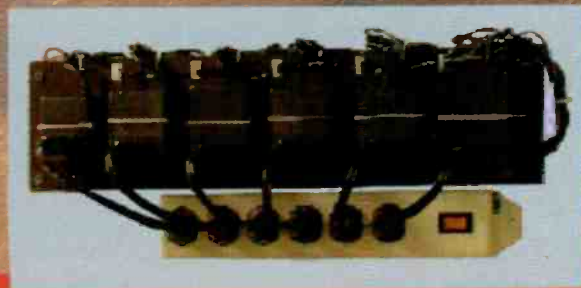
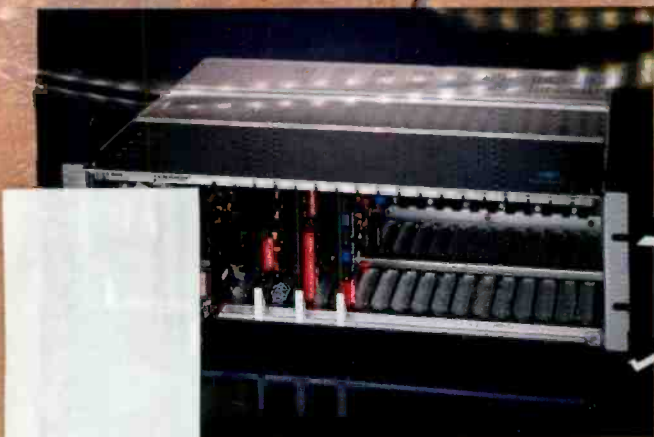
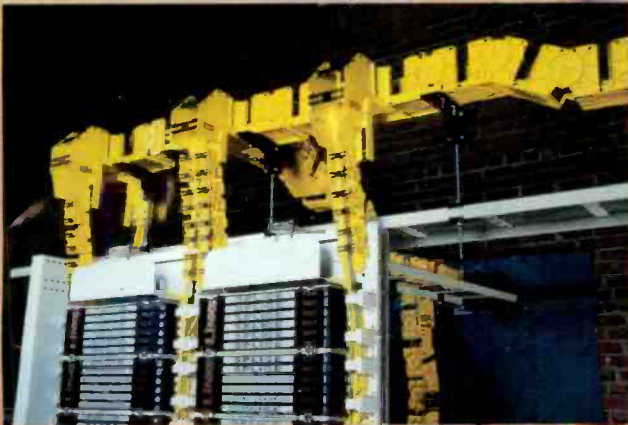


BE

Radio®

August 1998
A PRIMEDIA Intertec Publication
www.beradio.com

PRODUCT SOURCE





NuStar

The NuStar 3001 Series from Auditronics is, without a doubt, the most highly configurable and modular digital board in the industry. Such innovation in

design allows your studio to grow digitally well into the future without the expense of replacement equipment.

The NuStar is configured with two analog or digital inputs per module. Therefore, you choose what you need now, and it



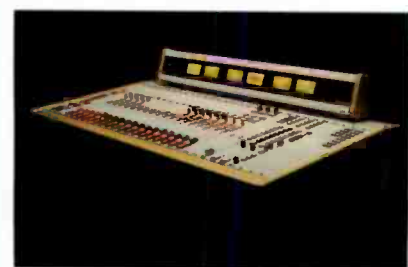
will still handle your needs tomorrow. Even more, its DSP-based technology is intuitive, reliable, and proven to provide quieter, cleaner sound than any current analog board. And NuStar is amazingly affordable.



2500 Series

Representing the perfect balance between feature rich and value price, the 2500 Series console is the perfect choice for discerning broadcasters on a limited budget.

Whether for new studio construction, rebuilds or replacement, the 2500 Series is an excellent selection for on-air or production applications. Designed to fit any studio need, the 2500 Series matches great design with quality manufacturing and components. And, of course, its modular design allows you to build one your way.



Comet

There are no limits to the performance options in this new, state-of-the-art analog console. With a completely new design and tight engineering, this Analog Mainframe Series is built upon a universal mother-board system that supports many module sets.

Available in 24, 30, or 36 position mainframe, the COMET Series offers superior engineering, components, and technological options to satisfy every engineer's preference and every owner's budget.



Auditronics 210

Designed to take advantage of the latest innovations in technology, the 210 Series of On-Air Broadcast consoles offer exceptional quality and long term reliability at an affordable price. The 210 Series is available in four mainframe sizes, thereby covering any application from a newsroom environment to large multiple station installations. In addition, a large assortment of optional modules gives you the flexibility to configure the console to meet your unique operating requirements without having to resort to expensive custom construction.

CONSOLE YOURSELF. NOW, THE ONLY THING EASIER THAN USING AN AUDITRONICS CONSOLE IS ORDERING ONE.

Discerning engineers across America and Canada have always known an Auditronics console delivered premium audio and worry-free technology at an affordable price. Now, get any Auditronics console delivered just as reliably from over 21 Auditronics distributors in the U.S. and Canada.

Don't worry. An Auditronics console distributor is nearby. Call one today and relax.

AUDITRONICS

Auditronics NuStar Digital Console

The first and only digital console you'll ever buy.

Auditronics Comet Console

Completely re-engineered and better than ever.

Auditronics 2500 Series Console

Fully featured, modular design at a value price.

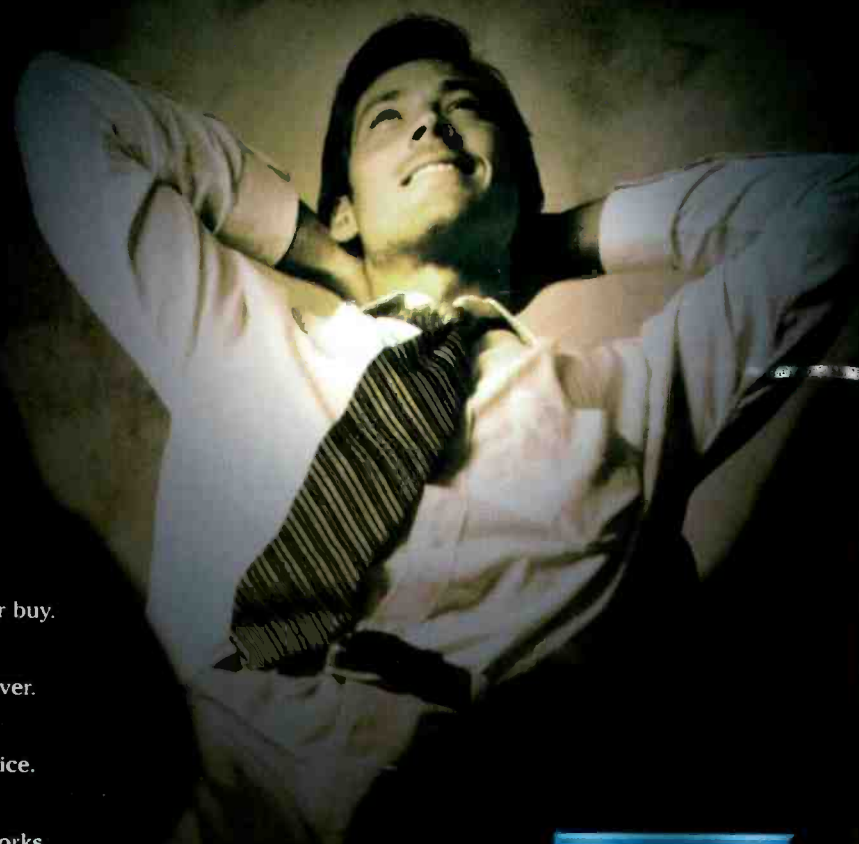
Auditronics 210 Series Console

For on-air or production, this work horse works.

Need Solutions?

www.bdcast.com

or (901) 362-1350



Solutions for
Tomorrow's Radio

©1998 Broadcast Electronics, Inc. BE emblem is a registered trademark of Broadcast Electronics, Inc.

AUDITRONICS CONSOLE DISTRIBUTORS

MIDWEST
Audio Broadcast Group
Grand Rapids, MI
(616) 452-1596

Broadcast Richmond
Richmond, IN
(317) 966-6468

RF Specialties of Missouri
Kearney, MO
(816) 628-5959

SOUTHEAST Broadcasters General Store
Ocala, FL
(352) 622-7700

RF Specialties of Florida
Valparaiso, FL
(904) 678-8943

SCMS
Pineville, NC
(704) 889-4508

Audio Broadcast Group
North Carolina Office
(800) 369-7623

SOUTH CENTRAL Audiomedia Associates
Covington, LA
(800) 544-2636

Crouse-Kimzey Company
Grand Prairie, TX
(972) 660-6100

Continental Electronics
Dallas, TX
(214) 381-7161

Giesler Broadcasting Supply, Inc.
Houston, TX
(713) 774-3314

RF Specialties of Texas
Amarillo, TX
(806) 372-4518

SOUTHWEST RF Specialties of California
Santa Barbara, CA
(805) 682-9429

Caughill-Palitz, Inc.
Honolulu, HI
(808) 941-3618

NORTHEAST RF Specialties of Pennsylvania, Inc.
Pittsburgh, PA
(412) 733-1994

Steve Vanni Associates, Inc.
Auburn, NH
(603) 483-5365

NORTHWEST RF Specialties of Washington
Seattle, WA
(206) 546-6546

CANADA AVR Communications Ltd.
Calgary, Alberta
(403) 251-0707

AVR Communications Ltd.
Scarborough, Ontario
(416) 297-9377

Caveco Equipment Ltd.
Scarborough, Ontario
(416) 438-6230

Marketing Marc Vallee
Quebec, Ontario
(514) 227-1828

Industrial Strength Digital Audio Delivery

Digital Audio Delivery systems are now recognized as a must for every broadcast facility. But few systems provide the features, flexibility or reliability required to maintain profitability in this demanding and fault critical application, nor the support mechanism to maintain them.

The ENCO DAD_{PRO32} Digital Audio Delivery System is simply the most powerful On-Air & Production system available. Based on the already widely accepted and mature DAD_{PRO} product, but now optimized for the Windows NT[®] operating system, DAD_{PRO32} is unique in its uncomplicated user interfaces and adaptability to any format, yet harnesses the power and reliability of proven technology.

- Intuitive On-Screen User Interfaces that are immediately familiar to operators. Optional Touchscreen makes Live Assist operation quick and easy.
- Complete On-Air flexibility for Live Assist, Automated, or Satellite Programmed operations, with transparent transitions between modes. Seamless Segues and Voice Tracking provide a continuously "Live" image.
- Powerful Production and Call Processing capabilities, including Graphic Cut & Paste Assembly Editing. Automatic Recording features are included for catching network feeds.
- Interfaces to all Music and Traffic Scheduling and Billing systems.

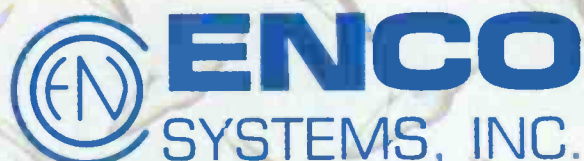


- Features full 32-Bit Processing and True Multitasking capabilities. Many third party programs, such as Multitrack Editors, Wire Capture systems and Word Processors may be directly embedded into DAD, or operated on the same Workstation.
- Inherent support of Global Wide Area Networking, for sharing of data between multiple facilities. Ancillary products are available for Store Forward operations and remote management of unmanned downlink sites.
- Operates on commonly available "off-the-shelf" computer hardware and network architecture, utilizing any of a wide variety of redundancy configurations.
- DAD is an outright purchase, and there are no monthly licensing fees. Free software upgrades are provided for the first year. ENCO technical support is legendary as the best in the business.

**Digigram
POWERED**

**Call Your DAD Dealer or ENCO For
Complete Information or Demo**

**Check Out The ENCO Web Page At:
www.enco.com**

**ENCO
SYSTEMS, INC.**

24555 Hallwood Court, Farmington Hills, MI 48335 USA
Tel: 800-362-6797 or 248-476-5711
Fax: 248-476-5712 • www.enco.com

Circle (4) on Free Info Card

A PRIMEDIA Intertec Publication
Vo. 4 No. 7

EDITORIAL

Skip Pizzi, *Editor-in-Chief*
Chris Scherer, *Editor*
Brahm Dick, *Editorial Consultant*
John F. Battison, P.E., *Technical Editor, RF*
Jim Saladin, *Associate Editor*
Tom Cack, *Senior Managing Editor*
Deborah Lickson, *Director/Manager*

ART

Stephanie L. Kastelan, *Senior Art Director*
Mike Krust, *Associate Art Director*

BUSINESS

PRIMEDIA Intertec
Dennis Tricola, *Group Publisher*
Eric Proffitt, *Marketing Coordinator*
Kathy Lewis, *Advertising Coordinator*
Sandra Ferguson, *Classified Advertising Coordinator*
Barbara Kummer, *Circulation Director*
Leann Sandifar, *Circulation Manager*
Customer Service: 913-967-1711 or 800-441-0294

TECHNICAL CONSULTANTS

Jerry Whitaker, *Contributing Editor*
Yasmin Hashmi, *International Correspondent*
Stefa Plumbridge, *European Correspondent*
Russ Berger, *Broadcast Acoustics*
Donald L. Markley, *Transmission Facilities*
Harry C. Martin, *Legal*
Kevin McNamara, *Computer Technology*

MEMBER ORGANIZATIONS

Sustaining Members of:
• Acoustical Society of America
• Audio Engineering Society
• Society of Broadcast Engineers
Member American Business Press
Member BPA International



PRIMEDIA INTERTEC

Raymond E. Maloney, *President & CEO*
Camron Bishop, *President*
Doug Conrad, *Corporate Creative Director*
PRIMEDIA Specialty Magazines
James Warner, *President*
PRIMEDIA Inc.
William F. Reilly, *Chairman & CEO*
Charles McCurdy, *President*
Beverly C. Chell, *Vice Chairman*

BE RADIO (ISSN 1081-3357) is published monthly except bimonthly in May/June and November/December and mailed free to qualified recipients by PRIMEDIA Intertec, 9800 Metcalf, Overland Park, KS 66212-2216. Non-qualified persons may subscribe at the following rates: USA and Canada, one year, \$30.00; all other countries, one year, \$35.00 (surface mail), \$70.00 (air mail). Single copy price, \$10.00. Periodicals postage paid at Shawnee Mission, KS, and additional mailing offices. Canada Post International Publications Mail (Canadian Distribution) Sales Agreement No. 0956244.

POSTMASTER: Send address changes to BE Radio, P.O. Box 12937, Overland Park, KS 66282-2937.

BE Radio is edited for corporate management, technical management/engineering and operations and station management at radio stations and recording studios. Qualified persons also include consultants, contract engineers and dealer/distributors of radio broadcast equipment.

SUBSCRIPTIONS

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by PRIMEDIA Intertec provided that the base fee of U.S. \$2.25 per copy, plus U.S. \$0.00 per page is paid to Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. The fee code for users of the Transactional Reporting Service is ISSN 1081-3357/1998\$2.25+\$0.00. For those organizations that have been granted a photocopy license by CCC, a separate system of payment has been arranged. Prior to photocopying items for educational classroom use, contact CCC at 508-750-8400.

Organizations or individuals with large quantity photocopy or reprint requirements should contact Carrie Wood, 913-967-7212. Microfilm copies of BE Radio are available by calling/writing UML, 300 N. Zeeb Road, P.O. Box 346, Ann Arbor, MI 48106-1346. Phone: 313-761-500 or 800-521-0600.

CORRESPONDENCE

Editorial and Advertising: 9800 Metcalf, Overland Park, KS 66212-2216. Phone: 913-341-1300; Editor: 913-967-1905. Advt. Fax: 913-967-1504.
© 1998 by PRIMEDIA Intertec.
All rights reserved.

PRIMEDIA
Intertec

FROM THE EDITOR...

Welcome to the third annual BE Radio Product Source. From the microphone to the transmitter, the latest and greatest in radio technology is represented here. Many of these products



were unveiled or previewed at the NAB in April, with some even newer than that. Our cover reprises the NAB98 Pick Hits. Look for the descriptions of these products and also the NAB98 Pick Hit Honorable Mentions inside this issue. For all the in-depth NAB coverage, look at the May/June issue of BE Radio.

Keep this source handy as a reference over the next year as your pictorial guide to what is shaping the trends in technology. The technology we use continues to improve and change every day. When you are faced with your next purchasing decision, be sure to look over the products listed here for a base reference.

To learn more about any product listed in here, use the free information numbers included with each listing. The Product Source is a valuable tool I hope you will use extensively.

I welcome any comments or suggestions for future issues of the Product Source. Contact me via e-mail at beradio@intertec.com, the BE Radio faxback line at (913) 967-1905, or in writing to BE Radio; 9300 Metcalf Ave.; Overland Park, KS 66212-2216.

Chris Scherer
Chris Scherer, editor

ON THE COVER

BE Radio

- Avocet Instruments**
AV-2000 Delay Canceller • p. 12
- Telect**
CableLinks Cable management system p. 6
- Broadcast Electronics**
AudioPoint Routing switcher p. 24
- Inraplex/G enayre**
ST- Plus with spread spectrum p. 30
- Delta Electronics**
TCA-WB Wide band, wide range RF ammeter p. 26
- Radio Design Labs**
WH1 Power Supply Mounting adapter p. 44
- ESE**
ES-102 GPS based master p. 8
- Dorrough**
PLM-120 Power line monitor p. 16
- Comrex**
Vector POTS codec p. 20
- Canare**
TS100E Coaxial cable stripper p. 14

SALES OFFICES

NATIONAL & INTERNATIONAL

Steven Bell
9800 Metcalf Avenue
Overland Park, KS 66212-2215
Telephone: (913) 967-1848
FAX: (913) 967-1900
E-mail: steven_bell@intertec.com

WESTERN U.S.

Sue Horwitz
809 South Orange Drive
Los Angeles, CA 90036
Telephone: (213) 933-9485
FAX: (213) 965-1059
E-mail: 763452624@compuserve.com

CLASSIFIED ADVERTISING

Brian Huber
Telephone: (800) 896-9939
(913) 967-1732
FAX: (913) 967-1735
E-mail: brian_huber@intertec.com

LIST RENTAL SERVICES

Lori Christie
Telephone: (913) 967-1875
FAX: (913) 967-1897

WWW.BERADIO.COM

"We're the #1 FM all ~~X~~ music station in Philly, probably because the Omnia completes our all-digital studio. Now, our sound is so loud, so clear...very well-defined with absolutely no grunge. And the Omnia is one thing that my PD and I agree on. It's definitely a keeper."

*Russ Mundschenk, Chief Engineer,
WBEB 101.1 FM, Philadelphia, PA*

Russ dared to go where his competition isn't. Yet.

The all-digital Omnia.fm processor from Cutting Edge delivers all the clarity and precision of digital, with the fullness and depth of analog. You have rock-solid peak control. Positively no grunge. And loudness that blows the suits right out of their... well, suits.



Demo the Omnia in your station for 60 days*. We think everyone will agree that the Omnia makes your station sound better than ever. If not, you have a money-back guarantee from Cutting Edge. Call us at 216 (241)-3343 or the Omnia dealer in your area. Because this is where you want to go. Just ask Russ.

Omnia. The promise of digital...delivered.

Guess what! Just 6 months after we installed the Omnia.fm, the spring Arbitron says we're the #1 station in Philly. Period. Thanks, Cutting Edge! We're celebrating at B-101! Russ



CUTTINGEDGE

2101 SUPERIOR AVENUE CLEVELAND, OH 44114

TEL: + (216) 241-3343 FAX: + (216) 241-4103

E-MAIL: INFO@NOGRUNGE.COM

WWW.NOGRUNGE.COM

*Demo requests must be submitted as a purchase order.
Terms are available from your Omnia dealer listed below.

See us at AES Show Booth #485
See us at NAB Radio Show Booth #132

Audio Broadcast Group 3685 Roger B. Chaffee Blvd. Grand Rapids, MI 49507 Tel: + (616) 452-1596 Fax: + (616) 452-1652 e-mail: support@abg.com
Bradley Broadcast Sales 7313G Grove Road Frederick, MD 21704 Tel: + (800) 732-7665 Fax: + (301) 230-6526 e-mail: info@bradleybroadcast.com
Broadcast Supply Worldwide 7012 27th Street West Tacoma, WA 98466 Tel: + (800) 426-8434 Fax: + (800) 231-7055 e-mail: info@bswusa.com
Crouse-Kimzey Company P.O. Box 155999 Fort Worth, TX 76155 Tel: + (800) 433-2105 Fax: + (972) 623-2800 e-mail: sales@proaudio.com
Radio Communications Unlimited 5509 Barrington Ooltewah, TN 37363 Tel/Fax: + (423) 396-3743

Circle (5) on Free Info Card

AKG Acoustics: HSC 200 SR



▲ One of the main features of the HSC 200 SR is the jumper-selectable frequency response of the microphone, which allows the headset to be adjusted to the user's voice. The earphones are semi-open designs and thus will not completely isolate users from their surroundings acoustically. A shock mount for the microphone element prevents the transmission of mechanical noise, particularly cable noise, and leakage from the earphones. The HSC 200 SR is rugged enough to withstand tough handling in the studio and provides a good price/performance ratio.

+43-1 866 54-241;
fax +43-1 866 54-205;
e-mail press@akg-acoustics.com;
www.akg-acoustics.com
Circle [201] on Free Info Card

Cortana: Lightning prevention

Cortana Corporation has provided affordable and rugged lightning prevention systems for broadcast towers for 16 years. The Stati-Cat system works through the principle of charge dissipation, providing a continuous, low-resistance discharge path for the static electric charge found on tall structures. The rugged design uses 1/8" stainless steel rods ground to needle sharpness and then inserted into lightweight aluminum bars. The system can be easily installed by any tower maintenance firm. Cortana will also design a complete system application at no charge.

888-325-5336;
fax 505-326-2337
Circle [205] on Free Info Card

Innovative Devices: TP33



modern DSP based Digital Hybrid technology. Simple to operate, the TP33 is a component of the Modular Integrated Telephone System (MITS) with solutions for single studios or applications as large as 60 studios.

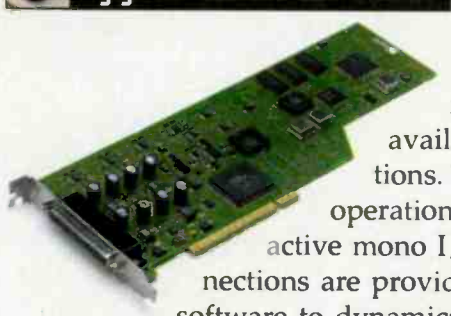
888-890-7424; fax 250-260-2871; e-mail info@innovadev.com;
www.innovadev.com
Circle [200] on Free Info Card

Sine Systems: ACU-1

The ACU-1 is a multi-function audio control unit designed for use in automation systems. It is a micro-processor-based audio switching device with eight stereo audio inputs and one stereo audio output. The unit also has the ability to perform sophisticated gain control operations and deliver the time and temperature. In addition, the ACU-1 has sixteen logic-level status inputs and eight control (relay) outputs. The unit is controlled by an external computer through an RS-232 serial data.

615-228-3500; fax 615-227-2367;
e-mail info@sinesys.com;
www.sinesys.com
Circle [202] on Free Info Card

Digigram: LCM440 and LCM220



◀ Digigram's LCM range of professional PCI sound cards offers only the most requested features found in Digigram's signature PCX range, making Digigram innovations available for more cost-sensitive applications. The LCM440 (pictured) offers duplex operation with any combination of up to four active mono I/Os. Balanced analog hardware connections are provided for all I/Os, with provisions for software to dynamically control the card's configuration. The LCM220 is a value-priced, full-duplex card that can mix up to three stereo files to its stereo output. The 220 is available in two versions: one with unbalanced analog I/Os (220a) and a second with balanced analog I/Os (220b).

703-875-9100; fax 703-875-9161; e-mail input@digigram.com;
www.digigram.com
Circle [204] on Free Info Card

OMB America: DDL

The Digital Data Link from OMB appears as a single LAN user port. The wireless link can be directly connected to a 10-base-T hub using an RJ-45 connector. Standard output power is 100mW, with a frequency range of 2.4 to 2.5GHz. The bi-directional system offers a transmit capacity of 10Mb/s.

