SPECIAL REPORT

Hot new products from NAB2003
IN 1993 WHEATSTONE began manufacturing the D-500 digital audio mixing console for the radio broadcast industry, and after 10 years of experience in the field it was only natural we would apply this digital technology base to the surround television market.

The new WHEATSTONE D-9 DIGITAL AUDIO CONSOLE, despite its compact footprint (25 inches front-to-back), is FULLY loaded with all the functions and control capability needed by most television broadcast facilities. With integrated routing, multiple outputs, surround sound, subgroups, DCM masters, full monitor functions and powerful communication circuits, the D-9 offers a wealth of operational choices for the most demanding of live television applications.
Connectivity Without Complexity

Revolutionary Net VX™ integrated networking solution.

The complex task of distributing, producing and transmitting audio, video and data in a digital, multichannel world with multiple formats, compression schemes and distribution protocols ... just got simpler.

Within one box Harris delivers its high-speed Net VX answer to the "too many formats and networks" problem. Never again work within bi-directional traffic environments with hybrid technical systems.

Replace five racks of equipment with a single platform solution that delivers media in multiple formats across hybrid networks. An easy to manage integrated solution for IP routing and ATM switching, that supports services across fiber, microwave, and satellite networks simultaneously. Reduce ongoing maintenance of multiple "black boxes" and lower service agreement and support costs. Count on Net VX scalability for true plug-and-play expansion.

Broadcast more efficiently, more cost effectively – and smarter. Visit us at www.broadcast.harris.com or call 1.800.622.0022 to learn more about the simplicity of Net VX connectivity.

www.broadcast.harris.com
As NAB has grown, so too has the number of new products and technology demonstrations at the convention. There’s frankly just too much there for any one person to see it all. To help those who attended the show find what they may have missed and to highlight for non-attendees the solutions displayed, we’ve developed this post-NAB Special Report on new products and technology.

Our team of engineers and editors spent four days touring the show floor, exhibit booths and private demonstrations to bring you this special coverage. Through their eyes you’ll be able to get a snapshot of the hundreds of exciting new products and solutions at this year’s show. In the special report, we’ve provided descriptions and full contact information on more than 200 new products. And for direct access to the manufacturer, just go to the Broadcast Engineering Web site: www.broadcastengineering.com. This entire report is posted there, complete with hot links direct to each product’s manufacturer. A few clicks and you’re there.

Brad Dick, editorial director
Gigantic Power Comes in Small Packages

The newest Anton/Bauer series of chargers and power supplies combines the power of InterActive charging with compact size, versatility, features and economy only a TITAN could match.

TITAN 70
- On camera no-noise 70 watt power supply
- Doubles as a single position InterActive charger
- Unplug-and-go handheld feature
- All travel power needs in a 1lb (450 grams) package

TITAN T2 NEW!
- 2 simultaneous independent charge channels
- 70 watt DC output for camera power
- Charge and camera power at the same time
- Fastest two position charger available

TITAN TWIN
- 2 position simultaneous charging
- Super-lightweight (480g)
- Economical travel/backup charger
- Perfect starter charger

TITAN TWQ NEW!
- Simultaneous InterActive charging
- Any combination of 4 batteries
- Addresses all Anton/Bauer batteries
- Perfect for larger operations

For information contact Anton/Bauer or any Anton/Bauer dealer or distributor worldwide.

Anton/Bauer, Inc. 14 Progress Drive, Shelton, Connecticut 06484 USA • (203) 929-1100 • Fax (203) 925-4988 • www.antonbauer.com
Anton/Bauer Europe, B.V. Eurode Business Center, Eurode-Park 1, 6461 KB Kerkrade, The Netherlands • (+31) 45 5639220 • Fax (+31) 45 5639222
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The power behind the best cameras capturing the best images in the world.℠
Product Source

**2003**

**TRANSPORT STREAM SERVER**

**DOREMI LABS TSS-100**
818-562-1101; www.doremilabs.com

Performs time delay of any ATSC digital television format, including HD and SD formats; a SMPTE 310M signal fed to the input BNC on the back of the unit can be delayed up to 13 hours; all video, audio and ancillary data on the signal are fully preserved; all functions are controlled by a Java-based software application via 100BaseT Ethernet.

**TRANSMISSION SOLUTION**

**TANDBERG TELEVISION DSNG**
407-380-7055; www.tandbergtv.com

Digital satellite newsgathering (DSNG) technology that is a fully integrated 2U digital flyaway, capable of bi-directional transmission of audio, video and data feed from a remote transmission site; provides two-way phone, data and IP communications between the satellite downlink and remote transmit site; set-up is quick and simple, permitting broadcasters to get on-air faster.

**INTEGRATED WIRELESS INTERCOM**

**DRAKE FREE SPEAK**
+44 1727871214; www.drake-uk.com

Provides users with digital audio-quality sound; offers all the functions found on a traditional desk-mounted intercom; allows users greater mobility and freedom of movement through wireless connectivity.

**MULTIMEDIA RF-VIDEO GENERATOR**

**SENCORE VP301 VIDEO PRO**
605-339-0100; www.sencore.com

Features HDTV and SDTV video format outputs, 4:3 and 16:9 aspect ratios, NTSC RF TV-channel output, composite and S-video NTSC/PAL outputs, and component and RGB signal outputs.

**TRIPOD**

**VINTEN FIBERTEC**
888-284-6836; www.vinten.com

Reduces the risk of wind buffeting and camera shake; "channel" leg sections are made of carbon fiber composite; is lightweight; lever action clamps are positioned adjacent to each other; ensures more secure locking; minimizes cable snags and accidental breaks.

**UP CONVERTER AND NOISE REDUCER**

**TERANEK VOLARE 210**
407-517-1086; www.teranek.com

Includes proprietary PixelMotion, and advanced noise reduction; features 3:2 detection and scene change detection algorithms; includes analog and digital interfaces and dual hot-swappable power supplies.

**CA SYSTEM**

**NDS VIDEOGUARD**
949-722-2500; www.nds.com

Enables users to introduce traditional pay-TV business models including subscriptions and pay-per-use; features secure return path and store and forward, profiling and targeting, and secure application download.

**MICROPHONE**

**SENNHEISER MKE PLATINUM**
860-434-9190; www.sennheiserusa.com

Reduced size subminiature condenser lavaliere has an ultra thin cable, with only 1mm thickness and low capacitance manufactured with KEVAR wrapped copper core; optimized high-end response provides more headroom at the bodypack; has improved rejection of handling noise and an embossed "umbrella" diaphragm that protects the microphone against moisture and sweat.

**VIDEOCASSETTES**

**FUJIFILM SR351**
800-800-FUJI; www.fujifilm.com

Videocassettes for the new HDCAM SR format high-definition portable and studio recorders; uses proprietary ultra-thin magnetic coating technology with a strong PEN base film for high output and a lower error rate; large version will be available in lengths of 124, 94 and 64 minutes, and small version in 40, 33 and six-minute lengths.

**DECODER**

**MINI MASTER CONTROL SWITCHER**

**EVERTZ PKGHD9625SW**
905-335-3700; www.evertz.com

Allows the user to control up to 12 input video signals and up to 48 AES audio inputs; voice-overs, wipes, fades, fade to black and several other features can be performed, all from the single remote control panel.
Superior electrical and mechanical performance
In stock for immediate shipment
Continuous product improvement
Extensive cable R&D and testing
Complete line of cables, connectors, and accessories
10-year warranty

For over 60 years, broadcasters worldwide have turned to Andrew to meet their system needs. Only Andrew HELIAX® cables provide the unmatched record of superior performance and unquestioned reliability that gives broadcasters complete confidence in the integrity of their transmission line systems.

See for yourself why Station Managers and System Engineers demand HELIAX. Contact your Andrew Broadcast Systems Specialist today.

1-800-DIAL-4RF
Andrew RF Broadcast System Solutions - We've Got You Covered
Product Source

**HD SET-UP BOX**

**PIONEER VOYAGER 3501HD**
310-952-2799; www.pioneerelectronics.com

Enables cable customers to view HD programs in all 16 ATSC formats supported by the cable industry, including 720p and 1080i, in both 4:3 and 16:9 aspect ratios; features full graphics over HD capability with video scaling; outputs to devices including plasma, HDTV-ready TVs, and standard TVs.

**AUTOMATION SYSTEM**

**ENCODA A5000 D-SERIES**
303-237-4000; www.encodasystems.com

Includes DAL channel manager, DAL Content Server, DALLingest Client and DALLingest; provides the functionality necessary for playout, automatic caching and system-wide alarm management.

**HD ZOOM LENS**

**FUJINON XA101X.9BESM**
973-633-5600; www.fujinonbroadcast.com

Sports lens has 101x magnification; includes a built-in OS-Tech optical stabilization system and a built-in moisture removal system; features multiple moving zoom groups that minimize coma and field curvature; back focus technology enables remote control of macro and focus fade on wide shots.

**LENSES**

**THALES ANGENIEUX OPTIMO 24-290 AND OPTIMO 12X9.7HD**
973-812-4326; www.angenieux.com

Optimo 24-290 has a focal range of 24-290mm and an aperture of T2.8, which provides for a large depth of field; produces contrast and color reproduction; Optimo 12x9.7HD incorporates an advanced optical design and proprietary high resolution glass; has an aperture speed of F1/4.

**LOCATION SOUND RECORDER**

**HHB COMMUNICATIONS USA PORTADRIVE**
805-579-6490; www.hhbusa.com

Combines 8-track recording on a removable hard drive, simultaneous recording of mono or 2-channel rushes to an external DVD-RAM/ DVD-R/DVD-RW drive, 24-bit/96kHz performance, comprehensive timecode facilities and session-based file transfer with Mac and PC workstations.

**DIGITAL ASSET MANAGEMENT SYSTEM**

**ARTESIA TECHNOLOGIES TEAM 5.0**
301-548-4000; www.artesia.com

Search for and retrieve unique assets regardless of media type, including audio and video recordings, images and graphics, and text-based documents; edit, transform, transcode and distribute media and other desktop assets directly to the desktop; new metadata management capabilities provide users with a personalized interface to guide them through the automated steps for transforming content, entering metadata and categorizing an asset in order to ensure greater consistency in future usage.

**DATA MANAGEMENT SYSTEM**

**AVALON AVALONIDM**
773-756-3992; www.ava.com

Data management system provides broadcasters with new levels of access and control over data files; offers a file system interface in addition to the product's open API; interface allows users to store data via standard NFS or CIFS mounted file systems.

**EDITING SOFTWARE**

**APPLE FINAL CUT PRO 4**
800-692-2775; www.apple.com/software/pro/broadcast/

Supports DVCPRO50; transfers 4:2:2 images via FireWire; 300 frames of new features; supports for your trimming, group management and editing features including fully customizable keyboards and workspace layouts; multi-track audio mixing, multi-channel output and real-time audio effects; includes LiveType CG and Soundtrack; provides 10-bit uncompressed video, composite elements and render effects with incredible clarity and precision using HDR imaging to render video using an amazing 32-bits per channel.

**FRAME-RATE CONVERTER**

**DOLBY MODEL 585 TIME SCALING PROCESSOR**
415-558-0200; www.dolby.com

Features pitch correction and time scaling of multichannel audio in real-time; suitable for all types of content, it accepts multiple channels of PCM or up to eight channels of decoded Dolby E or Dolby Digital audio and metadata; audio tracks can be pitch-shifted ±15 percent, or in time-scale mode, adjusted ±15 percent while maintaining proper pitch.

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**LATENCY PROCESSOR**

**DOLBY E OR DOLBY DIGITAL AUDIO AND METADATA**
800-692-2775; www.dolby.com

Features pitch correction and time scaling of multichannel audio in real-time; suitable for all types of content, it accepts multiple channels of PCM or up to eight channels of decoded Dolby E or Dolby Digital audio and metadata; audio tracks can be pitch-shifted ±15 percent, or in time-scale mode, adjusted ±15 percent while maintaining proper pitch.

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**CAMERA CRANE**

**SACHTLER CAMCRANE EFP**
516-867-4900; www.sachtler.com

For cameras up to 39.7 pounds; four towers and four outriggers stabilize the CamCrane EFP; tower and outrigger cables can be adjusted; main pipe is telescopic; can be set up at a variety of lengths; adjustable in both the horizontal plane as the top and bottom views; scaling on the spindle enables the cameras to be moved or repositioned at the same angle.

**SERVER**

**EVS MPEG-2 SERVER SYSTEMS**
973-575-7811; www.evs.tv

Product line is now both ATSC- and DVB-compliant and includes complete DTV business packages for multichannel time-zone delay; multichannel playout is handled by existing automation or with playlist management integrated within the server system; core technology relies on direct ASI inputs and outputs, and integrated multiplexing, maintaining content in the MPEG-compressed domain all the way through.

www.broadcastengineering.com

June 2003
Canon's new 'e' lens brings 'e'nhancement to a new level.

