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2004 Product Source

A PRIMEDIA Publication

A supplement to Radió magazine

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Scott Studios

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THE AUDIOARTS ENGINEERING D-16

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A COMPACT TABLETOP DESIGN, the D-16 has the features you need: both analog and digital PROGRAM and AUDITION stereo outputs, 2 MONO analog outputs, 14 input faders plus 2 caller faders, 4 mic preamps, control room and studio monitoring, built-in cue and headphone amps (with concealed headphone jack) —even four internally generated mix-minus outputs!

WITH 24-BIT A>D and D>A inputs and outputs and sample rate converters on every AES digital input, the *D-16 will work with virtually any digital source gear you have*. It can run your source machines too (up to eight of them)—all opto-isolated. Its DSP DIGITAL METERING simultaneously displays VU columns and peak hold fullscale digital so you can be assured of pristine performance. Its powerful caller tools generate mix-minuses automatically, and you can program any of its four MXM outputs to be pre or post fader.

And with Wheatstone's extensive digital background and reputation you can be assured that the D-16 is a *great* console!

AUDIOARTS® ENGINEERING

252-638-7000 / www.audioarts.net / sales@wheatstone.com

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VistaMax™

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VistaMax is a digital audio management system that lets you network your audio studios together. With universal access to all of your resources simultaneously you increase productivity and quality while decreasing maintenance. You can smoothly migrate from a dedicated analog studio to a digital networked infrastructure with this distributed approach – on your timeframe. Benefits include:

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As a natural extension of our BMXdigital™ expertise, VistaMax is built on field-proven technologies such as familiar user interfaces without the complexity of a PC.

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1 800.622.0022 | www.broadcast.harris.com

HARRIS

2004 Product Source

Radio
THE RADIO TECHNOLOGY LEADER

Indisputedly indispensable, too.

The collection of products in this year's Product Source offer real solutions to everyday needs. There is information on more than 200 innovative products in this supplement, making it an invaluable resource. Each listing offers a detailed description of the product or service, the company's contact information and most feature a photo of the equipment for your evaluation. There are products to fit various station sizes and budgets.

Many of the products featured in this year's Product Source debuted at NAB2004, including a review of the *Radio* magazine 2004 Pick Hit award recipients. Also, check out the new additions to the Product Source. Four pages in this issue have been dedicated to unique items that may be handy at the transmitter site, on a remote, in the field production kit or on your bookshelf. Some of these items are not the usual broadcast fare, so they may fill that special need that you may have.

The *Radio* magazine 2004 Product Source is a resource that you can refer to throughout the coming year.

Also, I welcome your feedback on this annual supplement. Perhaps you use a product that has filled a need like no other. Please e-mail your comments and suggestions to radio@primediabusiness.com.

Kari Taylor

Kari Taylor,
associate editor

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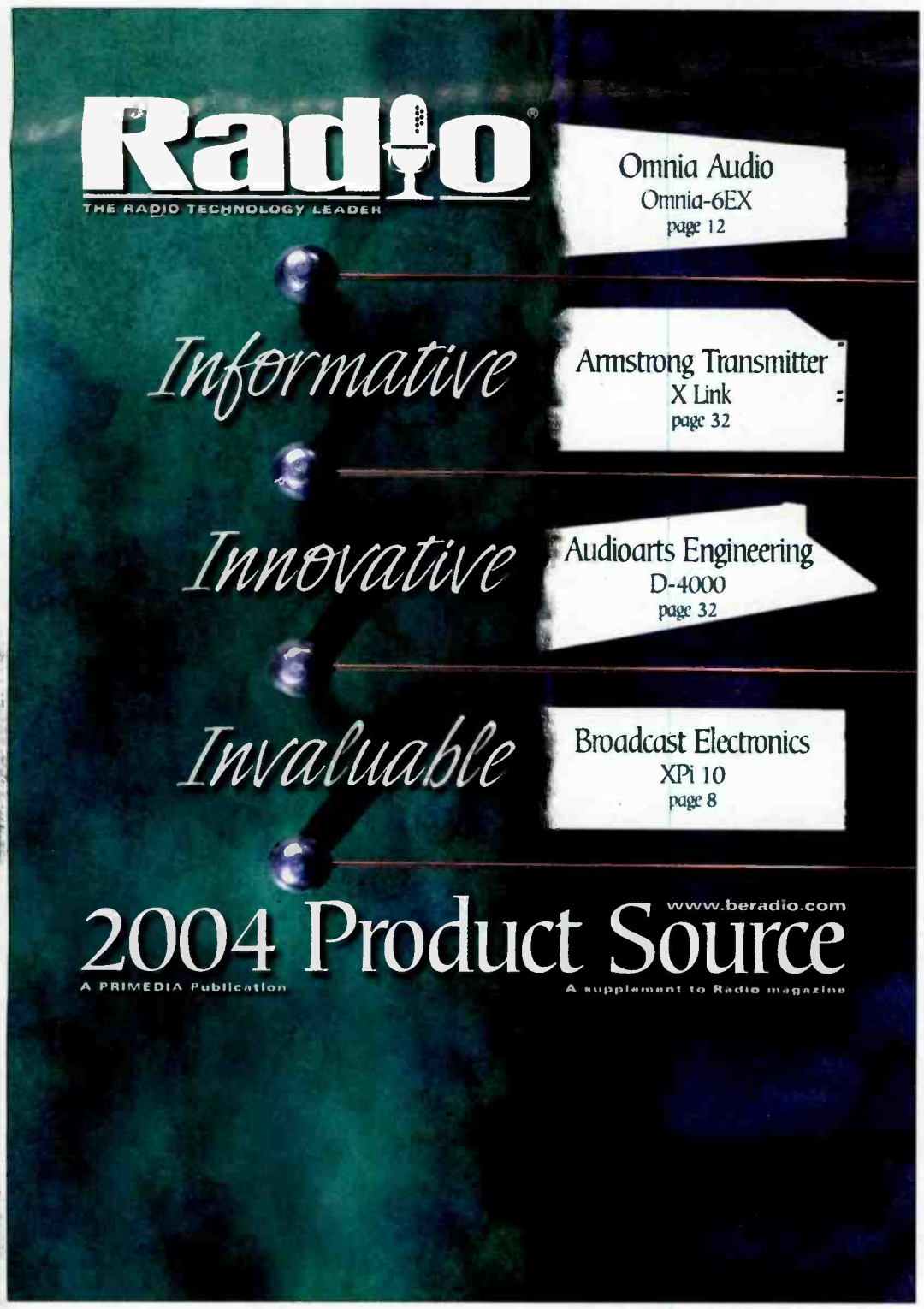

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Digital audio splitter
Aphex Systems

148: Designed to feed the same digital audio signal to multiple inputs, the 1/2 rack unit can split eight channels (four pairs) of digital audio into 32 channels (16 pair) through the use of 15-pin D sub connectors. This product can be mounted in a rack alone or in pairs with the Aphex Model 44-008SA Rack Kit. The splitter incorporates 20dB of saturated gain to square up the input signal and can be internally configured for 110Ω balanced or 75Ω unbalanced operation. Features of this splitter include one DB15 male input connector (four AES3 stereo inputs), four DB15 female output connectors (four AES3 stereo outputs on each), sample rates to 192kHz and an internal power supply.

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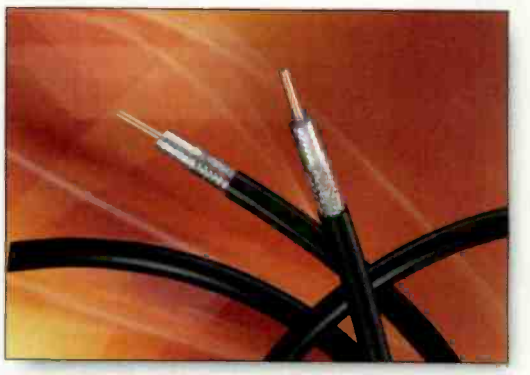
818-767-2929; fax 818-767-2641; www.aphex.com; sales@aphex.com

Low-loss cables
Belden



RF500 and RF600: These low-loss, 50Ω coaxial cables are lightweight and flexible, and can be used as antenna jumper cable assemblies and short antenna feeder runs in wireless communication systems such as wireless local loop, land mobile radio, PCS and cellular. They can also be deployed in in-building wireless applications such as internal communications systems and wireless LANs. The cables feature copper-clad aluminum conductors, foamed high density polyethylene insulation, an aluminum foil and tinned copper braid composite shield and a choice of a PE or a PVC jacket.

800-BELDEN1; fax 765-983-5294; www.belden.com; info@belden.com

Workstation
Omnirax

Forte: The desk holds an 88-note keyboard or several computer keyboards, with 64 rack spaces for equipment. Eighteen of those spaces are in the two sloping rack bays on the top. The remaining rack spaces are in four bays below the desk, 10 each in the two slanted front rack bays and 13 each in the two inside rear rack bays. A sliding monitor/mixer shelf allows the mixer/control surface on the front part of the shelf to slide forward over the main desk area. The sliding shelf can hold two 21" monitors. The front of the sliding shelf holds any of the smaller format digital or analog mixers, a control surface for DAWs or a 61-note keyboard. The optional computer keyboard shelf slides in and out from under the synthesizer shelf.

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

Power consumption meter
Scientifics

Watts Up? Pro: Users can measure the power consumption of any 120Vac appliance with this meter. The unit fits into any standard 120Vac wall outlet. The sampling rate starts at one-second intervals and displays how much power an appliance is consuming. The unit records current watts, min/max watts, power factor, cumulative cost, average monthly cost and 12 other energy consumption parameters. It can store power profiles of multiple devices and has a non-volatile memory that requires no batteries. The data recorded can be downloaded to a PC. Using the included software, data can be graphed and charted or tumed into spreadsheets for further analysis. The meter measures 7"L×4"W×2"H and weighs 1.5lbs.

800-728-6999; fax 800-828-3299; www.scientificsonline.com; cons_order@edsci.com

Wireless systems
Shure

ULX Wireless: Designed for live performance and systems integration applications, these frequency-agile models operate between 554MHz and 865MHz and offer as many as 1,440 selectable frequencies that are organized into pre-programmed groups. These groups enable a user to quickly set up and operate 20 compatible systems simultaneously. ULX Professional systems are able to scan all frequency groups to locate the one with the maximum number of compatible frequencies. Additional ULX Professional System features include: frequency and volume lockouts, advanced front panel controls, indicators for RF signal strength, furnished rack hardware, remote mountable halfwave antennas and an extruded metal chassis.

800-25-SHURE; fax 847-600-1212; www.shure.com; sales@shure.com

Subwoofers
Tannoy

TS8 and TS10: These compact active subwoofers are designed for studio monitoring and playback of multi-channel recordings. Despite the high power and low frequency performance, both models are less than 1 cubic foot in size, including the coned-shaped spiked feet. The TS8 provides a 12.5 liter closed box design with a down-firing 200mm (8") drive unit driven by a 200W RMS amplifier. The TS10 features a larger 16.75 liter closed box design with a down-firing 250mm (10") drive unit driven by a 300W RMS amplifier. The low frequency output (-6dB) of the TS8 and TS10 operates down to 32Hz and 29Hz respectively.

+44 1236-420-199
fax +44(0)1236-428-230
www.tannoy.com; litplease@tgina.com

Digital FM exciter
Nautel

M50: This direct-to-channel exciter is designed for use with analog FM and IBOC signals. It uses advanced digital signal processing technology enabling direct conversion of the audio source to the low-level FM signal. The exciter accepts data from Nautel's NE IBOC generator to produce a hybrid or all-digital HD Radio signal. An adaptive pre-equalization process compensates for system non-linearities to ensure the HD Radio signal is transmitted within spectral limits, avoiding the need for supplementary filtering. The exciter is frequency agile and suitable for N+1 applications. It features an LCD graphic display, status flow diagram and 128-event log.

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

Audio control surface
Sierra Automated Systems

Rubicon: A stand-alone control surface, the Rubicon integrates into the SAS 32KD Digital Audio Network for its mixing, switching, level control and effects. Modular, customizable and fully programmable, this control surface is for a medium- or large-market facility.

818-840-6749; fax 818-840-6751
www.sasaudio.com; sales@sasaudio.com

CD player/MD recorder
Sony Electronics

MXD-D40: The MXD-D40 is a combination CD player and Minidisc Recorder/player, designed for independent playback of either media as well as normal and high-speed digital dubbing of CDs to Minidisc. The device is designed for speed, flexibility and sonic performance and is well suited for music and radio production applications. The unit features MD long record/play using ATRAC3 compression and high-speed (4×) CD-to-MD dubbing for fast digital recording. The use of the optional Sony PCLK-MN10 PC link kit makes the CD/MD combination PC-compatible.

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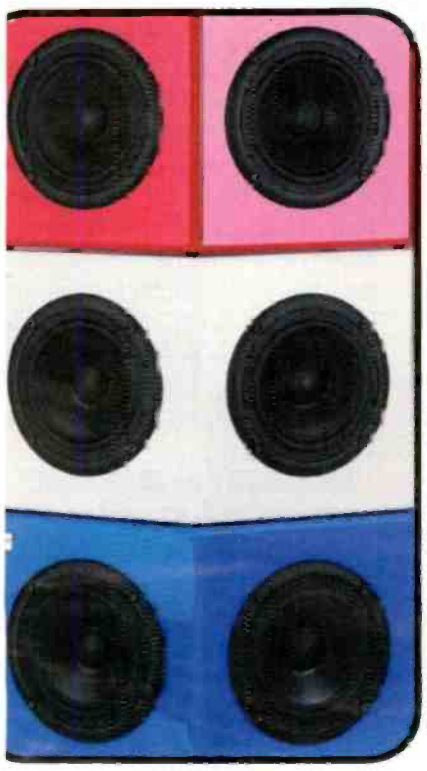

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Signal generator
Broadcast Electronics

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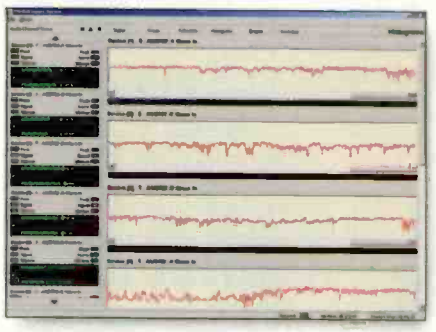
XPI 10: This HD Radio signal generator is installed at the studio, rather than the transmitter to reduce STL bandwidth and repurpose more of the existing equipment when implementing HD Radio. The generator allows the user to take advantage of the revenue-producing opportunities of HD Radio, such as advanced application services and secondary audio service. It also speeds implementation of Tomorrow Radio. Product features include interface connections for main program audio, secondary audio, program-associated data for main and secondary channels, and advanced data application; a graphical touch screen interface; integrated Ethernet connectivity; integrated audio synchronization and automated bypass functions; and an integrated GPS receiver.

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

Digital logging device
Mediatouch



Imedia Logger: Applications of this digital logger include time shifting and delayed broadcast, auto record without spots, 24/7 logging, mic skimmer and digital archiving. This unit can record as many as 12 audio sources simultaneously, and each workstation can record up to 12 separate stereo sources at the same time. Users can record four streams from each audio source using multiple compression formats and recording qualities. This system provides compression technology for MPEG 1 Layer 1, 2 and 3, PCM, Windows Media Audio and Real Audio.

888-665-0501; fax 204-783-5805
www.mediatouch.net; omt@omt.net

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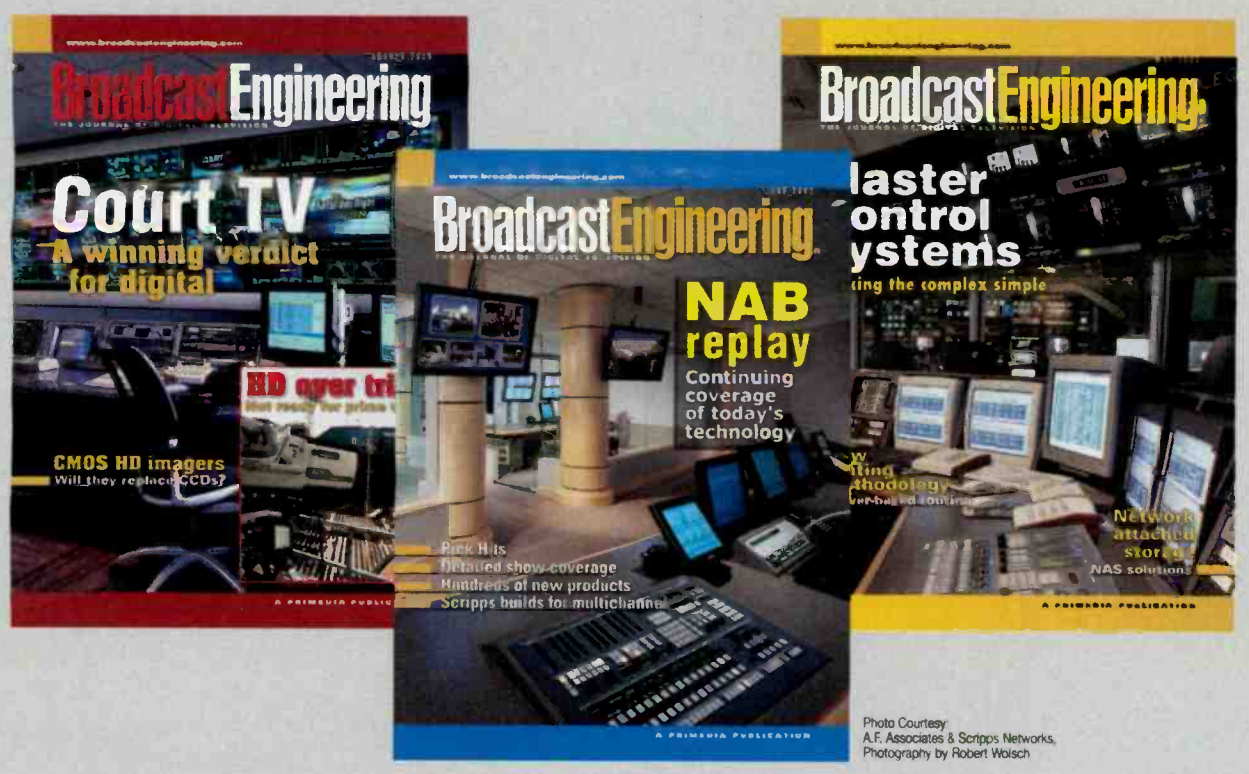
Some of our consoles were featured on the covers of *Broadcast Engineering* magazine in 2003. Countless others appear in all the other major industry magazines.



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Our industry is constantly changing, evolving, redefining or reinventing itself. At Forecast Consoles, we work very hard to provide the *Technical Furniture* for this moving target.
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Audio file converter
Acoustica

Audio Converter Pro: Besides offering a 32-bit audio engine, this converter also has the following features: converts freely between MP3, WMA, WAV and OGG; converts to and from higher sampling rates and bit depths up to 192kHz, 24 and 32 bit; converts songs directly off a CD by right-clicking on a CD track or CDA file; and automatically tags the new files via freeDB.