305-477-0973;
fax 305-477-0611;
www.omb.com
Circle [206] on Free Info Card

◀ With the TP33 any studio can have slick talks how and contest operation. Super-fast operation and automatic level control will make the TP33 a good choice for simple multiline studio telephone applications. Using a regular POTS telephone for the handset functions, the desktop box is connected to a remote rackmount unit occupying 1RU of space. The TP33 accepts up to three incoming phone lines and has the capability of taking all three callers to air at once using

Telect: Cable Links



range of cable sizes and run requirements. Links are chained together to form the trough and they move horizontally and vertically to fit any space. The soft bends allow for routing of special handling cable like fiber optic and CAT5, where sharp bends will damage the cable and distort the data being carried. The yellow, fire-retardant plastic links are available in three sizes.

800-551-4567; fax 509-926-1553;
e-mail gettinfor@telect.com; www.telect.com
Circle [203] on Free Info Card

Broadcast Supply Worldwide: 1998 Catalog



▲ As representatives of more than 200 manufacturers, it would be nearly impossible for BSW to give a comprehensive list of all of its products in any one source. As such, this 160-page catalog is a representation of the most popular products from each manufacturer. Orders can be made via telephone, fax, e-mail or Web, and product specifications are available upon request.

800-426-8434;
fax 800-231-7055;
e-mail sales@bswusa.com;
www.bswusa.com
Circle [207] on Free Info Card

360 Systems: Instant Replay 2.0



▲ Instant Replay 2.0 is a self-contained, professional digital audio player and recorder that places an entire audio library at your fingertips. Offering high-quality linear and Dolby AC-2 digital compression technology, Instant Replay 2.0 stores frequently used cuts to 50 panel-mounted buttons for immediate access in 10 user-defined groups. Each cut is stored with a name and ID number, making it easy to retrieve using the unit's "Find" feature. Individual cuts can be organized into playlists and triggered remotely. Audio can be recorded, titled, arranged and played with simple keystrokes and with no cut length limitations.

818-991-0360;
fax 818-991-1360;
e-mail info@360systems.com;
www.360systems.com
Circle [209] on Free Info Card

DPA: Series 4000

Formerly known as Bruel & Kjaer, Series 4000 is now badged by DPA Microphones, though they still employ the Bruel & Kjaer capsules in their design. As DPA had become independently successful in the distribution of high-performance studio mics, B&K's core business remains in the test and measurement of equipment. This divergence has led to the change in badging. All sales channels remain the same, and DPA will continue to service and support the very large number of B&K mics already in the audio community.

+45 48 14 28 28;
fax +45 48 14 27 00;
e-mail info@dpamicrophones.com;
www.danishproaudio.com
Circle [210] on Free Info Card

LISTEN.



VECTOR
POTS CODEC
15 KHZ TWO-WAY AUDIO
ON ONE STANDARD PHONE LINE.

Now SHIPPING!



Comrex Corporation, 65 Nonset Path, Acton, MA 01720
Tel: (800) 237-1776 Fax: (978) 635-0401 Fax-on-demand: (973) 264-9973
Email: info@comrex.com www.comrex.com

COMREX

ESE: ES-102



◀ A low-cost and highly accurate GPS master clock and time generator, the ES-102 provides timing signals in SMPTE/EBU, RS-232-C, ASCII, ESE-TC89 and ESE-TC90 formats. The unit also has a six-digit display and provides two one pulse/second outputs. An eight-

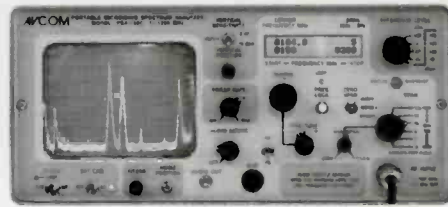
channel receiver is capable of receiving as many satellites, although only one is required for operation.

310-322-2136; fax 310-322-8127; e-mail ese@ese-web.com;

www.ese-web.com

Circle (211) on Free Info Card

AVcom of Virginia: PSA-65C



◀ The PSA-65C covers frequencies through 1250MHz in one sweep. Frequency converters are available to extend the range of the PSA-65C to 4.2GHz and can be ordered to any 500MHz band between 5.4 and 6.4GHz. The unit features a digital frequency lock function that controls analyzer drift, rechargeable

batteries and microprocessor control. The FM audio demodulator and AM detector with internal speaker, which had been options, are now standard features.

804-794-2500; fax 804-794-8284; www.avcomofva.com

Circle (212) on Free Info Card

ADVERTISEMENT

Bringing Portable Mixing to the Next Level.



Impressively quiet and with more features than many mixers twice its size, the Shure FP32A set a new standard in field production.

Now comes the FP33. With new high-precision sealed input potentiometers, an improved battery switching circuit, internal headphone level adjustments, and durable 3.5mm jacks, the FP33 takes portable mixing to the next level.

Professional Mixing That Goes Wherever You Do.

The Shure FP33 is a 3-input, 2-output portable mixer specifically designed for:

- Remote audio recording
- Electronic field production
- Electronic news gathering
- Location film production

The FP33 weighs just 3.5 lbs and is about the size of two video cassettes. Providing 8 hours use with just two 9V alkaline batteries — or powered by any 12 to 30 VDC power supply — the FP33 will go wherever you do.

Quiet Enough For DAT.

The FP33 has an exceptionally low self-noise and a wide dynamic range — making it perfect for use with DAT and other digital recording media.

So Many Features In So Little Space.

The new FP33 gives you all the features of the FP32A and more, including:

- Sealed, conductive plastic input potentiometers
- Dynamic range of over 100dB
- 48V phantom, 12V phantom and 12V T (A-B) power
- LED indicators of input levels, output peaks, limiter action, and low battery
- Pop-up pan pots
- Link switch to couple inputs 2 & 3 into a stereo pair
- Mix bus to connect an additional FP33 or FP32A
- Comprehensive headphone monitoring control with MS stereo matrix
- Internal DIP switches for over 4,000 customized set-ups

If you're looking to bring your mixing to the next level, make sure to pick up a Shure FP33 portable-stereo mixer.

For the Shure FP dealer nearest you, call 1-800-25-SHURE.

THE SOUND OF PROFESSIONALS... WORLDWIDE

SHURE

Circle 25 on Free Info Card

RCS:

AP NewsDesk

RCS is offering AP NewsDesk as a fully integrated module of the on-air system, Master Control. NewsDesk's numerous features include: instant access to bulletins and updates; scrolling headlines that display news stories; multiple wire inputs, including affiliate newswires and weather wires; and an enhanced keyword search. AP SoundDesk, the audio editing module included with the system, allows audio capture and editing as .WAV files. Soundbites can be edited and assembled into a news rundown, embedded into the appropriate text and aired directly from NewsDesk.

914-723-8567;

914-723-2258;

e-mail info

@rscsworks.com;

www.rscsworks.com

Circle (213) on Free Info Card

Central Tower:

Broadcast towers

Founded in 1985 to engineer and manufacture towers for the broadcast industry, Central Tower expanded its product line to include all telecommunication markets. The company's high production standards use only domestic manufacture, mill-certified steel for tower structural members. Central also maintains a full-time, in-house engineering staff to manufacture every tower to each customer's needs. They offer self-supporting, guyed and monopole tower designs.

800-664-8222;

fax 812-853-6652;

www.centraltower.com

Circle (214) on Free Info Card



SMARTI

SMARTI utilizes MPEG compression and current DSP technology, allowing it to send and receive 7.5 kHz audio over standard telephone lines (POTS) with true broadcast audio quality. SMARTI also incorporates 2 remote control

relays, serial data communications port and an event timer.



SMARTI's functions are menu driven from the "telephone style" keypad, and displayed on an easy to read backlit LCD display.

This 'smarter' remote also features three different operating modes: MPEG 2 layer III, low delay G.728, and direct analog telephone interface. Even more, SMARTI uses the fastest modem speed available, and it automatically adjusts speed to match telephone line conditions.

For maximum flexibility, the SMARTI is available in a single input model and a four input model. At a mere 5 lbs., the single input model offers convenience and reliability in one pack-

age that can be battery operated or rack mounted. Or, instead of hauling an extra mixer to the remote, use the built in 4 channel mixer.



ME-40 Exciter

Broadcast Electronics' MARTI brand ME-40 is a quality 40 watt synthesized FM Broadcast Exciter/Transmitter, offered at a surprisingly low price. The ME-40 combines world-class engineering, manufacturing and component quality to make this exciter comparable to the best available.

The ME-40 is an excellent choice either to replace your older existing exciters, or for use as a standby. While it is a high performance FM exciter offering many technical features, its price is well below that of the other high quality American made exciters.



RPS-402

The MARTI Phone Remote Mixer represents major advancements in features, performance, and compactness. The Remote Mixer is the unit professional broadcasters love because it is so versatile, as well as loaded with all the features that make remote broadcasting easier than ever before.

Even at a mere 3 lbs., this 4 channel mixer can handle all your remote broadcasting needs. And features such as its second phone line capability and rechargeable batteries for up to 10 hours of use make it the mixer of choice for today's broadcasters.

THE CLEAR SOLUTION IN CELLULAR REMOTES

from MARTI® - The Remote Experts

When you can't use your POTS or line of sight technology, you can be "cell casting" with the MARTI cellular remote products.

Cellular remotes give you the flexibility to set up a remote instantly anywhere there is cellular coverage. The Cellcast® has a full 3 watt cellular transceiver for those hard to reach spots. The lightweight Talk★Port™ is portable and ideal for the reporter covering that fast breaking story.

Better Remote Mixing



For superior mixing on site, the phone remote

mixer features 4 mic channels and 2 aux inputs, peak limiter, and squelch/mute switching, plus a lot more. AC or battery powered for up to 10 hours.

MARTI®



FREE Shure® BG1.1 Mic with purchase!
Call Now to Order 1-817-645-9163
Or contact your favorite MARTI distributor.

Guaranteed Next Day Shipment

Need Solutions?
www.bdcast.com

BE
Solutions for
Tomorrow's Radio

©1998 Broadcast Electronics, Inc. BE emblem, MARTI and Cellcast are registered trademarks of Broadcast Electronics, Inc. Talk★Port is a trademark of Broadcast Electronics, Inc. Next day shipment guaranteed on in-stock items. Free Shure BG1.1 Mic offer good through October 31, 1998.

Cool-Lux: L-10 Smart Power Battery Belt



The L-10 features a 1.2 amp charger with a 3.5 foot, coiled, heavy-duty powercord. The battery assembly is made of the most durable materials in the marketplace and offers the perfect power fill for those medium-sized events with 117WH. It is lightweight (9lbs.), comfortable, and complete with a cigarette or four-pin XLR plug. The L-10 incorporates the Cool-Lux method of voltage-balanced cells, has no memory, and is spaced to allow for recording from a seated position.

805-482-4820; fax 805-482-0736; e-mail coollux@cool-lux.com;
www.cool-lux.com
Circle (215) on Free Info Card

◀ The L-10 features a 1.2 amp charger with a 3.5 foot, coiled, heavy-duty powercord. The battery assembly is made of the most durable materials in the marketplace and offers the perfect power fill for those medium-sized events with 117WH. It is lightweight (9lbs.), comfortable, and complete with a cigarette or four-pin XLR plug. The L-10 incorporates the Cool-Lux method of voltage-balanced cells, has no memory, and is spaced to allow for recording from a seated position.

Continental Electronics: 80201



The 802D1, a next-generation version of the company's popular 802D, features several new enhancements, including more program source options with the addition of the Tkard option from Intraplex, which provides built-in T1 interfacing. In addition, the company has added an ergonomically improved front panel with better color LCD clarity and more intuitive operator control position, and a synchronization feature allowing frequency locking from external 10MHz references such as a GPS receiver. This feature allows synchronizing two or more transmitters on the same carrier frequency.

214-381-7161;
fax 214-381-4949;
www.contelec.com
Circle (216) on Free Info Card

ADVERTISEMENT

DBMAX

- FIVE BAND DIGITAL BROADCAST MAXIMIZER



Maximize your footprint and get the impact you need with the cleanliness you deserve!

Years of research and experience in digital compression and limiting techniques for CD mastering have led TC Electronic to the development of the five-band DBMAX processor.

The DBMAX was brought to life in close cooperation with chief engineers at broadcast facilities world-wide,

resulting in a powerful broadcasting tool, that easily interfaces with all analog and digital audio broadcast formats.

Used as a Transmission Processor, the DBMAX ensures a louder and more consistent signal, thereby enhancing the signal within the actual coverage area.

Better coverage means you get better ratings, which in turn makes the DBMAX a sound investment!

The DBMAX doubles as a great Production Tool at all resolutions and sample rates, offering optimized program material without the sacrifice of sound quality.

Radio, TV & Film Post Optimizer:

- ◆ Ultimate mastering processing: Louder, crisper, warmer, punchier, more subtle, more spectrally-balanced production
- ◆ 5-band Eq, Dynamic filtering of spot/trouble frequencies, 0 or 90 degree mono summing, MS-decoder etc
- ◆ AES/EBU I/O and sync-input as well as 24 bit AD and DA-converters
- ◆ Full 24 kHz audio bandwidth at 48 kHz sampling frequency

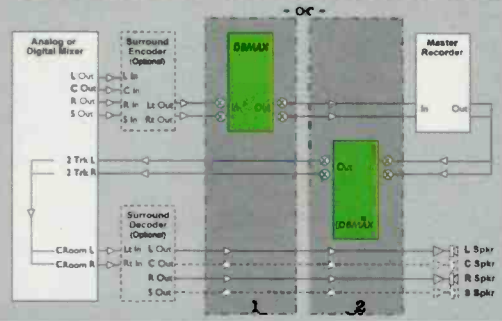
Transmission Processor:

- ◆ Transparent 5-band on-air dynamics processing
- ◆ Presets available for DAB, FM and AM transmission - all pre-programmed and easy to set up
- ◆ Simultaneous AGC, Compressor, Limiter and Soft Clipper
- ◆ Enhanced signal within the broadcast coverage area
- ◆ Various versatile OB-tools (for unattended operation etc)

The DBMAX allows transmission-settings to be copied to the production suites, enabling engineers with a DBMAX to listen to the final transmitted signal during the production phase. For easy transfer and back-up of these transmission settings we've equipped the DBMAX with a PCMCIA-slot.

Finally you can be confident your listeners receive the signal you intended them to!

Put Yourself in the Place of Your Listener



TV or Radio Production & Transmission Emulation

Example of production for DAB, Digital TV and FM

- 1) Production: DBMAX inserted pre-master to optimize production.
- 2) TX Emulation: DBMAX inserted post-master for transmission emulation

t.c. electronic
ULTIMATE SOUND MACHINES



TC ELECTRONIC INC., 790-H HAMPSHIRE ROAD, WESTLAKE VILLAGE, CA 91361, USA · PHONE: (805) 373 1828 · FAX: (805) 379 2648
EMAIL: INFOUS@TCELECTRONIC.COM · HTTP://WWW.TCELECTRONIC.COM/DBMAX
TC ELECTRONIC A/S, SINDALSVEJ 34, DK-8240 RISSKOV, DENMARK · PHONE: + 45 8621 7599 · FAX: + 45 8621 7598

Circle (27) on Free Info Card

Leitch, Inc.: 64x64 Family Routers

Configured up to 64x64, these routers are serial digital and analog audio capable, allowing users to mix formats and to feed in coax or fiber. The family is modular and features hot-swappable power and logic cards, as well as backward compatibility to all Leitch products. All versions expand from 32x32 to 64x64 in a 4RU frame and to 128x64 in a 6RU frame.

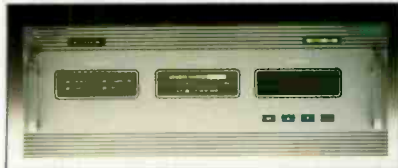
800-231-9673;
fax 757-548-4088;
www.leitch.com
Circle (217) on Free Info Card

OC White/Harris: Audio Metrics mic arm



▲ Now available with a counter balance that will support up to an eight-pound microphone, the Audio Metrics mic arm permits the microphone of your choice to reach out to where the action is. Available with several mounting options, the arm is available in black or beige.

217-222-8200;
fax 217-224-1439;
www.broadcastharris.com
Circle (218) on Free Info Card



Harris DIGIT® CD Digital FM Exciter

- Industry standard - over 1000 units on-the-air.
- True 16-bit CD-quality sound makes your station stand out on the dial.
- Digital input module offers digital stereo generation and a digital composite limiter which can be used to maximize loudness.
- Second generation features include: New benchmark for digital exciter sound quality, synchronous AM noise reduction circuitry and GPS lock option for carrier frequency synchronization.
- Field changeable analog or digital input modules.

Circle (93) on Free Info Card



Orban Audicity™ Digital Audio Workstation

- RAM-based editing and mixing.
- Unrivaled speed.
- Built-in effects including compression, EQ, and reverb.
- Video version with advanced SMPTE features.
- Automatic back-up on hard disk or removable Jaz drive.

Circle (97) on Free Info Card



Orban AirTime™ Digital Delivery System

- Multi-user, multi-tasking real-time QNX system.
- Familiar user-friendly interfaces provide a low learning curve.
- Quick and easy installation.
- Get Orban quality, service, and stability from the makers of Optimod.

Circle (98) on Free Info Card

Harris Platinum Series® ZCD Solid State FM Transmitters

- Digital solid-state FM efficiency and reliability at vacuum tube prices.
- True CD sound with DIGIT® CD Digital FM Exciter.



- World leader in FM transmitter redundancy...even offers built-in second exciter capability.
- Revolutionary Z-Plane combiner offers hot pluggable modules and maximizes RF output power under fault conditions.

- Field proven design with units installed around the world.
- Harris Platinum ZCD Series now available in 2, 3.5, 5, 7.5, 10 and 20 kW models.

Circle (99) on Free Info Card



Harris DX Series Digital Solid State Medium Wave Transmitters

- Module MTBF over 6-million hours.
- Major cost savings...efficiency to 86%.
- Loudest, cleanest digital FM-like sound.
- The global industry standard.

Circle (94) on Free Info Card



Harris DRC2000 Digital Radio Console

- Easy to install and use.
- Six powerful SHARC DSPs.
- Completely user-configurable.
- 5-band parametric EQ per channel.
- 7 digit output busses standard.
- Analog inputs optional.

Circle (95) on Free Info Card



Harris CD LINK™ 950 MHz Uncompressed Digital STL

- Provides uncompressed 950 MHz digital STL.
- Proven - on-the-air nationwide including the top ADIs.
- Avoid "lossy compression" or the possibility of cascading compression algorithms which can distort your station's sound.
- Less expensive than T1, lowest cost bit-for-bit audio transport.
- Provides added fade margin for existing analog STLs.
- Designed to easily replace analog STL systems with digital performance.

Circle (96) on Free Info Card

DIGITAL FM TRANSMITTERS
Someday They'll Wonder How We Did It!



Platinum Z Solid-State FM Transmitters.

"Here for future generations"

The Platinum Z may just be the eighth wonder of the world!

Phenomenal CD-quality sound is provided by true digital FM generation. The **Platinum Z** provides the reliability of solid-state digital technology, the performance of digital modulation, and the confidence of third generation solid-state amplifier technology.

Platinum Z transmitters also use innovative Z-plane combining, which enable seamless transmission during maintenance & enhances redundancy. If you remove a hot-pluggable RF module from a **Platinum Z** transmitter at any time, for any reason, the remaining modules will compensate to continue broadcasting at nearly, full power. Incredible RF module MTBF of 250,000 hours further ensures the reliable performance of **Platinum Z**.

Digital CD-quality performance...solid-state reliability & redundancy...with a price comparable to tube type transmitters.



Platinum Z features:

- Digit CD exciter (digital or analog input)
- Hot-pluggable RF modules
- Redundant IPA system
- Redundant power supplies
- Broadband design (N+1 capable)
- Life support backup controller
- Dual output power switching
- Built-in auto exciter switcher
- High/overall efficiency

If your wondering how the **Platinum Z** will fit in your budget or how your listeners and your ratings will increase... Stop wondering and give us a call!



Harris Platinum Z Transmitters®.
Harris does not recommend stacking or leaving the Platinum Z out in the weather.
 * Shown with optional second DIGIT CD™ exciter.

HARRIS CORPORATION BROADCAST DIVISION

U.S. and Canada
 TEL:+1 217 222-8200
 FAX:+1 217 224-1439
 Elsewhere
 TEL:+1 217 222-8290
 FAX:+1 217 224-2764

<http://www.broadcast.harris.com>



A new world of broadcast solutions

Radio-FM: DIGIT™ Digital FM Exciter • SuperCiter™ Analog FM Exciter • CD LINK™ Digital STL • Quest Platinum and Platinum Z Solid State FM Transmitters • HT Single-tube FM Transmitters • FM Antennas **Radio-AM:** DX Digital Solid State AM Transmitters • GATES® Solid State AM Transmitters **Radio DAB:** DAB 2000 Transmitters **Studio Products:** Digital and Analog Studio Equipment **Systems:** Mobile and Fixed Studio and Satellite Systems

Circle (36) on Free Info Card

Avocet Instruments: AV-2000



◀ With so many remotes being done using digital transmission, the need for creating a mix-minus return feed is essential for success. Some-

times creating a mix-minus is not easy or practical. The Avocet Instruments AV-2000 uses DSP to remove the local audio from a program feed to create a mix-minus automatically. The AV-2000 will calculate the time differential up to 800ms, and then suppress the returned local audio, typically up to 40dB. Front panel indications for audio and delay correlation let the user see what is happening.

800-443-0728; fax 503-671-9626; www.avocetinst.com

Circle (219) on Free Info Card

Otari: Radar II



◀ The RADAR II HDR series is a multitrack hard-disk recorder capable of 24-bit/48kHz operation. Supplied with a 9GB removable hard drive, the unit provides 42 minutes of 24-track record capacity. Longer record times are available by adding a hard drive internally, or by adding multiple drives on the external SCSI port. Multiple units can be interlocked to provide full 48-track operation via a single RE-8II remote. Optional 48-track metering is also offered. Its sampling rate is variable between 32 and 48kHz. Varispeed, MIDI I/O and RS-422 serial control are also standard, making interfacing with existing studio equipment simple. Other features include 8mm-tape backup, backward compatibility to RADARI, and user-definable macro keys.

650-341-5900;
fax 650-341-7200;
e-mail sales@otari.com;
www.otari.com
Circle (220) on Free Info Card

ADVERTISEMENT



'Two roads diverged' . . . until now.

Network programming is lifeblood to radio. Yet it can also strain the relationship between network and affiliates. One seeks control; the other desires freedom. The two roads diverged.

Until SpectraCast® that is. SpectraCast consists of powerful tools for satellite network content delivery. Best of all, SpectraCast delivers Controlled Freedom™.

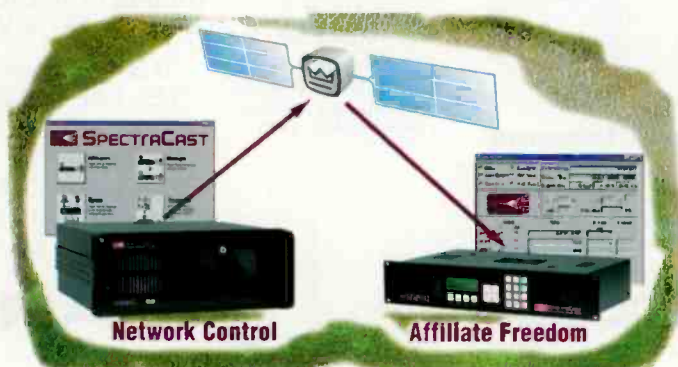
Networks find control in the DTAB1000 transport multiplexer, an MPEG-2 and DVB-compliant device, and its intuitive network management and control software. There's no more efficient way to deliver

multiple audio streams in a broadcast mode to selected affiliates.

Affiliates discover freedom in the DR2000 integrated receiver decoder and its intuitive monitor and control software. The DR2000 integrates a demultiplexer with modular RF tuners, multiple stereo decoders, mixer/faders, and even on-board memory for local program store and forward.

This end-to-end solution is available for your network today. Choose the road less traveled—Controlled Freedom from Crown.

Network delivery solutions for multimedia, audio, and data via satellite.



SpectraCast is a registered trademark and Controlled Freedom is a trademark of Crown Satellite.



800-598-6270 or 219-294-8143

Fax: 219-294-8120;

Email: spectracast@crownsat.com;

Web: www.crownsat.com

Circle (37) on Free Info Card



▲ The Scoop Reporter II is a lightweight, portable audio codec offering two transmission modes – POTS, utilizing the CELP algorithm, and ISDN, with the ITU-T G.722 and MPEG-2 audio Layer II algorithms. Depending on what is being transmitted, the unit is capable of three levels of operational quality. Live speech is facilitated at 7kHz with low delay, live music at 15kHz with proprietary low delay, and CD-quality music at 20kHz. Two packagings are available, a lightweight, portable box and a 19" / 1RU frame.