From its enhanced features to its environmental design, Canon's new J22ex7.6B IRSD/IASD lens is engineered to impress. The widest angle portable telephoto lens ever produced, the J22ex7.6B is the first in a series of Canon e-IFxs and e-HDxs broadcast lenses. These lenses feature enhanced digital technology, which improves on the performance of the highly useful Digital Drive tools and are manufactured with non-polluting components including lead-free glass, minimizing environmental impact.

**J22ex7.6B**

First in a series of e-IFxs and e-HDxs lenses

**Features at a Glance**

Equipped with an informational LCD display and digital feature navigator, e-IFxs series users can customize the enhanced digital functions with ease and precision. New features of e-IFxs lenses include:

- **Digital Drive’s new Focus Preset (IASD version)** can be combined with Shuttle Shot, Speed Preset and 2 Framing Presets, and Zoom Track for powerful user settings.
- New Aux 1 and Aux 2 switches provide quick access to user-assignable functions.
- Users can set precise zoom and focus curves according to their needs.

- **A Precise Movement Sensitivity Mode** can be memorized for zoom seesaw, zoom demand and preset controls.
- The drive unit can memorize 9 camera operator patterns of user-customized settings, as well as a default position, and transmit the data from unit to unit.
- Maximum Zoom Speed now 0.5 seconds.
- Follow reference signal display for virtual reality, robotic control and other uses.

Find out more at canonbroadcast.com

1-800-321-HDTV (Canada: 905-795-2012)

Maximize Your Camera’s Performance.

Canon KNOW HOW™

Canon is a registered trademark and Canon Know How is a trademark of Canon Inc. ©2003 Canon USA, Inc.
Product Source

**RECEIVER**

LECTROSONICS UCR411
505-892-4501; www.lectrosonics.com

Compact design; all settings are made from the front panel with an LCD interface, making the unit ideal for use with multi-couplers, on sound carts and in portable mixing “bag” systems; has a tube steel frame; side panels come in a variety of materials and colors.

**WIRELESS CAMERA SYSTEM**

MRC REPORTER
800-490-5700; www.mrcbroadcast.com

Provides wireless link between camera and central receiver over distances not exceeding 1000 meters; two audio channels; MPEG-2 encoding (4:2:2/4:2:0) with COFDM modulation, 18W power consumption; 1.99-2.7GHz operation.

DIGITAL SPG AND TSG

TRILOGY MENTOR PLUS
+44 01264 384000; www.trilogy-broadcast.com

Digital SPG and TSG includes embedded audio outputs on both digital black and test signal outputs; offers the option of wide-screen test signals; combines the benefits of a broadcast Master SPG, a studio reference TSG, and three multi-field black and burst timing units and embedded audio.

**ON-AIR SERVER**

SEACHANGE BROADCAST MEDIACLUSTER 24000
978-857-0100; www.seachangeinternational.com

Cost-effective range of control panels featuring full TCP/IP connectivity between routers and control panels allowing use of standard Ethernet LAN; existing LANs can be used as hardware platform for routing system; long-distance remote control possible via TCP/IP Internet connections.

**CONTROL PANEL**

QUARTZ ELECTRONICS QMC-FS
888-638-8745; www.quartzus.com

Offers quick and easy access to all of the facilities of the QMC; a full-function master control panel, assignable to any one channel or an entire bank of channels to be controlled simultaneously; provides an extra row of utility buttons, a lever arm, rotary shaft encoders, and dynamic button and function assignments.

**SATELLITE TERMINAL**

SWE-DISH IPT SUITCASE
+46 923 12250; www.swe-dish.com

Combines the benefits of simple, one-person operation with technical performance to allow live, 2Mbps broadband transmission complete with inbuilt encoding from virtually anywhere in the world; features four different versions for various applications.

**CONTROL SYSTEM**

NETWORK ELECTRONICS VIKINX.128
631-928-4422; www.networkelectronics.com

Capable of powering any camera or camera/light combination; offers 20 percent improvement in capacity to 120 watt hours, adding almost one hour of runtime to the typical ENG camera runtime.

**MODULAR CONSOLE SYSTEM**

WINSTED MATRIX
800-447-2257; www.winsted.com

Incorporates an overhead dimmable Xenon lighting system, an anti-glare monitor bezel with acrylic optical shield and a monitor position system; has a tube steel frame; side panels come in a variety of materials and colors.

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**REMOTE MONITORING SYSTEM**

RFS ANTENNA SYSTEM MONITOR
203-630-3311; www.rfsworld.com

Comprises a user-friendly touch screen connected to a programmable logic controller interfaced with a transducer and analog/digital converter; provides an active mimic panel and interactive graphical displays depicting parameters such as forward/reflected power, voltage standing wave ratio and temperature.

**SYSTEM BATTERY**

ANTON/BAUER HYTRON 120
203-929-1100; www.antonbauer.com

Capable of powering any camera or camera/light combination; offers 20 percent improvement in capacity to 120 watt hours, adding almost one hour of runtime to the typical ENG camera runtime.

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**AUDIO VECTORSCOPE**

RTW BROADCASTMONITOR
+49 221 70 91333; www.rtwd.de

Two- and four-channel design in a half-sized 19-inch submodule; features similar to those of the PortaMonitor but with transformer-balanced analog inputs and buffered AES/EBU signals looped through the unit; push-button functions can be remote-controlled.

**BLUE SCREEN MATTE EXTRATION PLUG-IN**

ULTIMATTE ADVANTAGE V1.5
818-993-8007; www.ultimatte.com

Enhancements include faster setup and render times, multi-directional matte shrink and blur controls, and user-defined system preferences; creates blue screen visual effects within Adobe, Apple, Avid, Discreet and other leading graphics applications.

**DOPPLER RADAR DATA**

ACCUEATHER NEXRAD LEVEL II
www.accueather.com

Now available as part of the company's Galileo weather graphics system; includes enhanced features such as real-time information, more comprehensive radar data than normal NEXRAD and 3-D viewing capabilities.

**MEDIACLUSTER 24000**

HITACHI HV-D17
650-589-8300; www.hitachi.com

Three-CCD color camera; has a tube steel frame; incorporates an overhead dimmable Xenon lighting system, an anti-glare monitor bezel and a monitor position system; has a tube steel frame; side panels come in a variety of materials and colors.

**NETWORK ELECTRONICS VIKINX.128**

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Our M-Series® iVDR intelligent video digital recorder has a familiar look about it.

That's because its touch-screen interface looks just like a VTR—so you can run it just like a tape-based system.

But you don’t have to worry about replacing high-cost tape heads. Or transports jamming. Or running tapes here, there, and everywhere.

That's because an M-Series iVDR is a digital system. No heads to replace. No capstans to clean. No rollers that can pinch.

Just plug it in, turn it on, and go.

The M-Series iVDR features two record and two playback channels, more than 60 hours of online DV storage, and removable media. And it supports any standard-sized media drive using industry-standard I/O—from digital tape to optical disk.

It's like having multiple VTRs in one box.

Best of all, the M-Series iVDR lets you do things you never could before. Like trim and create video clips and subclips. Or build playlists. Or exchange clips with news, graphics, and other applications using standard formats such as AVI and QuickTime.

Major software developers are already supporting the M-Series iVDR. They include, Crispin, Dixon Sports Computing, DNF Controls, Encoda Systems, Florical Systems, Harris Automation Solutions, OmniBus Systems, Pathfire, and Sundance Digital.

With its network-friendly design, the M-Series iVDR lets you send digital clips wherever you want with a push of a button. Its Firewire port can ingest video directly from a DV camera. And with the broadest compression format support available, the M-Series iDVR is architected to accommodate future camcorder and compression-format technologies.

In addition to direct control, the M-Series iVDR offers remote control via cable connection, Ethernet network, or specialized software.

To learn more, please visit www.thomsongrassvalley.com/M/. Or contact your local Grass Valley™ sales representative.
STREAM SWITCH

LOGIC INNOVATIONS SMART TRANSPORT STREAM SWITCH (TSS) 858-455-7200; www.logicinnovations.com

Provides MPEG-2 transport stream switching with pre-processing of table information; provides automatic PID detection, PSI/P slip insertion, stream grooming, re-branding of streams, re-mapping of PIDs and blocking of unwanted program elements; designed to interface with popular automation systems for precise control of transport switch timing.

MPEG-2 MEDIA SERVER

VELA MEDIAADVANTAGE 727-507-5532; www.vela.com

Integrated media management solution that provides access to a comprehensive set of video management features, including: time code aware recording, Longitudinal Time Code (LTC) input/output, remote access and simultaneous encoding/decoding confidence monitoring; employs the Argus MX encoder and the CineView Pro Xle decoder.

DIGITAL ROUTING SWITCHER

UTAH SCIENTIFIC 400/64 801-575-8801; www.utahscientific.com

Uses a three-board architecture consisting of an input board, a crosspoint board and an output board; contains 36 I/O slots; features signal presence detection, low-power consumption, redundant power supplies and control cards, and an internal monitor matrix.

SIGNAL GENERATORS

SHIBASOKU TG77AX 303-278-0202; www.shibasoku.com

Multiformat signal generators for HDTV and SDTV; compact 1U form factor enables users to conveniently and economically rack mount one or more units, each providing support to as many as four independent plug-in modules for an all-in-one test and sync solution tailored to each environments' unique requirements.

MULTI-STANDARD ANALYZER

SYNTHESYS RESEARCH MVA3000 650-364-1853; www.synthesysresearch.com

Solution for testing serial digital video signals as defined by SMPTE 259M and SMPTE 292M; makes testing easier and faster without sacrificing on performance or quality; provides two multi-format serial digital inputs, which may be switched between any combination of HD, SD or ASI signals.

AUDIO ANALYZER

TERRASONDE DIGITAL AUDIO TOOLBOX 888-433-2821; www.terrasonde.com

Capable of generating a low-noise digital signal at 24bit/96k resolution; this DSP-powered toolbox has four main sets of I/O connectors; supported digital formats include AES/EBU, s/pdif, toslink and ADAT at bit depths of 24 bits and sample rates to 96kHz; designed to interface with other digital audio test equipment; includes digital audio cable tester.

CONTROLLER

PIXEL POWER PIXELBROWSER 954-943-2026; www.pixelpower.com

Web-based browser is an open-standards-based software solution to the problem of browsing and searching still picture, video clip and character generator page assets in a broadcast environment; using only a common Web browser, staff can search the library of stills, clips and pages, and drag and drop images to create a playlist.

Windows Media Encoding and Streaming Platform

OPTIBASE MGW2400 650-230-2400; www.optibase.com

Powered by an Equator media processor and embedded Windows 2000 server; designed to enable high-quality video streaming at bit rates starting as low as 100kb/s and up to 2Mb/s per stream.

SOFTWARE DEVELOPMENT BOARD

ASPEX SOFTWARE DEVELOPMENT BOARD +44 1494 558 121; www.aspektotechnology.com

Consists of a PCI-based development system, which provides customers with a software and system development platform for its LineDancer software-programmable processor; features synchronous SRAM and synchronous DRAM.

EFFECTS GENERATOR

SHIBASOKU TG77AX 303-278-0303; www.shibasoku.com

Multi-purpose effects generator for HDTV and SDTV; handles requirements of HDTV (1080i/720p) and SDTV (480i/480p); CCD readout switchable between interlace and progressive scan modes; signal can be converted in the CCU to different formats; high sampling frequency of 28.64MHz provides maximum resolution of 900TV lines in the NTSC format.

LIVE BROADCAST ENCODER

IVAST ENCODER 408-496-0671; www.ivast.com

Provides real-time MPEG-4 audio/video encoding and simultaneous archiving for satellite and media backhaul, electronic news gathering and live event broadcasts.

MPEG-4 VIDEO APPLIANCE

VBRICK VBXCAST 203-265-0044; www.vbrick.com

Allows organizations of any size to simple "plug in" and broadcast video to and from anyone, anywhere, on any network; can be used for videoconferencing, distance learning, training simulations and trunking video to stream over local channels; leverages MPEG-4 compression technology to help these agencies improve and enhance their use of streaming video.

Broadcast PAINT PRODUCT

VIDEO DESIGN SOFTWARE TWISTER PAINT STATION 631-249-4399; www.videodesignsoftware.com

Fully compatible with Windows 2000, NT and XP operating systems; available in either a rack-mount or tower configuration; supports 3-D past image and mask layers, Photoshop plug-ins, video grab to canvas and real-time paint show to video; uses Chyron Lyric text plug-in for text generation.

HD/SD Camera

IKEGAMI HDK-790E/79E 201-368-9171; www.ikegami.com

Provides for both HD and SD capability; handles requirements of HDTV (1080i/720p) and SDTV (480i/480p); CCD readout switchable between interlace and progressive scan modes; signal can be converted in the CCU to different formats; high sampling frequency of 28.64MHz provides maximum resolution of 900TV lines in the NTSC format.

SHIBASOKU TG77AX 303-278-0303; www.shibasoku.com

Multi-format audio test equipment; features asynchronous SRAM and synchronous DRAM.

MULTI-STANDARD ANALYZER

SYNTHESYS RESEARCH MVA3000 650-364-1853; www.synthesysresearch.com

Solution for testing serial digital video signals as defined by SMPTE 259M and SMPTE 292M; makes testing easier and faster without sacrificing on performance or quality; provides two multi-format serial digital inputs, which may be switched between any combination of HD, SD or ASI signals.