559-692-2224; fax 559-692-2214
www.acoustica.com

High-resolution sound cards
Digigram

PCX HR series: The HR series of PCX sound cards features 24-bit/192kHz converters, more advanced functions and more processing power. The PCX882HR and PCX881HR multi-channel sound cards offer hardware sample rate converters on all inputs for simultaneous recording of digital signals

with different sampling frequencies, a 66MHz/64-bit PCI interface and a more powerful on-board DSP. Eight inputs and eight outputs are provided—digital I/Os in the PCX881HR and analog and digital I/Os in the PCX882HR. Maximum levels of the analog inputs and outputs are +24dBu.

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

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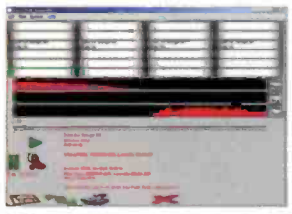

VoiceTRAC Package $404 *Buy Now* ☐
Record breaks, intros and outros for when you can't be live, but still want to sound like it. Includes: Basic VoiceTRAC module, Enhanced Production Interfaces module for third-party audio editors, CD Extractor/Audio Format Converter, and the Graphic VoiceTRAC Upgrade module for graphically based voice tracking and quick segue reviewing.

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POTS to ISDN codec
Telos Systems

Zephyr Xport: This codec uses a standard analog phone line to connect with any Zephyr Xstream ISDN codec. Spectral Band Replication coding delivers reproduction of voice and music. A broadcaster can use a standard analog phone line in the field to connect with the Zephyr Xstream ISDN codec in the studio. Custom DSP-based modem extracts bit-rate from real-world lines and prevents audio loss from retraining. With its built-in mixer, this product is useful for grab-and-go remotes. The DSP mixer section has mic and line inputs with selectable dynamics processing by Omnia, plus independent receive audio, headphone and monitor mix outputs. Operation is simple because it offers friendly menus for non-technical users. A built-in Web server and Ethernet port lets the user interact with this codec using a Web browser on a laptop.

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

RF safety analyzer
Narda Safety Test Solutions

Selective Radiation Meter SRM-3000: A hand-held selective measuring device for safety analysis of RF and microwave electromagnetic fields, the unit measures the field exposure that is produced by individual telecom services and assesses the results in accordance with the applicable standards. The analyzer consists of a basic unit and a measurement probe, and evaluates the results on site. The basic unit contains a spectrum analyzer for the frequency

2004 PICK HIT

range 100kHz to 3GHz. It can be operated using a triaxial from Narda or in combination with measurement antennas. The triaxial probe allows isotropic measurements in the range from 80MHz to 3GHz, covering FM radio up to the W-CDMA and UMTS services. The unit and probe are battery-operated and portable. The unit can also be used as a conventional RF spectrum analyzer for general field strength measurements.

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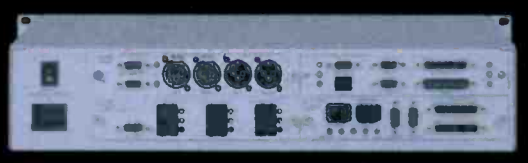
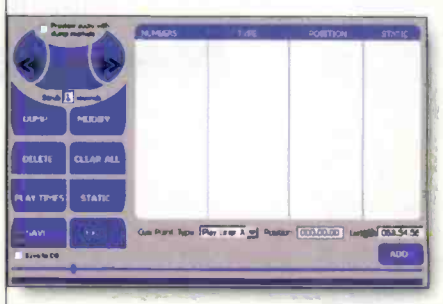


SuperLink rear panel configured for bi-directional T1 program transmission with automatic ISDN backup.

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

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

Extended-time profanity delay
Prophet Systems



Content Check: The profanity delay equipment allows users to record, listen and edit programs while they are happening, tailoring the programs to the audience, market and time slot. With more than 60 minutes of user configurable delay, the equipment allows the user to edit seven to 20 seconds of content and to remove the whole joke, bit or segment from the show. This product is configurable for uncompressed or compressed operation. It works with most automation systems, and non-destructive editing enables the user to keep the show for audit purposes.

800-658-4403; fax 308-284-4181
www.prophetsys.com
sales@prophetsys.com

TDM plug-in
Crane Song

Phoenix: A TDM plug-in for Pro Tools, this technology emulates the unique properties of a magnetic tape machine. The plug-in process not only incorporates the nonlinear saturation characteristics created by magnetic the 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

Spectrum analyzer
Rohde & Schwarz

FSH3: This spectrum analyzer provides signal measurements from 100kHz to 3GHz. The available measurement functions are suited for mobile radio base stations, on-site fault location in RF cables, IBOC measurements or lab applications. The analyzer provides four hours of continuous operation on battery power. Functions are accessed through functions keys and a menu system. As many as 100 traces and setups can be stored in the unit. The unit includes software to store, review and compare data.

2004 PICK HIT

301-459-8800; fax 301-459-2810; www.rsd.de

Graphical allocation tool
Dataworld

FM Explorer: A graphical allocation tool, this tool displays permissible areas to locate and provides real-time updated city grade contours. Users can uncheck the box

for a particular station in the data grid, and when the map redraws, the conflict will not be mapped. Change the class or channel in the control panel, and that change is reflected on the map and in the data grid. Move the transmitter by clicking on the map with "move study facility" selected in the control panel, and the coordinates change and the data in the grid is based on the new location.

800-368-5754; fax 301-656-5341
www.dataworld.com

Broadcast automation software
OMT Technologies

Imediatouch 2.2: OMT's flagship Imediatouch digital audio and broadcast system has an enhanced function with version 2.2. The noted enhancement is called Non-Stop Broadcasting, which provides an automatic failover to a separate in-studio slave computer in the case of a main system failure. The system also allows up to four computers to simultaneously connect to one on-air broadcast system to support a seamless on-air talent team approach. The system can also be configured to use a backup audio database in the event that the main database becomes unavailable. Imeditouch supports Dolby AC-3, MP2, MP3 and WAV file formats and includes an Apt-x audio conversion engine.

888-665-0501; fax 204-783-5805
www.omt.net; omt@omt.net

Commander G3
World's 1st Modular Stereo Audio Codec

Introducing the new Tieline Commander G3

At Tieline, we've taken a fresh approach to audio codec design. Now you can customize your audio codec to suit your exact needs for remote broadcasts and STLs. You only pay for what you need and we're the first to be compatible with most major ISDN and POTS codecs in your rack.

Think of the new Commander G3 as a codec foundation with two expansion slots which accept your choice of POTS, ISDN and GSM modules. You simply buy what you need.

For example, if you need a mono 15kHz POTS codec, simply buy the Commander G3 with a POTS module for one low price. Need 15kHz Stereo or dual mono over POTS? Just add another POTS module.

If you're looking for a mono/stereo ISDN codec without POTS, you can buy a Commander G3 with an ISDN module only. It comes with G.711, G.722, and Mpeg Layer 2. Tieline's "Music" algorithm also delivers an astounding 15kHz stereo over a single ISDN B channel! You can always add a POTS or wireless GSM module later if you need.

Need a stereo ISDN STL with automatic failover to 15kHz mono POTS? Buy the Commander G3 with POTS and ISDN modules plus Tieline's new Freedom Failover software kit.

Plug in the GSM module and deliver up to 7.5 kHz over GSM networks and up to 15 kHz over HSCSD wireless networks.

We've even created digital matrix router software which enables you to cue audio off air, create a local audio intercom, and talkback to the studio all without interrupting your broadcast.

The new Tieline Commander G3 is simply the world's most powerful, flexible and customizable codec. It's even compatible with your Comrex** Vector, Matrix, Blue and Musicam Liberty POTS codecs.

Every Tieline codec comes with a two year warranty plus the support of an experienced engineering team with more than 25 years in the broadcast industry right here in Indianapolis. That's why hundreds of stations, major radio groups and networks across America use Tieline to deliver audio every single day.

Hurry, free demonstration Commander G3's are limited. Call you favorite broadcast dealer or call us at 800-950-0750 to book your free demo.

Tieline TECHNOLOGY

**Comrex and Musicam are registered trademarks of each respective corporation

Call: 800 950 0750
www.tieline.com/be

2004 Product Source

Studio Telephone Access Center

Comrex

STAC6 and STAC12: These Studio Telephone Access Centers (STAC) for listener lines, talk shows and call-in segments incorporate two digital telephone hybrids handling as many as four callers. It is offered in six and 12 phone line versions with the ability to upgrade in the field. The accompanying control surface supports unique producer and screener configurations. IP-based call screening and control is embedded, enabling operation from virtually anywhere. Other unique features include auto-attendant and support of as many as four control surfaces.

2004 PICK HIT

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

Audio processor

Omnia Audio

Omnia-6EX: This processor offers a parallel processing structure that routes audio from the mixer section to separate output stages for conventional FM and DAB. The FM section receives distortion-controlled final limiting with pre-emphasis, and an upper-frequency response of 15kHz. The DAB section has a multi-band Look-Ahead final limiter with user-selectable frequency response up to the full audio bandwidth of 20kHz. The processor offers sampling rates of 48kHz and higher.

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

Automation software

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. Another feature is 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 artists can be set to a specific rotation even within randomized carts), 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

FM, digital transmitter

Nautel

V10: The Virtuoso is a 10kW FM/HD Radio transmitter employing a linear, adjustable bias, broadband design. It is capable of 3.2kW digital, 7.7kW hybrid or 11kW analog operation. Because it is frequency agile, it can be used for N+1 configurations in conjunction with the Maestro digital exciter. RF power modules and associated switch mode power supply modules are hot-plug for ease of service. A provision for duplication of exciters and IPA provides maximum redundancy. The unit features a graphic user interface, a diagnostic flow diagram and an event log. Compact and lightweight construction allows installation at sites with space and floor loading constraints.

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

Sound cards

Audioscience

ASI5000: There are initially three products in this series. The ASI5044 provides four stereo inputs and outputs in balanced analog and AES/EBU digital formats. A digital-only

version, the ASI5041, has four AES/EBU inputs and outputs and the ASI5042 has balanced analog I/O only. With the ASI5042 and ASI5044, the analog interface is balanced and uses 24-bit over sampling converters that support sample rates from 32 to 192kHz. Low noise analog circuitry delivers more than 100dB of dynamic range with THD+N better than 0.002 percent. The transformer coupled AES/EBU interface on the ASI5041 and ASI5044 can operate at rates from 32kHz to 192kHz. The card's sample clock can be synchronized to any of the four AES/EBU inputs. A 200MHz on-board DSP provides 12 play streams and eight record streams coupled to a mixer that allows any play stream or physical input to be mixed to any physical output or routed to any record stream.

302-324-5333; fax 302-738-9434
www.audioscience.com
sales@audioscience.com

Media streaming

Warp Radio

Audio streaming services: WarpRadio.com is a provider of streaming audio services for the radio industry. Its team of broadcasters and computer programmers, network administrators, system administrators and designers, is making the convergence of Internet and radio happen through the collective knowledge of both industries. The company's business model is a common sense view of business—you only pay for what you use. All radio stations who have a desire to stream can economically achieve a position on the Internet with minimal setup.

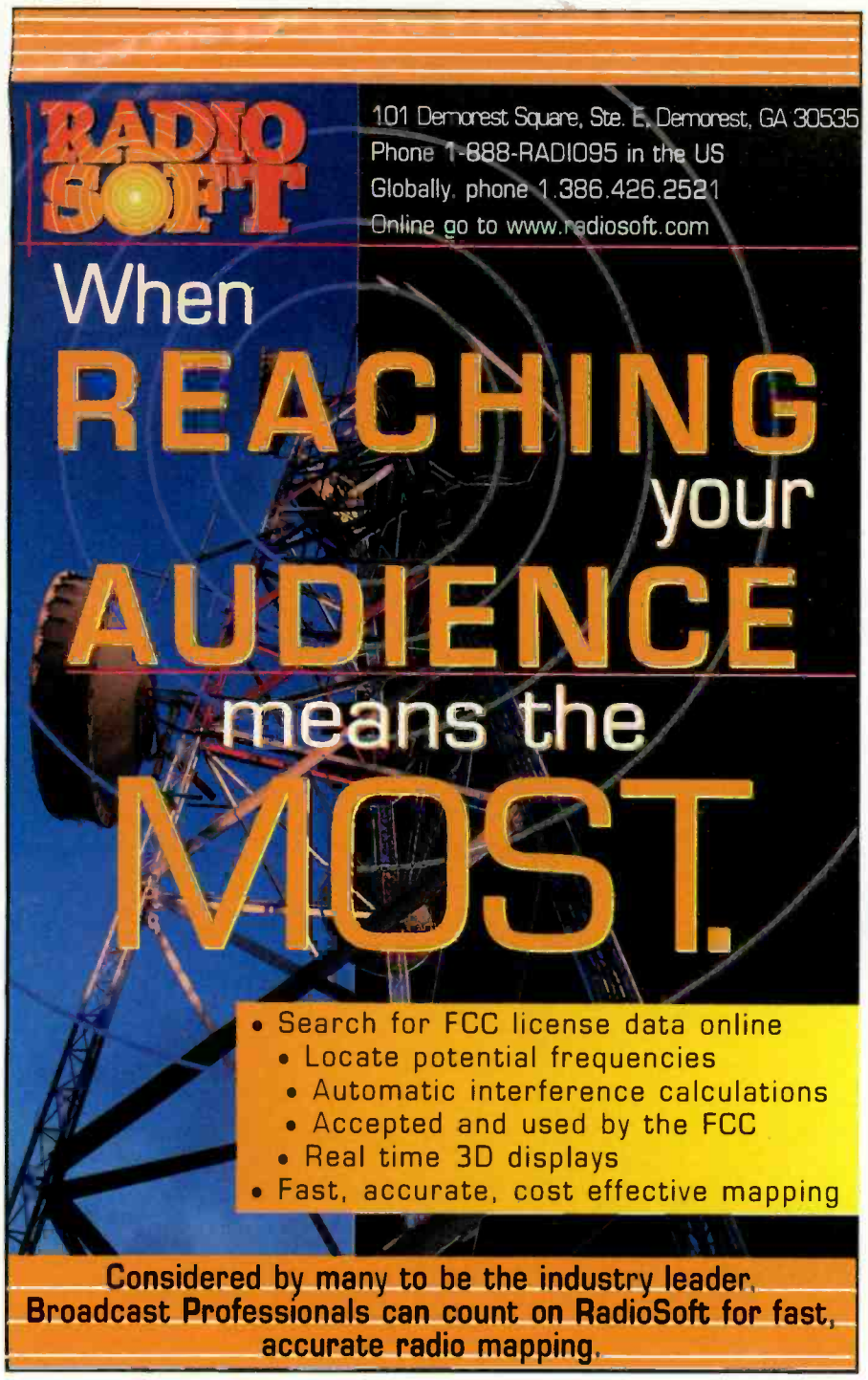
303-799-9118; fax 303-790-8543
www.warpradio.com
sales@warpradio.com

RF station monitor

Coaxial Dynamics

81095: This microprocessor-controlled, rack-mounted Watchman monitor/alarm measures and displays forward and reflected power simultaneously in 50Ω transmission systems. Using LCD displays, it also provides direct readings of VSWR. The monitor is compatible with the company's series of 7/8" to 6 1/8" line sections and will accept elements from less than 5W to 100kW full scale from 2MHz to 2.3GHz. Installation consists of the Watchman, a dual socket line section and two elements for monitoring forward and reflected power. The monitor is supplied with two 25' dc cable assemblies for connection to the line section and a 6' ac power cord. An audible single tone alarm will indicate a system or transmitter malfunction. Relay contacts are provided for remote alarm and reset switching.

800-COAXIAL; fax 216-267-3142
www.coaxial.com; sales@coaxial.com



Network-attached storage server
Promicro Systems

Prostore Backup Appliance: Promicro Systems has partnered with Avail Solutions to introduce a backup appliance that provides data storage, backup and recovery capabilities. The server offers 360GB of storage capacity, high-speed throughput with Intel processors, 10/100 Ethernet ports, three PCI slots and as many as six IDE drive bays in a compact form factor. The integrated eight-cartridge automated tape library transfers up to 640GB of compressed data at 6MB/s. A backup and recovery feature set is provided by Avail's Integrity data protection software, including dynamic resource allocation, GUI-based monitoring, remote administration and managed replication and protected data migration.

858-391-1515; fax 858-391-1510; www.promicrosystems.com

Station monitoring
Belar

HD Radio Monitor: This 2RU monitor decodes and analyzes AM and FM IBOC signals. The frequency agile front end can accept signals off the air or through a high-level input for use at the transmitter. The graphic display shows the measured results of the signal and will include basic spectrum analysis. Level metering is displayed as horizontal bar graphs in percents with a user-selectable dBFS level used as the reference. Capability to display SIS data, quality of service information, MPS data and bit-error data is standard. An RS-232 serial and RJ-45 Ethernet connection is included.

2004 PICK HIT

610-687-5550; fax 610-687-2686; www.belar.com; sales@belar.com

High-visibility warning light
CBT Systems

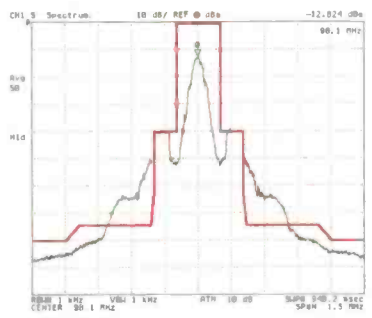
Dual Lens On-Air Light: The retro style, high-polish aluminum light mounts on the wall or ceiling and offers visibility from three approach directions. The unit's Plexiglas windows, which are available in blue or red, can be illuminated by a single 120V bulb or two 12V bulbs. Standard legends include on-air and recording. Custom lens colors, legends, color powder-coated finishes and a 220V option are also available. All units are UL approved.

858-536-2927; fax 858-536-2354
www.cbtsystems.tv doreen@cbt-net.com

Rotary phase converter
Kay Industries

Phasemaster Type T-R: Type T-R Rotary Phase Converter installs in minutes and operates any three-phase transmitter from a one-phase supply. The signature feature of the new Phasemaster Type T-R is a load range controller that enables the converter to maintain a balanced voltage within three percent to all types of broadcast transmitters regardless of power requirements. The Type T-R converter also features built-in disconnect switch, fuses, terminal blocks and surge protection that enable the installer to hook up the converter in minutes. It is designed for a simple "two wires in, three wires out" installation.

