

Radio

THE RADIO TECHNOLOGY LEADER

www.beradio.com

PRODUCT SOURCE

A PRIMEDIA Publication

A supplement to Radio magazine

THE BEST TECHNOLOGY IN TOWN

Portable Production ^{pg} 10
SPECIAL SECTIONS

Beyond These Walls ^{pg} 24
SPECIAL SECTIONS

Out and About ^{pg} 16 Reference Room ^{pg} 42

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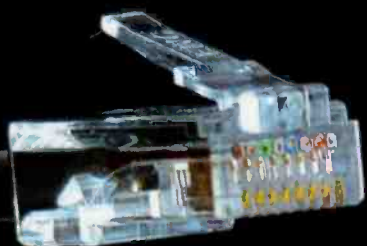


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HARRIS

2005 PRODUCT SOURCE

Technology is on the menu

Feast on more than 170 products to fit various station sizes and budgets. Many of the products featured in this year's Product Source debuted at NAB2005, including a review of the *Radio* magazine 2005 Pick Hit award recipients. The *Radio* magazine 2005 Product Source is a resource that you can refer to throughout the coming year.

This year's edition includes five additional courses in the special sections. Peruse these sections for items that may have a special use at the transmitter site, on a remote, in the field production kit or on a bookshelf. Some of the items are not the usual broadcast fare, so they may fill that special need that you may have. An additional special section has been added this year: HD Radio Receivers. If HD Radio equipment is on your table, we've listed several manufacturers of home and vehicle receivers, as well as a brief description of each one.

Also, I welcome your feedback on this annual supplement. Perhaps you use a product that has filled a need like no other. Tell us about it, and we'll add it to the menu. E-mail your comments and suggestions to radio@primediabusiness.com.

Kari Taylor

Kari Taylor,
associate editor

Special Section Index

Portable Production	10
Out and About	16
Beyond These Walls	24
HD Radio Receivers.....	36-37
Reference Room.....	42

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A PRIMEDIA
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Tieline **G3** Vs Telos Xport... You Decide.



Telos has recently published comparisons between their Xport POTS Codec and the Tieline Commander **G1** Codec which has been obsolete since November 2004. Here is a comparison with the current Commander G3.

Tieline Commander **G3** Vs Telos Xport

Feature	Tieline Commander G3	Telos Xport
POTS to POTS connection	Yes	No - POTS to ISDN only
POTS Audio Delay	100 Miliseconds	>600 Miliseconds
Maximum POTS Audio Quality	15kHz	15kHz
Low bit rate audio quality over POTS	7kHz as low as 9.6kbps	Telephone quality below 16kbps
15kHz Bi-Directional Audio over POTS	Yes	No - 15kHz 1 way only
POTS Compatibility	Yes Comrex/Musicam	No
Intelligent Gain Control	IGC + AGC	AGC
Warranty	2 Years	1 Year
Expansion Ports	2	1
12 Volt DC portable power options	Yes	No
Simultaneous duplex Comms and Talkbalk*	Yes	No
Remote Control Talent's audio Inputs	Yes	No
Stereo 15kHz over POTS*	Yes	No
Dual Mono 15kHz POTS*	Yes	No
Bonded POTS* Up to 48kbps mono	Yes	No
Audio Over IP Codec to Codec*	Yes	No
Weight	4 lbs	7 lbs
Dimensions	8.5x8.5x2.9 inches	9.25x12.75x3.5 inches
GSM 7.5kHz Wireless*	Yes	No
ISDN Options	Mono, Stereo, J-Stereo	Mono
ISDN Algorithms	Mpeg Layer 2, G.722, G.711, Tieline Music	AAC+, AAC LD, G.722
15kHz stereo/dual mono over 1 x 64K channel	Yes	No
User Remote Profiles	98	30
Configurable Macro Function Options	Hundreds	No
User configurable program/monitoring/comms	built in 11 x 6 cross point audio router*	No
Split Phones - Monitoring/Comms	Yes	No
List Price per pair **	\$5,750 (2x G3)	\$6,850 (Xport / Xstream)
Link Renegotiation	1 second	5-6 Seconds
Control Inputs and Outputs	2 in 2 out (Exp to 16 in/out)	3
Automatic Failover	Yes - to 15kHz POTS 2	Y

2005 PRODUCT SOURCE

USB audio interface Digigram



UAX220: This USB audio interface was specifically designed for broadcast and pro audio applications. Supplied in a 17cm x 22cm bag, the unit features two balanced analog inputs and two balanced analog outputs on Neutrik XLRs, 24-bit/48kHz resolution, a dynamic range greater than 103dB (A-weighted) and a 1/4" headphone output. Once connected

to a USB port on a computer (Windows 2000 and XP, Mac OS X, Linux), the unit is automatically recognized as a USB audio-compliant device without needing additional drivers. External power is not required.

703-875-9100; fax 703-875-9161; www.digigram.com; input@digigram.com

Adapter Pomona Electronics



XLR/Triple Binding Post/RJ11: The adapter simplifies connections to phone lines for ring down tests of audio lines or for phone communications across audio cables. The adapter features gold-plated pins and binding posts for connectivity. The three color-coded,

five-way binding posts (for high, low and ground terminals) accept bare wires via the through-holes, alligator clips, spade lugs and single, dual or triple banana plugs connected vertically or horizontally. The connector is available in four configurations: models 7288 (male) and 7289 (female) XLR/triple binding post to RJ11 connectors and 7286 (male) and 7287 (female) XLR/triple binding post connectors.

800-490-2361; fax 425-446-6070; www.pomonaelectronics.com; info@pomonatest.com

DAW remote control Merging Technologies

Isis Remote Controller, Isis Fader Expansion: The main controller features large dedicated machine control keys, high-resolution jog/shuttle/scrub functionality and jog-wheel editing capabilities. A range of user-assignable keys positioned around a large LCD screen enables multi-functional key operation, also allowing the user to custom define the key labelling. The main unit offers a master fader section and 24 additional user-definable keys across two layers that can be used as 48 direct access solo/mute/track arming keys, locators, cue triggers or any other chosen function. There is a separate and optional eight-fader expansion unit with eight rotary encoders, and both units use 100mm touch sensitive moving faders with dedicated solo, mute, read and write automation keys.

858-675-9703; fax 847-272-0597
www.merging.com; info.america@merging.com



Broadcast furniture Omnirax

Innova: CAD/CAM manufacturing processes are used in the furniture line to ensure precision fit and finish, repeatability and ease of modification. Layouts are fit tested and photo-documented prior to shipment. Surfaces are typically high-pressure laminate with a variety of substrates. Other options

include solid surface and Marmoleum for countertops. Edges are finished with matching or contrasting tee-molding for comfort and durability.

800-332-3393; fax 415-332-2607; www.omnirax.com; info@omnirax.com

Headphones Ultrasone



DJ1 PRO: These headphones use Ultrasone's S-Logic technology with standard EMF radiation protection up to 98 percent, detachable cables, a replacement pair of speed-switch ear pads and replaceable drivers. One of the detachable cables comes with volume control and a stereo/mono switch for use in the live performance environment. The headphones offer a frequency range of 10Hz to 22kHz with an impedance of 64Ω.

615-599-4719; fax 615-599-5493
www.ultrasoneusa.com; ears@earsaudio.com

CAT-5 UPS MGE UPS Systems

Power over Ethernet: The PoE midspan products provide continuous power to remotely connected IP telephones, wireless LANs, Bluetooth access points and IP-powered video surveillance and security systems, when used in conjunction with an uninterruptible power supply. This product integrates power and data onto a single CAT5/5e and 6 cabling infrastructure. The 24-port, 10/100 Mb/s midspan resides between the Ethernet switch and the connected equipment to provide 15.4W of 48V dc power per port. The 1RU midspan features auto-sensing algorithms for non-powered device protection. The remote management provides immediate alerts, responds to changes to the IP phones in the field and enables remote devices to reset. The units feature front-panel LEDs to indicate system status and power supply to RJ45 ports.

800-523-0142; fax 714-557-9788; www.mgeups.com; info@mgeups.com

Digital monitoring system Genelec



8130A: Featuring a 192kHz/24-bit digital audio interface, AES/EBU digital and analog audio inputs, as well as automatic detection of word length and sampling frequency, the 8130A is the latest addition to the 8000 MDE Series of bi-amplified active monitors. The unit features a 5" bass driver along with a 3/4" tweeter loaded into an advanced DCW. The free-field frequency response is 58Hz to 20kHz (±2.0dB). Peak SPL per pair is 108dB, driven by a pair of 40W amplifiers.

508-652-0900; fax 508-652-0909; www.genelec.com; genelec.usa@genelec.com

DJ mixers Soundcraft USA



URE1620LE, 1601, 1601S: Features of the 1620LE include six input channels—two phono and four aux inputs—headphone monitoring of any input and two-band EQ on the output. The 1601 features selectable line or phono inputs and three-band EQ on each channel, high-pass filters for removing turntable rumble or stage noise, an FX send and return loop with selectable signal feed locations, and an independent mic/line input with two-band EQ. Each input fader has selectable response curves, as does the cross-fader. The headphone outputs offer an EQ control. Two sets of dual 10-segment LED meters show the input and output levels. Outputs are on balanced XLR and unbalanced RCA-phono connectors. The 1601S is identical to the 1601, but also offers a two-bank, 32-beat, 96kHz/24-bit auto-looping sampler with one-shot and reverse functions.

818-920-3212; fax 818-920-3208; www.ureidj.com; soundcraft-usa@harman.com

Six-channel mixer Tapco



Blend 6: A six-channel mixer, this product features Mackie-designed mic preamps and impact-resistant knobs that are mounted so they ride just above the steel chassis, absorbing the impact from errant users. It features two mic preamps, two dedicated instrument inputs, stereo aux return to monitor and two aux sends.

425-487-4333; fax 425-487-4337
www.tapcogear.com; sales@tapcogear.com

Bass controller Waves

MaxxBCL: Waves' algorithm adds bass sound without adding bass frequencies. To provide more control, a high-pass filter can be switched in, allowing the harmonics only to be passed along as an image of the original bass frequencies. The unit's maximum analog input gain is 24dBu and



its input impedance, balanced input is 32kΩ at 1kHz. The frequency response is 10Hz to 24kHz from -0.1dB at 10Hz +0.01 at 24kHz. The THD + N is 0.0006 percent at 1kHz at -1dBFS.

865-546-6115; fax 865-546-8445; www.waves.com



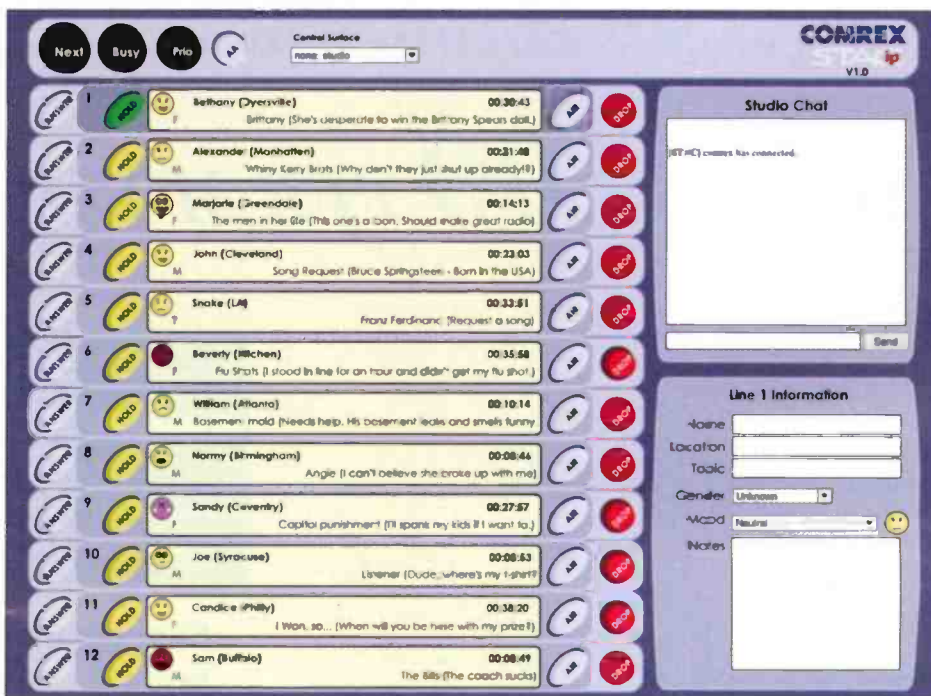


GOT CALLERS? STAC 'EM!

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The STAC system is available in six (STAC 6) and twelve (STAC 12) line versions. Connect up to four control surfaces using standard CAT5 cable — no custom cabling required. Best of all, STAC is incredibly easy to use — anyone can master it in seconds.



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- **Busy-All** makes starting contests a breeze.
- **Auto-Attendant** answers, plays your message and STACs callers on hold. Great stress relief for screeners and producers!



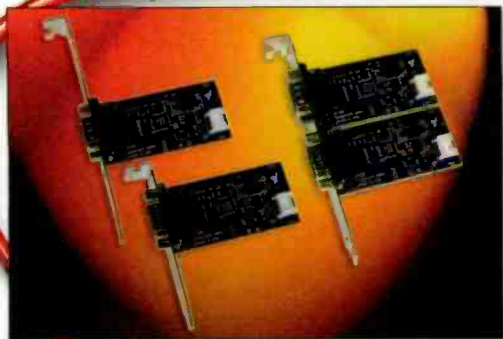
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COMREX

2005 PRODUCT SOURCE



Serial adapter Sealevel

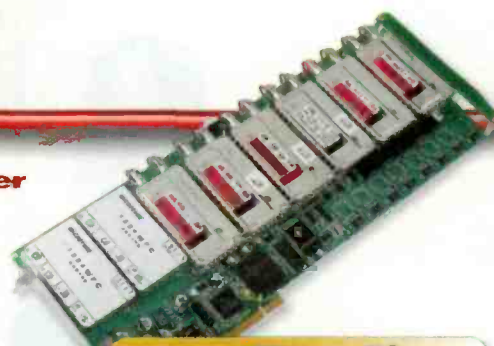
Sealink+232.PC: Sealevel Systems has produced internal USB to RS-232 serial adapters, available in one-port and two-port models. These devices mount directly to a PC's chassis, eliminating the need for external converters. All models are USB bus powered, capable of data rates to 46Kb/s, and install inside the computer in a spare bracket location.

The single port adapter is available with a low-profile PC bracket or standard PC bracket, while the two-port model ships with a standard PC bracket. The adapter includes a 14" cable that connects to most motherboard USB box header connectors and uses only one USB port per serial port.

864-843-4343; fax 864-843-3067; www.sealevel.com; sales@sealevel.com

Broadcast tuner adapter Audio Science

ASI8702 and ASI8703: The ASI8702 is a universal PCI card that contains eight AM/FM tuners. Each tuner may be set to an independent AM or FM radio station. The audio from each tuner is presented to the computer host as a mono or stereo record stream that may be accessed through a high speed bus master interface. The ASI8703 contains eight FM/TV audio tuners. The AM portion of each tuner (ASI8702 only) has a medium-wave tuning range of 520kHz to 1,750kHz. FM capabilities include a tuning range of 76MHz to 108MHz with software-controlled stereo decoding. An onboard 225MHz 32-bit floating point DSP from Texas Instruments provides audio routing, processing and streaming allowing up to eight stereo streams to be sent to the host PC for recording or further analysis.



302-324-5333; fax 302-738-9434

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...the risk free automation system
XTREME-digilink



Portable PA Yamaha



Stagepas 300: This system includes a powered mixer and two speakers for a self-contained PA. The speakers are two-way bass reflex cabinets. The eight-channel powered mixer includes four mic inputs, two stereo line inputs, a 150W per channel stereo power amp and digital reverb. The mixer can be mounted on a mic stand, or it can be left inside the storage compartment of one speaker during operation. The other speaker has a storage compartment for the included power cable and speaker cables. There is also room to pack a microphone.

714-522-9000; fax 714-522-9522
www.yamaha.com/proaudio

Solid-state transmitter OMB America

EM 2000: This 2kW FM transmitter includes four 600W high-efficiency MOSFET amplifier modules fed by two independent switching power supplies. The amplifier modules work independently through an isolated, power-combining structure. The unit features a low-pass filter at the antenna output, EMI filters at the utility connection and an internal transient suppressor. The LCD display provides the amplifier parameters: supply voltages, eight module currents, direct, reflected and input power, power loss in the internal unbalance load and three temperature sensors.

800-662-4872; fax 305-477-0611
www.omb.com; usa@omb.com

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20
15
10 1/2
5

SPECIALS

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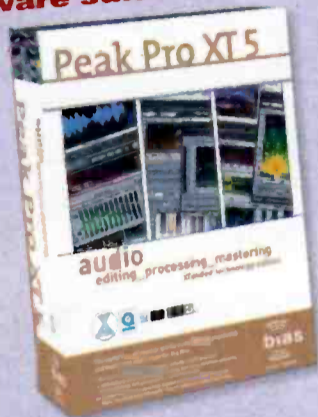
Editing software suite

Bias

Peak Pro XT 5: This suite of software includes Peak Pro 5, five new Bias plug-ins, Superfreq EQ, Soundsoap and Scundsoap.

Pro Peak Pro 5 is an upgrade to stereo recording, editing, mastering and delivery software for Macintosh. New features in Peak Pro 5 include a new playlist with graphic view, replication-ready CD burning with ISRC entry, PQ subcode editing, track indexes and CD-text, optional extension for DDP file export, audio units and VST instrument support, and improved on-board DSP including change pitch, change duration and sample rate conversion.

800-775-2427; www.bias-inc.com



Audio interface

Edirol

UA-101: This USB audio interface provides 10 inputs and 10 outputs with 24-bit/96kHz resolution with MIDI I/O in a half-rack unit.

It includes drivers with WDM and ASIO 2.0 support. As many as 10 channels of audio at 24-bit/96kHz, or six channels of audio at 24-bit/192kHz can be recorded. Two mic preamps are included on the XLR/TRS combo jack is equipped with a Hi-Z input to connect a guitar or bass without a direct box. An analog limiter is available on the inputs. The remaining six TRS jacks provide balanced inputs that are switchable between +4 or -10dBu. There are optical S/PDIF in and out. There are eight TRS balanced outputs a S/PDIF output plus a L + R monitor output. All settings and routing can be made through the control panel software. The USB port is switchable between USB 2 and 1 for greater compatibility.

360-594-4273; fax 360-594-4271; www.edirol.com; sales@edirol.com



USB hub

Targus

Notebook Chillhub: This is a fan-based notebook cooling pad with an integrated four-port USB 2.0 hub that implements a two-fan cooling system to silently draw heat from the notebook and prevent the CPU from overheating during use. The four-port USB 2.0 hub for accessory expansion supports low-speed, full-speed and high-speed throughput. Users can attach multiple devices such as a mouse, keyboard or external drive. The hub also features overcurrent protection on all four ports. This feature will shut down an overloaded port if the connected peripheral requires more power than the hub can supply while continuing to supply power to the other three ports. Measuring 11.75" x 9" x 0.8", the hub fits under a notebook and can be powered by the computer using the included upstream cable or by the included ac adapter.