MULTI-STANDARD ANALYZER

SYNTHESYS RESEARCH MVA3000 650-364-1853; www.synthesysresearch.com

Solution for testing serial digital video signals as defined by SMPTE 259M and SMPTE 292M; makes testing easier and faster without sacrificing on performance or quality; provides two multi-format serial digital inputs, which may be switched between any combination of HD, SD or ASI signals.
Videotek introduces two new precision VTM on-screen test instruments to provide the exact measurement device for your specific application. With more than ten models to select from, backed by our exclusive five year warranty and FREE future VTM enhancements, Videotek instruments are the most flexible and cost-effective choice!

**VTM-450E HD/SD**
*High Definition, SDI & Analog Multi-Format On Screen Monitor*
- Waveform/ Vector/ Picture/ Audio/ Alarms on screen.
- Auto detection of input formats 720p, 1080i, 1080p at 1.485 Gb/s, 525/60 and 625/50 at 270 Mb/s
- Eye Pattern, Gamut Display, Jitter Measurements
- Pixel locator/ Data Word Analyzer
- Ethernet connection with SNMP agent
- Closed Captioning detection and display
- Unique Analog/ Digital relative timing display
- Two RS-12 Series router control ports for input expansion
- XGA output, high resolution, for 16:9 or 4:3 displays
- Single user SpyderWeb™ IP software included
- Two composite analog inputs optional
- Audio optional

**VTM-150**
*Digital and Analog Multi-Format On Screen Monitor*
- Waveform/ Vector/ Analog Audio level and phase meters over Picture
- Video and Audio Alarms on screen
- NTSC/ PAL, 525/625 and CAV with four analog audio channels
- SVGA output, 800 x 600 resolution, for display on any standard computer monitor

Discover what is new in the VTM instrument line that has shifted the industry's test and measurement paradigm.

Call Videotek today!
**MULTI-VIEWERS**

**ZANDAR DX DIGITAL SERIES**
321-939-0457; www.zandar.com

Available in 4-, 8-, 12- or 16-channel configurations; features SDI or composite inputs with auto-detect of input format and a selection of outputs - video, SDI or VGA; options include In-Picture audio monitoring and In-Picture display of UMDs and tally status.

**SERVER SYSTEM PRODUCT**

**OMNEON PROGRAM DELAYTOOL**
866-861-5690; www.omneon.com

Adds real-time program delay capability to the Omneon Media Server System; for each program input, up to six simultaneous delayed outputs can be provided; if multiple instances of DelayTool are run, additional programs can be delayed; offers an easy-to-use graphical user interface and runs on a standard Windows 2000 platform.

**STORAGE SOLUTION**

**HEWLETT PACKARD/ADIC MEDIA STORAGE**
800-752-0900; www.hp.com

Features HP servers and HP storage with ADIC's StorNext Management Suite; manages content throughout its entire life cycle; control of media, drive and library functions improves data movement by choosing the optimal resource across shared libraries/drives.

**DEMODULATORS/DECODERS**

**VIDEOTEK DDM-520 (SHOWN BELOW) AND DDM-540**
800-800-5719; www.videotek.com

Have a variety of I/O capabilities; can display signals at 1080i, 720p, 480p and 480i; decodes and displays EIA 608 and 708 closed captions on-screen; supports three MPEG-2 streamed formats.

**UPCONVERSION SYSTEM**

**SNELL & WILCOX UPCASTER**
212-481-1830; www.snellwilcox.com

One-box HD upconverter for use in transmission and production; specifically designed to enable U.S. broadcasters to achieve a high-quality DTV picture on-air at an economic price point; suited to live production due to its low latency; easily configurable and designed primarily for fixed-mode operation; can handle all common HD formats.

**FACILITY AUTOMATION**

**CAM SYSTEMS TVIA**
408-446-7000; www.camsystems.com

Delivers traffic and billing solution, handles consolidation, hubbing and centralcasting and multichannel broadcast; advanced database schema, sophisticated program design, especially effective in cross-marketing and multi-ownership environments.

**ENTRY-LEVEL CONTROLLER**

**LSI LOGIC STORAGE SYSTEMS 2882**
408-439-8000; www.lsiic.gov

Designed specifically for open systems environments; 2Gb/s host-side connectivity supports direct-attached storage or storage area network configurations; "always on" availability keeps data accessible to decrease the risk of downtime-related revenue loss.

**CD IOT**

**THALES ELECTRON DEVICES**
TH 790 CD
+33 1 30 70 35 00; www.thesales-electrondevices.com

New IOT features a 55 percent efficiency at 30kW average 8-VSB power, which represents an increase in efficiency of 12 percent over standard IOTs; offers an immediate reduction of the operating power consumed; high gain is constant over the entire UHF band.

**REAL-TIME WECBAST CAPTIONING TOOL**

**COMPUTER PROMPTING & CAPTIONING CPC-800**
301-738-8487; www.cpcweb.com

Capable of inserting caption text directly in a live Web video/audio stream; allows caption/spoken dialogue synchronization within one to three seconds, the same as that of standard real-time TV broadcasts.

**HD AUDIO MONITOR**

**WOHLER TECHNOLOGIES AMP-S8**
650-589-5576; www.wohlert.com

Features eight 26- or 53-segment high-resolution tri-color LED level meters showing simultaneous VU and PPM; output limiter circuits are incorporated to protect the speakers; has an extra AES input.

**3-D TEXT, EFFECTS AND MULTI-LAYER COMPOSITING**

**INSCRIBER TITLEMOTION PRO FOR DPS VELOCITY**
519-576-9111; www.inscriber.com

Option for Inscriber's TitleMotion graphics and titling plug-in; provides access to animated textures over time, animated kerning over time and the ability to apply 3-D effects to text and graphics over time; ships with more than 100 new titling templates.

**OFF-AIR RECORDER**

**MASSTECH MASSLOGGER**
321-255-3652; www.masstechgroup.com

This device is a VCR replacement for off-air logging and confidence recording applications using industry-standard MPEG-4 encoding and playback; features single- or multi-channel networked solutions with local and network storage.

**ASI AMPLIFIER**

**LOGIC INNOVATIONS ASI-DA**
858-453-7200; www.logicinnovations.com

PCI card that provides ASI transport stream repeat/distribution while conserving equipment rack space and power; eliminates the need for mounting a traditional, self-contained DA in an equipment rack.

**BROWSING SOLUTION**

**IBIS VISTA**
44-1483 280208; www.ibistv.com

Fully scalable desktop browsing solution links into IBIS's Landscape, P2 and ServerSuite applications providing the ability to view media clips in any of the applications from a standard PC desktop.
Eliminating obstacles for today's broadcaster

Introducing the Pioneer

When we asked broadcasters what they want in a transmitter, one theme continually resurfaced - broadband. A broadband transmitter allows group owners to minimize spare parts stock and adds simplicity for stations planning to move DTV channels to current analog frequencies, or community broadcasters relocating to core channels. Introducing the Pioneer and Pioneer DT, meeting the needs of today's broadcaster like no other solution on the market. The modular LDMOS amplifiers cover the entire UHF band with no retuning, allowing simple channel changes and minimizing spare parts stock. And all Pioneer and Pioneer DT transmitters can be upgraded to high power with nearly 100% reuse. For over 20 years, the best-engineered transmitters have come from Axcera - The RF Experts.

Axcera - the new era of digital communications

www.axcera.com  | T: 724.873.8100  | F: 724.873.8105  | info@axcera.com
Product Source

**CMOS IMAGE SENSOR**

**ROCKWELL SCIENTIFIC PROCAMHD**

805-372-4545; www.rockwellscientific.com

The first commercially available HD image sensor to use CMOS technology instead of CCD technology; power consumption is only about one-fifth that of a comparable CCD sensor; active image-sensing area of 1936 x 1086 pixels exceeds highest HDTV standard.

**DIGITAL CONSOLE**

**WHEATSTONE D-4000**

252-638-7000; www.wheatstone.com

Four-bus; has 28 or 32 mainframe inputs, A&D I/Os, VU metering, dual source inputs, optional line selectors phone modules and open bus architecture; features full logic, opto-isolated machine control, built-in TB, cue, headphone, clock and timer; switchable daughter cards allow varying sources and signal rate within the same mainframe.

**WIRELESS INTERCOM**

**SYSTEMS WIRELESS HME PRO850**

800-542-3332; www.swl.com

Features operation between 470MHz and 740MHz; automatically selects frequencies or can be programmed by a front panel LCD on the base station or an attached PC.

**SATELLITE SERVICE**

**SES AMERICOM SIGNALSAT**

609-987-4143; www.ses-americom.com

This new satellite-based alternative service enables broadcast TV stations to maximize reach with their DMA; the affordable point-to-point C- or Ku-band satellite delivery service is a cost-effective alternative to microwave links and fiber networks.

**UNIVERSAL SYNCHRONIZER**

**PIXEL INSTRUMENTS VS5200**

408-871-1975; www.pixelinstruments.tv

Ten-bit frame synchronizer; built-in TBC with auto mode select; transcoding from any selected input to all outputs simultaneously; digital proc amp; wide range output timing; patented signal processing.

**NLE ACCELERATORS**

**AVID DNA FAMILY**

978-640-6789; www.avid.com

Trio of hardware accelerators, dubbed Nitris, Adrenaline and Mojo, pumps up the power of nonlinear-editing and media-processing systems; Nitris offers processing power equivalent to 30 Pentium-4 processors and supports uncompressed HD formats and up to eight audio channels; Adrenaline can transform PC and Mac desktops into high-powered editing workstations; Mojo targets notebook-computer users and offers real-time effects.

**AUDIO TEST AND MEASUREMENT SYSTEM**

**AUDIO PRECISION SYSTEM TWO CASCADE PLUS**

503-627-0832; wwwaudioprecision.com

This PC-controlled system brings improved distortion and noise specifications required to test the latest advances in converter technology; dual-domain architecture accommodates both analog and digital signals.

**TRANSMITTER COMBINER**

**RFS 450MHZ**

203-630-3311; www.rfsworld.com

Designed for use in the 403 to 512MHz frequency band; utilizes low-loss, low intermodulation dual-stage isolators with integrated coaxial cavities; four-channel combiner can be converted into an eight-channel unit.

**COMMAND CENTER**

**WINSTED PRESTIGE**

800-447-2257; www.winsted.com

Modular approach to command center design; provides full-service command center design capabilities, including complete electronics layout, Auto CAD drawings and full-color control room rendering.

**REAL TIME, 3-D PRODUCTION SYSTEM**

**KAYDARA KAYDARA ONLINE 4.0**

888-942-6842; www.kaydara.com

Integrates live video and real-time animation; uses a new PC hardware platform; provides broadcast-quality SD and HD video and audio I/O; features real-time triggers, voice recognition, and shadows and reflection.

**VIDEO DEMULTIPLEXER**

**PATH 1 CHAMELEON VIDX**

877-ONE-PATH; www.path1.com

Multi-port product line offers mixing and routing of SD and HD video streams over IP.

**SATELLITE TERMINAL**

**SWE-DISH FLY-AWAY 90**

+46 923 12250; www.swe-dish.com

Offers IP transmission up to 5Mb/s, with potential to upgrade to 10Mb/s for IP applications such as live broadcast, Internet access, VoIP and file transfer; optional equipment enables up to 50Mb/s DVB transmissions.

**CONNECTORS**

**CANARE TRI-FPRO TRIAXIAL**

818-365-2446; www.canare.com

Rugged construction; impedance of 75W; push-lock mechanism; compatible for Series 5 and Series 10 cables; cable compatibility meets European interconnecting strategy needs.

**TOWER DESIGN**

**SPECTRASITE BROADCAST GROUP**

972-550-9500; www.spectrasite.com

Offers design, engineering and fabrication services to meet any site challenge for broadcast towers up to 2000 feet.

**FLUORESCENT LIGHTING FIXTURE**

**ARRI STUDIO COOL**

845-353-1400; www.arri.com

Fluorescent fixture with choice of reflectors, three control options and traditional cast and extruded aluminum housing; can be used on the road or in the studio; slide-in lamp support and locking lamp holders allow for six 4-tube Studio Cools on one circuit; two, four and eight lamp fixtures available.

**ZCG AND GRAPHICS SYSTEM**

**PIXEL POWER CLARITY2**

+46 923 12250; www.swe-dish.com

Multiple pixel processors operate in parallel; a hybrid of dedicated graphics hardware and open platform PC technology.
**MM400A miniature transmitter**

Watertight, only 3.6 ozs. and powered by a single AA battery. With a solid machined aluminum housing and a non-corrosive finish, the MM400A is ideal for hostile environments and special costuming needs.

The 100mW output with an RF circulator/isolator in the output stage provides excellent operating range and multi-channel performance. The 4.5 hour battery life (Ni-Mh AA) is comparable to standard transmitter models operating on 9 V alkaline batteries. The input amplifier uses an ultra low noise op-amp for quiet operation. It is gain controlled with a DSP controlled dual-envelope limiter which cleanly clips input signal peaks over 30dB above full modulation. The unit can be programmed easily in the field for use with 400 Series digital hybrid receivers, or in several other modes for use with Lectro and other analog receivers.