+33 1 41 36 12 12;
fax +33 1 41 36 12 13;
www.aeta.com

Circle (221) on Free Info Card



Celebrating its seventh year of service, Satellite Systems offers prompt, accurate pre- and post-service technical support, along with a six-month warranty for the Dart 384 or the Scientific Atlanta 7300/7325.

719-634-6319;
fax 719-635-8151

Circle (222) on Free Info Card

MS1402-VLZ

Pristine mic preamps, natural EQ, beaucoup exclusive features, astonishing headroom, an extra stereo bus... and tens of thousands of enthusiastic owners.

■ "Great mixer. Really cleaned up the sound of my recording and has done a great job live mixing keyboards with the band and as my main mixer on solo and duo gigs." (J.S., Martinez, GA)

■ "Finally, a lightweight/compact mixer loaded with practical features that delivers clean, no-noise sound!" (R.B., Franklin, WI)

■ "Beautiful layout and the smoothest faders I've ever seen in a compact mixer." (B.L., Cedar Hill, TX)

■ "Great product. Clean sound. Live recordings are great!" (D.L., Denton, TX)

■ "I really like the Control Room mixing and Alt 3-4." (R.P., Fort Lee, NJ)

■ "I am greatly impressed with the very low noise of the mic preamps." (T.T., Belair, SA)

■ "I really dig all the features you pack into such a small price. My 1402 was really easy to get into and use." (R.R., Murray, UT)

■ "I didn't believe the hype until I bought an MS1402-VLZ. NOW I believe the hype." (J.C., Toronto, ON)

■ "Sure like that 'stereo solo in place' feature. Also, headroom is great with lotsa presence." (L.S., Forest Grove, OR)

■ "You've heard it all before, I'm sure. Great product. Great price. Options and versatility out the wazoo, from hardware design right down to panel labeling." (J.H., Ithaca, NY)

■ "I really like the EQ points you've chosen and the EQ curves." (B.M., Lanseshore, MA)

■ "Plastic mixers can break easily. The MS1402 is made of metal!" (M.S., Shorewood, IL)

■ "I will be using the MS1402 to track all keyboards on MANDBWDWTTWEL* for Atlantic Records." (R.H., New York, NY)

*Major act, name deleted because we don't want to tangle with entertainment lawyers.

■ **6 mic preamps.** The same high headroom, ultra-low noise (-129.5 dBm E.I.N.) preamps used in our 8-Bus studio consoles.

■ **6 mono and 4 stereo line level inputs.**

■ **2 aux sends per channel.**

■ **Low Cut Filter** lets you use LF EQ without boosting mic thumps, room rumble, and P-pops, or losing audible low bass. Exclusive Mackie circuitry.

■ **Trim** with -10dB "virtual pad" and 60dB total gain range.

■ **EFX to Monitor switch** folds reverb or other effects back into the Aux 1 stage monitor feed. Another Mackie exclusive.

■ "The Alt 3-4/Mute is ingenious!" (B.L., Cedar Hill, TX)

■ "On my test run — a live acoustic show — I was impressed by the quiet and user friendliness of the MS1402-VLZ. The audience was also impressed with its crystal clarity." (F.A., Bloomington, IL)

■ "The 'RUDE' solo light is certainly that, but you never have to worry about leaving it on by mistake." (L.B., Winnipeg, LB)

■ "The Low Cut button is a big help in cutting boomy stuff when running big bass and arch-top guitar live." (G.S., Kirkland, WA)

■ "The quality of the EQ is amazing! I was blown away by the tone and clarity." (J.D., Pomeret, CA)

■ "The MS1402-VLZ is great — excellent specs (I teach audio engineering) and really clever routing options." (J.P., Los Angeles, CA)

■ "What I heard when I hooked up my MS1402-VLZ was exactly what I wanted to hear. Nothing. Cleanest mixer I have ever worked with." (R.S., Fergus Falls, MN)

■ "The 1402 RULES! People all the time come and tell me how wonderful the sound is." (P.F., Cincinnati, OH)

■ "It survived and played through a glass of iced tea spilled all over it at a fashion show for a very important client of mine. Show was perfect. Client paid. I'm buying more Mackie." (H., Houston, TX)

■ "I do work as a Senior Executive Producer for [major classical music label]. The MS1402 was highly recommended by several studio engineers." (S.E., NY, NY)

■ "Great product!" (C.B., San Francisco, CA)



■ **Pre/Post Aux 1 mode switch.**

■ **2 master aux returns.**

■ **Balanced XLR outputs switch** between mic & line levels. Bal/unbal 1/4" TRS outputs, too.

■ **3-band EQ.** Others may have copied our EQ band centers but not the clean, musical sound of our unique circuit design.



■ **Solid steel chassis.**

■ **Constant loudness pan control** for precise stereo mixes.

■ **Alt 3-4.** The MS1402-VLZ's Mute button is really a second stereo bus in disguise. A Mackie exclusive.

■ **60mm faders** with true log taper for accurate fades throughout the controls' travel.

■ **Easy level setting via LED display; in-place stereo solo feature** maximizes headroom & minimizes noise.

■ **Control Room/Phones switching matrix** and separate volume control lets you submix, feed multi-track tape machines, create separate monitor mixes, preview channels, and much more. A Mackie Designs exclusive.

■ **AFL/PFL solo mode switch.**

MACKIE

All products made in Woodinville USA by certified Mackoids
Toll-Free in the US, 800/898-3211 • Int'l. 206/487-4333
E-mail: sales@mackie.com • www.mackie.com • NASDAQ: MKIE



Photo: A group of the band folks who work at Mackie Design in Woodinville, WA, 20 miles north of Seattle.

TecNec: On the Level



◀ On the Level audio interfaces are designed to interface semi-pro, industrial, and audio interfaces such as cassette players, CDs, turntables or similar unbalanced equipment to interface with professional balanced 600Ω audio inputs. These interfaces are enclosed in heavy-duty steel boxes, road ready for your next project. The rugged design allows for the day-to-day abuse of installers and contractors.

800-543-0909; fax 914-246-0626; e-mail tec nec@tec nec.com;
www.tec nec.com
 Circle (223) on Free Info Card

Canare: TS100E



◀ The preparation of coaxial cable can be a cumbersome task. Standard stripping tools often nick or cut into the outer shield. The TS100E has three circular blades that precisely and cleanly prepare the cable. The self-cleaning blades are easily replaced and are provided in a cassette handler. One blade cuts down to the center conductor, another cuts the outer jacket, and the third slits the jacket for easy removal, while a window lets you observe the action in progress. The hardened, surgical-steel blades can perform approximately 1000 operations. Five cable

presets allow fast preparations and the TS100E can accept coaxial cable in a range of sizes up to RG-6 and RG-11.

818-365-2446;
 fax 818-365-0479;
www.canare.com
 Circle (224) on Free Info Card

ADVERTISEMENT

Confiability with Life Time Warranty

EDUCATIONAL CIRCULAR SERIES

Model	Bays	Power	Gain	Price
MP-1	1	600W	-3.3	\$250
MP-2	2	800W	0	\$680
MP-3	3	800W	1.4	\$980
MP-4	4	800W	3.3	\$1,280
MP-2-4	4	2,000W	3.3	\$1,820
MP-3-5	5	3,000W	4.1	\$2,270
MP-3-6	6	3,000W	5.2	\$2,740

LOW POWER CIRCULAR SERIES

Model	Bays	Power	Gain	Price
GP-1	1	2,000W	-3.1	\$350
GP-2	2	4,000W	0	\$1,350
GP-3	3	6,000W	1.5	\$1,900
GP-4	4	6,000W	3.4	\$2,600
GP-5	5	6,000W	4.3	\$3,150
GP-6	6	6,000W	5.5	\$3,700

MEDIUM POWER CIRCULAR SERIES

Model	Bays	Power	Gain	Price
SGP-1	1	4,000W	-3.3	\$690
SGP-2	2	8,000W	0	\$2,690
SGP-3	3	10,000W	1.4	\$3,595
SGP-4	4	10,000W	3.3	\$4,500
SGP-5	5	10,000W	4.1	\$5,300
SGP-6	6	10,000W	5.2	\$6,100

The antenna gain may vary with the frequency. For powers up to 20KW please, make the request to provide the specific configuration.

OMB also Manufactures:
 FM transmitters
 TV transmitters
 FM and TV Links
 TV antennas
 Medium power FM antennas
 Connectors



OMB America
 3100 NW 72 Ave #112
 Miami, Florida 33122
 Phone: 305-477 0974
 Fax: 305-4770611
 Toll free: 888-OMB4USA

Circle (39) on Free Info Card

Extron: Matrix Switchers



▲ Extron recently introduced the Matrix 6400 and 3200 series switchers for large-scale routing applications that require up to 64 I/Os. Each allows for 16x8 switching upgradable to 32x32 or 64x64 routing applications. With modular internal busing card slots ready to be filled as needed, the Matrix 6400 switchers will grow to accommodate any system – even systems that are still expanding. Using a feature called “rooming,” each switcher can be programmed to function as several small, independent matrix switchers. With 10 presets per room with a total of 100 rooming presets, the units allow superior flexibility and control in routing signals. With a bandwidth of 230MHz (-3dB) fully loaded, the switchers maintain the integrity of any signal.

800-633-9876;
 fax 714-491-1517;
 e-mail support
 @extron.com;
www.extron.com
 Circle (225) on Free Info Card

Meet the "Morning Show Team"



Instant music, instant sound effects, instant fun.

- Holds up to 1,000 "carts" of any length, from milliseconds to hours.
- 10 banks of 50 programmable Hot Keys. It's like having 50 cart machines pre-loaded and ready to fire.
- Up to 24 hours of total on-line audio storage.
- "Find" button locates any cut instantly.

There is nothing faster, easier, or cooler! You can finally let go of your analog cart machines and associated maintenance headaches. Or, if you're running automation, now you have the perfect compliment for those times when you need to play something, and you need it now.

Instant Replay[®] 2.0

HARD DISK DIGITAL AUDIO

Fast and easy editing for news and listener call-ins.

- Instant record feature captures incoming audio manually, or from popular phone systems and network downlinks.
- Real cut/copy/paste editing with a large waveform display.
- Portable enclosure includes speakers and mic preamp; great for remotes.
- No razor blades, no tape, no learning curve, and no maintenance!

Now you can quickly capture and edit incoming audio. Realistic "scrub" editing, plus standard tape machine controls let you kiss your reel-to-reel machines goodbye.

Ask for a test drive and put them through their paces at your station. It's on us.



Short/cut[™]

PERSONAL AUDIO EDITOR



Attention call letter stations.* You're only a phone call away from a free 10-day Test Drive. So try it out. We'll understand if you don't give it back.

(818) 991-0360

360 Systems[®]

PROFESSIONAL DIGITAL AUDIO

For more information call (818) 991-0360 / Fax (818) 991-1360 / e-mail: info@360systems.com / Website: www.360systems.com

*Offer good in U.S. and Canada only.

Circle (48) on Free Info Card

RadioShack: Weather radio

Weather radio offers built-in support for the Nation Oceanic and Atmospheric Administration's Specific Area Message Encoding (SAME) system that sends alert signal for specific county locations. Unit's programmable memory can be set to receive alerts for up to 15 counties in your area, and features automatic voice mode switching after an alert tone. Additional features include a digital display showing the type of alert being issued, 40-mile range depending on local terrain, an input jack for use with an optional antenna in more remote areas, and a back-up battery system in case of power failure.

817-415-3200; fax 817-415-324;

e-mail rscusrel101@tandy.com; www.radioshack.com

Circle [226] on Free Info Card



Dorrough: PLM-120



Stable electrical power is essential in any plant. The Dorrough PLM-120, available in a desktop or rack-mount package, can capture, log and alarm for all violations of the Computer and Business Machine Manufacturer's Association. The AC line voltage is sampled 3840 times per second, capturing transients as short as 5µs. With an RMS voltage range of 96 to 135V, the unit also monitors overvoltage conditions and frequency and phase changes. All records are kept in non-volatile memory, and an RS-232-C port allows for download of all logs. All alarm points are user-selectable. Available in 115 or 220VAC nominal voltage versions, it is also self-calibrating and temperature independent.

818-998-2824;

fax 818-998-1507;

e-mail

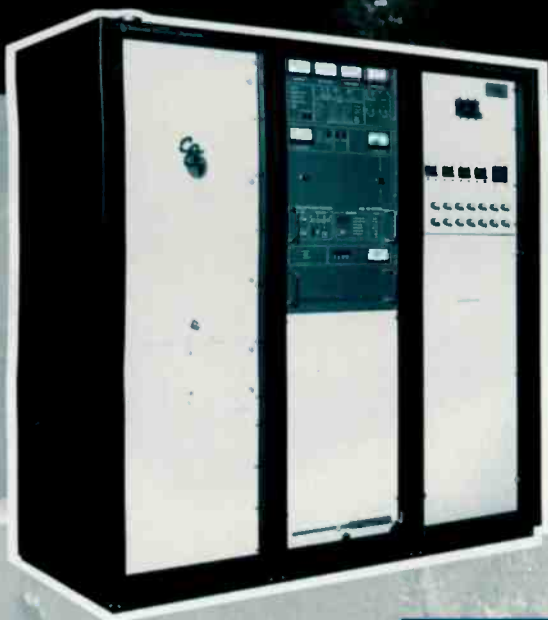
dorroughel@aol.com;

www.dorrough.com

Circle [227] on Free Info Card

ADVERTISEMENT

SATISFY YOUR TASTE FOR THE BEST



Known throughout the world as the best performing, most reliable FM transmitters available, Continental's 816R Series combines superior design and audio quality with exceptional workmanship to give broadcasters an unmatched, field-proven record.

The 816R Series comes in power levels from 10 to 70 kW. Available as an option is an internal control and monitoring unit which tracks trends stores data and provides an exact visual replica of the transmitter's control panel.

STANDARD FEATURES

- Solid-State IPA
- Internal Harmonic Filter
- Automatic Power Level Control
- Automatic Filament Voltage Regulation
- Exclusive "Soft-Start™" Protection Circuit
- Broadband Quarter Wave Cavity
- Totally Self-Contained In a Single Cabinet

For over 50 years, Continental Electronics has provided excellence in broadcast transmission products worldwide. Refuse to compromise... call Continental first!



Continental Electronics Corporation

P.O. BOX 270879 • DALLAS, TEXAS 75227-0879 • 214-381-7161 • FAX: 214-381-3250

800-733-5011

Visit our web site — <http://www.contelec.com>

9.97.118

Circle 49 on Free Info Card

Energy-Onix: Legend Series C

The broadband design of the Legend Series C makes it a perfect choice as a main transmitter or as a back-up for multiple stations in a single market. These medium power, solid state FM units are supplied with frequency-agile exciters, so a frequency change requires only a simple dial-in procedure on the exciter front panel. The hot-pluggable 1000W drawer can be safely removed or inserted while the unit is on-air. The transmitter will continue to operate at reduced power even with a PA drawer removed. Each Motorola MRF151G mosfet used in the transmitter is protected by its own thermal protection circuitry. In addition, each 1kW amplifier is also protected by a VSWR foldback circuit. Units are available in 2000, 3000, 4000 and 5000W models. 10,000 and 20,000W models are also available through special order.

518-758-1690;

fax 518-758-1476;

e-mail energy-onix@energy-onix.com;

www.energy-onix.com

Circle [228] on Free Info Card



Radio Has
Changed
A Lot In
70 Years.

Neumann Has Been The First Choice From The Beginning.

Since the early days of radio, Neumann has been the leader in broadcast audio microphones. We have continued to evolve, developing new products with a single purpose in mind – capturing all the nuances of the human voice.

Our new TLM 103 gives you the full, rich sound and natural presence Neumann is famous for. Utilizing a large-diaphragm capsule derived from our world-standard U 87, it has the lowest self-noise of any condenser mic in the world – important in today's low-noise and digital broadcast environments.

And now, having a Neumann as part of your sound has never been easier...for less than \$1000 US, you can acquire the most important piece of equipment you'll ever use.

Upgrade to the real thing – Neumann...
the choice of those who can hear the difference.



NeumannUSA
One Enterprise Drive • PO Box 987, Old Lyme, CT 06371 Tel: 860.434.5220 • FAX: 860.434.3148
West Coast: Tel: 818.845.8815 • FAX: 818.845.7140
Canada: Tel: 514-426-3013 • FAX: 514-426-3953 • Mexico: Tel: 52-5-639-0956 • Fax: 52-5-639-9482
World Wide Web: <http://www.neumannusa.com>

Circle (50) on Free Info Card





MediaFORM: CD-5300

◀ A leader in CD replication, MediaFORM has introduced the CD-5300 CD2CD/Plus CD-R replicator. This stand-alone system is capable of producing three CDs simultaneously without the need of a PC. It can also be expanded to a total of seven copy bays with the optional expansion unit. The simple, one-button operation can copy a full 74 minute CD in 18 minutes. It will also interface with a PC to work with CD

mastering software. The Easi-DAT or Easi-Audio option can be added for audio applications. Also available from MediaFORM are the CD-5900 and CD-3707 CD copiers.

610-458-9200; fax 610-458-9554; e-mail info@mediaform.com;

www.mediaform.com

Circle [229] on Free Info Card



Crown Satellite: SpectraCast DR2000



64kb/s to 45Mb/s. In operation, the unit permits a radio affiliate to receive multiple network audio feeds from the same receiver and to record and play commercials, liners, PSAs, IDs and even short-format programs.

800-598-6270; fax 219-294-8120; e-mail spectracast@crowntel.com;

www.crownsat.com

Circle [230] on Free Info Card



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 co-axial BNC fitting to go directly into the FM exciter, and a four-line, 40-character backlit LCD display for rapid interpretation of alert mes-

sages. Alert messages can also 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 either the keypad on the unit, or with a remote pushbutton in the on-air control room.

614-593-3150;

fax 614-592-3898;

www.gorman-redlich.com

Circle [231] on Free Info Card

ADVERTISEMENT

A.E.T.A. SCOOP REPORTER MKII P.O.T.S. CODEC



Rock Solid Remote Connections.

Are your remote connections important? You bet they are! Keep your live feed active with the highest standards possible. Use the new Scoop Reporter MKII manufactured by A.E.T.A. This new generation of P.O.T.S. (Plain Old Telephone Standard) codec supplies rock solid quality to all of your remote connections.

Tired of long delays in your remote? User-selectable delay modes down to 150 ms that are a standard feature on the



The Scoop Reporter MKII by A.E.T.A. available exclusively from Harris.

Scoop MK II offer you a choice when it comes to bidirectional communications.

When news feed and remote broadcasts are important to your organization, get the Rock Solid

Solution. Why risk it? Try the Rock Solid A.E.T.A. Scoop Reporter MK II codec today.

Call Harris for information and special pricing.

**HARRIS CORPORATION
BROADCAST DIVISION**

TEL: 1-800-622-0022

FAX: 765-966-0623

www.broadcast.harris.com

HARRIS

A new world of broadcast solutions



Mouser Purchasing Manual 595 offers a complete list of the dealer's product lines, including heat sinks/semiconductors/crystals, optos/lamps/LEDs, wire and cable, connectors and sockets, resistors, potentiometers, capacitors, fans and power supplies, transformers and inductors, switches and relays, speakers and microphones, batteries and holders, fuses and holders, panel meters and cabinets, knobs and hardware, equipment and tools, and kits. All orders ship same day, there is no minimum order, and on-line ordering is available.

800-346-6873;

e-mail sales@mouser.com;

www.mouser.com

Circle [232] on Free Info Card

©1998 Harris Corp.

Circle 100 on Free Info Card



DIGITAL MUSIC EXPRESS®

DMX SELECTS MEDIATOUCH FOR DIGITAL AUDIO DELIVERY SYSTEMS



MediaTouch

Advanced software technology signifies a new era for DMX and creates one of the world's largest digitized music libraries

Las Vegas, Nevada - April 8, 1998 - DMX Inc., a division of TCI Music Inc., and MediaTouch, a division of OMT Technologies Inc., signed an agreement today for the design and development of custom software solutions for DMX's worldwide network of digital audio file server studios, that will advance DMX's delivery of CD-quality music programming to businesses and homes internationally.

In 1994 DMX became the first company to deliver a digital music service using Dolby AC-3?, and as a result quickly became a digital technology leader. The MediaTouch relationship continues DMX's leadership position by developing new and expanded digital file server studios and software technology for delivering DMX music services. This new digital audio delivery system will provide automated broadcasting beyond the current 95 DMX music formats and hard disk storage management of over 600,000 music titles, creating one of the world's largest libraries of digitized music. The ability to digitally store and catalog music titles provides DMX with increased programming flexibility and expanded capability for program development. In addition, the digital file server studio is the first step in DMX becoming a worldwide point to point distributor of digital audio through the Internet, eliminating the logistics and costs associated with satellite and other distribution methods.

"DMX is extremely pleased to be associated with a progressive software company like MediaTouch," said Lon Troxel, president and CEO of DMX Inc. "This new technology has allowed DMX to develop our digital file server studio, the 'engine' that will drive future digital distribution of DMX in new and unprecedented ways to both the consumer and commercial markets. The digital file server studio is the beginning of a new era for DMX."

MediaTouch was one of the pioneers in developing software for hard disk playback. They were selected by DMX because of their prestigious track record in software development. DMX has been using MediaTouch technology since the fall of 1997 when they began distributing three French Canadian channels to the Canadian marketplace via DMX's direct broadcast satellite (DBS) system. MediaTouch also had the capability to customize their proprietary software specifically for the unique programming requirements of DMX - including providing the title, track and artist information of each song playing through DMX's DJ remote control.

"DMX and MediaTouch have both been the leaders in their field, so this is a natural partnership to create advanced software solutions to further expand the direction of both companies" said Scott Farr, vice president of MediaTouch. "We anticipate this announcement to be the beginning of a long and productive relationship."

DMX's digital audio studios are located in TCI's National Digital Television Center in Littleton, Colorado. Final integration of the MediaTouch software will occur within a month, with complete conversion to the digital file studio server anticipated in May. There will be no interruption of service to current DMX customers.

DMX currently offers more than 95 channels of CD-quality stereo music programming. Each program features 24 hours a day of music in specific styles, including piano, lite classical, modern country, classic rock, jazz vocal blends, hit sweep, mariachi, beach party, '70s hits as well as specialty programs such as Hawaiian, environmental sounds, Christian inspirational and a wide variety of international programming. Each DMX program is continuously updated by DMX's extensive programming

staff to keep the music fresh and current.

DMX Inc., a wholly owned subsidiary of TCI Music Inc., ("TCI Music") (Nasdaq SmallCap Market: TUNE/TUNEP), programs, markets and distributes its premium digital music service, Digital Music Express. The service is available on four continents and is provided to over 2.7 million homes and approximately 50,000 businesses internationally, making it the most widely available music service in the world.

For more information about DMX, access the company's World Wide Web site at www.dmxmusic.com.

Since 1984, MediaTouch has been designing and developing innovative audio solutions for the broadcasting industry. MediaTouch is the audio and Internet software development division of OMT Technologies Inc., a privately held company founded in 1968 and based in Winnipeg, Canada.

MediaTouch's work for DMX underscores the company's creativity and flexibility in delivering solutions for its clients. From a single stand-alone station to a Super Dupoly connected to a Wide Area Audio Network™, MediaTouch provides quality software that helps radio run more efficiently. For more information about MediaTouch, access the company's World Wide Web site at www.omt.net.