877-482-7487; fax 714-765-5599
www.targus.com; sales@targus.com



USB flash drive

Lexar Media

Jumpdrive Touchguard: With this drive a user can carry website

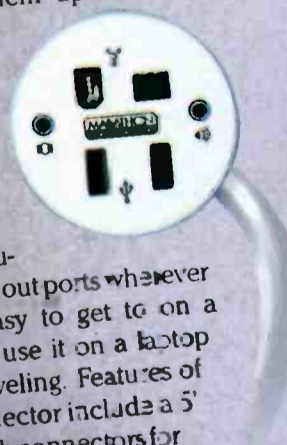


USB extension

Marathon Computer

Reporter: A single cable houses connectors to the rear panel ports and puts them up front where users need them. The unit puts two USB ports, Firewire 400 and 800 and audio in and out ports wherever they're easy to get to on a desk. Or use it on a laptop when traveling. Features of this connector include a 5' cable with connectors for each of a computer's rear ports, two USB Type A standard ports (supports USB 2.0), audio-in minijack (1/8"), stereo audio-out minijack (1/8") and USB ports that light when plugged in.

fax 615-367-6488
www.marathoncomputer.com
info@marathoncomputer.com



Retractable computer cables

Tiger Direct

Ultracord: This 50" RJ-45 cable fits easily into any notebook carrying case or pocket. Connect to any computer or network with this retractable cable. Because it retracts into a compact, portable unit, it is useful for traveling.

800-800-3300; fax 305-415-2202
www.tigerdirect.com

Wireless modem jack

RCA

RC930: With this 56K modem jack any electrical outlet can be turned into a modem jack. The jack offers built-in surge protection and the ability to send and receive data and faxes. The system contains the base unit, extension unit and 6' phone cord. It works with PCs, TV Internet boxes, internal or external modems, corded phones, cordless phones answering machines and fax machines. It's compatible with call forwarding, call waiting, three-way calling, conference calling, caller ID and other phone services.

www.rca.com



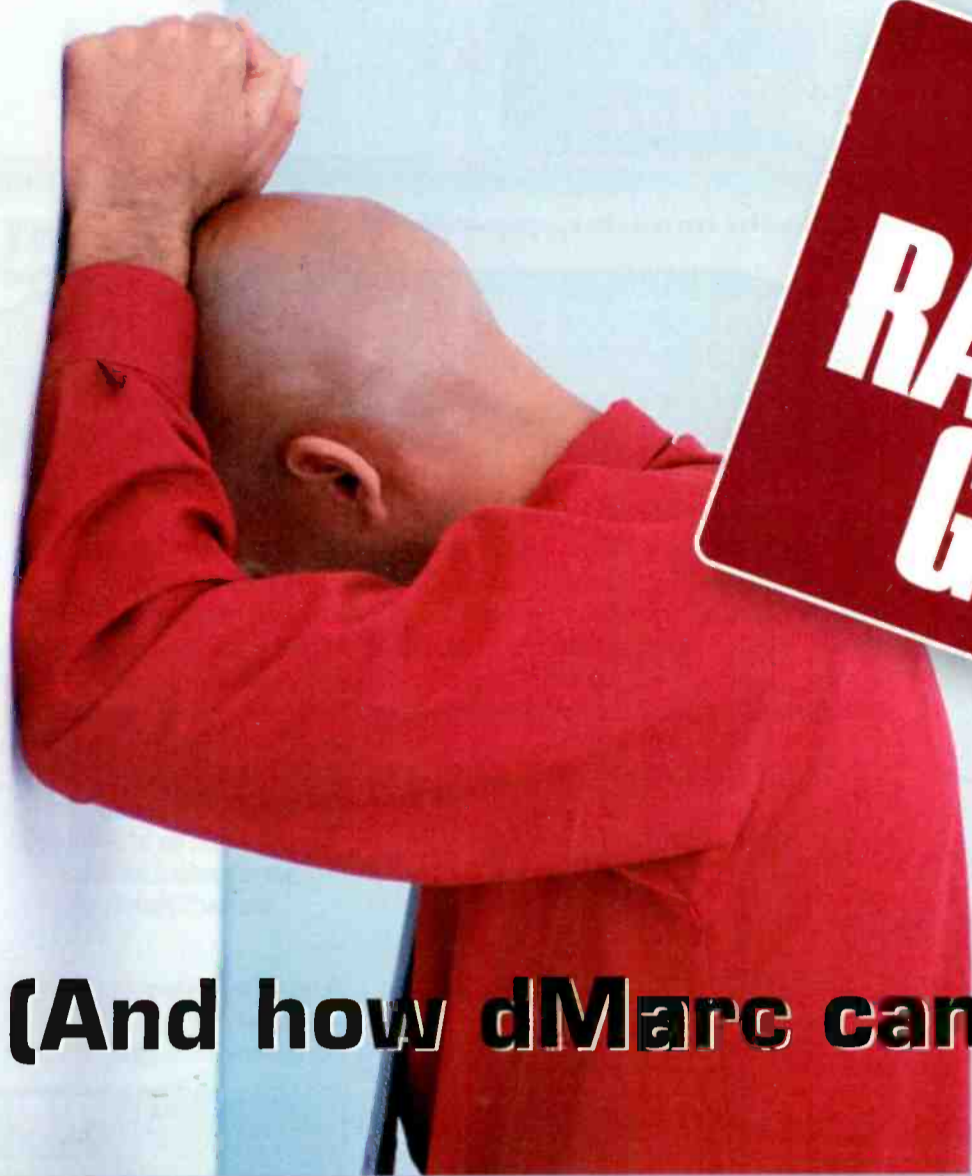
login information, as well as browser favorites. Users can login to websites automatically without installing software. Encrypt and decrypt any file on a computer or on the Jumpdrive with AES 256-bit encryption. No drivers are required and an interactive tutorial with instructions is provided. The specifications of this drive are read speed: 12MB per second; write speed: 6MB per second; and dimensions: 87.1mm x 23.5mm x 12.2mm. The system requires Windows XP Home or Professional, Service Pack 1 or later; Windows 2000 Professional, Service Pack 4; an Internet connection with Internet Explorer 6.0, Service Pack 1 or later, and one available USB port.

510-413-1200; fax 510-440-3499
www.lexarmedia.com; sales@lexar.com

2005 Product Source

Radio

THE RADIO TECHNOLOGY LEADER



**WHY
RADIO EXECS
GO BALD.**

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If stress doesn't kill you in this business, it can surely wreak havoc with your hair. Worries over expanding overhead costs, receding market shares, consolidation, struggles with your rep firm, or simply keeping up technically are enough to, well, make you want to pull your hair out.

Before that happens, check out the integrated new digital systems and media solutions from **dMarc**. We provide world class automation technology to more than 4600 broadcast clients, reaching over 40% of the stations within the top 50 radio groups. Through our pioneering **Scott Studios** and **Maestro** digital automation products, we've made station operations as simple as the touch of a finger on a screen or keyboard. With RevenueSuite, we make on-demand spot profitability not just a goal. But a reality.

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pull some profits. Call today.**

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www.dmarc.net

Maestro *Scott Studios*

Scott Studios and Maestro are Product Lines of dMarc

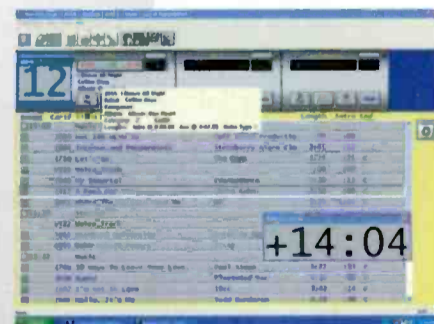
dMarc
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available from dMarc.**



SCOTT SS32

SS32 is the standard in broadcast digital audio. It combines powerful, intuitive software and industrial-grade hardware.



MAESTRO

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VISIT US AT NAB BOOTH 717!

2005 PRODUCT SOURCE

Telephone control panel Telos Systems

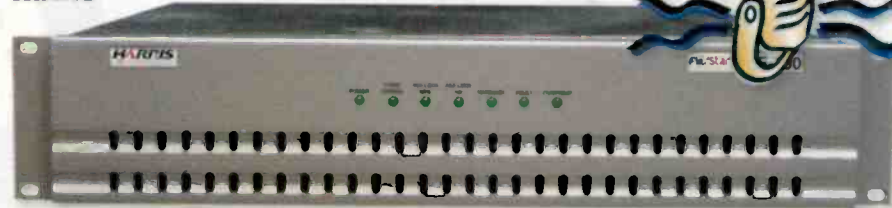


Call Controller: This unit adds a compact, flexible option for call screening and on-air control to the Twox12, the 12-line phone system designed specifically for talkshow production. Users can mix and match Call Controllers with Desktop Directors to customize control of their Twox12. Using Dual Studio mode, control of one of Twox12's two hybrids is assigned to each studio. On-air lines can now be shared between two studios, allowing the use of a Twox12 for simultaneous production

of live and pre-recorded talk segments. Twox12 works with analog or digital telephone circuits.

216-241-7225; fax 216-241-4103; www.telos-systems.com; telos-info@telos-systems.com

HD Radio importer, exporter Harris



Flexstar HDI-100 and HDE-100: The Flexstar HDI-100 data importer and HDE-100 program exporter can broadcast supplemental audio and implement data services, maximizing available bandwidth within the transmission chain. The HDI-100 importer accepts all advanced application services, including supplemental audio program streams. The HDE-100 exporter multiplexes the data leaving the importer with a station main program channel and feeds all the data as one bit stream to an HD Radio exciter. The Flexstar exciter is HD-Radio ready and can adjust the phase of the output for split-level combining applications.

800-622-0022; fax 513-459-3890

www.broadcast.harris.com

broadcast@harris.com

RoadStar™ & NetStar™

On the road or in the studio, deliver perfect stereo via IP or ISDN



Both RoadStar and NetStar come complete with IP and ISDN connections, AAC, AAC Low Delay, MPEG 2, MPEG 3, G.722 and G.711 encoding, and can even send and receive linear uncompressed audio. Both are effortless to operate, with automatic recognition of the calling codec and a built in Web Server for remote control from anywhere. Both give you 8 contact closures and ancillary data. Both can automatically switch from IP to ISDN, or vice-versa, if the primary link becomes unreliable.

NetStar is rack or tabletop mount. RoadStar is portable, with a built-in 4-channel mixer, 48 VDC phantom power, analog and AES/EBU inputs and outputs and a dual headphone monitoring system. Now, you can take your stereo show on the road and deliver spectacular audio your way.



RoadStar rear panel

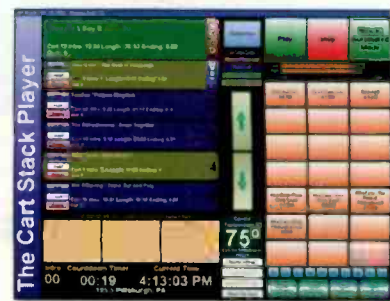


MUSICAM USA

MUSICAM USA is the d/b/a of Corporate Computer Systems, Inc.

670 North Beers Street, Bldg. #4
Holmdel, NJ 07733 USA
732-739-5600
732-739-1818 fax
sales@musicamusa.com
www.musicamusa.com

Automation software Program Orange



Cartstack: Designed for small and medium-scale radio stations, this software is compatible with Microsoft Windows 2000 and XP-based machine and requires no proprietary hardware. The system offers three automation types: satellite mode, full walk-away mode and live assist mode. It features built-in music scheduling, voice tracking and on-screen weather updates. Its interface provides an on-screen cart stack as well as instant-fire push-button carts. MP3, MP2, WAV and OGG files are supported. Full automation, live assist or satellite on-air system modes are available. Instant buttons allow users to define 210 audio cuts, playable at any time.

412-661-059; www.cartstack.com

sales@programorange.com

Technical consultation SCMS

Equipment dealer: A 28-year-old company in the broadcast industry, the computer division was formed in 1992 to address the digital revolution and new broadcast technology. The company represents more than 700 manufacturers. SCMS occupies a 12,000 sq. ft. facility capable of staging RF, computer or studio projects. This company is the exclusive Broadcast Electronics RF representative for the Southeast, and one of only three Wheatstone digital dealers. SCMS has five field offices across the United States.

800-438-6040; fax 704-889-4540

www.scmsinc.com; sales@scmsinc.com



Heavy-duty cases Road Ready Cases

RRUT1 and RRUT1E: These trunks are large enough to store oversized equipment and come with integrated casters and dishes on top to stack trunks on top of each other. The RRUT1E offers a storage capacity of more than 22 cubic feet, and the RRUT1 comes with eight adjustable/removable storage compartments and two take-out drawers to store smaller accessories. Recessed, industrial grade latches and recessed, spring-loaded handles are also features of these cases.

310-767-3536; fax 310-767-1798; www.roadreadycases.com; usa@roadreadycases.com

Transmission consultants

LBA Technology

AM equipment and services: Since 1963, Lawrence Behr Associates has provided consulting services to the telecommunications and wireless industry. The company offers its services in the areas of cellular, PCS, SMR, broadcasting, wireless cable and integrated broadband systems. The staff includes specialists in RF engineering, antenna design, AM detuning, facility shielding, zoning and litigation support, EMI resolution, radio frequency environment studies, project management, site acquisition and FCC regulations.

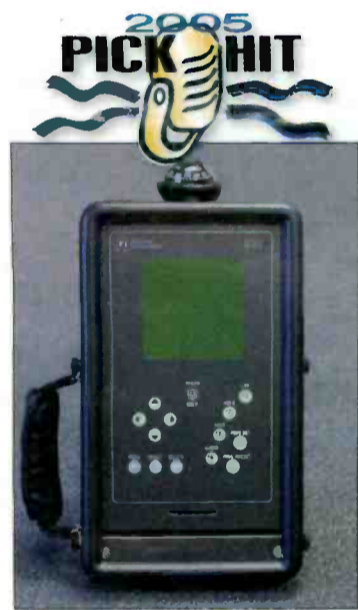
800-522-4464; fax 252-752-9155

www.lbagroup.com

lbagr@lbagroup.com

AM field intensity meter

Potomac Instruments



PI 4100: This meter measures electromagnetic field strength in the 520kHz to 5.1MHz frequency spectrum. This instrument combines a radio frequency voltmeter, a calibrated, shielded loop antenna, an internal GPS receiver, an internal calibration source and data acquisition hardware and software in a package weighing less than 3kg. Features of the meter include 116dB dynamic range RF voltmeter, digitally synthesized tuning in 1.0kHz increments and spectrum display to facilitate various compliance measurements (field strength, harmonic level and spectrum occupancy). The unit's data acquisition software and PC interface enable the collection, analysis and e-distribution of current field measurements.

301-589-2662; fax 301-589-2665

www.pi-usa.com; sales@pi-usa.com

www.beradio.com

Broadcast console Sierra Automated Systems

Rubicon SL: The Rubicon SL

radio broadcast console control surface is for the smaller market station or less demanding studio. Like its bigger brother

Rubicon, the SL offers complete integration with the SAS 32KD and the SAS Connected Digital Network, as well as stand-alone operation with the upgraded Riolink mixer and router.

818-840-6749; fax 818-840-6751

www.sasaudio.com; sales@sasaudio.com



New Nautel FM Digital Equipment



Ready for Digital. Ready for Anything.

Virtuoso V10

3 kW Digital, 7.7 kW Hybrid, 11 kW Analog Transmitter

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- Programmable frequency & power
- Better than 62% overall efficiency
- Compact, light weight rack (32" W x 72.5" H x 35" D) is ideal for tight spaces

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- Hot-pluggable RF modules
- Hot-pluggable PS modules
- Parallel rectifiers
- Redundant ventilation fans

More Duplication

- Dual digital exciters
- Dual IPA
- Dual IPA power supply
- Dual low voltage power supply

Maestro M50

Direct-to Channel Digital FM Exciter

- Plug-and-play integration with Nautel's NE IBOC FM signal generator for digital or hybrid transmission
- Built-in programmable analog modulation time delay is ideal for HD Radio or FM synchronous applications
- Links with Nautel FM transmitters to provide digital adaptive pre-correction
- Six programmable pre-selections for frequency, power and audio source
- Instantaneous remote or local selection of digital, hybrid or analog transmission modes
- Diagnostic 128 event time stamped log
- Built-in DSP stereo generator interpolates AES/EBU digital data or L&R analog audio to produce digital stereo composite
- Built-in SCA generators and RBDS/RDS coder
- Universal AC supply: 90 V to 264 V



Contact Nautel for details.

Phone: (207) 947.8200 | Fax: (207) 947.3693
info@nautel.com | www.nautel.com

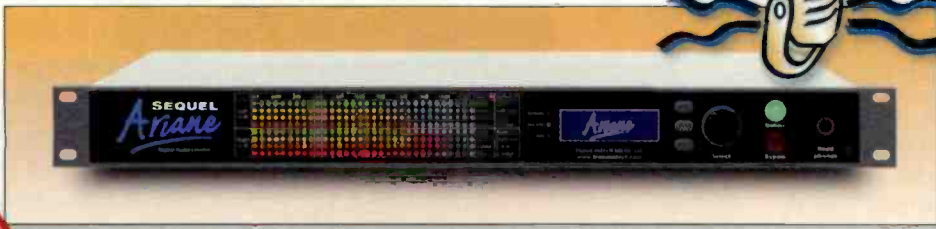
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S I M P L Y T H E B E S T E N G I N E E R E D T R A N S M I T T E R S

2005 PRODUCT SOURCE

Digital audio leveler Translantech Sound



Ariane Sequel: Like its analog predecessor, the Ariane Sequel features the company's sum-and-difference processing. The audio processing path is fully digital, not a hybrid analog/digital design. It provides independent two-channel and stereo-linked modes, protection limiting, input and output level metering, TCP/IP and RS-232 remote control and software upgrade capability. Adapting the Ariane leveler concept to a digital system was the result of Translantech's partnership with Broadcast Warehouse.

212-222-0330; www.translantech.com; david@translantech.com



Mic cables Audio-Technica

Premium and Value: The Premium microphone cables are balanced cables that feature 24-gauge stranded copper conductors and Neutrik connectors. Each conductor features a spiral shield inside the molded insulated sheath. A conductive PVC layer inside each shield dissipates static build-up during flexing. The A-T Value mic cables are available in two configurations (XLR to 1/4" and XLR to XLR) and come in a wide variety of lengths ranging from 10' to 25' (XLR to 1/4") and 10' to 50' (XLR to XLR). The Premium speaker cables

are available in four configurations: 1/4" to 1/4"; 1/4" to dual banana plug; Speakon to 1/4"; and Speakon to Speakon. The Premium cables are available with cable lengths as follows: 1/4" to 1/4", 3' to 50'; 1/4" to dual banana plug, 10' to 50'; Speakon to 1/4", 5' to 50'; and Speakon to Speakon, 5' to 50'.