800-348-5257; fax 219-289-5932
www.kayind.com
Phasemaster@kayind.com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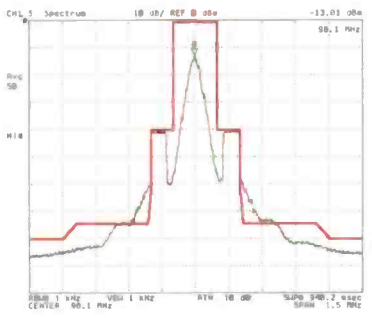
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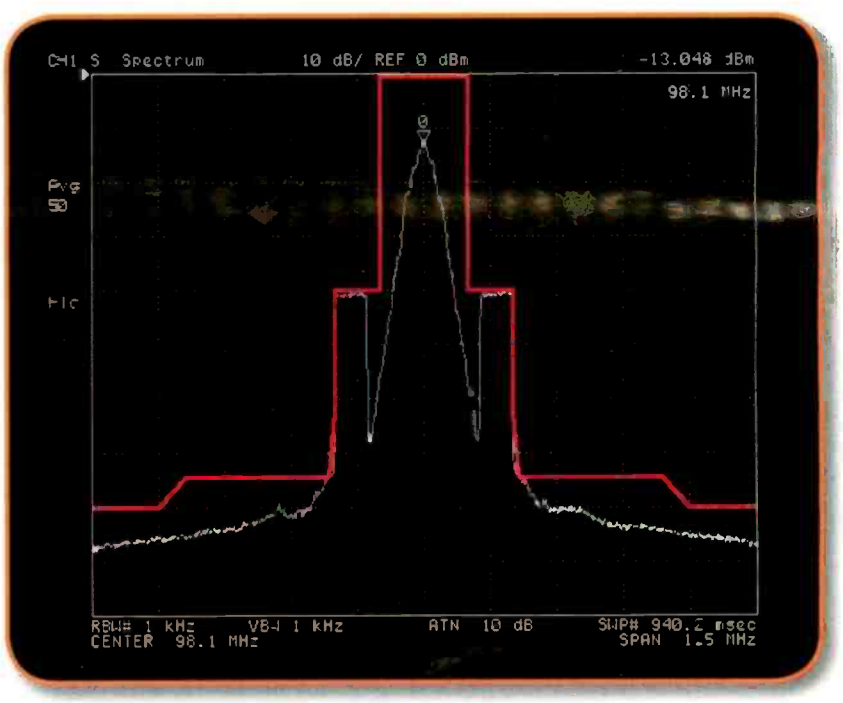

Gone.

Introducing Nautel's Newest Cutting Edge FM Technology –
Digital Adaptive Pre-Correction

V10 with M50

Worried about not meeting the HD Radio™ mask requirements? After all, you wouldn't want to interfere with someone else's signal. Nautel's new M50 digital FM exciter samples the all-digital or hybrid HD Radio™ output of the V10, 10 kW FM transmitter and dynamically applies digital adaptive pre-correction. This means no expensive external bandpass filter and no additional tuning. Even better, because the M50 continuously monitors and adjusts the RF output, your performance is optimized regardless of environmental changes and your signal will always be within spectral limits.

To learn more about how we can perfect your HD Radio™ signal, visit our website www.nautel.com.

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Pure Digital. Clear Radio.

nautel
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2004 Product Source

Radio
THE RADIO TECHNOLOGY LEADER

When the work takes you outside the studio

Over-the-shoulder carrier
Klein Tools

Tool Tote: An alternative to a tool belt, this tool case can be carried with a shoulder strap. It is constructed of rugged, double-layered, 600×300 denier polyester to resist wear and tear. The oval-shaped tool bucket measures 15.5"l×7.5"w×10"h. A contoured, padded, slip-resistant shoulder strap provides hands-free mobility for the user. Two-inch wide padded carry handles with comfortable leather wraps are tested for 900 pounds. Five interior pockets (two large collapsible end pockets and three medium-sized pockets) and a large interior compartment accommodate a wide assortment of hand tools, power tools and supplies, while seven exterior multi-tool pockets accommodate a variety of hand tools and a mobile phone. The Tool Tote's durable, molded bottom has drain holes to prevent water retention. The Tool Tote is water-resistant to avoid mold and mildew build-up. Zinc-coated rivets provide corrosion resistance and provide reinforcement at the seams.

800-553-4676; fax 847-745-4612; www.kleintools.com

Signal strength analyzer
Protek Test & Measurement

3290: This hand-held RF signal strength analyzer features 2.9GHz bandwidth, 117dB/m max sensitivity and a scan rate of 125 channels/sec. The extended frequency range and increased scan rate of this model make it a natural for a host of narrow band, wide band, FM, AM and single-sideband signal measurements. As many as 160 preset channels can be loaded into the memory for rapid scans and displays in the field. All functions are menu selectable and all setups can be stored in memory. Other features include: an RS-232 interface, a 50Ω input impedance, audio output with built-in speaker, selectable squelch levels and a 2.9GHz frequency counter. Display modes are spectrum, bargraph, and frequency on a light green LCD and LED backlighting. The unit can interface with a PC or laptop to upload and store measurements and screen displays for future analysis.

201-760-9898; fax 201-760-9888; www.protektest.com; sales@protektest.com

Instant-heat solderer
Cold Heat

Soldering Tool: This soldering tool heats and cools almost instantaneously: it reaches 800°F in less than one second. The tool uses four replaceable alkaline AA batteries and can solder more than 700 joints per battery pack. The product is portable and comes with a carry case. The tip is hot only when it is being used and includes a tip heat indicator. A replacement tip is included.

800-371-2643; fax 425-274-0697
www.coldheat.com; info@coldheat.com

USB pocketknife
Victorinox

Swiss Memory: A Swiss Army knife equipped with a USB memory drive, this accessory integrates numerous tools and is available in two versions. One has a stainless steel blade, scissors, a nail file with screwdriver, a ballpoint pen and a red light. The Air Travel version includes a red LED light and a ballpoint pen only. The USB drive has a memory capacity of 64MB. An LED light indicates when data is being written or accessed.

+41 41 8181 211; fax +41 4181 81 511; www.vitorinox.com

Power logging
Electro Industries

DMMS350: This multifunction power meter provides access to all voltage, current and power values with the LED display and through a TCP/IP Ethernet LAN. This meter is useful for applications requiring real time metering data streaming to data collection systems via IP. It provides true RMS voltage, current and power measurements and can display bi-directional energy and minimum/maximum electrical parameters. The Ethernet connection is supplied via a 10baseT RJ45 connector. It will display harmonics as a percentage of THD to the 31st order. The unit can be mounted in an electrical box. The device can be useful for locations with problem power feeds, or to monitor main feeds or generator output.

516-334-0870; fax ; www.electroind.com; sales@electroind.com

Switching amplifier measurement filter
Audio Precision

This dual channel multi-pole LRC passive filter provides the necessary attenuation of out-of-band signals and reduces the steepness of the fast switching edges. Features of this filter are as follows: frequency response is ±0.05dB, 10Hz to 20kHz; insertion loss is typically 0.05dB; high frequency rejection is greater than 50dB from 250kHz to 20MHz; and harmonic distortion is less than -110dB.

800-231-7350; fax 503-641-8906
www.audioprecision.com
sales@audioprecision.com

LED light
Enlux Lighting

LED Flood light: This LED-based drop-in replacement for a 45W or 65W incandescent or halogen flood light uses a fin design to maintain the light at a cool operating temperature. The optimized design results in a light source that is cool enough to safely touch with a bare hand, reducing the risk of a fire hazard. The light uses 22W of power, provides a light output of 500 lumens, has a lifespan of 50,000 hours and is 3" in diameter.

480-733-8065; fax 480-649-5434
www.enluxled.com

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615.620.3800 or akgusa.com

The tools of the trade.

H A Harman International Company

Web-based remote control
Broadcast Tools

WRC-4: Providing remote control, this system offers a built-in Web-server with non-volatile memory; 10/100baseT Ethernet port; four channels of 10-bit analog inputs with a large monitoring range; TTL compatible digital inputs; SPST relays; open collector outputs; front panel status indicators and a single front panel temperature sensor. The technology is supplied with removable screw terminals and loaded with a generic Web page that may be edited by the end user. The remote control works with dynamic or static IP addresses. Multiple units may be used with a user provided Ethernet hub.

877-250-5575; fax 360-854-9479; www.broadcasttools.com; bti@broadcasttools.com

2004 PICK HIT

Stand-alone automation system
Arrakis

Champion: This on-air workstation combines the company's Digilink Xtreme software and the the Champ-6 workstation hardware. It features an embedded PC and audio playback system in a fanless unit. The system offers four built-in stereo sound cards with play and record, analog and digital audio I/O and logic control for all four audio channels. It is Windows XP OS compatible with built-in networking for audio and schedule interfacing.

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

AC controller
Sonifex

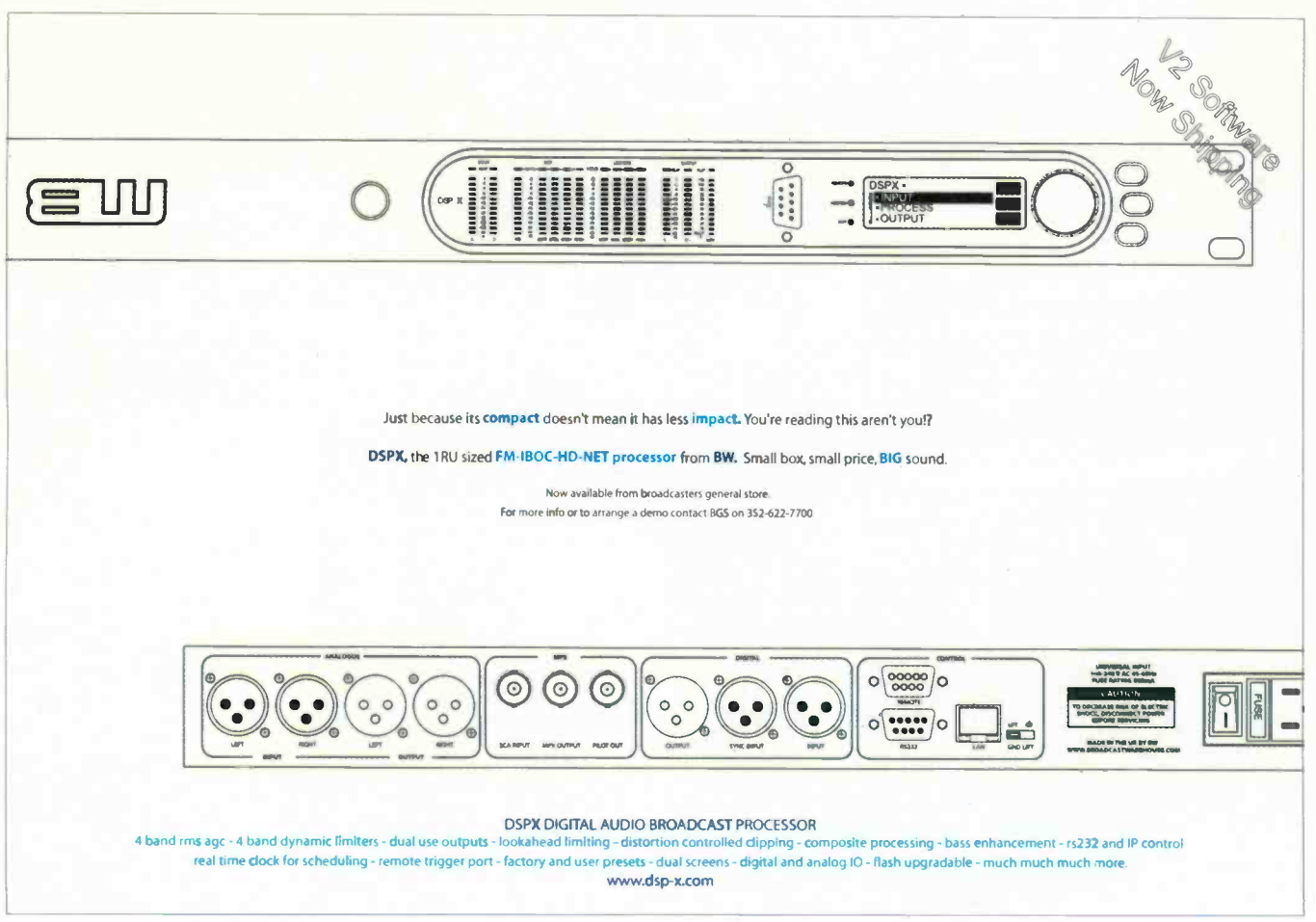
RB-LC3: The RB-LC3 is a triple output switching unit for controlling external ac mains indicators for on-air warning lights. Each output can be individually controlled by one of three remote inputs by a telephony input or a combination of two inputs. The type of control is set using the 12-way DIP switch (four switches for each output, allowing 16 settings). All connections are on the rear panel. The three IEC outputs are controlled by zero-crosspoint drivers. When an output is activated, the ac voltage level at that output will be equal to the mains input voltage used to power the unit. External control of the switched mains outputs is via the 15-way D-type plug connector. The telephone line input and handset output are via two RJ11-4 type connectors.

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

Audio storage and playback system
Scott Studios

SS32 for Linux: This system features the same user-friendly, intuitive look, feel and features as Windows versions. The system provides new security, support and safety. Because Linux includes the source code for the operating system, Scott can fine-tune Linux and the SS32 to ensure virtually no crashes. Linux drives never need defragmenting and it connects well to Windows traffic and music scheduling software.

800-SCOTT-77; fax 972-620-8811
www.scottstudios.com
info@scottstudios.com



Audio restoration
Cedar

Cambridge v1.2: This audio restoration and noise suppression processor incorporates the new Adaptive Filter Pack that forms the basis of the Cedar Cambridge Forensic System. This real time, fully automated system offers 64-bit floating-point processing and incorporates a dedicated rackmount time code reader/generator. The unit applies multiple processes to the audio as the user monitors it.

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

AT LAST, A BOARD GEEKS AND JOCKS CAN BOTH DROOL OVER.

Fact is, SAS packs so much sophistication and capability into the depths of the new **Rubicon**™ control surface that even the most intensive major market programmer or board operator will swoon. Yet Rubicon is so intuitive, so comfortable, so easy to use, the weekend intern is sure to sound like a pro.

SAS Connected Digital Network™

Rubicon Control Surface
32KD Digital Audio Router
RIOLink™ Remote I/O

Here's why:

Frequently used controls are always right at the operator's fingertips.

And for the power-user, the SAS multi-function "dynamic control matrix" provides quick access to deeper capabilities. In other words, Rubicon has a bucket-load of features for the simplest or most complex of broadcast-related tasks.

And should you think form to precede function, you'll find Rubicon's clean, easy-to-understand interface wrapped up within a custom-configured, drop-dead gorgeous frame.

Best of all, Rubicon is engineered by the brand synonymous with the finest in digital audio routing and network design. When it comes to quality and reliability, our name is all over it. rubicon™

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Engineering great radio.™

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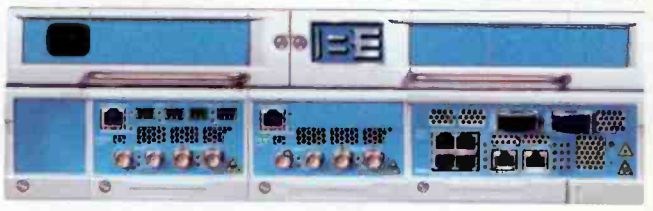
2004 Product Source

Digital STL
Broadcast Electronics



Big Pipe: This STL offers bidirectional capabilities up to 45Mb/s, analog and digital audio, HD Radio data, Ethernet, serial data and telephony can be interchanged via a wireless or wireline path. Key product features include audio inputs for AES or analog L and R; hot-pluggable modules for easy installation, upgrades or repair without service interruption; 45Mb/s bidirectional point-to-point radios for wireless applications and network access units available in DS3, OC-3C or OC-12C. Various modules and accessories are available to accommodate audio, video and data through a variety of interconnections.

2004 PICK HIT

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

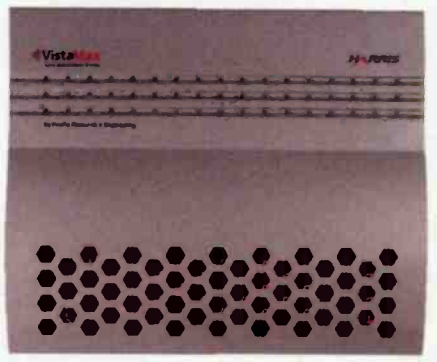
Remote antenna system monitoring
RFS Broadcast

Antenna system monitor: Broadcasters can remotely monitor network performance via modem or the Internet with this system. The monitoring system comprises a user-friendly touch screen connected to a programmable logic controller (PLC) interfaced with a transducer and analog/digital converter. This local set-up provides an active mimic panel, as well as interactive graphical displays depicting parameters such as forward and reflected power, voltage standing wave ratio (VSWR) and temperature. It also allows local control of motorized coaxial switches.

877-737 9675; fax 203-821-3852
www.rfsworld.com; literature.americas@rfsworld.com

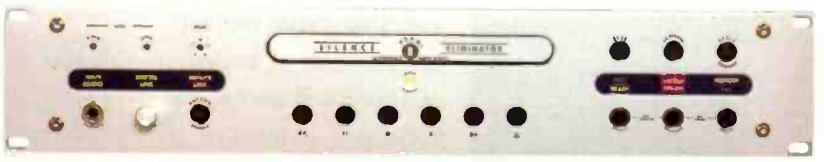
Audio routing frame
Harris

Vista Max: This hub enables all console resources and audio assets to be shared throughout the network. Audio is connected to one console in the networked system, but becomes available throughout the entire facility. Modular, and scalable, the console connects BMX-digital or other consoles to its hub via a fiber or CAT-5 connections with an architecture that ensures the shortest physical path between sources and destinations. The platform simplifies network audio management, reducing the need for stand-alone routers, distribution systems and long multi-pair bundles.



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

Digital/analog silence sensor
Danagger Audio Works

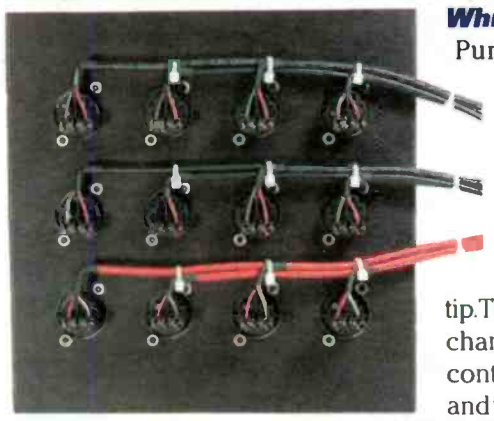


Plan B Plus: Building on the capabilities of the original Plan B Silence Eliminator, this silence sensor incorporates an additional level of audio failure detection and backup. An extra set of passively switched analog and digital audio inputs allows automatic connection to an alternate live program feed, such as an STL, dial-up codec or off-air receiver. If both incoming program feeds are down, an internal CD/MP3/DVD drive provides continuous replacement audio while a built-in voice remote control alerts station personnel. Delay range is four seconds to 10 minutes, and users can program a unique system ID number into each unit for multi-site installations. Like the Plan B, the Plan B Plus can also act as a stand-alone remote control/listen line or interface to external remote control systems.

888-892-8346; fax 250-763-2902
www.danagger.com; info@danagger.com

Audio connectors and adapters

Whirlwind



Punchdown XLRs: A new series of punchdown, solderless XLRs, these connectors/adapters speed assembly during installation. Using technology from the telecommunications industry, the connectors offer gold-plated contacts with metal shells and use a common 110-type punchdown tool with Krone tip. These adapters provide faster and easier changes to circuits, and the punchdown contacts are rated for up to 200 insertions and withdrawals.

