



From Audioarts...



This Is The Deal

Audioarts Engineering manufactures a complete line of audio consoles for every size radio station and market.

Like the brand new RD-12/20 series—the latest in digital technology. Fully modular with three stereo busses, analog and digital inputs and outputs and hot-swappable modules.

Or the R-17: a modular design in a compact mainframe with everything you demand in a broadcast console: muting, tallies, machine control, rackmount power supply—and more.

The R-5: 12 inputs with dual source channels. exclusive Simple Phone™ telco interface, full function tape remote and more—all in an affordable package.

R-60: The #1 selling console in the U.S. Fully modular for any combination of modules, superb audio performance, LED illuminated switches, dual inputs on each channel and a wealth of complete features engineered by the Wheatstone design team.

From on-air to production, we have a console to fit your needs with no compromise in quality or performance.

And These Are The Dealers

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Broadcasters General Store

Ocala, FL Phone: 352-622-7700 Fax: 352-629-7000 Email: bgs@atlantic.net S.C.M.S.

Pineville, NC Phone: 800-438-6040 Fax: 704-889-4540 Email: sales@scmsinc. com

Crouse-Kimzey:

Colorado Springs, CO

Phone: 800-257-6233 Fax: 719-392-8879 Email: ledwards@proaudio.com Lynn, IN Phone: 877-223-2221 Fax: 765-874-2540 Email: bpike@proaudio.com Annapolis, MD Phone: 800-955-6800 Fax: 410-754-9999 Email: kkaras@proaudio.com Fort Worth, TX

RF Specialties:

Phone: 888-737-7321

Concord, CA

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Fax: 806-373-8036 Email: rfstx@compuserve.com

Seattle, WA Phone: 800-735-705 I Fax: 206-937-8544 Email: jerryhill@csi.com

Tel: 252-638-7000 • Fax: 252-637-1285 E-mail: sales@wheatstone.com

Email: mbradford@proaudio.com

Phone: 800-433-2105

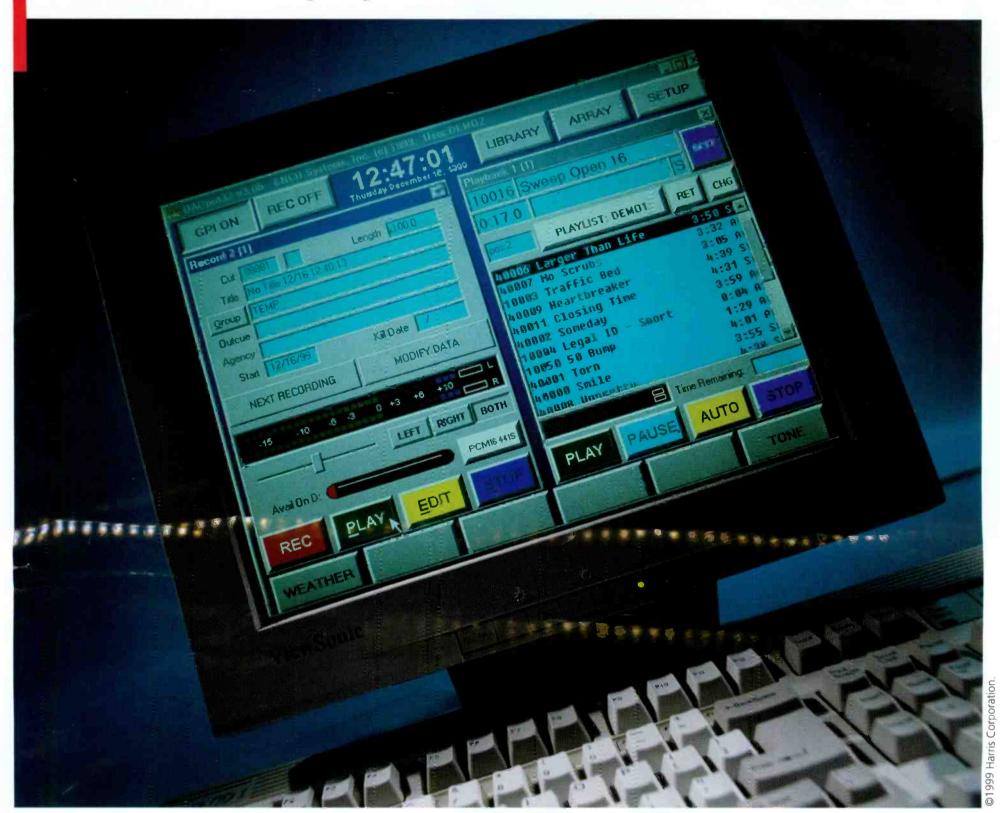
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Digital audio delivery. Available in S, M, L and multi-market sizes.



Whether you need a standalone digital storage system for a single, small radio station or the ability to share audio and data among multiple stations in various markets, we've got a solution that'll fit like a glove. Take a good look at DAD_{pro}32 from ENCO Systems. It's powerful, flexible and modular, designed to support you no matter what your application. DAD_{pro}32 works in live assist, automation, production and news. Integrate scheduling, billing, news and audio delivery. It's easy with the powerful ENCO DAD_{pro}32. And ask us how you can share your resources among any number of stations—efficiently, effectively and easily. DAD_{pro}32 make a perfect fit. Try us on for size.



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PRODUCT SOURCE

Welcome to the fifth annual *BE Radio Product Source*, the issue that covers the spectrum of products you rely on to get the job done.

Last year's issue won a regional and a national award from the American Society of Business Publication Editors. This year's issue also proves to be a winner — at 72 pages, it is the largest *Product Source* yet. That means we had more space to cover the latest product offerings, including webcasting, IBOC and LPFM gear.

The *Product Source* complements our pre- and post-NAB coverage. Although many of the products on these pages were unveiled at NAB, almost as many are more recent product offerings. This issue will serve as an essential reference tool as you make your product-purchasing decisions throughout the year.

Please feel free to provide feedback on this issue. Send your comments to 9800 Metcalf Ave., OP KS 66212-2216 or e-mail us at beradio@intertec.com.

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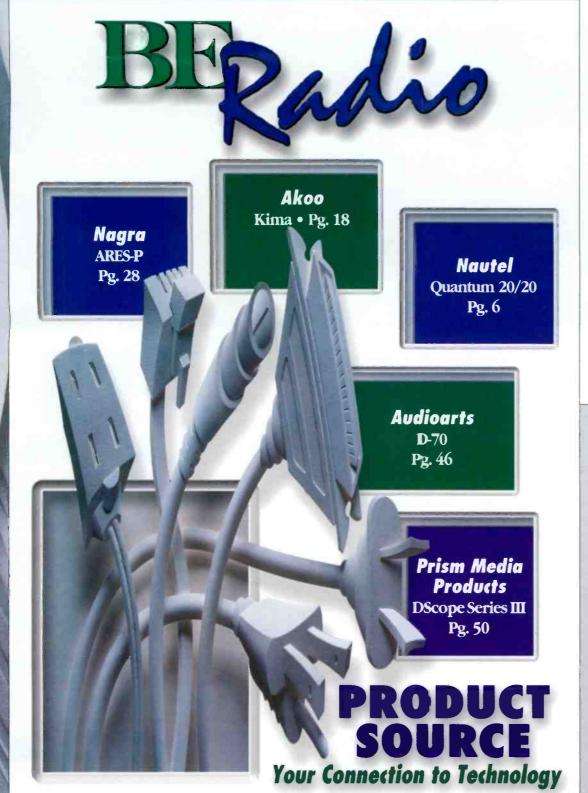
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without the price!



PRODUCT SOUR

Solid-state FM dual transmitter system Nautel Ltd



Quantum 20/20: Comprises two 20kW stand-alone FM transmitters that are fully integrated to operate as a 40kW active reserve transmitter system. Single or dual digital exciters with coherent drive components are included. System controls, metering and diagnostics for 40kW operation are incorporated within the dual Quantum 20 cabinets. Three standard configurations are offered.

902-823-2233; fax 902-823-3183; www.nautel.com; info@nautel.com Circle (287) on Free Info Card or go to www.beradio.com

Audio network Klotz Digital

X4P Network: Based on a PCI PCboard, this unit provides the use of a secure, private network via the Internet to distribute audio signals and graphics or video images. Gives any XP4 Network subscriber access to media data stored on servers in an SPN. Audio and multimedia contents are coded with MPEG-4/AAC algorithms and stored on servers. The contents are ready for download by users who have been authorized by the producer. For secure transmission through the Internet, the unit scrambles the signal, enabling prelistening at lower quality levels.

> 678-966-9900 fax 678-966-9903 www.klotzdigital.com klotz digital sales@ compuserve.com Circle (272) on Free Info Card or go to www.beradio.com

Large-diaphragm condenser mic Audio-Technica



AT4047/SV: Features a transformer-coupled output and uses dual, MGE UPS Systems gold-plated and aged large diaphragms for extended frequency response (20Hz to 18kHz), low self-noise (9dB SPL0), a wide dynamic range (140dB, 1kHz), and the ability to handle high SPLs (up to 149dB, 1kHz at 1 percent THD). Delivers a warm, natural sound without sacrificing high-frequency performance. Includes a switchable 80Hz high-pass filter and 10dB pad.

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

Circle (363) on Free Info Card or go to www.beradlo.com

Audio console LPB

7000 series: Includes transformer balanced line input cards, four mutable monitor circuits and one unmute circuit, a solid chassis for RF immunity, and one mono mixdown (two more are optional). Also features a modular component system, built-in talkback circuitry, two inputs per channel and three stereo buses. Comes with a one-year total-coverage warranty.

610-644-1123; fax 610-644-8651 www.lpbinc.com; lpbinc@aol.com Circle (275) on Free Info Card or go to www.beradio.com



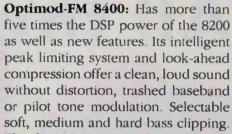
Audio codec AETA Audio

HIFIScoop 3: Designed to deliver 20kHz stereo CD-quality audio over ISDN lines. Housed in a 2RU chassis. Accommodates a range of standard compression algorithms, including ISO/ MPEG Layer II, G.722 and the lowdelay ADPCM. Features the ITU-T J52compliant algorithm, which automati-

cally renegotiates different algorithms from one location to another, ensuring stable, error-free connections. Available in 2-, 4- and 6 B-channel configurations and delivers full duplex operation in mono, stereo, joint stereo and dual mono channel modes. Allows transmission rates from 64kb/s to 384kb/s on ISDN of V11/V35 interfaces.

973-659-0555; fax 973-659-9555; www.aetausa.com; info@aetausa.com Circle (349) on Free Info Card or go to www.beradio.com

FM digital processor Orban



The limiting system eliminates the need to compromise between voice distortion and music loudness, allowing even loud, highly processed presets to offer pristine live speech. Patent-pending composite processor allows the stereo composite signal to be limited while preserving stereo separation and protecting the stereo pilot tone and RDS/RBDS subcarriers.

510-351-3500; fax 510-351-0500; www.orban.com; custserv@orban.com Circle (291) on Free Info Card or go to www.beradio.com

Decorative rack panel fillers Funk Logic



DD-301 and AP-302: Features decorative filler panels for racks. Available in 1- or 2RU versions. Includes knobs and a VU meter to resemble vintage

equipment (but with a humorous feel). An optional kit is available for meter illumination and meter movement.

760-434-3854; www.funklogic.com; funklogic@funklogic.com Circle (254) on Free Info Card or go to www.beradio.com

Directional antenna system controller **Kintronic Labs**

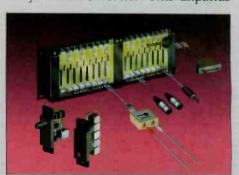
DAC-MOD-2-12/CI: This PLC-based controller has a new interface. The updated full-color touchscreen interface offers easier operation, improved visual indication of system status and more complete user feedback of present and previous alarm conditions. The improved main-page interface provides easy access to standard controller functions. Full navigational control of the system pages is permitted by the selection buttons at the bottom of the screen. Three password levels are available for customized operation. Other improvements include fullscreen help pages, intuitive controls and optional fiber optic control

423-878-3141; fax 423-878-4224; www.kintronic.com; ktl@kintronic.com Circle (271) on Free Info Card or go to www.beradio.com

Wiring system improvements

StudioHub+: Employs the same CAT-5 wiring platform, but makes different use of the pairs for increased compatibility with Ethernet networks. Expands

Radio Systems



the line to include a wide selection of new digital and analog accessories. Included are A/D 24-bit converters, S/ PDIF to EAS-3 converters, and mixing and monitor modules.

856-467-8000; fax 856-467-3044 www.radiosystems.com sales@radiosystems.com Circle (300) on Free Info Card or go to www.beradio.com

Galaxy 3000: Three-phase, online 10kVA to 30kVA UPS is compatible with all major industrial and network communications protocols, offers a full graphical user interface display and reports all input/output voltage combinations. Offers a unique ECO mode operating at 97 percent efficiency. Advanced inverter technology restricts total harmonic distortion to less than 3 percent. Also features a contained, scalable design — extra options cabinets are not necessary.

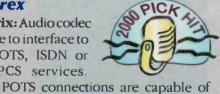
800-523-0142; fax 714-557-9788 www.mgeups.com; info@mgeups.com

> Circle (281) on Free Info Card or go to www.beradio.com



POTS/ISDN/PCS codec Comrex

Matrix: Audio codec able to interface to POTS, ISDN or PCS services.



up to 15kHz full duplex communications. Fully compatible with Vector and HotLine codecs. Optional accessory packs available to make the unit a flexible tool to aid in remote broadcasts. One choice transforms it into a light-

weight vet powerful ISDN codec. Another provides a PCMCIA slot for connection to a GSM phone, improving audio on GSM wireless circuits. A battery pack is also available. Two mic inputs (one input is mic/line switchable), one headphone output and one auxiliary output complete the Matrix package.

800-237-1776; fax 978-635-0401; www.comrex.com; info@comrex.com Circle (236) on Free Info Card or go to www.beradlo.com

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Audio codecs

PRODUCT SOURCE



TieLine USA

Pursuit and Express codecs: Use the

Express in the studio and a number of Pursuits in the field to maximize your coverage and minimize costs. The Pursuit contains only one encoder chip and operates as a one-way codec from field OB to studio. Fully remote control the Pursuit over the link from an Express in the studio. Put the unit's control in the hands of skilled studio operators. The Pursuit can also be fully operated by a PC in the field using the TieLine

Toolbox software via the RS-232 serial port.

317-655-9996; fax 317-655-9995

www.avcom.com.au; kwebb@prodigy.net
Circle (333) on Free Info Card or go to www.beradlo.com



Mic processor Thum + Mahr GmbH/ Yellowtec

VIP/digital: Fully DSP powered, this unit can save presets to a chip card memory. Users can save and then load presets into other VIP/digital units. Also bundled with natural reverb by Waves. The DSP algorithms are designed to work in harmony with the station's main audio processing. Settings can be changed with the front-panel controls or with Windows Software.

Different user levels allow various levels of controls and access. The unit can also be accessed via a TCP/IP network connection.

+49 2173 967336; fax +49 2173 9672400
www.yellowtec.com; info@thummahr.de
Circle (332) on Free Info Card or go to www.beradio.com

Targeted ad insertion

InSert and SplitStream: These products automatically switch away from a commercial or promotional spot and insert alternate material in its place. InSert can replace any given spot in the stream with an alternate spot. Split-Stream uses specific database and profile information to insert ads targeted to each listener. These advertisements can include graphical components and click-throughs to encourage impulse buying. InSert is intended for replacing one broadcast signal or stream with another prior to the audio encoder, most typically when covering a terrestrial station's local commercials with a separate feed more suited for the Internet. SplitStream can send different ads to individual listeners simultaneously, giving advertisers a much more focused and effective way of reaching consumers.

914-428-4600 fax 914-723-2258 www.rcsworks.com info@rcsworks.com Circle (301) on Free Info Card or go to www.beradio.com

Content-management system Informix

Media350: Addresses the growing need among Internet-driven organizations to digitize and manage audio, text and other content. The enterprise-level technology efficiently manages any kind of content, anywhere and at any time. Enables the reuse of existing content and media assets by creating a central, corporate repository that is accessible throughout an organization via the Web. It also capitalizes on the Web to create new revenue opportunities, such as publishing, distributing, selling or licensing content in new markets.

