

Broadcast ENGINEERING

THE JOURNAL OF DIGITAL TELEVISION™

Including:

2,000 Product Listings

1,000 DTV/HDTV Ready Products

700 Manufacturers/Dealers

600 Web Addresses

1999

Buyers

Guide

&

Web

Reference



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Broadcast ENGINEERING

THE JOURNAL OF DIGITAL TELEVISION™

December 15, 1998
Volume 40, Number 13

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Systems integrators are playing a larger role in new facility design such as this studio located at WFTS-TV and built by Professional Communications Systems.

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DVCPRO

IKEGAMI—STYLE

Ikegami's DVCPRO® Cameras Offer More.

Ikegami's DVCPRO Digital Camcorder Series combine the world's finest camera technology with today's popular digital VTR format. The camera incorporates newly developed digital processing ICs which maximize the potential of digital broadcasting. The HL-V77, and the V77W (16:9/4:3 switchable version) feature three 2/3" 520,000-pixel FIT CCDs, while the HL-V73 uses three 2/3" 400,000-pixel IT CCDs. A lightweight body of about 10 lbs. including the viewfinder, and a low center of gravity with a small VTR mechanism, make the cameras extremely agile.

The DVCPRO recorder compresses a high quality digital component video signal by a factor of 1/5

(4:1:1, 8bit), and delivers video output at a level that surpasses analog counterparts. Employing a 6.35 mm (1/4") wide MP (Metal Particle) tape, DVCPRO cassettes are about one-fourth the volume and one-sixth the weight of conventional 1/2" cassettes, while delivering over 1 hour of recording capacity.

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HL-V77
HL-V77W
HL-V73

DVCPRO DIGITAL CAMCORDER SERIES

Ikegami Electronics (U.S.A.), Inc. 37 Brook Avenue, Maywood, NJ 07607 East Coast: (201) 368-9171
West Coast: (310) 370-2400 Southeast: (954) 735-2203 Southwest: (972) 869-2363 Midwest: (630) 834-9774

Website @ <http://www.ikegami.com>

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Ikegami

Editorial

Welcome to Broadcast Engineering's 1999 DTV Buyers Guide & Web Reference. This is our last Buyers Guide before the turn of the century and we wanted to this one to be the best. To that end, several new features have been incorporated in this issue to make it even easier-to-use. Additionally, more than 90% of the information contained in this year's Buyers Guide has been verified within the last 60 days.

For starters, the product index starts on page 8. Use it to quickly locate the product section you are interested in. As an example, if you are looking for batteries, checking the product index shows they are included in the Power Products section, which starts on page 50. Almost 200 categories are listed in the product index and each points to a specific category within the product directory.

After the product index you will find the product directory. Starting on page 14, it is broken down into 39 categories and contains nearly 2000 products; half of which are DTV/HDTV ready. The product directory also includes phone numbers for each of the manufacturers listed—both toll-free and regular when available. Advertiser listings are highlighted in red. For information on their products simply circle the appropriate numbers on the Free Info Card (p.125).

Need a web address? Turn to page 87. There you'll find more than 600 company URLs. These pages can be detached and kept next to your PC for handy reference.

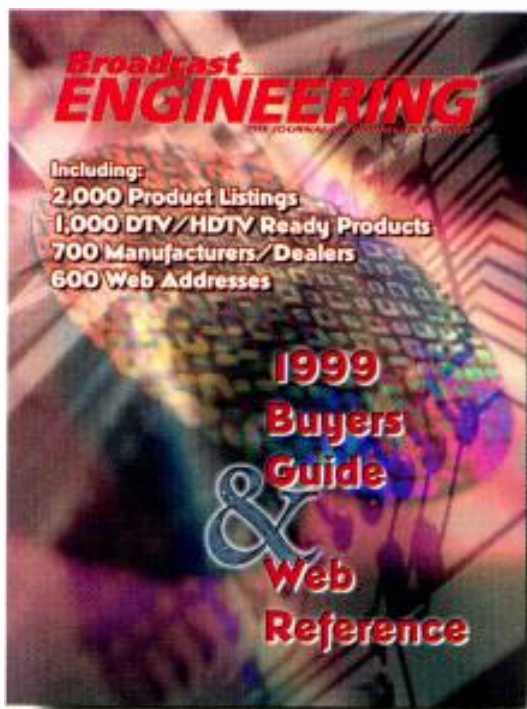
Starting on page 98 you will find full address listings for 700 manufacturers and dealers. Systems integrator addresses are listed separately and begin on page 133. Once again, advertisers are highlighted. Within the address section, you will also find a rundown of the sections where advertiser's products are listed. Page

numbers are included to make things even easier.

Also, don't miss the new feature, scattered throughout the Buyers Guide are *Tech Tips*. These concise factoids contain reference information you'll find useful. They can be found quickly by locating the colored banners on the lower side of the page. A complete list is contained in the Table of Contents (p.4).

For the times when you need access to this information and don't have your Buyers Guide handy, the complete Buyers Guide can also be found on the web at www.broadcastengineering.com. As an added bonus, all advertiser web addresses are hot linked back to their site.

So there you have it, the 1999 DTV Buyers Guide & Web Reference—all new, with even more useful practical information designed to make your job easier.



Steve Epstein, technical editor



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www.americanradiohistory.com

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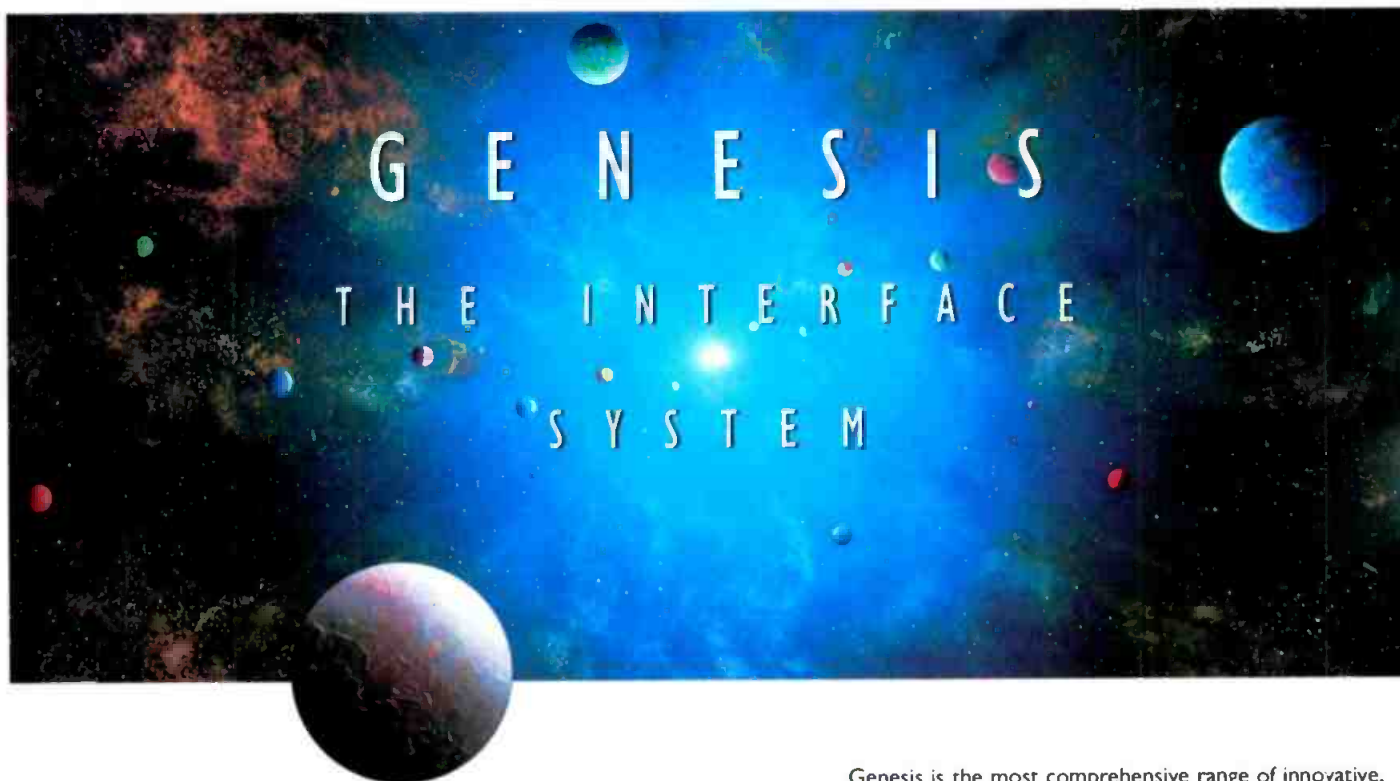
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Audio Compressors/Decompressors
Fibre Optic Drivers/Receivers
Audio AES Processors
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Analog Audio Distribution Amplifiers
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CONVERTING THE WORLD

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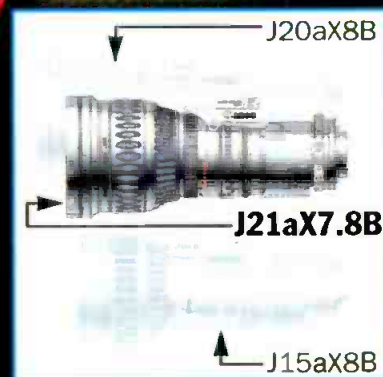


The control unit has been re-designed to fit comfortably into the palm of the hand, while extra padding has been added to the band.

The iris control is now a two-function rotary push switch for easier utilization. In the manual mode, the iris torque selection can be normal or heavy, satisfying the individual needs of the operator.

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The iris ring is angled for a better view, so adjustments can be made quickly and more efficiently.



The new IFxs lens **J21aX7.8B** as it compares in size to the J20aX8B and J15aX8B.



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Product Directory

Audio Accessories

Includes: Acoustic materials; Audio accessories; Audio codecs; Audio meters; Audio monitor amplifiers; Audio patch panels; Headphones; Sound/music/image libraries; Speakers; Surround sound accessories

615 Music Library

888-615-TRAX; 615-244-6515

*51 CD Music Library

Ac-cetera Inc

800-537-3491; 412-344-8609

PB Mounts Microphones to Microphones

CW Cable Organizers

R-X-1 No-Creak Wired XLR Gooseneck

Acoustic Systems

800-749-1460; 512-444-1961

Acoustic Materials

Acoustical Solutions

800-782-5742; 804-346-8350

Sound/Noise Control Products

AKG Acoustics US

615-360-0499

K2705 Sealed Parabolic Headphones

HSC200 Headphone/Microphone Broadcast Headset

ATI-Audio Technologies Inc

800-959-0307; 215-443-0330

BGD200/400VU/PPM NanoAmp Series Dual & Quad Bargraph Meters

Audio Accessories Inc

603-446-3335

Line of Patch Panels

Audio-Technica US Inc

330-686-2600

ATH-M40fs & ATH-D40fs Studiophones

Avocet Instruments Inc

800-443-0728; 503-671-9424

AV-2000 Audio Delay Canceller

Beck Associates Inc

888-422-8600; 512-252-7555

*AESIO

VU-2P

Benchmark Media Systems Inc

800-262-4675; 315-437-6300

SPM 220/320 VU Meter Systems

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Bogen Photo Corp

201-818-9500

Manfrotto Microphone and Speaker Accessories

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Boland Communications

800-918-9090; 949-367-9911

Digital uniVUer

Broadcast Richmond

765-966-6468

Prewired Console and Mixer Harness

Clark Wire & Cable

800-222-5348; 847-949-9944

Line of Patch Panels

Creative Support Services

800-468-6874; 213-666-7968

*168 CDs of Production Music & Sound Effects

Datatek Corp

800-882-9100; 908-654-8100

D2627 AES/EBU Synchronizer

Dolby Laboratories Inc

800-33-DOLBY; 415-558-0200

*DP562 Dolby Digital Decoder

*DP567 Two-Channel Dolby Digital Encoder

*DP569 Multichannel Dolby Digital Encoder

Dorrough Electronics

818-998-2824

*Dorrough Loudness Meter

DSP North America Ltd

630-653-1940

*MP-I-SPEED Monitor

Harrison by GLW

615-370-9001

*SMS Surround Monitoring System

Henry Engineering

626-355-3656

StereoMixer 8-Input Stereo Mixer

Matchbox II Level & Impedance Converter

PortaMatch

Twin Match

HHB Communications USA LLC

310-319-1111

*Circle S Studio Monitor 5.1

Horita Co Inc

949-489-0240

AM-50 On-Screen Audio Meter

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Industrial Acoustics Co

718-931-8000

Quad-Series Modular Studios

Noise-Lock Acoustic Windows & Doors

Intraplex Inc

877-INTRAPLEX; 978-486-9000

*OutBack MPEG Layer II ISDN Audio Codec

JBL Professional

800-852-5776; 818-894-8850

*LSR 32 Mid-Field Monitor

*LSR 28P Bi-Amplified Monitor

*LSR Multichannel Monitoring System

Lemo USA

800-444-5366; 707-578-8811

Connectors and Patch Panels

Logitek

800-231-5870; 713-782-4592

*Mechanical and LED VU Meters

MartinSound

800-582-3555; 626-281-3555

*Multimax Multiformat Monitor Controller

Megatrax Production Music

888-MEGA-555; 818-503-5240

Production Music Libraries

Mohawk/CDT

800-422-9961; 978-537-9961

*Audio Breakout Boxes

Neutrik USA Inc

732-901-9488

NADITBNC-M & -F

Easy Patch - TT & TB Patch Panels

OGM Production Music

800-421-4163; 323-461-2701

Production Music Libraries

OMNIMUSIC

800-828-6664; 516-883-0121

Production and Sound-Effects Libraries

PANORAMAdtv

650-589-5676

*In-Picture Audio Meters and Alarm Control

Prime Image Inc

408-867-6519

Twister

Promusic Inc

800-322-7879; 561-995-0331

*2000 CDs of Music & SFX

Radial Engineering

604-942-1001

*Headphones and Headsets

*Audio Accessories

Rip-Tie Inc

800-348-7600; 415-543-0170

*Rip-Tie Cable Management System

River City Sound Productions

800-755-8729; 901-274-7277

*Buy-Out Production Music Libraries

RPG Diffusor Systems Inc

301-249-0044

*Flatflusor New 2D Flat Diffuser 2'x2'x1"

*ProFoam New Profile Foam w/VDAC Technology

Sennheiser Electronic Corp

860-434-9190

*RS-8 Headphones

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*HD570 Headphones

Circle (261) on Free Info Card

*HDR-8 Headphones

Circle (134) on Free Info Card

*RS-6 Headphones

Circle (135) on Free Info Card

Sonic Science

800-26-Sonic; 416-351-9100

Sonic Boon Sound-Effects Library

Sonic Source Music Library

SoperSound Music Library

800-227-9980; 650-321-5193

Music Libraries

Sound Ideas

800-387-3030; 905-886-5000

*Professional-Quality Sound-Effects Libraries

*Professional-Quality Music Libraries

Switchcraft Inc

773-792-2700

*APP, Front-Access, Digital APP Series Patch Panels

Systems Development Group Inc

800-221-8975; 301-846-7990

Audio Accessories

Techflex Inc

800-323-5140; 973-729-6253

*Expandable Braided Sleeving

Telos Systems

216-241-7225

Zephyr Digital Network Transceiver

Zephyr Express Portable ISDN Codec/Mixer

The Music Bakery

800-229-0313; 615-790-9897

Buy-Out Audio Music Library of 30+ Production Music CDs

TRF Production Music Libraries

800-899-MUSIC; 914-356-0800

*PAN Music Library 120 CDs of Ethnic Production Music

*Bosworth, Musictrack, PowerSound & Pyramid New Releases

Trompeter Electronics Inc

800-982-2629; 818-707-2020

*Patch Panels, Jacks, Cords & Connectors

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Videotek Inc

800-800-5719; 610-327-2292

APM-200/800 - 2- and 8-Input Monitor Amps

Circle (402) on Free Info Card

Ward-Beck Systems Ltd

800-771-2556; 416-438-6550

Bit Buddy/Bit Spitter

Product Directory

WaveSpace Inc

949-770-6601

*WSM 15-2B Surround Monitor System

*WSS 600 Surround Monitor Switching System

Westlake Audio

805-499-3686

*Lc3W10 3-Way Mid-to-Close Field Monitor

*LcRG5.1 Dedicated Center Channel Speaker

*Lc 6.75 Compact Close Field Monitor

WhisperRoom Inc

800-200-8168; 423-585-5827

Sound Isolation Booths - Portable & Modular

Wohler Technologies Inc

838-5 WOHLER; 650-589-5676

*In-rack, Self-Powered Amplified Speaker Systems

*ATSC Surround Sound Audio Monitors for 5.1 Applications

*Full Line of Level and Phase Metering Products

You/Com Audiocommunicatie BV

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ReporterSet RSD/64



Euphonix CS 3100B Mixer

Euphonix Inc

818-766-1666

CS3100B Mixer (See Photo)

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Fostex America

800-7-FOSTEX; 562-921-1112

Mixers

Graham-Patten Systems

800-422-6662; 530-273-8412

*D/ESAM 400 - 64-Input Digital Audio Mixer

*D/ESAM 230/24 - 24-Input Digital Audio Mixer

Harrison by GLW

615-370-9001

*SMS Surround Monitoring System

PRO-950 TV/Radio Production Mixer

*digital.engine Digital Mixing System

*SeriesTwelve Mixing Console

*TV950 Broadcast Mixing Console

Logitek

800-231-5870; 713-782-4592

*NUMIX Digital Mixer (up to 64 Channels)

ROC-5/10 Digital Mixer (up to 64 Channels)

LPB Inc

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7000 Series Analog Audio Consoles

MartinSound

800-582-3555; 626-281-3555

*Neotek Elite II Production Console

Shure Brothers Inc

800-25-SHURE; 847-866-2200

*M367 Six Balanced Line/mic Input Portable Mixer

*FP410 Portable Automatic 4-Channel Mixer

*FP33 Stereo Mixer for Field Use

Solid State Logic

+44(0)1865 842300

*Aysis Air Digital Broadcast Console

*Avant Digital Film Console

*Axiom-MT Digital Multitrack Console

Sony Electronics

800-635-SONY

*OXF-R3 Oxford Digital Mixing Console

Circle (109) on Free Info Card

Soundcraft Electronics

615-399-2199

B400 Console

Studer North America

408-542-8880

*Studer D950

Studer Professional Audio AG

+41 1 870 75 11

*D950S Digital Mixing Console w/Surround



Wheatstone Corp TV 1000

Wheatstone Corp

252-638-7000

*D-500

Circle (155) on Free Info Card

*TV-80

Circle (249) on Free Info Card

*TV 1000 (See Photo)

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*Deva 4-Channel Recorder/Mixer