MediaTouch
INTRODUCES
OpLOG

Sunday Feb 1, 1998 11:07 On Hand: 20:18

THE TOUCH LEGAL ID 00:00:00 REAL 23:48:20 RUN: 00:04 07/22	Playing SND9000	MOVE	BEST MUSIC	RETRO LUNCH	RETRO CONTIN	GRANT (KRUST)
SPICE GIRLS - SAY YOU'LL BE TH 00:00:05 REAL 23:48:25 RUN: 03:55 1/7/22	Playing MHD2001	KILL 00:27	THE TOUCH	CLASSI CUT ID	LEGAL ID	HAN SCOR
BOBBY BROWN - MY PEROGATIVE 00:05:51 REAL 23:52:20 RUN: 04:46 2/7/22	Ready MHD299	AUD 00:00	STARS HALO	LITTLE RAS...L	DAFFY/ DISPCA	FUDD/H WABBIT
RETRO CLASSIC ID 00:08:27 REAL 23:57:06 RUN: 00:05 3/7/22	Ready SND6000	SEE 00:00	SAM/DI LIVIN'	BUGS/D	BUGS/W UP DOC	BUGS/W DOC
MR MISTER - BROKEN WINGS 00:08:37 REAL 23:57:12 RUN: 04:37 4/7/22	Ready MRT2007	AUD 0:00	APU/TH YOU FO	CHEIF WIGAM/	HOMER DOH	KRUSTY CRAP!
XMAS SONG INTRO 00:12:14 REAL 00:01:49 RUN: 00:06 5/7/22	Ready SND7000	AUD 00:00	WILLY	APU/TW	WILLY/ BUTTER	HOMER/ KEY
PERRY COMO - HOME FOR THE HOL 00:15:24 REAL 00:01:56 RUN: 02:57 6/7/22	Ready MXS1600	SEE 00:00	About Op2000	Play	Quit Op2000	Done

DEL FADE BOT UP DOWN BREAK INFO About Op2000 Play Quit Op2000 Done

To arrange an on site demo at your station:
Call 1-800-636-0123



2480 S.E. 52nd Street
Ocala, Florida 34480-7500
Tel: 1-352-622-7700
Fax: 1-352-629-7000

Watch our web site as details on OpLOG-2000 are released at www.omt.net

Windows 95 and Windows NT are trademarks of Microsoft Corporation.



Specifically designed for the unique demands of digital audio and webcasting, the DAB 6200 offers Protection Processing, providing peak control without audible compression; Two-Band Processing, which controls dynamic range while maintaining the frequency balance of the original program; and Five-Band Processing, with a flexible set

of equalization controls that let a broadcaster create a signature sound. The unit provides peak level control to an accuracy of better than 0.1dB, and an array of filtering choices to prevent aliasing, including filtering as low as 4kHz to accommodate speech-grade services. Other Optimod-DAB 6200 features include digital I/O at 48, 44.1 and 32kHz, a dedicated external digital sync input for house reference signal, analog balanced left and right inputs, an analog monitor output, and a compact 2RU design.

510-351-3500; fax 510-351-0500; www.orban.com

Circle (233) on Free Info Card



The Vector, a 1998 BE Radio NAB Pick Hit winner, delivers 15kHz, two-way audio on a standard phone line at a realistic 24kb/s. It's compatible with the popular HotLine codec, but incorporates a higher level coding algorithm that permits wider bandwidth audio at lower data speeds. Even on a 14.4 kb/s connection, the Vector still gives 7kHz audio. The unit contains

plenty of mixing and monitoring facilities, including: three mic level inputs on XLR with the third input being switchable to line level; inputs that can be muted with a front panel push switch; three headphone outputs on 1/4" phone jacks, and; outputs that are an adjustable mix of local program and studio return audio. Other Vector features include a quick-dial memory feature allowing one-button dialing, last-number memory and redial at the push of a button, and the ability to answer calls automatically or manually.

800-237-1776; fax 978-635-0401; fax on demand 978-264-9973;

e-mail info@comrex.com; www.comrex.com

Circle (234) on Free Info Card

ADVERTISEMENT

To grow in broadcasting you need time, money, guts, and Intraplex.



Your new acquisition is finally signed, now you need to operate profitably. Consolidate your program audio, LAN/WAN network, phones, faxes, traffic and billing on one single high quality digital line. The Intraplex STL PLUS gives you integrated two-way transmission over any distance, over any terrain at a fraction of the cost of individual communications links. It's bi-directional, so you can receive audio backhaul at the same time. What's more, you can stay in touch without running up the long distance phone bill. That's why more groups choose Intraplex than any other digital transmission solution. Call us at 978-692-9000 or visit our web site at www.intraplex.com.

The STL PLUS T1 System transmits program audio for STLs, TSLs and inter-city links, data for remote control and LANs, and voice for off-premise extensions and intercom.



Intraplex

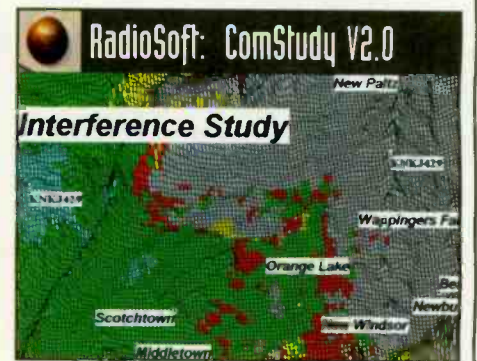
Intraplex, Inc.
3 Liberty Way
Westford, MA 01886
978.692.9000
978.692.2200 fax
<http://www.intraplex.com>

Circle (59) on Free Info Card



ACID is a software program facilitating a powerful multi-track audio editor with loop audio processing functions behind an easy-to-use GUI. Users are able to take audio files from a variety of sources and easily create seamless loops with precisely matched tempo and pitch to produce music for use anywhere a music bed is required. The package ships with hundreds of pre-recorded loops of differing formats, instruments and sounds, including rock, country, hip-hop, alternative, sound-effects, and ambient sounds. 800-57-SONIC; fax 608-256-7300; e-mail sales@sonicfoundry.com; www.sonicfoundry.com

Circle (235) on Free Info Card



Improvements to this analyzing and mapping software include database management of transmitter lists and matrix studies, full implementation of the new U.S. and international interference methods, and highly optimized 32-bit coding. 888-RADIO95; fax 904-423-0821; e-mail pmoncure@america.com; www.radiosoft.com

Circle (236) on Free Info Card



These fully modular systems use stock furniture components and accessories to form an endless variety of studio design options. This allows the tailoring of the furniture to match any space, equipment or storage requirements without the custom furniture price tag. The AFS series has a clean and nearly seamless design with no visible screws or bolts. Standard features include equipment racks and quick release

access doors in every cabinet side panel, wood trim to protect all outside edges, a single-level work surface, finished cabinet interiors, and wire/ventilation holes in each cabinet. The AFS-E series is built with the same materials and precision as the AFS series, but with fewer features. These changes allow you to purchase the basic studio furniture while paying for only the features you really need.

970-663-4123; fax 970-663-6338; e-mail afs@mail.omn.com;

www.omn.com/afs

Circle (237) on Free Info Card



From the first commercial C-band LNB in 1984, until today, Norsat's premium quality LNBS have been constructed to ensure the highest level of reliability. With extensive proven reliability in the field, models are available for C, Ku and Ka-band satellite applications and LNBS.

604-597-6200; fax 604-597-6214; e-mail info@norsat.com; www.norsat.com

Circle (238) on Free Info Card

Service you thought no longer existed.

In this day of self-service, ATMs and "get-it-yourself" attitudes, one place still offers full service – BSW.

Our knowledgeable sales representatives have real-world broadcast and studio engineering experience to offer expert help with your equipment purchase. And our comprehensive inventory, representing over 200 manufacturers, is on-site so we can quickly turn-around your order. Best of all, we offer low prices on all audio and broadcast equipment.

Go with BSW, the industry's full-service equipment supplier for over 25 years.



BSW[®]

BROADCAST SUPPLY WORLDWIDE

7012 27th Street West • Tacoma, WA 98466

Phone: 800.426.8434

Fax: 800.231.7055

<http://www.bswusa.com>

Henry Engineering: Portamatch



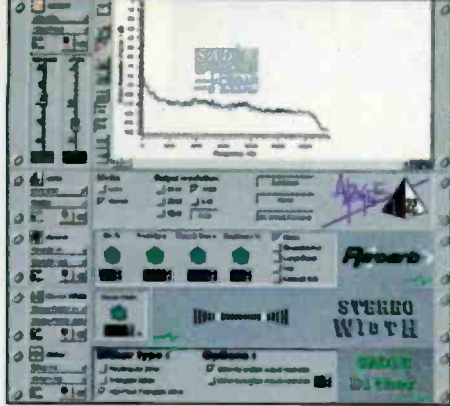
▲ This battery-operated version of Henry's Matchbox level and impedance interface operates on two 9V batteries and converts unbalanced -10dBv audio to +4dBm 600Ω balanced lines. Four independent amplifiers provide bi-directional stereo interface to convert unbalanced I/Os to balanced lines.

818-355-3656; fax 818-355-0077;

www.henryeng.com

Circle (239) on Free Info Card

SADiE, Inc.: V3 Software



erates an entire PQ list based on the in and out points of entries in the CD Playlist. Other new features include: automatic generation of ISRC numbers; longer track names; snap index to current time; and a completely comprehensive countdown preview function, allowing the user to monitor up to, through, or after any of the PQ flags, either singularly or for the entire CD.

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

Circle (240) on Free Info Card

◀ SADiE recently introduced major new enhancements for its PQ editor that are included in the latest V3 software upgrades for SADiE and Octavia digital workstations. Most noticeable is the new look of the editor, which has a completely interactive text editor attached to the CD Playlist. The user can now create a PQ list by either scrubbing the playlist to the correct position and manually inserting each flag, or by using the auto-create PQ list function which automatically gener-

PICK HIT HONORABLE MENTION

Kintronic Labs: Optilink

Optilink is a digital, fiber optic, intelligent control system for use in AM directional antenna sites. The system, combined with the Kintronic Model DAC-MOD-2-12 software programmable controller offers state-of-the-art local or remote operation of a site via microwave or satellite link. Features include RISC Processors, interpreted BASIC compiler, support for fiber optics up to 2km in length, and capability for up to three autonomous RF contactors at each tower.

423-878-3141;

fax 423-878-4224;

e-mail ktl@kintronic.com;

www.kintronic.com

Circle (242) on Free Info Card

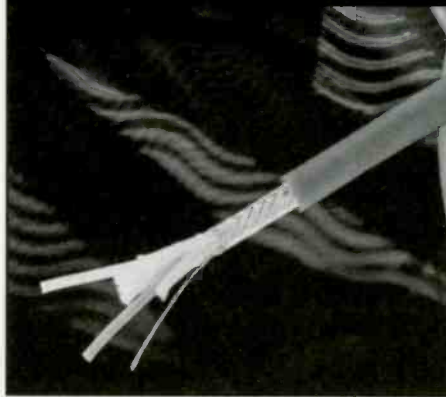
Vega: EMP wireless mics

Incorporating the considerable advantages of advanced microprocessor technology, the new Vega EMP Series of UHF wireless microphone systems offers an unprecedented level of RF and audio performance. The first system in the EMP series included the R-672 frequency receiver, as well as the T-690 handheld transmitter and T-772 bodypack transmitter. These system elements combine to offer a full wireless toolbox to RF and audio professionals.

800-877-1771; fax 818-444-1342

Circle (241) on Free Info Card

Belden Wire & Cable: 1800F High-Flex Brilliance



◀ The new 1800F High-Flex AES/EBU Digital Audio Interconnect Cable is a high-performance, 110Ω, shielded, single twisted-pair cable that can be used in a number of different ways, including as a highly flexible digital audio patch cable, an ultra-high performance analog audio mic cable, or as an interconnect cable for state-of-the-art digital audio mics. No-compromise analog audio performance is assured through the use of Belden's patented French Braid Shield. This is a double spiral shield (tinned copper

double serve) in which two spirals are tied together via one weave. The result is 95% shield coverage, but with lower levels of microphonic and triboelectric noise than either spiral or conventional braid shields. The 1800F features one pair of 24AWG stranded, bare copper conductors with blue and white high-velocity Datalene insulation, and a drain wire.

800-BELDEN-4; fax 765-983-5257; www.belden.com

Circle (243) on Free Info Card

ADVERTISEMENT

MAYRE YOU REMEMBER ME?

I'm Mrs. Braverman—you know, Daniel's mother.

Daniel is my son in radio who makes these gorgeous consoles.

They do everything and sound wonderful!

Three years ago I made everyone SUCH A DEAL with my son's consoles.

That was my first advertisement for Radio Systems.

Back then, we sold plenty.

But of course what everyone really wanted to know—

"Am I really Daniel's mom?"

Such a question!

I'm back!
With a beautiful new console!

So now they're bringing me back—

to show you their new fancy Millenium model.

But I say, millenium schmillenium.

We should all live to be one hundred and twenty.

Me, I love the new soft bright buttons.

And the mahogany wooden sides.

And guess what?

This new console is AN EVEN BETTER DEAL!

It's more than \$1000 dollars less than the old one.

Better and cheaper.

So what are you waiting for already?



radio SYSTEMS • 601 Heron Drive, Bridgeport, New Jersey 08014
(609) 467-8000 | fax: (609) 467-3044 | www.radiosystems.com

Circle (61) on Free Info Card

ADVERTISEMENT

Boxing the sound of General Mills

Fortified with essential isolation
No muss, no fuss, no pans to wash, no concrete to pour, no studs to saw
Hear unwanted noise just drop away from hips, ears & thighs

mobile modular
voice-over room
production room
sounds healthy
less expensive
more attractive
excellent isolation

ACOUSTIC SYSTEMS
800 749 1460
acousticsystems.com
The science of silence

When General Mills needed a studio with a voice-over room to produce their two radio programs, we put a modular studio in their corporate offices without disrupting business, and for less than they expected. We like to think of it as our very own cereal box.

Circle (62) on Free Info Card

PORTABLE ONE DUAL DOMAIN

Digital + Analog + Interface Audio Test



True Dual Domain Audio Testing at an Attractive Price Point

The Portable One Dual Domain is the complete portable test solution for analog and digital audio and the AES/EBU/SPDIF serial digital interface. As the first portable Dual Domain® audio analyzer, it includes separate and independent hardware for analog, digital and interface signal generation and measurement.

- Comprehensive analog audio analyzer
- True digital domain analyzer with -140 dB residual noise
- Independent analog & digital audio generators and analyzers
- Generate and measure interface jitter
- Digital interface analyzer
- View AES/EBU status bits

- Internal save and recall of 30 test setups
- Loudspeaker monitor for digital & analog audio signals

Audio precision

PO Box 2209
Beaverton, Oregon 97075-3070
Tel: (503) 627-0832 Fax: (503) 641-8906
US Toll Free: 1-800-231-7350
Email: sales@audioprecision.com

Our worldwide force of Audio Precision representatives will be pleased to demonstrate the many advantages of the Portable One Dual Domain

INTERNATIONAL DISTRIBUTORS: Australia: VICOM Australia Pty. Ltd., Tel: 3 9563 7844; Austria: ELSINCO GmbH, Tel: (1) 815 04 00; Belgium: Trans European Music NV, Tel: 2 466 5010 Brazil: INTERWAVE LTDA, Tel: (21) 325-5351; Bulgaria: ELSINCO Rep. Office Sofia, Tel: (2) 958 12 45; Canada: GERRAUDIO Distribution, Tel: (613) 342-6999; China, Hong Kong: A C E (Int'l) Co. Ltd., Tel: 2424-0387; S&V Instruments Co. Ltd., 2833 9987; Croatia: ELSINCO Rep. Office Zagreb, Tel: 1 615 34 50; Czech Republic: ELSINCO Praha spol. s r.o., Tel: (2) 49 66 89; Denmark: npr Elektronik aps, Tel: 86 57 15 11; Finland: Genelec OY, Tel: 17 813 311; France: ETS Mesureur, Tel: (1) 45 83 66 41; Germany: RTW GmbH & Co. KG., Tel: 221 709 13 0; Greece: KEM Electronics Ltd., Tel: 1 674851 4/5; Hungary: ELSINCO Budapest KFT, Tel: (1) 339 0000; Israel: Dan-El Technologies, Ltd., Tel: 3-647 8770; Italy: Audio Link s.n.c., Tel: 521 648723; Japan: TOYO Corporation, Tel: 3 (5688) 6800; Korea: B&P International Co., Ltd., Tel: 2 546-1457; Malaysia: Test Measurement & Engineering Sdn.(Selangor), Tel: 3 734 1017; Test Measurement & Engineering Sdn. (Penang), Tel: 4 6422088; Netherlands: Heynen B.V., Tel: 485 55 09 09; New Zealand: Audio&Video Wholesalers, Tel: 9 279 7206; Norway: Lydconsult, Tel: 47-69-178050; Poland: ELSINCO Polska sp. z o.o., Tel: (22) 39 69 79; Portugal: Acutron Electroacustica Lda., Tel: 1 640 1785; Singapore: TME Systems Pte Ltd., Tel: 747-7234; Slovakia: ELSINCO Slovensko, s.r.o., Tel: (7) 784 165; Slovenia: ELSINCO d.o.o., (61) 133 62 79; South Africa: SOUND-FUSION MFG., Tel: 11 477-1315; Spain: Telco Electronics, S.A., Tel: 1 531-7101; Sweden: TTS Tal & Ton Studioteknik AB, Tel: 31 52 51 50; Switzerland: Dr. W.A. Gunther AG, Tel: 1 910 41 47; Taiwan: R.O.C.: Double Advance Tech., Tel: 2-596 0696; Thailand: Massworld Company Ltd., Tel: 2-294-4930; United Kingdom: Thurby Thandar Instruments, Ltd., Tel: (1480) 412451 (11-12-97)

Broadcast Electronics: AudioPoint



◀ The Broadcast Electronics AudioPoint is more than just another routing switcher. This next generation device uses DSP to eliminate cabling, wiring and relay panels. Instead of employing a crosspoint matrix, all incoming signals, once digitized, are treated as data and not audio. The AudioPoint

can accept audio sources that are analog, digital, synchronous, asynchronous or MADI (multi-channel audio digital interface). In addition to simple routing, the AudioPoint can also perform programmable audio delays and gain and EQ adjustments. The system can be controlled via a graphic user interface that can be used across a network and can support drag-and-drop programming. Remote panels are also available in 32, 64 and 128-button X/Y controllers.

217-224-9600; fax 217-224-9625; e-mail bdcast@bdcast.com;

www.bdcast.com

Circle (244) on Free Info Card

Cartworks/DBM Systems: CartWorks features



for live sound simulation, switch between live assist and automated modes at the touch of a single button, and the importation of logs from most any music and traffic scheduling software. And lastly, CartWorks announces support for MPEG and linear digital audio formats.

800-795-RADIO; fax 601-853-9976; www.cartworks.com

Circle (245) on Free Info Card

ADVERTISEMENT

Analog & Digital A2-D Audio Measurement System

The affordable instrument
Designed to meet the challenges
of tomorrow's testing needs



Analog & Digital
Generator and Analyzer

User friendly front panel

Stand-alone or remote
control via RS-232 or
IEEE-488

Portable

We set the standard in making audio testing AFFORDABLE

NEUTRIK AG Liechtenstein Tel: 075 1 237 24 24 Fax: 075 1 232 53 93
NEUTRIK Instrumentation USA / Canada Tel: 0514 344 5220 Fax: 0514 344 5221
NEUTRIK UK Germany Tel: 0941 98041 Fax: 0941 99 97 72
NEUTRIK UK Great Britain Tel: 0983 811 441 Fax: 0983 811 439
NEUTRIK Zurich AG Switzerland Tel: 01 734 0400 Fax: 01 734 3891

NEUTRIK
CONNECTING THE WORLD

Circle (70) on Free Info Card

Acoustic Systems: Modular studios



▲ Custom engineered and innovative in design, these modular studios provide high-level acoustical sound isolation environments required for sensitive modern digital technology. With isolated floors, silenced ventilation and guaranteed performance, the rooms interior acoustics can be tuned using non-parallel walls, canted windows, bass traps and various wall treatments.

800-749-1460; fax 512-444-2282;

e-mail acoustic@inetport.com;

www.acousticsystems.com

Circle (246) on Free Info Card

QEI Corporation:

Transportable RF Systems



▲ This complete, self-contained transmitter site is available in mobile, semi-permanent or permanent building designs. The units offer integral environmental controls, are pre-wired and pre-assembled with new or existing equipment, allows solid state or single-tube power levels to 10kW and fixed-tuned or frequency-agile applications.

609-728-2020; fax 609-629-1751

e-mail qeisales@qei-broadcast.com

www.qei-broadcast.com

Circle (247) on Free Info Card



MAGER SYSTEMS

Designed, Fabricated, Delivered and Installed

21602 N. Central Ave., Suite 1
Phoenix, Arizona 85024
TEL: 602-780-0045
FAX: 602-780-9860

TIRED OF THE SAME OLD STUDIO FURNITURE?

For over 18 years Broadcasters have come to Mager Systems for our exquisitely designed studio furniture. Our unique construction, along with solid wood and quality materials, means your furniture is built to last. Every installation is backed by a 10 year warranty. Our quality is affordable and can accommodate every budget from economy to showplace. Call today and discover why Mager Systems is the best in Sound Furniture.

AVONITE®

Mager Systems is very proud to offer Avonite Solid Surface. Avonite is a non-porous solid surface material with depth and richness of stone in an easy-to-care for composite surface. Avonite is available in over 60 natural looking colors. Highly stain and scratch resistant, it boasts durability with confidence of a full 10 year warranty.

The best in
sound furniture!



KMCG - San Diego



KXGL - San Diego



KXGL - San Diego



KOOL - Phoenix

Circle (69) on Free Info Card

Sound Advice for Beautiful Digital Audio

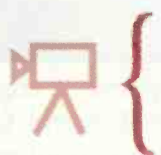
 **AES Glue**



Complementing the outstanding range of broadcast video products from Leitch

- Digital Glue now offers AES/EBU digital audio distribution, audio synchronization, audio multiplexing and a full range of precision converters
- Leitch analog and digital AES/EBU digital audio routing from 2x1 to 128x128 providing low cost monitoring routers to fully integrated control systems
- Latest digital server technology from ASC. The VR300 now offers AES/EBU digital audio to complement up to 24 channels of video sharing 96 hours of Fibre Channel storage

Leitch's Digital Audio Glue
— Now that's sound advice.



Distribution



Routing



Digital Glue



Production Products



Storage



Sync & Test



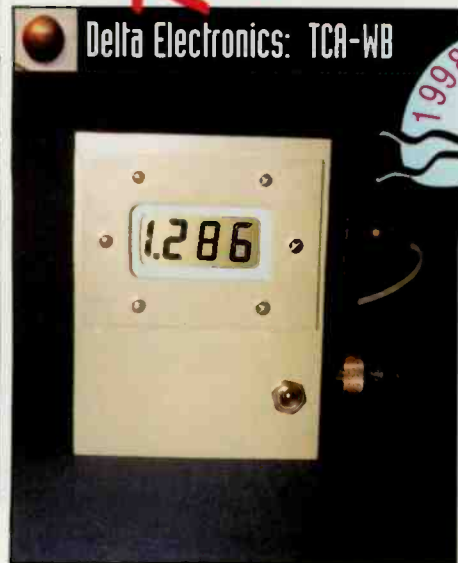
 **LEITCH**

ENGINEERING THE BIG PICTURE™

International/Canada +1 (416) 445-9640, (800) 387-0233 • U.S.A. +1 (757) 548-2300, (800) 231-9673 • Latin America +1 (305) 884-5484

Europe +44 (0) 1256-880088 • Australia +61 (2) 9939-3355 • Japan +81 (3) 5423-3631 • Brazil +55 (11) 867-0218

Circle (71) on Free Info Card



Delta Electronics: TCA-WB
 The TCA-WB is designed to operate over a broad current range so that it can accommodate a variety of applications and have suitable application in an installation with greatly varying power levels between modes of operation (day, night and critical hours). The wide frequency range covers the 20kHz to 5MHz range. The three-and-a-half digit LCD display shows an accuracy of better than two percent with a 2.15VDC full-scale output. The range selection is automatic. Power requirements are 18 to 40VDC at 80mA.
 800-833-5828; fax 703-354-0216; e-mail sales@deltaelectronics.com;
www.deltaelectronics.com
 Circle [248] on Free Info Card



Studio Technology:
 Studio Furniture
 Studio Technology is a full-service company that caters specifically to the broadcast and recording industry. Aside from producing some of the finest custom studio furniture in the country, Studio Technology offers furniture design assistance as well as delivery and installation of the furniture it produces. The company is currently celebrating its seventh year in business.
 847-676-9177; fax 847-982-0747;
 e-mail sales@studiototechnology.com; www.studiototechnology.com
 Circle [249] on Free Info Card



Comtek: DX3-4
 The DX3-4 digital IFB controller is an advanced, multi-task digital matrix router designed to meet the standards of mobile IFB and broadcast intercommunications. The unit features easy-to-learn controls with matrix routing connections to four universal inputs, three outputs, and two I/O ports which can be used for direct interface from a cell phone, telco line, or standard two- or three-wire intercom systems. All functions are constantly monitored with a large backlit LCD display. All input levels are keypad adjustable and displayed in 1dB increments. Functions programmed as IFB have a voice-activated fader with keypad adjustable VOX gain. Manual controls allow the operator to interface or to interrupt telephones, intercom, and both wireless talent channels from the gooseneck microphone. Front panel loudspeakers, headset or remote speaker can be used for monitoring.
 800-496-3463; fax 801-484-6906;
 e-mail sales@comtek.com;
www.comtek.com
 Circle [250] on Free Info Card

ADVERTISEMENT

Call the Pioneers!