510-628-5636; fax 510-628-3880 www.informix.com

Circle (265) on Free Info Card or go to www.beradio.com



Nearfield monitor TGI North America/Tannoy

Proto-J: Provides high-quality monitoring to those on a budget and where space is at a premium. Extended low-frequency response, controlled dispersion and dynamic character make it ideally suited for 5.1 format project studios. Uses a durable 6.5-inch mid/bass driver and a new ³/₄-inch high-frequency unit, ideally placed in a front-ported reflex enclosure. Each cabinet employs integral threaded inserts on its rear for easy wall mounting.

519-745-1158; fax 519-745-2364 www.tannoy.com; mbertrand@tgina.com Circle (330) on Free Info Card or go to www.beradio.com

Large diaphragm omnidirectional microphone DPA Microphones



Microphone Kit Type 3541: Designed for everyday use in studios where transparency, air and brightness are paramount. Based on the same large-diaphragm capsule technology as the Type 4040 Hybrid Microphone. Complete with suspension mount, windscreen and popfilter as well as the state-of-the-art Microphone Amplifier Type HMA4000 and a special microphone cable. Features a new, versatile modular capsule and preamplifier system.

519-745-1158; fax 519-745-2364; www.dpamicrophones.com info@dpamicrophones.com Circle (249) on Free Info Card or go to www.beradio.com

FM amplifier Silicon Valley Power Amplifiers

10/3000 and 10/1000: The 10/3000 solid-state FM broadcast amplifier is designed for continuous operation at 3kW and requires only 10W input. The amp is constructed with a 10/150 pre-amp driving three 10/1000 1kW amps whose outputs are combined and filtered. The 10/1000 is completely self-contained with its own power supplies, cooling and control circuitry. At-a-glance indicators give an immediate indication of the status of every module, and the four-line LCD displays show critical parameters.

800-986-9700; fax 408-986-1438; www.svpa.com; sales@spva.com Circle (312) on Free Info Card or go to www.beradio.com

Stand-alone CD duplicator *Discmatic*

Onyx: This multidrive unit features a proprietary autoloading mechanism. It is a 100-disc machine that supports up to four 8× drives. Offers on-the-

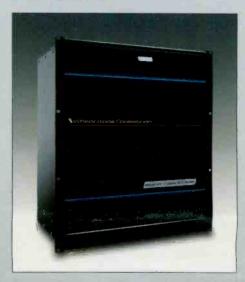


fly CD-to-CD copying, batch copying and the option of adding a dedicated CD-ROM reader. Equipped with four 8x drives, it can duplicate 24 full CDs (74min of audio/650MB of data) per hour.

800-422-6707 fax 516-894-9700 www.discmatic.com sales@discmatic.com

Circle (248) on Free Info Card or go to www.beradio.com

Digital router Wheatstone



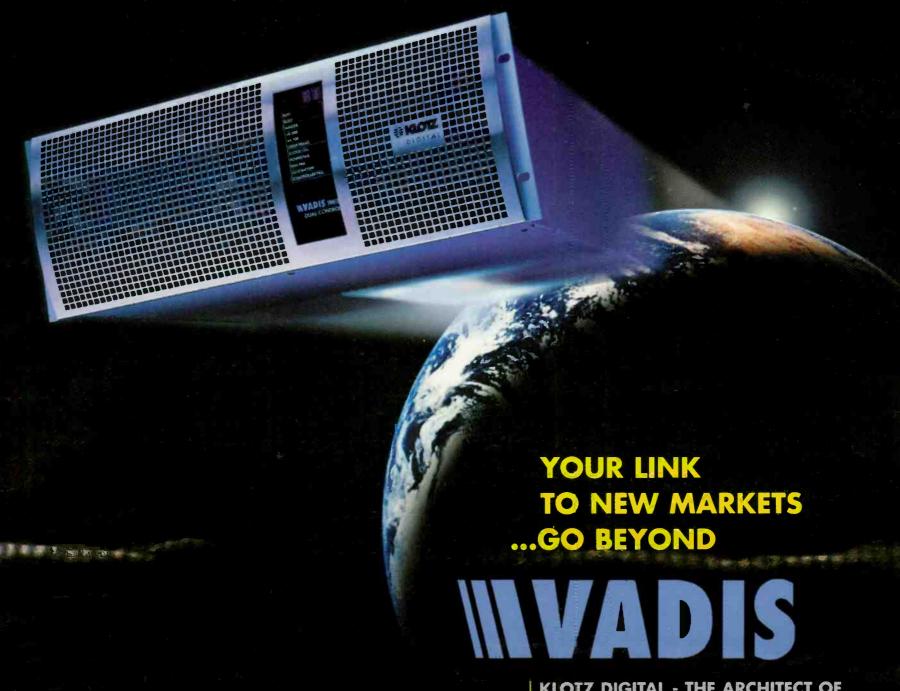
ATC-1: This digital AES router can provide all of the routing capacity most radio stations are ever likely to need. Features up to 256 AES in and 256 AES out for complete power and flexibility. Front removable hot-swappable cards in the router allow configuration and expansion of the system as needed. Input and output cards can be digital or analog, and any card can fit into any slot in the cage for total flexibility and expandability. Uses 24bit A/D converters and the digital inputs have onboard sample-rate converters. The software is automation friendly, making integration with a station's commercial automation and music systems seamless.

252-638-7000; fax 252-637-1285
www.wheatstone.com
sales@wheatstone.com
Circle (340) on Free Info Card
or go to www.beradlo.com

CD-R duplicator Verity Systems

CopyDisc 16: Based on the CopyDisc range and operates with automatic format and recognition. Its exceptional integrity and reliability result in failsafe operation and consistent high-quality CD-R duplication. The unit is a state-of-the-art CD-R duplicator for larger throughput requirements. The 16 Teac or Plextor writers, combined with a disk capacity of 1,100 CD-ROMs provides the ability to duplicate more than 1,000 CD-ROMs in less than 10 hours.

800-642-5151; fax 530-626-9395
www.veritysystems.com
verityscal@aol.com
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or go to www.beradlo.com



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Circle (117) on Free Info Card or online at www.beradio.com



BERALIO

PRODUCT SOURCE



Digital on-air console Arrakis

Colorado Digital Revolution series digital consoles: Rackmounted, digital broadcast console with digital and analog inputs. Occupies 3RU and is controlled by an external PC running the Cool-Mix software or from a slide-fader control surface. Available with 12 or 18 channels with two inputs per channel, three PGM

buses, two mix-minus buses, stereo monitor, headphone output, cue bus output. Includes machine control logic, remote channel on/off, five onboard mic pre-amps. Twelve-channel version can be upgraded to the 18-channel version.

970-224-2248; fax 970-493-1076

www.arrakis-systems.com; sales@arrakis-systems.com Circle (357) on Free Info Card or go to www.beradio.com FM, AM, Net processor
Omnia Audio

Omnia-3: Each processor in the Omnia-3 family includes, as standard features, 48kHz sampling, multiband processing, digital audio inputs and outputs, an integrated composite clipper, and a removable PC card

that simplifies software changes. The FM processor includes three-band processing as well as an integrated composite clipper, an all-digital stereo generator and daypart automation, all standard. The AM processor includes four-band processing, NRSC low-pass filtering, selectable narrow-band filters for news/talk formats and international requirements — even an EQ adjustment specifically for plate-modulated transmitters. The Net processor includes a host of processing presets designed to ensure spectral balance at common bit rates, a PC-Card slot to store, share and recall your custom processing algorithms and an RS-232 port. Remote

control is available with an optional PCMCIA modem card and Windows-based software.

216-241-3343
fax 216-241-4103
www.omniaaudio.com
info@nogrunge.com
Circle (327) on Free Info Card
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Telecommunications system planning CD-ROM Andrew



Powertools: Cuts the time needed to accurately plan an RF telecommunications system. Includes seven system-planning programs to speed the RF system design process. Contains the antenna-system planner, the broadcast-system planner, the microwave-system planner, the AntWind program, ezGuide software and the PSI select pressurization planner.

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fax 708-349-5444
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USB hub Keyspan

4-Port USB Hub: Can be used as a bus-powered hub (that draws power from the USB connection) or as a self-powered hub (that draws its power from a wall socket). Available in graphite and other popular colors.

510-222-0131 fax 510-222-0323 www.keyspan.com info@keyspan.com Circle (270) on Free Info Card or go to www.beradio.com

www.beradio.com

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Our new Prima LT is the fastest selling codec ever. You love the easy-to-use interface, the full compatibility with other codecs, and the unprecedented 24-bit audio. Now, the Prima LT Plus gives you even more.

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- ► Two RS232 ancillary data channels
- Full Prima Logic Language for automatic functions

Get the full story on what the LT PLUS can do for you. Contact MUSICAM USA for more details.

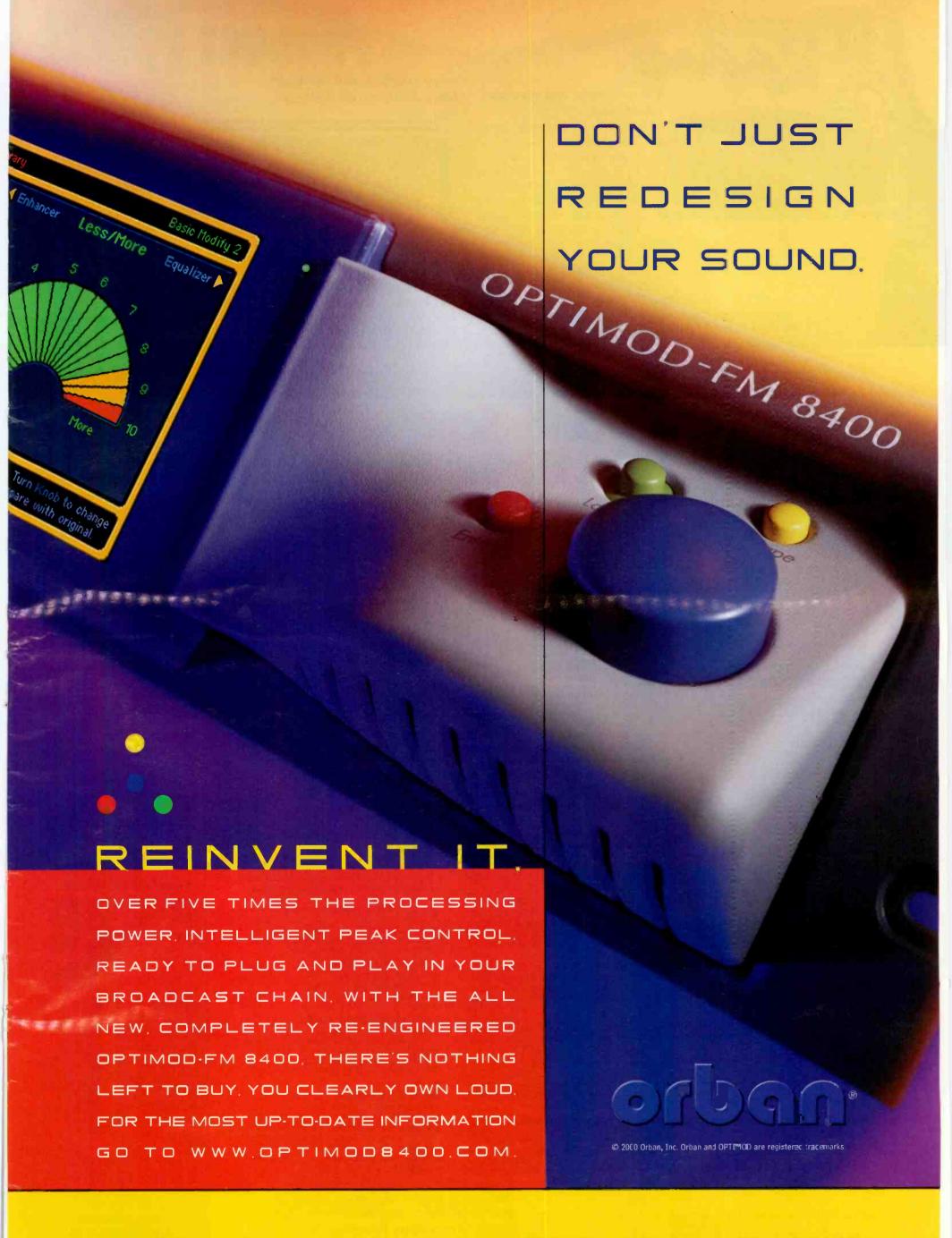


670 N. Beers Street, Bldg. 4 Holmdel, NJ 07733 USA Tel: 732-739-5600 Fax: 732-739-1818

Email: sales@musicamusa.com Internet: www.musicamusa.com

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AM measurer and analyzer **Audemat**

> AM-MC3: As a mobile fieldstrength analyzer, the unit provides simultaneous measurement of up to 99 stations and has a cartography setting function and internal GPS receiver. As a mobile dynamic baseband measurer, provides dy-

namic audio signal deviation measurement. Complete and comparative statistical pictures and an automated report function. Multiple configurations to qualify signals all along the broadcasting chain. Comes with complementary software modules, accessories and services.

978-392-2110; fax 978-392-2287 www.audemat.com; auditem@audemat.com Circle (359) on Free Info Card or go to www.beradlo.com

Audio routing and control Sierra Automated Systems



32KD: Performs switching, mixing, DSP, IFB and mix-minus functions using the SAS exclusive DTDM bus architecture, enhancing fault tolerance and mini-

mizing single-point failure issues. Fiber optic interfaces allow multiple mainframes to be linked together for almost unlimited expansion capabilities. Both analog and digital inputs and outputs are supported on user-selectable connector panels. The system also handles non-audio such as serial data and provides contact closures through a general-purpose interface. All SAS switchers use a variety of control methods, including rackmount and console-mount control panels, as well as soft panels and automation control. Special control panels for intercom systems and mix-minus programming are available.

PRODUCT SO

818-840-6749 fax 818-840-6751 www.sasaudia.com sales@sasaudio.com Circle (311) on Free Info Card or go to www.beradio.com

Introducing AXS 3: Scott Studios' Affordable New Digital System

With AXS (pronounced ax'-cess) 3, the 3 tells you this is the *third generation* of one of the most popular digital studio systems in radio! AXS is in its *second decade* as radio's premier satellite automation and digital cart replacement deck.

Triple Overlap: The 3 also indicates that AXS 3 is the first affordable digital system that plays three stereo audio recordings out to three separate console faders for music on hard drive. AXS 3 gives your announcers the ultimate in level control and mixing

Air Studio Production Bonus: AXS3 also has another stereo production output and record input. You can record and edit phone calls or spots and auto-delay news and audition them in a cue speaker while playing triple overlap on the air!

Premium SCSI LVD Hard Drives: The 3 also tells you that AXS 3 gives you a 3 year limited warranty on hard drives. AXS 3 uses exceptionally reliable and fast SCSI LVD 18GB hard drives from quality manufacturers (like IBM, Seagate, and others you trust) to keep your precious commercials, jingles and other recordings always at your fingertips. Some other systems cut corners with slower and less reliable IDE hard drives that sometimes choke and sputter with triple overlap and music on hard drive. They also jeopardize your cash flow with less reliable drives more likely to crash.

Awesome Sound Quality: With AXS 3, your station will sound superb. AXS 3 uses only the best non-proprietary +4 balanced 4 output digital audio cards by Audio Science. These are also sold by most of the major brands of digital systems, but only in their top-of-the-line models costing *lots* more than AXS 3.

Easy to Use: AXS 3 was designed by jocks, for jocks. It's 100% intuitive. AXS 3's big on-screen intro timer and separate countdown timers on every deck make

If you know how to work cart decks, you know how to work AXS 3. It's so simple, everyone can run it! AXS 3 has big buttons. Other systems use complex multi-step mouse mazes. AXS 3 gets things done with one simple touch.

Flexibility: AXS 3 seamlessly mixes uncompressed (linear) audio and all popular MPEG II compression ratios. AXS 3 can also play MP3 songs and spots you get from other sources, but if you do this you must stay with one bit rate for all. (It's a limitation of MP3, not AXS 3.)

The Music's Easy: AXS **3** is delivered with *your* music library already prerecorded for you either in MPEG II or uncompressed at no extra charge.

(972) 620-2211 FAX: (972) 620-8811



Jocks love AXS 3! Scott Studios' AXS 3 works with three cart players on the right side of the AXS 3 screen. The program log (at left) automatically loads the decks, or you can insert anything from pick lists. The far left of AXS 3 has 12 Hot Keys that can play instantly at a touch.

AXS 3 comes with Scott's time-saving TLC (Trim, Label & Convert) CD Ripper software for your Program Director's computer. TLC uses a CD ROM drive to transfer 5 minute songs to hard drive digitally in 15-30 seconds

The Best Air Studio Recording: AXS 3's built-in recorder has a graphic waveform editor for easy recording and editing of phone calls, spots, news or announcer lines. AXS 3's log editor lets you add new items to your schedule.