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AMEK US Operations Inc

888-286-9358; 615-360-0488

DMS - Digital Mixing System

Recall - Automated Production Console

Big - Production Multitrack Console

ATI-Audio Technologies Inc

800-959-0307; 215-443-0330

MSX100, MX100 NanoAmp Series Mono & Stereo Mixers

Cooper Sound Systems

805-927-8521

*CS104 ENG-EFP Audio Mixer

*CS 106+1 Professional Audio Mixer

*CS 108+1 Professional Audio Mixer

Audio Processing

Includes: Audio compressor/expanders; Audio effects systems

Applied Research & Technology

716-436-2720

*DMV Pro-Dual Stereo Digital Effects Processor

*Pro VLA Stereo Optical Compressor

*Tube Channel-Mic/Line Preamp, Comp, EQ

Audi-Cord Corp

309-452-9461

AIR Corp 500 Series Microphone Processors

beyerdynamic

800-293-4463; 516-293-3200

SPL Signal Processing

Cutting Edge Technologies

216-241-3343

Omnia-net Internet Audio Processor

*Omnia-dtv 5.1 Channel Audio Processor

Dan Dugan Sound Design

415-821-9776

*Model D Automatic Mixing Controller

*Model D-1 Live Mic Processor

Dolby Laboratories Inc

800-33-DOLBY; 415-558-0200

Audio Processors

Eventide Inc

201-641-1200

H3500-DFX/E Broadcast Dynamic Sampler

Ultra-Harmonizer

*DSP4000B Broadcast/Production

Ultra-Harmonizer

H3000B+ Broadcast Plus Dynamic

Ultra-Harmonizer

FM Systems Inc

800-235-6960; 714-979-3355

*ALM771-Automatic Audio Gain Control

Orban

510-351-3500

*Optimod-DAB 6200 (2-Channel DTV)

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3 color skin tone detail

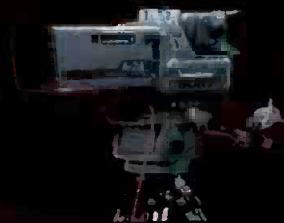
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 *Digicart II Plus
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SADA 6 MX Stereo Audio DAs
Matrix 6400 Audio Matrix Switcher

Graham-Patten Systems

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AAGC-200 Audio DA w/Automatic Gain

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NVISION Inc

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*4000 Series Modules

*NV3064SA Audio Router

*4000 Series Modules

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*NV1025 Audio DA

NV1050 Sample Rate Converter

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Drake Automation

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FloriCal Systems Inc

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- *AirBoss - On-Air Presentation
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- *Media Timer - Program Data Capture

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Louth Automation ADC-100

Louth Automation

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*ADC-100 (See Photo)

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Odetics Broadcast Roswell Facility Management System

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*Roswell Facility Management System (See Photo)

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DNA DVCPRO News Automation System

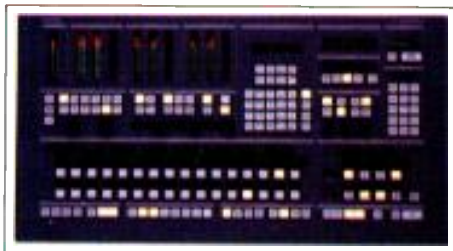
*Smart Carl Automation System w/DVCPRO VCRs

PESA Switching Systems Inc

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*Grass Valley M-2100 Master Control Switcher

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*APDV-200/DTV Delay System

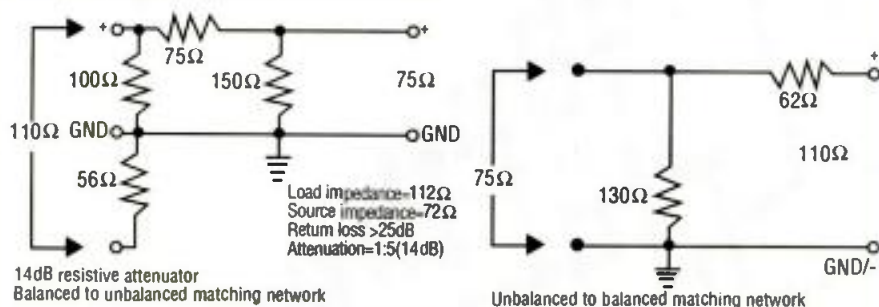
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Media Computing Inc
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*ROCI - Remote Operations Control Interface

NDS Americas Inc
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*VideoGuard; Director
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*DS-10 Lightweight Digital Support System
*Arrow 50 ENG/EFP Film & TV Support Systems



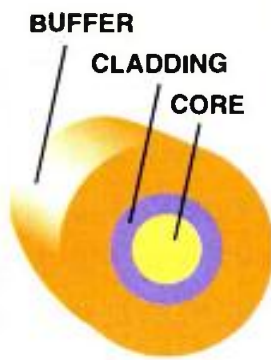
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O'Connor Engineering
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*2060 Fluid Head (See Photo)
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Tech Tip

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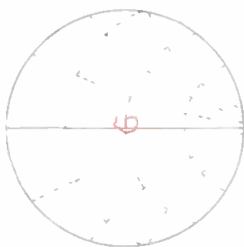
Finally, a place to stick the FCC's DTV requirements.



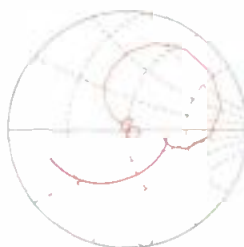
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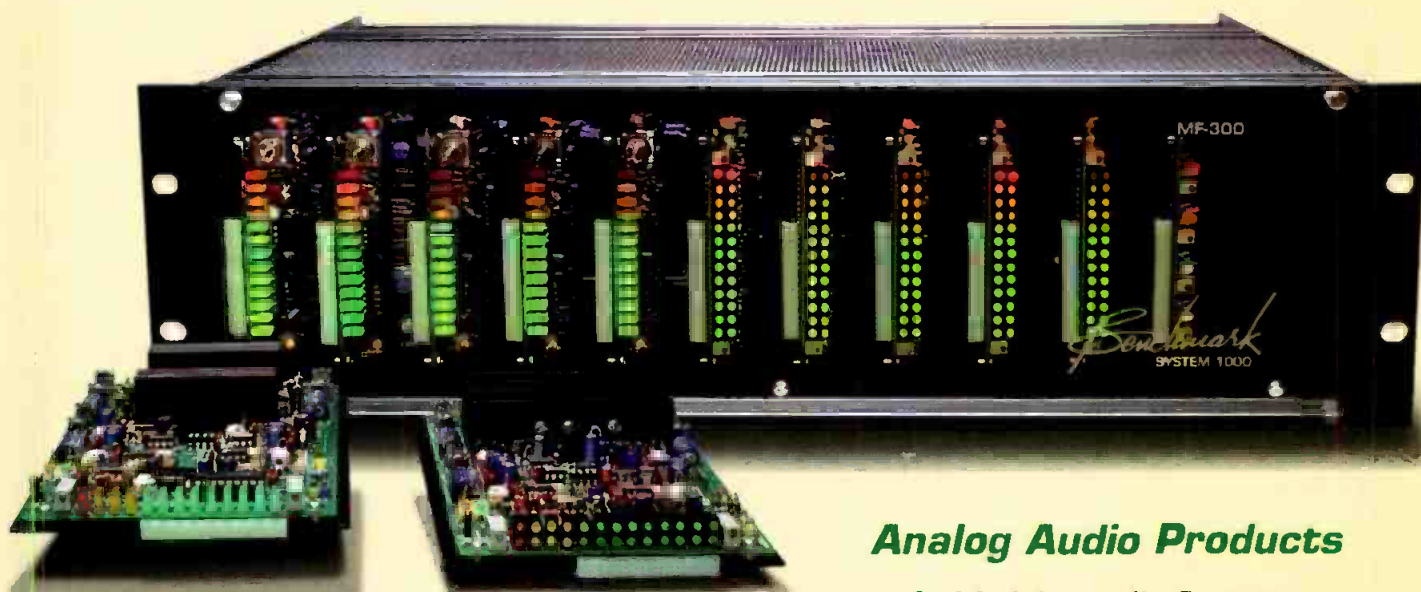
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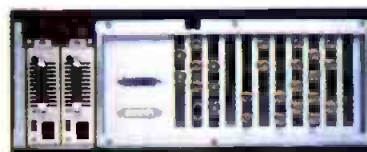
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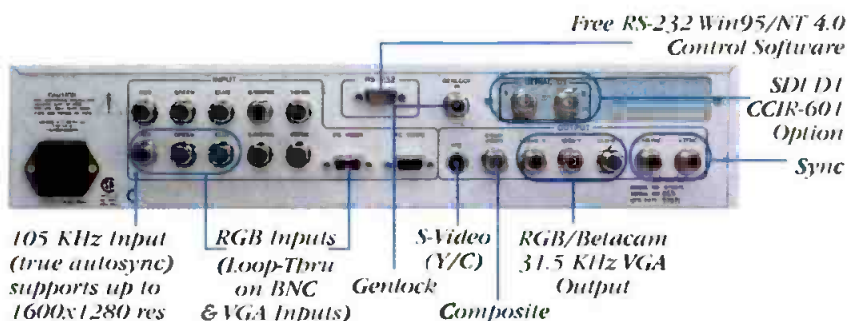
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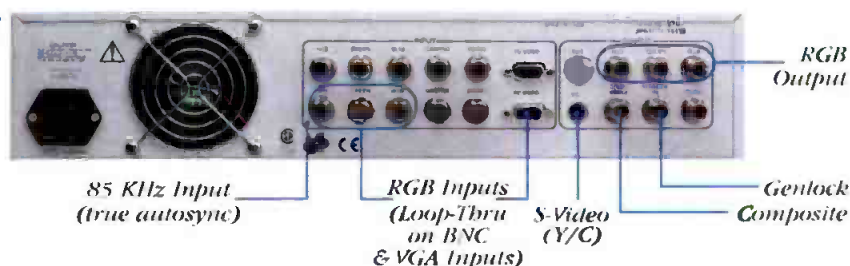
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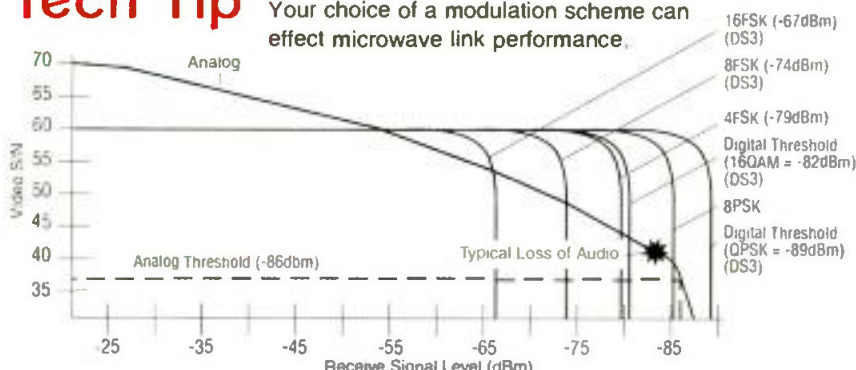
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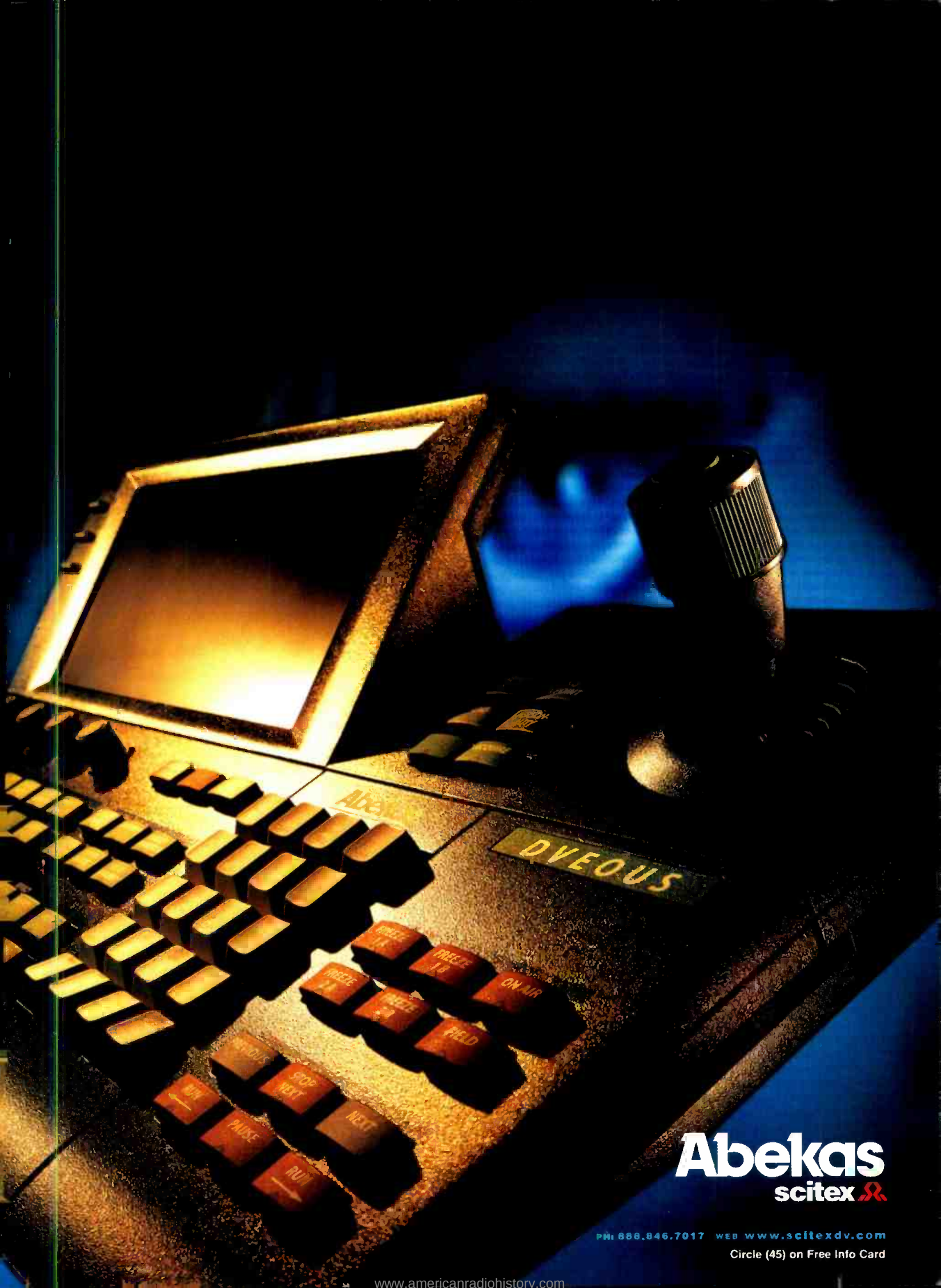
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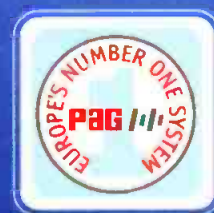
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310-532-5300

MT900B Intercontinental Multistandard Receiver

MT830BR Agile Omni Broadcast Receiver

*Alteia MPEG-2 4:2:2 Receivers and Decoders

MT830IBR Agile Omni International Broadcast
Receiver

TV/Com International

619-618-3500

P2020 Commercial Satellite Receiver

Wegener Communications Inc

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*UNITY4422 Receiver - MPEG 4:2:2 Satellite
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*UNITY4000 Receiver - DVB Compliant MPEG-2
Satellite Receiver

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FirstWarn Weather Warning System

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*Consoles & Racks

Broadcast Electronics Inc

217-224-9600

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5-Way Cable Stripper

Chief Manufacturing Inc

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ELC-520 Video Lift Case

SV-1 LCD Projector Stands

Clark Wire & Cable

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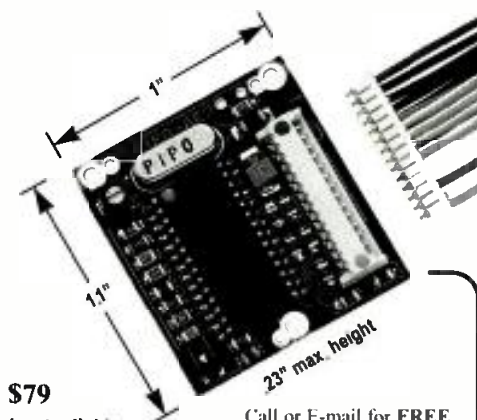
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www.americanradiohistory.com

Product Directory

EDX Engineering Inc

541-345-0019

- *TVSR-Channel Allocation Studies
- *SIGNAL-RF Coverage & Interference
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PC-471 SMPTE Time Code Reader PC Card

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ES-101, -102, -185A GPS Master Clocks/Time-Code Generators

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Forecast Consoles Inc

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Broadcast Consoles

Image Master Consoles

Gennum Corp

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Cost-effective Fly Packs and Standard Cases

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*CL-S Cleaning Solution

MilesTek Inc

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50-70101 Aluminum Rack 19"x 84"

Mole-Richardson Co

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*Tools, Equipment and Expendables

Nalpak Video Sales Inc

619-258-1200

TuffPak Hard Cases

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Peerless Industries Inc

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*TV/Monitor Mounts & Accessories

Penny & Giles Inc

310-452-4995

PGF 3000 Series Faders, Motorized & Standard

PGF 8000 Series Motorized & Standard Faders

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Line of Electronic Components

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AVCS - LCD Projector Case

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*Video Editing Consoles - Ergonomic, Economical & Modular

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2285 Field Monitor Case

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*LRStudy - Longley Rice Analysis

*SearchTV - Frequency Search Program

*Probe - Expert Level Propagation Software

VDP Inc

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VidCAD Facilities Design and Documentation Program

Veetronix Inc

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Videomagnetix Inc

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Refurbished Video Heads & Scanners

Wenger Corp

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V-Room Sound-isolating, Relocatable Broadcast Booth

Winsted Corp

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*LRx File Server Station

*Digital Desk Multimedia Desk

*F8203 DVCPRO Rack Slide Kit

Tech Tip

Standards Documents

•AES3-1992 (ANSI S4.40-1992). Transmission of two-channels periodically sampled uniformly quantized audio signals on a single twisted-pair cable. User and interface-related data may also be transmitted. This is a revision of the original 1985 document.

•AES-3id-1995. This information document (id) describes transmission of AES-3 formatted data over unbalanced coaxial cable.

•SMPTE 259M-1993 bit-serial 4:2:2 interface

•SMPTE 292M-1996 bit-serial 4:2:2 high-definition interface

Standards documents are available from:

Society of Motion Picture & Television Engineers*

www.smpte.org

Audio Engineering Society*

www.aes.org

*Also see address section for more information

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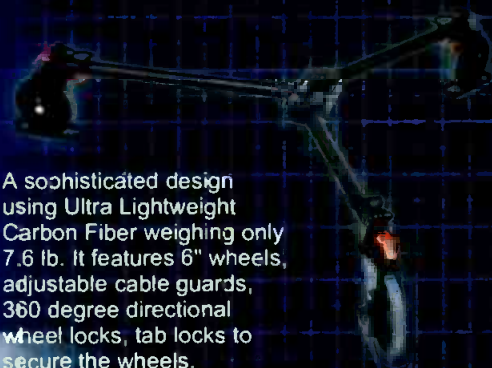


**ULTIMATE
DV
ULTIMATE
DVS**

ULTIMATE 2060 FLUID HEAD

ULTIMATE DV & DVS FLUID HEADS

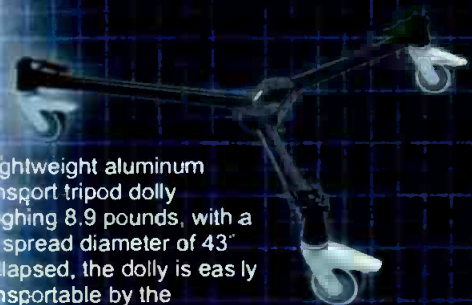
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530 CARBON FIBER STUDIO DOLLY

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53D TRANSPORT DOLLY

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David Breashears, Robert Schauer and members of the Sherpa camera team set up the lightweight IMAX II camera on an O'Connor 2575B fluid head over a crevasse in the Khumbu Icefall below Mount Everest in Nepal.