**UM400 belt-pack transmitter**

The UM400 provides the latest digital and analog features in a classic Lectrosonics belt-pack transmitter. The 5-pin input jack provides taps for any mic or line level signal.

The UM400 input handles low impedance dynamic mics, electret lavalier mics with positive or negative bias, and line level signals from any source. Input gain is adjustable over a 43 dB range to perfectly match the audio input level for optimum modulation, minimum distortion and maximum signal to noise ratio. Input levels are accurately indicated by two LEDs on the control panel.

**UM400 plug-on transmitter**

The UM400 adapts microphones with an XLR connector to wireless operation. In addition to common uses with hand-held microphones, the multi-voltage phantom power feature allows the transmitter to be used with high current condenser microphones, expanding its usefulness in high-end applications. The transmitter provides 256 frequencies in standard Lectro frequency blocks, selected with two rotary switches on the side of the housing.

**UCR411 compact receiver**

The UCR411 receiver provides professional performance and a versatile feature set in a compact design for field and location production. Tracking front-end filters guard against interference from DTV and analog television broadcast signals and other high power RF sources. All settings are made from the front panel with a powerful LCD interface, making the unit ideal for use in Quad Paks, on sound carts, in portable bags and in rack mount multi-couplers.

To alleviate interference problems in an increasingly congested RF spectrum, a spectrum analyzer is built into the receiver. The receiver tunes across its 25.6 MHz tuning range and records RF activity with markers on the LCD screen. Finding clear operating frequencies is a quick, simple process. The UCR411 is compatible with all 400 Series Lectrosonics wireless transmitters and can be powered with internal 9V batteries or external DC.

**Digital Hybrid Wireless™**

An industry first, this proprietary combination of digital audio and analog RF provides the superb audio quality of a pure digital system and the outstanding operating range of the finest FM wireless systems. The digital audio chain eliminates a compandor and its artifacts, and provides audio frequency response flat to 20 kHz. The RF link takes advantage of the spectral efficiency of an aggressively optimized FM radio system offering 256 selectable frequencies across a 25.6 MHz band.

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**Digital wireless with a fresh twist.**

Save time getting more information with no-spam Quik Links at this url:

[www.lectrosonics.com/R/be0603](http://www.lectrosonics.com/R/be0603)
DIGITAL MIXING CONSOLE
SALZBRENNER STAGETEC MEDIAGROUP CANTUS
+49 30 639902-0; www.stagetec.com

Features a distributed system consisting of a main console, optional slave consoles, a separate audio processor and the Nexus routing system; system components are interconnected by duplex fiber-optic cables.

VIDEO SERVER
360 SYSTEMS IMAGESERVER 2000
818-991-0360; www.360systems.com

New model provides two independent video output streams and simultaneous program ingest; each video channel has two stereo AES/EBU channels, with analog audio I/O included; stores up to 140 hours of video at 12Mb/s, and includes many of the standard features found on the larger 7000 server.

ENVIRONMENTAL CONTROL SYSTEM
PHOTRON Xenon Light Source
516-328-5000; www.canonbroadcast.com

A complete CG/"squeeze & tease" software package.

MPEG VIEWER
OMNEON MTV 1000 VIEWERTOOL
866-861-5690; www.omneon.com

Enables users to view video elementary streams within MPEG transport streams stored on the Omneon media server; can identify and select individual program streams within the transport stream.

PRODUCT SOURCE

**DIGITAL CG**
**CHYRON SOLO**
631 845 2000; www.chyron.com

Editing system consists of a Chyron-specified laptop PC, a PCMCIA PCI CG/squeezeback card contained in a separate three-pound box, and a complete CG/squeeze & tease software package.

**HD STUDIO CAMERA**
**SONY ELECTRONICS HDC-910**
201-930-1000; www.sony.com/professional

Uses switchable 50/60 HD camera head and optional downconverter plug-in boards in the camera CCU to simultaneously deliver the alternative 1280x720@59.94p HDTV output; vertical smear is held to -125dB.

**DISK STORAGE SYSTEM**
**STORAGETEK V2X2 SHARED VIRTUAL ARRAY**
303-673-5020; www.storagetek.com

Enhanced version of the V2X SVA; includes increased capacity using Seagate 73GB drives; provides automated storage management functions; features Power Point-To-Point Remote Copy which decreases synchronization time between disk subsystems.

**NEWS EDITING SYSTEM**
**AVID NEWSCUTTER ADRENALINE FX**
978-640-6785; www.avid.com

Processes uncompressed SD video over a single FireWire cable; ability to expand to 10-bit video and 24-bit audio capabilities; features built-in HD upgradeability and support for Avid Adrenaline DNA.

**DSNG ENCODER**
**SCOPUS CODICO E-1710**
609-987-8092; www.scopus.net

Combines encoding and modulation in a one rack-mounted unit; compact platform for DSNG applications; provides embedded L-band monitoring; offers both satellite and QPSK/8PSK/16QAM/QPSK modulation.

**AUTOMATION SYSTEM**
**ENCODA SYSTEMS BROADCAST MASTER**
303-237-4000; www.encodasystems.com

Multi-application, multifORMAT real-time graphics processor; offers real-time rendering of broadcast quality graphics, including widely-implemented HD formats (1080i, 720p60 and 1080/24p), as well as SD video (480i); PC-based system with a two RU size external graphics unit; designed for on-air sports/live graphics and virtual set applications; anti-aliasing generates images using 16 sub-pixels, with no performance degradation; defocus image generation, bump mapping, cube environment mapping and soft shadow all contribute to the realization of rich CG rendering in real time.

**GRAPHICS PROCESSOR**
**PANASONIC AV-CGP500**
201-392-4127; www.panasonic.com

Multi-application, multifORMAT real-time graphics processor; offers real-time rendering of broadcast quality graphics, including widely-implemented HD formats (1080i, 720p60 and 1080/24p), as well as SD video (480i); PC-based system with a two RU size external graphics unit; designed for on-air sports/live graphics and virtual set applications; anti-aliasing generates images using 16 sub-pixels, with no performance degradation; defocus image generation, bump mapping, cube environment mapping and soft shadow all contribute to the realization of rich CG rendering in real time.

**LEITCH ROUTER**
**LEITCH INTEGRATOR GOLD**
757-548-2300; www.leitch.com

Comes in SD and wideband digital multi-rate formats; handles signals from 30Mb/s to HDTV at 1.485Gb/s; re-clocks most standard data rates; expandable from 8x8 to 128x128 in a single 8RU chassis.

**LEITCH LOGOMOTION II**
**LEITCH INTEGRATOR GOLD**
757-548-2300; www.leitch.com

Available in analog, SD and HD formats; can insert up to four logos at once; features four-channel AES capability, support of multiple graphics formats and Ethernet network connectivity for logo interchange.

**DISCOGRAPHIC**
**DIGITAL MIXING CONSOLE**
**SCOPUS CODICO E-1710**
609-987-8092; www.scopus.net

Combines encoding and modulation in a one rack-mounted unit; compact platform for DSNG applications; provides embedded L-band monitoring; offers both satellite and QPSK/8PSK/16QAM/QPSK modulation.

**DIGITAL ROUTER**
**LEITCH INTEGRATOR GOLD**
757-548-2300; www.leitch.com

Comes in SD and wideband digital multi-rate formats; handles signals from 30Mb/s to HDTV at 1.485Gb/s; re-clocks most standard data rates; expandable from 8x8 to 128x128 in a single 8RU chassis.

**NEWSROOM EDITING**
**QUANTEL GENERATIONQ NEWS**
203-972-3199; www.quantel.com

Tailored for small and mid-market stations; 2-1 configuration includes an eight-port server with ingest automation, two browse applications, two desktop editing applications and a craft edit system.

**GRAPHICS PROCESSOR**
**PANASONIC AV-CGP500**
201-392-4127; www.panasonic.com

Multi-application, multifORMAT real-time graphics processor; offers real-time rendering of broadcast quality graphics, including widely-implemented HD formats (1080i, 720p60 and 1080/24p), as well as SD video (480i); PC-based system with a two RU size external graphics unit; designed for on-air sports/live graphics and virtual set applications; anti-aliasing generates images using 16 sub-pixels, with no performance degradation; defocus image generation, bump mapping, cube environment mapping and soft shadow all contribute to the realization of rich CG rendering in real time.

**AUTOMATION SYSTEM**
**ENCODA SYSTEMS BROADCAST MASTER**
303-237-4000; www.encodasystems.com

Integrates program rights management, scheduling and payment functionality; provides integrated library and workflow management.
The UTAH-400 High-Density Digital Routing Switcher, already the world's most advanced switcher, now offers even more:

- **Analog I/O Ports** - Your digital Audio or Video router can now be fitted with analog I/O in blocks as small as 8 ports. No more worries about integrating your existing analog source and destination equipment into your new digital plant!

- **A New 64x64 Frame** - Now all of the UTAH-400's advanced features are available in a compact (4RU) frame for smaller applications.

No matter what size, all UTAH-400 systems offer the same set of world class features at the industry's lowest prices:

- **SD/HD Compatibility**
- **Reduced Power Consumption**
- **Full-time Monitoring of Input/Output Signals**
- **Advanced Digital Audio Routing Capabilities**

Utah Scientific has a full range of solutions to the most demanding requirements for routing and presentation systems. Let us help you find the most cost-effective and future-proof digital signal management system for your facility. Visit us at www.utahscientific.com or call (801) 575-8801 today for more information.

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2003

Product Source

IP-MPEG ANALYSIS SYSTEM

PIXELMETRIX DVSTATION-IP
954-472-5445; www.pixelmetrix.com

Provides MPEG-2 transport stream analysis and monitoring over an IP connection; supports 10-, 100- and 1000Mb/s Ethernet, and both the ad hoc MPEG over UDP and RTP encapsulations.

DIGITAL MEDIA ENGINE

ADAM SYSTEMS ADAM 1000
408-526-0500x226; www.adamsystems.com

Solutions for content creation and delivery by the entertainment industry; scalable to thousands of terabytes with full security; enables fast conversion of film and video formats, processing of special effects and DVD creation.

SIGNAL MONITOR

TRILOGY BROADCAST SENTINEL
+44 01264 384000; www.trilogy-broadcast.com

Improved networked connectivity and alarm masking; includes VTR/server data, subtitles and AFDs; In-Vision display of monitored data and additional PC status monitoring.

ASSET MANAGEMENT

DALET DALETPLUS MEDIA LIBRARY
212-825-3322; www.dalet.com

Complete turnkey system running on standard IT hardware; catalog, store and distribute media assets in multiple formats: HD, DV, DVCPRO, MPEG-2, Windows Media, QuickTime, MPEG-4 and other formats.

AUDIO ROUTER

THOMSON GRASS VALLEY APEX
530-478-3000; www.thomsongrassvalley.com

Audio router features high-density construction and 11RU 256x256 chassis housing; TDM switching architecture; able to interconnect multiple frames to create matrices up to 1280x1280.

HD TRANSMISSION SERVER

LEITCH VR MTS TRANSMISSION SERVER
757-548-2300; www.leitch.com

HD content can be ingested and played out via ASI SPTS or MPTS; capable of storing both HD and SD material on same server.

ROUTING SWITCHER

PESA SWITCHING SYSTEMS CHEETAH 448X FLEXI-FRAME
256-726-9200; www.pesa.com

Incorporates a 27RU frame designed to support SD and HD, as well as other non-standard digital signals simultaneously; internal backplanes are programmable for either input or output connection.

NETWORKED STORAGE

PINNACLE PALLADIUM STORE
650-526-1600; www.pinnaclesys.com

Networked storage systems use scalable, mission-critical server and shared storage technology; provide seamless integrated ingest, editing and playout processes; eliminate the need for multiple copies of media.

ANALOG UHF TRANSMITTER

HARRIS ATLAS
513-459-3400; www.broadcast.harris.com

Built on a new common UHF transmitter platform; advancedDTV-660 analog/digital exciter; on-air servicing of PA modules and power supplies; redundant control system and robust serial bus architecture.

PROMPTING SOFTWARE

BDL-AUTOSCRIPT WINPLUS+
516-799-3869; www.bdlautoscript.com

Provides stand-alone prompting; features instant prompt editing and a fully active run order that can be manipulated at any time during scrolling; operates with all languages and fonts available in TrueType and Adobe.

MULTIFORMAT AUDIO GENERATOR/MONITOR

VIDEOtek ASM-100
800-800-5719; www.video-tek.com

Monitors most audio formats; displays up to eight channels of analog or AES/EBU audio; options allow de-embedding the SD and HD-SDI inputs; Dolby Digital and Dolby E decoding.

MEDIA ASSET MANAGEMENT SYSTEM

SEACHENGE BROADCAST MEDIALIBRARY
978-897-0100; www.seachangeinternational.com

Provides high-speed, universal access to over 24TB of media; allows clients using disparate media tools and file formats to collaborate more efficiently to produce, repurpose and distribute HD and SD media assets.