The Best Voice Tracking: AXS 3 works with Scott's optional Voice Trax, which you can add to your production room or air studio. Announcers will be able to hear surrounding music and spots in their headphones to match their voice to the moods and tempos of the music. During Scott Voice Trax, the level of your music is automatically lowered by A

Quality Hardware: AXS 3 uses an industrial quality Pentium III rack mount Windows computer. Jocks can use a keyboard or mouse, or optional button box or touch screen for fast control.

The Best Tech Support: hours a day, 7 days a week (including holidays). Software updates with new features are available for AXS 3 customers several times per year to stations on our annual support plan.

Easiest to Install: AXS 3 comes with a pre-wired connections to CAT5 LAN cables for snap-in installation on the AXS3 end of the wiring. Satellite control logic is also a snap with a plug-in connector. Your first two satellite audio connections for music format and news network, as well as another for your production console, are all built into AXS 3. For most music formats, there are no satellite interface cards or external switchers required. Basic connections are built into AXS3

LAN and WAN: AXS 3 and other MPEG and uncompressed WAVE Scott Systems use the same recordings. You don't have to dub the same spot several times for several

The Best Production Studios: AXS 3 is compatible with popular multi-track systems you may already have, like Sound Forge, Vegas Pro, Cool Edit Pro, Fast Edit and others. Simply add our time-saving \$500 no-dub instant LAN spot upload option.

AXS 3 is Affordable: Satellite AXS 2 systems start at \$7,995 with computer, double overlap audio card, satellite inputs, switcher and production recorder-player. Triple overlap AXS 3 adds 18GB of music on hard drive for only \$9,995 delivered. For details, check scottstudios.com, axs3.com or call 800 SCOTT-77.

13375 Stemmons Freeway, Suite 400 Dallas, Texas 75234 USA

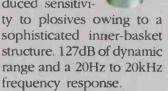
Hard-disk sound archiving Zenon Media

AirCheck: A stand-alone product that allows you to archive the incoming audio signals for documentation purposes (depending on the hard-disk capacity). Based on a processor that uses the Windows NT operating system, which archives all audio data onto the system's hard disk. Recording of audio data is achieved via a Sound Blaster or a compatible audio card using a compression algorithm. Depending on the compression rate, different bandwidths can be achieved. Bandwidths range from 4kHz in mono to 20kHz stereo.

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Vocal microphone

Neumann KMS 105: A supercardioid, live-performance vocal mic. 145dB maximum SPL. reduced handling noise caused by a triple process involving capsule tensioning, mounting and microphone electronics. Reduced sensitivi-



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Remote-control software Software Authority

Zephyr Remote: Features manipulation of all Zephyr functions. Continuously updates ISDN and sync status. Network version allows control of multiple Zephyrs via LAN, Internet or dial-up networking. Onscreen, unlimited autodial list. Save autodial list to file for backup. Displays call time, warns if call is lengthy and protects against leaving

Zephyr connected unintentionally. On-screen manual dialing and parameter control. Warm reboot of Zephyr. Works on Windows 95, 98, NT. Quick, easy setup.

877-504-9494; fax 216-642-0615; www.softwareauthority.com Circle (314) on Free Info Card or go to www.beradio.com

Expanded feature set 360 Systems



TCR/8: This synchronous master recorder is a hard-disk digital audio recorder designed to provide multichannel audio acquisition and playout for broadcast and production applications. Provides a measurable improvement of 20dB in SNR and dynamic range

over conventional designs and offers bit-for-bit reproduction of 24-bit PCM, Dolby-E and AC-3 recordings. Recordings can be stored on a 9GB internal hard disk, 250MB zip disks or DVD-RAM, all standard equipment. Includes a DVD-RAM drive. DVD-RAM disks will hold up to 10 hours of uncompressed 24-bit audio with random access and the ability to play back selected tracks in real time.

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Cable accessories

Cable Up!: The line encompasses a range of audio needs, featuring snake cables, patch bay cable sets, single and dual audio cables, MIDI cables, audio adapters and couplers, and AES-3 cables. Also included are SCSI and S/PDIF cables, USB/firewire connectors, rackmount screw kits, power extensions and cable wraps

323-726-0303 fax 323-727-7635

www.fascam.com tascamlit@tascam.com Circle (324) on Free Info Card or go to www.beradio.com

Miniature microphone AKG

CK-77WR: Available in flesh tone. white and black, with either a wire mesh windscreen in the same color or with foam windscreens in a wide range of colors for optimum blending with costumes, stage decorations and props. The dual-diaphragm transducer adds the signals captured by the two diaphragms while subtracting any noise caused by clothes rubbing against the microphone. The new design has no hole in the diaphragm. A capillary tube connected to a compensation cavity and sealed with a soft, flexible diaphragm creates the actual barometric pressure compensation. This design ensures pressure compensation even though the capsule is enclosed.

615-360-0499 fax 615-360-0275 www.akg-acoustics.com akgusa@harmon.com Circle (350) on Free Info Card or go to www.beradio.com www.beradio.com

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PRODUCT SOURCE



Digital audio card **Antex Electronics**

BX-12e: Able to play back MPEG files with up to four independent and fully adjustable sample rates. By adjusting each sample rate in increments of 50Hz over the entire sampling frequency, the user can achieve dynamic time-scale mod fication under software control. An audio track can be fine-tuned for replay under a preprogrammed time frame with virtually no degradation in audio

quality. DSP software-based sample-rate conversion allows any file to be converted to a common AES word clock for interface to digital consoles. Has20-bit A/D and D/A converters, four stereo analog channels for playback and MPEG Layer I/II compression.

800-338-4231; fax 310-532-8509; www.antex.com; sales@antex.com Circle (353) on Free Info Card or go to www.beradio.com



Broadcast equipment BSW-Broadcast Supply Worldwide

Dealer: A leading distributor of radio broadcast and professional audio equipment representing hundreds of manufacturers. For more than 26 years, BSW has supplied broadcasters and other audio professionals with quality equipment at low prices. The company offers guaranteed-best pricing, same-day shipping, extended hours, trained sales professionals with realworld broadcast and engineering experience and flexible credit terms. From the newest digital audio editing equipment to the tiniest lavalier microphone, you'll find it at BSW. For a free

176-page catalog, call the company's toll-free number or visit its website. 800-426-8434; fax 253-565-8114; www.bswusa.com; info@bswusa.com

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Broadcast mic Soundelux

R-1: Features a large-diaphragm condenser and produces recording studio audio quality as well as a 1-inch diaphragm transformerless FET and gold-on-Mylar diaphragm. The high SPL capability (138dB), high sensitivity (20mV/Pa), low self-noise (9dB"A"), low power consumption (1.31mA) and internal windscreen are packaged in a rugged, allmetal design.

323-603-3228 fax 323-603-3245

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Acoustic ceiling Acoustical Solutions



Sonex Contour Ceiling Tile: The line is completely fiber free and carries a Class 1 rating. Standard finish is a hypalon coating in white, gray or almond. Tiles are 2'×2' in size with an overall thickness of 23/8 inches. All styles have a 5/8-inch thick backerboard and are manufactured with a beveled edge.

800-782-5742 fax 804-346-8808

www.acousticalsolutions.com info@acousticulsolutions.com

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Internation Akoo. K tug use to a

Internet audio accessory
Akoo.com

kima: Allows users to wirelessly send audio signals from their PCs to any stereo or radio within 1,000 feet. Kima's base unit connects to the PC; the receiving unit is placed up to 10 feet from the stereo. The user tunes in to 88.3 FM on the stereo to access Internet radio, MP3 files and any Internet audio from the computer

anywhere in the home, office or outdoors.

708-583-9600; fax 708-583-1122; www.akoo.com; info@akoo.com Circle (351) on Free Info Card or go to www.beradio.com

PRODUCT SOURCE

Thirty-one-band EQ

Applied Research & Technology



352 EQ: Features constant Q circuitry, 70mm center-detent sliders with selectable boost or cut range

of 6dB or 12dB, balanced XLR, ½ inch and unbalanced RCA input and output connections, high- and low-pass filters, analog level metering, variable input controls, signal clip level indicators, ground lift switch, internal power supply and selectable line voltage. The all-steel chassis is 2RU and is intended for installation in standard 19-inch equipment racks.

716-436-2720; fax 716-436-3942; www.artroch.com; cserve@artroch.com Circle (355) on Free Info Card or go to www.beradio.com

Audio management system Computer Concepts

EpiCenter: Accepts all audio formats and reroutes them in real time, in digital or analog, to any location. Less space is required for rack configurations. Simultaneously records, encodes/decodes, stores and plays back hundreds of audio events. Allows you to manage operations over multiple locations. Configurable to accommodate operations of any size.

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Digital console Auditronics NuStar 4.0: Features more digital

tures more digital power as well as a digitally controlled engine that stations set up in the equipment room. Engine components are hot-swappable, and up to 256 stereo sources are possible. Includes four stereo program buses and four internal mix minus buses. Each

and four internal mix-minus buses. Each of the console surface's modules has a rotary encoder with eight-character alpha display that can select any of the remote sources, up to 256, for maximum flexibility. The console's centralized wiring has insulation displacement DB-25 connections to ensure that installation and prewiring are smooth.

252-638-7000; fax 252-637-1285

www.auditronics.com; sales@wheatstone.com Circle (366) on Free Info Card or go to www.beradio.com

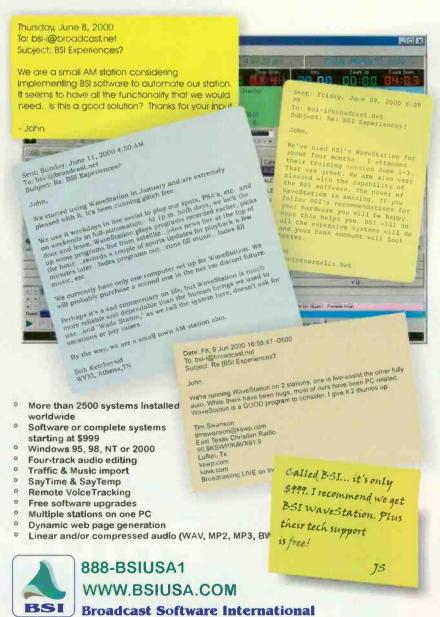
RF hazard calculator V-Soft

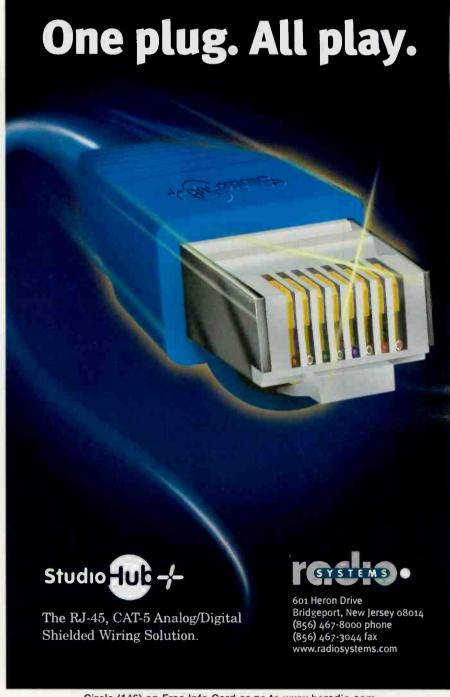
RFHaz: This Windows application takes the work out of calculating radiation levels. Predicts the percentage of the maximum standard nonionizing radiation levels found near FM transmitting antennas for various powers, antenna types and heights. Provides a button for controlled or uncontrolled environments. Computes power densities and percentages of the FCC's maximum for the frequencies in use. Developed in consultation with the FCC.

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One Question, Three Answers

An actual email thread, June 8-11, 2000 on broadcast.net





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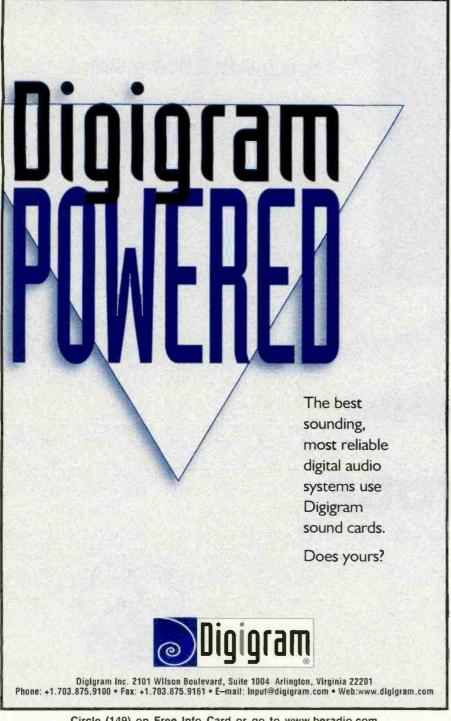
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Circle (148) on Free Info Card or go to www.beradio.com





MC-16 Mega-Coupler: Offers 32 programs, 32 ASCII strings (DTMF to ASCII), 64 macros, 16 relays, balanced inputs and output, auto answer (20 rings maximum), and four-digit access codes. Programming is done with a nondedicated computer. Screw terminals are removable. Unit is 1RU and includes a host of additional features.

877-250-5575; fax 360-428-6719 www.broadcasttools.com;bti@broadcasttools.com Circle (373) on Free Info Card or go to www.beradio.com

Portable spectrum analyzer **AVCOM of Virginia**



PSA-86A: Features a choice of frequency coverage, amplitude and frequency accuracy, and high sensitivity (-95dBm). Includes AVCOM's microprocessor frequency control technology, attractive multifunction backlit LCD and auto-

matic Digital Frequency Lock (DFL). Covers a frequency range from 5GHz to 7GHz in typical spans of 1000MHz, in accordance with the option selected and customer specification. Option 001 covers the frequency range 5.5GHz to 6.5GHz for economic analysis of satellite C-Band uplink frequencies. The model PSA-86C with option 002 covers the 5.1GHz to 6.1GHz band for point-to-point data communication links.

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Np Runtime enhancement Digigram

Linux Driver: Np runtime now includes a Linux driver for selected Digigram sound cards, making these cards available for Linux-based application development. Digigram's np Runtime, which includes device drivers and installation routines, supports Red Hat Linux distribution 6.1. Using the lowlevel PCX Designer Kit software development environment, applications can be written for the Digigram PCX820np and PCX821np sound cards. These professional sound cards offer DSPbased audio processing, such as MPEG coding, time-stretch and time-shrink, and conversions that will be fully available to Linux programs written to the cards. PCX Designer Kit is an application programming interface that provides access to low-level driver functions using C/C++. In addition to Linux, PCX Designer Kit can be used to develop applications for Windows.

703-875-9100; fax 703-875-9161 www.digigram.com input@digigram.com Circle (245) on Free Info Card

Live assist and radio automation **Mediatron GmbH**

MediaStation: Designed for small- to mid-sized market stations. Has integrated Mediatron plug-in technology. Until this release, the plug-in technology was only in use in the AirControl NT system developed by the company for bigger radio stations. Runs with the company's plug-in technology under the 32-bit desktop operation system Windows NT 4.0 or Windows 2000 Professional. Features intuitive handling so special training is not required. An optional user interface is available to make operation even simpler. Can also be used in connection with the Internet, digital radio stations and the multimedia services connected with them, such as PAD program associated data simply by installing the corresponding Mediatron WebShow or DAB plug-in module.

> +44-49-8131-8305-0 fax +44-49-8131-8305-25 www.mediatron.com info@mediatron.com Circle (280) on Free Info Card

Mic pre-amp, mixer and converter **Crane Song**

Spider: A high-quality, eight channel mic-preamplifier mixer with two types of digital outputs: stereo and eight channel. The stereo output is for recording engineers who do



live stereo or multichannel recording and want a flexible audio path. The eightchannel output allows the system to function as an analog front-end for DAWs, digital mixers and modular recorders.

715-398-3627; fax 715-398-3279 www.cranesong.com; staff@cranesong.com Circle (237) on Free Info Card or go to www.beradio.com

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Standard features:

Dual-channel programmable analogue and digital signal generators Real-time dual-channel multi-functional, programmable precision voltmeter. Dual-channel sweep analyzer. Automatic limit checking.

Scriptable FFT-based measurement de ectors:

Multiple readings of different quantities combe diployed simultaneousle. A range of standard measurements is provided plus the means a customize readings with VB script procedures and user-defined weighting filters.

