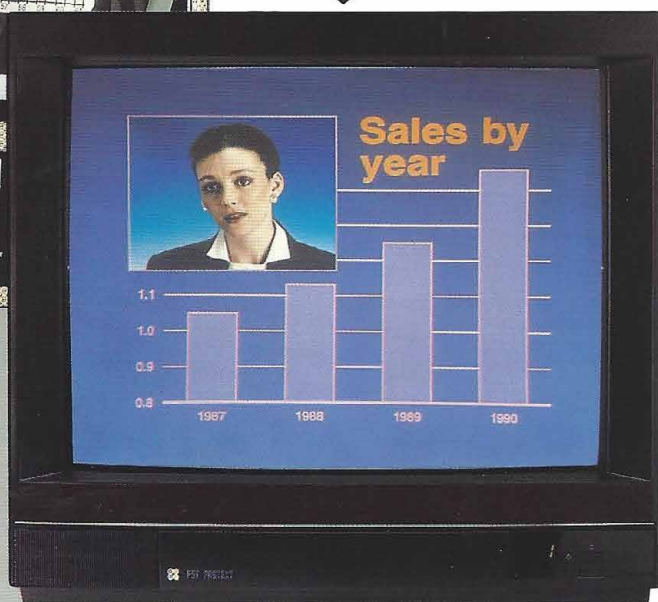
A Typical Broadcast Configuration



Corporate television



◀ Teleproduction c. 1960

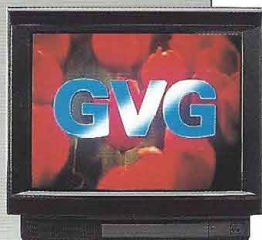
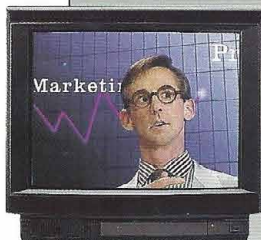


▼ Teleproduction c. 1990

Grass Valley Group innovation has changed the face of corporate video.

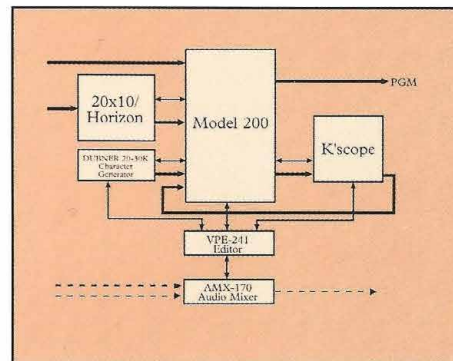
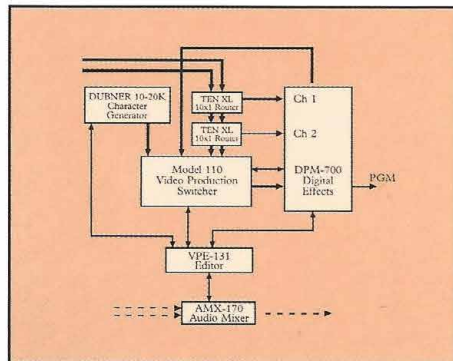
There was a time when the cost of sophisticated production tools made the terms "high quality" and "corporate video" mutually exclusive. Corporate TV producers had to be content to make do with inferior equipment and second-rate results.

Thanks to Grass Valley Group innovation, that just isn't true any more. We've taken the knowledge and experience gained as a leader in the broadcast industry and applied it to the development of a full range of equipment designed expressly for the budget conscious user. Production switchers, digital effects, edit controllers, electronic graphics, and a full range of support equipment. Cost effective tools with the power to produce top notch results.



Video is fast becoming the most powerful communication method in the modern business world. Equipment must offer quality comparable with broadcast equipment, at a price that makes it financially viable to industry.

Typical corporate television configurations



————> VIDEO and/or KEY <----- CONTROL - - - - -> AUDIO

Sales offices

Eastern Regional Office

Six Forest Avenue
Paramus, NJ 07652
(201) 845-7988 • FAX (201) 845-0336

Region Covered: Connecticut, Maine,
Massachusetts, New Hampshire,
New Jersey, New York, Pennsylvania,
Rhode Island, Vermont

Eastern District Office

12520 Prosperity Drive, Suite 110
Silver Spring, MD 20904
(301) 622-6313 • FAX (301) 622-6316

District Covered: Delaware,
District of Columbia, Maryland,
Virginia, West Virginia

Midwestern Regional Office

3150 Higgins Road, Suite 150
Hoffman Estates, IL 60195
(708) 310-9190 • FAX (708) 310-9205

Region Covered: northern Illinois, Iowa,
Minnesota, Nebraska, North Dakota,
South Dakota, Wisconsin

Midwestern District Office

P.O. Box 4609
Elkhart, IN 46514
(219) 264-0931 • FAX (219) 264-2689

District Covered: southern Illinois,
Indiana, Kentucky, Michigan, Ohio

Southern Regional Office

5628 Green Oaks Boulevard SW,
Suite A
Arlington, TX 76017
(817) 483-7447 • FAX (817) 483-9239

Region Covered: Arizona, Arkansas,
Colorado, Kansas, Louisiana, Missouri,
New Mexico, Oklahoma, Texas, Utah

Southeastern Regional Office

3554 Habersham at Northlake
Tucker, GA 30084
(404) 493-1255 • FAX (404) 491-0247

Region Covered: Alabama, Georgia,
Mississippi, North Carolina, South
Carolina, Tennessee

Southeastern District Office

8880 N.W. 20th, Suite I
Miami, FL 33172
(305) 477-5583 • FAX (305) 477-5385

District Covered: Florida, Puerto Rico,
Virgin Islands

Western Regional Office

21243 Ventura Blvd., Suite 143
Woodland Hills, CA 91364
(818) 999-2303 • FAX (818) 999-6283

Region Covered: Alaska, California,
Hawaii, Idaho, Montana, Nevada,
Oregon, Washington, Wyoming

For distributor information in Eu- rope, Africa, and the Middle East:

GVG International, Ltd.
Unit 3 Cherrywood
Chineham Business Park
Crockford Lane
Basingstoke RG24 0WF, England
+44-256-817817
FAX +44-256-817803
TLX 851-858399 GVGI G

For sales and service information in Japan:

GVG Japan Ltd.
Seiko Sunshine Bldg. XII
1-30-6 Higashi-Ikebukuro
Toshima-ku, Tokyo 170 Japan
+813-5992-06210
FAX +813-5992-9377

For distributor information in Asia:

Grass Valley Group Asia
1406 Wang Yip Industrial Building
1 Elm Street, Taikoktsui
Kowloon, Hong Kong
+852-7874118
FAX +852-7874407
TLX 780-32471 GVGA HX

For distributor information in Mexico, Central and South America:

Grass Valley Group Sud America
8880 N.W. 20th, Suite 1
Miami, FL 33172 USA
(305) 477-5488 • FAX (305) 447-5385

For sales and service information in any areas not covered above:

The Grass Valley Group, Inc.
P.O. Box 1114
Grass Valley, California 95945 USA
(916) 478-3000 • FAX (916) 478-3187

Grass Valley Group®

A TEKTRONIX COMPANY

At the heart of Television