From the large format film *EVEREST*, a MacGillivray Freeman Film, presented by Polartec®

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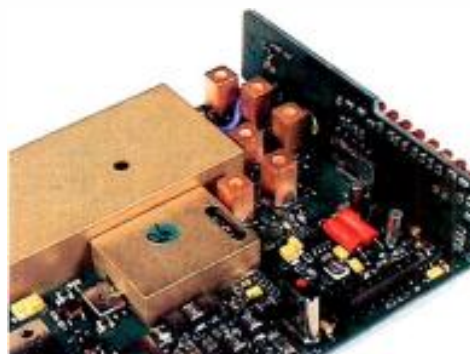
The UCR 200D receiver combines the advanced technology of the Tracking Front-end, a host of professional features and studio quality audio in a compact package suitable for studio, stage or field production. It is a portable, high performance, dual-conversion, frequency synthesized UHF receiver. The proprietary audio processing includes a dual-band compandor for low distortion and a superior signal to noise ratio. Compare this wireless system to a hard-wired setup and join the rapidly growing host of professionals who have discovered the 200 Series.

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Product Directory



James Grunder & Associates Inc
800-331-2019; 913-492-4666
*A4:2:2SX Advanced SX Series



Leitch Inc Genesis

Leitch Inc

800-231-9673; 757-548-2300

*Juno

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*Genesis Interface System (See Photo)

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*HDTV Glue

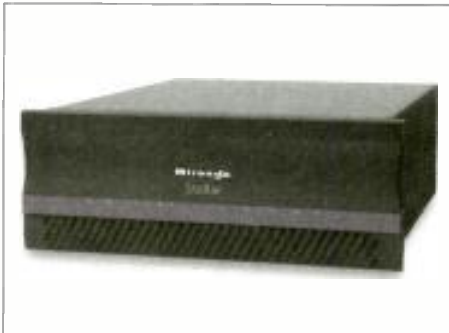
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*ENC-6801, DEC-6801

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Magni Systems
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*DVB-8020 Digital Video Buffer

Circle (330) on Free Info Card

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*HD200 Compact Downconverter

Kudos IQ Modular Series

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Interpolator

*HD5050 Upconverter

*HD2100 Compact Downconverter

Alchemist Ph. C Motion-Compensated Standards Converter

Maxim CVR500 10-bit Digital Standards Converter

*HD5100 Upconverter

Sony Electronics

800-635-SONY

*HKPF-525 HDTV Downconverter

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Tektronix Grass Valley MAX 9000

Tektronix Inc Video & Network Division

800-547-8949

Grass Valley MAX 9000 Digital Systemization Products (See Photo)

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*Grass Valley SMS8000 Digital Systemization Products

Circle (389) on Free Info Card

*Grass Valley 8980TLS Tri-Level Sync Converter

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*Matthey NTSC/PAL-to-Serial Decoder/Encoders

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*AT 970 ATSC Stream View Real-Time Monitoring

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*AD 953-II Stream Station II Real-Time and Offline Analysis

Circle (476) on Free Info Card

*AD 991 Stream Source ATSC/OVB Looping Seamless Signal Source

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*QAM 980 DVB-C Cable Meter Handheld Field-Installation Tool

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*SV 970 OVB Stream View DVB Real-Time Broadcast Monitoring

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*AD 951-II Stream Player II ATSC/DVB Record, Play, Multiplex

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*AD 950 Stream Analysis ATSC/OVB Offline Analysis Tool

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*Portable One Dual Domain

*System Two Dual Domain

Belar Electronics Lab Inc

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TVM-230 BTSC monitor

DSP-based Spectrum Analyzer

TVM-250 SAP/PRO Monitor

TVM 100/101

Berkeley Nucleonics Corp (BNC)

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Model 625A Signal/Function Generator

Broadcast Video Systems Ltd

905-764-1584

VITS 2 Video Audio Analyzer

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505-898-1455

SG-3 Color Bar Generator w/ID

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*DVB-Compliant Transport-Stream Analyzer

*ATSC-Compliant Transport-Stream Analyzer

*ATSC-Compliant Transport-Stream Multiplexer

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818-998-2824

*Stereo Signal Test Set Model 1200

DSC Labs

800-267-5227; 905-673-3211

*Ambi Illuminator, 16:9 and 4:3, Multisource Combi-1 and 2, Optical Signal Generators (OSGs) Combi-3, OSG Sine/Square Wave (Available Spring '99)

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PLM 1 - Composite Video/Audio Bar Graphs Level Indicator

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Monitor Scope 601 - SDI & Analog Video/Audio Wfm/Vect, BGs

LCO Scope - Component and Composite

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EMF Measurement Products

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TSG-50 NTSC Test Signal Generator

Circle (218) on Free Info Card

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408-727-2447

DVExplorer

Inovonics Inc

800-733-0552; 831-458-0552

TVU On-Screen Audio Level Meter

Leader Instruments Corp

800-645-5104; 516-231-6900

LE 1860 - CD/CO-ROM/DVO Jitter Meter

*LT 4250 - Digital Component Signal Generator w/Gen-lock

*LT 440D - HDTV Signal Generator w/Gen-lock 1080i, 1035i

LG 3226 - 2GHz Synthesized Signal Generator

LG 1311 - 10MHz Function Generator

LF 827 - 1.3GHz Frequency Counter

*LV5150D - HD Digital/Analog Waveform Monitor 1080i, 720p

*LV 5100OE Digital/Analog Component Waveform Monitor

Leitch Incorporated

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*HDTV Glue

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*STA-7000 Serial Digital Timing Analyzer

Circle (125) on Free Info Card

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*OSTS-Capture & Playback Digital Transport Streams

Magni Systems

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*SDI Automated Serial Digital Signal Monitor

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Modulation Sciences

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msi 320 Precision Video Demodulator

Multidyne Inc

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*4000 Series Modules

Potomac Instruments

301-589-2662

*Field Strength Meters

Prism Media Products Inc

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DSA-1 Portable Analyzer

DSCOPE-S

AD-124

JM-1 Jitter Modulator

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Product Directory

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*DVG MPEG2 Measurement Generator
*DVMD MPEG2 Measurement Decoder

Sencore

800-736-2673; 605-339-0100

Test & Measurement Equipment

*SV 953 MPEG-2 Stream Station

*AT951 ATSC Stream Player

DVA320QC Analyzer

Snell & Wilcox

+44(0)1730 821188

Kudos TPG 20 and 21 Sync/Test Generators

*Sentinel Standby Bitstream Inserter

Survey Technologies

503-848-8500

Automated Signal Coverage Field Measurements

SyntheSys Research

650-364-1853

*BitAlyzer HDTV, Model HDVA292

*BitAlyzerVideo Model DVA184C

Tektronix Inc./Measurement Bus

800-426-2200; 503-627-7111

*MTS 100/200 MPEG Test System

*DDS200 Demod System

*PQA-200 Picture-Quality Analyzer

*MTG200 Test Generator

764 Digital Audio Monitor

UPL Audio Analyzer

*MTD200 Test Decoder

*WFM 601 Series Waveform Monitors/
Vectorscopes

*WFM 1125 Waveform Monitor/Vectorscope

Tremetrics Industrial Instruments

512-251-1400

Frequency Difference Meters

Trompeter Electronics Inc

800-982-2629; 818-707-2020

*BNC Tester, P/N 010-0133

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Video Accessory Corp

800-821-0426; 303-443-4950

VB/BBG Black Burst Generator

Circle (357) on Free Info Card



Videotek VTM-200

Videotek Inc

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*VSG Series for Analog and 601 Video Synchronizers

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DM Series Demodulators - Video and Stereo

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*VTM-200 including Pic, Wfm, Vec, Audio on SVGA (See Photo)

Circle (171) on Free Info Card

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Circle (412) on Free Info Card

Ward-Beck Systems Ltd

800-771-2556; 416-438-6550

Bit Buddy/Bit Spitter

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Fibre Channel Protocol Analyzer

Z Technology, Inc.

503-614-9800

*R-506 Field Strength Meter

*R-507 Field Strength Meter w/ DTV

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TV Transmitters, Translators, Exciters & Antennas

Includes: Frequency conversion equipment; MMDS products; Remote control systems (transmitter); TV exciters; TV transmitters; TV transmitting antennas



Acrodyne Industries Gold Series

Acrodyne Industries Inc

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*Adi Digital Transmitter/Studio Integration

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*AuD Gold Series UHF Transmitters (See Photo)

Circle (173) on Free Info Card

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*Adjacent Channel Technology (ACT) UHF Transmitters

Circle (335) on Free Info Card

*VHF and UHF TV Exciters

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*TRL/TRH Series VHF Transmitters

Circle (337) on Free Info Card

*TRU Series Medium/Low Power UHF Transmitters

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ADC Broadcast Systems Division

724-941-1500

*Visionary Series - High-Power UHF IOT Transmitters (See Photo)

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Circle (315) on Free Info Card

*800 Series - UHF Transmitters up to 10kW

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Andrew Corp TRASAR Slotted Antennas

Andrew Corp

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Andrew Corp TRASAR Slotted Antennas, Dual Channel & ALP (See Photo)

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*PANAR Panel Antenna

Circle (234) on Free Info Card

Antenna Concepts Inc

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*Low Power Line: HPOL & CP Slot/Blaster

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- *C10X UHF IDT NTSC for All Powers
- *DCX UHF IDT DTV w/DAP for All Powers
- *Optimal VHF MOSFET NTSC/DTV w/DAP for All Powers
- *Advantage UHF IDT DTV w/DAP for All Powers

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*Digital/Analog Transmitters, Repeaters and Boosters

Conifer Corp

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Two-Way Transverters
Integrated Receivers

Continental Electronics Corp

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*715D Digital TV Transmitter
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1KBU 100, 1kW Solid-State Low-Power Transmitter

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*Dual-Channel Antennas
*Stacked Antennas
*Antennas

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*RF-Director
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*RF Host
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*Digacom series for MMDS
*TTU250HD Low-Power Digital Transmitter or Driver
*TTU2500HD UHF Digital Transmitter w/Harris Exciter
*TTV250HD VHF Solid-State Digital Transmitter

Gentner Communications Corp

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*GSC3000 Control System
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Harris Diamond CD Solid-State

Harris Corporation Broadcast Systems Division

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*Diamond CD Solid-State Series (See Photo)
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*CD 1A 8-VSB DTV Exciter

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*SIGMA CD Series

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Inscriber Technology

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ITELCO USA Inc

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*8-VSB Model T610N 1Wrms DTV Exciter
*IDT UHF Series 10kWrms to 100kWrms
*Solid-State VHF/UHF Series 400Wrms to 30kWrms

Jampro Antennas Inc

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*Stacked Aperture Antenna
Circle (149) on Free Info Card
*JUHD TV UHF Broadband Panel Antenna
Circle (235) on Free Info Card
*JTW UHF Traveling Wave Slot
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818-361-2248
*VSB-ENC-200 8-VSB Demod-Remodulator
*VSB-ENC-100B 8-VSB Modulator

Larcan Inc

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*HDR Series UHF Transmitters
*XLS Series UHF/VHF Transmitters
*Landmark Series UHF Transmitters
*M Series VHF Transmitters
*MX Series UHF/VHF Transmitters

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Landmark

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NEC America Inc Broadcast Equipment Department

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*DTU/DTV Series Solid-State DTV Transmitters

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*NTSC/DTV Antennas
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- *Complete Line of Custom ENG, EFP and SNV Vehicles
- *Navigator

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- *Trucks/Mobile Units

Calumet Coach Co

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- *Satellite Uplink Trucks
- *Satellite Flyaway Systems
- *ENG Trucks

Comtech Antenna Systems Inc

407-892-6111

Satellite Flyaway Systems

Custom Mobile Products

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- Remote Vehicles
- SNG Remote Vehicles
- Production Remote Vehicles

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ENG & DSNG Vehicles

LandSea Systems Inc

757-468-0448

LSS-94429 Ruggedized Solsat Phone

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- *Satellite Uplink Trucks
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*AS-11 DSNG: Aerodynamic, Easy-to-Operate Uplink Truck

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*Satellite Uplink Trucks

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*OVT2000 Flyaway - MPEG-2 Encoder/Modulator Uplink System

Circle (505) on Free Info Card

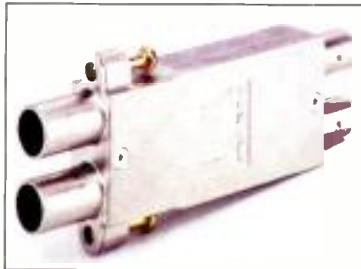
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330-682-7015

Masts

Video Accessories

Includes: EAS Products; GPS equipment; Timecode equipment; VBI data software systems; Video accessories; Video captioning equipment; Video patch panels



ADC SVJ-2 Super Video Jack

ADC Telecommunications Inc

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*STS Series True 75ohm Patch Cords

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ADC SVJ-2 Super Video Jack (See Photo)

Circle (260) on Free Info Card

*MVJ-3 Midsize Super Video Jack

Circle (422) on Free Info Card

Adrienne Electronics Corp

702-896-1858

*PC-VLTC Time Code Boards for PCs

Audio Accessories Inc

603-446-3335

Line of Patch Panels

Broadcast Software Solutions

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*V-Chip and Automation Control Modules

Broadcast Video Systems Ltd

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CANARE

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*SMPTE 259M/292M-Ready Patch Panels

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Clark Wire & Cable

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Line of Patch Panels

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800-474-7961; 602-706-1285

*Cobalt 4020 Serial D/A Component Converter

CPC/Computer Prompting & Captioning Co

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Simultaneous Teleprompting/Captioning System

V-Chip Code Insertion Software

Stand-Alone Post-Production Closed-Captioning

Davicom Technologies Ltd

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*DSRD-01 Digital Satellite Receiver Fault Detector

EEG Enterprises Inc

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DE241A Family of Decoders

*EN-470 Smart Encoder

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ESE

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Circle (346) on Free Info Card

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*Closed-Caption Equipment (8074 SD, 9570 HDTV)

*HD9590 HD Graticule Generator

9590 Digital Graticule Generator

Time-Code Equipment

Horita Co Inc

949-489-0240

GPS1,2,3 GPS-based SMPTE Time-Code Generators

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Circle (467) on Free Info Card

GPS1,2,3 GPS-Based SMPTE Time-Code Generators

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Image Logic Corp

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AUTOCAPTION Desktop Captioning Systems

Time-Code Reader/Generator Cards for PCs

Imagine Products Inc

317-843-0706

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Kings Electronics Co Inc

914-793-5000

7400-5,-7 Miniature Video Jacks

Lemo USA

800-444-5366; 707-578-8811

Connectors and Patch Panels

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*Presence Monitor and Control System

Media Computing Inc

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*ROCI - Remote Operations Control Interface

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*50-11036 2x24 Digital Video Panel

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VBI-net Internet/Data Broadcast System

*TV (VBI) Captioning Encoders

*TES5 Serial Digital Video VBI Inserter

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Techflex Inc

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*Expandable Cable Covering

Trompeter Electronics Inc

800-982-2629; 818-707-2020

*J214W/J214WT Wideband Patch Jack

Circle (277) on Free Info Card

*Patch Panels, Jacks, Cords & Connectors

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*BitPack - MPEG2 Authoring Workstation

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*MediaNode MN20 Remultiplexer

*MediaView MV15 Program Encoder

*ProView PV1200 Commercial IRD

*MediaView MV40 Program Encoder

Harris Corporation Broadcast Systems Division

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*Flexicoder

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InnovaCom

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DV2100 MPEG-2 Encoder Board

TRANSPG Point-to-Point T1/E1/ATM/100BaseT

Intelvideo Inc

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*VP3000 Precompression Processor

James Grunder & Associates Inc

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QS-440 Quad-Split Multi-Image Display

w/Independent Resizing

*E4:2:2SX Effect SX Advanced Scaling Engine

Leitch Inc

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*MPEG-2 Compression System

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*Noise-Reduction Module

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Video Pipeline

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Minerva Publisher MPEG Encoder

Minerva Compressionist MPEG Encoder



NDS 5000 Encoding/Decoding System

NDS Americas Inc

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*Reflex Stat-Mux

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*Series 5000 Encoding/Decoding System (See Photo)

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NEC America Inc Broadcast Equipment Department

888-383-4DTV; 972-751-7246

*VC-310 Series HDTV Encoders/Decoders

Philips Digital Video Systems

800-962-4287; 801-977-1611

*DVS 3112 MPEG-2 Digital Video Encoder

Circle (418) on Free Info Card

*VS-4 Video Sweetener

Circle (128) on Free Info Card

*Compression System Manager (CSM)

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Snell & Wilcox

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*MOLE Technology

Tadiran Scopus

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CODICO MPEG-2/DVB System

RTM-3600, Statistical Multiplexer/Re-Multiplexer

E-110, Modular Encoder

IRD-2510, Professional Integrated Receiver Decoder

E-1100, Advanced High-End Encoder

IRD-2500, Commercial Integrated Receiver Decoder

E-1000, Professional High-Quality Encoder

Tektronix Inc Video & Network Division

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*MH-1100DL Mitsubishi HDTV Decoder

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*PSIP - ATSC Data Insertion System

Circle (504) on Free Info Card

*MH-1100EL Mitsubishi HDTV Encoder

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DBE 4120 MPEG Encoder

ATM Multimedia Encoder

Tiernan Communications

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*TDR600 4:2:2 MPEG-2 Integrated Receiver/Decoder

*TE60 MPEG-2 Encoder

*THE1 HDTV/SDTV Encoder

*THE 10 HDTV/ATSC Broadcast Encoder

*TDR77 4:2:0 MPEG-2 Integrated Receiver/Decoder

*TDR6 SDTV/HDTV Receiver/Decoder

*TE600 MPEG-2 DSNG Encoder

TV/Com International

619-618-3500

Domain Management Systems - Open Digital Platform

Vela

813-572-1230

*Cineview Pro - MPEG-2 Decoder

*Broadcast Argus - MPEG-2 Encoder

Vibrant Technologies

781-275-4088

*Mpression MPEG 4:2:2 Encoding Server

Video International Development Corp

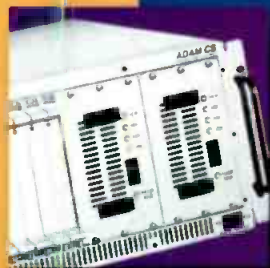
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MNR 340

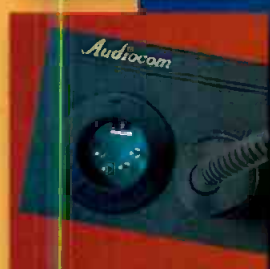
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*MPEG-2 Encoder



Wegener Unity 4000 Receiver

Wegener Communications Inc
800-848-9467; 770-814-4000
*DVT2000, 2001 - MPEG-2 Encoder/Modulator
Circle (508) on Free Info Card
*DVE-2000 MPEG-2 Encoder w/Multiple Audio
Circle (176) on Free Info Card
*DVM-2000 Multiplexer - 10-Channel Video Transport Mux
Circle (177) on Free Info Card
*DV-2000 MPEG-2 Encoder
Circle (270) on Free Info Card
*UNITY4000 Receiver - DVB Compliant MPEG-2 Satellite Receiver (See Photo)
Circle (509) on Free Info Card

DPS
www.dps.com

DPS products are used by television broadcasters, video production facilities, post-production studios and independent video producers for creating, editing and processing broadcast-quality video and audio material.