330-686-2600; fax 330-686-0719; www.audio-technica.com; pro@atus.com

Condenser mic Studio Projects



CS series: The CS1, a single pattern large diaphragm condenser mic, offers three thumb-wheels that are positioned just under the windscreen, rotating perpendicular to the axis of the body, controlling high pass filters (50Hz, 75Hz, 150Hz and 300Hz), low pass filters (3kHz, 5kHz, 7kHz and 15kHz) and pad (5dB, 10dB, 15dB and 20dB). The CS3 is a dual diaphragm multi-pattern large diaphragm condenser. Combined with all the features of the CS1, a fourth thumb-wheel has been added to allow users to adjust pattern (cardioid, wide cardioid, hyper-cardioid, omni and figure eight).

310-323-9050; fax 310-323-9051; www.pmiaudio.com

Stereo headphone DA Sonifex



RB-HD2: The RB-HD2 is a two-way stereo headphone distribution amplifier for driving two pairs of professional stereo head-

phones from a single stereo or mono input. There are two rotary volume controls on the front panel and a stereo and mono switch located on the rear panel.

207-773-2424; fax 207-773-2422; www.independentaudio.com; sales@independentaudio.com

Transmitters Harris

3DX-25: This 25kW transmitter's direct digital drive technology conserves energy and improves modulation linearity and bandwidth for the transition to digital radio. The transmitter offers a linear power supply that protects the transmitter when turned on and eliminates separate step-start/run contactors and resistors. The transmitter's Intellistat diagnostic user interface features easy-to-read control and status parameters to verify transmitter performance.

800-622-0022; fax 513-459-3890; www.broadcast.harris.com; broadcast@harris.com

Snap, Crackle, Pop? Dropouts? Intermittents?



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sales@sencore.com

www.sencore.com

1-800-736-2673 or 1.605.339.0100

Multicasting.

It's like trying to fit —
well, you know.



Management has decided to multicast. Which seems like a terrific idea — until you consider just how little bandwidth each channel will get. How will the sound of your station(s) survive these shrinking bitrates? Omnia can help.

New Omnia Multicast with SENSUS™ restores the fullness and depth that bit-reduction steals. Our DSP gurus teamed up with the codec experts at Telos (the folks who introduced broadcasters to MP3 and MPEG AAC). Together, they developed a unique suite of tools to pre-condition audio for HD Radio™ multicasting.



Omnia Multicast with SENSUS codec conditioning, Omnia Bass Management system and distributed look-ahead limiter significantly improves the sound of HD multicast and other bit-reduced streams.

SENSUS technology enhances punch, preserves presence, and reduces artifacts. Even heavily bit-reduced channels (like multicast) can be significantly improved by Omnia running SENSUS. And like all Omnia processors, Omnia Multicast delivers the smooth, clean, pure signature sound that grabs your listeners and holds them hour after hour. No wonder the top stations around the world choose Omnia over all other processor brands.

Multicast like you mean it... with Omnia Multicast.



OmniaAudio.com

SPECIALS



Out and About

Useful items to simplify remotes

Portable PA system

Avlex

Mipro MA-707: Features of this system are its integrated 70W amplifier, a full-range 8" loudspeaker and built-in dual intelligent rechargeable gel cell batteries (five hours of continuous usage). The system offers an intelligent dual-bay NiMH battery charger for optional M8-20 transmitter batteries and an integrated mixer. The PA offers a luggage-pull design with retractable handle and bottom wheels as well as two built-in storage compartments. Other features include optional VHF or UHF diversity receiver plug-in modules, an optional auto-reverse cassette player and recorder module an optional CD player module, 100 to 265Vac auto-switching ac power supply. It weighs 28lbs. when full, loaded.



877-447-9216; fax 913-906-9225; www.avlex.com; sales@avlex.com

Docking station with built-in audio, video

Targus

Universal Docking Station: This mobile computing USB-based docking station offers stereo audio out and two always-on USB ports, allowing users to power peripheral devices such as phones and MP3 players while the laptop is in standby or shut-down mode. Docking a laptop is easy for users of multiple laptop models because it requires only a USB connection. The docking station includes four high-speed USB 2.0 ports, a video monitor port, 10/100 Base-T Ethernet, a serial port, a stereo audio out jack and a microphone audio in jack. The One Touch feature minimizes the time users need to prepare their work area and can function with any notebook platform with a USB 2.0 port.



877-482-7487; fax 714-765-5599; www.targus.com; sales@targus.com

Charger

Medis Technology

Power Pack: This nine-ounce disposable charger is a 1/3W device with a streamlined fuel cell that converts chemical energy into electricity. Although fuel cells pack more power than batteries, most run on methanol—a highly volatile liquid. This charger uses a mixture of glycerol and sodium borohydride as fuel. It is non-explosive and doesn't require a complicated membrane to force a reaction. Once activated, it draws in air at the cathode to create hydroxide ions. These ions travel through an electrolyte to the anode. There they react with sodium borohydride to create a current. When the electrons hit the cathode, they mix with oxygen to create more hydroxide ions.

212-935-8484; fax 212-935-9216
www.medistechnology.com; medistechnologies@broadviewnet.net

Five-outlet power multiplier

Power Sentry

Powersquid: This five outlet power multiplier converts one grounded



outlet to five grounded adapter-ready outlets. It provides a yellow-light-

ed master switch with 15A circuit breaker and 4' 14/3 power cord.
800-852-4312; fax 763-557-8868

www.powersentry.com
customer@powersentry.com

Lighted keyboard

Zippy Technology

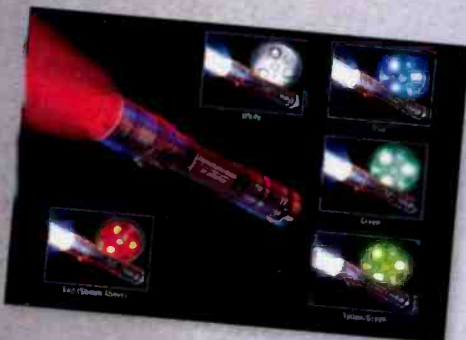
EL-620: This lighted keyboard provides a real brushed aluminum upper case, built-in Internet hot keys, and full IC-controlled inverter technology that prolongs lamp life and enhances brightness. The keyboard's scissor-type key structure produces smooth, tactile and quiet key strokes. The keyboard is spill and splash proof and is fully compatible with Windows 98SE/ME/NT/2000/XP. Its dimensions are 303mm x 163mm x 22mm and its cable length is 1.5 meters. It offers a USB interface only. Its power consumption is 5Vdc at 100mA max.

973-463-9499; fax 973-463-9588; www.zippy.com



LED/Xenon flashlight

Surefire



A2 Aviator: This flashlight is useful for anyone needing a high and low beam in a single long-running flashlight. Constructed of aerospace grade aluminum with a military specification hard-anodized finish and powered by two lithium batteries (10-year shelf life), the 5.6", four-ounce flashlight features a high-output incandescent lamp surrounded by three LEDs set in a specially designed parabolic reflector. The LEDs are available in five color choices: white, red, blue, green and yellow-green. The flashlight uses two lithium 123A 3V batteries with 10-year shelf life (included). The Surefire MA02 high-output incandescent lamp produces 50 lumens of white light for 60 minutes—three LEDs producing three lumens max output for 15 hours, followed by more than 30 hours of minimal output.

800-828-8809; fax 714-545-9537; www.surefire.com; helpyou@surefire.com

Mic mute switch

Proco Sound



Cough Drop Sign Off: A mic mute switch, this product features a sloped top panel that allows easy access to the switch for foot or hand operation; a sturdy 16-gauge steel and extruded polyvinyl chloride enclosure; and a passive design that requires no batteries or phantom power to operate. It connects with standard mic cables. Because it is passive, it can be used with mic or line-level signals.

800-253-7360; fax 269-388-9681
www.procosound.com

2005 Product Source

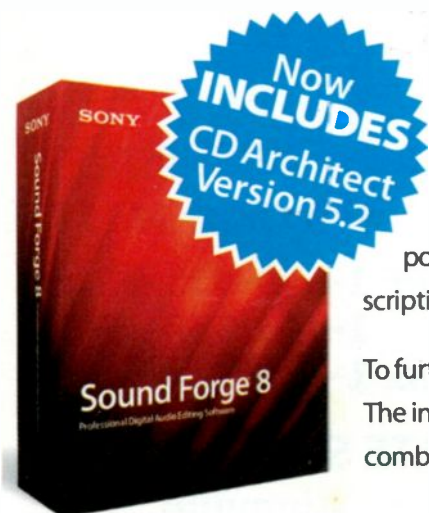
Radio

THE RADIO TECHNOLOGY LEADER

NEW! Sound Forge 8



your favorite audio-editing software JUST GOT TASTIER!



Bite into Sound Forge® 8 software, and enjoy the full-bodied production experience that only the industry's leading digital audio editor can deliver. Savor its extensive feature set and relax knowing you're using the audio editor that sets the standard for power, efficiency, and rich wholesome goodness. Version 8's new bold flavor comes from an exclusive blend of down-home scripting functionality, sweet VST effect and ASIO driver support, satisfying batch processing and other secret ingredients.

To further tempt your palate, Sound Forge 8 now comes with a heaping side of CD Architect™ 5.2, freshly spiced with CD-text support. The industry's leading audio editor coupled with the industry's favorite CD creation and mastering application - it's a tantalizing taste combination that's tough to beat.

like.no.other™

2005 PRODUCT SOURCE

Remote control

Circuitwerkes

Sicon-8: This dial-up, site controller features balanced audio pass through and eight channels of metering, status and



control. It provides five alarms per channel. Enhancement options are available for greater capabilities but aren't required for initial installation. A cell phone audio interface allows the remote control to be used with any auto-answer wireless phone. Six channels of momentary relays and two channels can be momentary or latching. All message prompts can be re-recorded.

352-335-6555; fax 352-380-0230; www.circuitwerkes.com; info@circuitwerkes.com



Durable microphones

AKG

CSS Series: The CCS Series includes six dynamic microphones. The D 88 S offers a supercardioid pattern, a metal body with rugged wire mesh cap and integrated on and off switch. The D 77 S is a cardioid microphone for voice, guitar and wind instruments. The metal case has an on

and off switch, plus a wire mesh grill. The 77 and 88 include a stand adapter and choice of 16' XLR to XLR or XLR to 1/4" plug cable. The D 11 XLR cardioid capsule mic is protected by an all-metal housing with integrated stand adapter that can withstand rugged use and impact. The D 22 XLR cardioid mic will stand up to the hardships of remote use. An integrated stand adapter and mounting bracket makes it a highly versatile microphone for use on instruments. The 22 and 11 include a 16' XLR to XLR cable. The D 55 S is a cardioid pattern mic with a permanently attached cable with mini jack plug and 1/4" adapter. The D 44 S is designed for use as all-round microphone. It has an impact-resistant plastic body, on/off switch and integral cable with mini-plug and 1/4" adapter.

615-620-3800; fax 615-620-3875; www.akgusa.com; akgusa@harman.com

Surround sound control

surface

Wheatstone

SR-9: This surround sound control surface offers full 5.1 surround capabilities. A comprehensive feature set that boasts four 40-input face channels and direct mix-minus from every input channel facilitates on-air and production tasks. The surface includes eight mix-minus busses, four stereo auxiliary sends and direct input router control on every fader with compressor/limiter and four-band parametric EQ on every channel. User-programmable switches allow for easy intercom or special functions setup. LCD meter displays show the channel input meter, input source, preset source and gain reduction meter.

252-638-7000; fax 252-637-1285; www.wheatstone.com; sales@wheatstone.com



Audio router

Audiorail Technologies



ADAT RX32TX32: This router sends 64 channels of audio over a single CAT-5 cable. Attached to each end of a CAT-5 run, the unit connects via Toslink to a D/A converter on each end (either a stand-alone or one integrated into a digital mixer). It works over CAT-5 runs as long as 328'. Longer runs can be made with an Ethernet-to-fiber converter. Multiple units can be daisy chained.

978-461-0177; www.audiorail.home.comcast.net/simple.htm; info@audiorail.com

Unidirectional mics

Roland

DR10, DR20: A dynamic microphone with a hyper-cardioid pattern, the DR10 and DR20 microphones provide a frequency response from 60Hz to 15kHz. A talk switch provides on and off control. The mics offer 130dB maximum sound pressure level (less than 0.5 percent THD). They include a hard-shell carrying case with mic clip and cable.

800-542-2307; fax 323-890-3701; www.rolandus.com

Broadcast Sales:

Mid-South Sales

Bob Mayben
> bobmayben@usa.net
Voice (877) 391-2650

Central Sales

Bernie O'Brien
> bernieob@earthlink.net
Cell (731) 695-1714

West Coast Sales

Doug Tharp
> dougt@scmsinc.com
Sales (866) 673-9267

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> marys@scmsinc.com
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> whitearthur@bellsouth.net
Sales (770) 632-1295

North-East Sales

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> jpeck001@scmsinc.com
Sales (315) 623-7655

South-West Sales

Tyler Callis
> tylerc@scmsinc.com
Office (877) 699-9151

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Translator Monitor 2000

A brand new approach to monitor, manage and control remote translators and transmitters 24 x 7 via satellite and the Internet.



AIRSIS Translator Monitor 2000

- One integrated device and service. No phone lines, optional interface devices, or PCs needed.
- No "box fatigue" or hassles of installation and phone line provisioning.
- Especially valuable for new sites.
- Highly configurable events and alerts changeable "over-the-air".
- More cost effective than comparable landline-based products.
- Global coverage. No blackout zones.
- Full 2-way communications.

Product Features

Metrics Measured	Unit / Account Management
A/C power	Current status
Output power %	History
Transmitter status	Unit location map
Modulation status	Last message
Input receiver	Add/delete units
% Availability	On/off commands
Silence sense	Event alerts
Signal strength	Export data
Final current and voltage	
Satellite feed status and control	
Temperature (inside, outside, transmitter)	

Generate High Payback

- 7 x 24 monitoring eliminates gaps and errors in data flow.
- Ability to anticipate, and correct, problems before they occur or immediately after they occur.
- Reduce significant transportation and labor costs of manual inspections.
- Minimize lost advertising revenue due to dead-air time.
- Potential savings in FCC fines due to non-compliance.



Final Voltage	Output Power %	Inside Temp	Transmitter Temp	Outside Temp	% Availability
24.7	95.8		90.9	90.5	100.0
29.3	104.4	76.7	77.6	76.6	100.0
2073.0	305.0	74.5	74.0	72.7	99.4
25.1	101.6	76.9	76.7	77.3	99.5
24.7	100.0	80.8	79.3	70.7	99.4
2032.0	278.0	87.9	77.1	76.1	99.5
2042.0	279.0	72.8	71.4	71.3	99.4
2031.0	280.0	75.5	75.5	74.5	99.4
2057.0	204.0	76.9	76.3	77.0	100.0
2015.0	208.0	76.1	53.9	75.9	99.5

Translator Monitor 2000 makes the broadcast engineer's job much easier and more productive while saving the station lots of money.

Sales and Inquiries
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 Fax: (858) 550-0564
 6215 Ferris Square, Suite 120
 San Diego, CA 92121
www.airsis.com



2005 PRODUCT SOURCE

Audio codec Comrex

Access: BRIC technology enables broadcasters to use a variety of commonly available Internet access points to broadcast real-time audio. The unit uses widely available wired circuits like DSL, cable, POTS and frame relay as well as wireless circuits such as Wi-fi, 1XRTT, Edge and 3G data networks. The codec is available as rack mount and portable units. Capable of providing voice quality connections over IP connections, the codec also offers a stereo mode that provides optimized performance when used on managed data networks.

800-237-1776; fax 978-784-1717; www.comrex.com; info@comrex.com



Studio mics Electro-Voice

Blue Cardinal and Blue Raven: The red-bodied, cherry wood finish Cardinal mic is a class A cardioid condenser while the dusky Raven is a dynamic mic. The Raven provides a cardioid pattern that offers off-axis rejection. The frequency response has a slight upward slope with peaks at 5kHz and 12kHz. The double swivel-mounted design makes it easy to position. The pressure-gradient Cardinal offers class A discrete noise circuitry and a 40Hz to 17kHz (± 3 dB) frequency response.

800-392-3497; fax 952-887-5588; www.electrovoice.com; pro.sound@telex.com



Digital console Tascam

DM-3200: A 48-channel 96kHz/24-bit digital console, it includes 16 rotary encoders with LED indicators to display mixer settings. Up to 6.1 surround panning is available, and the optional IF-SM/DM surround monitoring interface card adds multichannel monitor and downmix capabilities. The



console offers 32 channel inputs and 16 return inputs, 16 mix buses and eight aux busses, four-band full-parametric EQ and dynamics on each of the 32 channels and two stereo effects at 44.1, 88.2 or 96kHz. The console provides driverless USB 1.1 connection to a computer for data backup.

323-726-0303
fax 323-727-7635
www.tascam.com
tascamlit@tascam.com

EAS decoder Trilithic

Easy-Decoder: The Windows-based setup software allows configuration and control using a Windows setup program. Internally stored EAS logs for as many as 1,000 EAS activations may be retrieved into a word processor for printing, or archived on a disk. Flash BIOS and DSP technology allows the decoder's operating system to be field-upgraded with no hardware changes. Upgrades may include additional features or support for modifications in EAS regulations. The decoder offers two internal radio receivers, each tunable to AM, FM or NOAA reception. A balanced, stereo audio switch provides a self-contained means of replacing normal program audio with EAS audio.

800-344-2412
www.trilithic.com

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- The Split Band De-esser effectively cuts sibilance without dulling.
- The Big Bottom® and Aural Exciter® add resonance, depth, presence and clarity.
- The parametric EQ takes care of any frequency anomalies with surgical precision.
- Post-processing insert point, -10dBV and +4dBu analog outputs, 24/96 digital outputs on AES3, S/PDIF and Optical, word clock I/O, and a cough switch with soft mute allow the Model 230 to be easily interfaced into any system.