Back in 1988 when NSN introduced VSAT satellite technology to the broadcast industry, there were fewer than 1,500 VSAT terminals in the USA. Today there are over 150,000!

Over the years, we've installed more than 150 uplinks and over 2,800 remote sites worldwide. And we've blazed a few trails including the first ComStream ISO/MPEG VSAT digital audio and data networks in the USA, Venezuela, and the Bahamas; the first "store & forward" localized satellite audio networks in the USA; and the first VSAT SCPC paging data distribution network in Hong Kong.

NSN's unmatched integration experience has made us the nation's preferred choice for VSAT networks. We are the largest authorized distributor of ComStream digital audio equipment. The recent addition of Wegener's digital audio product line provides us with an extensive array of the finest satellite equipment and broadcast communications products to meet your needs. NSN offers complete, turnkey networks with spacetime for coast-to-coast stereo audio starting at just \$1,595 per month! Look to us for:

- ☑ Satellite Data Networks
- ☑ Satellite Internet Connectivity
- ☑ Network Design & Licensing
- ☑ Domestic & International Spacetime
- ☑ 24-Hour Technical Support
- ☑ Installation & Training
- ☑ Lease Financing



970-949-7774

800-345-VSAT
 8 7 2 8

Fax 970-949-9620

E-mail: kelly@nsn.net

Circle (73) on Free Info Card

Nagra Series C Professional Digital Recorder/Editors



Ultimate reliability
 from field to studio

ARES-C ~ C-PP

FLASH RAM PC Card media - no moving parts for maximum reliability and minimum maintenance

Non-destructive, user friendly on-board DIGITAL EDITOR with scrub wheel

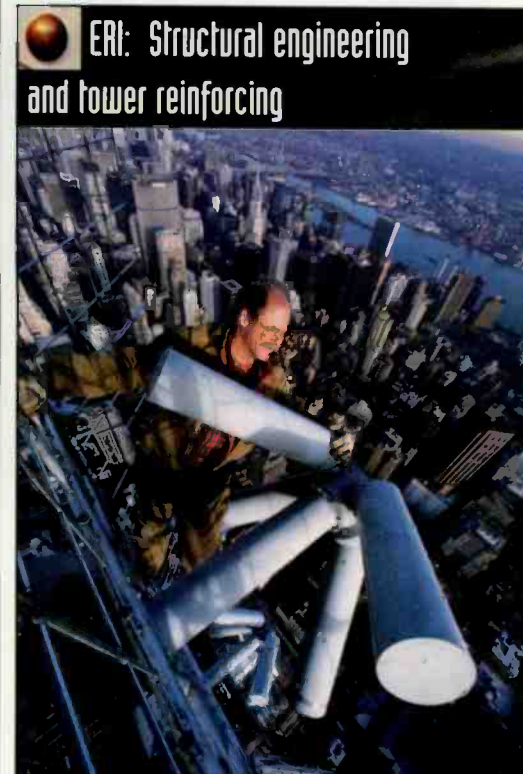
Mono & J-stereo modes with selectable compression - MPEG II, G722, G711

ISDN Interface with auto-answer file transfer and live remote capability - Industry-standard CODEC



NAGRA USA, Inc.
 240 Great Circle Road, Ste. 326
 Nashville, TN 37228
 tel. (615) 726-5191 mail@nagra.com
 fax (615) 726-5189 www.nagra.com

Circle (72) on Free Info Card



ERI: Structural engineering and tower reinforcing
 ERI has added an independent engineering team to meet the demand for streamlined tower analysis and reinforcing. The team of structural, civil and electrical engineers can diagnose, plan and implement fast track antenna and tower solutions. Additionally, ERI's 120,000 square foot tower and antenna fabrication facility ensures that engineering solutions are translated into reality.
 812-925-6000; www.eriinc.com
 Circle [251] on Free Info Card

MASTER CONTROL

The world's finest on-air system.



"We love it because it does everything!"

Take the RCS challenge!

Ask any software or hardware company how much combined **RADIO EXPERIENCE** is on their staff. We guarantee nobody comes close to the wide radio backgrounds of RCS people. We've been where you are...station ownership, management, engineering, programming, production, on-air. Experience in ALL facets of radio is curiously absent from other digital computer companies. Plus, RCS uses industry-standard components including Digigram audio cards. Rarely do you make such an important decision...Make this the right one. Get Master Control NT from RCS.

Want a free video?

Jot your name and address in this box and fax to 914-723-2258. We'll rush you your video and more info on Master Control NT.

Name:	_____
Station:	_____
Address:	_____
City:	_____ State: _____ Zip: _____
Tel:	_____ Fax: _____



Radio Computing Services, Inc.
 Two Overhill Road
 Scarsdale, New York 10583 USA
 Tel: 914-723-8567, Fax: 914-723-2258
 E-mail: info@rcsworks.com
 www.rcsworks.com





Broadcast Technology: Ultramod FM

◀ The Ultramod FM audio processor, well known as clean and easy-to-use, has now been improved with new, state-of-the-art circuits that include a low-distortion clipper and an ultra-clean digital stereo generator. The new Ultramod processor can be used as a stand-alone or can be purchased as part of the Ultramod FM-3 or FM-4 audio processing packages. The FM-3 includes two, three-band Tri-Maze processors as well as the Ultramod processor. For aggressive, yet clean processing the FM-4 adds a composite processor to the FM-3 package.

719-336-3902; e-mail info@hnat.com; www.hnat.com

Circle (252) on Free Info Card



Intraplex/Glenayre: STL Plus



◀ Intraplex is already established as an innovator in transmission of signals over T1 circuits. Replacing multiple analog telco loops and offering multiple digital channels for audio, data, LAN, telephone/fax and control signals is the core of the STL Plus system. Add to this the cost savings of an

RF STL along with license-free spread spectrum, and you have the best of both worlds. The Glenayre Western Multiplex LYNX.sc is a spread spectrum radio that operates in the 2.4 or 5.8GHz band and emulates the same function as a wired T1 or E1 circuit. The joint effort between two companies offers the expertise of each over the system.

Intraplex 978-692-9000; fax 978-692-2200; e-mail sales@intraplex.com; www.intraplex.com

Glenayre 704 553 0038; fax 704 553 0524; www.glenayre.com

Circle (253) on Free Info Card

ADVERTISEMENT

WARD-BECK PROFESSIONAL BROADCAST EQUIPMENT

STANDS ALONE

Legendary design
Legendary quality
Legendary construction



AFFORDABLE BY COMMITMENT

WBS WARD-BECK SYSTEMS LTD.

TORONTO, ONTARIO, CANADA

Tel: 416 438-6550 • Fax: 416 438-3865 • North America: 1-800-771-2556
website: www.wbsltd.com e-mail: wbsltd@istar.ca

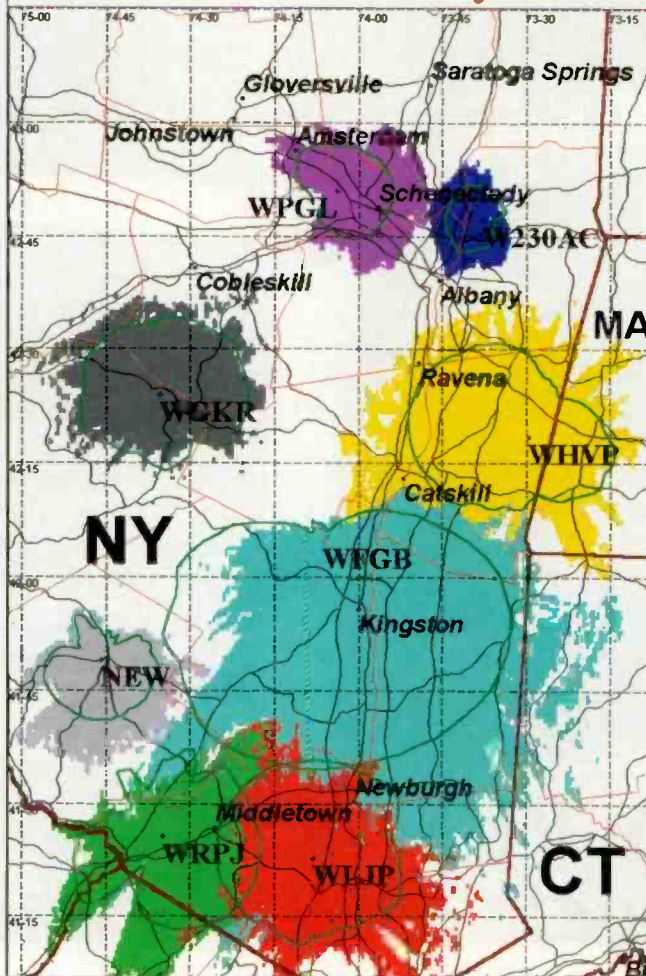
Call Ward-Beck for affordable Metering and Monitoring solutions, Audio Consoles, Digital Audio Products, Analog Audio and Video Products, Pods (low cost Broadcast Problem Solvers), Standard and Custom lines.



Circle 83 on Free Info Card

ADVERTISEMENT

RadioSoft™ ComStudy V 1.50



Most Likely Server Study of Eight FM's

Over 5 years in the making, RadioSoft's ComStudy 1.50 for Windows is the easiest, most advanced software ever created for all Broadcast, Paging and Land Mobile Applications. Map and Plan your systems with confidence in full color! Simple to learn! Complete tools include:

- Latest Matrix Based Tiling Techniques
- Correct models for any Service including DTV
- Directional and Multisite Antennae
- Land Uses and Attenuations Shown
- Interference and Delay Calculations
- More features than fit into this ad!

PRICED RIGHT!

Call now for demo or information:
RadioSoft 888.RADIO95, Fax 904.423.0821
109 West Knapp Avenue, Edgewater FL 32132

SEEING IS BELIEVING!

email: pmoncure@america.com

... a Customer Friendly Company

See the software perform at most major Land Mobile and Broadcast Trade Shows!

Circle 84 on Free Info Card

UTE: Microwave Circulators & Isolators

UTE Microwave has introduced a line of circulators and isolators for FM broadcast. The FM-band units employ Type N connectors and are rated for 60 or 100W. These units are supplied tuned to a selected operating frequency and feature 20dB minimum isolation, 0.5dB loss, and 1.25:1 maximum VSWR. Center frequency isolation and return loss are typically 40dB.

732-922-1009;
fax 732-922-1848

Circle (254) on Free Info Card

NSN Network Services: Satellite networking

NSN is a provider of integrated communications systems and specializes in CD-quality MPEG audio networks, global Internet connectivity, and data networks. Capable of true turnkey solutions designed for efficient, reliable and cost-effective operation, NSN can provide a broad range of services from consulting and specification, network design and hardware, to satellite space-time, installation and maintenance, FCC licensing, leasing and ongoing technical support.

800-345-VSAT;
970-949-9620;
e-mail sales@nsn.net;
www.nsn.net

Circle (255) on Free Info Card

where do you want to be?

With Sennheiser headphones, all you need to do is listen. The experience will take you wherever the music goes.

Starting realism and fast, smooth response are Sennheiser's trademarks.

For casual listening Sennheiser headphones are simply the best. For your creative impulses, imagine the possibilities that can result from the accurately referenced imaging that Sennheiser headphones can provide.

Available from your dealer, or give us a call.

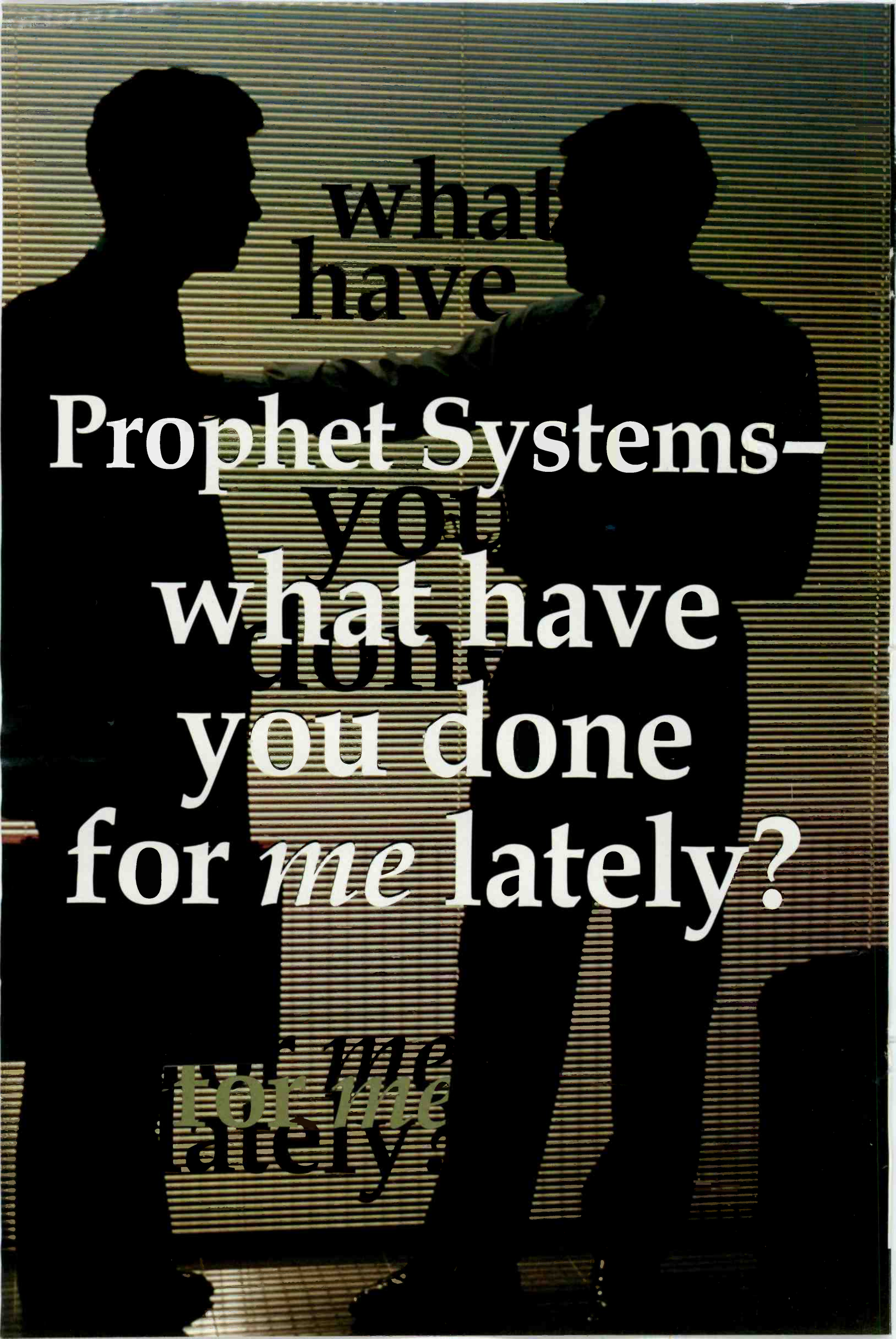
just listen

H E A D P H O N E S

 **SENNHEISER**

SENNHEISER ELECTRONIC CORPORATION
P.O. BOX 987, OLD LYME, CT 06371 • TEL: 860-434-9190 • FAX: 860-434-1759 • CALIFORNIA: TEL: 818-845-7366 • LATIN AMERICA: TEL: 525-639-0956
SENNHEISER CANADA: 221 LABROSSE AVE., PTE-CLAIRE, PQ H9R 1A3 • TEL: 514-426-3013 FAX: 514-426-3953
World Wide Web: <http://www.sennheiserusa.com>

Manufacturing Plant: Am Labor 1, 30900 Wedemark, Germany

The image features two men in silhouette, facing each other as if in conversation. They are positioned in front of a window with horizontal blinds, which creates a pattern of light and shadow across the scene. The overall tone is dark and contemplative.

what
have

Prophet Systems—

you

what have

you done

for *me* lately?

for *me*
lately?

We've gotten a great deal of press coverage in recent months. First, Prophet Systems signed a huge contract with Capstar. Then we joined them as their first non-station acquisition. Recently, Prophet Systems closed a major deal with Jacor.

But what does that mean for you?

Latest and Greatest Technology

We have the experience, the people and the financial backing necessary to take a great product line and move forward in great leaps. Take the AudioWizard CFS32™ out for a test drive at the Fall show in Seattle and you'll see our point. This 32-bit Graphical User Interface combined with our powerful database engine and WAN capabilities makes for one authoritative digital audio system.

Tech Support

Our superior tech support has actually been the deal-maker in some recent contracts. You can count on us. (Check out our client list at: www.prophetsys.com)

Your bottom line

Let us show you how you can recoup your investment, just like the big boys do.

Productivity

Our systems are user-friendly—you can probably be up and running in a matter of days. But to show you all the power and flexibility, we've created the PSI Training Academy, a state-of-the-art educational facility. Get hands-on experience under the supervision of broadcasters who have relied on the AudioWizard for their bread and butter.



Together, let's have fun and make great radio.

'nuff said!!





Wheatstone: D-500

◀ The D-500 has the power of 40-bit floating point DSP processors to handle the complex tasks it performs. It can accept analog and digital input signals, process them in the digital domain and then provide output signals from the console in digital and analog formats, keeping your present analog equipment from becoming obsolete and allowing a future transition to digital.

The console has four stereo program buses, input source selection, machine sequencing functions, and individual channel faders (digital level control). Operators have an option to save an entire control surface setting by hitting a button on the master module, so that personal setups can instantly be retrieved when talent first steps into the control room.

315-452-5000; fax 315-452-0160; e-mail email@wheatstone.com;

www.wheatstone.com

Circle (256) on Free Info Card

PICK HIT HONORABLE MENTION

Superscope Technologies:
Marantz PMD680, PMD 690



◀ With the Marantz PMD680 and 690 professional digital recorders, in-the-field recordings can now be easily transferred to a computer for editing, storage, or further transmission. Key features include user-selectable bandwidth/bit rates, XLR mic inputs, non-linear and non-destructive editing, and a parallel port for data

transfer to a PC. The units use standard PCMCIA PC cards to store the audio information, and offer the choice of MPEG compression or PCM (uncompressed) recording. A wide array of professional I/Os are included to satisfy any recording environment. The XLR microphone inputs provide a secure locking connection, and the digital output provides a real-time transfer to other digital media (PC, CD-R, DAT, etc.). Power is supplied from either conventional batteries or an optional rechargeable battery, and operation time is approximately three hours when using flash PC cards.

630-820-4800; fax 630-820-8103

Circle (257) on Free Info Card

ADVERTISEMENT

KRES Radio
Moberly, Missouri

They said,
"Show me."



So,
We did.

They liked what they saw in our fine furniture:

Bumpers to keep chair legs from gouging...wood trim to keep edges from delaminating...sloped racks to keep equipment safe. Round corners to give their rooms today's custom look.

They paid for quality, and they got it.

How do you make certain you get everything you pay for in your rooms? Opt for the sure thing in studio furniture design—specify Murphy Studio Furniture.

MURPHY

▲ 4153 N. BONITA STREET ▲ SPRING VALLEY, CA 91977 ▲ TEL (619) 698-4658 ▲ FAX (619) 698-1268 ▲
▼ (800) 307-1060 ▼ Email: dennis@murphystudiofurniture.com ▼ Web: murphystudiofurniture.com ▼

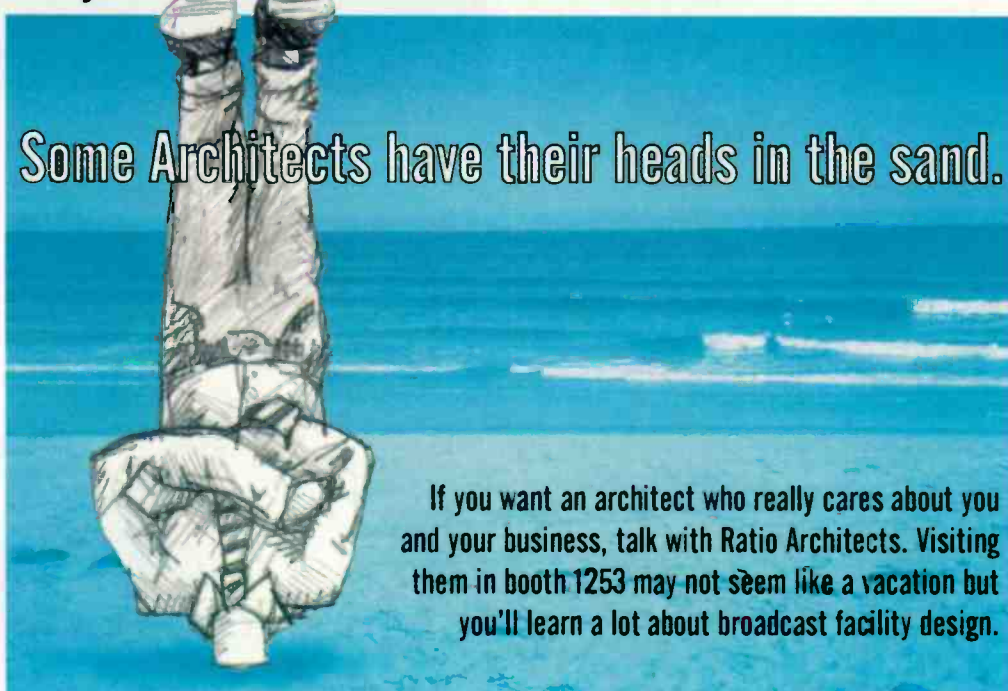
STUDIO FURNITURE

Our service goes beyond design and fabrication, to total management of your concept's execution.

Wood Trim Corners • Passive Ventilation • Built-In Wireways • Multiple Access Panels • Ease of Installation

Circle 87 on Free Info Card

Some architects would rather be vacationing on a beach than spending time with you at the NAB Radio Show.



Some Architects have their heads in the sand.

If you want an architect who really cares about you and your business, talk with Ratio Architects. Visiting them in booth 1253 may not seem like a vacation but you'll learn a lot about broadcast facility design.

RATIO



ARCHITECTS

Indianapolis
Indiana

317-633-4040

Designer of the new Emmis Communications World Headquarters

Circle 88 on Free Info Card



TC Electronic: Gold Channel

▲ This two channel, digitally enhanced microphone preamplifier features high-resolution, 24-bit, 96kHz A/D conversion with equalization and dynamics processing. The unit's features include an expander/gate, SoftSat compressor/limiter, equalizer and additional processing tools, all accessible through an easy-to-use channel strip interface with high-resolution metering. AES/EBU, Tos Link SPDIF, and ADAT I/Os are all provided in addition to standard mic and line inputs and Word Clock in. In an industry first for a mic-preamp, the Gold Channel features 200 user preset memory location for instant recall of custom configurations.

805-373-1828; fax 805-379-2648;

e-mail tcus@tcelectronic.com;

www.tcelectronic.com

Circle (258) on Free Info Card

Coaxial Dynamics: RF terminations

Coaxial Dynamics offers a full range of RF test and measurement equipment, including dummy load terminations. They offer a wide range of power levels and load types. Dry loads range from five to 1000W power levels, air-cooled models range from one to 75KW power levels, and liquid cooled loads can handle up to 200KW of power. All the loads are available with a variety of connectors to meet any installation need.

800-COAXIAL; fax 216-267-3142;

e-mail coaxial@apk.net;

www.coaxial.com

Circle (259) on Free Info Card

Hit the Road

Remote broadcasts have never been easier!

Sometimes it's impractical to install a special circuit like ISDN for a one-time remote, and often your RPU just won't make it. However, a plain telephone line is usually available and the HotLine delivers up to 10 kHz, two-way audio, on just one dial-up line. Want to sound great from anywhere, anytime? Hit the road with a Comrex HotLine.



Courtesy of WEKS-The Bear

"People thought the interview was being done in the studio!"