BROADCAST ARCHITECTURE

OMNIBUS G3
+44 8705 004300; www.omnibus.tv

Based on standard open IT protocols; utilizes a micro-modular design; provides tight integration between new HeadLine series of modules, including Edit 1000, 2000 and 3000 desktop editors.

RF SERVICES

ANDREW BROADCAST SYSTEMS SITE SERVICES
708-349-3300; www.andrew.com

Provide users with site survey and inspection services, transmission-line system design and layout, field technical-advisory service, system-optimization testing service, and system-optimization tuner service.

DIGITAL AUDIO CONSOLE

CALREC ALPHA 100
+44 142 284 2159; www.calrec.com

Console features up to 96 stereo/48 mono channels; two-layer design allows for channel path per fader or dual path arrangement; provides eight stereo or mono groups, four main outputs and a mix-minus output per channel.

AUDIO SIGNAL PROCESSING HARDWARE

SYMETRIX AIRTOOLS STUDIO MATRIX
425-778-7728; www.symetrixaudio.com

System configuration allows hundreds of input and output signals to be ingested and routed via mixers, selectors and/or crosspoint matrix/mixers up to 32x32 (stereo); contains two SHARC processors for specialized handling of audio signals.

www.broadcastengineering.com

June 2003
Introducing Arri Studio Cool, the most complete, flexible, and easy to service fluorescent lighting solution ever developed.

The optically superior Arri Studio Cool is available in 2-tube, 4-tube, and 8-tube models. Each lamphead accommodates 55-watt tubes for higher light output. What’s more, only Arri offers interchangeable reflectors that allow designers to select either the high output 90 degree reflector or the wide, soft 120 degree beam angle reflector.

Studio Cool’s rugged aluminum extrusion and cast housing features a detachable electronics module for total ease of service and maintenance. And when it comes to control, three different choices of Arri Studio Cool provide dimming via DMX control, two-step switching, or phase control dimming. Finally, a complete line of Studio Cool accessories is available to help you create the system solution that’s right for you. Accessories include barndoors, intensifiers, egg crates, louvers, and filter frames.

Optically superior, flexible, rugged and reliable, Studio Cool offers everything you’ve come to expect from Arri. And that’s the coolest part of all.

For more information about Arri Studio Cool, please call 845.353.1400 or email us at studio-be@arri.com.
**Product Source**

**AUDIO ROUTER**

**EUPHONIX TDM ROUTER**  
650-855-0400; www.euphonix.com  
Provides easy access and control over production monitors, I/O feeds, tape machines, console mix, and aux and group busses; up to 728x728 capability with multi I/O and 75V coax interconnectivity.

**VIDEO-BASED WORKFLOW SYSTEM**

**SGI CCAF**  
949-224-4566; www.sgi.com  
Uses IT technology for broadcast, post-production and broadband applications; enables the secure sharing of video as data files across high-speed networks.

**TOWER REINFORCEMENT**

**ERI PRE-ENGINEERED BOLT-ON AND WELD-ON LEG PARTS**  
81-925-6000; www.eriinc.com  
System of custom-designed bolt-on and weld-on leg reinforcement parts, inner member parts and adjustable length h...  
features brighter displays with better color saturation.

**DISPLAY TECHNOLOGY**

**CLARITY VISUAL SYSTEMS AP/LCD**  
503-570-0700; www.clarityvisual.com  
Features UXGA (1600x1200) resolution; offers redundant lamp engines for fail-safe reliability in control room environments; includes a new light engine design that produces brighter displays with better color saturation.

**DIGITAL ASSET MANAGEMENT**

**ARKEMEDIA ARKEKTEK**  
+44 1256 869200; www.arkemedia.com  
Pre-configured end-to-end system handles ingest and storage to management and distribution; ships with Ingest Manager, Resource Manager, full system management tools, HSM, RAID and 2.5TB of tape drive storage.

**HD/SD TEST EQUIPMENT**

**OMNITEK OMNIVIEW**  
+44 1256 881 110; www.omnitek.tv  
Provides standard waveform monitor functions operating in the RGB or YUV domain; optional built-in test generator for comparison of output image data with internally generated reference images.

**BROADCAST AUTOMATION**

**OMNIBUS TX>PLAY**  
+44 8705 004300; www.omnibus.tv  
Enter-level, multichannel content delivery solution enables the user to determine the exact functionality at each stage of ingest, content management and delivery.

**COMPOSITE SWITCHER**

**BRICK HOUSE VIDEO VTB-2A**  
+44 23 8067 6026; www.brickhousevideo.com  
Two additional switched auxiliary outputs allow it to offer 4x4 routing facilities; features take (cross-cut), auto/manual mix and wipe and auto fade to black; auto functions are variable in the range of 0-5 seconds.

**BROADCAST NEWS AUTOMATION**

**AUTOCUE SERIES**  
704-377-1496; www.autocue.co.uk  
Integrated news and transmission automation; fault-tolerant clustering design; indexes incoming wire stories in real time; supports multilingual archiving and script editing; remote access capable.

**BROADCAST AUTOMATION**

**SUNDANCE TITAN**  
972-444-8442; www.sundancedigital.com  
Separates the on-air interface from the actual playlist controller; List Processor runs frame-accurate playlists; up to ten list processors can run concurrently on a single server; Air Control Station allows multichannel operation.

**IP-BASED INTERCOM**

**TRILOGY BROADCAST MERCURY INTERCOM**  
+44 01264 384000; www.trilogy-broadcast.com  
Provides full intercom capability in facilities with Ethernet capability without the need for additional wiring; allows PCs to be used as virtual panels.

**CONSOLE MODULE**

**KLOTZ DIGITAL ENHANCED DSP MASTER MODULE**  
678-966-9900; www.klotzdigital.com  
For VADIS D.CII mixing consoles; rotary encoders allow direct and fast access to DSP parameters; access to all channel parameters from a single button.

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For more information, visit www.broadcastengineering.com.
The FusionPro 3RU is a multi-window display processor designed to accurately render multiple video and computer graphics sources to high-resolution displays. The FusionPro 3RU currently supports resolutions up to SXGA (1280 x 1024) and UXGA (1600 x 1200) with pristine image quality achieved through a combination of 10 bit RGB outputs, an advanced video processing engine and dynamic phase adjustment for accurate pixel mapping.

The Series is founded on a modular architecture consisting of a range of plug in processing cards and associated i/o, enabling users to combine input formats - analog video, SDI, HD-SDI, DVI and computer - in one system. The 3RU base system supports up to 13 dual-channel processing cards for 26 inputs, and is designed for mission critical applications with optional dual redundant power supplies and easily accessible front-loading cards.

The FusionPro 1RU delivers excellent image quality and can reproduce fine details even for small video windows. Each input is equipped with an advanced de-interlacing and scaling engine to ensure high quality display.

The FusionPro 1RU enable users to combine input formats - analog video, SDI, HD-SDI, DVI and computer - in one system. The 1RU base system accepts 4 processing cards, supporting up to 8 scalable windows.

The DX Digital Series MultiViewers are versatile, cost-effective solutions for a wide range of broadcast applications, including; broadcast presence monitoring, master control rooms, video server confidence channel, and multi-channel monitoring in OB Vans. The MultiViewers’ 1RU compact design delivers modular configurations for 4, 8, 12 or 16 SDI or composite inputs, with auto detect of NTSC, PAL or SDI formats. Composite, component, SDI and line doubled VGA outputs provide customers with a wide range of flexible display options. Both the front panel controls and remote control via RS-232/422 provide the user with the ability to view real-time multiple images in various pre-configured displays. Optional software allows user configuration of displays, and multi-system control, while options also exist for in-picture audio monitoring of analog, AES/EBU and SDI embedded audio.

The MX Analog Series MultiViewers are versatile, cost-effective and easy to operate four to sixteen input analog video screen splitters. The MultiViewers provide a cost effective solution for high quality real-time multi-video display and monitoring and are ideal for “presence” or “confidence” monitoring in multi-video display applications. Single touch operation provides the ability to view real-time multiple images in various pre-configured displays. Each image can also be seen full screen. Control is via the front panel buttons or remotely via the RS-232/422 serial interfaces. The front panel LCD display show menus for user configurations of channel ID, borders, clock & date and the GPIO lines.

The OmniVideo Series comprises the MVG2, MVG6 and MVG16 PCI cards solutions. These cards can display 2, 6 or 16 real-time video sources simultaneously with the following feature set; composite video inputs, a high quality video output, flicker-free text & graphics and user configuration of displays via integrated software, allowing picture resize, position, crop and picture-in-picture effects.
TELEVISION SYSTEMS TALLYMAN
+44 1628 587 200; www.televisionsystems.ltd.uk

Allows users to reconfigure tally systems easily and to interface to hardware including switchers, routers and multiviewers; allows an operator from single position to control the entire system.

WOHLER TECHNOLOGIES, PANORAMADTV VAMP2-SDA 650-589-5676; www.wohler.com

Offers two selectable SDI digital and two composite analog video sources in a 2RU unit; a composite video monitor output from the selected SDI is included for use with larger, external video monitors.

MAXELL PROFESSIONAL DV (DV-PRO) 800-533-2836; www.maxell.com

Developed for use in Mini DV and DV systems within the professional video and broadcast markets; integrates Maxell's Multipuretron vapor-deposited film; DV-PRO enhances picture quality and durability in demanding ENG/EFP applications.

ORAD HI-TEC SYSTEMS CYBERGRAPHICS 972-9-767682; www.orad.tv

Interfaces to industry standard newsrooms such as iNews and ENPS via MOS and TCP/IP protocols; user-friendly API for creating dedicated control applications, tools for centralization, management and editing of content.

KTECH DISTRIBUTED TRANSMISSION TECHNOLOGY 818-773-0332; www.ktechtelecom.com

Distributed DTV Transmitter and Transports for On-Channel Booster

Provides turnkey tower construction services in-cluding project planning and construction coordination, tower facility operation and management, and transmitter site development.

Distributed transmission technology employs GPS signals to synchronize all DTV transmitters and translators in a single channel; translators for on-channel boosters come in 1W, 5W, 10W, 50W and 100W versions.

NTP SYS NTP625 +45 44 53 11 88; www.ntpsys.com

Flexible audio matrix can be installed either as a master control room matrix system or associated to user surfaces and/or control panels for use in studios; has unlimited size.

SNELL & WILCOX HD3600 408-260-1000; www.snellwilcox.com

Features 12 keyers, three available on MEs one and two, and six available on ME3; has four HD frame stores with still-store backup; has four timed aux., plus 12 non-timed aux.

PANASONIC AJ-DE10 NOTEBOOK 201-392-4127; www.panasonic.com

Rugged notebook computer-based news editing system; extends DVCPRO and DV newsroom editing into the field; 1394 interface; supports 25Mbps DVCPRO and other DV-based video.

PANASONIC AJ-DE10 NOTEBOOK 201-392-4127; www.panasonic.com

Real-time video to DVB-ASI encoder; 1RU enclosure; provides Y/C and composite inputs and encodes to full D1 resolution at 10Mb/s; remote management and scalable resolution from half D1 to full D1.

Asaca FireFly DM Series 303-278-1111; www.asaca.com

Delivers up to 48TB of data per library at an unprecedented 400MB/s; each library can sustain up to a maximum of 400MBs of I/O; self-monitoring analysis and reporting technology (SMART) tool helps avoid data loss.

MIRANDA TECHNOLOGIES DENSITÉ 514-333-1772; www.miranda.com

Provides video and audio signal measurement and alarm profiling, as well as visual confidence monitoring with low latency, low bit rate video, and audio streaming over standard IP networks.

303-278-1111; www.asaca.com

Delivers up to 48TB of data per library at an unprecedented 400MB/s; each library can sustain up to a maximum of 400MBs of I/O; self-monitoring analysis and reporting technology (SMART) tool helps avoid data loss.

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ASACA FIREFLY DM SERIES 303-278-1111; www.asaca.com

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PARKERVISION CR1000 904-737-1367; www.pvtv.com

Can perform back-to-back transitions with up to two upstream key layers; has CG list display from news automation system scripts and run-downs that illustrate the "slug name"; includes script synchronization.

OMNIBUS SYSTEMS HEADLINE +44 8705 004300; www.omnibus.tv

Features ingest, machine control, router control, desktop media viewing, craft editor support, integration with the newsroom computer system, playout, manual server content management and manual archiving.

MIRANDA TECHNOLOGIES DENSITÉ 514-333-1772; www.miranda.com

Provides video and audio signal measurement and alarm profiling, as well as visual confidence monitoring with low latency, low bit rate video, and audio streaming over standard IP networks.

TELESTREAM CLIPVIEW 530-476-1300; www.telestream.net

Automatically receives MPEG video sent over standard IP networks from other Telestream appliances or FlipFactory applications; media is received and stored until users are ready to view them on large-screen video monitors.

SNELLMATION LIMITED +44 1628 687 200; www.televisionsystems.ltd.uk

Flexible audio matrix can be installed either as a master control room matrix system or associated to user surfaces and/or control panels for use in studios; has unlimited size.