So if you are looking to touch your listeners, you should be looking at the ApheX Model 230.

www.aphex.com

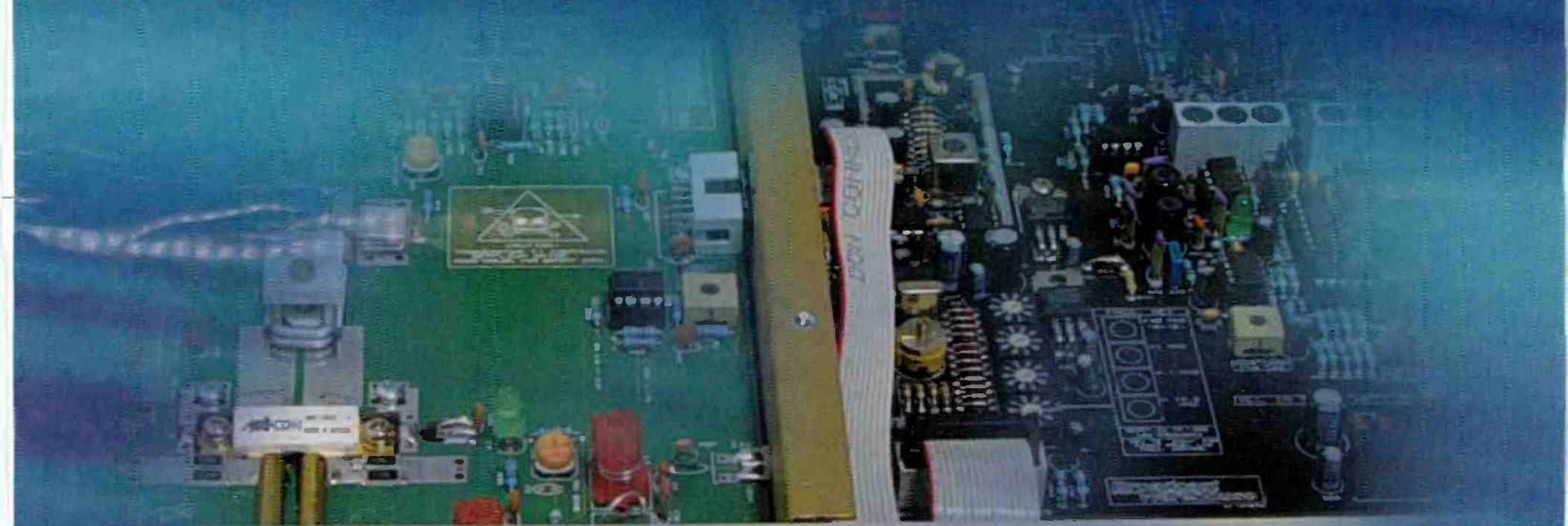
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2005 PRODUCT SOURCE



Broadcast power monitor Bird Electronic

BPM-E, BPM-E7: This system offers users more options in how they measure, monitor and protect their RF transmission systems. Its RF test port enables users to verify spectral compliance for many applications, including IBOC. Features of this system include alarm detection and notification, instant e-mail alerts, remote power/VSWR monitoring and administration, RF test port, access to historical data through data logging, and a small footprint for minimal rack space.

440-519-2062; fax 440-248-3790
www.bird-electronic.com; sales@bird-electronic.com



Mic pre-amp Great River Electronics



MEQ-1NV: This is a single-channel microphone preamplifier combined with a four-band parametric equalizer in 1RU. The unit's sonic character is attributed to the discrete Class A circuitry and custom-wound transformer inputs for mic pre and EQ, and true inductor-based LC circuits in the EQ-1NV. The EQ-1N features four overlapping frequency bands with comprehensive control of Q and slopes, as well as an effective third order high-pass filter.

800-455-1846; fax 651-455-3224; www.greatriverelectronics.com; gre_info@minn.net

Music library Firstcom Music

Noise Pump Music: NPM provides several musical styles from orchestral to electronica in a user-friendly layout including long form titles, commercial length edits and sub-mix versions. All music is released on Firstcom's website for download.

800-858-8880; fax 972-242-6526; www.firstcom.com; info@firstcom.com



Control surface Axia Audio

Element: The control surface features four program busses, four aux send busses, dedicated talk and preview functions on each channel, one-touch record and monitor sections and 32 mix-minus outputs. The system works in conjunction with the Axia Studio Mix Engine, an Intel-based mixing platform running real-time Linux. A standard SVGA LCD monitor displays all metering, clock timer, status and options info. This radio console can be configured to run stereo audio or discrete 5.1 surround programming.

216-241-7225; www.axiaaudio.com; inquiry@axiaaudio.com

Automation interface DM Engineering

Ultimate EAS Remote: The interface is designed for the Sage-Endec 1822 EAS encoder and decoder. The system offers a large backlit LCD to display the date, time and alert details, just like the LED sign display, with a small footprint for crowded countertops. A strobe catches the eye when an alert is pending, and the color is tailored to the severity of the alert. The system can cue the pending alert audio through an internal speaker or earphones, and an independent rear panel line output is supplied.

805-987-7881

www.dengineering.com; info@dengineering.com



Profanity delay Eventide

BD600: Replacing the BD500, this device increases the delay capability to 80 seconds, which is twice as long as the BD500's capability.



A panic feature allows a WAV file stored on a compact flash card to be played when the panic button is pressed. While the file is played the delay buffer rebuilds, allowing programming to continue in safety as soon as the jingle has completed. The unit can be controlled through the front panel or through a control interface. The unit also includes a microprecision delay, which can be set to 10 seconds of delay adjustable in 100 nanosecond increments.

201-641-1200; fax 201-641-1640; www.eventide.com; audio@eventide.com

Broadcast monitoring service RCS

Aircheck: Aircheck is a broadcast monitoring and automated audio identification service providing data from the top-rated radio stations in New York City. Clients can view commercials or songs aired, or play back the audio of any commercial or song. With same-day data availability, decisions can be made with current information. It does not need to run on RCS and all audio is watermarked.

914-428-5971; www.mediamonitors.com

Programmable event controllers ESE

700 series: ESE's 700 series is a family of programmable event controllers that provide a number of contact closure outputs at predetermined times.

These controllers allow the user to automate a multitude of events with simple programming. Various models are available from time code readers to stand-alone clocks and elapsed timers with thumbwheel, keypad and PC interface programmability.

310-322-2136; fax 310-322-8127

www.e-se-web.com; ESE@ese-web.com



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Automation system Broadcast Software International

Simian V1.6: The upgrade of this software includes improved deckfade macros to increase user control, improved index handling and playback on MP3 files, added control over the Async deck, increased webcasting functions and serial strings and a Reset Cart command to allow the software to go back to the first item in a cart, even if all the items have not been played. The software includes dynamic time compression, which allows broadcasters to condense their broadcast without any pitch-shifting. Smart Carts ensure that out-of-date spots will not be played, and the software can also check a log as of a certain date so that broadcasters can check their schedule days in advance.

888-BSI-USA1; fax 541-338-8656
www.bsiusa.com; info@bsiusa.com

Control Freaks



VAD-2

The tiny TOOLS VAD-2 is a user programmable two-input multi-number voice/pager auto dialer with integrated stereo silence sensor, designed for dial out paging and/or voice message notification! The VAD-2 is equipped with two dry contact inputs and stereo silence sensor, which, when tripped, will sequentially dial a pager and/or up to four different phone numbers and play back a user recorded message corresponding to the tripped input. The VAD-2 also provides two SPST one amp relays for the control of external equipment.



WRC-4

The tiny TOOLS WRC-4 is a fresh approach to remote site monitoring and control, or providing an inexpensive solution to Internet enabling your present remote control system. The WRC-4 combined with web access and your favorite web browser brings you the following features; A powerful built-in web-server with non-volatile memory; 10/100base-T Ethernet port; four each channels of 10-bit analog inputs with a large monitoring range; optically-isolated status (contact closures or external voltages) inputs; normally open dry contact relays; open collector outputs; front panel status indicators, a single front panel temperature sensor and 4-email alarm notification addresses. The WRC-4 is also SNMP enabled. The WRC-4 has carefully been RFI proofed, while including the accessories other manufacturers consider optional. The WRC-4 is supplied with removable screw terminals and loaded with a generic web page that may be easily edited by the end user.



Time Sync Plus

The tiny TOOLS Time Sync Plus provides four separate GPS time referenced outputs. The first is a SPST relay, which pulses at 12:00, 22:00, 42:00, 54:30 each hour and is user programmable in each of four locations for any minute and second each hour. The second output is an active high driver with a 100 ms pulse each second, while the third output is a 4800-baud, RS-232 serial port providing a time zone adjustable hours, minute and seconds time code. The fourth output provides an active high driver in the ESE TC-90 serial time code format. Indicator LED's are provided to display power/valid GPS data, programming mode and time sync relay operation. A Garmin 12 Channel GPS receiver with embedded antenna is supplied.

tiny TOOLS
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SRC-2/SRC-2x

The tiny TOOLS SRC-2 interfaces two optically isolated inputs and two SPST relays to a RS-232 or USB port, while the SRC-2x does this via a 10/100baseT Ethernet port. Both the SRC-2 and SRC-2x can notify a user's PC software program that any of two optically isolated inputs have been opened or closed and allows your software to control two SPST, 1-amp relays. The SRC-2x is also able to send an email when either of the two inputs change state. The user may also add up to 48 ASCII strings per input and 16 user defined strings per relay. Communication with the SRC-2(x) is accomplished via short "burst" type ASCII commands from the user's PC. Also, two units may be operated in a standalone mode (master/slave mode) to form a "Relay extension cord," with two channels of control in each direction. The SRC-2 communicates using RS-232 at baud rates up to 9600 and the SRC-2x via a 10/100baseT Ethernet. The SRC-2(x) is powered by a surge protected internal power supply. Either unit may be rack mounted on the optional RA-1 mounting shelf.



ESS-1

The ESS-1 provides a cost-effective, small profile solution for standard serial-to-Ethernet connectivity. Designed with the broadcaster in mind, the ESS-1 is equipped with extensive RFI protection. It is ideal for applications requiring data support for both RS-232 and RS-422 communications. The ESS-1 allows any device with a serial port, Ethernet connectivity and is ideal as a serial bridge/tunneling or applications where a COM port, TCP Socket, UDP Socket, or UDP Multicast functionality is needed. The small profile of the ESS-1 makes installation hassle-free.



AVR-8

The AVR-8 is a voice remote control system that automatically reports changes detected on any of its eight status inputs to a remote telephone and/or pager. After speaking a greeting message that may identify the source of the call, the AVR-8 then speaks a unique message for each status input. The user may customize each factory-recorded message. After reporting, the AVR-8 is ready to receive commands through your telephone keypad. Functions include telling the AVR-8 to report on the input state of any of the eight status inputs, commanding the AVR-8 to pulse any one of its four SPDT relays for 750 ms and/or turning any one of the relays on or off. When a relay command is given, the AVR-8 speaks the relay 'name' followed by the 'on' or 'off' message.

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SPECIALS

Beyond These Walls



When the work takes you outside the studio

Personal mobile navigation system VF Gadgets

Road Ace 2: This system incorporates GPS technology to provide real time, voice driven route guidance. The unit combines GPS with the functionality of a PDA creating a compact and lightweight alternative to traditional navigation systems. It comes with a Dell Axim X50 416MHz X-scale processor Pocket PC PDA that is Bluetooth equipped. This touch screen navigation system requires no installation, and can easily fit into a pocket. High-speed mapping software covers all of Canada and the United States. The mapping data is stored on one 256MB Secure Digital card with all major North American road mapping installed in the turnkey unit. The system is mounted in the car by a windshield-mounted gooseneck cradle and speaker, which plugs into any 12V power supply. The GPS antenna is accurate within 3 meters and connects directly into the PDA through a compact flash port on top of the PDA.



416-686-1452; www.vfgadgets.com

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Power strip Wiremold

Plugmold Tough: This power strip combines multiple power outlets with a diamond-plate housing. The power strip mounts on the wall or workbench, enabling multiple tools and accessories to be continuously plugged in and ready. The strips are 48" long and provide five duplex 15A receptacles for a total of 10 outlets. The assemblies plug into existing outlets with no hard-wiring. Units feature a built-in circuit breaker for added protection.

860-233-6251; fax 860-232-2062; www.wiremold.com

Cable tester Mad Scientist

Cable Scientist NL8/NL4: Built in a 16-gauge steel case and covered in a blue powder coat, this unit is built for the rigors of the road. To test a cable, insert each end into send and receive respectively, and then step through the number of conductors in the cable via the rotary switch. The LEDs above the switch indicate correct or incorrect wiring. If the cable is wired correctly each step of the switch will light the corresponding top and bottom red and green LEDs. If the cable is wired incorrectly, the cable tester will indicate which pins are swapped and if it is on the send or receive end. Red LEDs indicate receive and green LEDs indicate send. The unit comes standard with NL8, NL4, XLR 1/4" TRS, RCA and BNC connectors. An EP connector version is also available.

949-973-0173; www.madscientistdesigns.com
madscientistdesigns@cox.net

Folding saw Seatek



Fold-a-saw: This saw is comprised of two folding swing arms that nest neatly into the U-shaped channel. Space is provided inside this channel for storage of two hacksaw blades. The Fold-a-saw accepts standard 12" blades, it features a built-in guard and soft, cushioned rubber inserts for comfort. Latches hold the blade in place while it is tensioned by a fast, cam-action lever. The blade locking system is adjustable to tension the blade with high force for maximum frame rigidity. The blade locking system secures the blade tightly.

203-324-0067; fax 203-324-7844
www.seatekco.com; info@seatekco.com

Fingerprint Door Lock Mata Biotech



M28: This door lock combines a conventional cylinder lockset with fingerprint recognition technology. It can store as many as 10 fingerprints, and has the ability to delete and enroll individual fingerprints, and has the ability to delete and enroll individual fingerprints from its memory without needing a computer link. The lock is constructed from durable zinc-alloy metal and requires no hard wiring. The lock uses standard alkaline AA batteries and provides a warning signal when power is low.

877-782-4336; www.matabiotech.com; mata@matabiotech.com

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THE RADIO TECHNOLOGY LEADER

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Gary L. Ellingson, CPBE
Director of Engineering
Northwestern College Radio
KNWC- AM/Sloux Falls, SD



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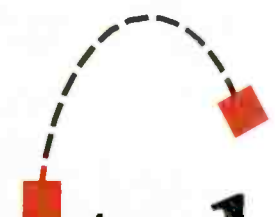
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2005 PRODUCT SOURCE



Solid-state FM transmitters Armstrong Transmitter

FM Series B: The 4kW to 20kW solid-state FM transmitters are comprised of self-contained 2kW solid-state amplifiers with redundant power supplies (three per amplifier) and status for individual amplifiers. The transmitters feature VSWR foldback and protection, and an optional CD-quality exciter and remote control capability. The transmitters are compatible with HD Radio. Each transmitter stands 22.25" W x 33" D. The 4kW and 6kW models stand 48" tall. The 8kW and 10kW models stand 76" tall.

315-673-1269; fax 315-673-9972
www.armstrongtx.com; sales@armstrongtx.com

Newsroom mixer Wheatstone



5200-D: A networkable news mixer, the unit provides front- and rear-panel mic input connectors along with a front-panel headphone jack. The mixer also has a segment LED VU meter and two output busses with program and mix-minus options. The five total inputs consist of one mic, one analog input and three digital outputs (two with router selectors). A built-in Ethernet Bridge X-Y controller is standard as well as cue speaker and headphone, cue level control, monitor selector and headphone volume control.

252-638-7000; fax 252-637-1285; www.wheatstone.com; sales@wheatstone.com

Streaming service Liquid Compass

Internet Streaming: Serving more than 250 radio stations around the world including Clear Channel Radio and WOXY, Liquid Compass offers streaming media services. Clients receive audio and video services and 24/7 tech support. Customized player skins are available for enhanced branding.

303-839-9400; fax 303-839-9401; www.liquidcompass.net; info@liquidcompass.net

Digital recorder AEQ



DR-100: Designed for broadcast journalism fieldwork, this recorder captures sound through the built-in mic, external mic or line input. An AGC circuit can be enabled on the record input. Audio can be saved to the built-in internal memory or to a Smart Media card. The unit uses the same batteries as a Nokia cellular phone. The unit records at two sampling rates (32kHz or 48kHz) and in three different file formats: Layer II, Layer II and G.723. Layer II files can be edited directly on the unit. Files can be transferred via USB or the built-in modem. The recorder includes an FM radio with 20 presets.

954-581-7999; fax 954-581-7733; www.aeqbroadcast.com; sales@aeqbroadcast.com



Acoustic treatment Realtraps

Gobotraps: This system consists of a lightweight carriage with wheels that accommodates standard or Gobo Mini-traps. The traps are stacked sideways on the carriage to create a gobo that is 4' wide, and two or three traps can be attached for a total height of 4' or 6'. The carriage hovers low to the floor to minimize sound leakage under the traps, and the wheels are large enough to roll on thick carpet or over wires. This product is available in standard and HF versions. Standard traps are absorbent on one side and reflective on the other, where the HF is absorbent on both sides. Both are built with an internal MDF barrier to provide sufficient mass to block sound from passing through.

860-210-1870; www.realtraps.com; sales@realtraps.com



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www.greatriverelectronics.com

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Jay Goldman, Technical Director
WXPN / Philadelphia


Sound Software™
www.rcsworks.com

2005 PRODUCT SOURCE

SPS-capable radio Radiosophy



Multistream: This transportable HD Radio receiver can handle multiple digital streams along with existing HD Radio and analog signals. The removable receiving unit measures less than 6" x 4" and the complete radio is less than 16" x 7". When broadcasters add a second digital stream, the receiver will allow

listeners to receive the additional programming.

605-232-6465; fax 612-435-3380; www.radiosophy.com; info@radiosophy.com

Compact mixer Peavey Electronics

Sanctuary S-4: The S-4 works as a stand-alone four-channel rackmounted mini mixer or can be linked with other S-4s for more channels. The mixer features Peavey's Automix technology, an automatic priority/ducking scheme for minimizing off-channel noise and interference. The S-4 also offers Mid Morph, a dual function cut and boost EQ designed for simplifying equalization settings.

601-483-5365; fax 601-486-1486; www.peavey.com

Headphone monitor system Henry Engineering



Multiphones: Providing multi-user headphone listening facilities, this system consists of a master unit and 12 guest pods. Guest pods are compact listening stations that can be located near the user. Each guest pod has its own headphone amplifier, volume control and headphone jacks. The pods are connected to the master unit with CAT-5 cable. The system provides multiple users with audiophile quality listening facilities, where each listener has his own volume control and can use any type of headphone without affecting other users in the system.

The pods are connected to the master unit with CAT-5 cable. The system provides multiple users with audiophile quality listening facilities, where each listener has his own volume control and can use any type of headphone without affecting other users in the system.

626-355-3656; fax 626-355-0077; www.henryeng.com; info@henryeng.com



Digital recorder Echo Digital Audio

Layla 3G: This recorder features two universal inputs with mic preamps, six balanced analog inputs, eight balanced analog outputs and a stereo headphone output. ADAT lightpipe, optical and coaxial S/PDIF and MIDI are included as well. The device comes with a 15' cable and PCI card that connects to the audio interface. The recorder is compatible with PCI-X (3.3 or 5V) motherboards and Power Mac G5 computers, as well as older systems.

805-684-4593; fax 805-684-6628; www.echoaudio.com; info@echoaudio.com

Active monitor Quested

S8: A self-powered, two-way active monitor, this speaker is configured with an 8" bass driver and a 1" soft-dome tweeter. It provides 370W of linear Class A-B amplification to drive each monitor. Measuring 17"H x 11.8"W x 14.5"D, the speaker weighs 42.3 lbs. Frequency response is 50Hz to 20kHz, ± 2dB.