Video Editing Systems

Includes: Editing systems and components; Nonlinear editors

Accom Inc
650-328-3818
*Axial 3000
Avid Technology Inc
800-949-AVID; 978-640-6789
*Media Composer 9000
*Symphony
Xpress Version 2.0
BUF Technology
619-451-1350
*VTR Controllers

Digital Processing Systems/DPS
800-775-3314; 606-371-5533
DPS Spark Plus DV Editing System
Circle (349) on Free Info Card
DPS Perception RT3DX Real-time Editor w/3D Effects
Circle (348) on Free Info Card
DPS Perception Nonlinear Editor
Circle (160) on Free Info Card
Dubner International Inc
201-447-9365
SCENE STEALER - Automatic Scene Detector and Video Logger
Editing Technologies Corp
818-840-1101
*Ensemble Pro - Professional Editing Package
*Ensemble Gold - Nonlinear/Multilinear Editing Systems
*ClipCutter - News-Style Nonlinear Editing Systems
Editware
530-477-4300
*Super Edit Version 8 Software
Profile NLE Nonlinear Software
*VPE 331, 341, 351 Edit Controllers
Incite Multimedia Corp
+41 22 308 57 57
Incite - Rack-Mount Version
Incite - Sports/News Network Version
Incite Editors

JVC Professional Products Co
800-JVC-5825; 973-315-5000
TimeGate MW-S1000 Hybrid 4:2:2 Nonlinear System
Media 100
508-460-1600
*Media 100 - Affordable, Broadcast-Quality Nonlinear Editor
*FINISH - High-Performance DV Processing
QX - Affordable, Professional-Quality Nonlinear System

Miles
+44-1635-552-524
*M57 Safe Area Inserter

Mina Systems
800-483-6462; 817-377-4777
Mina RT (Complete NLE)

NEXUS Informatics GmbH
+49-891-981550
OpenMedia - Browsing and Editing at Journalist Workstations

Panasonic Broadcast & Digital Systems Co
800-528-8601; 323-436-3500
DVEDIT DVCPR0-Based Nonlinear Editing System
newsBYTE 4x Transfer DVCPR0 Nonlinear System
POSTBOX 4.0 Digital Nonlinear Editing System
AJ-LT75 All-in-One DVCPR0 Laptop Editor

Pinnacle Systems
650-526-1600
ReelTime Nitro - Real-Time Online Editing w/3D Effects

Circle (443) on Free Info Card
MiroVideo DC50 - Affordable Component Video Editing Solution

Circle (289) on Free Info Card

Pixel Power Ltd
+44(0)1223-721000
*Collage Edit Non-compressed D1 Editor

Play Incorporated
800-306-PLAY; 916-851-0800
Trinity 1.1



Quantel Editbox

Quantel Inc
800-218-0051; 203-656-3100
Platinum Nonlinear Online Editor (See Photo)
Circle (297) on Free Info Card
*EditBox Magnum Nonlinear Online Editor
Circle (288) on Free Info Card

Scitex Digital Video
888-846-7017; 650-369-5111
VideoSphere Nonlinear Editor
Circle (453) on Free Info Card
StrataSphere Nonlinear Editor
Circle (452) on Free Info Card

Sony Electronics
800-635-SONY
DNE-700/1000 Series of Nonlinear Editing Systems
Circle (121) on Free Info Card
Tektronix Inc Video & Network Division
800-547-8949
*EditStar Nonlinear News Editor
Circle (396) on Free Info Card

United Media Inc
714-777-4510
On-Line Express
*On-Line Express Real-Time NLE for Window NT
*On-Line Express LE Software for DigiSuite LE

Vibrant Technologies
781-275-4088
*Mpression News Edit

Videomedia Inc
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*V-LAN interfaces

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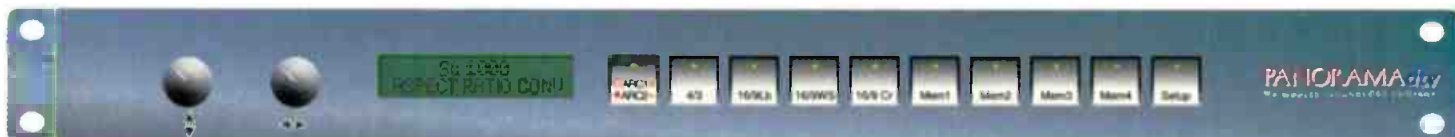
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Letterbox 16:9	14:9 Letterbox
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Product Directory

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Includes: CRT projectors; DLP projectors; Event controllers; Light valve projectors; Line doublers/quadruplers; Plasma displays; Video monitor parts and accessories; Video monitors; Video presentation equipment

AAVS

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*Kaleido

AMX Corporation

800-222-0193; 972-644-3048

Event Controllers

ASACA/ShibaSoku Corp of America

800-423-6347; 310-672-6765

*MS32 32" New Media Suite Series HDTV Monitor

*CM202H 20" New Media Suite Series HDTV Monitor

BARCO

770-590-3600

*HDM 5049 17" High-Definition Monitor

Boeckeler Instruments

800-552-2262; 520-745-0001

Pointmaker PVI-64 Videomarker

Boland Communications

800-918-9090; 949-367-9911

LCD Color Triples (3x5) and (3x6.4)

LCD Color 8.4" up to 20.1"

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LCD Color #1550 Quad (4x4)

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*WN-5240-S DLP Rear-projection SVGA

*SN-4010-P Plasma Display

Communications Specialties

888-4 FAX NOW; 516-273-0404

Duece

Da-Lite Screen Company Inc

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*Tensioned Dual-Masking Electronic Wall/Ceiling Screen

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*Image-Fixed Wall Screen

Davis North America

888-798-9998; 408-487-3787

DPP 1200 - Tabletop, Superbright XGA

DPS 60 - 60" Rear Screen Projection w/Touchscreen

DLX 650 - Ultraportable XGA, 700 Lumens

Digital Projection Inc

770-420-1350

*POWER 5gv 5000 ANSI Lumen Projector

*POWER 7gv 6500 ANSI Lumen Projector

*POWER 3gv 3000 ANSI Lumen Projector

E-Z UP International, Inc.

800-45-SHADE; 909-781-0843

E-Z UP Instant Monitor Stand

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Vector: High-Performance Image-Control Processor

ProDigital: Stackable Projection Cubes

Faroudja Laboratories Inc

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Fujitsu General America Inc

888-888-3424; 973-575-0380

Plasmavision 42

Hoodman Corp

310-379-6391

H789S

Hughes JVC Technology

800-225-4582; 760-929-5300

*Model D360 ILA Projector

*Model D370SC ILA Projector

*ILA-12K 12,000 lumen ILA projector

Image Video

416-750-8872

*RDU1500 Under Monitor Tally Display

James Grunder & Associates Inc

800-331-2019; 913-492-4666

*PV-5000 Flat Panel Driver Board

LD-2000 Line Doubler

*KS-42 - Feral 42" PDP w/PV-5000 Built In

Leightronix

517-694-8000

MVP-2000

Marshall Electronics Inc

800-800-6608; 310-390-6608

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Miranda Technologies

800-224-7882; 514-333-1772

Quartz Line Quadrupler

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PANORAMAdtv

650-589-5676

*VAMP-SDI 2RU Audio/Video Monitor

PC Video Conversion

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DoubleScan - Line Doubler

Circle (494) on Free Info Card

Progressive Marketing Products Inc.

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*Video Projector, Plasma Mounts

RGB Spectrum

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Sony Electronics

800-635-SONY

*BVM G-series of High-Definition Evaluation Monitors

Circle (110) on Free Info Card

*PFM-500A1WU 42" Flat-Panel Plasma Display

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Tally Display Corp

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*IDN System - Interactive Display Network

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Adrienne Electronics Corp

702-896-1858

*AEC-1 10x1 Video/Audio Router

AJA Video

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D5DA - 1x4 Serial DA, w/Reclocking and EQ.

Multistandard

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MAX Series Matrix Switchers

Homerun Series Matrix Switchers

DA1226A - Component Video DA

Artel Video Systems Inc

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*Utah-200 Compact Router

*Utah-300 Routing Switcher

*Utah-1500 HDTV Router

AutoPatch

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8Y-XL

*1Y-16

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Component Analog

VTM-190
Serial Digital

VTM-183
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Component Analog

VTM-180
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Product Directory

Avitel Electronics Ltd

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DSC 1110 SDI Proc Amp, 3 Channels in 1RU-Frame
VDA 3310 Equalizing, Remote Control Analog, SDI Versions

Avtek Systems

800-423-0913; 978-422-3466
Metawave MX256

Axon Digital Design BV

+31(0)13511 6666
FS-100, LS-100 Signal Processors
SD-107, -117, -217 Digital Video DAs
SW-221 Backup Switcher

BAL Broadcast Ltd

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Beck Associates Inc

888-422-8600; 512-252-7555
*SCP-10
*SCR 4x8

Broadcast Video Systems Ltd

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*DV-4 4x1 Digital Key Switcher
Circle (305) on Free Info Card
VCA 850 GVG-Style Video Clamping DA
Circle (306) on Free Info Card

Burst Electronics Inc

505-898-1455
VS 8x8 Video Crosspoint Switch

Datatek Corp

800-882-9100; 908-654-8100
*D2600/2800 Digital Video Routers

Di-Tech Inc

516-667-6300
*5875 D1 64x64 Matrix, 360Mbit
Meridian Series Routers
5881 Analog Video 128x160 Matrix

DNF Controls

818-252-0198
SW16x32 RS422 Port Switcher
Circle (341) on Free Info Card

ESE

310-322-2136
ES-207A 1x4 Video DA
Circle (344) on Free Info Card

Evertz Microsystems Ltd

905-335-3700
*HDTV DA HD9501-DA

Extron Electronics

800-633-9876; 714-491-1500
P/2 DA PLUS Series VGA/XGA DAs
*6400 Series Matrix Switchers
*3200 Series Matrix Switchers
*CrossPoint 1616 Series Matrix Switchers

FM Systems Inc

800-235-6960; 714-979-3355
*VM771 Video Gain Control-Automatic

Horita Co Inc

949-489-0240
VDA-50 Video DA
Circle (468) on Free Info Card

Hotronic Inc

408-378-3883
Proc Amp - High-Performance Video Processor

Image Video

416-750-8872
*XDS1601 16x1 Serial Digital Router

ISIS Group

888-622-4747; 530-477-2984
*MF-800 2x1 Modular Switcher
RTS Multi-Level Protection Switcher
VTS-416 4x16 Reference Switcher
VMS/AMS-126 Video/Audio 12x1
*VME-100 Video DAs

Kramer Electronics

800-557-2637; 201-229-1059
TP Series

Leightronix

517-694-8000
PRO-16 Event Controller/Switcher



Leitch Integrator

Leitch Incorporated

800-231-9673; 757-548-2300
*BO/S

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*Integrator (See Photo)

Circle (363) on Free Info Card
*HDTV Glue

Circle (240) on Free Info Card
*VIA32

Circle (165) on Free Info Card
*16x16 HDRouter

Circle (242) on Free Info Card

Lighthouse Digital Systems

800-323-8287
*HDTV Router

MicroVideo Ltd

+44(0)1223 834119
*PROC-S, -SB and REM-KNB
Digital Proc Amp

Multidyne Inc

800-4TV-TEST; 516-671-7278
VDA8505, Field DA w/3500ft EQ
Circle (439) on Free Info Card
VAGC-200 Video+EQ Automatic Gain DA
Circle (437) on Free Info Card

Network Electronics AS

800-877-8273; +47 33 48 99 99
PRO XL Series of 32x32 Routers

NVISION Inc

800-719-1900; 530-265-1000
*enVoy Series Universal Digital Routers
*1.5Gb/s Video DAs for 4000 Series

Omicron Video

818-700-0742
*Model 500 Series Router
*Model 200 Series DAs

Opamp Labs Inc

323-934-3566
Video DAs



PESA Tiger 144x144 Router

PESA Switching Systems Inc

800-328-1008; 256-726-9200
*SDVDA 3001/2 SDV DAs
Circle (354) on Free Info Card
*VPNet

Circle (175) on Free Info Card
*3500 Router Control System

Circle (352) on Free Info Card
LNS-8 Live News Switcher

Circle (273) on Free Info Card

*Tiger 144x144 Router (See Photo)

Circle (271) on Free Info Card

*Ocelot 8x8 and 16x16 Routers

Circle (353) on Free Info Card

Philips Digital Video Systems

800-962-4287; 801-977-1611

*Venus Routing Switcher Systems

Circle (211) on Free Info Card

JupiterPlus Routing and Machine Control System

Circle (376) on Free Info Card

*GS-499 Venus Gigabit Routing Switcher

Circle (377) on Free Info Card

Prager Associates

310-474-8139
SERDIS4 Serial Digital DA

Ross Video Ltd

613-652-4886
*RossGear Terminal Equipment, Analog & Digital
Circle (334) on Free Info Card

Sierra Video Systems Inc

916-478-1000

Digilinx Series

Ponderosa Series

Siskiyou Series

Sigma Electronics

717-569-2681

*Editing Router

DVD-2104 Digital 1x8 Reclocking & EQ DAs

*DVS-1616 16x16 Serial Digital Routing System

HPX High Performance 8x8 to 16x16 Router

*ADX, Large Matrix, 16x16 to 128x128 Router

Snell & Wilcox

+44(0)1730 821188

HD1132/HD1116 Video Routers

Sony Electronics

800-635-SONY

*DVS-V6464B Serial Digital Routing Switcher

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*HDS-V3232 Line of High-Definition Digital Routing Switchers

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MPEG 4:2:0

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www.americanradiohistory.com

Product Directory

Technical Necessities/TecNec

800-543-0909; 914-246-0428
Cable Stretcher - Video Line Amp, EQ
*1 Punch - Router for Nonlinear Editing
Route 4 - Router for Nonlinear Editing

Tektronix Inc Video & Network Division

800-547-8949
*Grass Valley 8900, 8800, 8500 Series DAs

Circle (395) on Free Info Card

*Grass Valley Performer 10x1 Router

Circle (394) on Free Info Card

*Profile VideoGateway (Specialized Video IP router)

Circle (392) on Free Info Card

*Grass Valley Series 7000 Signal Management System

Circle (393) on Free Info Card

TeleCast Group AS

+47 33 44 72 00

VD 2000 Digital Video Routing Switchers

Telect Inc

800-551-4567; 509-926-6000

3156 - Serial Digital Video DA, Non-Reclocking
64x64 VAA - 64x64 Video, Stereo Audio Router (150MHz)

*2000 - VersaFrame Modular Signal Management System Chassis

32x32 VAA - 32x32 Video, Stereo Audio Router (150MHz)

*3160 - 16x16 Digital Video Routing Switcher

2102 - Video DA w/Differential Input

2103 - Video DA w/Differential Input and EQ

3157 - Serial Digital Video DA, w/Reclocking

TV One Multimedia Solutions

800-721-4044; 606-282-7303

Splitter 525 PC Signal Splitter

Video Accessory Corp

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VB/4x1 4x1 Video Switch

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Videotek SDR.104

Videotek Inc

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*VDA and DDA Series for Analog and Digital Video

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*Single Bus and Matrix Routers - Analog and Digital

Circle (416) on Free Info Card

*DPA-100 and SDC Series of Proc Amps and Color Correctors

Circle (415) on Free Info Card

SDR Matrix Router Family (see photo)

Circle (103) on Free Info Card

Ward-Beck Systems Ltd

800-771-2556; 416-438-6550

RAV-24 Router

www.leitch.com/asc/

ASC's product line includes video server systems and nonlinear editing systems, as well as networking, server, and storage technologies for broadcast and post-production applications.

Video Servers & Storage

Includes: Commercial insertion equipment/software; Hybrid recorders (disk and tape); On-air presentation systems; Still/clip stores; Tape library systems; VDRs (video disk recorders); Video servers; VTRs

AAVS

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*DIVA-DVCPRO Library System

Accom Inc

650-328-3818

*Axess

*WSD/2Xtreme Video Disk Array

*APR Attache Digital Disk Recorder

Aston Electronic Designs Ltd

+44 1252 836221

*Concept Still- and Clip-Store

Avica

818-846-0589

*Vecta DTV Still-Store

Avid Technology Inc

800-949-AVID; 978-640-6789

*MediaServer

Celerity

423-539-3521

*CTL-9000

*Interactive Video Servers

Channelmatic-LIMT

619-596-8968

MVP (Managed Video Playback)

LVS - Local Video Server

DMM - Digital MoneyMaker

Cinebase Software

888-CINEBASE; 310-479-3700

*Cinebase Media Asset Server w/Video Tools

Digital Processing Systems/DPS

800-775-3314; 606-371-5533

DPS Whiplash Sto-Mo System

Circle (264) on Free Info Card

DPS Vclips Still- and Motion-Video Store

Circle (205) on Free Info Card

Simply Hollywood Uncompressed Video DDR

Circle (265) on Free Info Card

Digital Vision (DV Sweden AB)

+46 8 182465

*BitPack HDTV Video/Audio Encoding System

DNF Controls

818-252-0198

ST60, ST100, ST200, ST300 Controllers

Circle (343) on Free Info Card

*2000CL - 200 Clip Instant Access System

Circle (342) on Free Info Card

Doremi Labs Inc

323-874-3411

*V1 Video Server

*V1D Video Disk Recorder

Drastic Technologies

416-255-5636

VVW 3400TD Variable Length Video Delay

*VVW 1500 Lower-Cost Variable MJPEG DDR

VVW 1700 Variable MJPEG DDR

VVW 2000/2500 IEEE News/Dn-Air DDR

VVW 5000 10-bit Uncompressed DDR

VVW 3500 Dual Channel Video Server

VVW 4500 Multichannel MPEG-2 Video Server

VVW 1900 Sports/Replay Variable MJPEG DDR

DVS Digital Video Inc

818-846-9444

*MovieVideo BSS HDTV Broadcast Still-Store

*MovieVideo SCS HDTV Still- and Clip-Store

*ProntoServer HD360 Panasonic Compressed Server

*ProntoServer Video Server 480p

*ProntoVision HDTV Disk Recorder

*ProntoVideo HD360 Panasonic Compressed DDR

Electronica Industriale Spa

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Cart Machine

Fast Forward Video

800-755-8463; 714-852-8404

Dmaga Series VDRs

FloriCal Systems Inc

352-372-8326

*SpotCacher - Video Server Content Manager

*Cacheplayer - Entry-Level Video Server

For-A Corporation of America

714-894-3311

FR-200 Low-Cost Digital Recorder w/Optical Memory



Hewlett-Packard MediaStream

Hewlett-Packard Company

800-452-4844

MediaStream Server

Circle (131) on Free Info Card

MediaStream Disk Recorder (see photo)

Circle (127) on Free Info Card

JVC Professional Products Co

800-JVC-5825; 973-315-5000

*BR-D40 Digital-S Dockable Recorder

*SR-W50 W-V50 W-VHS HDTV Recorder/player

BR-DV10 Mini-DV Dockable Recorder

*BR-D51 Digital-S/SVHS player

*BR-D350 Player

*BR-D92 and BR-D52 Digital-S Studio VTRs

*BR-D750U Digital-S Recorder

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Kalidea

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*DPR700 Real-Time Uncompressed Digital Disk Recorder