Dual-channel digital 'scope and measurement trace display:

Prace types include audio wereform, arcio pe tram (FFI), time domair analyzer function (e.g. distartion waveform function reading (e.g. distartion) spectrum, jiller spectrum, sweep results, sto ed traces & .imst curves. Trace cursors and markers are available.

Digital interface measurements:

Fs (source) and data (intersembol) jitter, carrier amplitude, eye narrowing, phase, eye diagram display. Digital outputs may be degraded with a range of lass mechanisms to test receiver performance.

Visual Basic Scripting (VB Script). Setup

snapshots including the desitop layout and scripts (sest procedures) can be stored on disk.

Measurement procedures can be invoced from within MS-Access or MS-Word for automated generation of test reports & results detapass.

Key Specifications:

Anolog Input, residual THD-n -108dE (or Iful scale input, unweighted) FFT analyzer, residual THD-n -140dB (15 input, while TPDF dither at source) Time domain analyzer residual THD+# -120dE (15 input, unweighted) Analog input signal range Croise - mcx 11. u/rms to 159Vrms balanced input

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A B Live Scope trace

B Live FFT trace

B Live FFT trace

A Live TD Analyser 25.**0**2 dBu Channel A Channel B -81:44 dB **用日页页时间** 12.68 degrees Normal audio n Copyright asse -3.00 • Page S Page 2 | Page 3 | Page 4 | P

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sales@prismsounc.com

Prism Media Products Inc. 21 Pine Street, Rockawey_NJ. 07866, USA.

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Rewritable CD-RW discs HHB Communications

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ISDN codec/POTS extender

AEQ

TLE-02D: Offers three units in one audio codec. With a terminal adapter, it establishes high-quality connections on ISDN lines with low delay codings. Functions as a digital hybrid, with echo suppression and



frequency extender, for use on analog telephone lines. Also serves as a portable mixer, with returns, headphone am-

plifiers and four wire (I/O) connection to use on dedicated circuits and radiolinks. Includes double system power supply through standard dry cells or external transformer. Two microphone inputs and one mic/line, with level controls; two headphones outputs, with independent level control and monitor signal selector.

+34 91 686 13000; fax +34 91 686 44 92

www.aeq.es; aeqsales@aeq.cs

Circle (348) on Free Info Card or go to www.beradio.com

PRODUCT SO



Balanced power system Equi=Tech

Wall Cabinet Power System: The system has undergone a major redesign and upgrade. The unit has a greatly improved transformer design that was recently developed by the company's engineers as well as increased circuit capacity and more flexibility. Features distribution for up to 10 branch circuits with filtered outputs, surge and GFCI protection. Can be configured and adapted to most hardwired technical power-distribution systems. Designed for easy installation. Factory prewired and ETL ap-

proved for a safe installation and the approval of electrical contractors.

541-597-4448; fax 541-597-4099 www.equitech.com; mg@equitech.com Circle (253) on Free Info Card or go to www.beradio.com

Audio logging system MediaTouch Systems

iMediaLogger: Uses the M Audio Delta 44 audio card, which provides four balanced cr unbalanced audio channels of up to 24-bit/96kHz audio at either +4db, consumer, or -10db signal levels. Multiple Delta 44 audio cards can be used in a single PC, providing up to 16 audio recording and playback channels.

888-665-0501; fax 204-783-5805 www.mediatouch.net mt@omt.net Circle (279) on Free Info Card or go to www.beradio.com

Converters and distribution amps RDL (Radio Design Labs)

Digital audio interfaces: This family of eight devices handles tasks for digital uses and covers S/PDIF and AES-3 applications for D/A converters, distribution amplifiers, program selectors and format converters. All of the units include RDL's Sure-Lok circuitry to reinitiate the digital clock before passing any signal.

800-281-2683; fax 805-684-9316 www.rdinet.com

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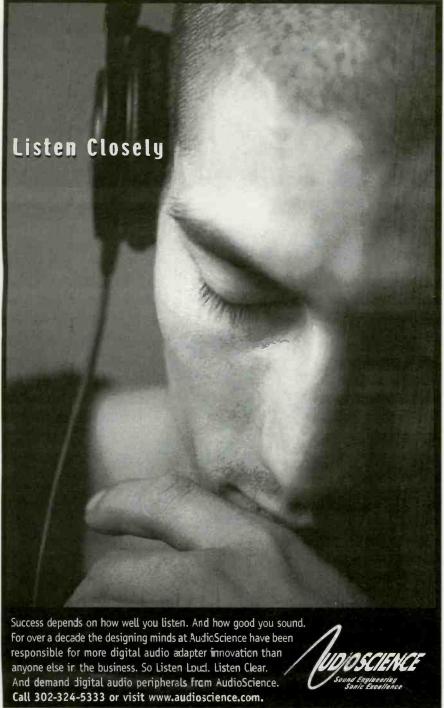
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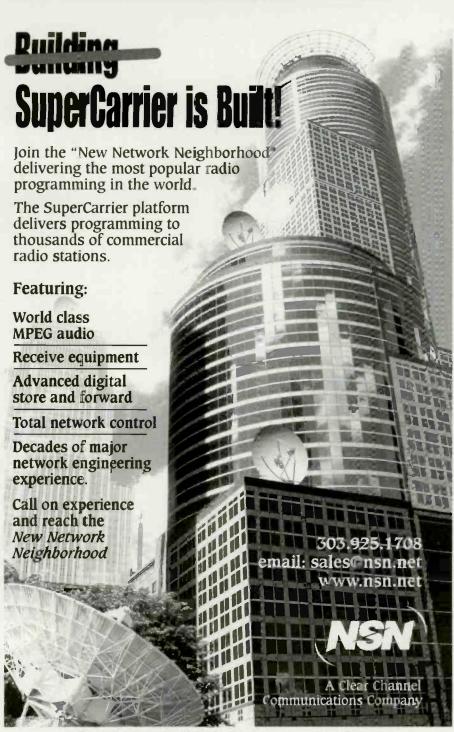
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IP2com, IP2port:
The IP2port allows for remote equipment management from any location via TCP/IP. Includes a comprehensive set of serial and

logic interfaces and the powerful IP2 operating system. Uses familiar Web tools to manage and control devices remotely from any network connection. Ideal for remote management of radio transmission sites. The IP2com gateway link enables supervision, remote control, remote maintenance, remote operations and other functions. Converts all V24 - RS-232 signals to TCP/IP protocol and makes your devices accessible on any LAN, WAN or Internet. Allows you to incorporate a Web server directly into your own equipment, which the product makes accessible using any Internet browser.

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www.aztec-radiomedia.com; contact@aztec-radiomedia.com

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Mic pre-amp Shure

FP23: A battery-powered mic preamp suited for on-location recording or broadcast environments. Nearly 20dB quieter than the FP11. Offers 24 hours of operating life with two AA batteries. All-metal construction, special filtering and transformer isolation. Delivers excellent resistance to outside RF interference and features easyto-use controls, including a selectable low-frequency roll-off. Offers a maximum of 66dB of gain, adjustable in 11 discrete steps for accurate, repeatable gain settings as well as premium quality input and output transformers that provide superior sonic quality and freedom from interference.

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Encoder/decoder Armstrong Transmitter

DTX/DRX 4: Four-channel STL digital encoder/decoder designed to provide a cleaner sound and greater immunity to interference. Delivers a clean signal with an S/N of just 30dB on the demodulated baseband signal or with a signal level at the antenna of up to 20dB lower than the operating threshold acceptable for an analog STL.

315-673-1269; fax 315-673-9972
www.armstrongtx.com
sales@armstrongtx.com
Circle (356) on Free Info Card
or go to www.beradio.com

Digital power meter Bird Electronic



Model 5000 Thruline: A handheld directional RF power meter combining a digital display with the ability to accurately measure power in analog and digital RF systems. Its compact size, rugged construction and rechargeable NiMH battery make it ideal for use in the field. Features backlit digital display, simple menu commands and five dedicated speed keys. Provides average, true average or peak measurements of 0.1W to 10,000W with ±5 percent accuracy, and automatically calculates VSWR, return loss and match efficiency.

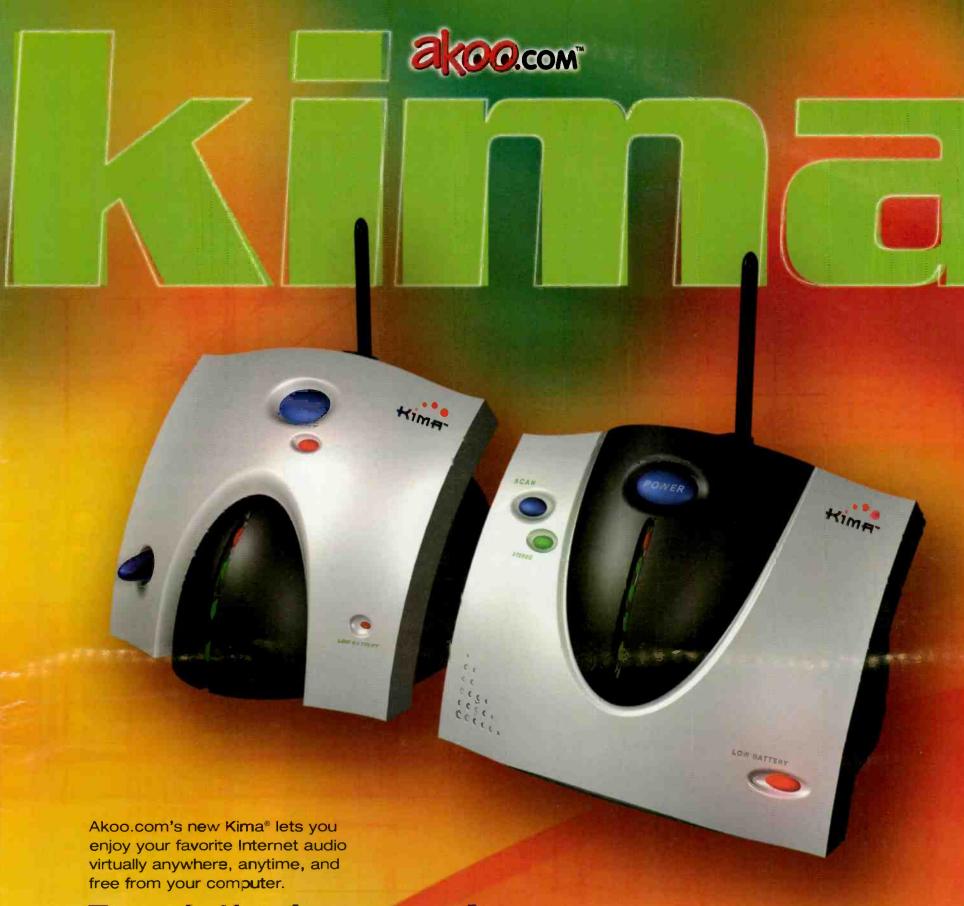
440-248-1200; fax 440-248-5426
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Time-insertion processor Prime Image



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408-867-6519; fax 408-926-7294
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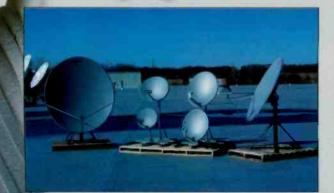
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Satellite Export & **Engineering**

Offset Antennas: Patriot will team up with Triax to jointly manufacture Offset Antennas with convenient fold-down adjustable feed arms with 60cm, 76cm, 90cm and 1.1m sizes. The two will also manufacture the new Elliptical Offset Antennas, in sizes of 45cm

and 60cm as well as the upcoming 75cm version. Each Elliptical Antenna offers a triple-feed system with the ability to skew the reflector to work anywhere in North or South America. They can be assembled in minutes with minimal hardware.

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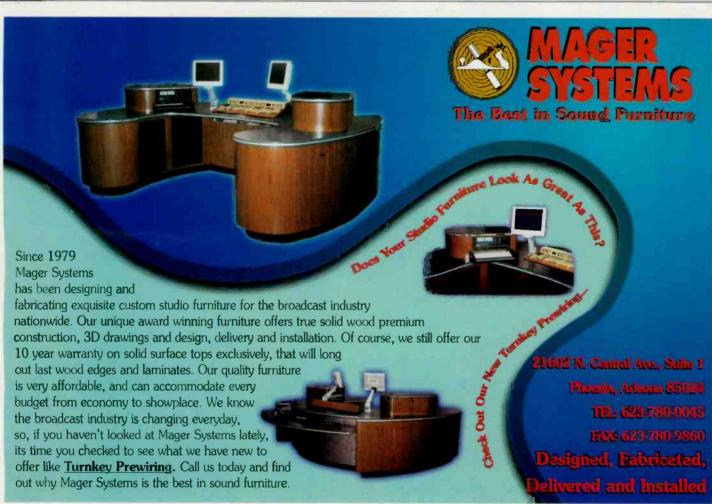


Cool Edit 2000 accessory: A professional yet affordable audio recording and editing application for Windows 9x, NT and 2000. Allows Cool Edit users to apply a subtle or extreme frequency bias with the 10-, 20- or 30-band graphic equalizer. Boost or cut up to five bands with adjustable widths and center frequencies with the parametric equalizer. Take out a hum or tone with the notch filter. Apply low-pass, high-pass and other

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Broadcast

Sirius Satellite Radio recently completed a revolutionary digital satellite radio system that broadcasts up to 100 channels of programming, including 50 channels of commercial-free music, to subscribing motorists throughout the continental United States. The Sirius Satellite Radio system is one of the largest completely digital

audio storage systems in the world. The system's massive digital storage capacity of 3.5 TB (terabytes) utilizes HP's fiber channel technology, Xeon CPU's, high-speed SCSI drive arrays and more than 160 Pentium II 450 industrial rackmount workstations. The architecture provides for complete fault tolerance and high performance response. The system uses a unique four play, one record card with synchronization to interface with a digital 512x512 AES router. There are no analog signals in the NexGen Digital system, either audio or contact closures. All audio is AES digital and all contacts are embedded in the AES stream using AES3-18 specifications.



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Crown transmitters are stand alone low power units and can be configured with optional stereo generator and audio processor. Thousands of broadcasters around the world have come to appreciate the rugged, reliability of the Crown Broadcast line of transmitters.

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station equipment and sensing of news feeds and

PCI broadcast audio adapter **AudioScience**

ASI4336: Features multistream MPEG audio record/playback. GPIO and an RS-422 serial input. The GPIO comprises eight relay outputs and 16 optoisolated inputs. These enable the control of

other events. Using the WaveX extensions to its Windows multimedia drivers, the GPIO may be accessed using standard Windows mixer calls. The unit's RS-422 serial input supports the direct input of a satellite receiver MPEG bitstream, which can be recorded as a standard WAVE or BWF file for later playback. Removes the MPEG transcode and A/D conversion process that typically occurs when recording network satellite feeds

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troto NEARFIELD MONITOR



E R **EXPECTATIONS**

The Proto-J compact playback monitor packs a tremendous amount of quality and features into a small package. The extended low frequency response, controlled dispersion and dynamic character of Proto-J make it ideally suited for 5.1 format project studios. The system employs a durable 6.5" mid/bass driver and a new 3/4" high frequency, smartly housed in a front ported reflex enclosure. Each cabinet employs integral threaded inserts (Omni 50 Series Spacing) on the rear of the cabinet for ease of installation and surround system alignment. Best of all-they're truly affordable!

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PRODUCT SOL



Eight-track recorder/ player TASCAM/ **Teac Professional**

DA-78HR: A 24-bit format DTRS recorder, the unit can record eight tracks, up to one hour and 48min, on a standard Hi-8 tape. Fully compatible with all existing DTRS machines. Can be locked with

other generations of DTRS machines. Able to play 16- or 24-bit tapes. I/O for word clock, SMPTE and MIDI. A read-before-write method allows for internal mix-down. Mix can also be routed to S/PDIF outputs.

> 323-726-0303; fax 323-727-7635 www.tascam.com; tascamlit@tascam.com Circle (323) on Free Info Card or go to www.beradio.com

Facility support Spacewise Broadcast **Furniture**

Studio Furniture: Spacewise offers a variety of furniture products to suit the needs of its customers. The company has moved to Phoenix, which will allow it to provide its customers with several advantages. These include new, large production facilities, a more central location for product distribution and growth into allied fields. Additionally, the company will now be able to accept the largest of orders and meet the production schedules recuired for its customers.

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High-resolution DAW SADIE



artemis: Capable of 192kHz editing and mixing, it can be configured to provide up to 24 inputs and outputs.