+44 1404 41500; fax +44 1404 44660

www.quested.com; sales@quested.com



A/D converter Broadcast Tools

ADCS III: This converter provides 24-bit A/D conversion along with AES path insertion and interruption functions. The unit may be configured as a stand-alone A/D converter or configured to switch AES or stereo analog inputs into another AES stream. The device is equipped with relay bypass in case power is removed



from the unit. The converter may be configured for sample rates from 32 to 192kHz or an external word clock. Additional features include balanced stereo analog input, AES input, AES output and remote control via plug-in Euroblock connectors. The front panel is equipped with left and right analog input trimmers, overload, audio presence and power LED indicators. The unit is powered by a surge protected, internal, bi-polar 15Vdc power supply.

877-250-5575; fax 360-854-9479

www.broadcasttools.com

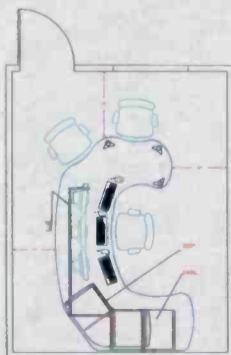
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- At Omnirax we work together with you from initial design concept all the way through finished product, ensuring that your furniture will provide you with years of satisfied use.
- Our strength is forging partnership relations where we can use our expertise to turn your ideas into reality. We are able to work to your exacting specifications or provide comprehensive design services that remove the guesswork from your investment.
- Our CAD/CAM process ensures precision fit and finish, repeatability, and ease of modification. All of our designs are rendered in the computer prior to manufacturing. We are able to make alterations and adjust to your equipment, guaranteeing you not only get what you want, but exactly what you need.
- We are small enough to give every job the personal touch, large enough to outfit a complete facility.
- The measure of our success is the achievement of a synthesis of form, function and ergonomic comfort.

CAD drawing



CAD rendering



KOIT
San Francisco, CA

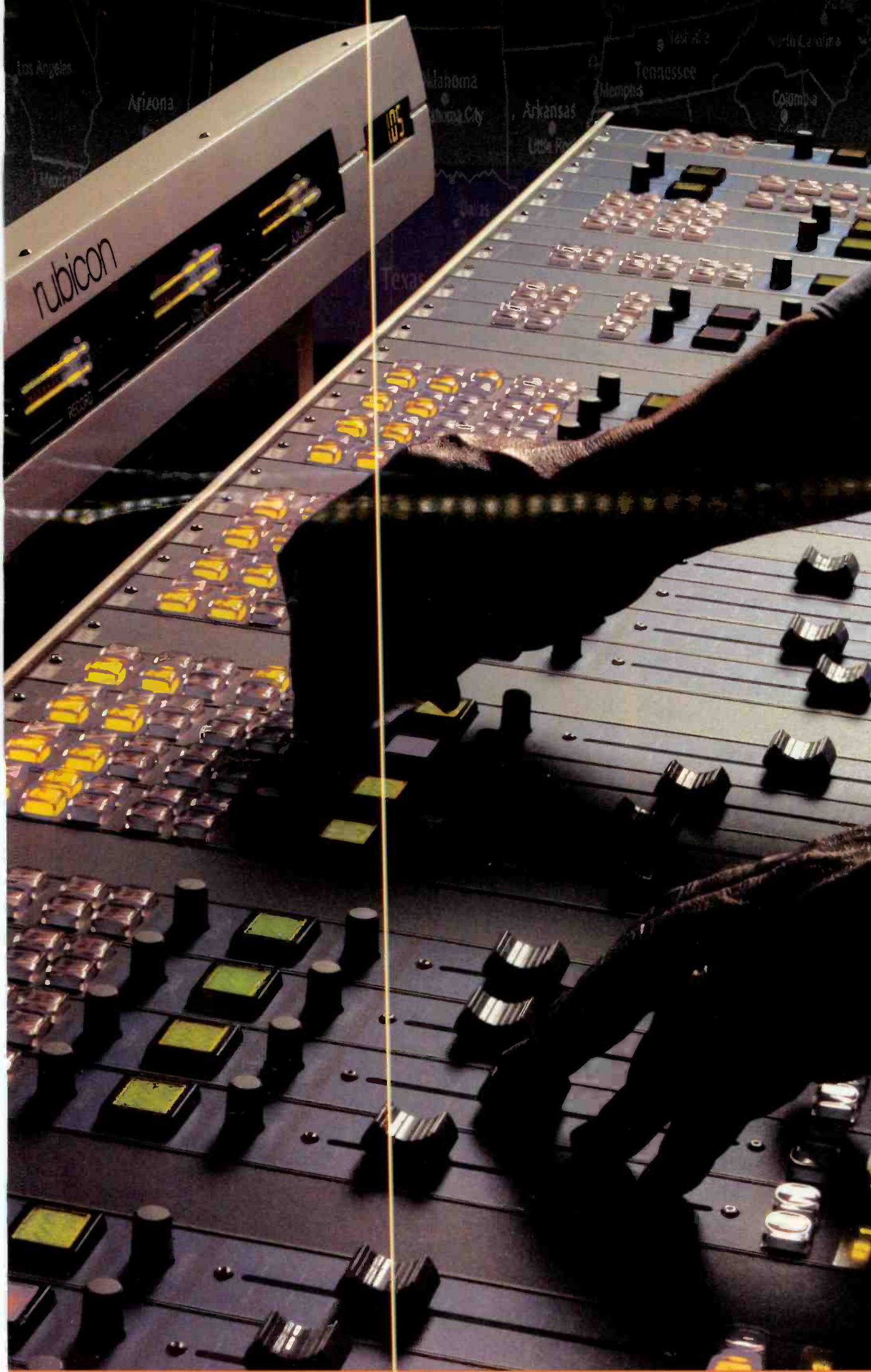


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NAB Radio Show Phila., PA
Booth #122 September 05

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Border to border.

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Rubicon, and the versatile new **Rubicon SL**, are the primary user interface of a proprietary system of audio routing, mixing, distribution, intercom, IFB, and automation that we call the **Connected Digital Network™**.

At the network's hub is the **32KD** digital router/mixer, the proven performer in many

hundreds of radio, network, and film installations around the world.

RIOLink remote I/O router/mixer now provides stand-alone or backup mixing in addition to interconnection from the studio to the central 32KD.

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Rack mounted 32KD Digital Router/Mixer, RIOLink remote I/O and Rubicon power supply



**SIERRA
AUTOMATED
SYSTEMS**

1.818.840.6749 radio@sasaudio.com

2005 PRODUCT SOURCE

Composite audio mixer/DA system Broadcast Devices



CMP-300: This equipment combines various FM signals to form one composite output that can be fed to three exciters or STL systems. The system can accept composite stereo, SCA, RBDS and TV SAP signals simultaneously. It features three wideband inputs with level control for each and three independent outputs that also have separate level trims. Each input can be individually configured for balanced or unbalanced operation. Possible uses include premixing of three baseband signals for older exciters lacking enough inputs or distribution of signals to as many as three exciters when only one stereo generator, STL, SCA, RBDS or SAP signal is available.

914-737-5032; fax 914-736-6916; www.broadcast-devices.com; sales@broadcast-devices.com

IBOC data importer Broadcast Electronics



IDI: This line of HD Radio data importers is capable of multiple secondary program services (SPS). The function of the

data importer is to provision HD Radio bandwidth between the Main Program Service and SPS, along with SPS program-associated data. The software encodes SPS audio and multiplexes it with the PAD and other data to be carried on the HD Radio signal. The resulting bitstream is delivered via Ethernet to BE's XPI 10 data exporter, where it is combined with the encoded HD Radio MPS and its data for transport to the HD Radio exciter and transmitter. The IDI 10 provides a fixed, 32kb/s SPS channel with no bitstream provisioning. The IDI 20 offers flexibility in managing the HD Radio system throughput for multiple SPS.

217-224-9600; fax 217-224-9607; www.bdcast.com; bdcast@bdcast.com

Portable recorder Marantz



PMD660: Featuring a built-in condenser microphone with automatic level control, one-touch digital recording to Compact Flash cards, on-board editing with mark segment, a virtual track mode for playback and instant audio access to the preset marked points, the recorder is a solid-state media recorder with one-touch digital recording. It can record for four hours running on four standard AA batteries. Uncompressed WAV files can be recorded at 44.1kHz or 48kHz, and MP3 files can be recorded in mono at 64kb/s or in stereo at 128kb/s.

630-741-0330; fax 630-741-0652; www.d-mpro.com; info@d-mpro.com



FM transmitter Rohde & Schwarz



NR8200: Covering a power range from 2.5kW to 30kW, the transmitter includes the SU800 exciter, VU825 power amplifier, a transmitter rack with cooling system, a power combiner,

power distribution and the Net CCU 800 control unit. The air-cooled models with only 800mm rack depth provide an output power of 15kW in a 19" rack. The Net CCU 800 transmitter control unit handles internal and external communication and provides all control functions. All transmitter and amplifier parameters required for diagnostics can be retrieved locally or remotely via standard protocol and standard software. Conventional standby systems such as exciter standby, (n+1) standby, passive standby and active output stage standby can be implemented.

410-910-7800; fax 410-910-7801; www.rohde-schwarz.com; info@rsa.rohde-schwarz.com



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The routing switcher gets a new twist.

(About five twists per inch, actually.)

Everybody needs to share audio. Sometimes just a few signals — sometimes a few hundred. Across the hall, between floors, now and then across campus. Routing switchers are a convenient way to manage and share your audio, but will your GM really let you buy a router that costs more than his dream car? Unlikely.

If you need a routing switcher but aren't made of money, consider Axia, the Ethernet-based audio network. Yes, Ethernet. Axia is a *true network*. Place our audio adapter nodes next to your sources and destinations, then connect using standard Ethernet switches and Cat-6. Imagine the simplicity and power of Ethernet connecting any studio device to any other, any room to any other, any building to any other... you get the idea.



Routers are OK... but a network is so much more modern. With Axia, your ins and outs are next to the audio, where they belong. No frame, no cards, no sweat.



Put an Axia Microphone Node next to your mics and send preamplified audio anywhere you need it, over Ethernet — with no line loss or signal degradation.



Scott Studios



Axia is already working with some great companies. Like Enco Systems, Scott Studios, Radio Systems, Balsys Technology Group, and of course Telos and Omnia. Check AxiaAudio.com/partners/ to find out who's next.

Scalable, flexible, reliable... pick any three.

An expensive proprietary router isn't practical for smaller facilities. In fact, it doesn't scale all that well for larger ones. Here's where an expandable network really shines.

Connect eight Axia 8x8 Audio Nodes using Cat-6 cable and an Ethernet switch, and you've got a 64x64 routing switcher. And you can easily add more I/O whenever and wherever you need it. Build a 128x128 system... or 1024x1024... use a Gigabit fiber backbone and the sky's the limit.

Put your preamps where your mics are.

Most mainframe routers have no mic inputs, so you need to buy preamps. With Axia you get ultra-low-noise preamps with Phantom power. Put a node in each studio, right next to the mics, to keep mic cables nice and tight, then send multiple mic channels to the network on a single Cat-6 cable. And did we mention that each Mic Node has eight stereo line outputs for headphones? Nice bonus.

With a little help from our friends.

A networked audio system doesn't just replace a traditional router — it *improves* upon it. Already, companies in our industry are realizing the advantages of tightly integrated systems, and are making new products that reap those benefits. Working with our partners, Axia Audio is bringing new thinking and ideas to audio distribution, machine control, Program Associated Data (PAD), and even wiring convenience.

Are you still using PC sound cards?

Even the best sound cards are compromised by PC noise, inconvenient output connectors, poor headroom, and other gremlins. Instead, load the

Axia IP-Audio Driver for Windows® on your workstations and connect *directly* to the Axia audio network using their Ethernet ports. Not only will your PC productions sound fantastic, you'll eliminate sound cards and the hardware they usually feed (like router or console input modules). Just think of all the cash you'll save.

Put your snake on a diet.

Nobody loves cable snakes. Besides soldering a jillion connectors, just try finding the pair you want when there's a change to make. Axia Audio Nodes come in AES/EBU and balanced stereo analog flavors. Put a batch of Nodes on each end of a Cat-6 run, and BAM! a bi-directional multi-channel snake. Use media converters and a fiber link for extra-long runs between studios — or between buildings.

Would you like some control with that?

There are plenty of ways to control your Axia network. For instance, you'll find built-in web servers on all Axia equipment for easy configuration via browser. PathfinderPC® software for Windows gives you central control of every audio path in your plant. Router Selector nodes allow quick local source selection, and intelligent studio control surfaces let talent easily access and mix any source in your networked facility.



<...> 100/1000

There's a better way to get audio out of your PC. No more consumer grade 1/8" connectors — with Axia your digital audio stays clean and pristine.



An Axia digital audio snake can carry hundreds of channels of digital audio on one skinny CAT-6 cable. We know you're not going to miss soldering all that multi-pair...



Control freaks of the world, rejoice: intelligent Axia mixing surfaces give talent complete control of their working environment. Reconfigure studios instantly and assign often-used sources just where they're most useful.



"This sounds expensive." Just the opposite, really. Axia saves money by eliminating distribution amps, line selectors, sound cards, patch bays, multi-pair cables, and tons of discrete wiring — not to mention the installation and maintenance time you'll recover. And those are just side benefits: our hardware is about half the cost of those big mainframe routers. That's right... *half*. Once you experience the benefits of networked audio, you will never want to go back. AxiaAudio.com for details.



2005 PRODUCT SOURCE

Digital transmitter Nautel

XR12: As the fourth generation of Nautel 12kW AM transmitters, this modular HD Radio/DRM digital transmitter features reserve power for signal processing and 155 percent positive peak program modulation at 10kW to produce more sideband energy and a stronger signal. With two power modules and one standby module, full power will automatically be maintained even under fault conditions. Power modules are hot-pluggable and can be removed and replaced. For greater redundancy, the transmitter comes with a standby DDS exciter section including a modulation encoder with automatic change-over. Operation, diagnostics and status are performed on a 240x60 LCD graphical user interface with an on-board real time clock and 128-event time-stamped log.

207-947-8200; fax 207-947-3693
www.nautel.com; info@nautel.com

FM meter, RBDS encoder Audemat-Aztec

Silver Range: Delivered with an external GPS receiver, FM antenna and PC software, the Mobile FM Meter can run an FM RF campaign of a station and analyze FM and RBDS subcarriers. Data can be exported to Mappoint PC software using the serial cable. It also integrates scrolling PS. The unit is configured with the included PC software that can calculate the PI code, interpret commands from an automation system and generate labels.

305-249-3110; fax 305-249-3113; www.audemat-aztec.com; contact@audemat-aztec.com

Prefab buildings Thermobond Buildings

Buildings, shelters: Thermobond is a manufacturer of communication shelters, equipment shelters, enclosures, prefabricated buildings, fiber optic shelters, meter buildings, head-end buildings, switch buildings and substation



control buildings. Its buildings feature R-values of R-11 to R-27 in the walls, roof and floor; complete wiring packages: lights, outlets, breaker panels, surge arrestors, generator receptacles, wall mount and window air conditioner installation and insulated steel door assemblies with adjustable weather-stripping.

800-356-2686; fax 605-356-2005

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Our team of broadcast professionals installs and configures your system so that everything is ready to run out of the box. We include telephone training to help you get started, and the Series 110 comes with a full year of standard telephone support and software upgrades. For added peace of mind, software mirroring synchronizes your machines, so that changes made on one computer are reflected on the other.

BSI systems are used in stations across the US and around the world.

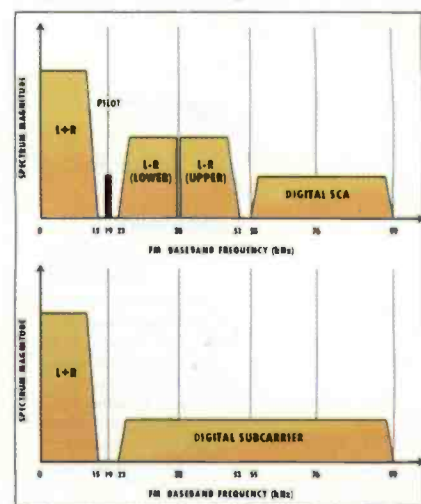
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www.bsiusa.com 888-BSI-USA1 (888-274-8721) info@bsiusa.com

Para el español, llamada Felipe Chavez, Distribuidor de los E.E.U.U.
(916) 368-6332 fchavez@ommedianet.com



Radio encoder Digital Radio Express



FM Extra: This encoder enables broadcasting of multiple digital signals on an existing FM carrier with flexible architecture that can use any available SCA carrier space. The unit offers expandable bandwidth, riding on 99kHz of baseband on standard FM exciters. It will work on IBOC stations or non-IBOC stations. The unit is capable of more than 128kb/s. The encoder can also be used to broadcast true discrete 5.1 surround sound, equivalent to Dolby Digital 5.1, and can broadcast multiple independent audio streams to provide multi-channel programming.

408-956-8707; fax 408-956-8748
www.dreinc.com; contact@dreinc.com



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at www.belar.com

BELAR
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HD Radio monitor Day Sequerra



M2: Over-sampling 24-bit/96kHz DAC combined with the proprietary Class A-biased audio output circuitry of this unit provides transparent and dynamic audio. The high resolution, peak and hold 50-segment LED meters indicate RF carrier modulation percent and audio modulation in decibels. The equipment uses a multi-function display for tuning and other station information. The monitor also includes alarms for over-modulation, loss of audio and loss of carrier. All tuner functions can be monitored and controlled remotely via an optional PC interface.

856-719-9900; fax 856-719-9903

www.daysequerra.com; info@daysequerra.com

Remote wattmeters Coaxial Dynamics

RF Wattmeters: These high-power, remote wattmeters are designed for the measurement of complex RF waveforms such as CDMA, DAB, CW and AM and FM. Several models



are available to measure forward and reflected power in 50Ω coaxial transmission line systems with 5/10/25 or 15/30/60 scales. The 98952-A wattmeter with 5/10/25 scales includes two 10' cables and an ac adapter. The 98954-1 with 5/10/25 scales includes forward/reflected switch, four 10' cables and an ac adapter. The 98958-A and 98959-A with 15/30/60 scales include forward/reflected switch, four 10' cables and an ac adapter.

800-COAXIAL; fax 440-243-1101

www.coaxial.com; sales@coaxial.com

Network cable Gepco International



CT504HD: This CAT5e cable is for use with Neutrik Ethercon connectors, and is also available from Gepco as pre-terminated cable assemblies. The inner jacket of the CT504HD allows the pair to have proper physical spacing to achieve EIA/TIA CAT-5 specifications, while the TPE outer jacket protects the cable from physical damage or abuse. In addition, the CT504HD uses stranded 24-gauge conductors that enhance the cable's flexibility and flex-life durability.