Courtesy of KTNN

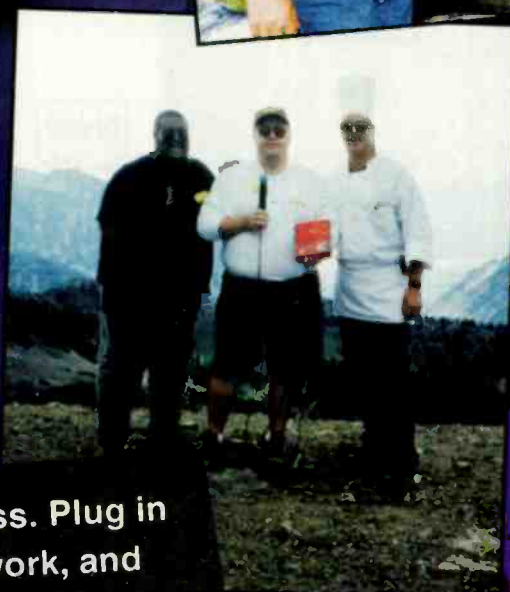
Courtesy of Middleburg Broadcasting Network



"I didn't have to do my usual routine of pulling a muscle contorting my radio antenna to avoid (RPU) interference."

...with the **Comrex HotLine.**

Courtesy of KBEE-Big Steve Kelly Show



"Our remotes are brainless. Plug in the HotLine, dial the network, and go on the air! It's that easy!"



Courtesy of Jason Gant — Ask the Computer Doctor Show



COMREX
We make great connections

800-237-1776
www.comrex.com

COMREX Corporation, 65 Nonset Path, Acton, MA 01720 USA
Tel: 978-263-1800 Fax: 978-635-0401 Email: info@comrex.com
Fax-on-Demand: 978-264-9973 Toll-free: 800-237-1776 in N.A.
or 0-800-96-2093 in the U.K.

PICK HIT HONORABLE MENTION

QSC: Rave



RAVE is a system that enables audio and control data routing via standard Fast Ethernet hardware and cabling, thus reducing cable costs, simplifying installation, increasing routing flexibility and improving audio performance. Individual units are capable of handling up to 16 channels of audio I/O. Using a front panel switch on each RAVE unit, blocks of eight audio channels can be transmitted or accessed at any point on the network. Sixty-four channels of audio can be operating on a dedicated audio network at one time with less than 6.3 milliseconds of delay to any point on the network. Inputs can be analog or digital.

800-854-4079; fax 714-754-6174; e-mail info@qscaudio.com

www.qscaudio.com/home.htm

Circle (260) on Free Info Card

Yamaha: DS2416



When installed inside a PC, the DS2416 digital mixing card offers the mixing power of the Yamaha 02R digital mixer, including: a 24-channel, 32-bit digital mixer with 10 bus outputs and six aux sends; 104 bands of parametric EQ; 26 dynamics processors; two effects processors equal in quality to Yamaha's REV500; channel delay on 20 channels; comprehensive metering; digital cross-patching for channel I/Os; a two-channel 20-bit A/D and D/A converter; stereo digital I/O with 20/24-bit resolution; and multi-channel analog and digital I/O with optional interface hardware. In addition, the card offers 16 tracks of hard disk recording with up to 32-bit resolution. Two DS2416 cards can be linked to create a larger system. Additionally, the card includes an audio streaming engine that provides eight tracks of simultaneous recording to, and 16 tracks playback from the disk drive.

714-522-9011; fax 714-739-2680;

e-mail info@yamaha.com;

www.yamaha.co.jp/product/proaudio/homeenglish/index.html

Circle (261) on Free Info Card

ADVERTISEMENT

We Do Crosspoint!



List \$729.00

SS 8.2 Stereo Crosspoint Switcher

This new generation of BTI's popular 8x2 switcher allows crosspoint switching of 8 stereo inputs to 2 stereo and 2 mono outputs, with any input to any output. Here is a sampling of its many features:

- Inputs can be programmed for overlap, mix, or interlock switching operation
- Electronically balanced inputs and outputs
- Internal stereo silence sensor with front panel LED indicators, adjustable alarm threshold and duration
- Front panel, multi-color LED VU meters
- Headphone amplifier with front panel output selection switch, headphone jack and level control
- Powered speaker output with front panel level control, output selection switch and mute control
- Multidrop addressable RS-232 and RS-485 serial ports allowing up to 8 units on one serial port
- 16 Parallel (status) Input Port (PIP)
- 8 relay outputs and 8 open collector outputs
- Low-drift 60Hz clock/calendar with battery backup and sync input
- Power-up selection of inputs to outputs, mute or last selected channel
- Plug-in screw-style wire captive connectors

Check out our new web site for additional information and a list of distributors!

Voice: 360 . 428 . 6099
Fax: 360 . 428 . 6719

BROADCAST TOOLS inc.

E-mail: bt@broadcasttools.com Internet: www.broadcasttools.com

Circle 91 on Free Info Card

The Perfect Mixer for your CODEC



New in 98

JK Audio Remote Broadcast Gear

800-JK Audio 815-786-2929 www.jkaudio.com
800-552-8346 Fax: 815-786-8502

Circle 90 on Free Info Card

Roscom, Inc.: Broadcast equipment specialists

Roscom has three offices specializing in complete RF and studio equipment packages, design and installation. The company also provides complete digital automation packages and carries over 150 lines of broadcast equipment.

Southeast: 770-992-2230;

fax 770-992-6538;

e-mail roscom@mindspring.com

MidAtlantic: 804-974-6635;

fax 804-974-9942;

e-mail ric@cstone.net

Western: 970-482-9254;

fax 970-482-6123;

e-mail shideler@webaccess.net

Circle (262) on Free Info Card



Pre-built Transmitter Sites

Solid-State Transmitters

Single-Tube Transmitters

Low Power Transmitters

RF Amplifiers

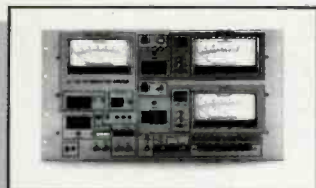
FM Exciters

Digital T1 STL Systems

Digital Spread Spectrum

Digital Stereo Generators

Modulation Monitors



Modulation Monitors



Digital STL / TSL Systems

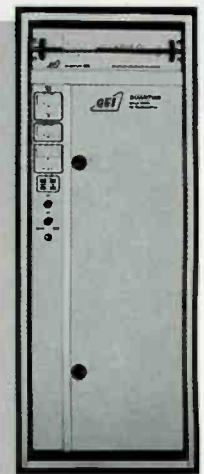


Low Power Transmitters

Meeting The Broadcaster's Present And Future Needs



Transportable Pre-Built Transmitter Sites



Solid-State and Single Tube High Power Transmitters

QEI Corporation
One Airport Drive, P.O. Box 805
Williamstown, NJ 08094
e-mail: qeisales@qei-broadcast.com

Toll-free Sales (800) 334-9154
Fax (609) 629-1751
Emergency Service (609) 728-2020
Web Site: <http://www.qei-broadcast.com>

For More Information Call Us Toll-Free At (800) 334-9154

Circle 92 on Free Info Card

NEWS

AKG'S BROADCAST MICROPHONE SERIES BRINGS THE WORLD TO YOUR AUDIENCE

From a Super Bowl broadcast to an interview in China to the local news, AKG microphones ensure that what you hear is what your audience will hear.

C577

D230

C577 Lavalier Microphone

- World's smallest dual diaphragm microphone
- Ultra low self noise and superior dynamic range
- Field serviceable modular design
- Rejects clothing rustle and cable noise

D230 Handheld Interview Microphone

- Specifically designed for ENG applications
- High output, omni-directional capsule
- Super low handling noise
- Non-reflective finish

HSC200SR Broadcast Headset

- Lightweight semi-open headphones
- High quality cardioid microphone capsule
- Excellent isolation
- User selectable EQ settings

AKG also manufactures a complete line of on-air and shotgun microphones for studio and field applications by the broadcast industry.

HSC200SR



LEGENDARY SOUND QUALITY BY

AKG Acoustics U.S., 1449 Donelson Pike, Nashville, TN 37217,
phone: 615-360-0499, fax: 615-360-0275.
AKG Acoustics G.m.b.H. Vienna/Austria, <http://www.akg-acoustics.com>



H A Harman International Company

Ward-Beck: Audio Bit Spitter



◀ The Audio Bit Spitter (ABS-1) is a companion to the successful Audio Bit Buddy portable digital/analog audio monitor. This portable, battery-powered unit generates digital and stereo analog audio test signals that may be injected into the signal path when testing device performance or signal path continuity with an Audio Bit Buddy or other audio monitor or metering device. The ABS-1 generates an AES/EBU digital signal of 1kHz or 400Hz at the three most commonly used sampling rates of 48, 44.1, or 32kHz. The unit may also be synchronized to an external digital reference signal. Digital signal levels of -20, -12 and 0dBFS are front panel selectable. Stereo analog tones of 1kHz or 400Hz may also be selected at levels of -16, -8, and +4dBu.

800-771-2556; 416-438-3865; e-mail wbsltd@istar.ca; www.wbsltd.com
Circle (263) on Free Info Card

Marshall & Associates: PA6471-14



650-610-7900; fax 650-593-0118; e-mail nmai@nmai.com; www.nmai.com
Circle (264) on Free Info Card

◀ This newest addition to the family of solid state microwave power amplifiers replaces obsolescent T.W.T.s in Harris Farinon's DM6 microwave radio. The PA6471-14 is a form, fit and function replacement that extends the operating life of existing equipment. The amplifier, is easy to install and requires no maintenance.

Neumann: TLM 103

▶ The TLM 103 microphone offers a flat-frequency response to just below 5kHz and a 4dB presence boost between 6kHz and 16kHz. The fourth-generation circuitry of the 103 allows only a 7dB (A) self-noise figure. The maximum sound pressure level capability is 138dB PS (at 0.5 percent distortion) with a resulting dynamic range of 131dB. Components of the 103 are elastically mounted to reduce use and handling noises. The mic operates on phantom power.



860-434-5220; fax 860-434-3148; e-mail neumannlit@neumannusa.com; www.neumannusa.com
Circle (265) on Free Info Card

Nagra: ARES-C, C-PP

The ARES-C is a unique digital recorder offering operation versatility and shock-resistant, continuous, solid state recording capability matched by powerful on-board editing and transmission (ISDN and analog) features. The codec module allows program material to be digitally transmitted downline to the broadcast studio, as well as enabling live, two-way communication via ISDN. Editing is non-destructive, instant random-access, and the double PCMCIA slot allows edited recordings to be copied and stored, or distributed separately from the master recording. The unit has a maximum recording capacity of over four hours via two 64MB PCMCIA type II cards and offers sampling rates of 16, 24, 32, and 48kHz.

Based on the ARES-C, the C-PP is a standard 19" rack-mount powered from 94V to 264V ac, 48 to 63Hz. In addition to the standard codec facilities, it also offers the possibility of recording and playing, as well as of virtual editing, based on a PCMCIA flash memory card technology.

+41 21/732 01 01; fax +41 21/732 01 00
Circle (266) on Free Info Card

ADVERTISEMENT

SINE SYSTEMS

Innovative Solutions

RFC-1 DIAL-UP REMOTE CONTROL



Control and monitor your transmitter from any telephone with the famous RFC-1: the world's most affordable full-featured dial-up remote control. It speaks to you with a natural human voice! It can also telephone you to report out-of-balance conditions and can automate transmitter power/pattern changes. It is expandable to 64 channels and has many optional accessories.

SINE SYSTEMS

972 Main Street, Nashville, TN 37206-3614
615-228-3500 FAX: 615-227-2367
FAX ON DEMAND: 615-227-2393 www.sinesys.com

Circle (75) on Free Info Card

ADVERTISEMENT

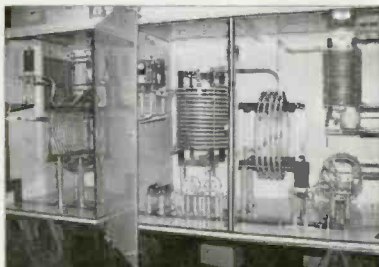
YOUR SOURCE FOR
QUALITY AM ANTENNA
SYSTEMS FOR
THE 21st CENTURY

KINTRONIC



LABS, INC.

AM BROADBAND DIPLEXER



READY FOR EXPANDED BAND
/ IBOC DIGITAL AUDIO

2 x 50 KW 5-TOWER AM
DIPLEXED DIRECTIONAL
ANTENNA SYSTEM



10KW +130% AM DUMMY
LOAD W/INTEGRATED
DUMMY/ANTENNA SWITCH



MODEL: DL-10/MS

KINTRONIC LABORATORIES INC.
P.O. BOX 845
BRISTOL, TN 37621-0845
PH./FAX: 423-878-3141/4224
WEB SITE:
<http://www.kintronic.com>
EMAIL: ktl@kintronic.com

Circle (76) on Free Info Card

OUR MAST GETS IT UP FAST HILOMAST



Telescopic Pneumatic Masts

FEATURES:

- Full length keyways
- Aluminum collars with low friction slide rings
- Locking collars with thumb screws
- Mast sections heat-treated aluminum alloy
- Alloy pistons with low friction slide rings
- Neoprene seals
- Air inlet valve
- Air release valve

COMPETITIVE PRICING

For further information contact
Jim Osborne

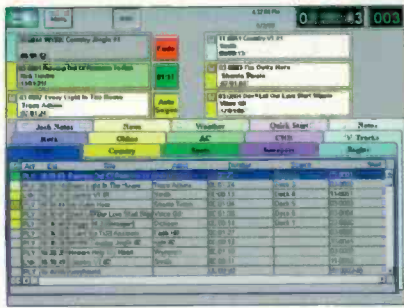
ALLEN OSBORNE ASSOC., INC.
756 Lakefield Rd., Bldg. J
Westlake Village, CA 91361
Tel: (805)495-8420 FAX (805) 373-6067



www.aoa-gps.com
aoa@aoa-gps.com

Circle (77) on Free Info Card

AudioVAULT®

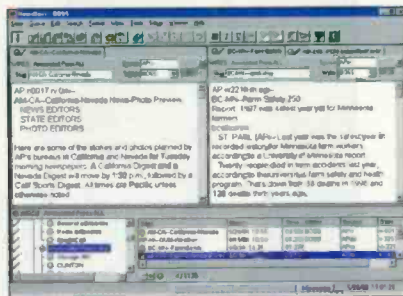


AudioVAULT from Broadcast Electronics is the world's leading digital audio storage and studio system. From single station operation to WAN's and webcasting, AudioVAULT has a complete solution for every functional need of your operation.

This Windows®-based system is a wise investment, as it grows with your station and effectively

handles consolidations. And AudioVAULT resists obsolescence with periodic software upgrades through BE's unique software licensing program.

NewsBoss™

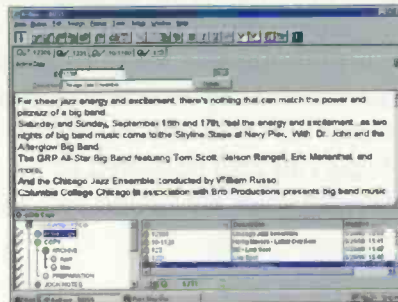


The NewsBoss newsroom management system for Windows, was designed specifically to improve your news operation. NewsBoss offers integrated wire capture, story composition

and management, and also allows embedded audio cuts to be placed into news scripts.

All stations will benefit from NewsBoss' ability to grow with your operation - from a one person staff to a major news operation, you can build exactly the system you need.

AirBoss



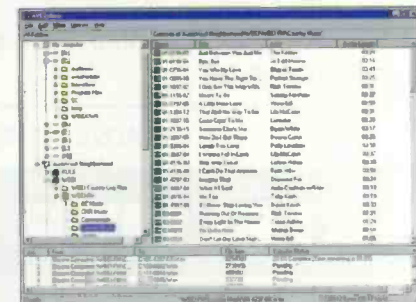
AirBoss is the complete on air copy management solution for

radio. It is completely networkable, giving everyone simultaneous access to information, its word processor makes managing copy easy.

AirBoss not only manages copy, music notes, and live tags, but also allows you to give perfect on-air presentations directly from the AV-Air screen.

Other features include an internal message system to control users' access, and the ability to send and receive copy via the AirBoss TCP/IP network connection.

AVExplorer



AVExplorer, the complete multi-site manager, allows you to distribute files between servers or locations on a LAN, WAN, or the Internet. Of course, AVExplorer offers a full security system to protect your assets from the outside world.

The remote portion of AVExplorer is a Windows Explorer type view of both local and remote sites. Voice tracks or commercials produced locally can be sent to a remote site or retrieved from a centralized news operation.

AVExplorer is equipped to handle AudioVAULT files or standard PCM or MPEG .wav files.

AudioEDIT



AudioEDIT is a unique digital audio multi-track editing software that integrates easily with AudioVAULT. The basic configuration features 16 tracks on two individual input/outputs in real time. To create a personal work environment, AudioEDIT's screen parameters may be user configured.

AudioEDIT is fully modular and fully featured for today's radio operations. Features such as the sound export function is used to merge all the selected tracks to form a single file that is ready for broadcast. In addition, comprehensive management of audio libraries is easy with AudioEDIT. Audio is organized into catalogs with each library holding multiple catalogs. In addition to a description of the file, two key words can be attributed for easier retrieval.

MAKE THE SWITCH TO HERO STATUS

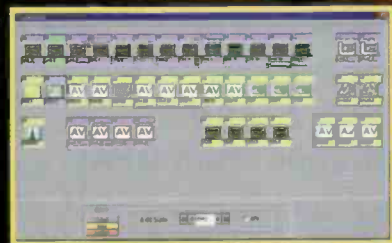
SAVE TIME & MONEY WITH AudioPOINT®

If you're building new studios, or consolidating into one location (and who isn't?), routing audio is expensive. But you can be a Hero just by installing an AudioPOINT DSP-based routing switch. It's the only one that mixes analog and digital sources on the same matrix and eliminates external A/D, D/A converters. Plus no more costly cabling, patch bays or distribution amps. That saves money. AudioPOINT is easy to install, maintain, and it's more reliable than traditional routing solutions. Even its windows-based configuration and control software is easy to manage. So, to switch from "over-worked engineer" to "money-saving Hero," contact Broadcast Electronics today.

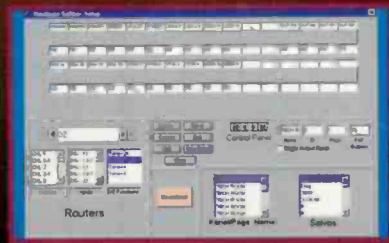
- Analog/Digital/MADI inputs & outputs
- Expandable from 32x32 to 1024x1024 channels
- Allows mixing, summing and tone generation/signal analysis



Rotary Remote Control Panel



Customizable Edit Suite Panel



Hardware Button Set-up Panel

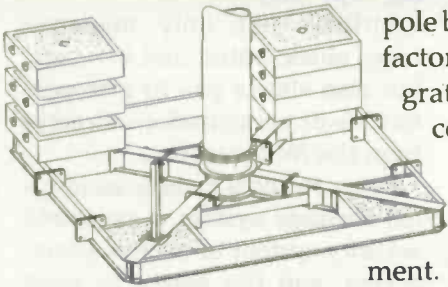
Need Solutions?
www.bdcast.com
 or (217) 224-9600

BE
 Solutions for
 Tomorrow's Radio



©1998 Broadcast Electronics, Inc. BE emblem is a registered trademark of Broadcast Electronics, Inc.

Pirod, Inc.:
Portable monopole base



◀ Ideal for temporary or semipermanent installations, or permanent sites where conventional foundations are impractical, this monopole base is designed to maintain full safety factors and EIA code compliance. The integrated base, lifting hooks and modular construction allow for easy, one-day setup, making it perfect for transient coverage needs or emergency replacement for out-of-service equipment. The unit is suitable for placement on

soil with as little as 1500psi bearing capacity and can accommodate a 30-inch base diameter monopole with a maximum overturning moment of 500ft/kips. Pre-cast concrete ballast blocks can also be added as needed to support various antenna loads for monopoles up to 110 feet tall in 80mph wind zones.

219-936-4221; fax 219-936-6796; www.pirod.com
Circle (267) on Free Info Card

ADVERTISEMENT

SATELLITE SYSTEMS



Satellite Equipment for Radio

When you're off the air you need reliable repair service—NOW.

- Satellite Systems is respected industry-wide for prompt, accurate service to radio stations and networks.
- Whether you have a Dart 384 or Scientific Atlanta 7300/7325 we can repair your equipment.
- Pre- and post-service technical support, along with a 6-month warranty.
- Ask us about the CB500 25/35 Hz Tone Decoder.

Rely on Satellite Systems

Celebrating 7 years of providing reliable repair service

615 East Brookside Street, Colorado Springs, CO 80906
Phone: (719) 634-6319 Fax: (719) 635-8151

Circle (81) on Free Info Card

Sound Judgement



The best sounding, most reliable digital audio systems use Digigram sound cards. Does yours?



Digigram Inc. 2101 Wilson Boulevard
Suite 1004 Arlington, VA 22201
Phone: +1.703.875.9100 • Fax: +1.703.875.9161
E-mail: input@digigram.com
Web: <http://www.digigram.com>

Circle (79) on Free Info Card

Jensen Tools:
Garmin GPS - 12XL



◀ The GPS-12XL puts GPS navigation and positioning in the palm of your hand. The unit indicates position in latitude and longitude, UTM/UPS or seven other coordinates anywhere on Earth within 15 meters. Navigation is simple with the moving map graphic plotter. The unit features a user-selectable navigation guidance and highway or compass display, resettable trip odometer, 12 parallel-channel receivers for fast satellite acquisition and tight satellite lock even under tree cover, 12-hour battery life, internal patch antenna, and 106 pre-defined map datums. Unit stores up to 500 waypoints and 20 routes. Included are a carrying case, four

AA batteries, wrist strap, and one year manufacturer's warranty.

800-426-1194; fax 800-366-9662;
e-mail jensen@stanleyworks.com;
www.jensentools.com

Circle (268) on Free Info Card

ADVERTISEMENT

S m a l l



Wonder

The miraculous DPA 4060 Miniature Microphone tops the bill in wireless systems for theatre and television. Not only does the 4060 offer outstanding audio performance under difficult conditions, it is also extremely robust in operation. Unique connection adapters ensure compatibility with a wide variety of VHF and UHF systems. A range of sensitivities encompass the vast majority of applications where high quality audio, near invisibility and lightness is required. Developed from many years of professional audio experience, the 4060 is just one of the high quality products from the renowned 4000 series - available now from DPA Microphones.

**Series 4000
Microphones from DPA**

Hejrevang 11, 3450 Allerød, Denmark
T: +45 48142828 F: +45 48142700

NORTH AMERICAN DISTRIBUTORS:
TGI North America Inc. 300 Gage Ave,
Unit 1 Kitchener, Ontario N2M 2C8, Canada
T: 519 745 1158 F: 519 745 2364

www.dpamicrophones.com



Circle (80) on Free Info Card

KD Kanopy: Portable shelters



▲ KD Kanopy is an industry leader in the design, manufacture and distribution of colorful, multi-purpose portable shelters. Tucked into small, lightweight packages, all KD Kanopy products are easily raised by one or two persons in a matter of minutes. Available in a variety of sizes, styles and colors, KD Kanopy products can be customized with regular or oversized lettering, graphics or logo.

800-432-4435; fax 303-650-5093;
e-mail kd@netone.com;
www.kdkanopy.com

Circle (269) on Free Info Card

PICK HIT HONORABLE MENTION

Kintronic Labs: Optilink

Control and monitoring of AM arrays can require extensive amounts of wire and interconnection. The Optilink uses fiber optic cable to communicate data from each tower instead of multiple runs of copper wiring. The fiber runs can be up to two kilometers with each tower requiring two cable runs. The system uses RISC processors to handle the gathered data. Up to three contactors can be controlled at each tower. RF immunity is inherent to the fiber optic cable, and each fiber link replaces 21 copper conductors.

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

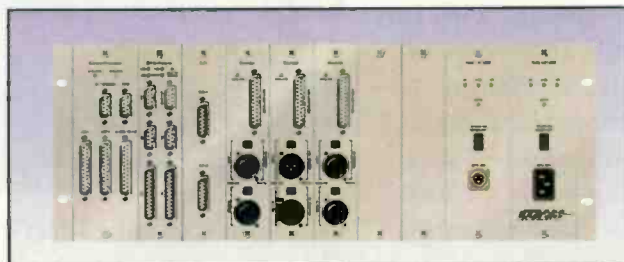
Circle (270) on Free Info Card



MUSICAM USA

"MUSICAM USA, the pioneer in audio codec technology, is committed to meeting your ISDN, T1/E1 and POTS transmission needs. Customer-driven design in crystal-clear audio and reliability, are hallmarks of all our products. With over two decades of engineering expertise and 15,000 of our codecs in use worldwide, we're ready to take digital audio to the next generation."