800-733-9473; fax 716-865-8930
www.whirlwindusa.com; sales@whirlwindusa.com

PC mixer

Henry Engineering

Studiodrive: Studiodrive makes a PC with a soundcard into a studio-in-a-box. This stereo audio mixer fits in the drive bay area of any PC. It features six inputs (one mic and five line), and provides on-air and soundcard outputs. Sources can be mixed for a live broadcast or recorded and edited on the PC. There is also a built-in telephone coupler, a mix-minus output and provision for remote mic control. The monitor system features automatic muting when the mic is on, plus control of on-air warning lights.

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

Fiber optic multiplexer

Multidyne

DAM-2000: The DAM-2000 20-channel, 24-bit audio fiber optic transport will support 20 audio and three simplex data channels. The multiplexer supports 24-bit stereo audio flat from 20Hz to 20kHz with a S/N greater than 90dB and THD less than 0.05 percent. The optical budget exceeds 30dBm. The transmitter and receiver modules plug into a 10-channel frame with redundant power supplies or are available as stand-alone units. The system supports 110/220Vac and optionally for 48Vdc. The system is available with 1,300nm wavelength LEDs for multimode and 1,300nm and 1,550nm wavelength lasers for single-mode applications.

800-4TV-TEST; fax 516-671-3362
www.multidyne.com; info@multidyne.com

Digital equalizer line

DBX Professional Products

IEQ: The IEQ series of graphic equalizers provides 10Hz to 22kHz of frequency response, 113dB dynamic range, Advanced Feedback Suppression, dbx proprietary TypeV noise reduction and Peak Stop Plus limiting. Suitable for use on the road or in the studio.

801-568-7660; fax 801-568-7662; www.dbxpro.com; customer@dbxpro.com

Digital asset management system

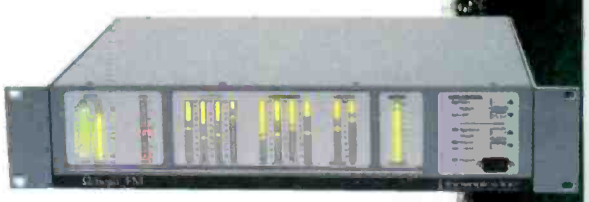
Msoft

Music Cue 3.0: A cross-platform hard drive delivery system created for production music library users, this system can search, sort, demo and track anything from the library. The server provides access to the music tracks from any computer via local file server. Users can save any number of music projects, add remarks and classifications of how the music was used—it can create an automatic cue sheet of the productions.

818-716-7081; fax 818-716-0547; www.msoftinc.com

Digital FM processor

Inovonics



Omega_FM: A largely software-based digital on-air processor and generator, the Omega_FM offers a short and direct program signal path that keeps latency at a minimum. The user interface includes a no-menu front panel setup that suits a variety of applications, or allows any PC to be connected for control over all processing parameters.

800-733-0552; fax 831-458-0554
www.inovon.com; info@inovon.com

Upgradeable!

Buy a Radio Systems' console with the confidence that you can always upgrade to the next level of performance.

Only Radio Systems protects your console investment by providing a program of significant styling and technical improvements for your still-dependable, but aging Radio Systems boards.

Upgrade from your older RS-Series console to a beautiful, fuller-featured Millenium console today, or buy a new Millenium board and upgrade to digital performance whenever you're ready.

Upgrade kits are inexpensive and available for field or factory installation.

601 Heron Drive Bridgeport, New Jersey 08014
(856) 467-8000 voice (856) 467-3044 fax
www.radiosystems.com

BY Studio Hub® Radio Systems

2004 Product Source

Digital STL transmitter/receiver

TFT

460/467: A new addition to the STL product family, the unit offers six uncompressed program channels and a data channel to meet the requirements of consolidated operations. The digital STL consists of a transmitter and receiver pair that accommodates three AES/EBU inputs or six discrete audio channels. The transmitter provides a 2W output and delivers them uncompressed in a configurable digital method to the receiver. Sample rates of 32kHz, 44.1kHz and 48kHz are supported. The RF system is frequency agile and set by software in the transmitter and receiver. The transmitter and receiver can be remotely controlled over an Internet or LAN connection. The 460 transmitter features six channels uncompressed, analog I/Os and 3.125kHz step size. The receiver offers a threshold sensitivity of 84dBm for 256 QAM, analog output levels at -10 to 8dBm and analog audio outputs at 600Ω balanced.

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

Intercom panel

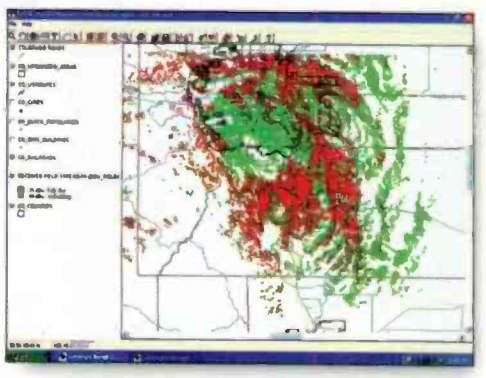
Logitek

COM-12: The COM-12 intercom panel is a 1RU enclosure with a microphone, loudspeaker and 12 lighted push buttons. The panel provides access to all of the routing, networking and control functions of the Logitek Audio Engine. Users can expand the number of call buttons through the use of BTN-12 panels.

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

High-definition mapping engine

Softwright



Terrain Analysis Package software v5.0: The centerpiece of TAP 5.0 is the mapping software called HD Mapper. Maps are generated with layers, which can be turned on or off. Layers can be any shapefiles, which conform to the ESRI international standards. Coverage studies now become one of the many layers that can be plotted on the maps. Users have control over each layer including color, line widths, fill patterns, symbols and values plotted. Shapefiles can be plotted as graphics displaying roads, streets, civil divisions and may also contain detailed demographics that are geographically related, such as population and census details.

303-344-5486; fax 303-344-2811; www.softwright.com; sales@softwright.com

Dual-channel processor

Lexicon

MPX 550: With 24-bit dual-channel processing and balanced analog and S/PDIF digital I/O, this unit offers 255 presets with true stereo reverb programs. Dual programs combine two effects plus digital compression in four routing configurations. Four dedicated front-panel knobs permit adjustment of 20 effect parameters. A program knob is used to scroll through single, dual and user programs, jump through program banks and also activates the cue program mode, which enables one program to load while another is prepared for loading. The processor also features a compressor with I/O volume matching, along with other dynamics processing such as limiting, expansion and tape saturation effects.

781-280-0300; fax 781-280-0490
www.lexicon.com

Studio furniture

Forecast Consoles

Masterail 2.0 and Masterail NLE: Masterail 2.0 allows more flexibility and expandability and the Masterail NLE is an editing console that provides all the benefits of Masterail's modular based console system—expandable, modifiable and flexible. The furniture integrates a pre-engineered, steel-frame superstructure with a proprietary aluminum extrusion serving as the spine of the console. All devices are universally attached to the spine allowing for random or specific placement of equipment.

800-735-2070; fax 631-253-0277
www.forecast-consoles.com
info@forecast-consoles.com

Radius-Xp ... studio furniture

the most POPULAR furniture lines ever...

new for 2003

... all plastic surface & trim design
... modular for flexibility
... highest quality materials
... precision crafted
... professional features
... many options available

This new studio furniture line is engineered for studio decors where non-wood trims are a design goal. Available in a wide variety of colors, this furniture will complement any size market application. The modular design enables the furniture to be ordered in almost any configuration that can be imagined.

only $2,995
call 970-461-0730 ext 329

arrakis systems inc. www.arrakis-systems.com (970) 461-0730

Data management system
Broadcast Electronics

Radio Data Dimensions: In addition to RBDS eight-character identifiers and 64-character text of title/artists, promotional messages, advertiser *ID*s, traffic bulletins and AMBER Alerts, the data management software suite includes support for HD Radio's secondary program channel services such as Tomorrow Radio. It also provides bandwidth provisions for navigational system data downloads to tuners. All functions and user controls for the software suite are accessible from a Web-browser content management tool.

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

Automated profanity elimination
Enco Systems

Guardien: This system is an automated profanity elimination and spoken word logging system for radio broadcasters. Guardien is a 2RU device with stereo balanced analog and AES/EBU inputs and outputs and 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; support@enco.com

Auto-backup FM transmitter system
Crown Broadcast

RF Sentinel 200: RF Sentinel is an auto-backup FM transmitter system that offers full or semi-redundancy protection. In the event of a failure in the primary transmission stream, the system automatically switches to a backup transmitter. The transmitter controller senses faults based on the present levels. It also fully manages the antenna feeds between primary and secondary transmitters. The system can incorporate two low-power transmitters, one low-power and one medium-power units, or two medium-power units. The RF Sentinel 2000 automatically switches from a 2kW primary output to the 500W output of the company's FM500 exciter should a fault occur in the primary broadcast stream.

800-262-8919; www.crownbroadcast.com; fmsales@irec1.com

Studio furniture
Mager Systems

Sound Choice Furniture: The vented cabinets of this furniture have curved corners and the countertop edges are rounded. Various riser heights are available for the rack turret. The cabinets are 19-ply, 1½" 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

Audio switching
Broadcast Tools

DAS 8.4: This unit provides digital audio switching of any one of eight AES inputs to be assigned to any of the four AES outputs. No input mixing is permitted. The DAS 8.4 may be controlled via front panel switches, contact closures, 5V TTL/CMOS logic or the multi-drop RS-232 serial port. The front panel is equipped with input and output selection push buttons, output assignment LEDs and a headphone jack with level control. Additional features include a 96kHz/24-bit D/A converter with analog balanced stereo output and a 16 x 16 GPIO port. Installation is simplified with removable screw terminals.

877-250-5575; fax 360-854-9479
www.broadcasttools.com
bti@broadcasttools.com

MAKE
THE CONNECTION

Do you StudioHub? It's the perfect liaison between analog and digital. If you're building a new facility or just rewiring a single studio, consider using StudioHub – the fast and flexible new universal connection standard.

Radio Systems, Inc.
6C1 Heron Drive Bridgeport, New Jersey 08014
(856) 467-8000 voice (856) 467-3044 fax
www.radiosystems.com

BY Studio Hub® Radio Systems

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.

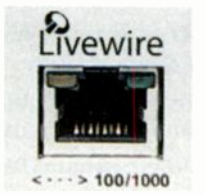
Routers are OK... but a network is so much more modern. With Axia, your ins and outs are next to the audio, where they belong. No frame, no cards, no sweat.

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.

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.



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

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.

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.

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.

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...

ENCO SYSTEMS INC

Scott Studios

radio systems

BALSYS

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.

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.

Would you like some control with that?

There are plenty of ways to control your Axia network. For instance, you'll find built-in webservers 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.

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.

AXIA
A TELOS COMPANY

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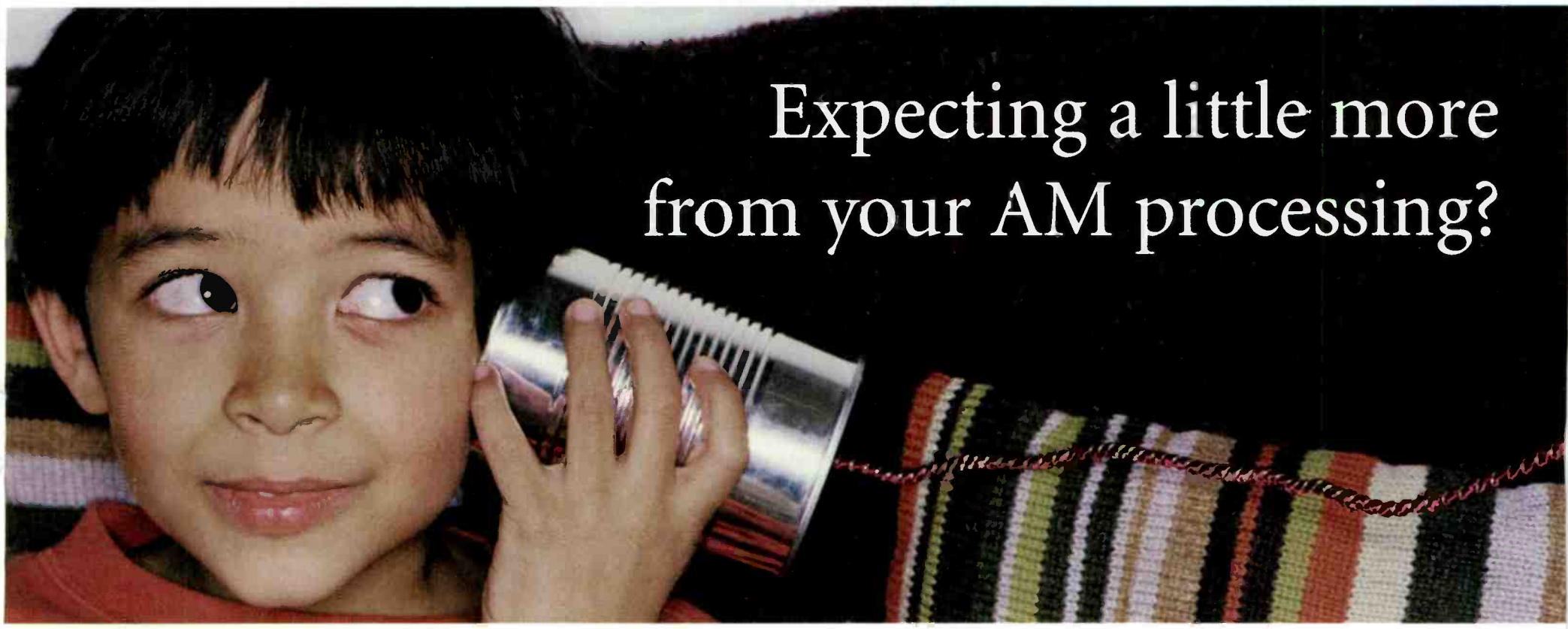

Omnia-5EX for AM delivers.

The new Omnia-5EX HD+AM has enhanced processing for standard AM, and a second limiter section and digital output for HD Radio. Both limiters and outputs are included as standard.

For those who don't need HD Radio capability, there's Omnia-3AM, with a four band limiter, wideband AGC and our famous high-performance, non-aliasing final limiter for sweet, clear, natural audio that keeps listeners hooked.

Many people are saying that HD Radio will benefit AM stations most, because the fidelity improvement will be so dramatic. Probably so. But you'll need a processor that gives you maximum quality on a low-bitrate coded channel. You need a processor designed by people who understand both processing and audio coding - and nobody knows these audio arts better than Telos / Omnia.

The new Omnia-5EX HD+AM is the only processor that accomodates **both your analog and digital channels** in a single unit that easily integrates with your HD encoder and transmitter.

Processing for the HD Radio side is smooth and clean, capably handling AM's programming variety - and really showing off the digital channel to listeners first sampling the new medium.

And you get a **potent upgrade for your analog AM.** Consider: Omnia AM processing is already on many legendary 50kw stations. Understandably, most of these want to keep their advantage a secret. But if you imagine the major AM signals - the real flamethrowers that sound great - you may very well be hearing an Omnia. CEs at these stations tell us, "Phone calls are clearer than before. And the bottom end is phenomonal, so the promos really punch." "Amazingly clear - even when we're in the 5 kHz analog mode for HD Radio compatibility."

You should expect more from your AM processing. More clarity, more presence, more power, more flexibility. Omnia-5EX HD+AM delivers.

Omnia
A Telos Company

omniaaudio.com

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2004 Product Source

Useful items to simplify remotes

Out and About

LED flashlight
Ledtronics

FlashLED FLT-5001: Press the switch and 1,800-foot candles of white light emit from the three 1W Luxeon LEDs. Each LED features an onboard collimator that focuses the light into a tight beam for an intensity of 75 lumens each. The fully integrated flashlight head optimizes light color, intensity and dispersion. The LED lamps operate for more than 100,000 hours (10 years). This energy-efficient flashlight operates for nearly 17 days on three D-cell batteries. It features an anodized aluminum housing and a crosshatched rubber grip. A removable 57" shoulder strap is included.

800-579-4875; fax 310-534-1424; www.ledtronics.com

Portable radio
Bosch Power Tools

Power Box: Bosch claims that its weatherproof Power Box radio is durable enough for a construction site. The radio boasts a steel and rubber frame that protects the ruggedized shell, which houses four ground-fault circuit-interrupter-protected outlets for other ac devices. The outlets cut power if water leaks in. There is also a slot on the back to charge the batteries for cordless power tools. When away from an outlet, the radio can run off those same batteries. The radio also includes a mini-plug input for a line input and a 12Vdc outlet to recharge a cell phone.

877-BOSCH-99; www.boschtools.com

POTS protector
Konexx

Modem Minder: This device prevents damage to modems when plugged into high-current digital phone lines on a PBX. If the line conditions are not safe, the Modem Minder will not allow the modem to connect to the unsafe line. The device also protects the modem from power surges. It automatically configures the line for proper polarity. Measuring 1.3"W × 0.95"H × 2.75"L, the device weighs 1 ounce. It is powered by the phone line.

800-275-6354; fax 858-550-733
www.konexx.com; sales@konexx.com

Equipment rack
RackFrame.Com

Rack Frame Cube: The advantage of being assembled as a cube is that the user can load 19" rackmountable components from any side. All points of access into this 19" cube accept eight rack units (14"). Shallow depth components such as audio mixers can be top-loaded to mount into depth rails. Every vertical as well as horizontal rail is tapped on both planes. The rack's various mounting positions and lightweight design provide useful housing for a remote kit.

888-214-8363; fax 219-922-4442
www.rackframe.com; info@rackframe.com

Digital signal & test set
Ward-Beck

Bit Buddy/Bit Spitter: The ABB-1 Audio Bit Buddy is a convenient way to monitor digital and analog audio signals. Digital and analog program audio can be monitored by the headphone output while the left and right levels are displayed on LED bargraph meters.

Critical signal parameters such as sampling frequency, emphasis, professional consumer format and data errors are displayed when monitoring AES/EBU or S/PDIF signals. Digital input monitors sampling frequencies from 30kHz to 50kHz automatically. The ABS-1 Audio Bit Spitter is a companion to the ABB-1. This portable, battery-powered unit generates digital and stereo analog audio test signals that may be injected into the signal path when testing device performance or signal path continuity. The ABS-1 generates an AES/EBU digital audio signal, 1kHz or 400Hz, sampling rates of 48kHz, 44.1kHz or 32kHz. The unit may also be synchronized to an external digital reference signal. Digital signal levels of -20, -12 and 0dBFS are front panel selectable.

800-771-2556; fax 416-335-5202
www.ward-beck.com; info@ward-beck.com

Battery-based power inverter
Xantrex

Xpower Powerpack 1500: This portable power system can supply 1,500W of ac power through a battery pack and inverter. There are two standard outlets for ac use and a dc power panel for 12V products. The unit is assembled into a rugged cart with a removable waist handle. It will operate a device consuming 150W for about four hours.