Ktech Telecom Inc

818-361-2248

*TSS-100 MPEG-2 Bitstream Playback Unit



Leitch ASC VR-300

Leitch Incorporated

800-231-9673; 757-548-2300

ASC VR-300 (See Photo)

Circle (417) on Free Info Card

Miles

+44-1635-552-524

*M44 On-air Clock

*M42+ Presentation Generator

*M25 Not-So-Still-Store

MountainGate

800-556-0222; 702-851-9393

CentraVision MPIRE Realtime I/O Processor

w/VTR Emulation

CentraVision MPIRE (Multipurpose Image Resource Engine)

CentraVision

NEC America Inc Broadcast Equipment Department

888-383-4DTV; 972-751-7246

*Diskcam Digital Optical Video Disk Editor

Nesbit Systems Inc

609-799-5071

Media Library System

nSTREAMS

408-988-8188

*dvbSTREAMS - DVB Digital Video Server

movieSTREAMS - NVOD Server

adSTREAMS-Ad Insertion Server

Odetics Broadcast

714-774-2200

*TCS45-PRO DVCPRO Video Library

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*TCS90-PRO DVCPRO Video Library

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Pacific Computing

831-427-4280

*OmniJet A/V 4x2 CAV/Audio w/ LTC/OSD/DTMF

Panasonic Broadcast & Digital Systems Co

800-528-8601; 323-436-3500

*AJ-D950 DVCPR050 Studio Editing VCR

*AJ-HD2700 - 1080i/720p Switchable D-5 HD Recorder

*AJ-PD950 DVCPR050 Progressive Editing VTR

*AJ-D580 D-5 VTR/AJ-HDP500 HD Processor Combination

AJ-D780 4x Transfer DVCPR0 VCR

Philips Digital Video Systems

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Media Pool Digital Video Server

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*DCR Series of DVCPR0 & DVCPR050 VTRs

Circle (378) on Free Info Card

Pixel Power Ltd

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*Collage Series

Pluto Technologies Int'l

303-402-9000

*HyperSPACE HD Digital Video Recorder

*VideoSPACE Digital Video Recorder

*AirSPACE Multichannel Broadcast Server

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MTI Intellideck Image Processing System

Prime Image Inc

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Time Machine

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*Pictureframe - Single-user, Multi-output Graphics System

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*Picturebox - Multi-user Multi-output Still-Store

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*CacheBox Distribution Server

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*Inspiration - Integrated News/Sports Production System

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*ClipBox Central Video Server

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*Robit Digital Motion Image Recorder

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*DVB-8020 Digital Video Buffer

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Replay On-Air Presentation System (See Photo)

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*HD 1.5 Plus

*Quickframe HD360 Option

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NFS Server

Silicon Graphics Inc

800-800-7441; 415-960-1980

Streamcaster



Sony Electronics MAV-70

Sony Electronics

800-635-SONY

*HDCAM Line of High-Definition VTRs

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*Digital Betacam Line of VTRs

Circle (117) on Free Info Card

DVCAM Line of VTRs

Circle (106) on Free Info Card

*MAV-70 Selectable Bit Rate MPEG-2 Server for FlexSys (See Photo)

Circle (115) on Free Info Card

*BetacamSX Line of VTRs

Circle (116) on Free Info Card

Spencer Technologies

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*Spotstore - Multichannel Time Delay

*SS-2000 w/DVE, Linear/Chroma Keyers

*Newstore - Dual-Channel, NLE, Animation w/Key

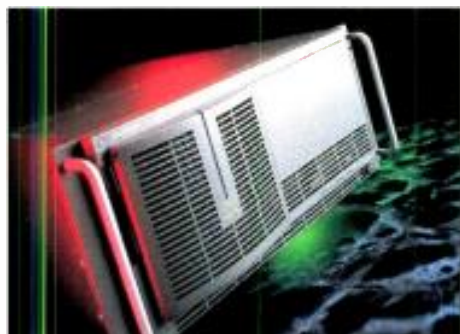
*Newstore II - Includes 4-Channel, RAID, Editor, Fibre Channel

STB Systems

888-478-2687; 972-234-8750

Quartet GLI - PCI 4-Channel MPEG-2 Decoder w/Gen-lock

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Tektronix Inc Video

Tektronix Inc Video & Network Division

800-547-8949

*Profile PDR Series Networked Video Servers
(See Photo)

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*Profile PLS200 Library System

Circle (398) on Free Info Card

*Profile PRS250 RAID Storage System

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Nexstore

Vela

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*Rapid Access - Video Delivery System

Vibrant Technologies

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*Mpression MPEG 4:2:2 Production Video Server

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Wire, Cable & Connectors

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*ProAx Triaxial Camera Connectors

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*True 75ohm BNC Connectors

Circle (424) on Free Info Card

Alpha Wire Company

800-52-ALPHA; 908-925-8000

XT3A-GUARD High-Performance Electronic Cables

Audio Accessories Inc

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Edac Connectors

Belden Wire & Cable Company

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*Brilliance Precision Analog & Digital Cables

Bi-Tronics Inc

800-666-0996; 914-592-1800

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Extron Electronics

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*SuperFlex Cable w/Sequential Numbering

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*7537 Super Trunk Multicore Video Cable

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*VPM 2000 High-Bandwidth Video Cable

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*VSD 2001 High-Bandwidth Video Cable

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*7538 Miniature Video Cable

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*5526EZ Digital Audio Cable

Circle (275) on Free Info Card

*GEP-FLEX Multipair Audio Cable

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*5524EZ Digital Audio Cable

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*5522M Digital Microphone Cable

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*Mogami Wire & Cable

MilesTek Inc

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*10-03001-240 BNC 75ohm for 1505A

MIT Inc

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*Mogami Cable

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*BNC-2964 Push-Pull BNC Connector

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*Video cable

*Spectrum

*Audio Connectors

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*NE3700 Series 37-Pin (DT12) Connector

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*BNC Terminations & Caps

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1080i/1035i/720p

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HDTV Digital & Analog Waveform Monitor - LV 5150D

- 2 Serial Digital Inputs (SMPTE 292M)
- 1 3-Wire Analog Input (SMPTE 240M)
- 1080i/1035i Operational, 720p Optional
- Full EDH Error Reporting with Alarms
- Waveform, Vector, Picture and Stereo Monitoring
- Overlay, Parade and Timing (Bowtie) Waveforms
- Active Serial Input Decoded to Analog Pix Monitor Output
- Active Serial Switched (A or B) Output

HDTV Serial Digital Signal Generator - LT 440D

- 1125/59.94 HDTV Operation (60Hz option can be added)
- 1080i or 1035i Active Lines; Front Panel Switchable
- Digital Genlock to 1125 Tri-Level Sync or 525 NTSC Black Burst; Adjustable Delay
- Embedded as well as Separate AES/EBU Audio
- Tri-Level Sync Output and H&V Drives
- Source Identification



See For Yourself...

Feature	LEADER	THE BIG "T"
LV 5150D HDTV Digital & Analog Waveform Monitor		
True Instrumentation CRT for Clean, Detailed Waveform Observation	Yes	No
3-Wire Analog Input for Monitoring Decoded Analog HDTV	Yes	No
LT 440D HDTV Serial Digital Signal Generator		
Embedded As Well As Separate AES/EBU Outputs	Yes	No
General		
Parts & Labor Warranty	2 Years	1 Year
First Time Calibration — Free	Yes	No

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DTV/HDTV

Leader Instruments Corporation was the first test equipment manufacturer to meet the needs of video professionals in the start-up aspects of HDTV production. Products shown at NAB 97 included the LV 5150D Waveform Monitor and the LT 440D Signal Generator. These have found widespread use among the networks and major production houses. A close working relationship between these users and Leader have helped to refine the instruments to the point where they are recognized as essential building blocks in any HDTV facility.

The LV 5150D Waveform Monitor handles both SDI and analog (three-wire) feeds for 1125 signals (1080 or 1035 lines displayed.) 720p operation is an option. Analog component operation is very useful as there are few analog component monitors readily at hand for 1125/60 and inspection of signals in the analog domain remains important. The LV 5150D offers waveform display in overlay and parade in the choice of YCbCr or GBR. Vector display is shown with the option of an electronic or external/illuminated graticule, and a picture display shows program material (from the Y or G components) as well as signals outside the active picture area. An analog stereo audio display with settable level reference is also provided. Line select operation and precision waveform cursors are standard as well as full error and 16-channel audio status reporting.

The LT 440D Signal Generator operates in the 1125/59.94 system with user selection of 1035 or 1080 lines displayed. It features eight channels of embedded AES/EBU audio as well as a separate AES/EBU audio output feed. Digital genlock to black burst or composite tri-level sync is provided with 100-line settable advance delay. Test signals are tailored to digital operations and include the pathological check field and a 20-character source ID. 1125/60 operation is available as an option.

The LT 1611 Generator delivers analog RGB signals that cover an enormous range of raster formats including 525/60, 625/50 and all of the HDTV formats currently under consideration. The unit is preprogrammed by ROM or may be PC programmed by the user. This allows for format editing as well as design of custom test patterns. When combined with Model LT 1606 Video Encoder, RGB is transformed into full encoded NTSC, PAL or component YPbPr with tri-level sync where applicable.

LV 5150D Digital Waveform Monitor



New!
720p Option
Now Available
Call
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For Details

- HDTV Waveform, Component Vector, Picture Monitor
- Two SDI Inputs
- Analog (3-Wire) Inputs
- Picture Monitor Output of YPbPr or GBR
- YCbCr or GBR Waveform Display
- Overlay, Timing and Parade 3-Channel Waveforms
- CbCr Component Vector Display
- Choice of Electronic or External (Illuminated) Vector Scale
- Picture Display (Y or G)
- Precision Cursor Measurements
- Stereo Audio X-Y Display
- Full Error-Reporting Facilities
- Full Line Select with Strobe in Picture Display

LT 440D Signal Generator



- 1125/59.94 HDTV Signal Source
- 1035 or 1080 Lines Displayed, Switchable
- 1125/60 Option
- Embedded and Separate AES/EBU Digital Audio
- 8 Channels of Embedded Audio, 2 Separate
- Digital Genlock with ± 100 Line Advance/Delay
- Analog Tri-Level Sync, H and V Drive Outputs
- 20-Character Programmable Source ID
- Supports Full Error Reporting Facilities
- Test Signals Include Pathological Check Field

LT 1611 Programmable RGB Video Generator



- PC Programming and Control Operates in Windows Environment
- ROM Setup and Control for Stand-Alone Operations
- Analog RGB, Clock to 150 MHz, Model LT 1611
- High Speed Switching Speeds Pattern Selection
- Power Saving Display Function as Specified in VESA Standards
- Graphic Design of Custom Test Patterns
- Stock Test Patterns Include SMPTE RP-133 & Flower Image
- Image Downloading
- X-Y Display Function Locates Pixel Coordinates (to Locate Display Faults)
- Auto Display Functions (Pattern Switching & Scroll)

Leader Instruments Corporation

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The first to offer an SDI waveform monitor capable of handling both digital and analog 3-wire components for 525/59.94 signals, Leader filled the SDI lineup with features like the first readout of data stream signal strength in terms of equivalent cable length, data readout in hex and an SDI generator with advanced features that include moving/switchable patterns to check the effects of concatenated compression.

The **LV 5100D Waveform Monitor** handles both SDI inputs as well as one 3-wire analog feed making it ideal for mixed facilities. Relative timing between SDI and analog feeds can be checked and the unit is equally at home in 525/60 and 625/50 systems. A huge range of operating options include line select, precision cursors, waveform display in GBR or YCbCr, overlay or parade waveforms, picture display (with line-select strobe and display of Y signals outside active picture), component vector and analog stereo Lissajous with menu-selected reference levels. Full EDH facilities are provided including error time readout and alarms to catch errors in categories chosen by the user. Data, in hex, for all 1716 data points per selected line is shown allowing easy search for normally hidden codes. The unit can be set to capture and freeze data at the time of error. The LV 5100DE version adds EYE pattern analysis with cursor rise/fall and jitter measurements.

The **LT 425D Signal Generator** offers four SDI outputs, one of them digital black. Four channels of AES/EBU digital audio may be embedded in the SDI data stream and a separate AES/EBU stereo pair is available from the rear panel. Digital genlock to black burst is provided with settable +16 line advance/delay. Test signals include shallow, oversized and digital-limit ramps. SMPTE bars (BBC bars in 625/50) and the pathological check field. Compression stress tests include a programmable moving white patch and switching between selected test patterns with selectable dwell times.

The **LT 5910** is a monitor in a true sense because it keeps track of all aspects of the SDI data stream without the need of human observation. Its three modes of operation include **MONITOR** where data is displayed in real time, **WATCH** where data is caught and frozen at the time of error, and **LOG** where details to up to 100 errors are stored. The unit operates in digital composite and component systems, provides a frame store with the ability to edit stored data, and features **EYE** pattern analysis. Stored data can be output (SDI) and used as a test pattern. User-designed monitoring programs include gamut ranges.

LV 5100D/DE Component Waveform Monitor



- Component Digital and Component/Composite Analog
- Eye Pattern (SDI Waveform), Model LV 5100DE Only
- EDH Facilities
- Hex Readout of All Data Samples
- Serial Data Signal Strength Reading in Terms of Equivalent Length of Coax Cable
- User-Selected Alarms
- Picture Display of Y or G
- Full Line Select with Strobe on Picture Display
- Preset/Recall of 10 Front Panel Setups

LT 425D Component Signal Generator



- 4 Serial (includes digital black) and 1 Parallel Outputs
- EDH Codes in Accordance With RP-165
- 4-Channel AES/EBU Embedded Audio **plus**
- Independent AES/EBU Digital Audio Output
- Compression Tests Include Variable Speed, Direction Controlled Marker and Sequentially Switched Patterns
- 20 Character Programmable ID and Calendar/Clock
- SMPTE Color Bars (BBC Bars in 625/50)
- Ramp: Oversize, Digital Limit and Shallow (10)
- SDI Pathological Check Field

LT 5910 SDI Analyzer



- Continuous Monitoring of EDH, TRS, ANC and Gamut Errors
- SDI Level in Terms of Equivalent Cable Length
- Handles Digital Composite and Component at 525/60 & 625/50
- Active SDI & Frame-Stored Data Output
- Records Error Totals for Designated Periods
- Reads FF & AP EDH Errors, FFCRC and APCRC Codes and EDH Flags
- Ability to Edit and Output Frame-Stored Data
- Reads Status of 16 Audio Channels
- SDI Eye Pattern Monitoring with Levels and Time Cursors
- Printer Output

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Facilities operating in analog component (Betacam, MII, GBR or SMPTE) have their test-signal source and monitoring needs filled in the instruments shown on this page. All are capable of handling NTSC composite as well as analog components.

Model 5100 Waveform Monitor offers four-channel operation to accommodate YPbPr or GBR in 525/60, 625/50 or 1125/60. The fourth channel can be assigned to NTSC or PAL composite or any choice of synchronous signal. The hookup can be changed to handle four channels of composite, or composite, Y and C and another channel of choice. Waveform display includes overlay or parade, and the 30-MHz channel bandwidth coupled with HDTV time base allow the unit to display YPbPr for 1125/60 signals. The vectorscope display is menu-set up to correct calibration for Betacam, MII or SMPTE with or without setup. The vector display corrects automatically when 1125/60 HDTV signals are processed. Other outstanding features include full line-select operation, precision cursor measurement and presets to instantly recall panel setting for up to twelve routine operations. A universal power supply accepts worldwide power mains plus 12 V dc.

Model 425A Signal Generator supplies sync and component test signals in GBR or YPbPr in either the Betacam or MII formats. The choice of Betacam or MII should be made when ordering. In addition, the 425A outputs NTSC composite, Y and C for selected test patterns. A two-channel dubbing output of Y and time-compressed C is also provided to match the chosen format (Betacam or MII). Genlock operation is standard, and a front-panel switch allows the choice of zero or 7.5% setup. Test signals are tailored to either component or composite operations and include both component and composite pulse/bar, Bowtie, multiburst, modulated staircase and others.

Model 5222 Waveform Monitor handles a full eight channels to accommodate a pair of component signals for relative timing checks or two sets of four channels. The unit automatically switches between 525/60 or 625/50 to display NTSC, PAL, SECAM or component waveforms including YRGB. The 5222 also offers precision cursors for time or level measurements, the latter in volts, IRE units, % or dB. Y/C monitoring is facilitated by adding C to Y to show the familiar composite waveform. Line select is standard and includes a strobe of the selected line in the picture mode.

Model 408 has been called the "DO IT ALL" generator because it delivers baseband and VHF/UHF/Cable signals with fully programmable test setups for 100 test routines. It outputs RF, composite video, Y, B-Y, R-Y, GBR and encoded C. It is mentioned here under *Component* because the programming capabilities facilitate the setup of Betacam or MII component signals.

Model 5100 Waveform/Vector



- Four Channel Operation
- Auto Recognition Setup & 525/60, 625/50, 1125/60 Systems
- Full Line Select
- Δ Volts and Δ Time Cursors
- Presets for Twelve Observation Setups
- Component Vector Display
- Betacam, MII, SMPTE, YPbPr and RGB

Model 425A Signal Generator



- 525/59.94 Analog Component and NTSC Composite
- Betacam or MII
- Digital Genlock
- Shark Fin and Bowtie Timing Signals
- YPbPr, GBR, Composite and Y/C Signals
- Dub Feeds (Y/C/TCM or CTDM)

Model 5222 Waveform Monitor



- Parade and Overlay Displays
- Picture Display (with Line-Select Strobe)
- Full Line Select with 525/60 and 625/50 Notation
- Menu Selected Setup
- Memory Storage of 10 Panel Setups
- Cursor Measurement of Level and Time (0.5%)
- Level Cursors Read in Volts, IRE, % and dB

Model 408 NTSC Test Generator



- NTSC M (408 and 408NPS)
- PAL-B, C, D, G, H, I, K and L (408NPS only)
- SECAM III-B, D, G, H, K and L (408NPS only)
- Composite, RGB, Y/R-Y/B-Y, Y/C
- VHF/UHF/Cable R-F Coverage
- Programmable Parameters
- 100 Program Storage

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Leader's lineup of NTSC composite monitoring and signal-generation equipment meets the needs of the most demanding production, post production, design and maintenance applications.

The **Model 5870 Combination Waveform/Vector Monitor** processes two NTSC inputs and provides overlay or side-by-side waveforms and overlay vector displays of the two input signals to facilitate precision phase matching and timing adjustments. A x5 vertical gain multiplier, 200 ns/div fastest time base and wide-ranging centering controls permit close inspection of all parts of the waveform for high resolution adjustments. Separate or simultaneous display of waveforms or vectors is possible, as is side-by-side display of a flat and low-pass (LUM) filtered signals. The use of decoded R-Y signals facilitates high-resolution checks of differential phase and gain. A precision measurement of SCH with digital readout of error with respect to the signal observed or an external reference checks color framing. Full line select operation is provided with sync from both or fields 1/3 or 2/4, and a preset system recalls up to 9 line selections for routine tests. The universal power supply accepts 90-250 V ac, 40-440 Hz as well as 12 V dc. **Model 5872A** is identical in all aspects to the 5870 except that it does not provide for SCH measurement.