Michael D'Agostino
Sr. VP Digital Products,
MUSICAM USA



Command the field with a winning TEAM™

The new T1/E1 Audio Multiplexing transmission system for broadcasters and audio professionals who demand high-quality audio and data transmission. TEAM lets you pack the data capacity of a T1 line with as many as six stereo or 12 mono audio channels. Each powerful unit consists of a main frame, control processor, T1 or E1 multiplexer and power supply that

- contains two additional ancillary data channels for use when in J.57 operation
- allows for any combination of encoders, decoders,

or I/O modules

- linear non-compressed audio, including a variety of audio coding standards,
- offers drop/insert capability, remote control, relay contact closures for remote command actuation, and auto-reconfigure on specific conditions

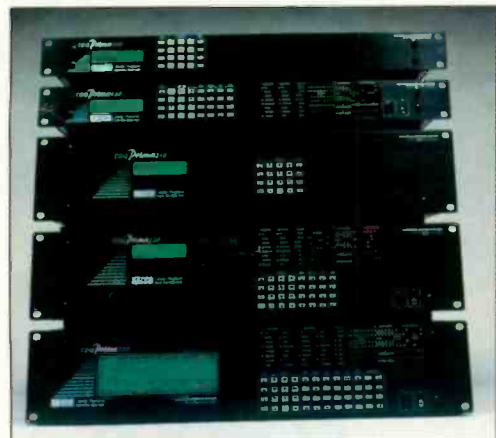
Circle (109) on Free Info Card

RoadRunner™ gets you on the fast track to new business anywhere

The bi-directional, portable audio codec rated a "best value" by voice-over talents, packs mixer, terminal adapter, and codec in a solid rugged unit that

- speeds mono audio over ISDN lines—15kHz mono on a single ISDN "B" channel, 20 kHz on a full ISDN line
- puts "on the fly" mixing capability at your fingertips
- contains MUSICAM® MPEG layer II, III and G.722 for total compatibility

Circle (104) on Free Info Card



Deliver star performance with CDQPrima™

The first intelligent digital audio codec series that offers more models and standard features than the competition

- new software upgrade that cuts delay time by half
- up to 384kb/s contribution grade audio
- 256 speed dial locations with 32 factory quick-configuration presets
- makes multipoint broadcasts "a piece of cake" with speed dials

Circle (105) on Free Info Card



Call the shots from anywhere with FieldFone™/StudioFone™

The first system to broadcast quality audio over one standard phone line works like a portable studio. It tackles broadcasting from the field with

- patented transmission technology for upto 10.2 kHz of broadcast quality bi-directional audio—without costly ISDN lines
- Sound Shapers™ —that modify up to five versions of the encoding algorithm "on demand"
- multiple mic inputs and relay contact closures for remote control of studio equipment

Circle (106) on Free Info Card

Which would you rather carry on your next Remote?

ALL THIS

\$2995
\$2300
\$4980
\$1900
\$150
\$950

or

ROADRUNNER

\$2800

Your one box remote broadcast solution!

When you're rushing off to your next remote you don't want to lug around a lot of equipment.

RoadRunner from MUSICAM USA gives you:

- A 3-channel mixer
- Built-in ISDN Terminal Adapter with integrated NT-1
- MUSICAM® MPEG Layer II, Layer III and G.722 for total compatibility
- Internal power supply or external battery

All in one box.

See Us at AES San Francisco

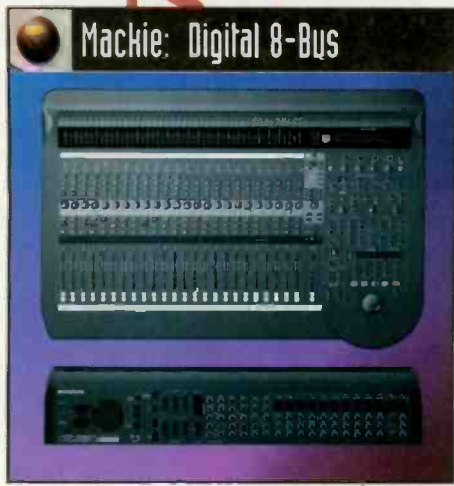
Performance, price and portability — RoadRunner outdistances the competition every time



MUSICAM USA
670 North Beers Street, Building 4, Holmdel, New Jersey 07733 USA
Tel: 732/739-5600
Fax: 732/739-1818 • Fax On Demand: 732/935-2777
Email: sales@musicamusa.com
Internet: http://www.musicamusa.com

Prices shown are published manufacturer's list prices as of 3/1/98

Circle (63) on Free Info Card



Mackie: Digital 8-Bus

◀ The Digital 8-Bus audio console with built-in Apogee UV22 Super CD encoding software is an affordable digital console with full recording and mixdown capabilities. Includes full automation, motorized faders, robust DSP, 5.1/7.1 surround capability and 32-bit internal processing with an intuitive, easy-to-use "analog mixer" interface. The unit offers 12 balanced mic/line channels with high-headroom low-noise mic preamps and inserts, 12 balanced

line input channels, 48 channels with 12 aux sends per channel, and 24-bit, 64x oversampling.

800-898-3211; fax 425-487-4337; e-mail sales@mackie.com;

www.mackie.com

Circle (271) on Free Info Card



◀ ATI's line of AES/EBU digital audio distribution amplifiers are available in single and dual input configurations. Levels and connectors are optimized for use with balanced XLR 110Ω cable or unbalanced BNC 75Ω coax. Adjustable

input cable equalization and multiple regenerated independent AES/EBU low jitter outputs make them ideal for the most demanding digital audio signal distribution requirements. Sample rates from 27 to 96kHz are indicated with numeric readouts. Signal status and error messages are decoded and displayed to provide visual assurance of data integrity and also to provide an easy means to optimize input cable equalization.

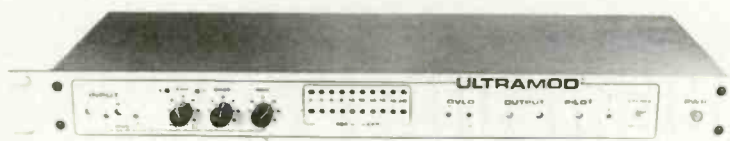
800-959-0307; fax 215-443-0394; e-mail les@atiguys.com;

www.atiguys.com

Circle (272) on Free Info Card

ADVERTISEMENT

BROADCAST TECHNOLOGY COMPANY



The UM-2000 is a self contained split band stereo FM processor, with AGC and an **-ultra transparent-** digital stereo generator. Designed to give you concert quality, at a price you will like.

Contact us for details and dealer information.

Just \$1,895.00

affordable
audio
processing

**BROADCAST TECHNOLOGY
COMPANY**

P.O. Box 751 • Lamar, CO 81052
(719) 336-3902

<http://www.hnat.com>

Circle (65) on Free Info Card

ADVERTISEMENT

Problem:



I have a duopoly. I need back-up transmitters for my stations:

Solution:

Don't buy two transmitters — buy ONE!

Our Legend Series, Solid State, FM transmitters are Frequency Agile and Broadband. Your engineer can instantly tune one to any frequency!

We've designed the Legend Series to ensure long transistors life with "wind tunnel" cooling & brute force power supplies.

Legend Transmitters make perfect main transmitters too!

Available from 1KW - 11KW

Two or more stations;
One back-up transmitter.
GREAT IDEA!

**Great Products
Great Solutions!**

"The Transmitter People"



PO BOX 801 ♦ 1306 RIVER ST.
Valatie, NY 12184
Phone 518-758-1690
Fax 518-758-1476
energy-onix@energy-onix.com

Circle (66) on Free Info Card



A combination system readout and datalogger, the HI-4460 makes use of its large backlit LCD to display multiple numeric and graphical electromagnetic field representations. The display can show the resultant reading, individual axis readings, and bar graphs, as well as a running time plot simultaneously. It incorporates an easy-to-use menu system for quick setup and execution of EMF data gathering sessions, allowing either simple test configurations or complex site evaluations to be handled easily. The unit features an RS232 PC interface for downloading software sets, as well as uploading the test data to a computer. A partial list of the additional features includes simultaneous axis, resultant and peak field display, running time plots of field strength figures, and the ability to review collected data in numeric and graphical formats.

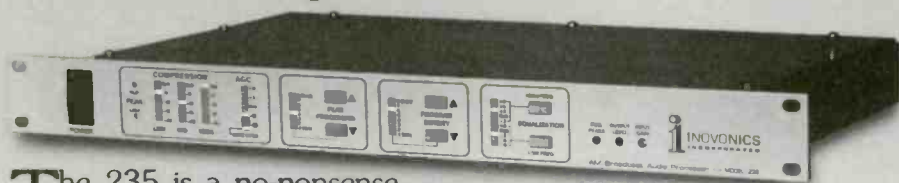
612-934-4920; fax 612-934-3604;

holaday@holadayinc.com;

www.holadayinc.com

Circle (273) on Free Info Card

Honest AM Improvement



The 235 is a no-nonsense, full-function AM audio processor. It features slow, "gain-riding" AGC, 3-band average level compression coupled with variable equalization, and an asymmetrical peak controller combining fast limiting with variable clipping depth. Strict NRSC compliance is guaranteed by specified pre-emphasis and overshoot-compensated low-pass filtering.

You'll find the 235 very easy to set up and use. Front-panel controls and indicators make local operation a snap, and the built-in RS-232 port and our simplified software enable computer or modem remote control if desired.

Your preferred broadcast equipment supplier can arrange a demo at your station. Phone, fax or check our website for complete technical details.

Model 235 — \$1800

Inovonics
1305 Fair Ave. • Santa Cruz, CA 95060
TEL: (408) 458-0552 • FAX: (408) 458-0554

www.inovon.com



Circle (64) on Free Info Card

NUMIX

Logitek's Numix is an innovative approach to digital console design. The control surface is a series of wedge-shaped, modules that can be arranged at will to match the needs of the installation. The control surface arcs around a user to make even distant faders and buttons accessible. You can choose from 4, 8, 12, 16, 20 or 24 faders - motorized or non. Each fader is assignable through a matrix of buttons. Options include pan, EQ and profanity delay. Presets allow each user to have a preferred configuration. The control surface's low profile ensures that studio PC monitors will not create a wall between talent and host and the narrow depth means easy access to touch screens. If you think of a



routing switcher with a sophisticated control head, you will be closer to the concept of the Logitek digital consoles than thinking of a traditional analog console. The audio is kept separate from the control surface in a rack mount enclosure that can be up to 1000 feet away. This "Audio Engine" houses all the audio cards (either analog or digital), it supports multiple control surfaces, meaning to add a second studio, you add a second control surface... not a second console. Inputs can be exclusive or shared among studios (such as network feeds). Logitek has taken advantage of the digital technology to build a console that is in tune with the new reality of radio.

For more information on Logitek's full line of digital consoles for radio, call Richard Byrne at 1-800-231-5870.

Circle (107) on Free Info Card

Buying an analog console? DON'T!

That analog console may at first look cheap and affordable but given that consoles usually last over 10 years you might want to think again. Will you want that analog piece of gear in your facility in the year 2008... or even 2005? Analog consoles bought today will not get the years of use that digital ones will, meaning that the cost per year of use will be higher for analog consoles than newer... even more expensive digital ones. Factor in the cost of installation, the disruption of construction and you have strong arguments from your accountant, to invest in digital consoles today.

The costs savings can be very real... by removing heat generating equipment from the studio, your air conditioning costs can be reduced and over the life of a console - this could mean thousands of dollars. Logitek allows you to do this with it's separate audio engine. The "heart" of the console can be remoted up to 1000 feet, kept next to the satellite feeds and hard disk systems. This also means that cabling that had to be run back to the engineering room no longer needs to be... another real cost saving in labor and cable.

Having the "Audio Engine" outside the studio means that servicing can be done during normal office hours thus reducing overtime... there is no longer a need to come late at night or weekends to work on the console.

With the modular approach that Logitek has taken, you have a protected investment. Need more inputs... in the traditional analog world this could mean a whole new console, with Logitek's Audio Engine, you simply add more cards to the audio engine. And, as we move to a totally digital studio, adding a digital microphone will simply mean replacing a card, rather than a console. Logitek's consoles are software defined as opposed to having fixed hardware modules for different functions. If your station suddenly changes from music to talk, there is no need to order and wait for new modules to come in. With Logitek you can redefine your consoles with a push of a button. You can change inputs from mono to stereo, add mix-minus busses, even add processing. Logitek consoles will meet your needs today and in the years to come.

For an information package on Logitek's digital consoles call Logitek now at 1-800-231-5870.

Circle (108) on Free Info Card

The **Digital** Console that Fits

Logitek designed and built the ROC-5 digital console to meet your needs for a small size console. Ideal for dubbing studios, newsrooms or stations that use automation or satellite programming.

Logitek's ROC-5 is small in size but offers up to 64 inputs - all easily accessible through assignable faders. The ROC-5 works with all analog and digital audio sources. It has a serial interface to your hard disk system, adding functionality and value to both systems.

Logitek offers the widest selection of broadcast digital consoles. Call us today for a complete information package..



ROC-5 starting at under \$8,000

Logitek digital with a better difference!

3320 Bering Drive, Houston, TX, 77057 USA Voice: North America 800.231.5870
 Fax: 713.782.7597 Others 713.782.4592 e-mail: info@logitekaudio.com

Visit our home page at www.logitekaudio.com for more information

Circle (67) on Free Info Card

S.W.R. Inc.: FM Antennas



▲ Headquartered in the US, S.W.R. products are manufactured and tested on site to ensure reliability. Through superior design procedures and high testing standards, the company continues to develop new technology, upgrade manufacturing procedures, and design superior features into its products. In addition, SWR will supervise RF installations, perform field service work, and customize products to meet individual needs. The FM3 (pictured) is built along the lines of the company's FM10, but is priced for the Class A station.

800-762-7743; fax 814-472-5552;
e-mail swr@third-wave.com;
www.swr-rf.com

Circle [274] on Free Info Card

Multidyne: AIA-880

Adapt the audio screw terminals of the Leitch FR-883 and FR-884 audio distribution trays to XLR connectors using this breakout panel. The interface is neatly accomplished using ribbon cables to adapt the screw terminals to two panels housing 60 XLR connectors each. The system converts all 120 screw terminal connectors to 120 XLR connectors in four rack units. All the audio connections are made with XLR terminated cables instead of direct wiring to screw terminals.

800-488-8378; fax 516-671-3362;
e-mail info@multidyne.com;
www.multidyne.com

Circle [275] on Free Info Card

Systembase: C400xr

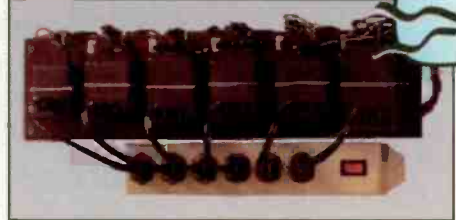


◀ The C400xr is a fully featured, 1RU, 19" rack mount stereo ISDN audio codec offering a short coding delay of only 3.8ms. In addition the unit can interface directly with the ISDN digital network to provide a high-quality, bi-directional music circuit at either 15.6kHz stereo or 22.5kHz mono. Connection to various other types of digital networks is permitted: included x.21/v.35 digital leased lines (nx64kb/s), satellite, digital microwave and spread spectrum links. The unit is ideally suited for implementing STLs for FM radio with full-bandwidth ISDN backup in case of a primary circuit failure. AES/EBU digital audio interface with sample rate conversion is supplied as a standard, allowing direct connection to digital studio equipment. Other features include Dial-on-Audio/ Hang-on-Silence mode to minimize ISDN call charges, 9600kb/s auxiliary data port for sending time code, and full remote management facility.

+44 (0) 1256 882 797; fax +44 (0) 1256 882 797;
e-mail sales@systembase.com;
www.systembase.com

Circle [277] on Free Info Card

Radio Design Labs: WH1



strip. The WH1 from Radio Design Labs mounts them on a single bracket where they can be spaced and secured as needed. An included six-inch power cord connects the supply to the power strip, thereby eliminating the wasted space. Each kit comes with the parts needed to mount up to six power supplies. The brackets measure 19" x 4.6" x 1.1".

800-281-2683; fax 800-289-7338; www.rdlnet.com

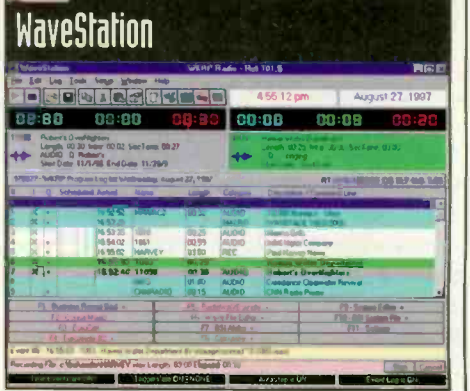
Circle [276] on Free Info Card

◀ With more and more equipment using external, wall-mount power supplies, the space needed to plug in these "wall warts" has grown. Add to this that they are all different sizes and the result is several wasted outlets on a power strip. The WH1 from Radio Design Labs mounts them on a single bracket where they can be spaced and secured as needed. An included six-inch power cord connects the supply to the power strip, thereby eliminating the wasted space. Each kit comes with the parts needed to mount up to six power supplies. The brackets measure 19" x 4.6" x 1.1".

800-281-2683; fax 800-289-7338; www.rdlnet.com

Circle [276] on Free Info Card

Broadcast Software International: WaveStation

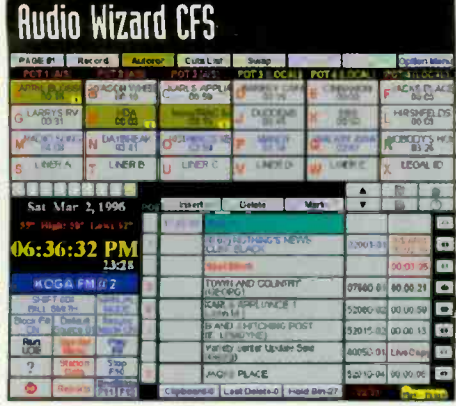


▲ WaveStation is a state-of-the-art digital audio automation software which leverages the power of the Windows environment to give you many of the advanced features of more expensive systems, and even provides the ability to run other programs and "triple overlap" for true voice tracking. The package is equipped with BSI's exclusive .WAV file labeling technology, allowing the insertion of information right into the audio file, and can run entirely automated or as a live-assist system. It easily interfaces with your satellite receiver for satellite automation and can import program log data from virtually any traffic management or music scheduling systems.

541-338-8588; fax 541-338-8656;
e-mail info@bsiusa.com;
www.bsiusa.com

Circle [281] on Free Info Card

Prophet Systems: Audio Wizard CFS



recorder that provides long-form capture of incoming audio material.

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

Circle [278] on Free Info Card

◀ The Audio Wizard CFS is a full-featured station digital automation system. The centerpiece of the Audio Wizard CFS is its live show interface offering: drag-and-drop commercials and songs, full touchscreen compatibility, auto roll buttons, outcues, and a clipboard function among many other features. The system offers several ways to record and edit audio at any workstation, including the handy Quick Recorder and Quick Editor, and the Digital Reel-to-Reel

Shure Brothers: Broadcast mics

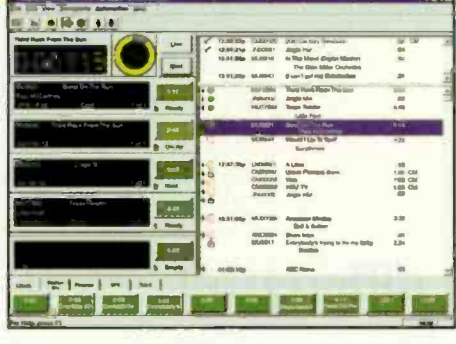


▲ A handheld, omnidirectional dynamic microphone with extremely low handling noise, the SM63LB is a black version of Shure's SM63L. The device features a dent-resistant Veraflex grill and a humbucking coil that virtually eliminates extraneous noise. The VP64AL is identical to the Shure VP64A, with the exception of its longer handle length. The unit is outfitted with a high-output neodymium cartridge that is protected by a water-resistant mesh grill.

800-25-SHURE; fax 847-866-2279;
e-mail sales@shure.com;
www.shure.com

Circle [280] on Free Info Card

CBSI: Digital Universe



having to deal with one clean, uncluttered screen, supporting touchscreen, mouse and keyboard operations.

800-547-3930; fax 541-271-5721; e-mail info@cbsi.com;
www.cbsi.com

Circle [279] on Free Info Card

◀ Digital Universe, new from CBSI, requires only one PC/monitor per studio thanks to its robust client/server architecture. This means not only that you can reduce hardware costs substantially, but also tailor each Digital Universe workstation with a consumer-grade audio card, perhaps, for a low demand auditioning studio, and a higher-grade card for your main air studio. Operators will appreciate

Visit us on the web at

WWW.BERADIO.COM

for a complete list of industry links

Production can deliver on time...

No matter what happens!

Hard to believe from your experience, isn't it? Using MicroSound digital audio workstations, even when the unexpected happens, your production is safe.

For 8 years, MicroSound users worldwide have never lost a file. Period! Every edit and change backs up instantly, never interfering with the creative process. Productivity and creativity shine with the absolute safety of MicroSound.

All this and ultimate quality at a price you can afford. Never heard of us? **The press and our users say it best...**

Mix Magazine, 20th Year Anniversary Issue

"Micro Technology Unlimited was the first in the world to ship a microprocessor based Digital Audio Workstation."

Jerry Vigil, Producer, Radio and Production Magazine

"I expected the lack of a control panel to be a weakness. As it turns out, MicroSound is even capable of doing some things faster than systems with dedicated control panels. So, throw out any old notion about mice and keyboards... MicroSound makes production with a mouse surprisingly fast and rather comfortable for even the most computer shy producer.

Performing a digital fade in or fade out is as easy and fast as it gets. Setting a perfect 2 second fade can literally be done in one second, or less! Is it really this simple?

Perhaps the most unique aspect is how it treats the idea of "tracks" as we are used to thinking of them in a multitrack environment. If you want to talk in terms of tracks, MicroSound is a 512 track digital workstation. You won't run out of tracks. Next question.

After dozens and dozens of hours of use, MicroSound did not crash even once. There was not even a single error message. Bravo!

Jim Smith, Past Technical Supervisor, NPR, Washington, DC

"MicroSound is completely uncluttered and flexible. It doesn't work like a tape recorder, or some other DAW or piece of gear. It shouldn't, it should work BETTER which means that it has to be different! Its open-ended simplicity is really changing the way I think about and produce my work.

After listening to the results of purely digital playback of the same DAT on multiple machines and being astounded by the sonic differences, I've come to the conclusion that my primary storage medium for album mixes in the studio is going to be direct to MicroSound. It has become the reference. My partner, who is already working for a major label in Nashville, has commented often on how transparent the MicroSound system is."

Charles Lawson, WETA Public Radio, Arlington, VA

"MicroSound is the easiest to learn, offers the most flexibility in production, and is the most stable and consistently reliable system I have ever used. There is nothing else in its class. ... I totally amazed a new producer yesterday by creating a master spot with 11 different versions and burning an archive CD of them all in 65 minutes!"

Marty Moran Prod. Dir., WHCN-FM, Hartford, CT

"MicroSound is about total reliability. I've experienced this first hand. Our system is currently 5 years old. It has never crashed. I have never lost a sound file. Ever! The system runs 24 hours a day because it is used by the entire programming staff

Jeff Apthorp, Bible Broadcasting Network, Charlotte, NC

"I've done the best production of my career with MicroSound. My first hour saved me 32 hours of work! The screen layout, true nonlinear concept, and manual are so easy to understand that our entire staff of announcers [even 60+ year olds] was productive in just a few days."

Eddie Ciletti, EQ Magazine

"Mixing with MicroSound is the ultimate automation... The sound quality is excellent, which is to say that it is completely transparent. The average analog console, all faders down and muted, is not this quiet."

Marvin Sanders, Keyboard Magazine

"I watched MicroEditor mix 20 channels - including [sample accurate, smooth] fades and amplitude changes - without any delay at all from hitting Play to playback. This means that, even real-time, it offers at least twice the tracks of the other systems in this roundup [of 10 DAWs]."