604-422-8595; fax 604-420-1591
www.xantrex.com
customerservice@xantrex.com

Condenser microphone
Beyerdynamic

MCE 530: Suitable for project studios and semi-professionals, this cardioid condenser mic is lightweight and can be mounted to goosenecks. The cardioid polar pattern provides high gain-before feedback and eliminates noise from the rear. Its plastic casing is strengthened with carbon fibers. Its small, short design permits flexible and unobtrusive positioning. The mic is powered by phantom power between 11 and 52V. Its frequency response is 30Hz to 20kHz and its nominal impedance is 220Ω. The mic's maximum SPL is 136dB (at 48V phantom power) and 126dB (at 12V phantom power).

800-293-4463; fax 631-293-3288; www.beyerdynamic.com; salesUSA@beyerdynamic.com

Production music libraries
TRF Production Music Library

Adrenalin: The first 10 Adrenalin discs include Futurea, Urba Grooves, Pop Rock, Atmospheric Loops, Chill Out, Ambient Grooves, Sports Rock, Electro Techno, Jazz Fusion and Alternative Rock. Future new releases will include classic beats, urban and techno sports. All Adrenalin discs contain underscores, loops, and 60-second, 30-second and 15-second jingle-length versions. The discs are being added to the more than 50,000 selections already contained in the TRF libraries.

800-899-MUSIC; fax 914-356-0895
www.trfmusic.com; trfemail@aol.com

Studio-sized router
Wheatstone

Satellite Router Cage: Offering all of the capabilities of the Bridge router, this unit is actually scaled to meet the needs of individual studio locations. It uses the same card family as the larger Bridge router, ensuring system-wide compatibility. The 10-slot Satellite router has all the necessary functionality, including routing, networking, mixing and logic I/O, allowing mix surfaces to be configured together or operate as individual mix islands. Installation is accomplished via single wire CAT-5 connections.

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

Rotating rack system
Middle Atlantic Products

WR series: This series consists of a detachable rack frame that is housed in its own protective host enclosure. Installers can roll the rack out and rotate it 60 degrees for easy access to rear equipment connections. Off-site integration and testing of A/V equipment in the detachable rack frame reduces labor and simplifies the installation. The roll out, rotating design of the series saves a minimum of six square feet of space per bay. Ample laser knockouts on the side of the rack allow ganging of multiple racks and cable pass-through between each. Slots in the upper rack frame accommodate Velcro ties and the rack frame features pre-punched rackrail brackets for built-in cable management.

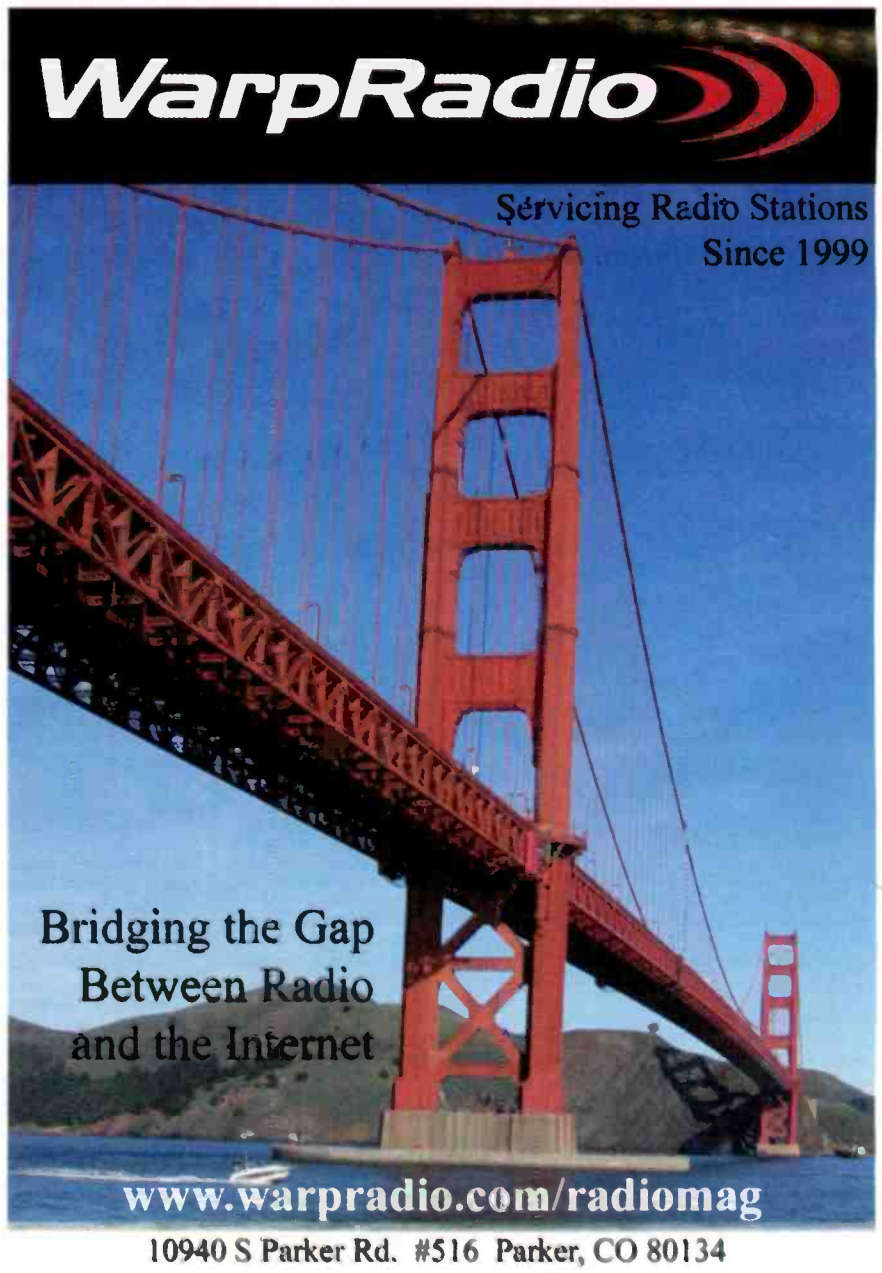
2004 PICK HIT

973-839-1011; fax 973-839-1976; www.middleatlantic.com; sales@middleatlantic.com

Tube comressor
Drawmer

1968ME: The dual-channel compressor is a 1RU, two-channel compressor featuring a JFET/tube combination design that includes dual JFET compressors with variable threshold, attack and release. On the outputs, 12AX7 tubes with variable gain control offer flexible application from transparent to overdrive tone characteristics. Front panel features include: dual mono or true stereo link operation; side chain access and listen capability; VU metering of gain reduction and output; switchable +10dBVU re-scale mode for working at hot output levels; red VU warning light; and balanced +4dB XLR I/O.

702-365-5155; fax 702-365-5145; www.drawmerusa.com; sales@transaudiogroup.com



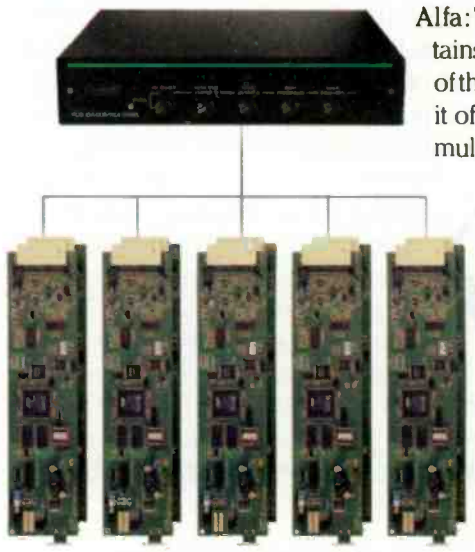
2004 Product Source

Stereo codec/mixer
Tieline America

I-mix G3: Left and right audio channels can be phase locked over two telephone lines to deliver 15kHz stereo programming with this codec. It offers the provision for dual 15kHz mono transmission from a single POTS codec, enabling the use of one 15kHz mono channel for program audio and the other 15khz channel for a range of communications including production/engineering talkback, telephone coupler for live on-air callers and simultaneous 7kHz voice and 9.6kb/s control data. The design incorporates an expansion slot allowing broadcasters to select from a range of new hardware modules to suit individual remote applications. The modules include GSM to landline wireless, stereo/mono ISDN, stereo or dual-mono POTS plus new IFB and telephone talkback caller facilities.

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

Audio leveler
Ward-Beck



Alfa: This audio leveler for audiophiles maintains a target level at the ingest of play-out point of the program chain. As a card-based system, it offers a method of controlling the level of multiple digital audio signals. The system offers as many as eight AES channels of control in a 1RU frame and 20 channels of control in a 2RU frame. Control can be preset for automatic level adjustment of predetermined levels or dynamic adjustment via a physical control panel. Unlike a compressor/expander, this audio leveler responds slowly to minimize the potential to change the dynamics of the signal. It acts to adjust the long-term average level of the signal.

800-771-2556; fax 416-335-5202
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The DAVID-III is easy to set up and easy to use. It employs quasi-digital PWM processing circuitry, digital synthesis of the FM baseband signal, and it never requires routine calibration. Component parts are common and available worldwide.

Ask your preferred distributor for a demonstration of the DAVID-III at your station.

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www.inovon.com • e-mail: info@inovon.com

DAVID-III - $2200
Visit www.inovon.com for full technical details

Indecency Processor

No, this product doesn't remove naughty words, but if you do run a profanity delay or simply have a buildup of digital latency, talent can't listen to the processed air signal. Instead, their feed is probably direct from the console. Compared to the air sound, this can seem weak, dull and lifeless.

Our Model 255 Triband Spectral Loading™ processor has zero delay and can deliver a dense, tight, and punchy 'broadcast' sound to headphones and control room speakers... a sound you can't achieve with a general-purpose "utility compressor." Other 255 applications include the program feed to telephone hybrids and IFB processing.

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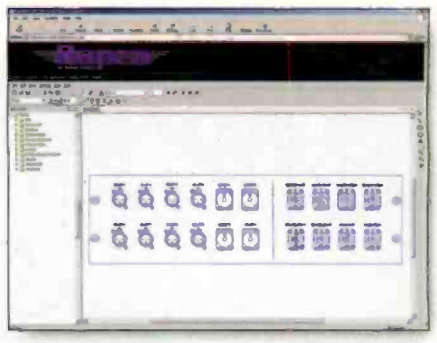
Online panel design
Horizon Music



Net CAD: Based on Stardraw.net technology, Net CAD is delivered by a Web server and works from within a browser so there is nothing to download or install. It is comprised of a drag-and-drop interface linked to a complete library of all of Horizon Music's and Rapco's panel products. The user selects the panel he wants, drags on the connectors that are needed and sets engraving, finishes and artwork. Once the design is complete, a separate pop-up report delivers a price quote. This system can support complex pricing models, e.g. setup charges, product charges, variable charges and pricing by user profile.

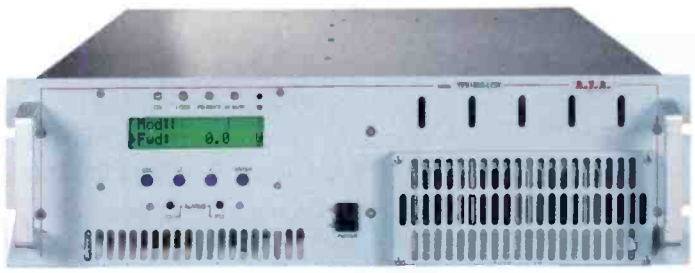
573-651-6500; fax 573-651-3460
www.horizonmusic.com

Coaxial cable
Dielectric

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

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

Frequency-agile transmitter



R.V.R.

TEX500-LCD: The stereo encoder offers as much as 500W of RF power that is output adjustable. It covers the FM band from 87.5MHz to 108MHz and its digital interface can diagnose and control all the parameters displayed. Other features include mono/MPX, two SCA/RDS inputs, 230Vac input, N output connector and all in 3RU. Available options include multi-voltage 90 to 250Vac power input, power factor corrector, fully integrated telemetry and SMS alarms and a built-in GSM modem.

305-471-9091; fax 305-471-6979; www.rvrusa.com; sales@rvrusa.com

Weather receiver

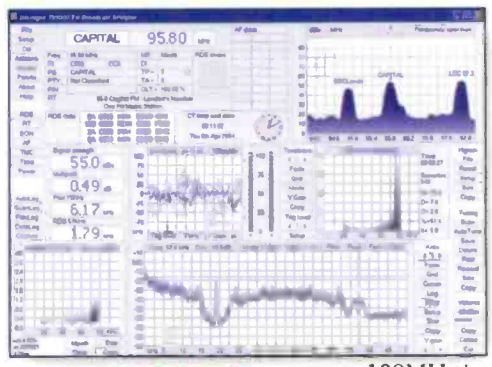
Dayton Industrial

AF630: A NOAA weather receiver housed in a 1RU chassis, this receiver offers a front panel that has a built-in monitor speaker with volume control. There are two 10-segment LED indicators, one for the modulation level indication and the other to indicate received signal level. The receiver has tone detector circuitry for the alarm circuit with front panel indicator, test and reset controls. Input power is derived from a 12Vdc wall-mount converter. The receiver is phase lock loop controlled with the frequency of operation selected using an internal three-position dip switch. A continuous receiver line audio output is provided. The speaker output audio is controlled automatically by a tone detector circuit that monitors the receiver audio for the presence of the 1,050Hz attention tone signal.

941-351-4454; fax 941-351-6081
www.daytonindustrial.com; sales@daytonindustrial.com

FM broadcast analyzer

Broadcast Warehouse



Microgen Systems TS9000: Besides providing broadcast measurements, the USB port of this analyzer allows for on-site and mobile monitoring. The unit samples the multiplex signal at 240kHz at 12-bit precision, with all measurements and calculations performed by Windows software. Modulation power is calculated with 32-bit floating-point precision. The band covered is 87.5MHz to 108MHz in 10kHz steps. The unit includes a baseband FFT spectrum analyzer covering 10Hz to 100kHz. With a dynamic range of 90dB and a resolution of 10Hz, the unit can analyze the multiplex signal or be used as a stand-alone audio analyzer using the external BNC input.

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www.broadcastwarehouse.com; info@broadcastwarehouse.com

DA converter

Radio Systems

D-A+A-D: This converter is a broadcast quality device optimized to provide flexibility along with quality conversion of analog and digital signals. The DA/AD is actually two stereo converters, which can provide simultaneous conversion of analog to digital and digital to analog signals. Features include: 24-bit resolution, variable sample rates, internal and external clocking, sample rate conversion, auto sample rate sensing and XLR and RJ-45 connectors. Its input impedance is 20kΩ and its output impedance is 50Ω.

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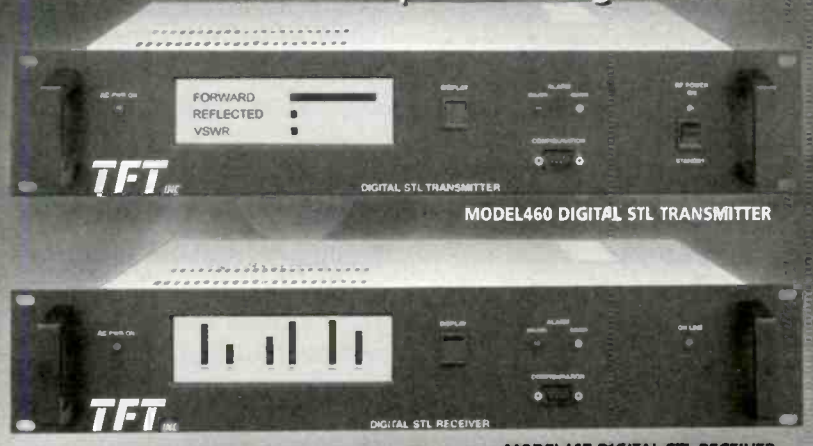

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2004 Product Source

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888-765-2900; fax 804-342-1107
www.acousticsfirst.com
info@acousticsfirst.com

Ethernet audio interface
Axia Audio

AES/EBU Node: The AES/EBU Node provides eight stereo AES3 inputs and eight stereo AES3 outputs in a 1RU device. It includes its own power supply. The Livewire-enabled Ethernet port connects the AES/EBU Node to an Ethernet media network. A built-in Web server enables remote configuration and control via a standard Web browser. The interface also contains a dot-matrix front-panel display. When used with an Analog Audio Node, the AES/EBU Node can be used as an A-to-D/D-to-A converters. By connecting four EAS/EBU Nodes to an Ethernet switch, a 32×32 stereo digital routing switcher is created.

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

Speaker
Liquid Acoustics

LB-100: Specifications of this speaker are as follows: sensitivity is 90dB; frequency response is 55Hz to 20kHz (-6dB); impedance is 16Ω; power rating is 200W RMS; transducers are dual 5.25" specially designed drivers; and energy dispersion is 20 percent. This speaker weighs 12lbs and its dimensions are 8.5"H×15"W×8.25"D. The speaker's nominal impedance is 8Ω.

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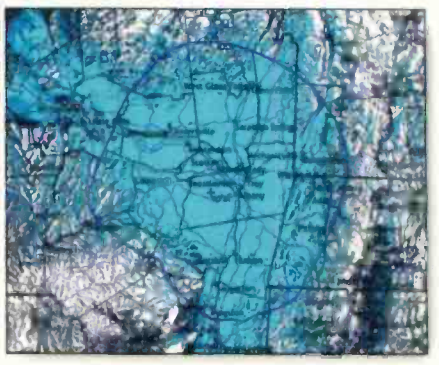

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310-322-2136; fax 310-322-8127; www.ese-web.com; ESE@ese-web.com

Content delivery system
Pristine Systems

CDS32 Live: The system includes a TTI I/O card for connection to remote buttons or console and can connect to a remote button or a console and fire off spot sets like a cart machine. The system reads logs generated by all traffic software and spot sets are easy to view and edit. Other features include peer-to-peer utilities for easy file sharing, responsive peak and hold digital VU meters and includes CD Trax, the company's custom CD Ripper.

310-831-2234; fax 310-831-6287
www.pristinesys.com
sales@pristinesys.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-square-foot facility capable of staging major RF, computer or studio projects. SCMS is the exclusive Broadcast Electronics RF representative for the Southeast, and one of three Wheatstone digital dealers. Additionally SCMS has five field offices across the United States.