Models 5860C and 5850C Standard Waveform Monitor and Vectorscope respectively are the familiar workhorses of video monitoring. They mount side-by-side in a half-rack adapter and handle two input feeds for level and timing comparisons. Both may be synchronized to an external reference for system timing/phase adjustments. The 5860C offers 1H, 2H, 1V and 2V sweeps plus 1 μ s/div and 2V magnifiers. Filters include FLAT, IRE, CHROMA and DIF'D STEP (the latter for linearity checks). The 5850C offers an internal, illuminated graticule as well as an electronic graticule that is immune to position settings and can be read from a distance.

Model 411 is a 10-bit digital-to-analog synthesized signal generator that provides long and short term precision. It outputs two feeds of the selected test signal plus a continuous feed of SMPTE bars with a programmable 16-character SID. Balanced audio test tones and full sync-generator feeds are also provided. Seventeen test patterns including a 10% and 20% APL modulated staircase and bounce. Two black burst outputs are provided as well as digital genlock to an external reference. A front panel switch sets setup to zero or 7.5%. Provision is made for remote control of pattern selection.

Model 410C is also a 10-bit synthesizer to ensure precision NTSC signals over the long haul. It outputs 12 test signals including SMPTE, EIA and full-field color bars, pulse/bar and modulated staircase. Three black burst outputs are provided plus composite sync and CW subcarrier. Composite video output level is variable with a fixed cal setting. Provision is made for remote pattern selection.

Model 5870 Combination Waveform/Vector



- Digital SCH Readout
- Simultaneous/Overlaid Displays
- Full Raster Line Select
- Line Select Presets

Models 5860C and 5850C Waveform Monitor/Vectorscope



- | | |
|--|---|
| ■ Two Channels Plus EXT REF | ■ Two Channels Plus EXT REF |
| ■ 1H, 2H, 1V, 2V, Sweeps | ■ EXT REF Accepts Composite Video, Black Burst or CW Subcarrier |
| ■ 1 μ s/div Plus 2V MAG | ■ Accepts Line-Select Strobe |
| ■ RGB Standard, YRGB (Option) | ■ Electronic Scale Shows Error Limits |
| ■ FLAT, IRE, CHROMA and DIF'D STEP Filters (The latter for Y Linearity Checks) | ■ No Parallax Error |
| ■ Picture Monitor Output | ■ Fits Half-Rack Adapter |
| ■ Fits Half-Rack Adapter | |

Model 411 Synthesized Signal Generator



- Precision 10-Bit D/A
- Digital Genlock
- 17 Test Signals + APL + Bounce
- Front Panel Setup Switch (0 or 7.5%)
- Dedicated SMPTE Bars Output with 16 Character Programmable SID
- Balanced Stereo-Audio Test Tones
- Occupies Only 1/4" of Vertical Rack Space

Model 410C Synthesized Sync/Test Generator



- 10 Bit Digital Synthesizer
- Complies with RS-170A
- Pulse/Bar with Modulated 12.5T Pulse
- Multiburst at 50% and 100%
- Modulated and Unmodulated Staircase
- 3 Black Burst Outputs

Leader Instruments Corporation

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6484 Commerce Drive, Cypress, California 90630 Tel: (714) 527-9300 Fax: (714) 527-7490

For additional information call 1 (800) 645-5104
Visit our web site at www.leaderusa.com

Circle (63) for Product Information Only
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Leader has a long history of supplying test instrumentation to the audio field. Some of the products in the full lineup are shown here.

Model 5836A is the first surround sound monitor capable of displaying the sound image for 3-1 and 3-2 surround-sound systems. It accepts digital AES/EBU digital inputs as well as balanced and single-ended analog feeds. Displays include the sound image with dedicated bargraph indicators for level and inter channel Lissajous patterns for relative amplitude and phase observations.



Model 5836A



Model 5835

Model 5835 provides the means to monitor the phase and amplitude of stereo signals. Further, an automatic alarm is triggered if a serious phase error, as might be caused by a polarity inversion in either stereo feed, results in a significant L-R component for more than 5 seconds. This prevents serious degradation of sound for monaural listeners.

Model LMV-186A is a dual-channel AC millivoltmeter with 100 μ V sensitivity and 500-kHz bandwidth. Calibrated in mV, V, dBV and dBm, the unit is ideal for precision stereo measurements over a very wide range of levels.



LMV-186A



LFM-39A

Model LFM-39A has been the mainstay of test and QC operations where the measurement of wow and flutter is vital. It offers 0.03% full-scale sensitivity, conforms to JIS, CCIR and DIN standards, uses built-in weighting filters and provides an oscillator output.

EFP/ENG PRODUCTS

Developed to take video monitoring instrumentation into the field, the EFP/ENG products feature small size and weight. All operate from a 12 V dc source such as an NP-1 battery or vehicle power, have internal regulators to accept a wide range of supply voltages and provide a low-battery warning.

The two-channel waveform monitor, **Model 5864A**, provides A/B input selection, 2H and 2V timebases with MAG on/off, Flat and IRE filters and a x4 gain boost. The two-channel vectorscope, **Model 5854**, provides phase control, A/B input selection as well as phase reference and a x5 gain boost for precise camera balance checks. The signal generator, **Model 413S**, outputs EIA and SMPTE color bars, a flat white field and a SNG color bar pattern especially designed for satellite operations. Features include an eight-character programmable SID and balanced audio test tones.

A full line of accessories facilitate the assembly of combination packages consisting of 1 to 4 units and includes carrying cases and battery attachments.



Model 5864A



Model 5854



Model 413S



LR-2452-02



LR-2451-011

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Instrumentation designed for use in the video systems in use throughout the world has always been part of the Leader lineup. Included is **Model 5222**, an 8-channel component/composite waveform monitor capable of operating with NTSC, PAL and SECAM systems and offering full line select, picture mode, cursor operations, Y/C monitoring and memory storage of 10 observation setups. **Model 5212** is a three-channel NTSC/PAL vectorscope offering advanced features such as auto burst zeroing, digital phase measurement, overlay of 3 signals plus an external reference, CRT readout of DG and DP to two decimal places, storage of 10 presets and X/Y display for stereo audio monitoring. **Model 408NPS** is an extremely versatile NTSC/PAL/SECAM video generator that also outputs VHF/UHF cable signals. Programmability extends to channel selection (including carrier frequencies), Y, chroma, sync, burst and setup levels. Programming of 100 test setups includes pattern and channel selection, genlock and front panel settings. Outputs include RF, composite video, Y/C, Y/B-Y/R-Y, RGB, black burst, composite sync, H&V drive, burst flag and CW subcarrier.

**Model 5222****Model 5212****Model 408NPS**

AV SERVICE PRODUCTS

Leader's full line of instrumentation covers a very wide range of test needs in manufacturing, QC and maintenance. The following instruments are of particular value on video/audio test benches.

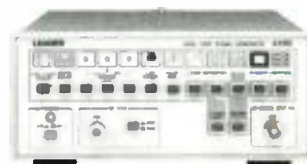
Model 8106, a two-channel 100-MHz oscilloscope, features on-screen readout of key settings, precision cursor measurements and continuous readout of V p-p, DC level, frequency or period. Calibrated delayed sweep extends to video line-select operations and dedicated TV sync separators ensure rock-solid video observations.

Model LF 827 is a 1.3 GHz frequency counter featuring reciprocal counting for low frequencies, comparator to user preset frequencies and hi/lo readings with preset limits.

Model 430, a 10-MHz video sweep generator with multiple markers at key frequencies, is a must for the fully-equipped test or QC station. It also supplies multiburst and color bars.

Model 435B video generator is unique in that it supplies a 1000-line monoscope test pattern. Outputs include full field and SMPTE bars, pulse/bar, window, line sweep, mod stair, dot crosshatch, flat YRGB fields and computer-type display.

Model 401YB video generator is a valuable addition to the test bench featuring composite, Y/C, CH3/4 and RGB outputs, 11 test patterns and progressive or interlace scan.

**LS 8106****LF 827****Model 430****Model 435B****Model 401YB**

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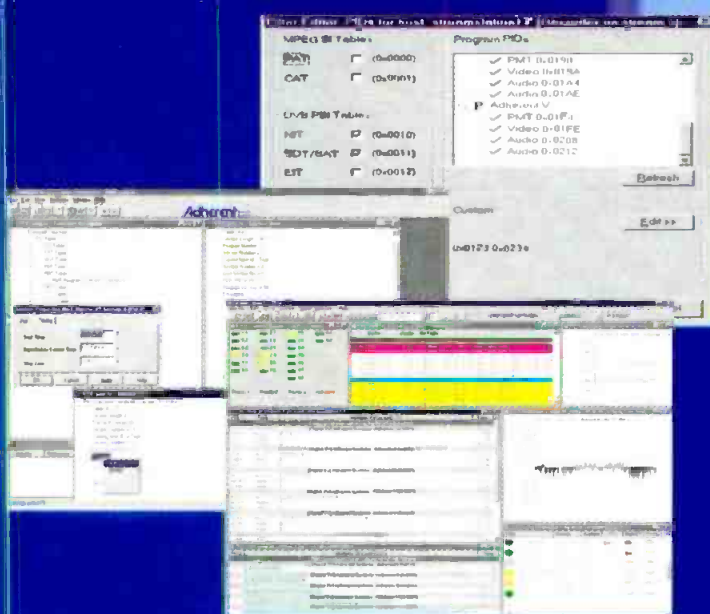
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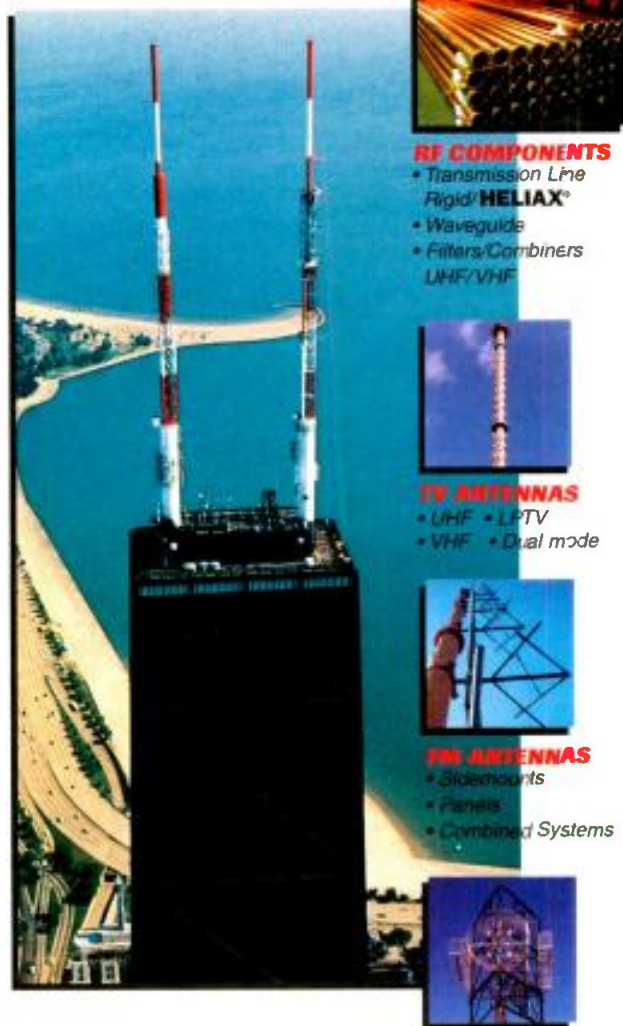
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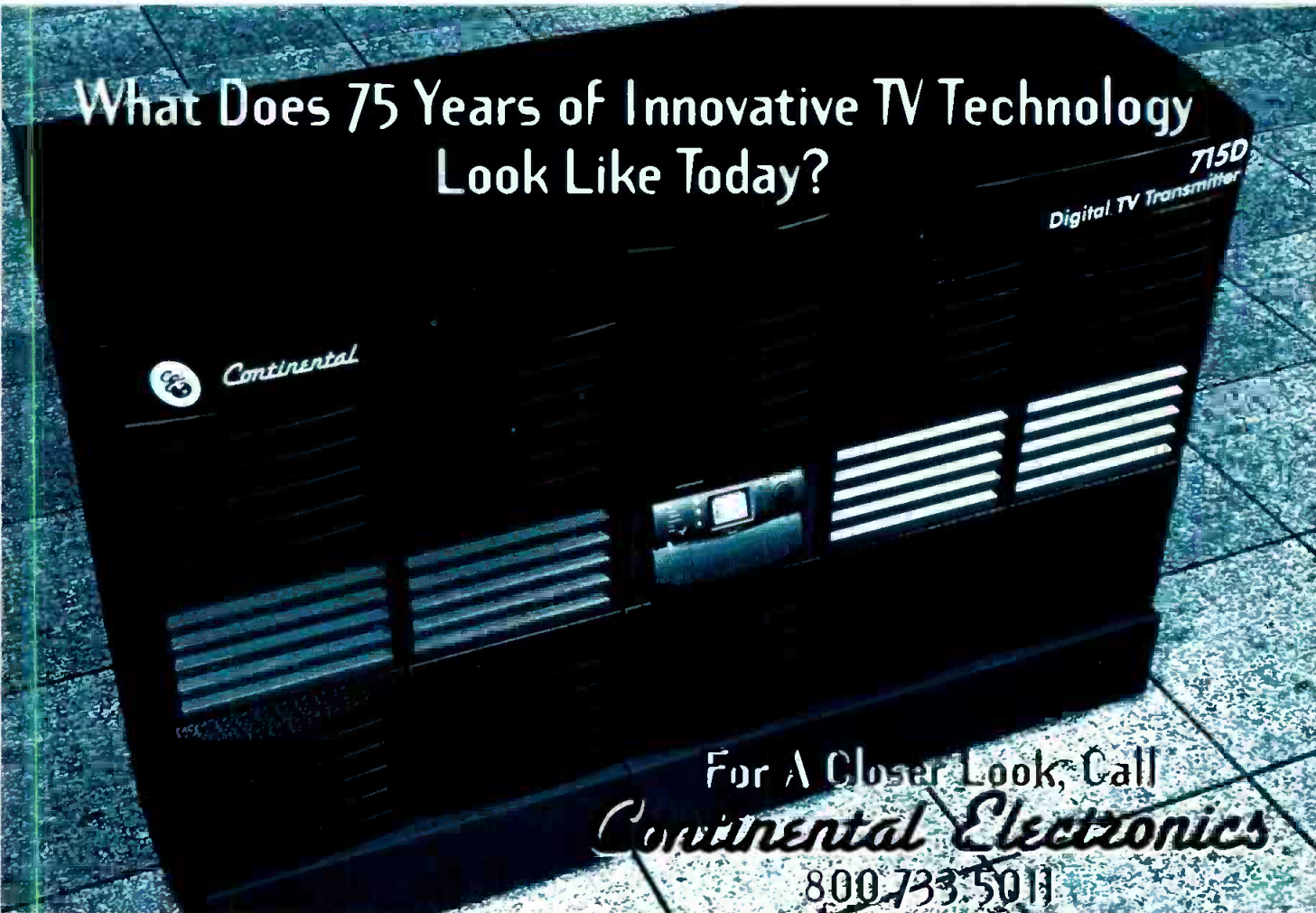
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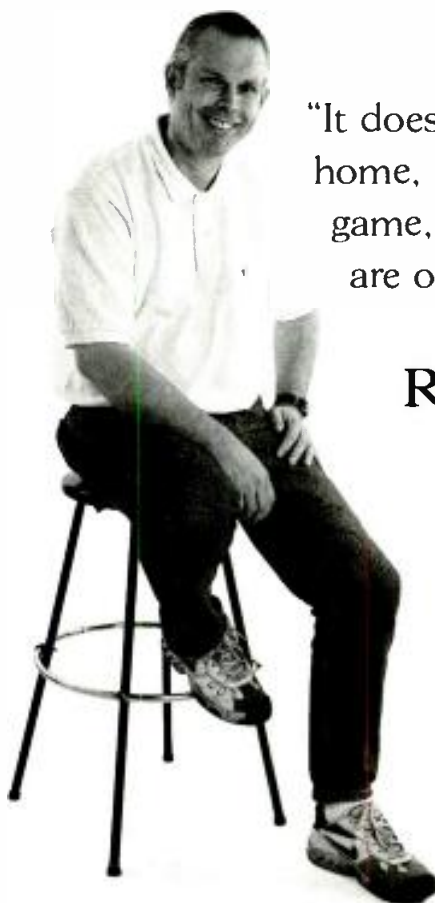
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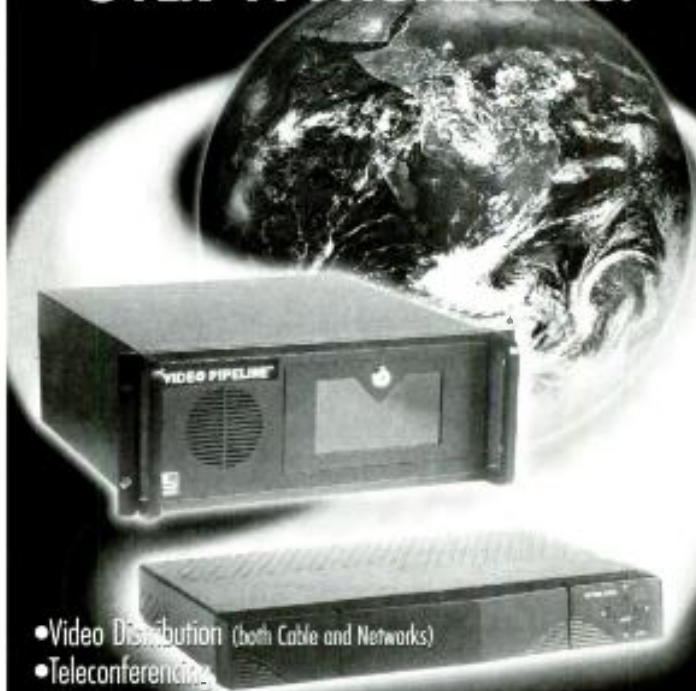
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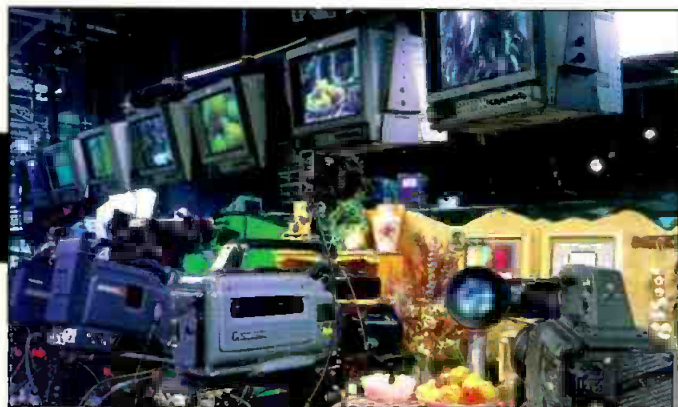
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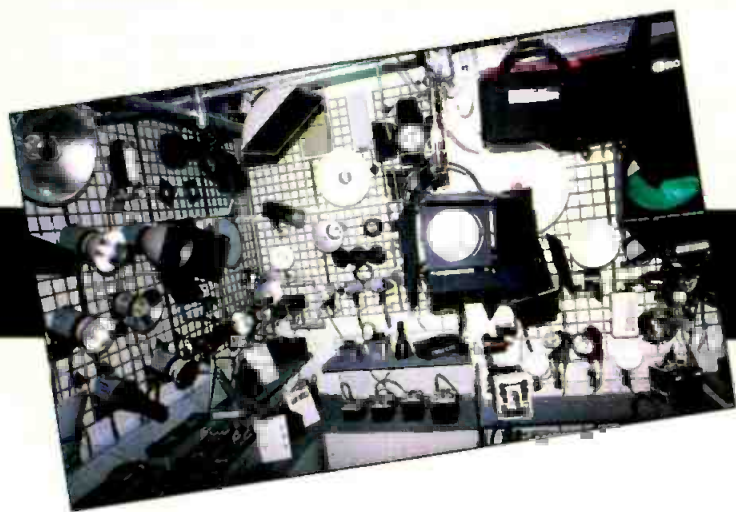
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- VCT-U14 Tripod Adapter • LC-2000CP System Case

DSR-30 DVCAM Digital VCR

The DSR-30 is an industrial grade DVCAM VCR that can be used for recording, playback and editing. DV standard 4:1:1 sampling digital component recording with a 5:1 compression ratio provides spectacular picture quality and multi-generation performance. It has a Control L Interface for editing with other Control L based recorders such as the DSR-200A DVCAM Camcorder or another DSR-30. It also has a continuous auto repeat playback function making it ideal for kiosks and other point of information displays. Other features include high quality digital audio, IEEE-1394 Digital interface and external time recording. The DSR-30 can accept both Mini and Standard DVCAM cassettes for up to 184 minutes of recording time, and can playback consumer DV tapes as well.