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Digital on-air console Studer



On-Air 2000: The centerand channel-section touchscreens and the patented tactile encoders together allow easy acces to all console functions for routing and signal processing. Various levels of user access can be assigned. Accepts analog or digital inputs. Available in 6-, 12-, 18- or 24 input chan-

ne.s. Analog and digital outputs. The console can be fully integrated with with automation systems to send and receive commands.

510-297-2711; fax 510-297-2785

www.studer.ch; studer.sales@harman.com Circle (318) on Free Info Card cr go to www.beradio.com

Solid-state palm recorder Nagra

ARES-P: Designed for single-handed operation, with dimensions of 7.4×3.15×1.1 inches. Records three hours and 15min in stereo at 128kb/s (192MB card). Battery life is four hours, and it takes five AA alkaline batteries. 20-bit Sigma-Delta A/D and D/A conversion. 16-, 24-, 32-, 48kHz sampling frequencies. Uses PCMCIA Flash RAM type I and II recording media. Recording mode is digital compression: G.722, MFEG Layer II. Mic, mono and stereo, phantom, ALC and sensitivity-selectable inputs. Frequency response is 30Hz to 20l.Hz. Has a dynam.c range of 80dB. Options include plug-in Electret mono omnidirectional and stereo cardioid mics, an external mic and line-input



cables, and line output cable and ARES NT/95 software. Weighs 1 lb.

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Audio-Technica AT4047/SV Chosen as Announcer's Mic for The Cleveland Orchestra Radio Broadcast

The Cleveland Orchestra radio broadcast on Cleveland's classical music station WCLV (the anchor for a 255-station network which carries the broadcasts nationwide) has been a once-a-week tradition for the last 35 years. WCLV President Robert Conrad has announced the weekly event since its inception, and holds the distinction of being on-air commentator for a regularly-scheduled national orchestral broadcast longer than anyone in American broadcasting history. Conrad is now relying on the AT4047/SV large-diaphragm cardioid capacitor microphone as his announce mic for the broadcast.

"The AT4047 brings a certain presence to my voice that no other microphone has been able to do," says Conrad. "There is a wonderful brightness to the top end, while still warm and comfortable — not harsh or brash — and the low-frequency response is just as nice. Everyone likes the way it sounds, including my engineer and audio supervisor for The Cleveland Orchestra, Bruce Gigax, who originally suggested the microphone."

Conrad and Gigax use the AT4047/SV both on location at Cleveland's Severance Hall and at Audio Recording, a facility where much of the Orchestra's post-production work is done, and where Conrad voice tracks the orchestra commentary for concerts he misses when out of town. "This gives us seamless continuity and total consistency," concludes Conrad.

WCLV President Robert Conrad



AT4033a Microphone Continues to Gain Popularity Among Broadcasters



On-air studio of WKSU in Kent, Ohio

Professional broadcasters around the country have been equipping their facilities with Audio-Technica's AT4033a cardioid capacitor microphone for on-air vocals. Originally introduced for the professional recording studio and live sound markets, the AT4033a was designed for use in the most demanding applications. Because of its low-noise and symmetrical, transformerless electronics, the AT4033a produces clean output signals and exceptional transient response with a dynamic range of 128 dB. In addition, a switchable 80 Hz hi-pass filter and 10 dB pad reduce sensitivity to "pops" in close on-air vocal use, regardless of the announcer's microphone technique.

When WKSU, of Kent, Ohio, the largest and most listened to National Public Radio (NPR) affiliate in the state, revamped their studios, they purchased 11 Audio-Technica AT4033a's for on-air vocals. Ron Bartlebaugh, Director of Engineering at WKSU comments on their purchasing decision: "In the process of updating WKSU's studios, we researched various microphones on the market, with the goal of equipping every studio with the same microphone to assure consistency. After careful evaluation, we chose the AT4033a because of its vocal integrity and lack of proximity effect. The microphone has a very clean and natural sound. We also wanted to make sure all of our announcers 'shined through' and the AT4033a's definitely contribute to the station's overall sound. We're very pleased."



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BERALIO

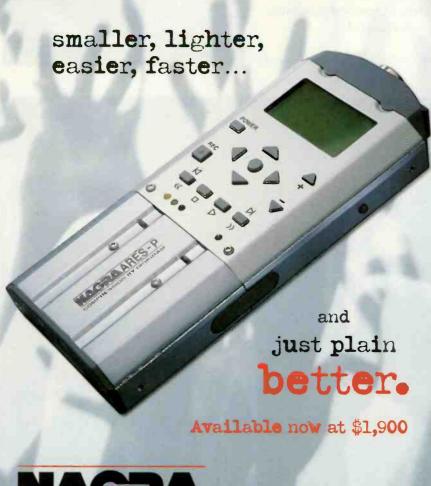
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outlets distributed between two 20amp circuits. Connection is via ³/₄-inch conduit and a Furman PGP-S 60 Amp Remote Power Switcher, or any usersupplied junction box. Twelve PlugLock brackets (eight with the PGP-20) are supplied with the unit. Additional sets of six brackets are available.

707-763-1010; fax 707-763-1310
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Virtual crosspoint audio router *Philips*

PRODUCT SOU

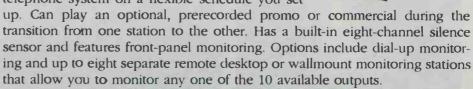
Dune: The first commercially available ATM-based audio router for the broadcast industry. Its ATM architecture offers high-bandwidth connectivity for digital and analog signals in very large audio distribution systems. Allows customers to build a robust, secure infrastructure for the most demanding professional audio applications. ATM switching technology offers reliability and high switching capacity.

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MOH-1000 interface Strategic I.T. Solutions MarketMinder 32:

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ly rotating the station being fed to the telephone system on a flexible schedule you set



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Audio-card accessories Ward-Beck



8200 Series Additions: Has four new additions to the card-frame platform. All four new cards operate from

22kHz to 96kHz sampling rates and offer 20- or 24-bit resolution. The D8205 (shown) is an adjustable-gain distribution amplifier with built-in sample-rate converter. The D8206 is a digital audio reference signal generator able to

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Rackmount computer accessories Middle Atlantic Products

RM-MM and RM-CPU-ATX: Model RM-MM monitor rackmount measures 19 inches wide by 15³/₄ inches high. Includes integral rolled-steel rack handles, an access door for

monitor controls and four adjustable crossbars that secure the monitor in place. Model RM-CPU-ATX is tapped for the company's optional rack slides. Includes a 300W, UL-listed ATX power supply. Front-panel features include a hard-drive bay capable of housing a trio of disk drives behind a latching front door, a removable front grill for filter replacement, a reset switch and LED power/HDD indicators.

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

Circle (282) on Free Info Card or go to www.beradio.com

PRODUCT SOURCE



Turntables

Denon Electronics

DP-DJ150 and 100: Two new quartz synthesized direct drive turntables. The DP-DJ 150 is equipped with an S/PDIF coaxial digital output, which enables direct recording to a digital storage medium (MD, CD-R, DAT, hard disk) while

preserving the highest sound quality. Features Denon's unique key adjust: When line out is selected, the turntable incorporates a built-in DSP to maintain a constant key even when rotation speed is altered. Built-in equalizer permits it to be connected directly to an amplifier, sampler, MD recorder or other device that does not have a phono input jack. The DP-DJ100 uses a bi-directional servo control direct drive motor with single-body construction to deliver a startup torque of 12.25 pounds per inch.

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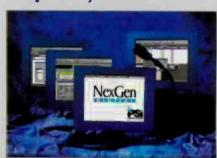






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CD-ripping software Prophet Systems



CD/Extractor Family: The CD/Extractor software has been expanded to three versions: NGD, CFS and Pro. CD/Extractor NGD is for use with the NexGen systems, CD/Extractor CFS is for AudioWizrd system users, and CD/Extractor Pro is a stand-alone version. All three CD/Extractor versions can automatically gather Internet information on the album or song. All three are certified by CDDB, the online audio CD information database.

800-658-4403; fax 308-284-4181

www.prophetsys.com sales@prophetsys.com Circle (297) on Free Info Card or go to www.beradio.com



Pre-built Transmitter Sites

Solid-State Transmitters

Single-Tube Transmitters

Low Power Transmitters

RF Amplifiers

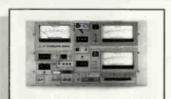
FM Exciters

Digital T1 STL Systems

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Modulation Monitors



Digital STL / TSL Systems



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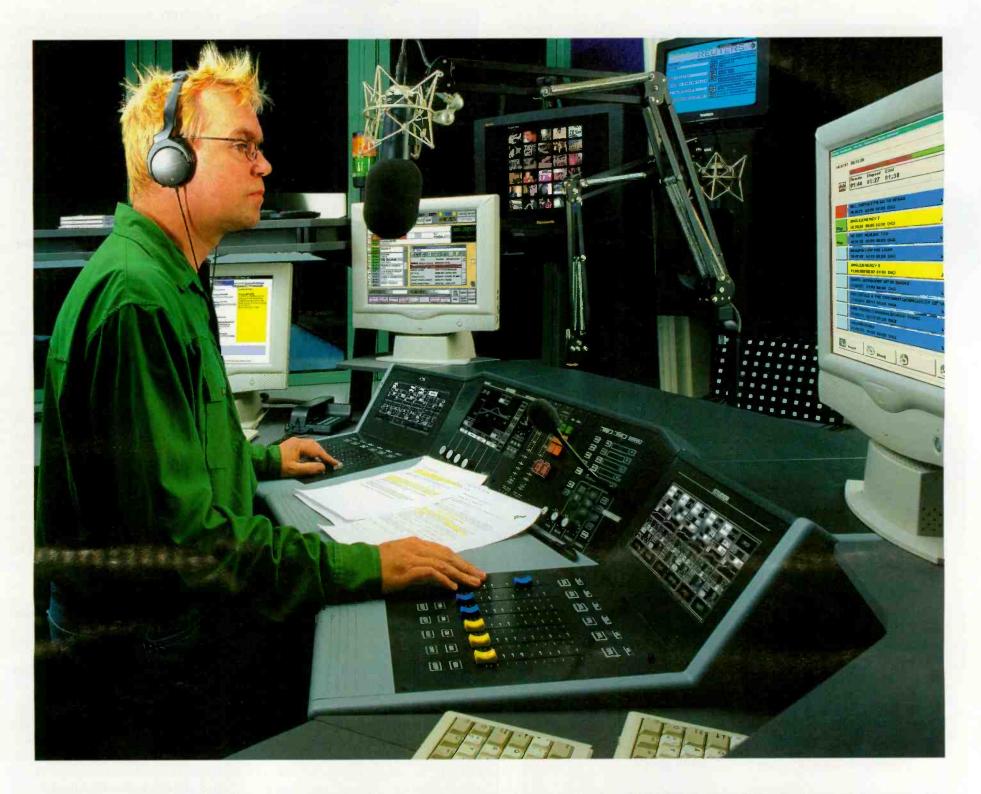
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Circle (208) on Free Info Card or go to www.beradio.com

Broadcast Solutions



The Studer On-Air 2000 Digital Continuity Console offers a unique and intuitive user interface via touch screens (Touch'n'action concept). Due to its modular audio interfacing and a wide range of options and configurations the On-Air 2000 may be adapted to any radio stations needs. The new released version 3 software features up to six cleanfeeds, assignable master faders and a comprehensive interface for integrating with CAB systems.

The combined system of Studer DigiMedia and On-Air 2000 is the perfect solution for computer assisted broadcasting.

The new **Studer DigiMedia Pro CAB System** (Computer Assisted Broadcasting) provides powerful features for the complex requirements of a competitive radio station: Drag&Drop for title and jingle insertion, remote control over LAN or telephone line, integration of industrial standard audio editors and control of digital mixing consoles. Enhanced functionality for RDBS and internet publishing. The open architecture allows for easy interfacing of DigiMedia with all major scheduling software. Newsroom systems may be integrated using the DigiMedia database replicator.



H A Harman International Company

Studer Professional Audio AG, Althardstrasse 30, CH-8105 Regensdorf-Zurich Switzerland, Tel. +41 1 870 75 11, Fax: +41 1 870 71 34

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Canada: +1 416 510 13 47, Japan: +81 3 34 65 22 11, Singapore: +65 225 51 15, USA: +1 510 297 27 11

http://www.studer.ch

Audio processor Broadcast Technology



TXL-210: Designed to meet the new demands placed upon today's audio

chain. Useful in applications such as limiting the audio into a digital production workstation, STL preprocessing, satellite uplink processing or SCA processing. Switch-selectable pre-emphasis and de-emphasis allow the unit to be used directly as an AM-NRSC or FM onair processor. Designed to control any kind of energy. When installed in your air chain or production facility, it will produce the control of audio level your desire and be virtually undetectable. Has independent left and right input and output controls. Other features include a mono output and phase rotation in the control circuits for optimum voice level control. Comes in a single-channel version, which includes a mic input and output.

858-451-1350; fax 858-451-6589 www.buftek.com; info@buftek.com Circle (372) on Free Info Card or go to www.beradio.com

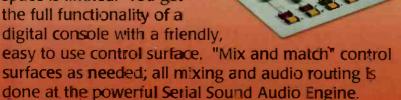
True Digital Performance



Logitek ROC-10 and ROC-5 Consoles Give You All The Flexibility You Need

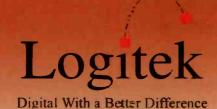
- True DSP-based digital mixing and routing
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- Fully assignable faders allow you to control multiple sources, save valuable space
- Attractive low-profile design maximizes studio visibility

ROC consoles are ideal for applications where studio space is limited. You get the full functionality of a digital console with a friendly, easy to use control surface. "Mix and match" control



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5622 Edgemocr Houston, TX 77081 800.231.5870 (North America) tel: 713.664.4470 lax: 713.664.4479

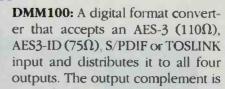


Visit us at www.logitekaudio.com

Circle (209) on Free Into Card or go to www.beradio.com

PRODUCT SOUR

Digital signal converter ATI



the same as the input section. All connections are transformer coupled and floating for maximum isolation and ground loop elimination. All outputs are digitally reshaped. The front panel has a power switch, power indicator and signal pres-

ence indicator. As part of the Nanoamp series, the unit can be rackmounted with other units or used as a stand-alone. The DMM100-BAT offers the same features but can be powered by four AA batteries.

800-959-0307; fax 215-443-0394; www.atiguys.com; sam@atiguys.com Circle (358) on Free Info Card or go to www.beradlo.com

Mic pre-amp **Aphex Systems**



1100: Offers the lowest noise possible and uses 24bit, 96kHz digital outputs and Aphex's exclusive MicLim protection circuit. On this circuit, 20dB of headroom makes overloading the pre-amp virtually impossible. A low-frequency cancellation filter is tunable in 11 steps, from 30Hz to 195Hz. The digital conversion will be at the highest possible resolution without overload because the A/D converter is scaled to clip at the same point as the mic pre-amp. Delivers an EIN specification of -135dB. AES-3 audio output is standard. Clock synchronization options allow locking to standard word clock and to AES-3 clock received via back-panel BNC input. The internal clock can be set at 44.1-, 48- or 96kHz sample rates. When set for external clock reference, the BNC input jack directly links to the BNC output for easy daisy chaining of multiple 1100s.

818-767-2929; fax 818-767-2641; www.aphexsys.com; sales@aphex.com Circle (354) on Free Info Card or go to www.beradlo.com

Automated off-air skimmer Weisinger Engineering Services

AM/FM Skimmer receiver: Designed to monitor the station for hours on end by sampling and recording a few seconds of programming every two or three minutes. Record and sample times can be changed any time. When not in skimmer mode, the receiver can be used as a standard AM/FM cassette recorder. For remote starts, a simple 24-hour AC timer will start the skimmer overnight (or for whatever start time is desired).

330-626-2469; fax 330-626-2469 wwes.hypermart.net wwes@juno.com Circle (339) on Free Info Card

or go to www.beradio.com

Handheld analyzer/generator **Prism Media Products**

DSA-1 Portable Analyzer: A handheld AES-3 signal analyzer and generator. It is a battery-powered instrument for electrical, timing and data analysis of digital audio signals. These factors are vital in establishing reliable interconnection operating margins. The latest version 2.0 software features a versatile signal generator and a host of extended analysis and logging functions. Software upgrades are easily user-installed via a simple serial download to flash memory

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

www.prismsound.com sales@prismsound.com Circle (295) on Free Info Card or go to www.beradio.com

Power conditioning system Staco Energy Products



Trolgard: Conditioning module is enclosed in a 19-inch, 2RU enclosure and operates as

a full-time, stand-alone

power conditioner providing regulated output voltage and frequency, harmonic filtration, plus sag, surge, electrical noise and brownout protection. Equipped with two ports for remote communications. If an application requires blackout protection, the addition of an optional battery pack and the rear panel selection of UPS operating mode converts the unit into a full-featured UPS. A simple factory modification provides frequency-conversion capabilities in either the power conditioner or UPS operating modes. Available in 1kVA to 3kVA ratings, 120V or 240V.