800-438-6040; fax 704-889-4540
www.scmsinc.com; sales@scmsinc.com

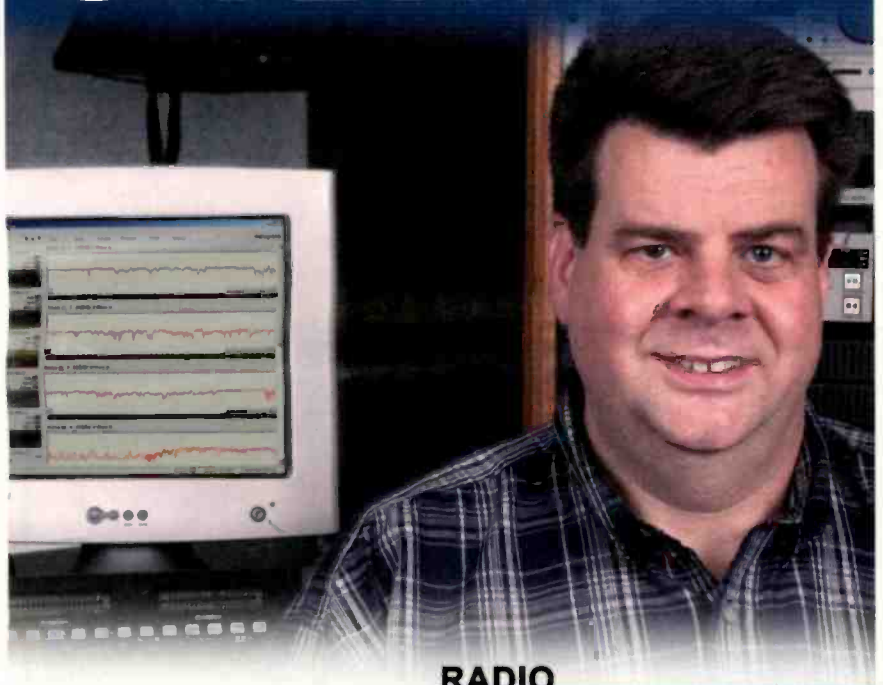
RF signal monitor
Audemat-Aztec

Navigator 100, Navigator 1000: These monitors offer DSP technology, a front panel LED display (10 characters) and navigation interface, an RS232 serial link and antenna or MPX input/MPX output. The 100 FM features a GPS receiver, removable flash card for measurement and a loudspeaker. The Navigator 1000 is the same version as Navigator 100 without GPS. It is useful for monitoring an RBDS subcarrier and decoding RBDS data.

305-692-7555; fax 305-682-2233; www.audemat-aztec.com; contact@audemat-aztec.com

Looking for a Digital Audio Logger? Why not try the Industry

STANDARD



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Universal telephone interface
JK Audio

Compack: This pack provides audio connections to cell phones, PBX phone systems and plain analog phone lines. Plug the unit into the 2.5mm headset jack of a wireless cell phone for use with cell phones. The phone will recognize the Compack as a headset, which will disable the mic and speaker in the phone. For PBX systems, unplug the handset from any analog or digital PBX phone and plug the cord into the device. With analog phones, plug the interface into an RJ-11 jack, go off-hook and dial, or answer an incoming call. The system also functions as a simple telecom interface for a beltpack intercom system. This allows users to connect the three-pin XLR to a beltpack intercom group for a full duplex, always-on connection to any telephone network.

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

Rack-mount mixer
Alesis

Multimix 12R: This 12-channel mixer occupies 3RU and offers eight high-gain mic/line inputs with phantom power, two stereo balanced 1/4" line inputs and two aux sends, stereo aux return, 8 1/4" inserts and two-track stereo RCA in and out. The mixer provides separate 1/4" balanced main and monitor outs and front-panel headphone out. Pan control, peak indicator and a 60mm fader on each channel are also features. Other specifications include a frequency response of 20Hz to 50kHz ±0.5dB; a dynamic range of 108dB; distortion less than 0.005 percent; and a maximum gain of 70dB with 24dB headroom. It is powered by 120Vac. Its dimensions are 5.25"H x 19"W x 4.25"D and it weighs 8lbs.

800-5-ALESIS; fax 310-255-3401; www.alesis.com

Telephone remote control
Conex Electro Systems

DT-90: This audio switcher is controlled by DTMF tones over a standard telephone line. It features four stereo channel inputs and one stereo channel output. To control the switcher, call the number the unit is connected to, enter an optional access code, and press the number one followed by a channel number from one to four. There are also four relays and an internal microphone that can be controlled. The relays operate independently of the switcher. They can be programmed to operate momentarily or latching. The built-in mic allows the user to call the unit and listen for sounds where the DT-90 is located. All connections are made via plug-in terminal strips. The unit is rack-mountable.

800-645-1061; fax 360-676-4822
www.conex-electro.com; conex@conex-electro.com

Ethernet signal converters
Cyber Research

ETS series: Converters in the ETS series come with one Ethernet port and one to eight serial ports. Various ETS models support RS-232, RS-422/485 or RS-232/422/485 protocols at data rates from 230 to 460kb/s. Models for RS-485 support full and half duplexing. All ETS models use a 16954 UART that provides FIFO buffers of 128 bytes. All are compatible with Windows 98/2000/XP and come with monitoring LEDs that indicate Ethernet activity, power status and serial-port activity. Most ETS module cases are 8.6"L x 6.0"W x 2.2"H.

203-483-8815; fax 203-483-9024; www.cyberresearch.com

Modular audio console
Autogram

Pacemaker II Model PM228: This model features a modern styling and color with wood end trim, an exclusive bimodular concept, all DC control, and screw-type plug-in connectors. Uses similar switches and the same Penny and Giles pots as the original Pacemaker. It features up to 60 stereo inputs. The modular design allows it to be added to when expansion is needed. Modules are easy to install and change after installation.

800-327-6901; fax 972-423-6334;
www.autogramcorp.com;
sales@autogramcorp.com

Powered mixer
Behringer

PMH3000: A compact and lightweight powered mixer, this unit incorporates Cool Audio, an amplification technology that delivers power and sonic performance at nearly half the depth and weight of conventional powered mixers. The table-top PMH3000 offers I/O options and features studio-grade Invisible Mic Preamps (IMP) on all or most mono channels. The powered mixer's 24-bit stereo FX processor with 99 Virtualizer presets features reverb, delay, chorus and flanger. The mixer also offers three-band channel EQs, a stereo seven-band graphic EQ for frequency correction of monitor and main outputs and switchable pad and clip LEDs on all mono channels. A standby switch mutes all input channels but does not interrupt the tape inputs.

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800-898-3211; fax 425-487-4337
www.mackie.com; productinfo@mackie.com

Computer keyboard
IC Intracom

Roll-up USB Keyboard: This computer keyboard rolls for easy storage. CE and FCC tested and approved, it is a standard USB 104-key keyboard. The keyboard is dust and moisture proof and is rated for 15,000,000 keystrokes. The flexible design is suited for use on the road when a laptop keyboard can be inconvenient to use.

800-881-7325; fax 813-855-2545; www.icintracom.com; sales@icintracom.com

Portable mixer
Behringer

Eurorack UB 1002: This 10-input, two-bus mic and line mixer features two invisible mic preamps (IMPs), a musical three-band EQ and a switchable low-cut filter on all mono channels. There is one post fader FX send per channel for external FX devices, main mix outputs plus separate control room, headphones and stereo tape outputs. Tape inputs are assignable to main mix or control room and headphones outputs and there are two mono inputs and two stereo inputs. The mic inputs have switchable 48V phantom power. The mixer measures 2"×7.25"×8.66" and weighs 2.31lbs.

877-672-0816; fax 425-673-7647
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WiFi sniffer
Smart ID Technology

WFS-1: Seeking a WiFi hotspot with a laptop can be cumbersome, especially when the PC has to boot before it is realized that there is no access available. The WFS-1 WiFi detector sniffs for 802.11b and 802.11g nodes with the press of a button. The unit is about the size of a credit card and weighs less than three ounces. A red status indicator shows the Wifi signal strength. A green status indicator shows battery strength. It operates on 2 AAA batteries.

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www.smartid.com.sg; sales@smartid.com.sg

Universal ac/dc adapter
Targus

Mobile 70: With up to 70W of continuous power, the Mobile 70 Universal ac/dc power adapter includes seven tips, a 3' ac input cord, a 3' dc input cord, a 6' dc output cord and a carrying pouch. The power unit is compatible with most manufacturers' laptop models. It weighs 7.5 ounces. Additional device power tips are available to power PDAs and cell phones. The ac input accepts 100 to 230Vac. The dc input accepts 11.75 to 16Vdc.

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

Q: Your digital audio feed pops and clicks and drops out unexpectedly. And, the problem is intermittent. Which tool do you reach for to troubleshoot it?

A: 1) My Audio Precision System. Oh wait...we don't have one, the station bought a car instead.

2) Tools?...digital audio is perfect so it must be sunspot activity.

3) **The Digital Audio Toolbox!**

Our Digital Audio Toolbox is the only digital audio tester in its price class that is stereo 24-bit/96k capable, includes all hardware inputs and outputs (including ADAT®), is truly portable and is very affordable for all sizes of broadcasting stations. Tools include: Jitter Meter, Lock Tests, Digital Capture, Latency Test, Clock and Sample Counter, Bitscope, Digital Watchdog™, Digital Distortion Meter, Jitter FFT, Pass Mode and more

TerraSonde

For more information about how the Digital Audio Toolbox can solve audio problems at your station, please call **888-433-2821** or visit **www.TerraSonde.com**

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

LED sign interface
Sine Systems

MBC-1: Replacing 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 unit 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

Digital broadcast monitor
Dovetail Sciences

DBM-300: All setup and local operation of this monitor is performed using the LCD display with an integrated touch screen. The unit is tuned to the desired center frequency and displays the spectrum at the selected frequency span. Audio demodulation of the center frequency is also provided. The detected audio can also be saved in digital format. Spectral and audio captures may be programmed at user-defined start, stop and interval times. Data is stored in a large internal memory, providing for long periods of unattended operation. The unit also features the ability to display captured data.

2004 PICK HIT

610-264-0100; fax 6102648901; www.dovetailsci.com

Rack screws
Middle Atlantic Products

Guardian series: Available in quantities of 100, these rack screws feature a square post that requires a

specialized bit, only available to dealers and integrators from Middle Atlantic Products. At 3/4-inch long with 10-32 threads and a black oxide finish, the screws feature a tapered self-guiding pilot point. Also featured is a factory-installed nylon washer that permits installers and integrators to focus more time on the overall project, eliminating tedious, time consuming tasks.

973-839-1011; fax 973-839-1976
www.middleatlantic.com
sales@middleatlantic.com

Large diaphragm mic
Neumann

TLM 127: A multi-pattern large diaphragm microphone, this mic features low self noise and high sound pressure level transmission. The dual

diaphragm capsule is acoustically well balanced and offers multiple polarity from the microphone, switchable pad (-14dB) and a high pass-filter. Cardioid and omni-switchable patterns are available on microphone, with a full range of five patterns available via optional remote control and power supply using standard XLR cables. The mic is available in satin nickel or matte black.

860-434-5220; fax 860-434-3148
www.neumannusa.com
neumlit@neumannusa.com

www.beradio.com

2004 Product Source

Analog STL system
Armstrong Transmitter

X Link STL system: Replacing the FML10 system, this transmitter and receiver features microprocessor control that evolves the FML10 to a user-friendly menu driven system. Frequency, power output, signal strength and all metered parameters are available on the front panel LCD display and via remote control. The system's receiver is more sensitive making it useful for long STL paths. This system interfaces easily with Armstrong's two and four channel digital converters to allow a station to add digital audio to the analog platform. The transmitter and receiver operate on 24Vdc, 110Vac or 220Vac.

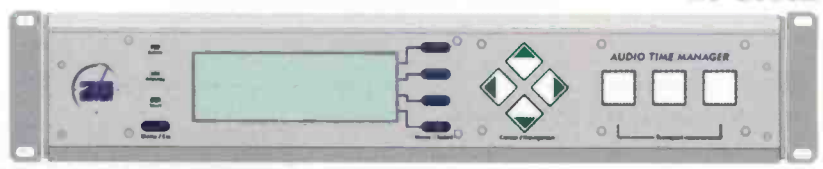
315-673-1269; fax 315-673-9972
www.armstrongtx.com; sales@armstrongtx.com

Digital series console
Audioarts Engineering

D-4000: This D series console features a new look with a stainless steel meter bridge and wrist rest, composite fused finish end caps and new work surface graphics. Other features include a large phone-in capacity (as many as four callers), easy installation and accessories such as remote switches, router control modules and multi-line phone panels. The console offers a hot-swap design, four stereo mix busses, six pointer-style true VU meters and 24-bit A/D conversion on analog inputs.

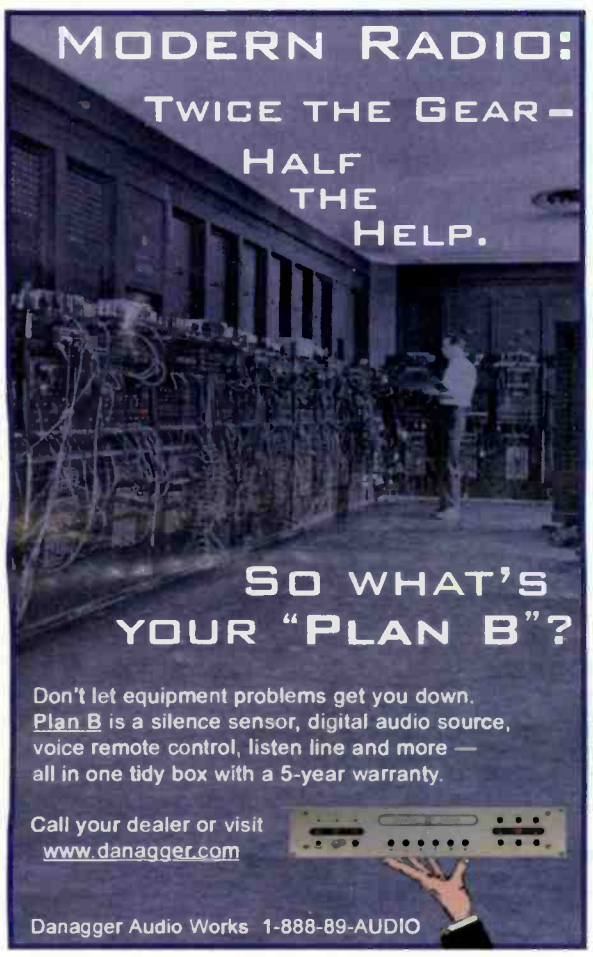
252-638-7000; fax 252-637-1285; www.wheatstone.com; sales@wheatstone.com

Time shifter
25-Seven



AudioTime Manager: ATM allows users to delay the start of live programs and shorten their duration, in real-time, to accommodate the unexpected or create additional availabilities on an on-going basis. Its time compression technology is clean so that users can conservatively add about three minutes per hour to a schedule. Depending on the program source, users can more than double that and still maintain acceptable broadcast spoken language quality. The scheduler does not remove important content, change pitch, damage inflection or create artifacts.

888-257-2578; www.25-seven.com; info@25-seven.com



Music scheduling software
A-Ware Software

Musicmaster for Windows: Musicmaster for Windows features a user-defined database that can be customized to meet a user's exact needs for fields of information. Each installation becomes unique for its own application. Infinitely scaleable rules allow the system to think more like a music programmer to find the best possible song. The system integrates with virtually all automation and traffic systems. The program is offered on a buy-out basis, with no long-term lease.

800-326-2609; fax 262-717-2230
www.mmwin.com

Audio tester
Terrasonde

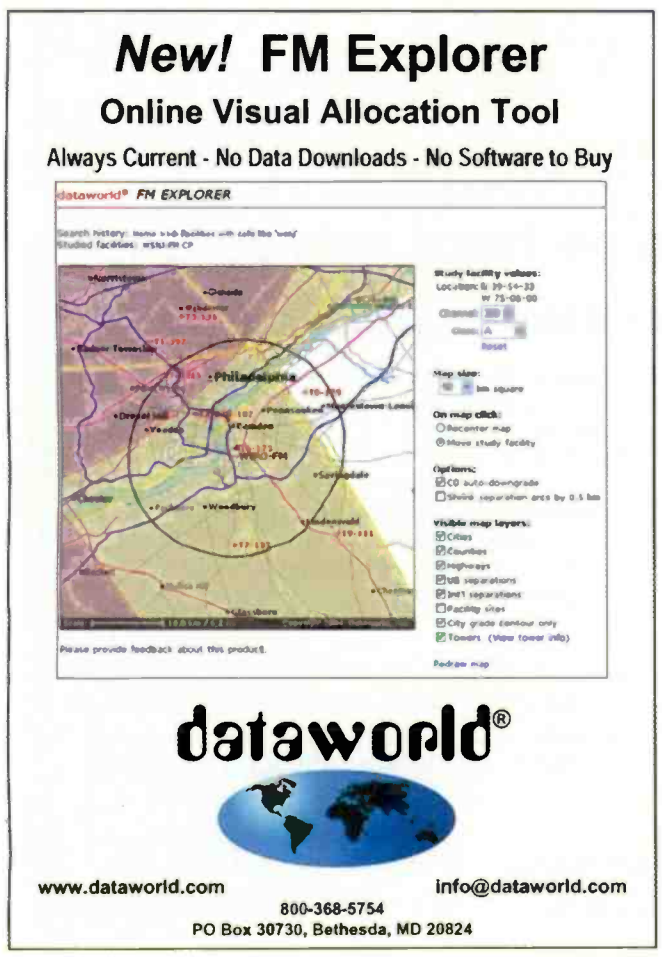
Studio Toolbox: Featuring 36 audio functions and a portable, lightweight chassis, this test equipment assists the engineer throughout the recording process. Pre-production functions like the Room Reflection Analyzer analyze room acoustics and speaker array phasing, Clic Trak+ Generator, and Virtual Pitch Pipe for tuning voices save time and ensure that room, equipment and clients are ready to go. Production features include the Mix Down tool that combines an SPL meter with 1/3 octave RTA for fast and accurate mixing, MIDI helper allows a user to display MIDI data on a MIDI cable in several forms, split MIDI events between two output ports and test MIDI cables and time code tools for testing, troubleshooting and fixing time code problems.

888-433-2821; fax 303-545-6066
www.terrasonde.com; info@terrasonde.com

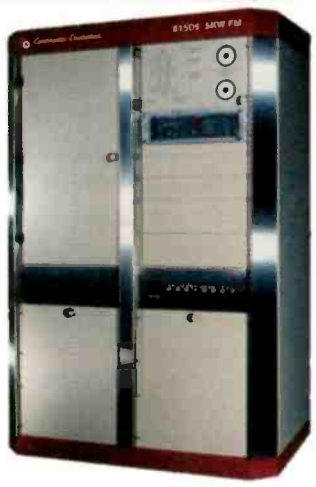
ISDN codec frame
Harris

Intralink ISDN: This ISDN monitor can control as many as six basic-rate ISDN lines in a 3RU shelf. It handles any combination of program audio, voice and data using standard Intraplex channel modules. Five shelves can be linked for a maximum capacity of 30 BRI, and it is compatible with most industry codecs. The unit delivers MPEG program audio up to 128kb/s and delivers LAN data at 128kb/s. It is Telex and Clearcom voice and data compatible for remote intercom use and is field-configurable via a Windows-based user interface.

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



Solid-state FM transmitters
DRS Broadcast Technology



Continental 815D5 and 815HD5: The new line of FM solid-state transmitters, beginning with the 815D5 and the 815HD5, is a 5kW solid state FM line with an RF combining and splitting system designed and tested to withstand as much as three times its operating RF requirements. This transmitter line wields a combiner system that ensures that the most RF possible gets to the output in the event of single or multiple amplifier module failure. The 815 series includes 24.5" (12 rack units) of user available 19" wide rack space and built-in ancillary equipment power outlets. This area is located in a non-interlocked area and accessible from the front or rear.