800-966-0069; fax 847-795-8770

www.gepco.com; gepco@gepco.com

www.beradio.com

Voice tracker via the Internet Scott Studios/Dmarc Broadcasting

Voice Tracker: This system allows announcers to record air shifts from anywhere with an Internet connection, Windows computer and microphone. When used with Scott's SS32, times and current temperatures can air. Voice Tracker via the Internet requires a special Internet music server at the station to send compressed song heads and tails, in WMA format, to the announcer's headphones. It automatically virus scans and places the recorded voice tracks in the air studio. Stations choose how many songs per hour an announcer is allowed to change for timing, or whether he must follow the log exactly.

800-SCOTT-77; fax 972-620-8811

www.scottstudios.com; info@scottstudios.com



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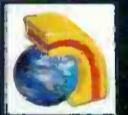
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2005 PRODUCT SOURCE

Surround sound analyzer Modulation Sciences



Spidervision: Unlike the Lissajous and other level and phase displays, Spidervision images the entire soundfield. It delivers a picture of the direction and amplitude of the dominant sound sources, and allows compatibility analysis of all audio-including monoaural, stereo, Pro Logic, two-channel encoded surround and discrete 5.1 surround.

800-826-2603; fax 732-302-0206
www.modsci.com; judy@modsci.com

Time code reference Masterclock

NTP100-TC: Features of this system are NTP reference for Ethernet LANs in a compact, self-contained box; NTP time synchronization to existing time code source; NTP query or broadcast mode; and assignable network configuration. Telnet or serial interface discovery tools are included. The unit is rackmountable in a RM4 or stand-alone. It offers 115/220Vac or 9 to 28Vdc operation. When synchronized to external time code source long-term accuracy is the same as the external source. After initial synchronization and on loss of time code signal, the unit will revert to an internal calibrated oscillator and maintain accuracy within 165ms per day.

800-940-2248; fax 636-724-3776
www.masterclock.com

Tuning in HD Radio

The menu of available receivers continues to grow

As more stations begin transmitting HD Radio signals, the need for HD Radio receivers will grow. Kenwood received a great deal of attention for offering the first HD Radio tuner module for use with its head units. Now several companies offer consumer HD Radio receivers. Here is a rundown of the units that we were able to find listed as being commercially available. Unfortunately few of these models are available at local retail outlets. Most must be ordered through mail order or online outlets.



Auto

- A Alpine DVA-9965**
HD Radio tuner with DVD, CD, MP3 and WMA playback. XM or Sirius ready.
- B JVC KD-SHX900**
HD Radio tuner with CD, MP3 and WMA playback. Also receives Sirius.
- C Kenwood KTC-HR100MC**
HD Radio tuner that works with select Kenwood head units.
- D Panasonic CQ-CB9900U**
HD Radio tuner with CD, MP3 and WMA playback.
- E Sanyo ECD-HD1990M**
HD Radio tuner with CD, MP3 and WMA playback.

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Built with dual hot-swappable 600 Watt RF modules capable of 150% modulation, X-1000B can bring that major market sound to your radio station. Engineered with the latest technological innovations, X-1000B offers high reliability, built-in redundancy and it is HD Radio® ready.

Best of all, our customers tell us that the money they save running the X-1000B pays for itself with

savings in electricity and maintenance costs over an older transmitter...and as a bonus they get exceptional reliability and that major market sound for free.

But, don't take our word for it. Talk to our customers already on-the-air with the X-1000B. Call or email for a users list and decide for yourself why owning this transmitter is a no-brainer.



Tel 315-673-1269 / sales@armstrongtx.com / www.armstrongtx.com

* HD Radio is a registered trademark of Equity Digital Corporation.



F



G

Home

F Audio Design Associates Tune Suite

A modular tuner that accepts receiver modules for AM, FM, HD Radio, weather and XM. Housed in a 2RU package.

G Rotel RT-1084 This 2RU

HD Radio receiver that can also receive Sirius Satellite Radio and decode RBDS signals.

H Polk Audio I-sonic

HD Radio receiver with a DVD player and XM satellite radio. Decodes multicast streams. Aux audio inputs, alarm clock.

I Radioscopy Multistream

HD Radio receiver with a docking speaker. Decodes multicast audio streams. Aux audio inputs.

J Yamaha RX-V4600

A home theater unit with a plethora of connections on the back, it includes Pro Logic II and SRS Circle Surround for HD Radio and other surround formats for home theater.

K Boston Acoustics Receptor

HD Radio receiver with two alarm clocks. Available in three colors.



H



I



J



K

Speakers

Phonic

Performer series: Performer 225 is the smallest wireless 12" 90W active speaker in the series and the Performer A540 is the largest wireless 15" 400W active speaker. The two passive models feature a 1" tweeter with HF driver protection and come equipped with a 24dB crossover. The Performer 535 features a 15" woofer with an output of 350W RMS. The 225 offers a 12" woofer with 250W RMS. This series of speakers has the option of wired or wireless operation and they can be used with a wireless microphone with little setup and no audio cables required. A wireless mixer module can be used to wirelessly transmit the signal from the mixer to the active speakers in mono or stereo.

813-890-8872; www.phonic.com
info@phonic.com

AM broadcast antenna Kintronic Labs



Kinstar: The radiation pattern and efficiency of this antenna provide operation equivalent to that of a standard quarter-wave monopole, but at about 20 to 25 percent of the height. The low-profile antenna consists of four electrically short, vertical, closely spaced elements, each of which is terminated in a horizontal top load element. Each vertical element is fed via a phase-matched section of 50Ω transmission line.

423-878-3141; fax 423-878-4224
www.kintronic.com; ktl@kintronic.com

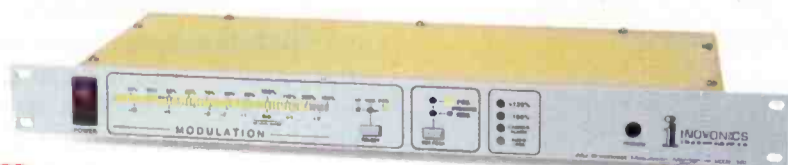
Dependable AM Measurements

Model 520 - \$1750

THIS AM MOD-MONITOR FEATURES A TUNABLE PRESELECTOR AND AN EASY-TO-READ DISPLAY

Take accurate modulation readings right off the air with this compact, full-featured Mono-AM monitor. Fixed and adjustable peak flashers complement the peak-holding bargraph readout for clear, interpretation-free results.

Audio-loss, carrier-loss and modulation limit alarms may be remotely located, and an RS-232 port allows full computer/modem control. An efficient outdoor active antenna is optionally available for difficult reception situations.



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2005 PRODUCT SOURCE

HD Radio monitor Day Sequerra



M4: Like the M2, the M4 offers a low noise RF front end with built-in preselector and double-balanced mixer. Its low jitter DAC and Class A-biased audio output provide playback of HD Radio 96kb/s programming. Synthesized pushbutton tuning for AM and FM bands, balanced audio outputs at +4dBV on 3.5mm Eurostyle modular connectors and a multi-function LCD are all features of this monitor. Ten preset stations per AM and FM band are offered, as well as left program and right program signal indicators. The unit also features an HD Radio digital to analog program time-alignment monitor.

856-719-9900; fax 856-719-9903; www.daysequerra.com; info@daysequerra.com



Dynamic mic Heil Sound

PR-30: This mic features a large 1" diameter dynamic element and a dual wound voice coil with a neodymium magnet structure that creates a magnetic field 10 times stronger than traditional magnets. The mic's frequency response is 28Hz to 18kHz and it offers an impedance of 600Ω balanced. Other features include an output level of -52.9dB at 1,000Hz and a net weight of 15oz.

618-257-3000; fax 618-257-3001

www.heilsound.com; info@heilsound.com

Streaming, processing, routing system Digigram

Xip882: This unit combines the functions of four traditional product categories: IP steaming client/servers, audio processors, routers and codecs. The system features eight audio inputs and eight audio outputs in analog and digital formats. An embedded matrix provides routing capabilities from any input to any output. The system combines a 2RU and a network application programming interface that enables Digigram's OEM development partners to control the equipment's functions.

703-875-9100; fax 703-875-9161; www.digigram.com; input@digigram.com



Digital console surface Logitek

Mosaic: A control surface for the Logitek Audio Engine digital router, the Mosaic can be configured for a range of two to 24 faders with a variety of control and soft-key capabilities. The consoles provide multiple, full-color LCD screens that can display clocks, meters, timers, delay information, text or graphics; single-button access to multiple functions; timer controls; extensive GPI/GPO control; and display 16-character source names.

800-231-5870; fax 713-664-4479; www.logitekaudio.com; info@logitekaudio.com



Studio furniture Mager Systems

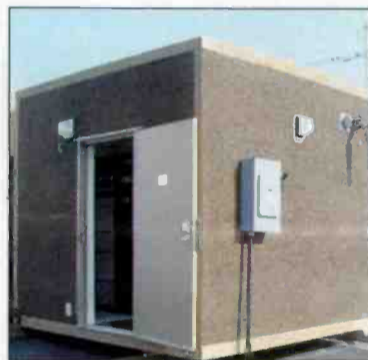


Sound Choice Furniture: This series of stock studio furniture offers vented cabinets with curved corners and countertop edges that are rounded. A standard color choice is available. Various riser heights are available for the rack turret.

The cabinets are 19-ply, 1" thick plywood and do not use particleboard or melamine. The countertops are solid-surface Avonite. No cabinet assembly is required. All surfaces are fully sealed with no laminate to crack, chip or peel.

623-780-0045; fax 623-780-9860; www.magersystems.com; mager@magersystems.com

Transmitter building Balsys Technology Group



Plug and Play: Each precast concrete building is custom sized and configured for the specific construction permit and its unique requirements. Electrical and other specifications adhere to local codes. All equipment is installed at the Balsys Orlando facility, pre-wired and tested. When delivered to the final site, all that is required is a pad on which to place the building, electrical and transmission line hookups, phone line or STL hookup, system proof and the job is done. This process maximizes efficiency, and minimizes on-site time and the associated travel and per diem expenses for contract engineers.

407-656-3719; fax 407-656-5474
www.balsys.com; balsysflorida@cs.com

Combiner systems Shively Labs

2630, 2640: The 2630 low power branched combiner system and the 2640 balanced combiner system are patching systems with lockout-tagout capability, compact power dividers, low windload hybrids and a digital injector for high-level combining.

888-SHIVELY; fax 207-647-8273
www.shively.com; sales@shively.com

Mix, router, codec Tieline America



Commander G3: Commander G3 features two expansion slots that accept the user's choice of hardware and software modules. Combinations of modules offer 15kHz mono over POTS, dual mono over POTS, stereo over POTS, mono/stereo over ISDN, GSM wireless to landline and mono/stereo audio over IP and data networks. The unit also offers simultaneous off-air communications over POTS, ISDN or GSM networks in addition to the main program channel. There is a digital audio matrix router in each codec that configures broadcasting profiles such as mono, stereo, live off-air communications with the program channel, dual mono, cue, intercom and bonded mono configurations.

888-211-6989; fax 317-913-9615
www.tieline.com; sales@tieline.com

Product Showcase



Model DAI-2 Dialup Audio Interface

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- momentary and/or maintained relay outputs
- four logic inputs with programmable output
- balanced audio input and output with ALC

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615.228.3500

more information: www.sinesystems.com

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www.audemat-aztec.com Miami, FL USA - ussales@audemat-aztec.com

Voice processor Aphex Systems

230: Features of this voice processor include a reflected plate amplifier tube mic preamp, an easy rider compressor, a logic-assisted gate, split band de-esser and an aural exciter. The processor offers +4dBu and -10dBV outputs, as well as 24-bit/96kHz A/D AES, S/PDIF and optical outputs. It also features a low jitter word clock output, word clock input and a cough switch (soft mute).

818-767-2929; fax 818-767-2641; www.aphex.com; sales@aphex.com



Monitor, control translators Airsis

Translator Monitor 2000: This product allows users to monitor and control transmitters and translators on remote towers via satellite and the Internet. From a desktop, users can monitor and manage the translator network, get alerts of impending failures and send commands to fix problems. Users can also change the alert thresholds or event triggers from a Web-enabled PC. The monitor is a plug-and-play solution consisting of the hardware monitor and Airsis Vision, the company's Web-based management service. It provides near real-time monitoring, alerting and reporting of the translators.

619-585-0435; fax 619-585-0474
www.airsis.com



Optical wiring system Otari

LW-55: This system features 64 channels of 24-bit/96kHz audio signals and accepts external word clock signals at 44.1kHz, 48kHz, 88.2kHz or 96kHz. The optical fiber cables between two units can be extended 1.5km and the transmission length can be extended to 22.5km with a maximum of 16 units connected. The system's units are connected by dual transmission lines and each unit has dual power supplies for fault-tolerant and redundant operation. The system offers eight slots for signal processing modules.

800-877-0577; fax 615-255-9070
www.otari.com; sales@otari.com

On-air console upgrade Audioarts Engineering

Net-75 Panel: This upgrade combines work surface technology with a stand-alone console. Wheatstone's D-75 digital audio mixing console can be modified with the Net-75 panel to provide a fully integrated network system with the option of autonomous console operation when needed. Four output busses along with eight digital inputs and outputs are provided within each panel. A CAT-5



connection allows for 64 x 64 bi-directional AES channels. Four faders within the D-75 will have access to thousands of analog and digital system resources. Input modules are equipped with eight-character LED displays, rotary source selectors and take buttons.

252-638-7000; fax 252-637-1285
www.wheatstone.com

Digital audio editing Sony

Sound Forge 8: A new feature of this audio editing software is the CD Architect 5.2 software for professional CD mastering, with direct track export functionality from Sound Forge software for Red Book audio CD creation. This upgrade also provides application scripting functionality and batch processing, which allows users to automate processes for multiple file encodes; customizable keyboard commands for streamlining workflow; and the addition of low-latency ASIO driver support.

800-686-SONY; fax 201-930-4752
www.sony.com/proaudio

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856-719-9900
www.daysequerra.com

2005 PRODUCT SOURCE



Audio console Arrakis

Xtreme Mixer: This digital audio console supports analog and digital sources. The console features multimillion operation switches, Penny & Giles slide faders and LED illumination for all switches. It offers a clamshell design that flips open with

strain-relieved connectors. The console features three mixing busses, stereo cue, monitoring for a control room and studio, and a telephone interface for on-air talk shows and off-line recording and communication.

970-461-0730; fax 970-663-1010; www.arrakis-systems.com; sales@arrakis-systems.com

Multichannel radio processor Linear Acoustic



Aeromax-HDFM: This processor incorporates programmable audio processing for a station's analog and digital FM signal paths, in addition to providing separate multiband processing for two supplementary audio channels. The unit also provides 5.1-channel surround-sound encoding via built-in SRS Labs Circle Surround technology. The unit's front panel display features a spectrum analyzer and a digital oscilloscope display.

888-292-3117; fax 717-735-3612

www.linearacoustic.com
info@linearacoustic.com

LED sign interface Sine Systems



MBC-1: This interface replaces the basic signaling lights with a customized message on a Beta-Brite or other Adaptive Micro Systems LED message boards. Each MBC-1 can control several displays. The system monitors as many as 15 control room devices and can display a unique message for each one. Any message that can be displayed on the message sign can be triggered by the MBC-1. Several messages are preprogrammed and can be changed. Inputs are individually programmed for a momentary or latched display. Latched messages are cleared with a common reset input.

615-228-3500; fax 615-227-2367

www.sinesystems.com; info@sinesys.com

50kW AM transmitter Broadcast Electronics

4MX 50: This 50kW transmitter is based on a patent-pending modulation design and is about half the size of comparable models. The transmitter is IBOC and DRM compatible. Notable features include PA modules that can be accessed from the front of the transmitter, while lift-off rear panels provide access to power supplies and all ac connections. Power can be cut back to 250W. A 15" XGA GUI is provided for operation and diagnostics. This data is also available via IP. The unit's power factor is greater than 0.98.

217-224-9600; fax 217-224-9607

www.bdcast.com; bdcast@bdcast.com

Digital console Radio Systems

Millenium Digital: This console provides analog or digital on every channel, 32-bit resolution, sample rate conversion on every input and CRT companion metering/timer and set-up display. All the outputs are available in analog or AES/EBU digital format and the console offers 10 extra auxiliary output busses. The system also features 10 fully programmable mix-minus outputs and a serial RS-232 interface.

856-467-8000; fax 856-467-3044; www.radiosystems.com; sales@radiosystems.com



Low-noise laptop Alienware

Acoustic Dampening System: Systems configured with this system will be outfitted with Alienware's acoustic absorption matting, as well as low-noise system fans for decreased internal chassis decibel levels. The acoustic absorption matting consists of 4mm of soft cellular foam padding that is built into the system chassis to reduce the noise generated by components such as graphics cards, processors and hard drives. The 92mm, 120mm and 80mm chassis fans are 80 percent quieter than standard case fans. The systems operate at noise levels as low as 21dBA, and move up to 54 cubic feet per minute of airflow.

1-800-ALIENWARE; fax 305-259-9874; www.alienware.com



Tube microphone DPA Microphones



4041-T2: Using an updated 130V microphone preamplifier module, this mic incorporates a pentode vacuum tube driven as a cathode follower in a Class A unity gain output stage. The sub-miniature vacuum tube is heated by 6V supplied via the HMA5000 high-voltage microphone amplifier. With a self-noise of 10dBA and a THD at 0.5 at 120dB SPL peak, the mic offers a range of about 110dB. The back plate of the capsule is polarized via the HMA5000 with 200V, providing sensitivity and SPL handling of 144dB before the onset of clipping. The mic features a flat phase design with a frequency response from 10Hz to 20kHz and a soft boost of 4 to 6dB at 8kHz.

303-823-8878; fax 303-823-5830

www.dpamicrophones.com
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www.balsys.com

Auto mic mixer Klotz Digital

Mixer: As many as 40 mono or stereo line levels inputs or microphone channels are automatically mixed in this Vadis-based mixer. Each channel provides an individual level meter for exact level control and offers adjustment to parameters like pre-gain, threshold, attenuation or attack-and-release time. Equalizers and dynamics can be inserted in any signal path. The mixer also allows the user to determine a permanent main or presenter microphone that has overall priority. This equipment is controlled and set up by a software GUI, also enabling to remote control via LAN or modem any single microphone.

678-966-9900; fax 678-966-9903; www.klotzdigital.com; sales@klotzdigital.com



Vacuum capacitor Comet North America

Integrated Drive: The core component of the Integrated Drive is the variable vacuum capacitor. It also includes a motor, coupler and tube to drive the capacitor. A durable, backlash-free coupler connects the capacitor to the drive system. A bulk-head flange and adjustable end flange ensure easy mounting in the match-box. Features include an optional memory chip that stores specific module information, such as capacitor type, serial number, measurement of capacitance curves and, on request, an integrated stepping motor driver and a micro controller that allows high-level commands.

513-831-5000; fax 513-831-7889; www.cometnorthamerica.com; info@CometNA.com



Multipattern mic Cad Professional Microphones

GXL3000: A large-diaphragm, multi-pattern (cardioid, omni, figure-eight) condenser mic, this piece of equipment features a 1" dual diaphragm, a highpass filter and a 10dB pad. A shock mount is included.