937-253-1191; fax 937-253-1723 stacoenergy.com; sales@stacoenergy.com Circle (316) on Free Info Card or go to www.beradio.com

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Audio tester TerraSonde



The Audio Toolbox Rack-mount: Based on the original Audio Toolbox, this multifunction audio test and acoustic-analysis device combines more than 30 functions in one 2RU unit. Includes time-code generator/

analyzer, RTA, SPL, signal generator, sample scope, impedance meter, THD, sweeps, memories, speaker/mic polarity tester, MIDI, and more. Power is selectable for 90V to 120V or 220V to 240V. All connections are on the front panel. Includes PC and Mac interface cables. Rechargeable battery system is optional. Software version 2.16 supports uploading of up to 40 data memories.

888-433-2821; fax 303-545-6066

www.terrasonde.com; info@terrasonde.com

Circle (329) on Free Info Card or go to www.beradio.com

PRODUCT SOURCE

Side-mounted circularly polarized FM antennas *Dielectric*

DCR-L: Rated at 500W to 1kW (depending on the feed system) per bay input

per bay input power, with a maxi m u m

input power of 4kW. Designed as an inexpensive alternative for applications such as Class A stations, repeaters and translator sites as well as remote site applications where a nonpressurized antenna is needed.

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

Circle (244) on Free Info Card or go to www.beradio.com

Digital audio recorder Henry Engineering



DigiStor II: A solid-state device that can store up to 16min of audio with a bandwidth of 6.5kHz. Supports multiple play modes and features full remote-control capability, an EOM tally output and an automatic phone coupler.

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

info@henryeng.com
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or go to www.beradlo.com

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Desktop List Price \$780.00



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JK Audio Remote Broadcast Gear

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Circle (210) on Free Info Card or go to www.beradio.com

CD duplicator MediaFORM

CD-5400L: A manual stand-alone CD-R duplication system whose advanced features allow duplication of up to four CDs simultaneously, each in less than 7min. One-button operation makes the unit simple to use while duplicating all current CD formats, from an original (master), from a locally stored hard-drive image, or imported from another source. 12×/8× selectable Smart-Drive2 makes for fast and exact image copies. In one hour, the unit is capable of duplicating 34 CDs (min) based on a full 650MB master CD.

800-220-1215; fax 610-458-9554 www.mediaform.com; info@mediaform.com

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Telephone systems Innovative Devices

PROtalk4: Designed by Broadcast Telephone Systems, the unit brings caller handling into the 21st century. Its small footprint and intuitive, backlit control panel are at home in any studio. Independent digital hybrid technology and automatic level balancing ensure a consistent sound.

888-890-7424; fax 250-260-2871

www.innovadev.com
info@innovadev.com
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or go to www.beradlo.com



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Con/Air Switcher eliminates delay from headphone monitor monitor audio can be Individually tailored immediate warning on air signal failure air signal is not altered in any way optional rack mount panel available

Telephone Announcement System

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Circle (211) on Free Info Card or go to www.beradio.com

Internet automation system Broadcast Electronics

WebVault: An Internet audio studio system for the collection, organization and broadcast of professional audio over the Internet. Offers AV Air, AV Sat, AV Production and AV Schedule as well as additional traffic and music-scheduling software. Includes AV Web, the newest addition to the software line, which streams data along with the audio to create dynamic HTML presentations.

217-224-9600; fax 217-224-9607
www.bdcast.com; bdcast@bdcast.com
Circle (370) on Free Info Card or go to www.beradio.com

Portable mini-disc recorder Superscope/Marantz



PMD650: Digital editing features let users mark time- and date-stamped tracks and move, divide, combine, erase and title tracks. A 20sec stereo recording (40sec mono) pre-record audio cache ensures solid field recording while en-

abling recording of up to 2sec of audio before the record button is pressed. The TOC is updated before recording to make sure recordings are not lost in case of unexpected loss.

630-820-4800; fax 630-820-8103
www.marantz.com/product/professional
Circle (320) on Free Info Card or go to www.beradio.com

To: The Broadcast Community

From: G. Scott Benton

President

Commercial Communication Associates, Inc.

Dear Friends,

I am pleased to announce the new ownership and management of CCA by Commercial Communication Associates, Inc.

Commercial Communication Associates, Inc. was formed in a concerted effort between myself and a group of private investors. This new company was formed for the purpose of purchasing the assets of CCA Electronics, Inc. The purchase was finalized on the 24th of March 2000.

Commercial Communication Associates, Inc. is in no way affilliated with any other transmitter manufacuring company. We are privately owned and we operate as a stand alone business.

Our new management team was selected to reorganize the company from the ground up. The entire team is comprised of previous CCA employees. Our employees have a combined experience of more than 200 years. I would like to take this opportunity to introduce them to you. Many of you will recognize some of our names from the past.

President- Scott Benton, CFO- Connie Fultz, Dir. of Test- Jerry Meier, Customer Service Manager- Tim Parrott, Materials Manager- Bob Todd, Production Manager- Van Nguyen, I.T. Manager- Irena Posyvaylo Documentation Manager- Alan Ashford, Office Manager- Dorothy Saffels, FM Test Engineer- Lee Langley, AM/SW Test Engineer- Vernon Boyce.

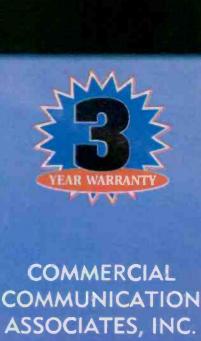
Every member of our team is committed to manufacturing the highest quality products in our industry. We are dedicated to complete customer satisfaction and to operating our business in an honest and ethical manner. We are focused on continuous controlled growth in both our business and product offerings. We will deliver the highest level of customer support in our industry. We will provide our customers the greatest value for their broadcasting dollar.

I wish to personally thank those of you who have been calling with words of congratulations and encouragement. It's great to be back!

Thank you,
G. Scott Benton
President
Commercial Communication Associates, Inc.



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Radio transmitters CCA (Commercial Communication Association) AM and FM Transmitters: In March 20 the Commercial Communication Associates team was formed and was successful

AM and FM Transmitters: In March 2000, the Commercial Communication Associates team was formed and was successful in purchasing CCA Electronics for the purpose of operating the broadcast transmitter manufacturing facility and business. CCA has been manufacturing FM, AM and shortwave broadcast transmitters for more than 35 years. CCA is recognized around world and in the broadcast industry as a leader in the field of broadcast transmitter manufacturing. The name CCA is synonymous with reliability and ruggedness. The company's

high-quality, conservatively rated components and its innovative circuit designs have given Commercial Communication Associates/CCA a solid, time-proven track record.

770-964-3530; fax 770-964-2222; www.cca.ws; info@cca.ws
Circle (231) on Free Info Card or go to www.beradio.com

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Available with gold tuning fork IDC er solder contacts. Made of only 3 pieces—and no set screws—Easycon is the fastest way to terminate a cable with an XLR connector on the market today.



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http://www.kintronic.com
EMAIL: ktl@kintronic.com

Circle (214) on Free Info Card or go to www.beradlo.com

PRODUCT SOURCE



Studio furniture prewiring

Mager Systems

Turnkey Prewiring:
Since 1979, the company has been designing and fabricating exquisite custom studio furniture for the broadcast industry. This award-winning furniture offers true, solidwood premium construction,

3D drawings and design. The company now also offers new turnkey prewiring. The furniture comes with a 10-year warranty on all solid-surface tops. The company provides delivery and installation nationwide.

623-780-0045; fax 623-780-9860

Circle (276) on Free Info Card or go to www.beradlo.com

Digital stereo monitor Genelec Oy



2029B: An XLR, AES-3 24-bit/96kHz version of the 2029A. The monitor supports the same modes of operation, including use in monitoring systems with a Genelec 1091A subwoofer. Ideal for direct connection to online and offline editing systems. Comprised of one right master speaker and one left slave speaker. Stereo level adjustment is controlled by a single volume knob on the right master speaker. Designed to accept either AES digital audio data through an XLR connector mounted into the right master speaker or conventional analog audio inputs.

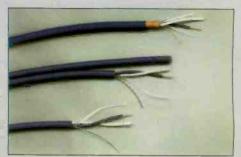
+35 8771 3311; fax +35 8178 12267

www.genelec.com

genelec.usa@genelec.com Circle (256) on Free Info Card or go to www.beradio.com

AES-3 cable Gepco International

5596 series: This AES-3 digital audio cable is designed for extended physical distances and increased data rates. Precision manufactured for 100Ω impedance, it is optimal for 96kHz bandwidth requirements. The low attenuation and jitter specifications also work



well for applications requiring long cable runs at lower sampling frequencies. Available in two versions, the 5596EZ is intended for punchdowns, mass termination, and permanent installations and the 5596M is designed for studio wiring and cable harnesses. Both feature stranded, 24-gauge conductors.

800-966-0069; fax 847-795-8770
www.gepco.com; gepco@gepco.com
Circle (258) on Free Info Card
or go to www.beradio.com

FM exciter SBS

FM10: Features wideband design techniques. Frequency adjustment is easily achieved by internally set direct reading dial switches — no further tuning is required. Uses the SBS ultra linear modulator to provide quality sound reproduction with freedom from overshoots and artifacts. With its effective VSWR foldback system, the unit will operate into any load without damage. Conservatively rated components ensure extremely high reliability and give good efficiency. Available in four versions: mono input with limiter (FM10/M), stereo inputs with encoder and limiters (FM10/S), AES-3 stereo input without limiters (FM10/AESEBU) and a multiplex input (FM10).

352-622-7700; fax 352-622-7000; www.bgsfl.com Circle (307) on Free Info Card or go to www.beradlo.com

Signal transport systems **QSC Audio**



Rave-s: Rave-s (Routing Audio Via Ethernet) models now support operation on switched networks, which allows audio and computer data to be transmitted over the same Ethernet network and gives Rave-linked audio systems the potential to accommodate hundreds of audio channels over a single CAT-5 or fiber optic cable. Switched networks offer several advantag-

es, including the transmission of non-audio data, compatibility with multiple network protocols and expanded channel capacity. Non-audio data can be transmitted on switched networks by creating Virtual LANs (VLANs), which essentially divide a single physical network into multiple virtual LANs.

714-957-7100; fax 714-754-6174 www.qscaudio.com; info@qscaudio.com Circle (299) on Free Info Card or go to www.beradio.com

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www.superscope-marantzpro.com





BERALIO

PRODUCT SOURCE



New options Digital Audio Research

OMR-8: The new Edit Controller option, featuring a smooth, weighted-action rock wheel, provides a set of dedicated function keys to ensure the maximum operational flexibility and speed. It is also designed to enable convenient remote operation of machine-room installed OMR8 systems. Also new are Pro-

Tools compatibility and DSP functionality with Segment-Based four-band parametric EQ. Simply inserting a ProTools disk into the machine opens the files instantly, with no file conversion or translation time required. This enables a project to be continued as a ProTools session. Enables new projects to be started and operated in ProTools mode, while DAR-format projects can also be exported to a ProTools system. Other additions include a CD-mastering facility and new fine-edit function. +44 1372 742848; fax +44 1372 743532

www.dar.uk.com; mail@dar.uk.com Circle (246) on Free Info Card or go to www.beradio.com

Mic processor loemeek

VC-3Q: This 1U half-rackmounting unit features a microphone preamplifier, the Joemeek compressor and the Joemeek Meequalizer EQ. The front end is a new design that uses five complete stages of amplification controlled by a single volume control. The design gives (microphone) input headroom of more than 30dB. The input is floating balanced and will easily accept mic levels from -70dB up to more than 0dB. Phantom power is provided for capacitor mics. Noise performance is (-125.5dB below input 20Hz to 20kHz 200Ω input termination). The line input is designed for balanced circuits and will accept -30dB up to +24dB

310-373-9129
fax 310-373-4714
www.joemeek.com
sales@pmiaudiogroup.com
Circle (269) on Free Info Card
or go to www.beradio.com

Portable mixing console Calrec Audio Ltd



M3: Available in two frame sizes — the 1-inch rackmount version is a 10×4×2. The desktop version is a 20×4×2. Features include four auxiliary sends, choice of input module types and a mix-minus send on each input. Offers an internal power supply. Monitor section has multiple source selection, control room, studio and headphone outputs, and LED bar graph meters.

fax +44 1422 845 244

www.calrec.com; claireh@calrec.com

Circle (375) on Free Info Card

or go to www.beradio.com

+44 1422 842 159

Instant shelter E-Z UP International

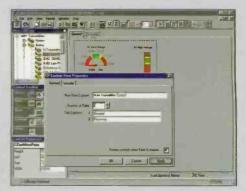
Hut: Known for its large graphics area, the shelter helps stations establish a market presence for on-site locations, remotes and broadcast events with screen-printed station logos, graphics and slogans. Features a patented, scis-



sors-action truss system with a unique new gabled-top design that increases visibility. Also features white, powder-coated frame that sets up in seconds on any surface without the use of ropes or poles. Available in four sizes (8'×8', 10'×10', 10'×15', and 10'×20').

800-45-\$HADE; fax 909-781-0586 www.ezup.com; info@ezup.com Circle (250) on Free Info Card or go to www.beradio.com

GSC3000 software package Gentner



Lynx: This Windows-based package improves the functionality of the GSC3000 by letting the user preschedule tasks such as logging and capturing stored data, printing reports and configuring user-defined jobs. Allows for user viewing of historical information from any networked GSC3000 unit. Available to current users in an easy upgrade path.

800-945-7730
fax 801-977-0087
www.gentner.com
bcastinfo@gentner.com
Circle (257) on Free Info Card
or go to www.beradio.com

EAS receiver Dayton Industrial Corp



AFC3: The company's line of receivers is designed for professional or EAS monitoring. The receivers are available as stand-alone or three can be housed in a 1³/₄-inch rackmount, the AFC3. The AFC3 contains a front-panel audio selector switch, mounted small speaker and headset outputs controlled by a volume control. Also mounted on the front panel are LED indicators for carrier and modulation activity for each receiver. An alert indicator and test/reset switch is mounted on the front panel for those receivers that use alert tone detectors, such as the weather and public-service monitors. The rear panel contains outputs for the receivers. Uses a 12V power source.

941-351-4454; fax 941-351-6081
www.daytonindustrial.com; sales@daytonindustrial.com
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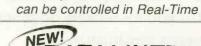
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The Hafler® VR Studio Supports 360° Views of it's Products, Including the Industry Acclaimed TRM8 and TRM6 Active Monitors

Hafler®, the leader in amplifiers and active monitors for the broadcast, studio, post production and audiophile markets, has unveiled its new "Virtual Reality" website at www.hafler.com. Hafler's new VR Studio is a collection of Virtual-Reality movies that support 360-degree views of its products that allows viewers to experience Hafler products in real time by seeing objects from all sides. Now sound contractors, engineers, producers, studio owners and musicians shopping for new amplifiers and reference monitors can get a close-up view on all Hafler products.

"Hafler's VR Studio lets our customers get a close up view of amplifiers and reference monitors from the convenience of their home, office or studio," explains Haller WebWizard Eric Russell. "Customers can also zoom-in on controls, connectors and LEDs as well as click on hot spots to see the inside circuitry and craftsmanship that goes into each and every Haller product."

Jerry Cave, managing director for Hafler, says, "This is a great first step for dealers and potential customers to see what our products are all about. Not only can they see the necessary specs on a particular amp, active monitor or subwoofer on our website, now they can see how the components are actually laid out and visualize on a 3D scale how the gear looks from all sides. Hafter gear is not only the best sounding gear in the market but, cosmetically, they are very attractive, as well. The Hafler VR Studio allows the viewers to see that for themselves.