800-733-5011; fax 214-381-3250; www.contelec.com; sales@contelec.com

Dual feed exterminators
Sabine

FBX-1020 Plus and FBX-2020 Plus: These dual feedback exterminators offer 20-bit digital conversion and 12 patented FBX filters per channel. The feedback control algorithm identifies feedback and places narrow filters on the ringing tone. Each filter is custom-made at the moment of the feedback, and is placed just deep enough to remove the ringing tone in 3dB steps. It is able to distinguish feedback from program material. These units offer more gain before feedback, increased clarity and intelligibility, more wireless mic mobility and adaptive automatic feedback control.

800-626-7394; fax 904-418-2001
www.sabine.com; sabine@sabine.com

Environmental sensor
MGE UPS Systems

SNMP/Web cards: These SNMP/Web cards include an optional environmental sensor along with instant e-mail and pager notification of UPS status. The environmental sensor provides remote supervision and monitoring of temperature and humidity close to UPSs that are located in server racks, computer and battery rooms and internetworking environments. Monitoring, status indicators and alarms are viewable via a Web interface and via network management systems. User-definable out-of-bounds events will trigger an orderly shutdown of the secured equipment via the UPS and send alerts to specified e-mail addresses, pagers and PDAs. The sensor's software monitoring interface graphically displays current temperature and humidity values, user configuration controls and thresholds. The new sensor also features two external contacts that can interface with door and fire alarms, gen-set start-up or other user-defined systems.

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

Audio analyzer
Neutrik Test Instuments

Minilyzer ML1: Part of the Minstruments line, the Minilyzer is compatible with the Minirator hand-held audio tone generator. This palm-size test instrument continuously measures audio levels as RMS or peak levels, absolute or relative to a definable reference with selectable units. The accurate frequency measurement, with high resolution of 100ppm gives additional functions and acts as the base for distortion measurement. It features a microphone input for polarity tests and a headphone jack for monitoring of the input signal for aural diagnostics. It also features a set of audio weighting filters that can be used in all measurement functions.

800-661-6388; fax 514-344-5221
www.nt-instruments.com; info@nt-instruments.com

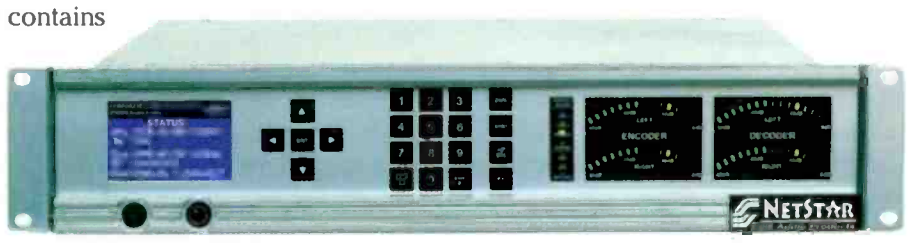
Monitoring and control unit
Comlab/Davicom

Secure IP version of the MAC: This new Davicom MAC offers 128-bit encryption. With the Secure IP Davicom MAC, access and control of remote site configuration is possible via the Web. The Secure IP Davicom MAC allows remote monitoring and control without increasing long distance costs since alarms generated by the system are sent to a local server via Internet.

418-682-6291; fax 418-682-8996
www.comlab.com; info@comlab.com

Digital audio codec
Musicam USA

Netstar: This codec sends and receives real-time audio, contact closures and ancillary data in its self-contained 2RU chassis. Stereo analog and AES/EBU inputs and outputs are standard. This product can send and receive bi-directional audio via IP, ISDN and all types of dedicated data circuits. It also contains coding algorithms including G.711, G.722, MPEG 1 and 2 Layer II, and MPEG 1 and 2 Layer III 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 large LED VU meters and a large menu display, this codec is a flexible headphone monitoring system that allows users monitor send audio, receive audio or a blend of the two. The blend function is well suited to voice talents, who often need to monitor both ends of a session.



732-739-5600; fax 732-739-1818; www.musicamusa.com; sales@musicamusa.com

Audio cables
Gepco International

61801EZ: This single-pair audio cable is available in 20 colors with a new riser-rated PVC jacket to allow for more color-coding options and improved flexibility. The cable features stranded, tinned-copper conductors that facilitate quick soldering or punch-down, and a high-grade polyethylene dielectric. In addition, each pair is shielded with an easy-to-strip, bonded foil shield with drain wire. These materials, combined with Gepco's uniform pair twisting process and tight mechanical tolerances, yield exceptionally low loss and noise. As with most Gepco products, this audio cable is UL listed CMR for permanent installation in a wide variety of locations.

800-966-0069; fax 847-795-8770
www.gepco.com; gepco@gepco.com

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Western Region
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Fremont, CA 94539
510-656-8766
510-657-7283 (fax)

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..and The Software..
CenterStage Live

Send station identifiers, song and artist info, your station promos.. scheduled when YOU want them to appear in the RDS display, regardless of hardware restrictions.

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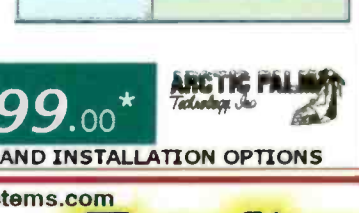
Control room paperless studio software system!



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913-568-2254 TurnKey MEDIA SYSTEMS

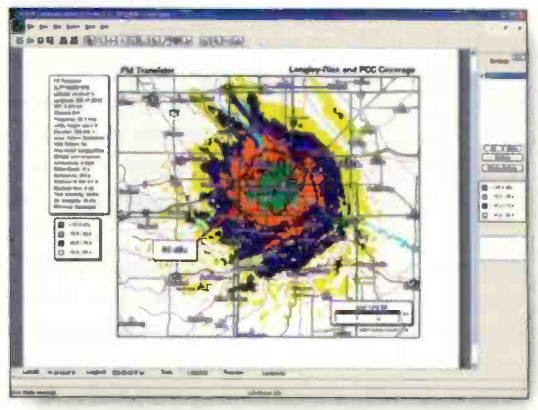
2004 Product Source

Phone editing system
Audion Laboratories

Vox Pro PC 3.3: This update revises Vox Pro PC's internal database format, allowing for gain increase of selected audio for one or both tracks. It includes a resizable interface, from minimal to full-screen, and it is compatible with virtually all sound cards (not WDM dependant). It supports mouse click and drag audio highlighting, MP3 import and export of multiple files, streamlined administrative features and faster access to folders containing thousands of files. Other feature upgrades include the ability to display all master recordings in the current users' account; gain control volume adjustments in 1dB increments for a maximum of ±24dB on either or both channels; stretch, shrink or maximize the Vox Pro PC screen to fit any size monitor; and import and export MP3 files using LAME encoder/decoder. Users have four customizable, default settings for advanced options.

206-842-5202; fax 206-842-6029; www.audionlabs.com

Terrain analysis software
V-Soft



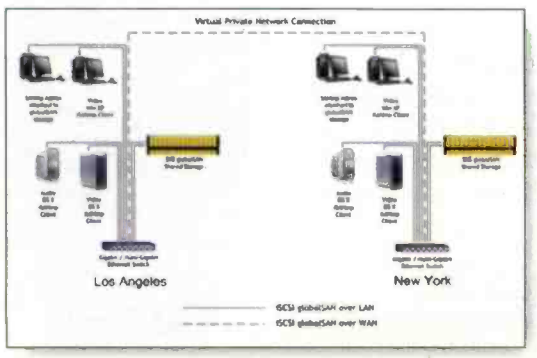
Probe 3: While undergoing modifications to enhance the overall usability of the program, the software maintains all the features of its predecessor, the Probe II. New tools of the software include a polygon creation tool that allows users to define a shape on the map and then calculate its area and population, as well as a D/U Ratio Study that allows for color-coded D/U ratios to be plotted on a map. The software also includes a new database search engine, allowing the user to search by criteria such as service type, licensee, city of license or distance. It supports NAD27 and NAD83 data, includes a new mapping engine for solid and dashed lines of any width, plots census density using gradient shading and imports MIF files as a separate layer to be plotted on the map.

800-743-3684; fax 319-266-9212; www.v-soft.com; kmichler@v-soft.com

Turnkey studio and transmitter systems
Lightner Electronics

System integration: This company offers turnkey studio and transmitter solutions. All equipment is pre-built at the factory and sent to any location. Complete documentation is provided for easy installation of the systems, or professional installation is available. Capabilities include: central rack rooms; pre-wiring and equipment installation, including testing and level setting; custom studio furniture systems; production/on-air control rooms and studios; equipment selection; acoustical, electrical and mechanical systems planning; coordination of architectural and engineering team; systems consultation and evaluation; telecommunications and computer systems; development of systems budget; and master planning and conceptual layout.

814-239-8323; fax 814-239-8402
www.lightnerelectronics.com
info@lightnerelectronics.com



Shared storage network
Studio Network Solutions

ISANmp and GlobalSAN: Built on the ISCSI protocol, ISANmp enables audio and video files to be shared over Ethernet, whether in the adjacent editing suite or with a remote location. ISCSI is an IP-based storage networking standard that provides transport of block-level I/O data over high-speed Ethernet. ISANmp works with Windows and Mac OS X systems.

877 537 2094; fax 314 423 4867; www.studionetworksolutions.com

Monitoring system
Blue Sky International

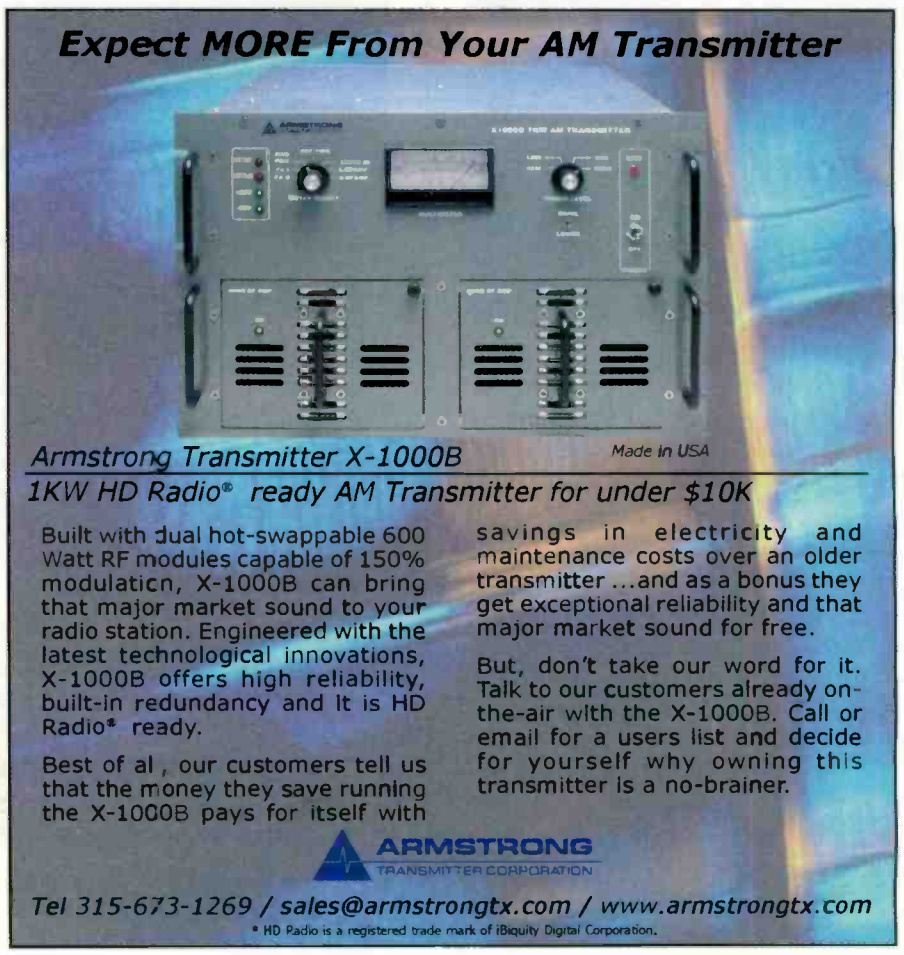
Prodesk: Prodesk is a 2.1 system consisting of two Blue Sky SAT 5 bi-amplified satellite speakers and a complementary powered 8" subwoofer. These speakers feature a cast-aluminum frame and a 0.75" dual concentric diaphragm tweeter with integral waveguide for off-axis response. Using Blue Sky's proprietary computer-optimized crossover and bass-management networks, the system delivers seamless full range audio from the subwoofer to the main monitors with smooth on- and off-axis frequency response.

516-249-1399; fax 516-753-1020; www.abluesky.com; info@abluesky.com

Cable mounts
Andrew

Anchor Rail Adapters: This adapter snaps into common strut or anchor rail systems for a secure, neat mounting of coaxial cable runs on any support structure. The adapters clamp into the rail, providing a secure platform to accept all common snap-in hangers. Once snap-in hangers are installed, runs of coaxial cable can be mounted on communications towers, making the most of the often-limited space on these structures. These one-size, self-contained, stainless steel adapters replace spring nuts, square washers, hardware and standard hangers in use today. No tools are required for installation. Adapters can be used for horizontal or vertical cable runs and produce neatly aligned cable installations on large poles, smokestacks, rooftops, walls or any support structure indoors or outdoors.

800-DIAL-4-RF; fax 708-349-5444
www.andrew.com; rose.wolski@andrew.com



Text or audio distribution
Burli Software

FTP client: As an add-on to its software, Burli offers a drag-and-drop FTP client. Using an Internet connection, a Burli user anywhere can send and receive text or audio stories to and from any FTP server on his desktop. The FTP client opens in the top half of the Burli screen. To upload a file, drag it across the screen and drop it in this window. Use Burli to transfer files and to play, copy and edit audio while it's still pouring across the Internet. An audio file arriving by FTP can be previewed and edited while it is being transferred.

604-684-3140; fax 604-684-4160
www.burli.com; info@burli.com

Pro Tools effects plug-in
Eventide

H3000 Bank Delays: The plug-in provides ProTools users with the feature set and functionality of the Band Delays algorithm from the H3000 in a plug-in format. The plug-in features Hot Keys that offer four editing controls, allowing scalable multiple parameter manipulation of the four most important adjustments to the effect. The product also features eight tempo-based delays each with programmable resonant filters and independent panning controls.

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

CD recorder/cassette combo
Tascam

CC-222MKII: This unit combines CD and cassette recording in one rackmountable package. When recording from cassette to CD, the Sync Rec feature senses when the audio has been silent for more than six seconds and pauses recording. Recording resumes when the audio comes back. A digital attenuation control can now be added to the analog inputs, and the CD's digital converters have been upgraded to 24-bit resolution for better dynamic range performance. This system uses professional and consumer CD-R and CD-RW discs, offers a bi-directional cassette mechanism and features Dolby B noise reduction. The recorder/player uses S/PDIF digital coax and optical digital I/O for the CD recorder.

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

SBE certification sample test software
Society of Broadcast Engineers

Cert Preview: The Society of Broadcast Engineers Program of Certification has released a sample test software program to assist in preparation for taking an SBE certification exam. Replacing the previous DOS version, the new version operates on Windows and provides a flexible platform for updates, changes and enhancements. The software disc includes tips on taking an SBE certification exam and several types of practice test modes. Users can review specific areas of knowledge to prepare for the actual exam.

317-846-9000; fax 317-846-9120; www.sbe.org

Studio furniture
Arrakis

Radius-XP: This studio furniture line is engineered for studio decors where non-wood trims are a design goal. Available in several colors, this furniture will complement any size market application. The modular design enables the furniture to be ordered in almost any configuration. The furniture features all plastic surfaces and the tabletops are plastic laminates. The tabletop equipment rack pod offers a heat vent and rear access. All the tabletops and other panels are laminated on both sides to reduce warping. Thermofused polylaminate side panels cannot delaminate and are scratch and wear resistant.

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

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www.jkaudio.com • info@jkaudio.com

Field strength program
RF Software

RF Investigator-FM: By performing spacing and contour analyses, this engineering tool helps users comply with FCC 73.207 and 73.215 rules when applying for a new FM broadcast station or making changes to an existing one. The program features an antenna pattern design tool and a terrain profile tool.

352-336-7223; fax 352-367-1725
www.rfsoftware.com; info@rfsoftware.com

Codecs
Audio Processing Technology

Worldnet Oslo and Worldnet Ohio: These codecs deliver low delay audio over T1, E1, TCP/IP and ISDN networks. Unique to the Worldnet Oslo is the ability to network WAN/LANs over synchronous circuits, in addition to simultaneously sending audio over the same circuit. This feature will help broadcasters who are attempting to network remote stations within a radio group.

323-463-2963; fax 323-463-8878
www.aptx.com; aptmarketing@aptx.com

Handheld mic
Heil Sound

Goldline Pro: By mounting the wide frequency response dynamic element into a special sorbothane shock mount system, Heil has created a mic with low handling noise. Features of this mic include a magnet structure and a large aluminum 1 1/8" low mass voice coil assembly; a phasing plug assembly with equally placed ports that sense audio from behind the source entering them out of phase, thus producing a linear cardioid pattern and reducing the proximity effect; a 40Hz to 18kHz frequency response; and an impedance of 600Ω balanced. The mic is usable in high sound pressure levels and is immune to overload conditions. The cardioid pattern offers rejection at 180 degrees off axis, which is directly behind the microphone and creates virtually no off-axis coloration while rejecting unwanted audio.

618-257-3000; fax 618-257-3001; www.heilsound.com; info@heilsound.com

2004 Product Source

Selections for your bookshelf reference

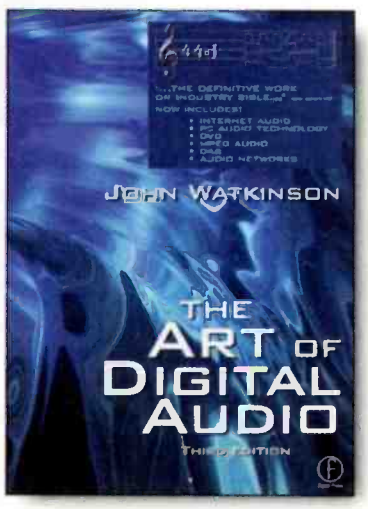
The Reference Room

The Art of Digital Audio, 3rd edition

By John Watkinson

Publisher: Focal Press, 2000

Written for anyone with an interest in digital audio, the author is an audio specialist who conducts professional seminars and workshops around the world. This new edition includes Internet audio, PC audio technology, DVD, MPEG audio compression, digital audio broadcasting and audio networks.