- Records PCM digital audio at either 48kHz (16-bit 2 channel) or at 32kHz (12-bit 4 channel).
- Equipped with Control L, the DSR-30 is capable of SMPTE Time Code based accurate editing even without an edit controller. Built in editing functions include assemble and separate video and audio insert.
- By searching for either an Index point or Photo Data recorded by the DSR-200A camcorder, the DSR-30 drastically cuts the time usually required for editing. The DSR-30 can record up to 135 Index points on the Cassette Memory thanks to its 16K bits capability.
- Audio lock ensures audio is fully synchronized with the video for absolute precision when doing an insert edit.
- Built-in control tray has a jog/shuttle dial, VCR and edit function buttons. The jog/shuttle dial allows picture search at 1/5 to 15X normal speed and controls not only the DSR-30 but also a player hooked up through its LANC interface.
- DV In/Out (IEEE 1394) for digital dubbing of video, audio and data ID with no loss in quality.
- Analog audio and video input/outputs make it fully compatible with non-digital equipment. Playback compatibility with consumer DV tapes allows you to work with footage recorded on consumer-grade equipment. Tapes recorded in the DSR-30 are also compatible with Sony's high-end DVCAM VCR's.

PVM-14N1U/14N2U & 20N1U/20N2U 13-inch and 19-inch Presentation Monitors

With high quality performance and flexibility, Sony's presentation monitors are ideal for any environment. They use Sony's legendary Trinitron CRT and Beam Current Feedback Circuit for high resolution of 500 lines as well as stable color reproduction. They also accept worldwide video signals, have a built-in speaker and are rack mountable. The PVM-14N1U/20N1U are designed for simple picture viewing, the PVM-14N2U and 20N2U add RGB input and switchable aspect ratio.



- 500 lines of horizontal resolution
- They handle NTSC, NTSC 4.43, PAL, and SECAM.

- Picture (chrome, phase, contrast, brightness) and setup adjustments (volume, aspect ratio) are displayed as easy-to-read on screen menus.
- Closed captioning is available with the optional BKM-104 Caption Vision Board.
- PVM-14N2U/20N2U Only:
 - (Last Input Switch) - Contact closure remote control allows you to wire a remote to an existing system so that the monitor's input can be remotely controlled to switch between the last previously selected input and the current input.
 - 4:3/16:9 switchable aspect ratio

PVM-14M2U/14M4U & 20M2U/20M4U 13-inch and 19-inch Production Monitors

Sony's best production monitors ever, the PVM-M Series provide stunning picture quality, ease of use and a range of optional functions. They are identical except that the "M4" models incorporate Sony's state-of-the-art HR Trinitron CRT display technology and have SMPTE C phosphors instead of P22.

- HR Trinitron CRT enables the PVM-14M4U and 20M4U to display an incredible 800 lines of horizontal resolution. The PVM-14M2U and 20M2U offer 600 lines of resolution. M4 models also use SMPTE C phosphors for the most critical evaluation of any color subject.
- Dark unit for a higher contrast ratio (black to white) and crisper, sharper looking edges.
- Each has two composite, S-Video and component input (R-Y, B-Y, analog RGB). For more accurate color reproduction the component level can be adjusted according to the input system. Optional BKM-101C (video) and BKM-102 (audio) for SMPTE 259M serial digital input.

- Beam Current Feedback Circuit
- 4:3/16:9 switchable aspect ratio.
- True multi-system monitors they handle four color system signals: NTSC, NTSC 4.43, PAL, and SECAM.
- External sync input and output can be set so that it will automatically switch according to the input selected.
- Switchable color temp: 6500K (broadcast), 9300K (pleasing picture). User preset, (3200K to 10000K).
- Blue gun, under scan and H/V delay capability
- On-screen menus for monitor adjustment/operation.
- Parallel remote control and Tally via 20-pin connector.

SONY

UVW-100B

More affordable than ever, the UVW-100B offers 700 lines of horizontal resolution, 60dB S/N ratio, 26-pin VTR interface, compact design and ease of operation - making it ideal for field shooting applications.



- Three 1/2-inch IT Power HAD CCDs with 380,000 pixels attain sensitivity of F11 at 2000 lux (low light is 4 lux), S/N ratio of 60dB and 700 lines of resolution.
- Gain-up can be preset in 1dB steps from 1dB to 18dB.
- Auto Iris detects the lighting conditions and adjusts for the proper exposure.
- Clear Scan records computer monitors without horizontal bands across the screen. Shutter speed can be set from 60.4 to 200.3 Hz in 183 steps. Also has a variable high speed shutter from 1/100 to 1/2000 of a second.
- SMPTE LTC time code and UB generator/reader. Rec Run/Free Run. Preset/Regen are easily set. For multi-camera operation, genlock to an external time code is provided.
- Genlock input and built-in color bar generator.
- 26-pin VTR interface for feeding component, composite and S-Video signals to another VTR for simultaneous recording. Start/stop are controlled and external VTR status such as Rec and Tally are shown in the viewfinder.
- Diecast aluminum, 1.5-inch DXF-601 viewfinder is rugged yet comfortable while providing 600 lines of resolution.
- Large diameter eye cup reduces eye strain and simplifies focusing. Diopter adjustments (-3 to 0) compensates for differences in eye sight.
- Zebra level indicators, safety zone and center marker generator. Shows tape remaining and audio levels.
- 8-digit LCD display indicates time data, warning indications and video status. Battery status audio level are also shown in a bar graph meter.
- With Anton/Bauer Digital Batteries remaining battery power is displayed on the LCD panel and through the viewfinder.
- Weighs 15lb. with viewfinder, battery, tape and lens. Shoulder pad is adjustable, so you maintain optimum balance when using different lenses and batteries.

UVW-1200/UVW-1400A Betacam SP Player • Player/Recorder

The UVW-1200 and UVW-1400A are non-editing VCRs which deliver Betacam SP quality and offer features for a wide range of playback and recording applications. RGB and RS-232 interface make them especially ideal for large screen, high quality video presentation, scientific research and digital video environments.



- Ideally suited for work in computer environments, because RGB signals can be converted into component signals and vice versa with minimum picture degradation.
- 25-pin serial interface allows external computer control of all VCR functions based on time code information. Baud rate can be selected from between 1200 to 38,400 bps.
- Built-In Time Base Stabilizer (TBS) locks sync and subcarrier to an external reference signal as well as providing stable pictures. High quality digital dropout compensator further ensures consistent picture performance.
- Equipped with two longitudinal audio channels.
- Both read LTC Time Code and UB (User Bits). The UVW-1400A also generates LTC and UB (Free-Run/Rec-Run).
- Built-in character generator can display VTR status, time code, self-diagnostic messages, set-up menu, etc.

- Auto repeat of entire or a specific portion of the tape
- Control of jog, shuttle, playback, record, pause, FF and REW with the optional SVRM-100A Remote Control Unit.
- Composite and S-Video as well as component via BNCs which are switchable to RGB output. The UVW-1400A has two switchable sync connectors and a Sync on Green.
- Built-in diagnostic function and hour meter.
- Initial set-up menu for pre-setting operational parameters. Settings are retained even after power is turned off.

UVW-1600/UVW-1800

Betacam SP Editing Player • Betacam SP Editing Recorder

The UVW-1600 and UVW-1800 are the other half of the UVW series. They offer the superiority of Betacam SP with sophisticated editing features. They feature an RS-422 9-pin interface built-in TBCs and Time Code operation. Inputs/outputs include component, composite and S-Video. All the features of the UVW-1200/1400A PLUS—

- Optional BVR-50 allows remote TBC adjustment
- RS-422 Interface for editing system expansion
- Two types of component output: via three BNC connectors or a Betacam 12-pin dub connector.

- Frame accurate editing is assured, thanks to sophisticated servo control and built-in time code operation. In the insert mode of the UVW-1800, video audio Ch-1/2 and time code can be inserted independently or in any combination.

PVW-2600/PVW-2650/PVW-2800 BETACAM SP 2000 PRO SERIES

Whenever versatility and no compromise performance is needed, there is only one choice. Legendary reliability and comprehensive support for its many users has established the PVW series as the standard in broadcast and post production. The PVW Series includes the PVW-2600 Player, PVW-2650 Player with Dynamic Tracking and the PVW-2800 Editing Recorder. They feature built-in TBCs, LTC/ITC time code operation and RS-422 serial interface. They also offer composite, S-Video and component video inputs and outputs. Most important they are built for heavy, every day duty.



- Built-in TBC's and digital dropout compensation assure consistent picture performance. Remote TBC adjustment can be done using the optional BVR-50 TBC Remote Control.
- The PVW-2600, PVW-2650 and PVW-2800 (generates as well) read VITC/LTC time code as well as User Bits, Ext/Int time code, Regen/Preset, or Rec-Run/Free-Run selections.
- Built-in character generator displays time code or CTL data.
- Set-up menu for pre-setting many functional parameters.

- Two longitudinal audio channels with Dolby C-type NR.
- Recognizable monochrome pictures at up to 24X normal speed in forward and reverse. Color at speeds up to 10X.
- Two types of component connection: three BNC connectors or a Betacam 12-pin dub connector. They have composite and S-Video signals as well.

- PVW-2650 Only
 - Dynamic Tracking (DT) playback from -1 to +3 times normal speed.

- PVW-2800 Only
 - Built-in comprehensive editing facilities.
 - Dynamic Motion Control with memory provides slow motion editing capability.

UHF WIRELESS MICROPHONE SYSTEMS



Consisting of 5 handheld and bodypack transmitters and 6 different receivers, Sony's UHF is recognized as the outstanding wireless mic system for professional applications. Operating in the 800 MHz band range, they are barely affected by external noise and interference. They incorporate a PLL (Phase Locked Loop) synthesized control system that makes it easy to choose from up to 282 operating frequencies, and with the use of Sony's pre-programmed channel plan, it is simple to choose the correct operating frequencies for simultaneous multi-channel operation. Additional features, like space diversity reception, LCD indicators, reliable and sophisticated circuit technology ensure low noise, wide dynamic range, and extremely stable signal transmission and reception. Ideal for broadcasting stations, film production facilities, and ENG work.

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Panasonic

WJ-MX50
Digital A/V Mixer



- Four input switcher and any two sources can be routed to the program busses • Two-channel digital frame synchronization permits special effects in each A/V bus
- Combination of 7 basic patterns and other effects creates 287 wipe patterns • External edit control input for RS-232 or RS-422 serial controls. Also has GPI input
- Wide boundary effects: soft/border (border, eight background colors available) • Digital effects: strobe, still, mosaic, negative/positive, paint, B&W, strobe, trail, and AV synchro
- Real-time compression - entire source image is compressed inside a wipe pattern
- Fade-in and fade-out video, audio, titles individually or synchronously faded • Down stream keyer with selectable sources from character generator or external camera
- "Scene Grabber" moves a pattern while upholding the initially trimmed-in picture integrity
- Eight separate memories enable instant recall of frequently used effects • 8 preset effects including: Mosaic Mix, Position Stream, Corkscrew, Bounce, Flip, Shutter, Vibrate, and Satellite • Audio mixing capability of 5 sources with 5 audio level adjustments

Canon

IF+ Series Zoom Lenses

Canon's IF+ family of lenses are engineered to meet the needs of the next generation of broadcasting while meeting the standards of today. Besides having the widest wide angle lens available, the IF+ lens series have wider angles at shorter M.O.D. (Minimum Object Distance), provide higher MTF performance and incorporate Hi-UD optics for reduced chromatic aberration. In addition to superb optics they're all designed with Canon's "Ergonomic Grip" for fatigue-free shooting over an extended time. IF+ lenses are your assurance of unsurpassed quality and performance for today and tomorrow.



J15ax8B

A next generation internal focusing lens with the shortest M.O.D. and widest angle of any standard lens, the J15ax8B IRS/IAS is a standard ENG lens that lets you shoot in tight or restricted areas at the closest minimum object distance ever possible and capture more of the subject. It incorporates all the great features of IF+ lenses including a built-in 2X extender, high MTF performance, Hi-UD glass, square lens hood and Canon's "Ergonomic Grip".

J20ax8B IRS/IAS

Excellent for ENG, sports and production, the J20ax8B IRS/IAS lets you squeeze in shots from 8mm and still take you all the way out to 320mm with its built-in extender. Incorporates all IF+ features, plus is the only lens (besides the J9x35.2B IRS/IAS) with a variable-Polar lens hood, enabling rotation of attached filters.



V-16 AND V-20

Camera Stabilization Systems

The V-16 and V-20 allow you to walk, run, go up and down stairs, shoot from moving vehicles and travel over uneven terrain without any camera instability or shake. The V-16 stabilizes cameras weighing from 10 to 20 pounds and the V-20 from 15 to 26 pounds. They are both perfect for shooting the type of ultra-smooth tracking shots that take your audience's and client's breath away - instantly adding high production value to every scene. Whether you are shooting commercials, industrials, documentaries, music videos, news, or full length motion pictures, the Glidecam "V" series will take you where few others have traveled.



sachtler

Sachtler quality is available to low budget users. The price of a CADDY system includes the 7-step dampened CADDY fluid head, ultra-light but rugged carbon fiber tripod, lightweight spreader and either a soft bag or cover. The CADDY fluid head features an adjustable pan arm, 7-step adjustment for quick counter balance and the self-locking Sachtler Touch and Go System.

CADDY systems

- CAD D1 Single-Stage ENG Carbon Fiber System:
 - CADDY Fluid Head • ENG Single-Stage Carbon Fiber Tripod
 - SP 100 Lightweight Spreader • Transport Cover 100
- CAD 2A 2-Stage ENG Carbon Fiber System:
 - CADDY Fluid Head • ENG 2-Stage Carbon Fiber Tripod
 - SP 100 Lightweight Spreader • Soft padded ENG Bag

MILLER Fluid Heads and Tripods

Miller 20-Series II Fluid Head

- Dynamic fluid drag control
- Sliding/quick release camera platform
- Weights 4 lbs. - handles up to 22 lbs.
- Counterbalance system compensates for nose heavy or tail heavy camera configurations and permits fingertip control of the camera throughout the tilt range
- Includes independent pan and tilt locks, bubble level, dual pan handle carriers and integrated 75mm ball leveling



Miller 25-Series II Fluid Head

- 100mm ball level fluid head • Robust, lightweight, low profile design
- Quick release camera platform • Weighs 7 lbs. - handles up to 25 lbs.
- Multi-step fluid drag system and integrated counterbalance system provide ultra-smooth, repeatable pan-tilt fluid control and finger-tip camera balance for ENG camcorders, industrial CCD cameras or small studio cameras

#601-Lightweight Tripod

- Weights 4.5 lbs., supports up to 30 lbs.
- Minimum height down to 24", maximum height to 57"
- Folds down to 33" • Engineered from thermoplastic moldings, diecast alloy and hard anodized tubular alloy
- Fast, one turn, captive leg locks
- Includes 75mm (3") ball leveling bowl

#649-2-Stage Tripod

- Two extension sections on half leg. Operates at low levels as well as normal heights without the use of mini legs
- High torsional rigidity, no pan backlash
- Weights 6.6 lbs. supports 50 lbs. • Very portable, folds to 27"
- Includes 75mm (3") ball leveling bowl

- System 20 #338-Miller 20 Head, 601 Lightweight Tripod, On Ground Spreader
- System 20 #339-Miller 20 Head, 649 2-Stage Aluminum On Ground Spreader
- System 25 #508-Miller 25 Head, 611 Lightweight Tripod, On Ground Spreader
- System 25 #502-Miller 25 Head, 641 2-Stage Aluminum On Ground Spreader

Vinten

PRO-130 SYSTEMS

The Pro-130 tripod systems are perfect for today's on the move ENG cameramen. Lightweight, these systems have been specifically designed to provide a wider balance range to suit the latest DV, DVCPR, DVCAM camcorder and camera/recorder combinations. All systems come complete with the PH-130 fluid pan & tilt head, choice of single or 2-stage ENG tripod, floor spreader and soft carrying case for easy transportation.

The PH-130 pan & tilt head incorporates Vinten's continuously variable LF drag system to provide smooth movement and easy transition into whip pan, together with a factory set balancing mechanism. Both the single-stage and two-stage legs are toggle clamp tripods are made from strong, durable aluminum with excellent height range capabilities.

VISION 8 AND 11 Lightweight Heads for the Future

Superbly engineered and designed for use in professional broadcast, educational and corporate productions, the Vision 8 and Vision 11 simultaneously provide the ultimate in lightweight support with exceptional robustness—even in the toughest shooting conditions.

Vision 8 Pan & Tilt Head

The incredibly lightweight Vision 8 provides smooth shots, whip pan action and quick set-up while supporting up to 23 lbs. Add the single-stage carbon fiber tripod and you have the lightest combination possible for that all important event—without sacrificing the reliability and robustness that you require.

- Simple external adjustment for perfect balance over the full 180° of tilt
- Infinitely variable drag with proven LF technology
- Calibrated drag knobs
- Flick on/flick off Pan and Tilt brakes
- Single rotation counterbalance
- Leveling bubble standard
- Standard 100mm leveling ball • Lightweight, only 5.9 lbs.

Vision 11 Pan & Tilt Head

Slightly heavier the Vision 11 offers additional capacity (up to 29 lbs.) plus it has illuminated controls to allow fast camera balancing and leveling even in poor lighting. Combine with a two-stage carbon fiber or aluminum tripod and you have a package with the biggest height adjustment yet the smallest to carry. Ideal for all ENG assignments.

- Simple external adjustment for perfect balance over the full 180° of tilt
- Infinitely variable drag with proven LF technology
- Back-tilt and calibrated drag knobs
- Flick on/flick off Pan and Tilt brakes
- Digital counterbalance readout
- Illuminated leveling bubble • Standard 100mm leveling ball
- High load to weight ratio • Lightweight—only 6.2 lbs.

antonbauer

DIGITAL PRO PACS

The ultimate professional video battery and recommended for all applications. The premium heavy duty Digital Pro Pac cell is designed to deliver long life and high performance even under high current loads and adverse conditions. It's size and weight creates perfect shoulder balance with all camcorders.