FILM DISC CORPORATION 866-322-7331; www.filmdisc.com

Royalty-free HD stock footage; 50-disk library with 20 shots/disk ranging from seven to 15 seconds each.

ASACA FIREFLY DM SERIES 303-278-1111; www.asaca.com

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ASACA FIREFLY DM SERIES 303-278-1111; www.asaca.com

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HALO

The Halo standalone routing system enables flexible, low cost ASI/SDI and HD/SD switching in 16x16 or 32x32 configurations. Designed to address a wide range of digital routing requirements, with special focus on redundancy switching in digital cable and satellite applications, Halo is based on the latest switching technology.

PROCION 2

Offering unprecedented freedom in designing GUI's, Procion 2 enables customized control interfaces to be easily created and integrates fully with existing Pro-Bel router control systems including Aurora. Operating from a single configuration database, Procion 2 also integrates with COS-MOS, Pro-Bel's system configuration and monitoring solution - enabling router control and monitoring mimic soft-panels to be quickly built.

THE SIRIUS FAMILY

The award-winning Sirius family is available in SDI/HD/analog video and AES audio formats, scaleable from 8x8 to 256x256. Utilizing innovative technology and providing unprecedented flexibility and scalability, Sirius incorporates built-in analog and digital signal conversion for both video and audio signals, as well as Ethernet and SNMP management and control.

THE ICON

Pro-Bel's extensive signal processing range offers simple, low-cost distribution amplifiers up to multi-channel DSK/mixer units. The ICON family represents total frame flexibility and supports powerful and sophisticated signal processing functions such as digital video and AES/EBU conversion, mux/demux, key/mix, etc.

MERIDIAN, SEXTANT AND COMPASS

Meridian, Sextant and Compass automation systems use dedicated, hardware controllers providing a broad range of device control and ultra-reliable play-out of automation schedules. The MAPP media management system can be used independently for server-only automation playout, or for global WAN media management. These highly integrated solutions efficiently handle basic single-channel to sophisticated multi-channel transmission.

The competition just discovered the price of the new Pro-Bel Halo router!

You know Pro-Bel routers are of the highest quality but if you think they're expensive you obviously haven't heard the price of the new Halo router!

- High performance SDI and ASI compatible
- Available in 16 x 16 or 32 x 32 configurations
- Removable dual redundant power
- Editable database (with control for up to 8 breakaway levels) plus fully compatible with all Pro-Bel control systems
COLOR CONTROL SUITE
PANDORA
POGLE EVOLUTION
+44 1474 561000; pogle.pandora-int.com
Includes an integrated Wacom drawing tablet, dedicated knobs and soft keys; hardware and software is linked by a high-speed network; individual modules contain their own RISC processor.

FULLY AUTOMATED MOBILE TRANSMISSION SYSTEM
BT BROADCAST SERVICES
BT SATNET
202-721-8599; www.broadcast.bt.com
Provides uplink and satellite capacity controlled and operated from a central hub; can be easily fitted to the roof of most vehicles; PC interface is designed to be easy to use; incorporates fixed transmit setting.

DIGITAL WIRELESS CAMERA SYSTEM
LINK RESEARCH LINKXP2
+44 1923 200 900; www.linkres.co.uk
Designed for live broadcast; offers reverse camera control; supplied as a complete camera back with a Sony BVV-5 interface, making it compatible with all broadcast cameras.

DIGITAL GRADING AND COLOR CORRECTION SYSTEM
DISCREET LUSTRE
514-393-1616; www.discreet.com
Offers a resolution-independent environment capable of processing images of any resolution as well as a color grading environment with real-time primary color correction and playback of up to 2K 10-bit RGB data.

CONVERT-EFFICIENCY RF AMPLIFIER
L-3 COMMUNICATIONS ELECTRONIC DEVICES L-3 CEA 130
570-326-3567; www.L-3com.com
Operates from 470MHz to 810MHz; combines a multi-stage depressed collector with an inductive output amplifier; DC input power nearly proportional to RF output over a wide power range.

LOGO INSERTER
EVERTZ HD9625LG
905-335-3572; www.evertz.com
Inserts logos in flash memory so the user can quickly access them through the device’s front-panel quick-select keys or through GPI inputs; logos can be static or moving, and can be as small as one percent of the display area; their position and fade rate are user controllable.

AES DIGITAL AUDIO SIGNAL
SIGMA OCTASTREAM FAMILY
801-575-8801; www.sigmaelectronics.com
Consists of the DA5320 mixer and subframe router, the DA5315 variable delay compensator, the DA5325 sample rate converter and the SG5605 audio reference generator; designed for the S5000 signal management frame.

9.4-METER DUAL-REFLECTOR EARTH STATION ANTENNAS
ANDREW EARTH STATION ANTENNAS
708-349-3300; www.andrew.com
Available for Ku or K-Band two- or four-port configurations with linear or circular polarization; features aluminum and steel construction; wind survival up to 125 mph.

ATSC TRANSPORT STREAM MONITOR AND ANALYZER
TRIVENI DIGITAL STREAMSCOPE MT-25
605-716-3500; www.trivenidigital.com
Monitors, measures and analyzes DTV streams and signals to ensure they are error-free and comply with the ATSC standards; includes an at-a-glance transport stream summary display and support for closed captioning.

TACTICAL OPTICAL CABLE
MULTIDYNE HYDRA-800
800-488-8378; www.multidyne.com
Transports up to 32 video and 128 audio in 1RU; maximum of 768 channels on one tactical cable; modular design; 10-bit video with S/N ratio greater than 67dB; video bandwidth of 6.5MHz.

MINIATURE DIRECT DV RECORDER
LAIRD TELEMEDIA CAPDIV
845-339-9555; www.lairdtelemedia.com
Designed for recording edit-ready clips directly to its integrated hard drive from any DV camcorder while shooting; eliminates the lengthy capture process; clips are accessible by the user’s NLE system for post production.

BROADCAST GRAPHICS AUTOMATION
VERTIGOXMEDIA PRODUCER XMEDIA
514-397-0955; www.vertigoxm.com
Has full MOS-compliance; features “smart” templates defining output format and production logic; includes multiple live data feeds that can share between applications; no custom programming required.

ADC FIBER OPTIC CONNECTORS
CLARK WIRE & CABLE FASTERM SC AND ST CONNECTORS
947-949-9944; www.clarkwc.com
Compatible with either 3mm or 900µm fiber optic cable; 62.5/125 or 50/125µm fiber size; extremely low loss (<.2dB typical) and low reflective output amplifier; DC input power range.

MPEG AND DOLBY DIGITAL ENCODING PLATFORM
OPTIBASE MPEG MOVIEMAKER 2005 PUBLISHER
650-230-2400; www.optibase.com
Comes bundled with MPEG Composer 200 version 3.7, allowing customization and control of encoding parameters; features include DVB and ATSC compliance, as well as support for Dolby Digital 5.1 input with synchronized muxing.

ANALOG VIDEO CARD
BLACKMAGIC DESIGN DECKLINKSP
+61 (3) 9682 4770; www.decklink.com
Features analog component YUV video input and output, analog stereo-balanced XLR audio input and output, and separate SDI video monitoring output; separates SPDIF digital audio outputs for monitoring or high-end mastering.
PROGRAMMABLE PROCESSOR

ASPEX LINEDANCER
+44 1494 558 121; www.aspextechnology.com

New services or features can be introduced after the final product has been deployed; if specifications change during the development cycle, the processing bandwidth can be increased accordingly.

3U DIGITAL/ANALOG TV MODULES

BROADCAST TECHNOLOGY 3000 SERIES
+44 1264 332 633; www.btl.uk.com

Includes the DTCA 3000 DVB-CI CA module, capable of descrambling multiple services; and the DTTDA 3000 DVB-ASI distribution amplifier with three switched DVB-ASI inputs and six DVB/ASI-compliant outputs.

LCD WAVEFORM MONITOR

ASTRO WM-3004 WAVEFORM MONITOR
818-848-7722; astro-systems.com

Portable HDTV waveform monitor; high brightness and contrast; supports 23 formats of HD and SD video; one audio output selectable from 16 channels of imbedded audio.

HEADPHONES

AKG K 171 STUDIO (SHOWN BELOW) AND K 271 STUDIO
615-620-3800; www.akgusa.com

Feature AKG’s Varimotion XXL transducers used in the K 141 and K 240 models; the K 171 Studio combines the benefits of a closed-back design with the light weight and comfort of supra-aural headphones; the K 271 Studio combines the benefits of AKG’s circumaural “around-the-ear” design with a closed-back design for maximum isolation from ambient noise.

VIDEO SERVICES ROUTER

SKYSTREAM NETWORKS MEDIAPLEX-20
408-616-3300; www.skystream.com

Has 20-slot chassis with full hot swappable-capable modules; provides backplane connectivity and management capability for all modules; provides video and data interface connectivity.

VIDEO SERVER

CONCURRENT COMPUTER MEDIAHAWK
678-258-4000; www.ccur.com

Placed on an existing LAN, the unit functions like a digital videotape player; designed to deliver full-screen, TV-like quality video (25fps to 30fps) to a desktop computer.

FRAME/LINE SYNCHRONIZER

CRYSTAL VISION SYNAD124
+44 1223 497049; www.crystalvision.tv

Includes tracking audio delay for up to two groups of embedded audio; allows video feeds containing embedded audio to be re-timed; eight mono channels of audio can be delayed to match the video from any two audio groups.

UNIVERSAL-FORMAT DVE SYSTEM

ACCOM DVEOUS/MX
650-328-3818; www.accom.com

Allows the creation of real-time video effects in either SD (525 or 625) or HD (720, 1035 or 1080) at all known frame rates; internal hard drive for more storage and fast save/recall of files.

DIGITAL INTERMEDIARY TOOL

BOXX CINEBOXX
877-877-2699; www.boxxtech.com

Features 2K film, HD and SD sequential image review with option I/O module; NLE editing of 2K film, HD and SD material; ingestion system for sequential image export; network shared storage for frame depot and crash and batch capture with EDL import.

DIGITAL MATRIX INTERCOM

TELEX RTS CRONUS
952-884-4051; www.rtsintercoms.com

Thirty-two port system occupying 2RU; its standard configuration offers the ability to link up to four units into a single 128-port matrix over distances of hundreds of meters.

WHEN you require the best, most accurate in precision timing look only to ESE. Designed for “Precision Timing”, ESE Master Clocks & Accessories have been the industry standard for over three decades. Whether using GPS, WWV, Modem, Crystal or line frequency accuracy – all ESE Master Clocks can drive digital or analog slave clocks, as well as interface with video and/or computer based systems. Call or visit our web site for more details.

• 3-Year Warranty

ESE

142 Sierra Street • El Segundo, CA 90245 USA
Phone: (310) 322-2136 • Fax: 310.322.8127

www.ese-web.com

June 2003
Product Source

**SPORTS CONTROLLER**

**DNF CONTROLS DMAT-O**
818-898-3380; www.dnfcontrols.com

Designed for Odetics protocol-based video servers; allows users to assign playout speed for every element in their highlight list; access up to four record trains for the creation of clips and highlight lists.

**NEWS AUTOMATION**

**CRISPIN NEWSPLAYX**
919-845-7744; www.crispin corp.com

Works in conjunction with news automation systems including Avid's iNews, AvStar and a MOS interface with AP's ENPS; translates the rundown and controls video servers, switchers and tape machines.

**DIgITAL COMPOSITING SYSTEM**

**ULTIMATTE ULTIMATTE 10**
818-393-8007; www.ultimatte.com

Automatically calculates optimum matte settings upon backing color selection; features include an eight-input router, full RGB foreground and background color controls.

**CONTROL PANEL**

**VISTEK V1602**
973-313-6416; www.vistek.tv

Can be controlled externally; all parts of the panel provide continuous status monitoring; any error conditions can be immediately flagged; alarms can be configured to suit user requirements.

**ANALOG CODER**

**NUCOMM ANALOG CODER**
908-852-3700; www.nucomm.com

Extends the use of analog microwave systems into the digital domain; once upgraded, the system will support a variety of digital signal and data rates from 1Mb/s to 30Mb/s, including SMPTE-310, DVB-ASI and a T1 Data Pack.

**MICROWAVE ANTENNAS**

**RADIO FREQUENCY SYSTEMS COMPACTLINE**
203-630-3211; www.rfsworld.com

Range now includes a four-foot antenna to be used for point-to-point applications; incorporates all the standard features of the company's single and dual polarized CompactLine ranges.

**SOFTWARE-ONLY MEASUREMENT PACKAGE**

**HAMLET VIDSOCPE**
+44 1494 793763; www.hamlet.co.uk

Designed for the desktop editing market; provides real-time precise waveform and vectorscope displays of DV video, and level and phase displays of embedded audio.

**DIGITAL AUDIO MIXING CONSOLE**

**EUPHONIX NEW SYSTEM 5-B**
650-855-0400; www.euphonix.com

Upgraded software increases capacity from 72 to 96 digital channels using a single DSP core; includes a dedicated mix-minus bus with single-button-press mix-minus outputs and talkback from each channel.