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TRM6 Active Monitor & TRM10s TRANS•ANA Active Subwoofer System

Hafler®'s down-firing, ported TRM10s Trans-aña Active Subwoofer augments the performance of Hafler's TRM6 Active Monitor System or any small monitor when frequency response below 30Hz is vital. The TRM6 and TRM10s have already received rave reviews from its customers and the professional trade



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"Designed around the same demanding principles of our award winning TRM8, the TRM6 has been engineered to deliver stateof-the-art sound quality, but in a smaller package and at a lower price point," says Jerry Cave, managing director for Hafler. "We've matched Hafler's Trans ana amplifier technology to a two-way speaker system to provide the ultimate in sound, reliability and

The TRM6 is magnetically shielded, is based on Hafler's superior Diamond topology Transonova amplifier technology, and is designed to fill the monitoring needs of music recording studios. film and video post production houses, professional and home surround sound applications, remote trucks and mastering facilities. The TRM6 is a bi-amped, two-way system offering a free field frequency response of 55Hz to 21kHz. +/- 2dB. The peak acoustic output per speaker pair using music as a sound source at 1m is 120dB or greater, accommodating the ever-growing dynamic range needs of digital audio playback.

The TRM6 incorporates a 1-inch soft dome tweeter high fre



TRM10s Circle (223) on Free Info Card or go to www.beradio.com

quency driver and a 61/2-inch polypropylene cone low frequency driver. The front panel includes a POWER/CLIP/THERMAL LED display. The rear panel has XL Rand RCA inputs, unbalanced/ balanced DIP switch, input sensitivity DIP switches, tweeter/ woofer mute DIP switches, bass and treble shelving DIP switches. IEC standard line input/AC line fuse.

The TRM10s is a combination of Hafler's latest class G Trans-ana amplifier circuitry coupled to a 10-inch subwoofer and, like the TRM6 and TRM8, the TRM10s is entirely custom designed and manufactured by Hafler and the Rockford Acoustic Design Division for optimum performance.

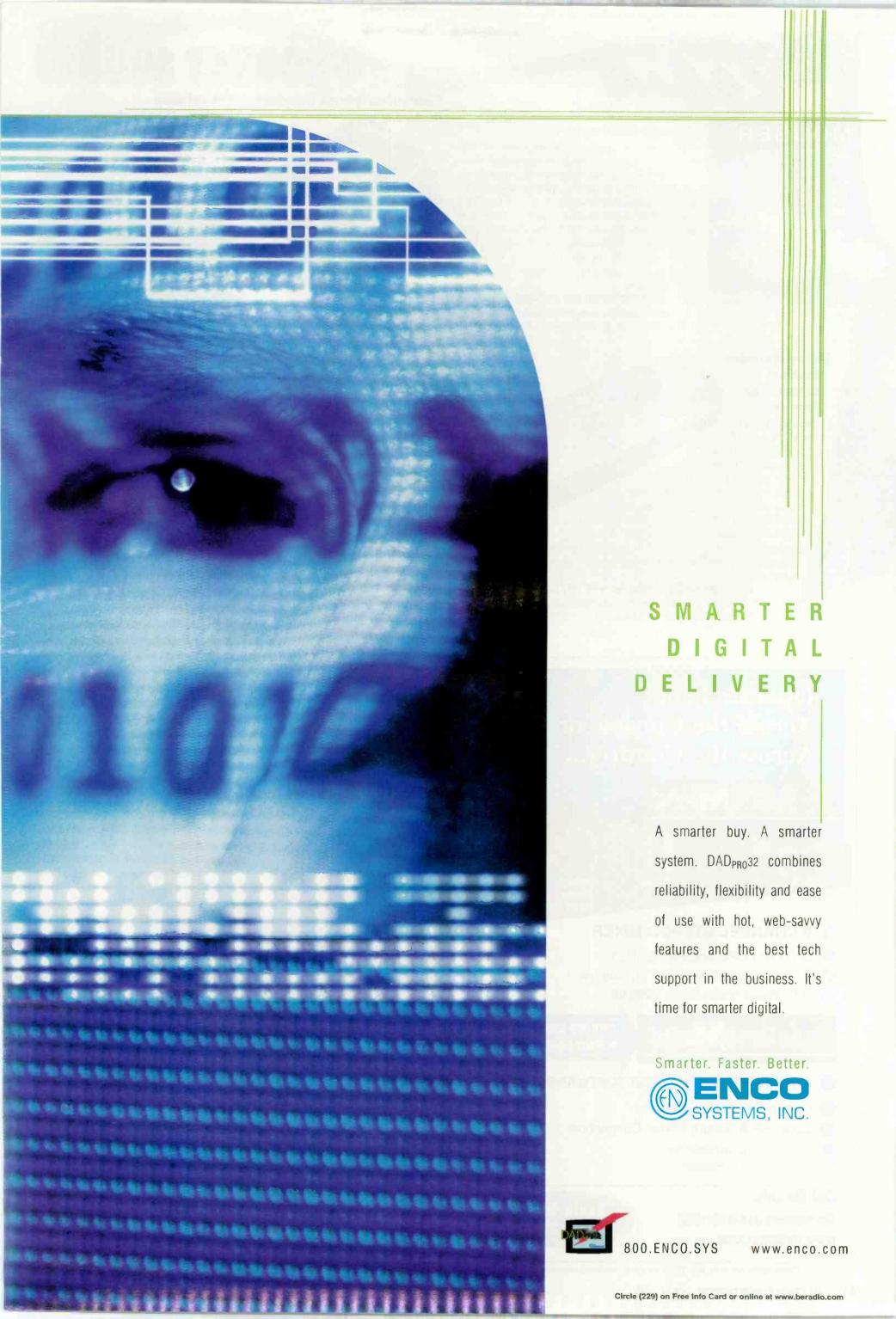
"The TRM10s' relatively compact size coupled with its Hafler Trans-ana amn circuitry makes for the ideal companion to the Haffer TRM6 active monitor," says Gary Church, chief ennineer for Rockford Acoustic Design. "The TRM10s is a universal system that will enhance any subwoofer application."

Jerry Cave, managing director for Hafler, says, "We incorporated our latest amplifier designs in the TRM10s, along with a subwoofer/enclosure system to provide a perfect companion to any small monitor. Its flexibility makes it a choice for literally any application where tight, deep bass is vital."

The TRM10s features a MOSFET output stage and class G/ Trans-ana topology with a one-cubic-foot vented enclosure. The unit has a 200-watt amplifier and oversized power supply for wide dynamic range. The superwood cabinet (the same as the TRM6 and TRM8) has an exo-port for pure low frequency extension. The TRM10s has adjustable input sensitivity, an adjustable low pass of 24dB/octave Linkwitz/Riley crossover with 40Hz to 110Hz range, is complete with balanced XLR and RCA stereo inputs and has selectable phase control.

Designed and manufactured in the U.S., the TRM10s comes in a black matte finish and has a one-year warranty.

"The TRM6 Active Monitor Speaker and the TRM10s are the perfect complement not only to each other, but also to any monitoring situation," Cave says. "This active monitor system is becoming yet another industry standard for Hafler. The TRM6 and TRM 10s system is a must for anyone who demands a powerful, accurate, yet highly economical active speaker system."



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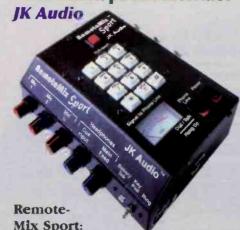
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PRODUCT SOUR Field mixer/phone interface FM antenna



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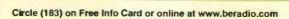
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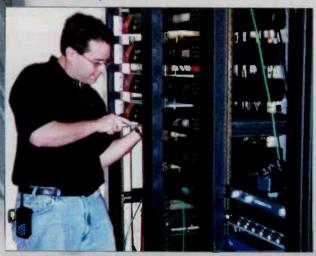
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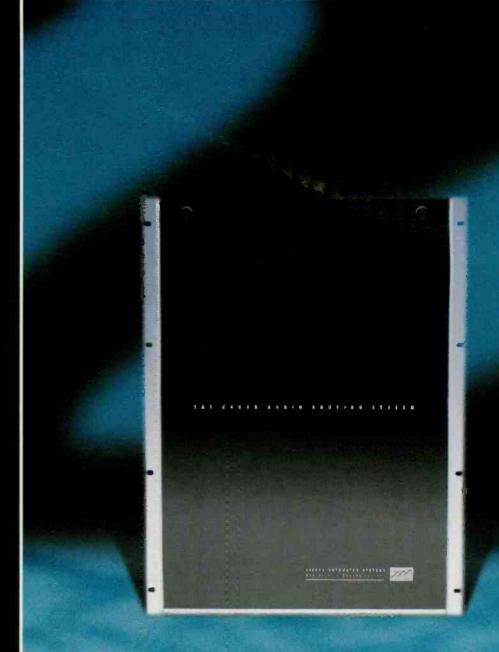
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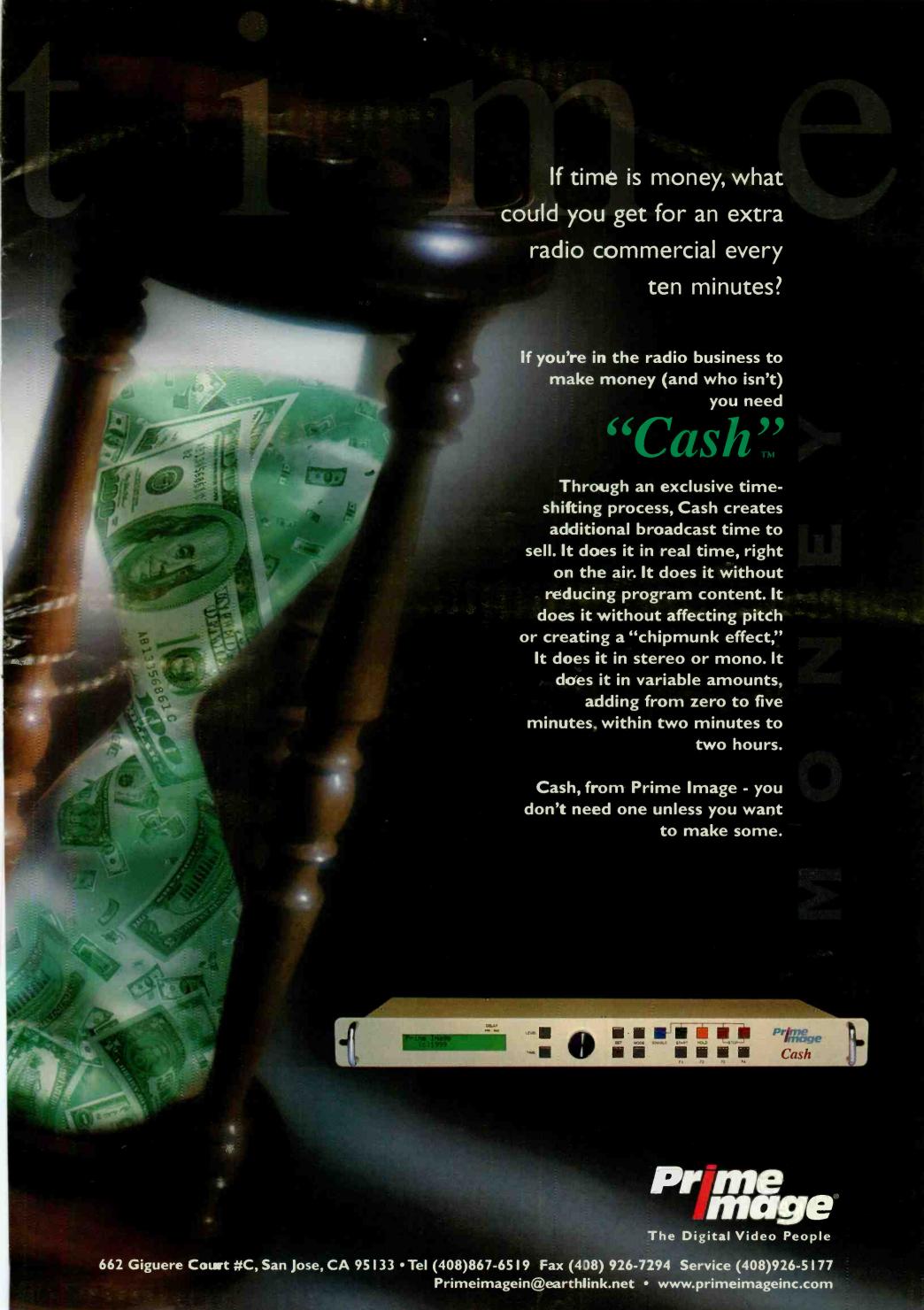
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Streaming audio content musicmusicmusic

Website solutions: The company is an RIAA (Radio Industry Association of America) licensed webcaster that helps you make your website a revenue generator. Produces "Internet Radio," customized music programs for your station's website. The company can create the music your audience wants to hear and make it available around the clock. Allows you to promote contests and loyalty programs as well as insert community-service announcements. The company will also redesign your website to maximize its appeal.

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www.musicmusic.com

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ISDN digital hybrid Telos Systems

Telos Two: Gives users the flexibility to connect to digital ISDN telephone lines as well as traditional analog POTS lines. Enables broadcasters to take advantage of superior hybrid technology and new callmanagement features immediately and to gain enhanced audio quality and call setup features once they make the transition to digital phone lines. Contains two digital hybrids in a single rackmount unit, providing high-quality conferencing for radio production, corporate teleconferencing or distance-learning applications where multiple lines are not required.

> 216-241-7225 fax 216-241-4103 www.telos-systems.com info@nogrunge.com Circle (328) on Free Info Card or go to www.beradio.com

Multiplexer Harris

PRODUCT SOUR

Intraplex Intralink-IP: The IP audio transport is designed to support future commercial use of IP-based, CD-quality, real-time stereo audio over Ethernet links for a variety of applications. These include delivery of audio content to servers or server networks for webcasting using streaming technologies as well as use of IP transport of programming across local and wide area networks. The applications for this technology include IP/Ethernet-based STL links and backup links, high-quality remote pickup links, interstudio communications and production feeds. and webcasting.

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96k audio analyzer Audio Precision



pling-rate capability. Companion model System Two+DSP, with the new platform improvements but without digital I/O, is also available as well as a cascade digital-only model, SYS-2500A. Harmonic analyzer

System Two Cascade: Features

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is capable of individual and group harmonic distortion measurements. The

company also has introduced APWIN 2.0.

800-231-7350; fax 503-641-8906

www.audioprecision.com; sales@audioprecision.com

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Powered subwoofer system Yamaha

SW10: A bi-amped monitor speaker designed for broadcasting. Provides exceptional sonic quality and extremely flat response over a wide listening area. An 8-inch long-throw woofer housed in a bass reflex design cabinet provides deep and tight

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Internet automation system ENCO Systems

eDAD: At the NAB Radio Show in September, ENCO will introduce a very cost-effective solution to webcasting that combines a suite of tools which provide the flexibility, reliability and power needed by Internet broadcasters as well as traditional broadcasters. The product will set new standards in webcasting.

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PRODUCT SOURCE

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Hello, Caller! Engineering Survey Uncovers Key Issues

Survey results made available by Broadcast Telephone Systems have identified the core concerns radio stations have in the area of caller handling systems. And, as one might suspect...they want it all.

The independent study, with a sample of more than 250 radio engineers responding, showed remarkable commonalities, regardless of station size, market or format. Respondents from coast to coast shared similar likes and dislikes...addressed, importantly, by the just-released PROtalk4 broadcast telephone system.

Plug and Play

Top of mind for most of the respondents was ease of use: the ability for busy on-air talent to quickly and efficiently operate the equipment. This kind of simplicity, quality and reliability outstripped even the specific feature set as the most important



factor in user satisfaction. Yet, at the same time, with studio space at a premium, products like these must be compact and streamlined.

The PROtalk4 meets this criterion admirably with its small-footprint housing and no-fuss icon-based buttons, backlit for even better visibility. Its redesigned front panel makes access and accuracy easy for even the most harried air personality. Speakerphone capability even lets talent keep their hands free for their myriad of other tasks.

Quality Matters

A common frustration voiced among respondents? Poor audio quality. The implementation of digital equipment throughout the

station has brought this issue to the fore in every aspect of the studio-to-air chain. And nowhere does poor audio quality stand out more vividly than in call-ins, particularly when

several callers are conferenced on-air simultaneously.

The designers of the PROtalk4 remained senstive to audio quality in every aspect of the product's design, basing the unit on independent digital hybrids for the most pristine sound possible. Features like automatic level balancing add to the consistency of the on-air sound.

How Many Lines?

Another conclusion revealed by the survey was that multi-line requirements are on the increase. Most respondents indicated that their needs are well served by between two and four lines, rather than with an elaborate multi-line phone system. The PROtalk4 squarely targets the real-world need with four high-quality channels which can be easily accessed and managed.