800-762-9266; fax 440-593-5395; www.cadmics.com; sales@astatic.com

Acoustic foam Acoustics First

Cutting Wedge: This polyurethane foam absorber can create seamless surfaces to reduce unwanted reflections. Available in two versions, the 2000 series panels can be nested to increase the thickness of the surface. The Classic series has a flat back. Both are available in charcoal, brown, beige, blue, burgundy and hunter green. Panels can be ordered as 1' x 1' squares or 2' x 4' panels.

888-765-2900; fax 804-342-1107

www.acousticsfirst.com; info@acousticsfirst.com



Audio processor Broadcast Warehouse



DSP Extra: This audio processor features a six-band limiter with advanced distortion control, multiband AGC adopted from Translancech Sound's Ariane digital audio leveler and split processing architecture that makes it suitable for simultaneous FM and digital radio services such as IBOC/HD Radio and Internet streaming. The unit also provides TCP/IP and serial control, multiple factory and user-defined presets and front panel metering and a control system.

+44 208 5409992; fax +44 208 5409994

www.broadcastwarehouse.com; info@broadcastwarehouse.com

HD Radio on-air processor Omnia Audio



EXI Series: Three units are part of the new line of processors designed for hybrid analog and digital broadcasting: the Omnia-6 EXI for FM, and Omnia-5 EXI for AM and FM broadcasters. The EXI processors add new tools for HD Radio broadcasts. Most notably is an onboard diversity delay method and an advanced clipper design engineered to help eliminate intermodulation distortion (IMD). The diversity delay capability moves the audio delay required to match the analog and HD Radio signal paths from the exciter to the audio processor. This simplifies the audio path and eliminates a failure point in the audio chain. The Lo IMD Clipper featured in the processor reduces the IMD that is created when using moderate to

aggressive clipping to create competitive loudness. Existing Omnia-6, Omnia-5 and Omnia-4.5 processors can purchase an upgrade to add EXI capabilities.

216-241-3343; fax 216-241-4103; www.omniaaudio.com; info@omniaaudio.com

Site analyzer Bird Electronic



SA-6000EX: The SA-6000EX provides users with a diagnostic test range from 25MHz to 6GHz. The unit stores up to 300 traces. This product includes better overall frequency resolution, a source VSWR of 1.12 to 1.00, a VSWR range of 1.00 to 99.99, and a greater low-temperature operating range (-10 to +50 degrees C). The unit is built for field use with a high-capacity battery pack, ergonomic design, large color display and immunity to on-channel interference (+13dBm).

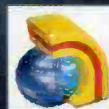
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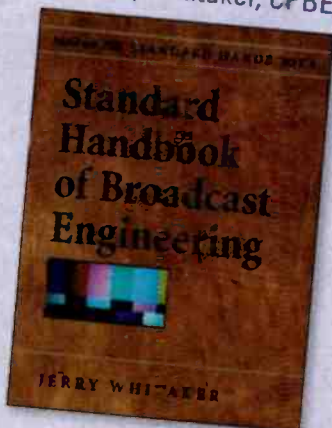
The Reference Room

Selections for your bookshelf reference

Standard Handbook of Broadcast Engineering
By Jerry Whitaker, CPBE

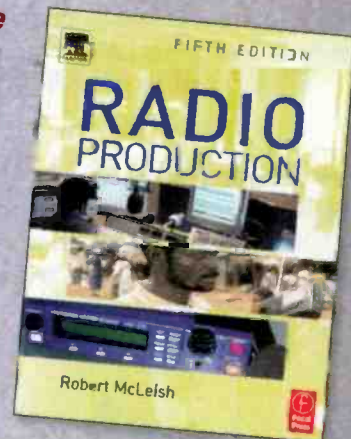
Publisher: McGraw-Hill

This book provides comprehensive and well-illustrated coverage of DAB and DTV. With 57 chapters, it provides need-to-know broadcast, engineering and technical information, data and reference material. It includes data broadcast standards and implementation guidelines, maintenance of RF systems, all types of antennas and receivers. It also provides testing procedures and equipment for new and older technologies.



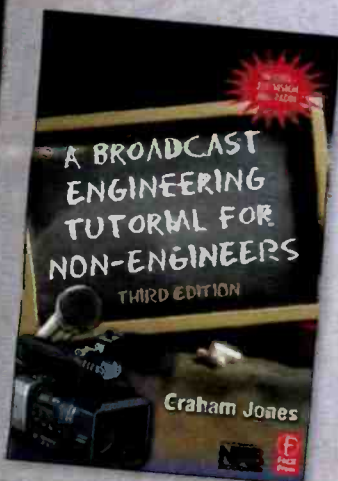
Radio Production, 5e
by Robert McLeish and Georgia Kennedy
Publisher: Focal Press

This book covers everything from operational techniques and producing different program formats, to conducting interviews and writing for radio. The fifth edition features new and updated information on digital production techniques; the internet and Internet-only radio stations; automatic playout systems; ethics; storytelling, station management; scheduling; and remote reporting. This edition is further enhanced by a supporting CD-Rom, packed with examples, exercises and resources.



A Broadcast Engineering Tutorial for Non-engineers
By Graham Jones

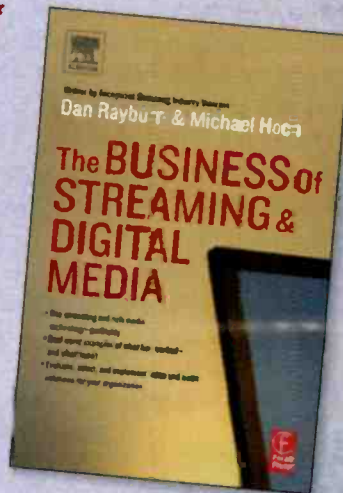
Publisher: NAB and Focal Press, 2005



There are numerous books available on broadcast engineering but most of them assume some level of technical knowledge and many cover specialized technologies or concentrate on certain areas of the industry. This book is aimed at those people who would not understand, or don't need, the technical depth of more specialized publications. It introduces broadcast engineering in all its aspects, including radio and TV, analog and digital, studios and transmission. This third edition of the NAB title has been completely revised and little of the previous version remains unchanged.

The Business of Streaming and Digital Media
By Dan Rayburn, Michael Hoch
Publisher: Focal Press, 2005

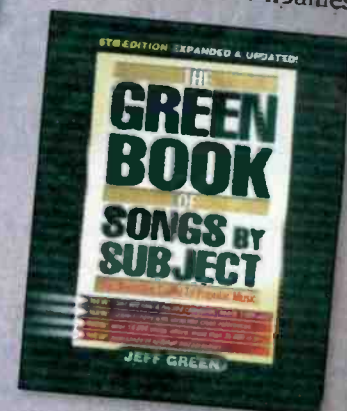
This book answers the question, "What is the value of using streaming and digital media for my business and what can I expect in return?" The book provides direct analysis of how to implement a scalable, profitable venture as well as the common and hidden pitfalls to avoid in business. By focusing on the business implications and technical differences between rich media and traditional broadcast distribution, readers will learn how to gain significant time-to-market and cost-saving advantages by effectively using streaming and digital media technologies.



Green Book of Songs by Subject: The Thematic Guide to Popular Music
By Jeff Green

Publisher: Professional Desk References, 5th edition 2002

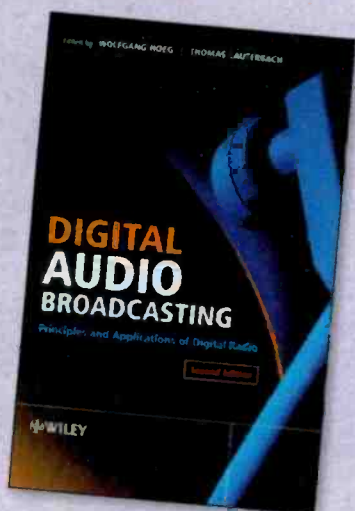
With more than 35,000 songs classified in almost 1,800 categories, this is a useful reference tool for disc jockeys, production companies,



researchers and trivia buffs. Since the fourth edition (1995), more than 14,000 songs and 905 categories and subcategories have been added. Green, executive editor of Radio and Records, offers well-known and relatively obscure songs that range from jazz and popular standards to rap and TV jingles.

Digital Audio Broadcasting: Principles and Applications of Digital Radio
By Wolfgang Hoeg and Thomas Lauterbach

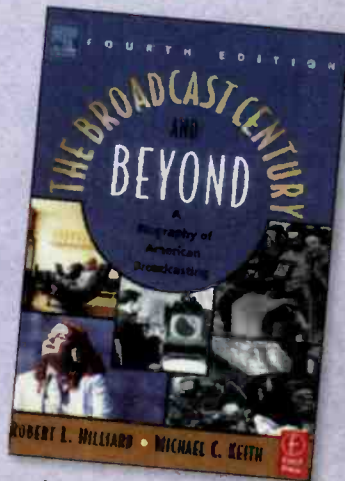
Publisher: John Wiley & Sons, 2nd edition 2003



This edition introduces the recent international standards, applications and the technical issues of the Eureka 147 DAB system. The book explains the basic concepts of DAB including audio processing, data transmission and modulation schemes, and how the system can be implemented and operated.

The Broadcast Century and Beyond: A Biography of American Broadcasting
By Robert L. Hilliard and Michael C. Keith

Publisher: Focal Press, 2004, 4th edition



Because the media are the most powerful forces in the world for influencing the minds, emotions and even the actions of humankind, this book attempts to relate the development of broadcasting and media to the political, economic and social world they both reflect and affect.

These books are available through most book outlets, including the SBE bookstore and the NAB bookstore.

2005 Product Source

Radio

THE RADIO TECHNOLOGY LEADER

STL transmitter TFT



5200: The analog STL consists of a transmitter and receiver pair that delivers a composite or mono signal with flexibility and minimum adjustment or configuration. The transmitters feature a nominal output of 10W; 20W versions are also available. The RF system is frequency agile and set by software in the transmitter and receiver. The transmitter features all frequency bands from 1.7GHz to 140MHz, a 6.25kHz step size, direct FM modulation and an input/output of 600Ω. Its dynamic range is 80dB static and its frequency response is ±0.1dB at 0.5Hz to 100kHz.

800-347-3383; fax 408-432-9219; www.tftinc.com; dparker@tftinc.com

Surge suppression, power conditioning technology

Surge X



SX1115, SX1115-RL, SX1115-RT, SX1120-RT and SX1215: The SX1115 Series surge suppressors are 15A load-capable. The SX1120-RT accepts 20A loads, and the SX1215 is for 240V applications. All models provide eight grounded ac receptacles on the rear panel, with six switched and two always on. The R and RT models also provide a front-panel courtesy outlet. The SX1115-RL features two Neutrik XLR connectors for Littlite gooseneck lamps to provide dimmable illumination of equipment racks in recording studios, custom design/build installations and FOH sound reinforcement applications. The SX1115-RT features a remote turn-on capability for use in integrated power distribution systems. A rear-panel Phoenix connector allows the unit to be connected in a master-satellite configuration with a controller such as the Surge X SEQ for the sequential power-up of multiple components.

215-766-1240; fax 215-766-9202; www.surgex.com; anew@frontierelec.com



Near/mid-field monitor NHThif

M-60: This DEQX-calibrated speaker system features DSP speaker correction. The near/midfield monitor offers a XDA DSP processor and amplifier that features DEQX-calibrated DSP speaker correction for a wide soundfield that remains accurate, even when listening from a far-off axis. Each system uses amplification courtesy of Power Physic's patented Class D One Cycle Sound design.

800-648-9993; fax 707-748-5945; www.nhthif.com

Portable audio mixer Comcon Industries

FP-21: A three-channel portable audio mixer, this unit is equipped with long-lasting batteries, conductive-plastic rotary faders, mic/line selectors, metering, filters and balanced audio circuits. The unit provides phantom power, to 124dB S/N and distortion of 0.5 percent or less. The balanced audio inputs and outputs are provided on XLR connectors. The unit is housed in an aluminum enclosure and can operate for 10 hours on six D batteries. It can also accept a 10.5V to 18V dc power feed.

+91-11-2638 4606; fax +91-11-2638 5589
www.comconindustries.com

SPL meter ATI



SLM-100: This audio meter features a large analog meter for quick measurements in frequency ranges from 32Hz to 10kHz. It can be set to measure A- and C-weighted measurements with peak or averaging response. It includes a seven-range selector switch, calibration control and a test signal output via an RCA jack. A 9V battery supplies power. SPL ranges from 50dB to 126dB, referenced to 0.0002mbar, are possible. A threaded insert allows the meter to be mounted on a camera tripod. The unit measures 6.25" x 2.5" x 1.75".

800-922-8001; fax 856-719-9903
www.atiaudio.com; sales@atiaudio.com

Rack mount telephone interface JK Audio



Innkeeper 2: A two-line rack mount digital hybrid, the front panel keypad, display and handset jacks provide speed dialing and call setup. Digital hybrids allow the user to send signals into the phone line while maintaining separation between the user's voice and the caller. The balanced XLR output jacks contain only the caller's voice. This proprietary, dual-convergence echo canceller algorithm can achieve separation typically exceeding 50dB, without any setup and without sending a noise burst down the line. The interface features auto-answer and auto disconnect for use in IFB and monitoring applications.

800-552-8346; fax 815-786-8502; www.jkaudio.com; info@jkaudio.com

Universal voltage monitor Statmon Technologies

UVM-6: A universal voltage monitor hardware interface, this equipment allows a host computer to measure and monitor six ac line voltage sources via a variety of communications standards, including serial control as well as optional TCP/IP over high speed Ethernet using a standard 10BaseT connector. The system uses a dedicated RMS to dc analog signal processing device to compute, using analog building blocks, the RMS value of the input waveform from any of the six available ac connectors on the rear panel. The device will support the installation of an Ethernet communications module to allow operation over the Internet. The module is attached to the rear panel and is supported by a pair of standoffs on the main board.



310-440-8053; fax 310-278-6585; www.statmon.com; info@statmon.com

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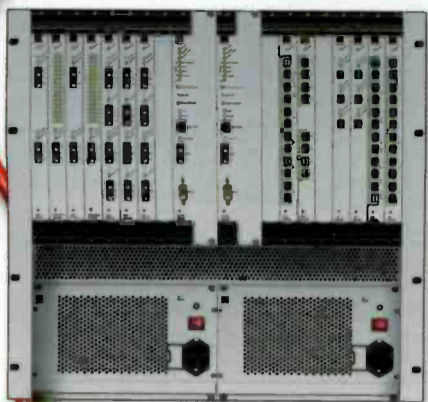
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2005 PRODUCT SOURCE

Matrix Lawo



Nova 73 HD: With this product users can service, equip and reconfigure while the system is running. Hot-plugging is not restricted to the replacement of similar components, but also allows system extension of similar components, and allows system extensions even when the user is on-air. This product is designed as a central matrix for audio and additional data. Its modular build allows the flexible adaptation to the real requirements, scalable in routing capacity of up to 8,192 mono channels. Mounted in a 10RU frame, it has 16 slots for I/O modules with integrated

signal processing. It supports sampling rates of 44.1kHz, 48kHz, 88.2kHz and 96kHz. It can be controlled via Ethernet. RS-422 control is available.

+49 7222 1002 0; fax +49 7222 1002 24
www.lawo.de; info@lawo.de

TDM plug-in Crane Song

Phoenix: This TDM plug-in for Pro Tools emulates the unique properties of a magnetic tape machine. The plug-in process not only incorporates the non-linear saturation characteristics created by the magnetic tape itself, but also includes the interrelation of an analog tape recorder's record/reproduce electronics and equalization curves. Five TDM plug-ins emulate tape characteristics, each one incorporating a color change button allowing three choices to modify the process. A level control determines the amount of the process integrated into the audio signal.

715-398-3627; fax 715-398-3279; www.cranesong.com; staff@cranesong.com



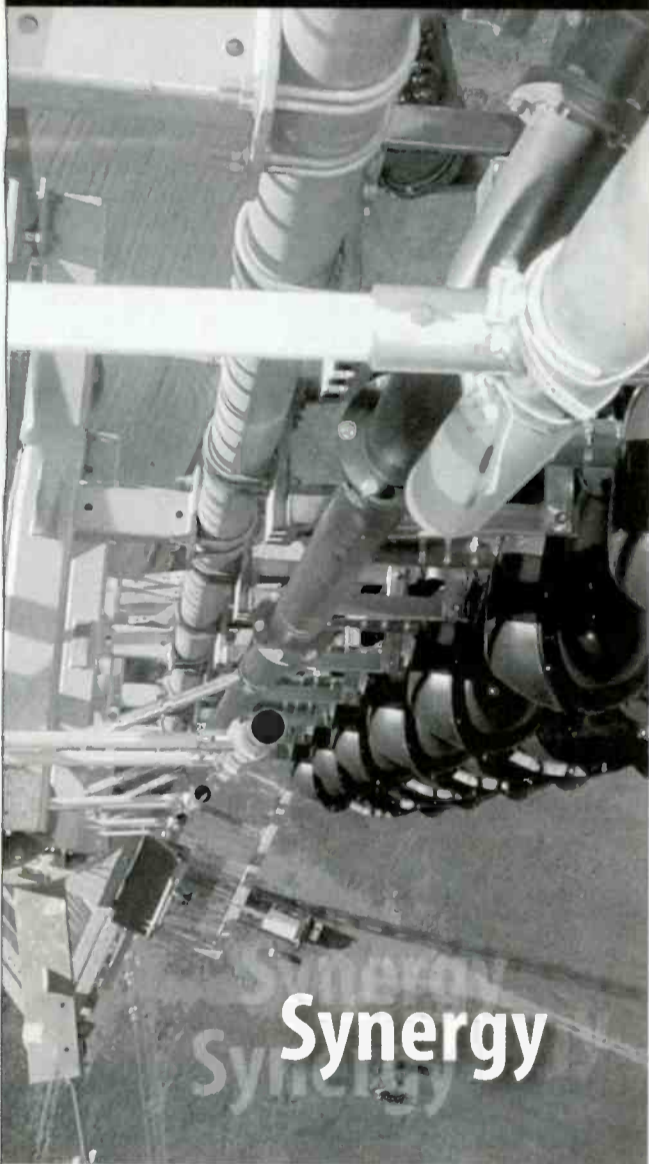
Stereo utility processor

Inovonics

Model 261: This processor allows users to normalize and control audio levels in an all-digital or mixed-signal facility. The unit provides four independent audio processing functions: gain-riding AGC, program dynamics compression, broadband limiting and independent HF limiting. It may be configured to incorporate one basic function, or to use all processing options for comprehensive program audio control. Features of this processor are an all-digital design using DSP technology; 48-bit internal processing, 16/24 bit I/O; accepts analog and digital program inputs, provides analog and digital outputs simultaneously; a frequency response of ± 0.1 dB, 20Hz to 20kHz; and a power requirement of 115/230Vac, 10W.