**WAVEFORM MONITOR SERIES**

**TEKTRONIX WFM700**
503-627-7111; www.tektronix.com

Advanced video measurement tools for production, post-production, distribution and transmission of HD and SD content. Features an optional audio monitoring module to validate standards and document compliance.

**VIRTUAL TELEVISION PRODUCTION SYSTEM**

**RADAMEC SCENARIO-XR**
877-RADAMEC; www.RadamecBroadcast.com

Renders ray-traced virtual studios in real time; allows the virtual and real video world to be mixed seamlessly in real time; enables real-time control of lighting, transparency and color.

**VIRTUAL TELELINE**

**VIDEO DESIGN RESEARCH LUCI AND RICKI**
416-538-1775; www.videodesignresearch.com

Virtual teleline comprised of Cintel's primary and secondary color corrector (LUCI) and Video Design Research's HD-DDR (Ricki); combination reduces the time needed on the telecine by one-fourth.

**MEDIA LIFECYCLE-MANAGEMENT TOOLS**

**BBC TECHNOLOGY COLLEDIA**
888-BBC-3826; www.bbctechnology.com

Enables broadcasters to produce high-quality content more efficiently at every stage of the creation, management and distribution lifecycle.

**AUDIO TEST SOFTWARE**

**AUDIO PRECISION PC AUDIO TEST APP2010**
503-627-0832; www.ap Audioprecision.com

Measures the audio performance of a PC sound device such as a sound card or a motherboard implementation; comprises a suite of tests that measure level, phase, distortion, noise, crossstalk and other parameters.

**HD ENCODING SOFTWARE**

**HEURIS MPEG POWER PROFESSIONAL - DTV HD**
314-534-1514; www.heuris.com

Program runs on both PC and Mac platforms and allows customers to create ATSC-compliant streams on the same computer system as their favorite HD nonlinear editing systems.

**CONNECTORS**

**SWITCHCRAFT AAA SERIES**
773-792-2700; www.switchcraft.com

Available in three to seven pins or contacts; features easy twist on combination handle/strain relief, and only two parts to assemble; strain relief is designed to accommodate most popular cable sizes; also features a rugged die-cast metal handle for optimum protection and increased signal shielding.

**AUDIO ROUTER**

**NVISION NV2756-PLUS**
530-265-1000; www.nvision1.com

Provides support for analog as well as digital signals; allows you to mix and match analog audio, AES and time code in the same frame; a single NV2756-Plus frame supports matrix sizes up to 256x256; multiple frames may be linked together to build larger systems; expansion is linear.

**MONITORING SYSTEM**

**TEKTRONIX WVR600 SERIES RASTERIZER**
503-627-7111; www.tektronix.com

Monitors both analog and digital video signals in an advanced all-digital architecture; offers high-resolution output to external displays; includes two SD SDI inputs and two audio inputs (analog and/or AES/EBU).

June 2003
Master Control has become one of the fastest evolving areas in the modern broadcast plant. The PESA MCLite Digital Master Control Switcher, with its flexible and open architecture, has been developed to fulfill the needs of all present and future requirements.

The MCLite is a compact, low-cost, multi-channel SDTV Master Control Switcher available with a wide range of processor and control panel options. Multi-channel, multi-format and centralcasting operations benefit from the modular nature of the MCLite, allowing each channel to be fitted with just the appropriate amount of processing power. Multiple processors and control panels can be arranged in any combination, with up to 16 channels being controlled all from a single control panel or from station automation.

FEATURES
- Multi-Channel SDTV Operation
- Compact A/B Mix-Effects Processor
- Four Keying Layers
- Logo Keyer with Internal Storage
- Extensive Logo Management Software
- Optional DVE Squeezeback
- AES and Embedded Audio Processing
- Automation and GPIO Interfaces
- Relay Bypass Protection

PESA's MCLite Has It All!!
**Product Source**

**CODEC**

**AUDIo PROCESSING TECHNOLOGY**  
WORLDNET MILANO  
+028 9037 1110; www.aptx.com

Multi-algorithm ISDN codec for broadcast, post production and voice-over applications; provides connectivity with APT codecs including WorldNet DSM100/Pro-Link, DRT128 and BCFs.

**MANAGEMENT AND SHARING SOFTWARE**

**STUDIO NETWORK SOLUTIONS**  
SAMMP  
877-537-2094; www.studionetworksolutions.com

Allows workstations with different operating systems to concurrently access info. from a storage area network; does not require a server or Ethernet connection; can configure, manage, share and access SAN resources.

**DIGITAL SOLID-STATE UHF TRANSMITTER**

**LARCAN MAGNUM**  
905-564-9222; www.larcan.com

Offers 2.5KW to 20KW of power; features include a fully redundant design, intuitive advanced diagnostics and an extensive monitoring system designed to simplify maintenance.

**What Your Integrator Doesn’t Want You to Know!**

Call up and for a side-by-side comparison of leading manufacturers’ products

201-457-1504  
20 East Kennedy Street, Hackensack, NJ 07601  
www.patchamp.com

**12MM HEAVY-DUTY HYBRID FIBER CABLES**

**GEPCO HDC120 SERIES**  
847-795-9555; www.gepc.com

Consists of the HDC120 and HDC120PU; designed for SMPTE 311M HD camera applications; both feature an increased overall diameter, larger gage copper conductors, and Kevlar-reinforced and tube-jacketed single-mode fibers for durability.

**INTERACTIVE SERVICE**

**NDS VALUE@TV**  
949-725-2500; www.nds.com

Tools and applications offer users interactive services including sports, t-commerce, gaming, voting and enhanced TV; provides stand-alone applications and enhanced content to help users increase average revenue per user, retain users and increase ratings.

**SERVER EXPANSION SYSTEM**

**MASSTECH MASSEXPAND**  
321-255-3653; www.masstechgroup.com

This hardware and software platform expands disk-to-disk storage of digital content for content delivery systems and video servers; features more than 1.4TB of RAID 5 storage on a 1RU chassis.

**MULTI SDI MONITOR**

**LEADER INSTRUMENTS**  
LV 5700  
714-527-9300; www.LeaderUSA.com

Features an XGA TFT color LCD; tests 14 HD-SDI and SD-SDI formats with digital processing compliant to SMPTE 259M, SMPTE 292M anleaderd SMPTE 296M; automatically detects input format and colorimetry.

**MULTIPLEXER**

**OPTICOMM DIGIBAND**  
DVX-5400  
858-450-0143; www.opticom.com

Multiplexer uses time-division multiplexing (TDM) to transmit four channels of uncompressed serial digital video across one laser; delivers a payload of 270Mb/s for each channel, or a net payload of 1.080Gb/s.

**HD SET-TOP BOX**

**PIONEER VOYAGER 3501HD**  
310-952-2799; www.pioneerelectronics.com

Enables cable customers to view HD programs in all 16 ATSC formats supported by the cable industry, including 720p and 1080i, in both 4:3 and 16:9 aspect ratios.

**VIDEO STABILIZER**

**FOR-A IVS-500 AND IVS-300**  
714-894-3311; www.for-a.com

IVS-500 provides digital input and output; IVS-300 provides analog composite I/O; both correct picture shake and judder while preserving intentional camera movements.

**DIGITAL VIDEO ROUTER**

**NVISION NV8256-PLUS**  
530-265-1000; www.nvisiion1.com

A unique architecture and a high density 256x256 crosspoint module enables new 256x256 system to expand to 512x512 without DAs or secondary switching.

**AUDIO, VIDEO AND DATA TRANSPORT**

**HARRIS NETVX**  
513-459-3400; www.harris.com

One-box solution used to transport audio, video and data; supports IP routing, ATM switching, E-3 and DS-3 microwave transport and more, simultaneously.

**COAX CAMERA CONTROL SYSTEM**

**TELEMETERS COAX-LINK**  
201-848-9818; www.telemetersinc.com

Uses the common RG-59 coax cable to link the camera and base station; provides video transmission with return monitor video to the camera, camera controls, program audio, intercom transmission, and IFB talent feedback.

**STORAGE SYSTEM**

**SUN MICROSYSTEMS STOREEDGE 9000 SERIES**  
800-555-9587; www.sunmicrosystems.com

Series includes the Sun StorEdge 9970 and 9980 systems; optimized for the Solaris operating environment; certified for Sun Cluster 3.0.

**MICROPHONE**

**SENNHEISER MKH418S**  
860-434-9170; www.sennheiserusa.com

Allows adjustable M-S stereo imaging via an independent dual capsule system; documents directional information for use in future stereo mixes.
PRODUCT SOURCE

HYBRID EDITING SYSTEM
EDITWARE FASTRACK SE
530-477-4300; www.editware.com

New editing option adds classic linear-style display next to the standard graphical timeline display; allows edits to be created or modified using linear-style keystroke functions while the timeline display updates instantly.

AUDIO TRANSCODER
PIXEL INSTRUMENTS UMAT-1200
408-871-1975; www.pixeinstruments.tv

Provides reference-quality A/D and D/A conversion, digital sample rate conversion and audio monitoring through internal speakers and external headphones; stereo analog, AES/EBU balanced digital, SMPTE unbalanced digital and S/PDIF inputs and outputs are standard.

ACTIVE SUBWOOFERS
GENELEC LSE SERIES
508-652-0900; www.genelec.com

Incorporate built-in 6.1 bass management and an extended frequency range for multichannel playback environments; series includes 8", 10", 12" and dual-driver 12" models (pictured: the 7071A model).

CHARACTER GENERATOR
PINNACLE DEKO1000
650-526-1600; www.pinnaclesys.com

Single-channel CG suited for local broadcasters or larger facilities needing additional Deko seats; delivers layer-based motion controls; supports optional ClipDeko internal clip player and the new DekoObox option.

REPLAY AND EDITING SERVER
EVS LSM-XT
973-575-7811; www.evstv

Records super-motion sequences and normal video feeds simultaneously in uninterrupted loop-mode; allows up to four operators to carry out smooth replays instantly and edit with wipe and dissolve effects.

FINISHING SOFTWARE
MEDIA 100 844/X VERSION 2
800-773-1770; www.media100.com

Features new tool sets for unlimited-layer compositing, editing and audio; new color correction tool set enables users to view and interactively adjust and match the color values of clips instantly and accurately.

CONVERTER
MAGNI SYSTEMS MCP-601
503-615-1900; www.magnisystems.com

First in the MagniCoder Premier line; seamlessly overlays high-resolution computer DVI/XGA standard content onto an incoming SDI 601 or analog signal.

BATTERY CHARGER
ASPEN ELECTRONICS ASPEKT
860-489-1193; www.aspenelectronics.com

New line of chargers addresses Aspen V-mount batteries; Aspen's Nexus system or standard NP batteries of any manufacturer; state-of-the-art charge programming; features AllChem capability and simultaneous charging.

UHF RECEIVER
AKG SR 4000
615-620-3800; www.akgusa.com

Wideband diversity frequency-agile UHF receiver; offers maximum dynamic range; features a backlit display and jog wheel; also includes a data-encrypted Pilot Tone decoder unit.

NTP TIME SERVERS
ESE NTP TIME SERVERS
310-322-2136 www.eseweb.com

Allow users to put time information onto a network; when the time server is plugged into the network and configured, any client on the network can request time.

MASTER CONTROL PANEL
UTAH SCIENTIFIC MC-2020
801-575-8801; www.utahscientific.com

Fully compatible with all previous generations; features multiple keyers, internal DVE options, embedded audio operation and multichannel support; compatible with the MC-500 series.

PC DATA LINK
NEUTRIK MINILINK
732-901-9488; www.neutrik.com

Field-reprogrammable link enables PC-based communications between Minilyzer and Digilyzer; consists of a small plug-in USB communications interface board that can be retrofitted inside all Minilyzers and Digilyzers.

SYNC GENERATOR
DK AUDIO PTV PT5202
800-421-0888; www.dk-audio.com

Compact VariTime sync generator includes all features necessary for professional sync, timing and test signals in one half-sized box; front panel controls enable users to operate the sync generator without a PC.

SYSTEMS INTEGRATION SERVICES
THE SYSTEMS GROUP
201-795-4672; www.tsg-hoboken.com

Consults, designs, engineers and integrates electronics for modern broadcasting facilities; has completed multichannel origination and master control consolidation projects.

DIGITAL IOT TRANSMITTER
AXCERA VISIONARY DT
724-873-8100; www.axcera.com

Uses a DT2B-based exciter driving LDMOS IPAs for continuous linear and nonlinear adaptive pre-correction; exciter can be locked to any precision 10MHz standard for a ±2Hz frequency stability.

DVB-MHP MIDDLEWARE
ALTICAST ALTICAPTOR
512-225-6665; www.alticast.com

Capable of running on existing set-top boxes; includes an optimized pljava-based Java Virtual Machine; supports major chipsets and major RTOSs; offers a small DRAM and Flash footprint.
**Product Source**

**HD SET-TOP BOX**

**SCIENTIFIC-ATLANTA EXPLORER 3250HD**

770-236-6190; www.scientificatlanta.com

Features more audio options, and new stretch and zoom capabilities for HDTVs; utilizes a 166MHz processor; provides 40MB of application and program memory to manage multiple tasks and applications.