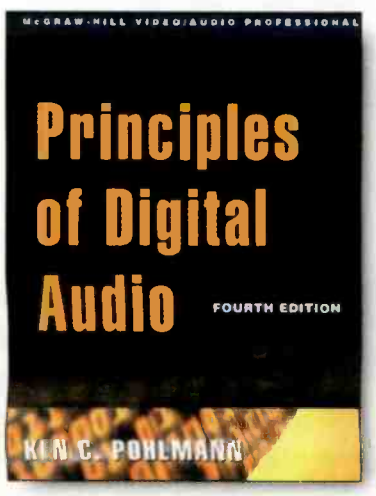


Principles of Digital Audio, 4th edition

By Ken Pohlman

Publisher: McGraw Hill, 2000

From the basics to the cutting edge, this book is packed with vital information. Through three editions, this text has illuminated the frontiers of digital audio science. The updated and revised fourth edition provides the needed tools to



capitalize on the expansion of digital audio technologies. Widely used as a college text and a professional reference, the book delves into DVD, Internet and PC audio, compact discs, workstations, perceptual coding, and digital radio and television.

Signor Marconi's Magic Box

By Gavin Weightman

Publisher: DaCapo Press, 2003

Guglielmo Marconi doesn't fit the typical inventor stereotype: he lacked wild hair, wasn't absentminded, wore debonair-looking hats and frequently wooed women when traveling by ship. Yet Marconi's aptitude for technology led him to be-

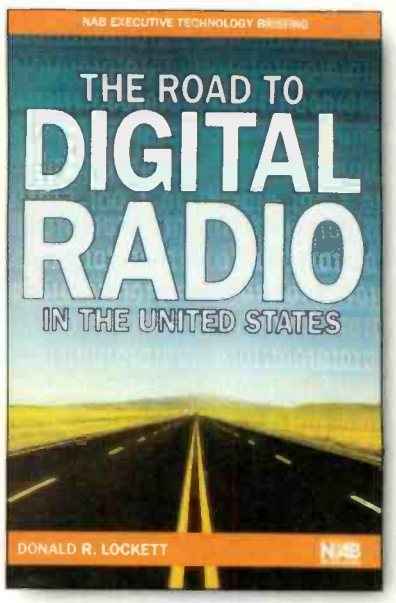
come the father of wireless telegraphy and radio. Born in 1874 to an Italian father and an Irish mother, Marconi was always fascinated by the nascent technology of electricity and, as a young man, was struck by the idea that he could transmit telegraph messages—then carried by cables—through the air. Weightman's text is about the juggling for position among the wireless inventors and their respective companies around the turn of the century.

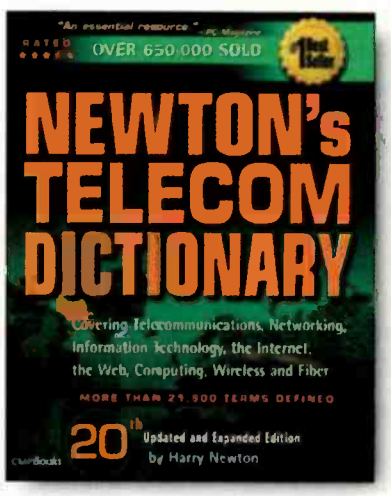
The Road to Digital Radio in the United States

By Don Lockett

Publisher: NAB, 2004

This book offers a management-level overview of where things stand with digital audio broadcasting in the United States following the FCC's authorization to allow digital radio transmission in October 2002. Terrestrial radio stations are the last broadcast media to transition to digital transmission technology. Radio industry commitments to convert and the availability of digital radio technology to facilitate digital radio are at an infancy stage. This book examines the experiences of early adopters during the first year, highlights developments that occurred and reveals first-hand perspectives of broadcasters, manufacturers and industry players as the transition begins.





Newton's Telecom Dictionary

By Harry Newton

Publisher: CMP Books, 2004

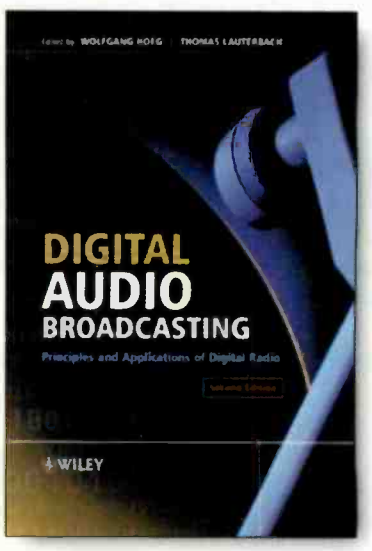
Newton's Telecom Dictionary helps technology and business professionals stay on top of the ever-changing network, telecom and IT industry. With more than 21,000 definitions, the 20th updated and expanded edition includes complete coverage of wireless, broadband, intranet, e-commerce, IT and technology finance terms. While the tech industry hype has cooled, new telecom and networking technology and services continue to be adopted at a rapid pace, and new terms and acronyms sprout just as quickly. Technical concepts are explained in non-technical language.

Digital Audio Broadcasting: Principles and Applications of Digital Radio, 2nd edition

By Wolfgang Hoeg and Thomas Lauterbach

Publisher: John Wiley & Sons, 2004

This updated 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 digital radio including audio processing, data transmission and modulation schemes and how the system can be implemented and operated. Features such as perceptual audio coding, OFDM channel coding and modulation, multiplex management (STI) and data transmission protocols (MOT) are described.

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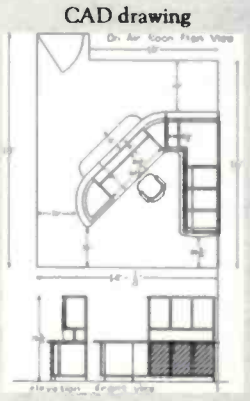

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Los Angeles, California

Entravision Showcase Studio
Los Angeles, California

Analog equalizer
Klark Teknik

DN370: Aimed at monitoring applications, each channel of this equalizer offers two swept and overlapping 18dB notch filters with illuminated combined frequency and in/out rotary controls. Greater control is provided by swept 12dB per octave high-and low-pass filters on each channel, allowing the frequency response of a given channel to be precisely tailored to its use. Its 45mm faders (with protective dust covers) offer control of the configuration of the 'proportional Q' filter type.

616-695-4750; fax 616-695-0470
www.klarkteknik.com

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RadioSoft

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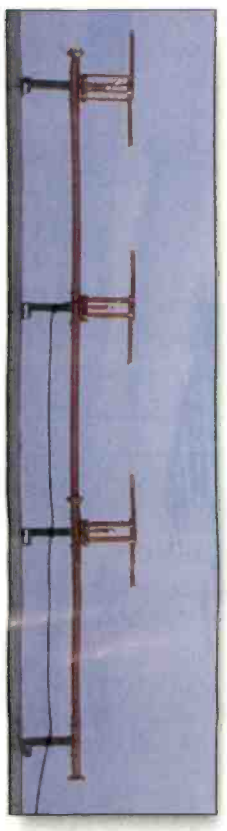
IBOC/analog antenna
Shively Labs



IAD-FM 6813: A cost-effective solution for low power IBOC conversion aimed at Class A and similar power stations, this antenna produces a digital IBOC signal using a separate antenna, but without requiring additional aperture. It does not require a 10dB coupler to inject signal onto the analog as is done with high-level combining. This means the 90 percent loss to the digital signal and the 10 percent loss to the analog signal is avoided. The antenna requires no additional tower space because the digital antenna to be mounted directly to the feedline of the existing full wave spaced antenna. The unit will not affect the tuning of the existing analog antenna.

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

Solid-state recorder
Marantz

PMD570: Using Compact Flash cards, this recorder provides compact recording with no moving parts. It features RS-232c control of functions, MP3, MP2, WAV and BWF file recording formats, and more than 40 assignable quality settings. The unit's sampling rate is 16Hz to 48kHz and offers a bit-rate setting from 32 to 384. The unit features digital input and output and balanced XLR line inputs with trim, as well as unbalanced line in and out.

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

Tube and solid-state transmitters
Superior Broadcast

FM Transmitter Line: The 120W PM120 and 300W PM300 solid-state transmitters are rack-mount units with frequency agile tuning in 10kHz steps across the FM band. The KAFM series, available in 2.5kW and 3kW models, use a single tube design and occupy a space that is only 22" x 30" in a package that is 5' tall. The 5kW and 10kW models stand 6.5' tall. All the tube transmitters us a single-tube grounded-grid design for low-cost, dependable operation. They also feature a solid-state, digitally synthesized, high-performance exciter and IPA.

800-279-3326; fax 800-644-5958
www.superiorbroadcast.com
jjoynt@superiorbroadcast.com

LAN/IP audio distribution
MDO UK

AudioTX Multiplex: One or more server PCs take multiple, live, audio sources and make them available across an existing network. Any PC on the network can receive the audio feeds by using a small receiver module that emulates a tuner by selecting a channel. New sources and destinations can be added by loading the appropriate software. The system works with standard Windows hardware and sound cards. The system uses multicast technology, and installation tests have shown that 50 stereo audio channels at broadcast quality occupy only 6 percent of a 100Mb/s network. Audio can be broadcast as linear WAV, MP3 or MP2 files. Users can purchase the software only or MDO can supply configured servers.

+44 121 256 0200; fax +44 121 256 5109; www.audiotx.com; sales@mo.dutta.org

Antenna for AM Broadcast
Kintronic Labs

Kinstar: The radiation pattern and efficiency of this antenna provide operation equivalent to that of a standard quarterwave 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.

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Condenser mic
Neumann

BCM 104: The first product in the broadcast line, this condenser mic offers an independent, functionally optimized design derived from 3D simulations. The large-diaphragm condenser capsule features a cardioid directional pattern with internally switchable proximity effect compensation. A second switch allows the sensitivity to be reduced by 14dB. The microphone head grill twists off for quick cleaning. Optional, color-coded head grills are available.

860-434-5220; fax 860-434-3148; www.neumannusa.com; neumlit@neumannusa.com

Noise-reducing cabinets
Noren

ACL-24 Acoustilock: This cabinet eliminates fan and drive noise in critical listening environments such as on-air and production studios. The cabinet provides 38dBA of noise reduction and features heat pipe heat-removal technology. Heat pipes are hollow pipes containing a capillary wicking material and a precise amount of liquid in a partial vacuum. When one side of the pipe heats, the liquid boils and enters a vapor state. The vapor then moves to the cooler side of the pipe, thereby transferring the heat to the cool side. Acoustilock is available in different configurations and sizes to fit a variety of needs. All models include a triple-layer acoustic for maximum noise attenuation; free-floating, vibration-dampened rack to eliminate vibrational coupling; multiple cable channels for cable routing; an internal digital temperature meter and casters for portability.

650-322-9500; fax 650-324-1348
www.norenproducts.com; sales@norenproducts.com

Red beacon
Dialight

D164 series: This medium intensity red beacon was designed to interface into existing systems or in new installations. The beacon withstands severe environments with its cast aluminum base and stainless steel hardware. The dome is made of UV-resistant acrylic and sealed. The beacon can mount onto existing bolt pattern installations. The light was designed to replace 300mm incandescent obstruction lighting fixtures with high flux LED technology. The modular design allows for simple replacement of the light engine. The light can flash or be a steady burn. It uses 90 percent less energy than an incandescent and creates no EMI/RFI.

800-835-2870; fax 732-751-5778; www.dialight.com; info@dialight.com

FM antenna for IBOC
ERI-Electronics Research

Dual-feed IBOC antenna: This dual-input, side-mounted FM antenna is designed for FM IBOC applications and is capable of transmitting the analog and digital FM signals without requiring a high-loss hybrid combiner or the use of a circulator to attain the required isolation between the digital and analog transmitters. The antenna is a dual-input antenna that excites all radiating elements with both analog and digital signals. The unit allows the use of a single antenna while eliminating the combining loss as is present in the 10dB hybrid combining method. It achieves 1.05:1 VSWR for analog and digital inputs and provides in excess of 30dB isolation between analog and digital inputs without using an isolator/circulator.

812-925-6000; fax 812-925-4030
www.ERIinc.com; sales@ERIinc.com

Audio switching router
AEQ

BC 2000 D Router: More than an audio switching router, this unit allows centralized or decentralized audio management, the link and communications of all studios and as many as 2,048×2,048 channels with no limitation of simultaneous connections. The unit offers a decentralized system linked by MADI connections between all the sub-racks. It handles digital, analog and microphone inputs and outputs, as well as non-audio signals such as Dolby E and MPEG. Its signal processing capability includes mixing, equalizations, filters, compression, expansion, limiting, reverb and delay. This product can be configured to be totally redundant, and it has automatic error correction capability, plus remote diagnostic and remote repair abilities. It may be used as an intercom router using dedicated panels.

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

Programmable relay controller
Circuitwerkes

Prex: The controller manages and multiplies contact closures. The controller accepts a variety of input signals and converts them to contact closure outputs. The microprocessor allows each relay to be individually programmed and triggered by any number of inputs, combined together using basic logic functions. Relay operating modes include momentary, toggled, leading or trailing edge, pulse stretching as long as 4.5 hours, input debounce and maximum on time. The controller can be programmed using jumpers or through a computer serial port. The configuration manager provides instant, graphical access to all of the setup commands.

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

Audio editing software
Adobe Systems

Audition 1.5: Adobe has released version 1.5 of its audio editing software. The first revision since the product was taken under the Adobe name, new features of the software include integrated CD burning, pitch correction, automatic click/pop elimination and the ability to save custom keyboard shortcuts. In addition, new sample sessions are included to assist users in getting started with the program. Royalty-free loops allow the creation of custom audio tracks. Other updates include: Rewire support, VST plug-in support, frequency space editing, enhanced support for video, clip time stretching and flexible envelope scaling.

800-833-6687; fax 408-537-6000
www.adobe.com

Mic boom riser
RAM Broadcast Systems

MBR-12: This mic boom riser features a hollow center to hide the mic cable, a shaft that is bolted to the base, and a no-screws design in the aluminum construction. This riser is useful for Corian-type bases and fits most mic booms. XLR adapters are optional.

800-779-7575; fax 847-487-2440
www.ramsyscom.com
sales@ramsyscom.com

Utility amplifier system
Broadcast Devices

UTA-200: By using three standard modules, the system can accommodate a variety of standard and custom D/A configurations. The system is totally modular, including the power supply. All modules plug in from the front panel. There are two analog modules available in addition to a D/A converter module. Each frame is fully configured, labeled and tested before shipping.

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Interface system
Kramer Electronics

FC-1ETH: This bi-directional, hardware and software interface system controls all Kramer RS-232 controllable machines via Ethernet LAN, as well as via the Internet. The system is comprised of a bi-directional RS-232/Ethernet CAT-5 converter and control software. The system integrates into an existing LAN system, allowing fast and safe IP address definitions a standard TCP/IP protocol. The system also allows using dummy CAT-5 cables without a real LAN system, and does not require a PC adjacent to the controlled device. Using a typical LAN structure, the FC-1ETH allows multi-node operation, having several PCs controlling several machines independently. Remote monitoring and control requires a dedicated IP address and a modem in the remote location, whether it is a stand-alone PC or a LAN system.

888-275-6311; fax 908-735-0515
www.kramerelectronics.com; info@kramerelectronics.com

Condenser microphones
AKG

C414-XL II, C414-XLS: This mic's proportions have been optimized, straight lines have been replaced with sweeping curves, and flat areas now have with gently rounded surfaces. The mic is slightly bigger than its predecessors. The rounded edges also reduce unwanted reflections. A fifth polar pattern has been added to the original set of four selectable patterns: cardioid, hypercardioid, figure eight, omni and now wide cardioid. All switch positions, microphone output overload, and power on/off status are indicated by LEDs. A capsule shock mount minimizes handling and stand-transmitted noise. Other features include sensitivity tolerance of ±0.5 percent, sensitivity of 6dB and low self-noise. The XL II features a transformer output.

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

Mic preamplifier
Daking Products

Mic-Pre IV: This unit features Class A preamplifiers in a single rack space unit with an outboard power supply. The preamp is configured for four microphone inputs or four line inputs from XLR/TRS Neutrik combo jacks on the back, plus four line inputs (+10 to -50) or 1/4 hi-z instrument inputs on the front. The unit uses discrete Class A circuitry with transformer-balanced inputs and outputs and can be used as a stand-alone or in conjunction with a console. Each input offers continuously variable gain control using aluminum knobs. The preamp offers a 20-segment LED level meter with +24dB peak indicator, switchable +48V phantom power and switchable 20dB pad.

302-658-7903; www.daking.com; geoff@daking.com

Distribution system
Fiberplex

Light Viper VIS-1832: This system consists of a 32 x 8 audio input stage box and a complementary 1RU (model VIM-1832) audio output unit. Connecting these two components is a fiber optic cable weighing less than two pounds per 100' of cable run. The cable is immune to ground loops, RFI, EMI and electromechanical noise, and runs of up to 1.25 miles can be accomplished without signal loss or degradation. The inputs on the audio input stage box will accept balanced or unbalanced XLR or TRS mic or line level audio. Industry standard 48V phantom power is supplied to all audio mic inputs.

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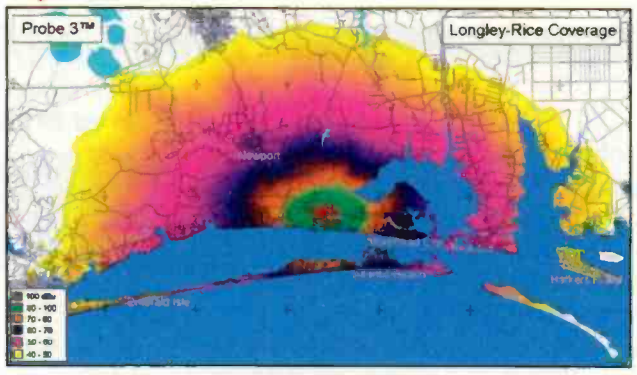

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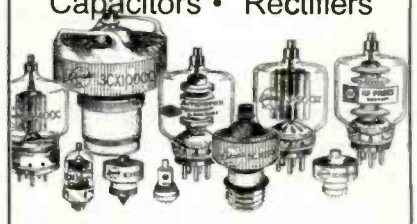

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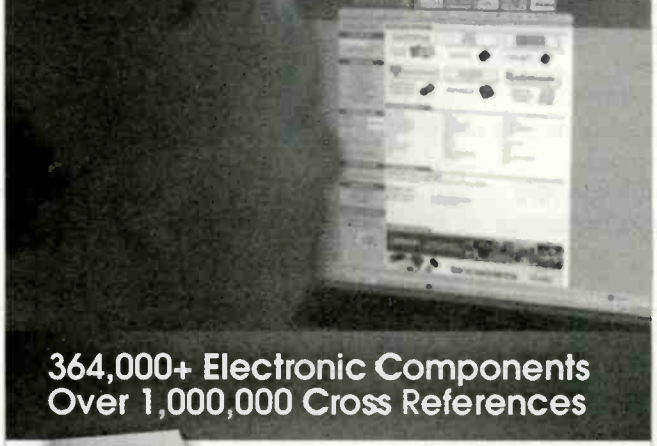

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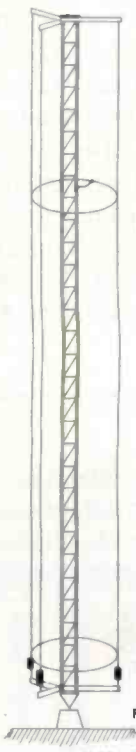

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