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Disc cutter Vestax



VRX-2000: This vinyl recorder features vinyl cutting at 33-1/3 or 45rpm, an integrated cutting equalizer and amplifier, and a special limiter for cutting head protection. It is quartz-control or varispeed selectable. The recorder can record 14 minutes per side. It offers playback with an ASTS tonearm.

516-333-9100; fax 516-333-9108
www.vestax.com

File transfer service Arrakis

Connected Radio: This service lets stations transfer audio, events, logs and text between multiple stations, station personnel, remotes, program originators and remote talent. The station provides a PC with Internet access at each site and Arrakis does the rest. Files can be transferred by dragging and dropping. The service provides the functions and links for the user. Once files are received, they can automatically be routed to the appropriate destination, regardless of the software or automation system that will use the file.

970-461-0730; fax 970-663-1010
www.arrakis-systems.com
sales@arrakis-systems.com

Miniature multitrack recorder Sonosax



Mini R82: A miniature two-to eight-track hard disk and Compact Flash card recorder with recording capabilities from 44.1kHz to 192kHz at 24 bits, it includes two microphone preamps with limiter and LF cut, two line inputs at a fixed level, eight AES-3 digital inputs and full timecode function. This unit measures 4.75" x 3.15" x 1.1" and weighs about a 0.5 lbs with four AA batteries.

+41 21 651 0101; fax +41 21 651 0109; www.sonosax.com; sonosax@sonosax.ch

Power conditioner Furman Sound

AC-215: Built around the company's SMP+ technology, the conditioner includes two rear-panel outlets and mounting hardware. It fits into any application where discreetly located, remote power purification and protection are needed. A three-year limited warranty covering defects in materials and workmanship is included.

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Prefab sound enclosures Acoustic Systems



Modular Studios: With isolated floors and silenced ventilation, the room's interior acoustics can be tuned using non-parallel walls, canted windows, bass traps and wall treatments. The company has created a hybrid line of modularly constructed sound isolating rooms that achieve all the relocation and pricing options of modular construction while also providing the level of finish normally associated only with conventional construction techniques.

800-749-1460; fax 512-444-2282
www.acousticsystems.com
info@acousticsystems.com

Condenser mic SE Electronics

Z3300a: This mic is a Class A multi-pattern condenser with 1.07" gold diaphragm with cardioid, omni and figure-eight patterns with a 100Hz filter and 10dB pad. Frequency response is 20Hz to 20kHz, and sensitivity is 12.6mV/Pa - 38 ±2dB (0dB=1V/Pa 1kHz). Other features include an impedance of 200Ω, equivalent noise level 20dB (A weighted) and 125dB max SPL. It uses 48V phantom power. The mic also comes with a metal shock-mount cradle and aluminum flight case.



408-873-8606; fax 408-873-7670

www.seelectronics.com; microphone@seelectronics.com

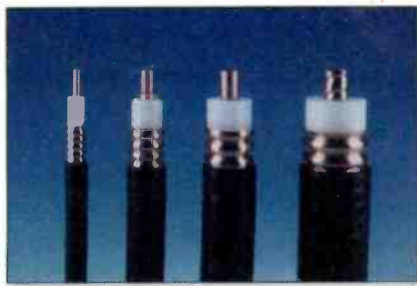
Automated profanity elimination Enco Systems



Guardien: This system is an automated profanity elimination and spoken word logging system for radio broadcasters. Guardian is a two rack-unit device with stereo balanced analog and AES/EBU inputs and outputs. It features contact closures for control of external devices or alert mechanisms. The unit delays and monitors the air signal, looking for objectionable words, and when it finds them, mutes or bleeps them automatically. Then the system logs the event, along with an audio clip, for future reference.

800-362-6797; fax 248-827-4441
www.enco.com; sales@enco.com

Coaxial cable Dielectric



Flexline Foam: Type FLF is normally used for primary feeders, while Type FLS is typically used for jumper assemblies. Both style cables feature copper inner conductors, highly closed-cell foamed polyethylene insulator, oxygen-free copper corrugated outer conductor and polyethylene jackets. The foam cable is available in a full range of sizes. The FLF is available in 1/2", 7/8", 1 1/4" and 1 5/8". The FLS is available in 1/4", 3/8", 1/2" and 7/8". Connectors and accessories are available for all sizes of these cables.

800-341-9678; fax 207-655-7120; www.dielectric.com; dcsales@dielectric.com

Digital audio codec Musicam USA



Netstar: This codec allows users to send and receive real-time audio, contact closures and ancillary data via IP, ISDN and all types of dedicated data circuits. The codec is self-contained in a 2RU chassis. Stereo analog and AES/EBU inputs and outputs are standard. This product contains G.711, G.722, MPEG 1 and 2 Layer II, and MPEG 1 and 2 Layer III coding algorithms for compatibility with older codecs. It provides MPEG 2 AAC and MPEG 4 AAC low-delay encoding for high audio performance at lower bit-rates. Featuring four LEDVU meters and a large menu display, this codec has a flexible headphone monitoring system that allows users monitor send audio, receive audio or a blend of the two.

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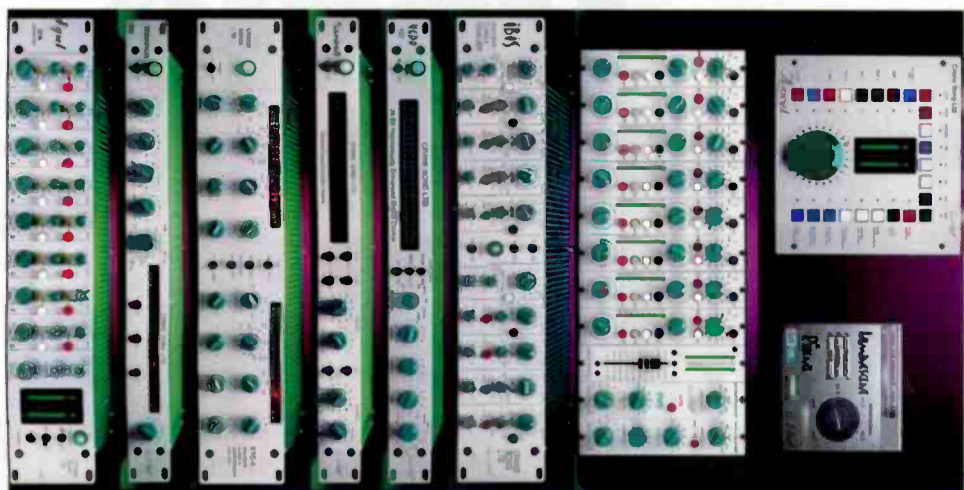
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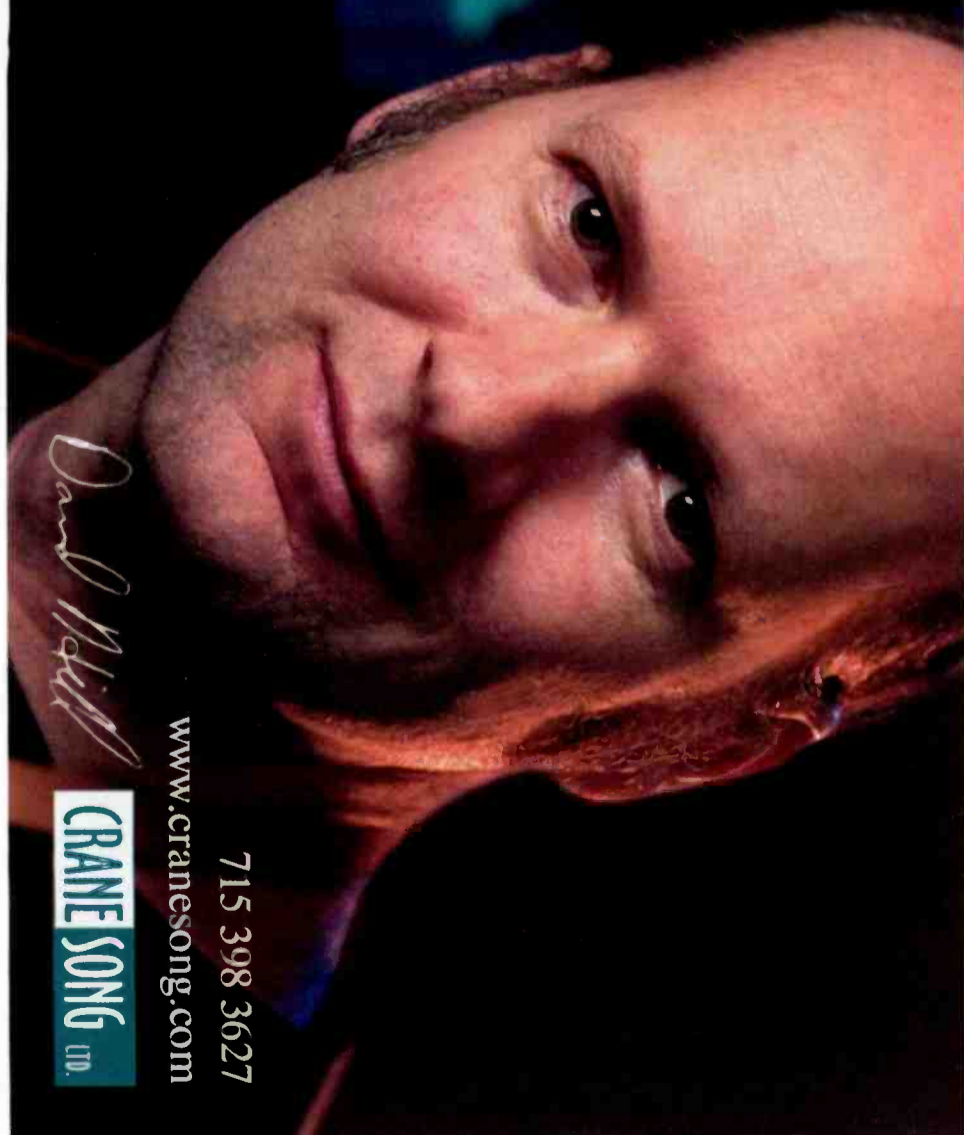
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2005 PRODUCT SOURCE

Power strips

North American Cable Equipment

CT-PCHRM9, CT-PCVRM24: The CT-PCHRM9 is a 19" EIA rack-mountable, nine-outlet power strip, while the CT-PCVRM24 is a vertical, 24-outlet EIA rack-mountable unit. The CT-PCHRM9 features a 15A circuit distributed over eight outlets on the back and one outlet on the front. It is equipped with a 10' power cord, EMI filtering, and surge and spike protection. A backlit combination circuit breaker and power switch allows for all nine outlets to be shut off or turned on simultaneously. The CT-PCVRM24 is a vertically rack-mountable power strip with a 15A circuit distributed over all 24 outlets. Eleven outlets are spaced for power supplies. The CT-PCVRM24 is housed in black plastic, equipped with a 10' power cord, circuit breaker and mounting brackets.

800-688-9282

www.northamericancable.com; info@northamericancable.com



Portable editing system

Sadie

PCM2: Using a USB 2.0 interface, the PCM2 system adds power to the BB2-J portable editing system and can be added to any laptop or desktop host PC running Windows XP. The portable system's connections are provided for analog I/O, S/PDIF digital I/O, headphone output and stereo microphone input. The BB2-J combines all of the audio I/O capability and functionality of the BB2 with a jog wheel controller, together with core function buttons.

615-327-1140; fax 615-327-1699; www.sadie.com; sales@sadie.com



Cardioid mic

Sennheiser Electronic

Evolution E840: This professional cardioid vocal microphone has been engineered to suppress sounds emanating from outside its pick-up pattern and providing high gain before feedback. It is fitted with a hum-compensating coil to reduce electromagnetic interference. The metal housing, finished in gray with a gray basket, encloses a shock-mounted capsule, resulting in a durable microphone that is insensitive to handling noise. The mic is supplied in a protective pouch with an MZQ800 microphone clip.

860-434-9190; fax 860-434-1759

www.sennheiserusa.com; lit@sennheiserusa.com



Converter/processor

Prism Sound

ADA-8 XR: Providing eight channels of 24-bit/192kHz A/D-D/A conversion, this converter offers flexible digital interfacing options: AES3, two-speed or two-wire, and also handles S/PDIF. Firewire is provided for direct connection to DAW software on a PC or a Mac. Other features of this product include direct connection of 32 inputs and outputs per card to Pro Tools HD; built-in signal-to-noise shapers for 16-bit and 20-bit reductions; built-in MR-X word-mapping for lossless recording up to 24-bit/96kHz on standard DA-88 or ADAT MDMs or other 16- or 20-bit media; and stereo monitor, with headphones and analog and digital line outputs, can monitor any input or output pair, or a panned stereo mix of all eight channels.

973-983-9577; fax 973-983-9588

www.prismsound.com; sales@prismsound.com



Digital audio toolbox

Score Electronics

DA795: Analyze any stereo digital audio signal and generate low-noise digital test signals, all at up to 24-bit/96kHz sample rate resolution. The toolbox offers two sets of AES/EBU and S/PDIF inputs, including Toslink and ADAT, plus word clock in. A transparency test verifies that a device passes digital test waveforms without errors, using synchronous or asynchronous test. The bit stream analyzer analyzes digital stream characteristics to check actual word length and sample rate, bit activity, header information, flag errors and low voltage. Bitscope shows distortion, noise or jitter on a signal-to-distortion or X-Y scope, and also applies the results to the internal speaker, headphones and line output.

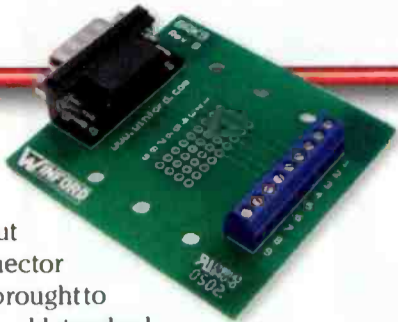
800-SENCORE; fax 605-339-0317; www.sencore.com

DB to screw-terminal adapters

Winford Engineering

Breakout Boards: This series of breakout boards brings all the pins of the DB connector to screw terminal blocks. Each pin is also brought to solder pads (four per pin) at 0.1" spacing to add standard pin headers. The boards are available in DB9, DB15, DB15HD, DB25 and DB37 versions. All boards have male DB connectors, so a gender changer is required for female connections. Clips are available to mount the blocks to DIN rails.

877-634-2673; fax 989-671-2941; www.winfordeng.com; sales@winfordeng.com



Auto-switcher

Altinex

SW1956CT: A two in, one out four-twisted pair auto-switcher, this device automatically switches on signal detection, or may be controlled manually. The unit is encased in a solid metal enclosure and ships with an external, 9V 500mA power



adapter. An external switch for manual input selection override is included. A manual override switch connects to the input select jack, which could also be controlled from a control system. The switcher may be mounted to furniture or other suitable surfaces using optional hardware.

800-ALTINEX; fax 714-990-3303

www.altinex.com
solutions@altinex.com

Outlet power control

Pulizzi Engineering

IPC36XX and IPV42: Available in rack-mount and a 42" vertical strip, these power distribution products provide individual on and off control of eight outlets. Power is controlled remotely via Ethernet (TCP/IP) or serial (RS-232) connections. The network interface can be accessed with a Web browser, telnet client or with SNMP management software. The system login provides two access levels, allowing administrator and outlet user access. The software is configurable for outlet names, unit names, network settings, sequence times and reboot times. The IPC36xx Series fits in 1RU. The IPC3601

is rated for 85-264V, 20A input and features right IEC C13 computer-style receptacles. The IPC3602 is rated for 120V, 20A input and features eight NEMA 5-15R standard three-prong receptacles. Both are a 42" L x 2" W x 2" D vertical strip.

800-870-2248; fax 714-641-9062
www.pulizzi.com; sales@pulizzi.com



Multiple-source audio meter

Ward-Beck Systems

RLM24: The 2RU meter accepts 24 balanced (110Ω) AES/EBU digital audio signal inputs via three-pin plug-gable screw terminations located on the rear panel. The meter provides 24 stereo LED bar graph displays. Each bar graph displays VU and peak information simultaneously. Below each meter pair is an LED illuminated push-button switch. If the input signal is lost the LED in the push-button switch turns on and the internal alarm is sounded. The LED remains lit until the signal is restored. The loss of signal threshold is adjustable. The unit houses two removable power supplies in a dual-redundant configuration. The central configuration panel is a 1RU half-width unit that sets and displays the configuration parameters of all the meters. The RS-422 control network is connected in a daisy chain through all the frames, up to 12 units, in the system.

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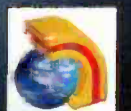
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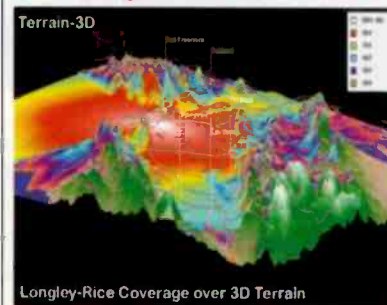
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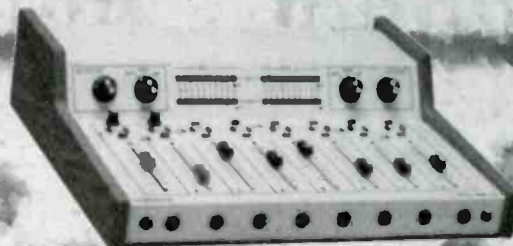
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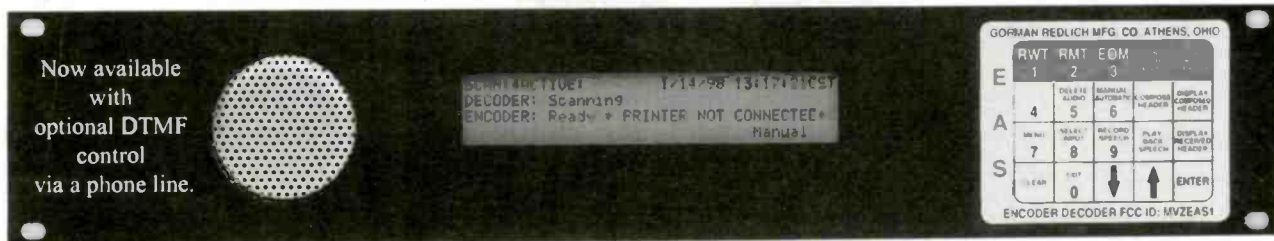
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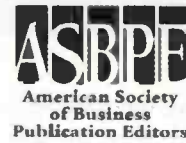
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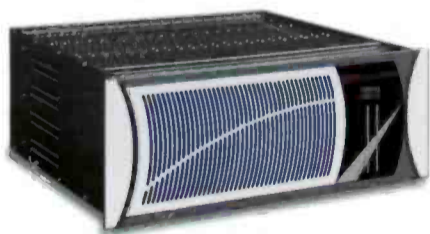
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