**SERVER UPGRADE**

**QUVIS QUBIT MODEL ST**

785-272-3656; www.quvis.com

Features 50 video/graphics formats; includes QSDTI, a new high-speed media transport interface; redesigned audio processing architecture; hot swappable drive support; two front removable drives.

**8-VSB DEMODULATOR**

**TANDBERG TELEVISION TT6330 MEDIALINK**

407-380-7055; www.tanbergtv.com

Demodulates off-air 8-VSB signals into individual ASI streams for remultiplexing and remodulation prior to transport through a cable network; features multichannel capacity.

**DATACASTING SYSTEM**

**TRIVENI DIGITAL SKYSCRAPER**

609-716-3500; www.trivendigital.com

Platform for managing data to be broadcast through the digital television infrastructure; new features for receiver targeting, encryption and support for multi-station networks provide increased opportunities for broadcasters, and content providers to design and deploy innovative, revenue-generating solutions using digital television.

**AUDIO MODULE**

**AUDIO PROCESSING TECHNOLOGY APT-X MODULE**

+028 9037 1110; www.aptx.com

Utilizes 2.4GHz Bluetooth; designed to offer third-party manufacturers a module for wireless speaker, headphone, microphone, in-ear monitoring and PA systems; offers 20kHz bandwidth at a sub five-millisecond delay; additional features includes reverse control channel, forward error protection and adaptive frequency hopping.

**8-VSB DEMODULATOR**

**TANDBERG TELEVISION TT6330 MEDIALINK**

407-380-7055; www.tanbergtv.com

Can record and play back the 1920x1080 HD format at 23.98p, 24p, 25p, 30p, 50i or 59.94i; can also record and play back the 1280x720@59.94p HD format; can play back all existing HDCAM tapes; captures all of these formats at 10-bit depth, records 12 channels of 24-bit audio; features dynamic tracking playback, pre-read, and edit confidence and record monitoring.

**STUDIO EDITING VTR**

**SONY ELECTRONICS SRW-5000 MEDIALINK**

201-930-1000; www.sony.com/professional

Can record and play back the 1920x1080 HD format at 23.98p, 24p, 25p, 30p, 50i or 59.94i; can also record and play back the 1280x720@59.94p HD format; can play back all existing HDCAM tapes; captures all of these formats at 10-bit depth, records 12 channels of 24-bit audio; features dynamic tracking playback, pre-read, and edit confidence and record monitoring.

**PHANTOM POWER TESTERS**

**CANFORD P-48 AND PHANTOM TONE GENERATOR**

+44 191 418-1000; www.canford.co.uk

Delivers up to 48TB of data per library at an unprecedented 400MB/s; Each library can sustain up to a maximum of 400MB/s of I/O compared with tape speeds of 20MB/s; the self-monitoring analysis and reporting technology (SMART) tool helps avoid data loss by serving as an early warning system to disk failure; available in three basic configurations.

**CONTENT MANAGEMENT SYSTEM**

**PANASONIC DCM SOLUTION**

201-392-4127; www.panasonic.com

Expanded digital content management powered by SISCOM software; features Windows Media 9 encoding/decoding; system provides proprietary digital logging and retrieval platform.

**MODULAR DVR**

**LEITCH NEO VR**

757-548-2300; www.leitch.com

Full-featured modular digital video recorder packaged on a single, space-saving module; equipped with dual fixed onboard hard drives, can record a total of four hours of high-quality programming; up to 12 units to be housed in a single frame. Supporting industry-standard control protocols, the NEO VR operates with existing VTR control panels.

**TRANSPORT STREAM MONITOR**

**SENCORE TSM 1770**

605-339-0100; www.sencore.com

Performs confidence monitoring of up to four transport streams in real time; can analyze individual streams up to 213MB/s with a maximum total bandwidth of 320MB/s.

**NEWSROOM SYSTEM**

**AVID INEWS**

978-640-6789; www.avid.com

Offers advanced machine control, the ability to store CGs with the script, and the synchronicity of words with pictures inside NewsCutter and Media Browse systems; ControlAir system controls up to 32 on-air playback devices.
PRODUCT SOURCE

MSDC IOT TRANSMITTER
AI QUANTUM
888-881-4447; www.acrodyne.com
Offers a single-cabinet version for power levels up to 30kW; Remote Parameter Monitoring and Control system (RPM) allows monitoring through a standard internet connection.

VIDEO TAPE RECORDER
PANASONIC AG-DV2500
201-352-4127; www.panasonic.com
Studio or portable VTR, suitable for IEEE-1394-based nonlinear editing applications; offers playback compatibility with 1/4-inch tape-based DV compression video formats and can operate in both NTSC and PAL television standards; can either be AC- or DC-powered, and records on miniDV cassettes or full-sized DV cassettes without the need for an adaptor; the maximum recording time is 276 minutes on a single cassette.

DV DISK RECORDER
FOCUS ENHANCEMENTS FIRESTORE
DR-DV5000
408-866-8300; www.focusinfo.com
Up to six hours of DV video can be recorded to a single removable disk drive; unit weighs two pounds and mounts directly between the video camera body and battery system.

MASTER SYNC/CLOCK GENERATOR
EVERTZ
5600MSC
905-335-3700; www.evertz.com
Provides a range of synchronizing signals and locks the in-house master clock system to the master video sync pulse generator; six independently phasable reference outputs and two independent LTC time code outputs.

GALLERY

Edit Sweet

The Benchmark System 1000 is the perfect tool set for the audio-for-video and broadcast professional. Twelve audio module positions are available for a diverse range of devices. The sonic performance of each System 1000 module is absolutely unsurpassed. This becomes paramount as customers demand ever increasing quality.

Call today for configuration options and cost effective pricing on the System 1000.

GALLERY

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SOFTWARE SUITE HAS BEEN EXTENDED TO SUPPORT DISTRIBUTED BROADCAST MODELS SUCH AS CENTRALCASTING; MEDIA AND METADATA CAN BE TRANSFERRED BETWEEN MULTIPLE MAPP SYSTEMS AND THIRD-PARTY MANAGEMENT PRODUCTS; SYSTEM NOW CHECKS QUALITY OF MATERIAL AUTOMATICALLY DURING ACQUISITION.

FORTEL DTV FS-415
770-806-0234; www.forteldtv.com

For applications in which analog IO is not needed; features a modular design and up to nine A/V synchronizers or 18 video-only in one 4RU frame with redundant power supplies.

ROBOTIC CAMERA CONTROL
VINTEN AUTOCAM CONTROLLERS
888-284-6836; www.vinten.com

Series 200 controllers enable control of from eight up to an unlimited number of cameras; PCS-125 controller is an entry-level single-camera mobile software control solution for any Windows-based PC or laptop.

CONSULTING SERVICES
DIELECTRIC COMMUNICATIONS
207-655-4555; www.dielectric.com

Designs, engineers and manufactures broadcast antennas for DTV and NTSC, FM antennas, combiners, switches, transmission lines, waveguides and dehydrators; provides custom solutions for its customers' unique requirements.

SIGNAL PROCESSING PRODUCTS
NETWORK ELECTRONICS CONQUER
631-928-4422; www.network-electronics.com

A new line synchronizer, video delay, multiplexer and serial digital video DAs complement A/D and D/A video and audio converters, embedders, de-embedders, frame synchronizers, DAs, and video and audio delays.

EDITING SYSTEM
QUANTEL EQ
203-972-3199; www.quan tel.com

Resolution Coexistence allows material of any resolution, color space and bit depth to be loaded without the need to restart or partition the disk; timeline interface provides easy access to editing tools, comes with RAID disk protection; supports 16-bit processing with Quantel's Dynamic Rounding.

CINE-STYLE ZOOM LENS
FUJINON HA13X4.5B
973-633-5600; www.fujinon.com

Features a 4.5mm focal length at its widest end; provides a 93.6-degree horizontal field of view and focus rotation up to 280 degrees for easier and more exact focusing, with little focus breathing.

Advertiser Index

<table>
<thead>
<tr>
<th>Advertiser</th>
<th>Website Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew Corp.</td>
<td><a href="http://www.andrew.com">www.andrew.com</a></td>
</tr>
<tr>
<td>Anton-Bauer</td>
<td><a href="http://www.antonbauer.com">www.antonbauer.com</a></td>
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<tr>
<td>ARRI</td>
<td><a href="http://www.arri.com">www.arri.com</a></td>
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<tr>
<td>Axercia</td>
<td><a href="http://www.axercia.com">www.axercia.com</a></td>
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<tr>
<td>Benchmark Media Systems</td>
<td><a href="http://www.benchmarkmedia.com">www.benchmarkmedia.com</a></td>
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<td>BTX</td>
<td><a href="http://www.btx.com">www.btx.com</a></td>
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<td>Canon USA Broadcast Lens</td>
<td><a href="http://www.canonbroadcast.com">www.canonbroadcast.com</a></td>
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<td>ESE</td>
<td><a href="http://www.eve-web.com">www.eve-web.com</a></td>
</tr>
<tr>
<td>Evertz Microsystems</td>
<td><a href="http://www.evertz.com">www.evertz.com</a></td>
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<td>Harris Corp., Broadcast Div.</td>
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<td>Lectrosonics</td>
<td><a href="http://www.lectrosonics.com">www.lectrosonics.com</a></td>
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<td>Leitch</td>
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<td>Patchamp</td>
<td><a href="http://www.patchamp.com">www.patchamp.com</a></td>
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<tr>
<td>PESA Switching Systems</td>
<td><a href="http://www.PESA.com">www.PESA.com</a></td>
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<td>Pro-Bel</td>
<td><a href="http://www.pro-bel.com">www.pro-bel.com</a></td>
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<td>Switchcraft</td>
<td><a href="http://www.switchcraft.com">www.switchcraft.com</a></td>
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<tr>
<td>Technical Operations</td>
<td><a href="http://www.tech-ops.com">www.tech-ops.com</a></td>
</tr>
<tr>
<td>Thomson Grass Valley</td>
<td><a href="http://www.thomsongrassvalley.com/newsproductions">www.thomsongrassvalley.com/newsproductions</a></td>
</tr>
<tr>
<td>Utah Scientific</td>
<td><a href="http://www.utahscientific.com">www.utahscientific.com</a></td>
</tr>
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<td>Videotek</td>
<td><a href="http://www.videotek.com">www.videotek.com</a></td>
</tr>
<tr>
<td>Wheatstone</td>
<td><a href="http://www.wheatstone.com">www.wheatstone.com</a></td>
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<tr>
<td>Zandar Technologies</td>
<td><a href="http://www.zandar.com">www.zandar.com</a></td>
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Advertiser Hotline

<table>
<thead>
<tr>
<th>Advertiser</th>
<th>Website Address</th>
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<tbody>
<tr>
<td>Andrew Corp.</td>
<td><a href="http://www.andrew.com">www.andrew.com</a></td>
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<tr>
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<td><a href="http://www.antonbauer.com">www.antonbauer.com</a></td>
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<td>ARRI</td>
<td><a href="http://www.arri.com">www.arri.com</a></td>
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<td>Axercia</td>
<td><a href="http://www.axercia.com">www.axercia.com</a></td>
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<td>Benchmark Media Systems</td>
<td><a href="http://www.benchmarkmedia.com">www.benchmarkmedia.com</a></td>
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<td>BTX</td>
<td><a href="http://www.btx.com">www.btx.com</a></td>
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<td><a href="http://www.canonbroadcast.com">www.canonbroadcast.com</a></td>
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<td>ESE</td>
<td><a href="http://www.eve-web.com">www.eve-web.com</a></td>
</tr>
<tr>
<td>Evertz Microsystems</td>
<td><a href="http://www.evertz.com">www.evertz.com</a></td>
</tr>
<tr>
<td>Harris Corp., Broadcast Div.</td>
<td><a href="http://www.harris.com">www.harris.com</a></td>
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<td>Lectrosonics</td>
<td><a href="http://www.lectrosonics.com">www.lectrosonics.com</a></td>
</tr>
<tr>
<td>Leitch</td>
<td><a href="http://www.leitch.com">www.leitch.com</a></td>
</tr>
<tr>
<td>Patchamp</td>
<td><a href="http://www.patchamp.com">www.patchamp.com</a></td>
</tr>
<tr>
<td>PESA Switching Systems</td>
<td><a href="http://www.PESA.com">www.PESA.com</a></td>
</tr>
<tr>
<td>Pro-Bel</td>
<td><a href="http://www.pro-bel.com">www.pro-bel.com</a></td>
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<tr>
<td>Switchcraft</td>
<td><a href="http://www.switchcraft.com">www.switchcraft.com</a></td>
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HP75BNC Series:
- **True 75 Ohm** impedance
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Front Access Audio Patchbay:
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- All jacks are nickel-plated, steel frame, with gold-plated crossbar contacts
- Part of a complete line of audio patchbays, call for details

Video Patchbays:
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- VPP standard High Definition version rated at 2.4Ghz
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