- DIGITAL PRO PAC 14 LOGIC SERIES NICAD BATTERY
 - 14.4V 60 Watt Hours • 5.18 lbs. Run time 2 hours @ 27 watts, 3 hrs @ 18 watts
- DIGITAL PRO PAC 13 LOGIC SERIES NICAD BATTERY
 - 13.2V 55 Watt Hours • 4.34 lbs. Run time 2 hours @ 25 watts, 3 hours @ 17 watts

DIGITAL TRIMPAC

Extremely small and light weight, the Digital Trimpac still has more effective energy than two NP style slide-in batteries. High voltage design and Logic Series technology eliminate the problems that cripple conventional 12 volt slide-in type batteries. The professional choice for applications drawing less than 24 watts.

- DIGITAL TRIMPAC 14 LOGIC SERIES NICAD BATTERY
 - 14.4 V 43 Watt Hours • 2.34 lbs.
 - Run time, 2 hours @ 20 watts, 3 hours @ 13 watts

QUAD 2702/2401

Four-Position Power/Chargers

The lightest and slimmest full featured four position chargers ever, they can last charge four Gold Mount batteries and can be expanded to hold up to eight. They also offer power from any AC main: in a package the size of a notebook computer and weighing a mere four lbs! The Quad 2701 can charge four ProPacs in two hours and TruPacs in one. Add the Diagnostic/Discharge module and the QUAD 2401 becomes an all purpose power and test system. The 70 watt QUAD 2702 has the module and is the ultimate professional power system.



HyTRON 50 Battery

Weighing a mere 3.1oz (88g grams) and packing 50 Watt-hours of energy - enough to operate a typical ENG camcorder for two hours, the HyTRON 50 is the most advanced lightweight battery in the industry.

- Made possible by recent advancements in a cell technology originally designed for the mobile computing industry, it incorporates nickel metal hydride cells that provide the highest energy density of any rechargeable cylindrical cell available. High performance is further assured through the integration of Anton/Bauer InterActive digital technology.
- Equipped with an on-board fuel computer, which monitors energy input and output as well as critical operating characteristics and conditions. This data is communicated to the InterActive charger to ensure safety and optimize reliability.
- In addition, remaining battery capacity information is available by means of an LCD display on each battery and in the viewfinder of the most popular broadcast & professional camcorders.
- Special low voltage limiter prevents potentially damaging overdischarge

Specifications: 14.4 V, 50 WH (Watt Hours)
5-3/4" x 3-1/2" x 2-1/4", 1.9 lbs (88kg)
Typical runtime: 2 hours @ 25 Watts 3 hours @ 17 Watts

Dual 2702/2401

Two-Position Power/Chargers

The Dual 2701 (70 watt) and 2401 (40 watt) are sleek, rugged, economical two position Power/Chargers that have all the features of InterActive 2000 technology including DC camera output and LCD display. The Dual 2701 will charge any Gold Mount battery in one hour, the Dual 2401 charges ProPac batteries in two hours and TruPacs in one. Compact, lightweight design makes them the ideal for travel. They can also be upgraded with the Diagnostic/Discharge Module and/or with Expansion Modules to charge up to 6 batteries of any type.

PROFESSIONAL VIDEO TAPES



Professional Grade VHS			
PG-30	2.39	PG-60	2.59
BGR-30	3.29	BGR-60	3.99
ST-30	6.79	ST-60	7.49
Broadcast Grade VHS Box			
BGR-30	3.29	BGR-60	3.99
ST-30	6.79	ST-60	7.49
H471S S-VHS Double Coated			
PG-120	2.79	PG-120	2.79
BGR-120	4.49	BGR-120	4.49
ST-120	7.69	ST-120	7.69
M221 Hi 8 Double Coated			
PG-60	2.59	PG-60	2.59
BGR-60	3.99	BGR-60	3.99
ST-60	7.49	ST-60	7.49
Metal Particles			
P630HMP	4.99	E630HME	7.69
P660HMP	6.39	E660HME	10.29
P6120HMP	8.29	E6120HME	13.59
M321SP Metal Betacam (Box)			
05S	17.95	10S	18.49
30S	22.95	60L	31.95
DP121 DVC PRO			
12M (Med.)	7.99	23M	9.49
63M	21.99	64L (Lg.)	22.99
94L	32.99	123L	42.99

maxell

Hi8 Metal Particle (XRM)			
P6 120 XRM			5.99
Broadcast Quality Hi8 Metal Particle			
P6-30 HM BO	5.39	P6-60 HM BO	6.09
P6-120 HM BO			7.99
P1 PLUS VHS			
T-30 Plus	1.69	T-60 Plus	1.99
T-120 Plus		T-160 Plus	2.69
MGX-PLUS VHS (Box)			
HGXT-60 Plus	2.69	HGXT-120 Plus	2.99
HGXT-160 Plus			3.99
BQ Broadcast Quality VHS (Box)			
T-30 BQ	3.89	T-60 BQ	3.99
T-120 BQ			5.99
BQ Professional S-VHS (In Box)			
ST-31 BQ	6.79	ST-62 BQ	6.89
ST-126 BQ	7.49	ST-182 BQ	13.99
Betacam SP			
B5MSP	15.75	B10MSP	17.75
B30MSP	16.99	B60MSP	27.99
B20MSP	19.75	B90MSP	39.99

Panasonic

Mini DV Tape			
AY DVM-30	7.99	AY DVM-60	8.49
AY DVM-60 (10 Pack)			each 7.99
DVCPR			
AJ-P12M (Medium)	8.49	AJ-P23M	9.99
AJ-P33M	13.49	AJ-P63M	22.99
AJ-P64L (Large)	24.99	AJ-P94L	34.99
AJ-P123L			44.99

SONY

Hi-8 Professional Metal Video Cassettes			
P6-30 HMPX	4.59	P6-30 HMEX	7.99
P6-60 HMPX	6.49	P6-60 HMEX	10.99
P6-120HMPX	8.89	P6-120HMEX	14.99
PR Series Professional Grade VHS			
T-30PR	2.39	T-60PR	2.59
T-120PR			2.79
PM Series Premier Grade Professional VHS			
T-30PM	3.49	T-60PM	3.99
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BA Series Premier Hi-Grade Broadcast VHS (In Box)			
T-30BA	3.49	T-60BA	3.99
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MD Master Quality S-VHS (In Box)			
MOST-30	7.49	MOST-60	7.79
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KCS-10 BRS (mini)	8.29	KCS-20 BRS (mini)	8.99
KCA-10 BRS	8.19	KCA-20 BRS	8.69
KCA-30 BRS	9.69	KCA-60 BRS	13.39
XBR 3/4" U-matic Broadcast Master (In Box)			
KCS-10 XBR (mini)	8.79	KCS-20 XBR (mini)	10.19
KCA-10 XBR	9.29	KCA-20 XBR	10.69
KCA-30 XBR	11.99	KCA-60 XBR	15.69
KSP 3/4" U-matic SP Broadcast (In Box)			
KSP-S10 (mini)	9.59	KSP-S20 (mini)	11.09
KSP-10	10.09	KSP-20	11.59
KSP-30	12.99	KSP-60	16.99
BCT Metal Betacam SP Broadcast Master (In Box)			
BCT-5M (small)	12.29	BCT-10M (small)	13.29
BCT-20M (small)	13.99	BCT-30M (small)	14.99
BCT-30ML	21.49	BCT-60ML	23.49
BCT-90ML			34.99
Mini DV Tape			
DVM-30EXM w/Chip	15.99	DVM-60EXM w/Chip	17.99
DVM-30EX "No Chip"	12.99	DVM-60EX "No Chip"	14.99
DVM-30PR "No Chip"	9.99	DVM-60PR "No Chip"	11.49
Full Size DV Tape with Memory Chip			
DV-120MEM	25.89	DV-180MEM	29.99
PDV Series Professional DVCAM Tape			
PDVM-12ME (Mini)	18.99	PDVM-22ME (Mini)	20.99
PDVM-32ME (Mini)	23.99	PDVM-40ME (Mini)	25.99
PDV-94ME (Standard)	34.99	PDV-124ME (Standard)	38.99
PDV-184ME (Standard)	49.95	PDV-64N	27.50
PDVN-124N	34.95	PDVN-184N	43.95

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NewTek

Calibar 3-Oz. Pocket-Sized Test Generator

The size of a ball point pen and running on a single battery, Calibar is an NTSC test signal generator that packs a rack mount's worth of test equipment into a battery operated instrument. Calibar is the fastest, easiest and most portable way ever to calibrate video equipment. No patch bay racks. Just one cable. So besides giving you fast, accurate readings in the studio, it's perfect for off-site events or trouble-shooting in the field.

- Designed for studio and field operation, it produces 24 test pattern functions at the touch of a button. 10-bit precision digital-to-analog conversion assures highly accurate signals.
- Calibar's combination of low cost, portability and full-featured operation makes it ideal for broadcast engineers, television production facilities and video post houses.
- Tuck Calibar in your pocket and you're ready to go. Touch the button to generate SMPTE color bars. Touch it again to calibrate convergence and so on.
- With the supplied AC adapter, it also functions as a black burst generator.



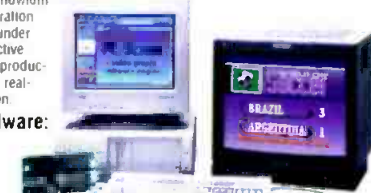
CHYRON PC-CODI & PC Scribe

Text and Graphics Generator and Video Titling Software

PC-CODI incorporates a broadcast quality encoder and a wide bandwidth linear laser for the highest quality, realtime video character generation and graphics display. A video graphics software engine running under Windows 95/NT, PC Scribe offers a new approach and cost effective solution for composing titles and graphics that is ideal for video production and display applications. Combined, they are a total solution for realtime character generation with the quality you expect from Chyron.

PC-CODI Hardware:

- Fully-analysed displays • Display and non-display buffers
- Less than 10 nanosecond effective pixel resolution
- 16.7 million color selections • Fast, realtime operations
- Character, Logo and PCX Image transparency
- Variable edges: border, drop shadow and offset
- Full precision and justify control of character and row
- User definable intercharacter spacing (squeeze & expand)
- Multiple roll/crawl speeds • Automatic character kerning
- User definable tab/template fields
- Shade backgrounds of variable sizes and transparency
- Software controlled video timing



PC-Scribe Software:

- Number of fonts is virtually unlimited. Also supports most international language character sets. Fonts load instantly and the level of anti-aliasing applied is selectable.
- Adjust a wide range of character attributes. Wide choice of composition tools.
- Characters, words, rows and fields can color flash
- Character rolls, crawls and reveal modes. Speed is selectable and can be auto timed with pauses. Messages can be manually advanced or put into sequences along with page transitions.
- User definable read effects playback: wipes, pushes, fades
- NTSC or PAL sync generator with genlock
- Board addressability for multi-channel applications
- Auto display sequencing • Local message/page memory
- Preview output with safe-title/cursor/menu overlay
- Composite and S-video input with auto-genlock select
- Multiple preview windows can be displayed simultaneously.
- Transitions effects include: cut, fade, push, wipe, reveal, peel, zoom, matrix, wipe, spiral, split, weave and jitter.
- Import elements to build graphics. This includes OLE objects, INtuit! RGB and TGA with alpha channel. Scribe also imports and exports TIFF, JPEG, PCX, TGA, BMP, GIF, CLP, ASCII, IIV, SGI, PICT and EPS formats.

PC-CODI and PC-Scribe Bundle 2995.00



TARGA 1000/MCXpress NT Professional Video Production Workstation

Incorporating the award-winning TARGA 1000 video card and Avid MCXpress NT non-linear editing software, this fully configured workstation meets the needs of production professionals, corporate communicators, educators and Internet authors.

TARGA 1000 Features:

- The TARGA 1000 delivers high processing speed for video and audio effects, titling and compositing. Capture, edit and playback full motion, full-resolution 60 fields per second digital video with fully synchronized CD-quality audio.
- Compression can be adjusted on the fly to optimize for image quality and/or minimum storage space. Has composite and S-video inputs/outputs. Also available with component input/output (TARGA 1000 PRO).
- Genlock using separate sync input for working in professional video suites
- Audio is digitized at 44.1KHz or 48KHz sampling rates, for professional quality stereo sound. Delivers perfectly synchronized audio and video.

MCXpress Features:

The ideal tool for video and multimedia producers who require predictable project throughput and high-quality results when creating video and digital media for training, promotional/marketing material, local television and cable commercials, CD-ROM and Internet/Intranet distribution. Based on Avid's industry-leading technology, it combines a robust editing functionality with a streamlined interface. Offers integration with third-party Windows applications, professional editing features, powerful media management, title tool and a plug-in effects architecture. It also features multiple output options including so you save time and money by reusing media assets across a range of video and multimedia projects

TARGA 1000/MCXpress Turnkey Systems:

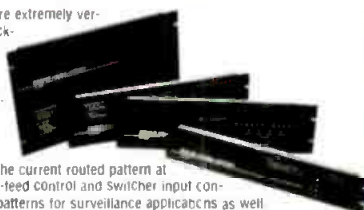
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- Avid MCXpress for Windows NT
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- With TARGA 1000 \$5995.00
- With TARGA 1000 Pro (component input/output) \$6495.00



KNOX VIDEO

RS4x4/8x8/16x16/16x8/12x2 Video/Audio Matrix Routing Switchers

Knox's family of high performance, 3-channel routing switchers are extremely versatile, easy-to-use and very affordable. Housed in an ultra-thin rack-mount chassis they accept and route (on the vertical interval) virtually any video signal, including off-the-air and non-timebase corrected video. They also route balanced or unbalanced stereo audio. The audio follows the video or you can route the audio separately (breakaway audio). Each of the switchers offers manual control via front panel operation. They can also be controlled remotely by a PC, a Knox RS Remote Controller, or by a Knox Remote Keypad via their RS-232 port. Front panel LEDs indicate the current routed pattern at all times. Knox Switchers are ideal for applications such as studio-feed control and Switcher input control, plus they have an internal timer allowing timed sequence of patterns for surveillance applications as well.



- Accept and routes virtually any one-volt NTSC or PAL video signal input to any or all video outputs.
- Accept and route two-volt mono or stereo unbalanced audio inputs to any or all audio outputs.
- Video and audio inputs can be routed independently, they don't need to have the same destination.
- Can store and recall preset cross-point patterns. (Not available on RS12x2.)
- Front panel key-pad operation for easy manual operation.
- Can also be controlled via RS-232 interface with optional RS Remote Controller or Remote Keypad.
- Front panel LED indicators display the present routing patterns at all times.
- An internal battery remembers and restores the current pattern in case of power failure.

- Internal vertical interval switching firmware allows on-air switching.
- Housed in a thin profile rack-mount 1" chassis.
- Also except the RS12x2 are available in S-Video versions with/without audio.
- Models RS16x8 and RS16x16 are also available in RGB/component version.
- With optional Remote Video Readout, the RS16x8 and RS16x16 can display active roles on a monitor at remote locations, via a composite signal from a BNC connector on the rear panel.
- The RS4x4, RS8x8 and RS16x16 are also available with balanced stereo audio. They operate at 660 ohms and handle the full range of balanced audio up to +4 dB with professional quick-connect, self-locking, bare-wire connectors.

LEADER

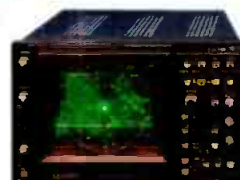
Manufacturing test and measurement equipment for over 40 years, Leader Instruments is the standard which others are measured against for reliability, performance, and most important—cost effectiveness.

5860C WAVEFORM MONITOR

A two-input waveform monitor, the 5860C features 1H, 1V, 2H, 2V, 1 s/div and 2V mag time bases as well as vertical amplifier response choices of flat, IRE (low pass), chroma and QIF-STEP. The latter facilitates easy checks of luminance linearity using the staircase signal. A PIX MON output jack feeds observed (A or B) signals to a picture monitor, and the unit accepts an external sync reference. Built-in calibrator and on-off control of the DC restorer is also provided.

5850C VECTORSCOPE

The ideal companion for the 5860C, the 5850C adds simultaneous side-by-side waveform and vector monitoring. Featured is an electronically generated vector scale that precludes the need for fussy centering adjustments and eases phase adjustments from relatively long viewing distances. Provision is made for selecting the phase reference from either A or B inputs or a separate external timing reference.



5100 4-Channel Component / Composite WAVEFORM

The 5100 handles three channels of component signals, plus a fourth channel for composite signals, in mixed component / composite facilities. Features are overlaid and parade waveform displays, component vector displays, and automatic bow-tie or "shark fin" displays for timing checks. Menu-driven options select format (525/60, 625/50, and 1125/60 HDTV), full line-select, vector calibration, preset front-panel setups and more. On-screen readout of scan rates, line-select, preset numbers, trigger source, cursor time and volts.

5100D Digital Waveform/Vectorscope

The 5100D can work in component digital as well as component analog facilities (and mixed operations). It provides comprehensive waveform, vector, timing and picture monitoring capabilities. Menu driven control functions extend familiar waveform observations into highly specialized areas and include local calibration control, the ability to show or blank SAV/EAV signals in both the waveform and picture, the ability to monitor digital signals in GBR or YCbCr form, line select (with an adjustable window), memory storage of test setups with the ability to provide on-screen labels, flexible cursor measurements, automatic 525/60 and 625/50 operation and much much more.

5870 Waveform/Vectorscope w/SCH and Line Select

A two-channel Waveform/Vector monitor, the microprocessor-run 5870 permits overlaid waveform and vector displays, as well as overlaid A and B inputs for precision amplitude and timing/phase matching. Use of encoded R-Y allows relatively high-resolution OG and DP measurements. The 5870 adds a precision SCH measurement with on-screen numerical readout of error with an analog display of SCH error over field and line times. Full-raster line select is also featured with on-screen readout of selected lines, a strobe on the PIX MON output signal to highlight the selected line, and presets for up to nine lines for routine checks.

5872A Combination Waveform/Vectorscope

All the operating advantages of the 5870, except SCH is deleted (line select retained), making it ideal for satellite work.

5864A Waveform Monitor

A two-input waveform monitor that offers full monitoring facilities for cameras, VCRs and video transmission links. The 5864A offers front panel selection of A or B inputs, the choice of 2H or 2V display with sweep magnification, and flat frequency response or the insertion of an IRE filter. In addition, a switchable gain boost of X4 magnifies setup to 30 IRE units, and a dashed graticule line at 30 units on screen facilitates easy setting of master pedestal. Intensity and focus are fixed and automatic for optimum display. Supplied with an instruction manual and DC power cable.

5854 Vectorscope

A dual channel compact vectorscope, the 5854 provides precision checkout of camera encoders and camera balance, as well as the means for precise genlock adjustments for two or more video sources. Front panel controls choose between A and B inputs for display and between A and B for decoder reference. Gain is fixed or variable, with front panel controls for gain and phase adjustments. A gain boost of 5X facilitates precise camera balance adjustments in the field. Supplied with a DC power cable.

Designed for EFP and ENG (electronic field production and electronic news gathering) operations, they feature compact size, light weight and 12 V DC power operation. Thus full monitoring facilities can be carried into the field and powered from NP-1 batteries, battery belts and vehicle power. Careful thought has been given to the reduction of operating controls to facilitate the maximum in monitoring options with the operating simplicity demanded in field work.

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