Conferencing among lines, likewise, is a need not being met by many systems...and it is a need that can only be expected to become more widespread. With the growing trend toward syndicated programming, for instance, an on-air operator might need to connect calls from many different regions simultaneously. The PROtalk 4 demonstrates, however, that conferencing need not be expensive. The unit can readily conference together up to four different users, with the same high quality applicable to a singleline call.

Complete Results Available

Broadcast Telephone Systems'
Martin Boyson
said that the survey was a guiding
light throughout



the design phase of the PROtalk4's development was important to us that we begin from a current needs assessment and design toward those needs. rather than retreading the old ground of many existing products in this category. In the PROtalk4, we honestly feel we've achieved the best balance between the two essentials of quality and ease of use, at a price which stations will find very manageable whatever their budgets." Boyson added that requests for complete survey data and more information can be made through www.broadcasttelephones.com, toll free at 1-888-890-7424, or via fax at 250-260-2871.

Caller...

Caller...

are you there caller...?



On-air hosts just want to sound good. With the help of the PROtalk4, they do.

The PROtalk4 is designed around the features busy talent depend on to keep calls flowing smoothly. Backlit buttons make operation quick and simple. Talk to all four callers at the same time, with automatic level balancing for a consistent on-air sound. Independent digital hybrids provide exceptional audio quality in the studio and between callers.

Plus, the PROtalk4 stands up to your most demanding work environment, with a robust but elegant housing, compact footprint, and straightforward rackmount connections.

4 independent digital hybrids

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or go to www.beradio.com

Transmitter remote control Electronic Associates

DataLine: Field expandable to accommodate the smallest or largest transmission facility, the system provides standard features such as remote dial-up access using laptop or handheld computers as well as touchtone-activated voice operation. The unit can also be used with the state-of-the-art RF-Host multiple site-control system and intermixed in any combination of Electronic Associates equipped sites.

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Nearfield monitor Westlake Audio



BBSM-5: This completely redesigned version of the classic BBSM-5 nearield monitor system addresses the need for an accurate nearfield monitor for today's high resolution, digital playback systems and varied production situations. This twoway, medium power, low-distortion professional reference monitor offers an internal, high-

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RF Equipment Superior Broadcast

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Multichannel monitor controller **Martinsound**

MultiMax EX: Controls up to eight speaker channels, configured as three or five front monitor channels with two, three or four rear surround channels. This version has been introduced in response to the development of new audio production formats incorporating additional rear surround channels, such as Dolby Digital-Surround EX. Adds comprehensive surround-sound functionality to any stereo mixing console by providing extensive monitoring facilities for 8-, 7-, 6- and 4-channel formats. Controls multiple speaker systems, facilitates downmix compatibility and quality checks, and includes bass redirection and system calibration tools. The downmixing features have been expanded from the standard version to correctly fold-down the new formats. Standard units can be upgraded to the EX version.

800-582-3555; fax 626-284-3092 www.martinsound.com info@martinsound.com Circle (402) on Free Info Card or go to www.beradio.com

Equipment supplier Broadcasters General Store



Broadcast equipment: Celebrating more than 20 years of service, BGS is a full-line supplier of broadcast equipment representing more than 400 pro audio, pro video and RF manufacturers nationwide. The company's website contains a full catalog of the varied product lines it carries. The company has been serving the industry since 1979 with the customer service of yesterday and the technology of tomorrow

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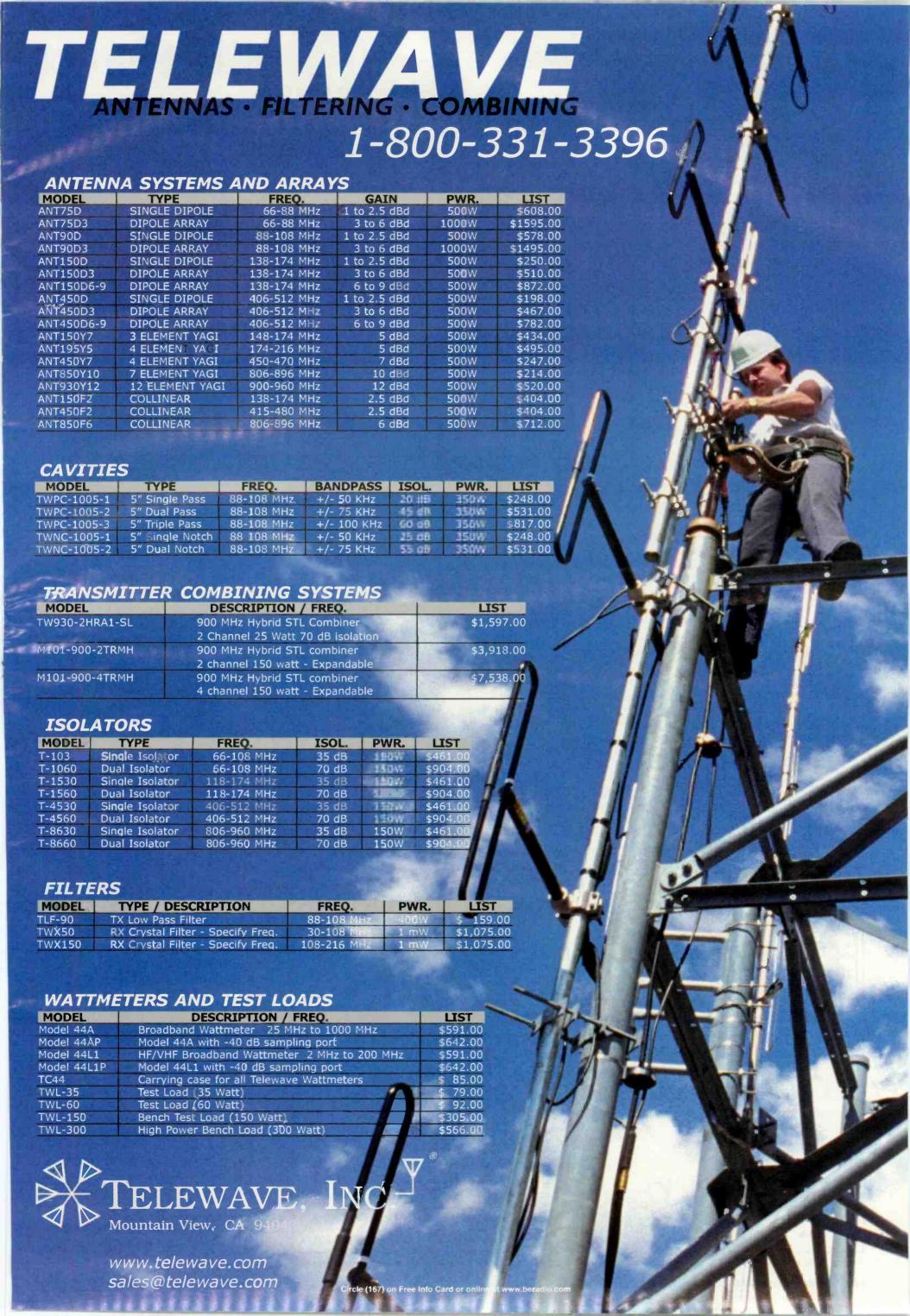
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On-air audio delivery Broadcast Software International

Digital audio software developer: Dedicated to developing and marketing affordable digital audio software for broadcast radio stations and other professional audio-production environments. BSI was founded in 1989 by its current president, Ron Burley. All BSI products adhere to the Microsoft Windows specification program. The look and feel of BSI software is very close to the familiar Microsoft Windows. This makes BSI products easy to learn, use and support. BSI is now based in Eugene, OR, and is a wholly owned subsidiary of Cumulus Media, one of the largest radio broadcast groups in the U.S. Its client list includes more than 5,000 large and small broadcasters worldwide. BSI has has distributors in more than 20 countries.

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PRODUCT SOURCE Dual channel 15-band EQ Applied Research & Technology



342 Dual EQ: Features constant Q circuitry, 70mm center detent sliders with selectable boost

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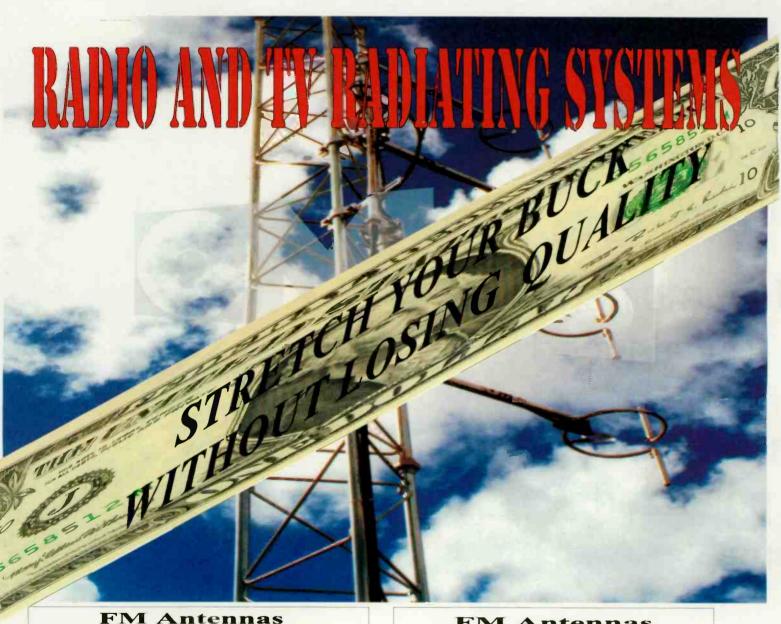
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PRODUCT SOURCE

RF accessories Coaxial Dynamics

RF power measurement and termination equipment: Located in Cleveland, the company has been a leading manufacturer of precision equipment for the measurement and termination of RF power for more than 25 years. The company's products are used in a variety of applications throughout the world. Several models of wattmeters and RF loads are available for power ranges from 0.1W to 100,000W. Each wattmeter accepts any of a range of plugin measuring elements for specific power levels and frequency ranges. These elements simply plug into a short section of coaxial line and the measurements are clearly displayed on the three-scale wattmeter.

800-COAXIAL; fax 216-267-3142

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Facility support Studio Technology

Broadcast furniture: Founded in August of 1991, the company provides studio furniture to clients across the U.S. It operates out of a 6,700 square-foot cabinet shop located in the western suburbs of Philadelphia. The company provides furniture-design services as well as complete delivery and installation of the furniture it produces. Its goal is to provide you with furniture that meets the ergonomic needs of your studios as well as your budget.

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Digital communications DH Satellite

Antennas: The NXL384 range is available in analog or digital versions. Designed as a cost-effective solution to audio communications across permanent digital networks, the unit provides the benefits of apt-X to STLs and studioto-studio networking. Apt-X technology delivers uncompromised audio quality and lowest available coding delay to the broadcaster. The NXL384 offers features such as auxiliary data, alarm functions and integral backup circuitry to ensure program continuity.

800-627-9443; fax 608-326-4233 www.dhsatellite.com

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Minirator MR1

Analog audio generator Neutrik

Minirator MR1: Includes a comprehensive set of audio test signals as required in broadcast audio environments. Provides sinusoidal signals over the entire audio band, from 20Hz to 20kHz at levels as low as -76dBu up to +6dBu, including sweep capabilities at various speeds. Alternative level units are dBV and volts. A dedicated polarity test signal enables the user to unveil devices with inverse polarity. The white and pink noise signals with low crest factors and high-repetition rates act as an ideal source for room acoustic measurements, frequency response equalizations and signal evaluation.

732-901-9488; fax 732-901-9608 www.neutrikusa.com; neutrikusa@aol.com

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RDS/RBDS encoder Inovonics

Model 711: This collaborative effort with Aztec Radiomedia is being manufactured under license from the French FM broadcast equipment firm. Easily interfaces with analog and digital stereo generators and exciters. Conforms to the Universal Encoder Communication Protocol (UECP), making it capable of dynamic operation through the built-in serial data port. This allows immediate transmission of direct advertising, real-time contests and billboard information. Song title and artist can be displayed on the listener's radio using supplied software that automatically interfaces with popular digital automation systems. All available RDS/ RBDS data groups common to domestic NRSC and European EBU standards are accommodated with appropriate

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Low-power antenna Antenna Concepts

Ultra Tracker LP: Single-lobe performance designed for LPFM, where every watt is critical. Broadcasters get the most out of precious power, superior building penetration, while eliminating RFR/RFI issues in town.

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EAS control interface Circuitwerkes

EAS Trigger IV: The EAS Trigger IV interfaces relay closures from your automation or other control sources to trigger RWT or RMT events for single or multiple, co-located stations on the SAGE ENDEC EAS unit. Triggers for other units will soon be available.

352-335-6555; fax 352-380-0230
www.cicuitwerkes.com
info@circuitwerkes.com
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Digital exciter Nautel

NE50: A broadband, fully digital 50W FM exciter using direct digital synthesis (DDS) technology to generate the FM signal. DDS provides a 32-bit signal pro-

cessing to digitally construct the carrier signal with a numerically controlled oscillator. Modulation in the digital domain provides a perfectly linear system with superior audio fidelity sustained over time. Makes possible an all-digital path from the studio to the FM modulator. Simple front-panel frequency selection requires no tuning adjustment and audio performance is not affected by channel selection. This broadband solid-state amplifier is capable of up to 55W with adjustable output to 1W.

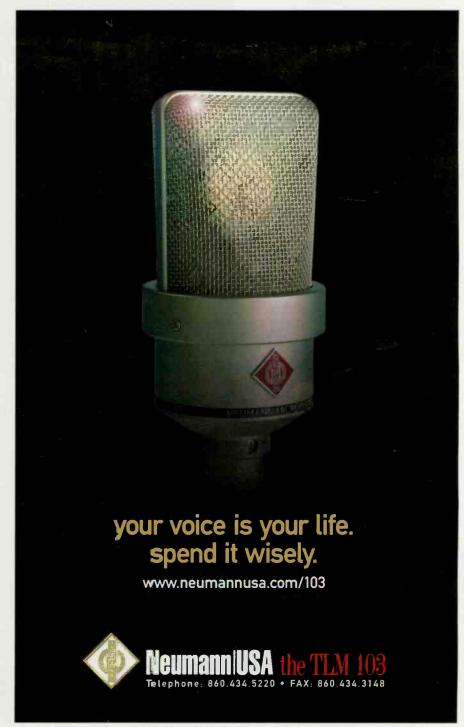
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RF equipment *Telewave*

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800-331-3396; fax 650-968-1741

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PRODUCT SOU

EAS encoder/decoder Gorman-Redlich

EAS1: This feature-rich encoder/decoder offers a 25-pin printer port allowing an external printer to keep the EAS log, an auxiliary output through a coaxial BNC fitting to go directly into the FM exciter and a fourline, 40-character backlit LCD display for rapid interpretation of alert messages. Alert messages can be scrolled on a remote sign board, a computer screen or with a character generator on a video monitor. Other features include a 20-key keypad to construct alert messages header code, set modulation levels or set input levels. The complete required weekly test, the end of the message code, sending a stored alert or sending a composed header can be done from the keypad on the unit or with a remote pushbutton in the on-air control room.

740-593-3150; fax 740-592-3898

www.gorman-redlich.com

Circle (384) on Free Info Card or go to www.beradio.com

Composite processor Solid Electronics Labs



DCP-1A: The Model DCP-1A dynamic composite processor performs the functions of instantaneous and composite low-pass filtering

in a single structure, thereby permitting maximum loudness, filter overshoot control and dynamic range. The design employs an active linear amplifier as the limiting device. Its filter structure is configured in two separate sections, each with its own overshoot compensation circuit. Front-panel LED indicators allow direct indication of clipping level, input level and overshoot compensator threshold levels.

610-353-9449; fax 610-356-8449

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Compact two-way loudspeaker Hafler Professional

M5: This nearfield passive monitor is magnetically shielded and designed to work alone or in conjunction with Hafler's line of professional amplifiers as well



as the TRM10s active subwoofer. The monitor's 5/8inch thick MDF cabinet has an internal volume of 5.3 liters and a front firing slotted port tuning the system to 70Hz. The low-frequency character allows a smooth response extending down well below system tuning.

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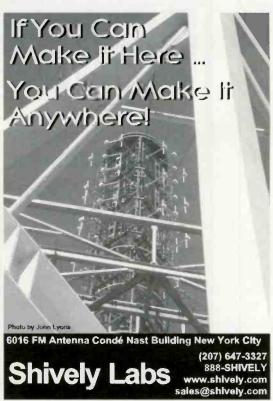
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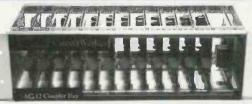
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