Bill Hodges, Journalism Broadcasting Dept., Oklahoma State University, Stillwater, OK

"The MicroSound workstation we bought three years ago is still working perfectly. It is being used on a daily basis for training in a radio production class. My biggest fear when we first got the system was that students would be constantly crashing it. That just has not happened. Still to this date the system has not crashed or locked up where it could not be used."

Ruud Broers, Media Morphics, The Netherlands

"Media Morphics division of ODME is using the MicroSound hardware in our [multi-million dollar] Media Conversion Systems since 1991. The hardware is found to be extremely reliable and in use in CD mastering sites all over the world like; Japan, China, Europe and the United States.

Between 30% to 50% of the audio CDs available WORLDWIDE have been mastered on MicroSound because it is used as the ODME front end."

The logo for MicroSound features the word "micro" in a lowercase, sans-serif font, followed by a stylized graphic of a sun or moon with horizontal lines, and then the word "sound" in a larger, bold, lowercase, sans-serif font. A small trademark symbol (TM) is located to the right of "sound".

"Celebrating 21 years in Quality Digital Audio."

Micro Technology Unlimited

6900 Six Forks Road, Raleigh, North Carolina, USA 27619-1061

Voice: 919-870-0344 Fax: 919-870-7163 Email: info@mtu.com Web: www.mtu.com

Circle (51) on Free Info Card



VIP Products: Wrap-Ups

◀ Wire & cable markers designed to provide an inexpensive solution to the ever-present problem of fast and permanent field identification. The markers are available in widths from 1.5" to 6" to fit virtually any size cable or wire, and in eight colors to meet EIA / TIA606 standards. When applied, the clear film of the Wrap-Up completely covers and laminates the written legend, thus ensuring permanent protection against dirt, oil and water. Wrap-Ups are available for imprinting with laser printers, and custom units may be ordered to suit any need.

800-950-4921; fax 800-967-3986

Circle (282) on Free Info Card

CircuitWerkes: TeleRadio

With TeleRadio you can instantly listen to several stations in several markets simply by using your phone. TeleRadio offers: ten random memory presets; remote-controlled scanning, tuning, AM/FM band change, and memory set; automatic reset to first memory each time it answers a call; and a remote control aux audio input allows the coupler section to temporarily be used as an audio patch for remote talkback.

352-335-6555; fax 352-380-0230;

e-mail info@circuitwerkes.com; www.circuitwerkes.com

Circle (283) on Free Info Card



Neutrik USA: Website

◀ Neutrik has updated its website to include expanded authorized distributor and new product pages, along with a new page dedicated to the trade shows Neutrik USA attends, including booth numbers when available. The new product page includes the latest products and their descriptions. The updated page now includes the new SCDF and SCDM D series weather-resistant dust covers, the NP3TT-P bantam plug, COMBO connectors, and the AES/EBU digital audio adapters. Neutrik's authorized distributor page includes an expanded alphabetical list of distributors with their logos and contact information.

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

www.neutrik.com

Circle (284) on Free Info Card



ENCO Systems & WireReady:

NewsDAD32

◀ NewsDAD32 integrates features from ENCO's DADpro32 digital audio delivery system and WireReady's NewReady32 wire capture and editing system. The unit includes all of the features and functionality of NewsReady 32, but is optimized for seamless integration of sound bites and other audio cuts as recorded and edited within DADpro32 into a news script as prepared within NewsDAD32. The final product is a news script with embedded sound bites that can be used for on-air prompting and execution at any DADpro32 workstation sharing data access on a LAN or groupwide WAN.

800-362-6797; fax 248-476-5712; e-mail lamoray@enco.com;

www.enco.com

Circle (285) on Free Info Card

ADVERTISEMENT



Silicon Valley Call 800-986-9700
POWER Fax 408-986-1438
AMPLIFIERS

B-2000

2 KW FM POWER AMPLIFIER

up to 2.4 KW for 10 W drive.

FM AMPLIFIERS FROM 150W TO 2.4KW, MODULES FROM 10W

Circle (52) on Free Info Card

See why Norsat is making waves with its new low cost PLL LNB.

Norsat introduces the next wave in LNBs. Norsat's new low cost series of C and Ku-band PLL LNBs offers superior phase noise performance combined with reduced costs making this new line of LNBs ideally suited for many digital audio and data applications. They are available in a wide selection of C and Ku-band frequencies for installation around the world and L.O. stability options range from ± 75 kHz to ± 150 kHz.

Contact your Norsat representative for quotations on custom products for your specific application. For next day delivery of all your commercial LNB needs, contact your local distributor or Norsat today.



The people you think of first.

Contact Norsat at:
#302-12886 78th Avenue, Surrey, British Columbia, Canada V3W 8E7
Canada • Tel 1-604-597-6203 • Fax 1-604-597-6214
Internet: www.norsat.com E-mail: info@norsat.com

Circle (53) on Free Info Card



Stereo Field Mixer

NANOAMP SERIES™

MXS100 Stereo Three Input Mic/Line Mixer

- Quiet Mic/Line Inputs • Phantom Power
- Program/Cue Headphone • Lo-cut Filters
- Slate Mic and Tone Osc. • Bright 3 Color Meters
- Limiter • 10-30 VDC Ext. Power

AUDIO TECHNOLOGIES, INCORPORATED

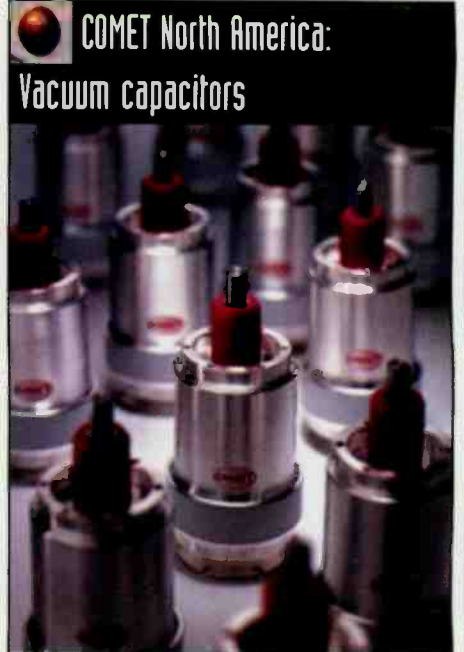


328 W. Maple Avenue,
Horsham, PA 19044
Tel: (215) 443-0330 • (800) 959-0307
Fax: (215) 443-0394 • <http://www.atiguys.com>

Call or write for free detailed brochure.



Circle (42) on Free Info Card



COMET North America:

Vacuum capacitors

▲ Comet offers several types of vacuum capacitors for use in transmitters, couplers and phasers. Included in the line: the MC MiniCap, a lower cost fixed vacuum capacitor; the X-Cap, a gas-filled variable capacitor designed to fill the gap between lower cost but technically limited air capacitors and higher cost, high-performance vacuum capacitors; CONDIS, a high-power compressed-gas capacitor; and the HV 100-30, used for testing and reconditioning of vacuum capacitors and other components.

203-852-1231; fax 203-838-3827

Circle (286) on Free Info Card

Pacific Research & Engineering Completes Second Sale To China National Radio

Worldwide Business Expanding

Carlsbad, CA, USA, June 23, 1998... Pacific Research & Engineering Corporation (PR&E) today announced its second sale of digital and analog on-air consoles to China National Radio, the largest operator of radio networks and stations in China.

Three more of Pacific Research & Engineering's Integrity® Digital broadcast consoles will be delivered to China National Radio's Beijing headquarters, complementing the two initial Integrity consoles purchased earlier this year. Also included are two Radiomixer consoles, marking PR&E's first sale of analog broadcast consoles specifically for use by China National Radio. The purchase was made through the Infostor Group, PR&E's Beijing distributor.

This latest acquisition by CNR brings the total number of PR&E Integrity Digital consoles in China to eight, following last month's purchase of three Integrity consoles by Beijing Radio. CNR had previously purchased two of PR&E's Integrity Digital consoles for their Beijing studios in January 1998, as well as a 20-input AirWave analog console for use at Economic Station of China HangZhou Radio in ZheJiang Province.

State-operated China National Radio is the largest provider of radio content in China. CNR's seven different networks originate over 120 hours of programming daily, which is delivered to more than 1,300 affiliate stations. "PR&E believes that there is enormous potential in the Asian marketplace in general, and in China in particular," stated Susan Dingethal, PR&E's V.P. of Sales and Marketing. "Because of recent economic difficulties, many companies have diminished their presence in Asia, but PR&E is committed to these markets. We hope that this additional purchase of PR&E products by China's largest and most distinguished broadcaster will pave the way for widespread acceptance of our products with other Chinese broadcasters."

Pacific Research & Engineering is a manufacturer of high quality broadcast studio products including on-air and production consoles, digital audio workstations, studio systems design/integration services, and custom cabinetry. U.S. Clients include NBC, ABC, CBS, Jacor Communications Inc., Capstar and Chancellor Broadcasting. Pacific Research & Engineering is located at 2070 Las Palmas Drive in Carlsbad, California, 92009, USA.

Pacific Research & Engineering Announces Partnership with IBM

Carlsbad, CA, USA, March 11, 1998... Pacific Research & Engineering Corporation (PR&E) announced today that the Company has entered into a strategic partnership agreement with International Business Machines (IBM)(NYSE:IBM). As an IBM business partner, PR&E has agreed to market the eWave™ broadcast software product family, as well as the distribution and integration of other IBM products and global services.

Most industries use integrated enterprise software specifically designed for corporations to manage their finances and operations. Prior to the Telecommunications Reform Act of 1996, the radio industry had limited need for such software due to caps on station ownership. Now, with managers overseeing dozens of stations in many locations, broadcast-specific information technology is necessary in order to effectively manage those properties. eWave is a fully integrated software solution that gives managers the all-in-one control and visibility they need.

"We're very excited about our partnership with IBM," said Susan Dingethal, V.P. of Sales and Marketing of Pacific Research & Engineering. "It's a perfect fit. PR&E is one of the most respected names in the radio industry. Together with IBM's vast resources and information technology experience, PR&E can now develop business software solutions to help broadcasters compete more effectively."

"We think that the commitment IBM has shown to the radio industry with eWave speaks volumes about the significant changes brought about by the Telecommunications Reform Act," Dingethal continued. "The business of broadcasting is now dominated by sophisticated, well-financed companies with hundreds of properties, and this rapid change has created a tremendous opportunity in the area of information management. Computers are changing the way the world works... this partnership will enable PR&E to help broadcasters change the way they work, as well."

PR&E is a Carlsbad, California-based manufacturer of high quality broadcast studio products including on-air and production consoles, digital audio workstations, studio systems design/integration services, and custom cabinetry. Clients include NBC, ABC, CBS, Jacor Communications Inc., Emmis Broadcasting, Capstar, Chancellor Broadcasting, American Radio Systems, and Cox Communications. PR&E is located at 2070 Las Palmas Drive in Carlsbad, California, 92009.

Pacific Research & Engineering Signs Letter Of Intent To Acquire Graham-Patten Systems

Carlsbad, CA, USA, May 26, 1998... Pacific Research & Engineering Corporation (PR&E) (AMEX:PXE) announced today that it has signed a Letter of Intent, subject to completion of due diligence, to acquire Graham-Patten Systems, Inc., a Grass Valley, California-based manufacturer of digital audio mixers for the video editing environment. Terms at the time of signing were not disclosed.

Jack Williams, Chief Executive Officer of PR&E, stated "Graham-Patten Systems is a recognized and highly-valued name in the audio-for-video industry. Their reputation and products are unmatched, and the combined expertise of both companies in high-performance digital audio technologies will allow us to leverage beyond our existing marketplaces."

"The television industry has been undergoing tremendous change of late," continued Williams. "PR&E's acquisition of Graham-Patten Systems positions the company optimally for the industry's conversion to Digital Television [DTV]. The relationship is also enhanced by our similar corporate cultures and values; both companies are well-respected in the marketplace for their customer-first business practices."

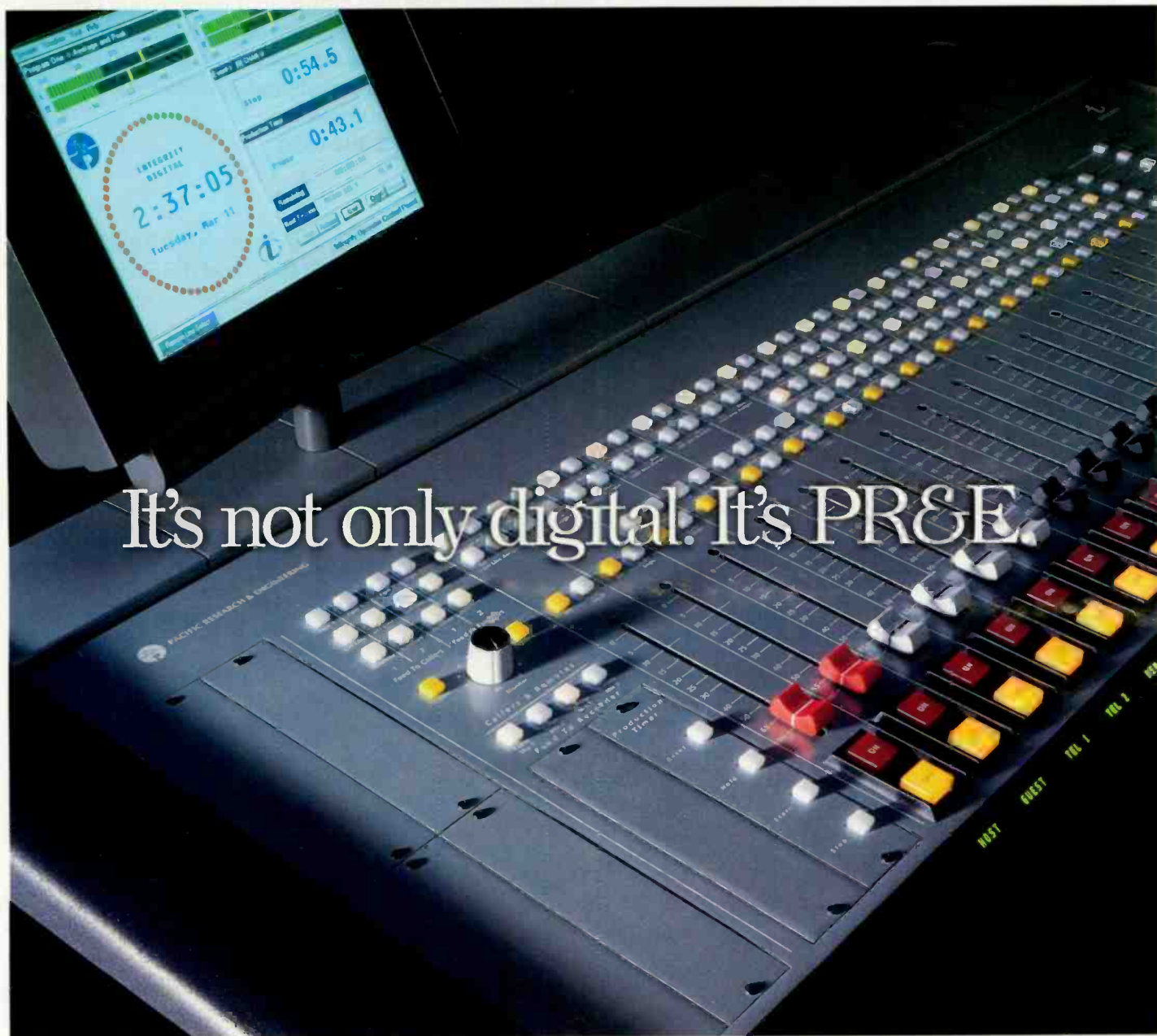
"We are extremely excited about the prospect of join-

ing forces with Pacific Research & Engineering," said Graham-Patten Systems co-founder and President, Mike Patten. "Our combined resources will allow us to better serve existing customers and put us in a unique position to leverage more than 10 years of digital audio development into new products for DTV and other expanding markets. PR&E is a recognized leader in broadcast systems, and shares with us an excellent reputation for quality, value and customer satisfaction."

Founded in 1980, Graham-Patten Systems (GPS) is the world's leading manufacturer of digital audio mixers for video editing. Innovations include production of the first professional audio mixer designed specifically for video editing, and the industry's first digital edit suite audio mixer. GPS products are employed by all major U.S. television networks, and in post production facilities worldwide. They have also been used in every Olympic Games since 1984. By working closely with their customers, Graham-Patten has invented a number of products which have since become industry standards. These include the Digital Edit Suite Audio Mixer (D/ESAM), the Digital Audio Transmission System (DATS), the Video Audio Multiplex Process (VAMP), and SoundPals digital audio building blocks.

PR&E manufactures high quality broadcast studio products and provides turnkey studio design/integration services to the worldwide broadcasting industry. Products include on-air and production mixing consoles, digital audio workstations, and studio furniture. PR&E's clients include NBC, ABC Radio, CBS Inc., Jacor Communications Inc., Chancellor Media Broadcasting, American Radio Systems, Emmis Broadcasting and Cox Communications. For more information, visit the Company's Web site at www.pre.com or call 760-438-3911.

Forward-looking statements and comments in this press release are made pursuant to the safe-harbor provisions of Section 21E of the Securities Exchange Act of 1934. Such statements relating to, among other things, the prospects for the Company to increase the level of sales and maintain profitability, are necessarily subject to risks and uncertainties, some of which are significant in scope and nature, including risks related to the demand for radio broadcasting equipment, competition and availability of capital. These risks are further discussed in the periodic reports and registration statements filed by the Company from time to time with the Securities and Exchange Commission.



It's not only digital. It's PR&E.

Now you can get digital technology and PR&E reliability in the same console. Integrity.™

It's the first digital on-air board that also speaks fluent analog. All 16 inputs can handle analog signals. Ten can also accept digital inputs at any sample rate. So you can deal with the hodge-podge of equipment in real-world studios. A unique architecture also guarantees a level of reliability other digital consoles can't match. So you can rest assured your signal will stay on the air.

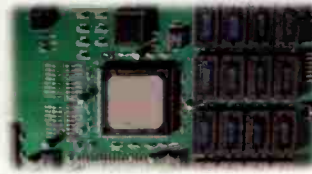
And with digital programming, you get seamless show transitions, fewer board-op errors and fewer make goods. For a brochure, call 760-438-3911, visit www.pre.com or e-mail sales@pre.com



The LCD screen and Windows® interface provide access to powerful configuration management and session-based features.



Four special-purpose buses provide automated mix-minus for telephone and remote feeds, each with IFB.



An array of state-of-the-art, floating-point digital signal processors perform mixing, routing and other functions.



The 10-character display changes when another audio source is assigned, either manually or at a preassigned time.

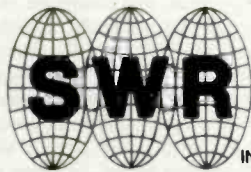


The FM Series

SWR's FM antennas, ranging from educational series to multi-station antenna arrays, are highly customized to meet broadcaster's needs.

Options

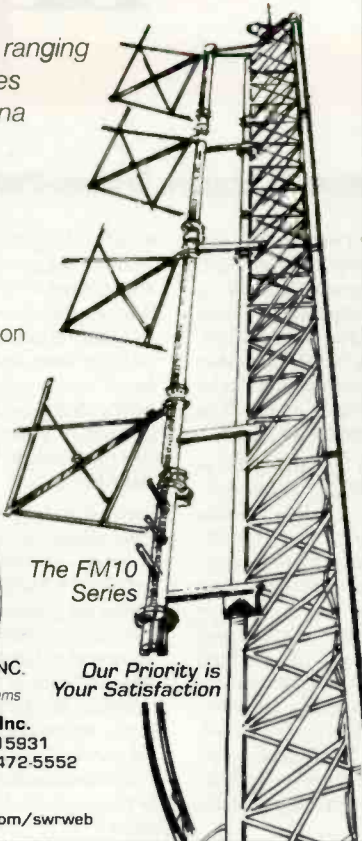
- Circular, horizontal, or vertical polarization
- Beam tilt
- Null fill
- Customized directional patterns



INC.

Antennas and Transmission Line Systems

Systems With Reliability, Inc.
P.O. Box 856, Ebensburg, PA 15931
1-814-472-5436 FAX 1-814-472-5552
Sales: 800-279-3326
E-Mail: swr@third-wave.com
http://homepage.third-wave.com/swrweb



The FM10 Series

Our Priority is Your Satisfaction

Circle (55) on Free Info Card

BE Radio

EDAC: Multimedia Connector 521 Series



EDAC's 521 series of multimedia connectors is available with many different contact combinations — 28 hermaphroditic Edacon contacts along with up to six 75Ω or 50Ω contacts or six power contacts, each capable of up to 40 amps. This design allows for mixing of different types of connector requirements. It would also allow for two pairs of Edacon contacts to be used for sync, control signals, or parallel filtered power up to 16 amps.

416-754-3322; fax 416-754-3299; e-mail edac@edac.net; www.edac.net

Circle (287) on Free Info Card

This microphone processor was designed for application in the studio or on remote. Its input levels can be remotely controlled to correct levels between announcers. Once levels are correct, the equalization can easily be established with no further adjustment required. The unique compressor/expander combination reduces room and equipment noise while providing level control and increased loudness for the announcer. Other features include front panel selection of input level in four ranges, +4dB to -50dB, three section variable boost and out equalization designed for easy set-up without increasing room rumble and system hiss, and symmetry correction providing more talk power with less compression.

972-304-0455; fax 972-304-0550

Circle (288) on Free Info Card

AIRcorp: Model 500 Pro Announcer



Lambda offers this brochure highlighting the company's NES/DRP, JWS/RWS and JFS Series of DIN rail-mountable power supplies. The brochure, now available, gives complete product descriptions, features and specifications. The brochure also includes contact information for all Lambda sales and service offices worldwide, in addition to listing its nine authorized national and local distributors.

516-694-4200; fax 516-293-0519;

www.lamdapower.com

Circle (289) on Free Info Card

Spirit by Soundcraft: Folio FX8



Like the Folio FX-16, the FX-8 is a flexible, four-bus mixer capable of producing digital-quality sound for live and recording applications. It features a specially designed

16-program Lexicon effects section with dual-effect capability (including chorus and reverb, chorus and delay, and reverb and delay), as well as fully editable/storable programs and parameters.

The console itself includes eight mic/line inputs and 16 total inputs to mix, including FX returns and tape return to mix. In addition to the mix outs, two sub-busses allow groups of inputs to be sent to multitrack recorders or additional speakers, or sub-grouped to mix. All of the FX8s eight mic/line inputs are equipped with Spirit's UltraMic preamp. Providing a full 60dB of gain range and +22dBu of headroom, this preamp enables the input stage to handle virtually any mic or line device.

916-630-3960; fax 916-630-3950; www.spiritbysoundcraft.com

Circle (290) on Free Info Card

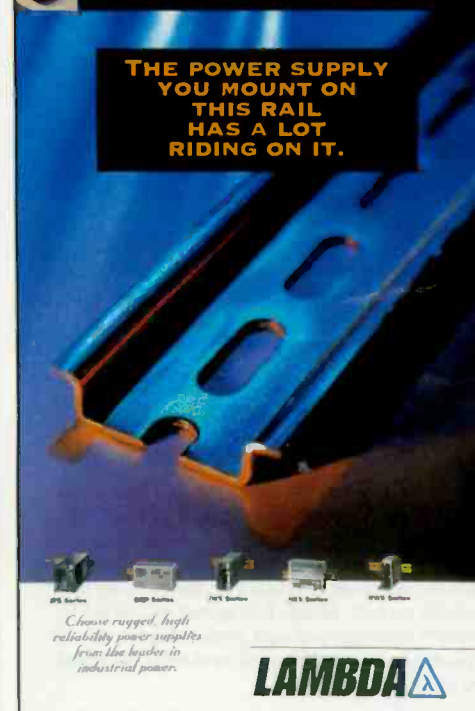
The Portable One is a true dual-domain audio tester in a portable package. The unit offers a comprehensive analog audio analyzer, a true digital domain analyzer with -140dB residual noise, independent analog and digital audio generators and analyzers, and interval save and recall of 30 test setups. The Portable One is also capable of generating and measuring interface jitter, of viewing AES/EBU status bits, and of serving as a loudspeaker monitor for digital and analog audio signals.

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

Circle (291) on Free Info Card

PRODUCT SOURCE

Lambda Electronics: Brochure



Choose rugged, high reliability power supplies from the leader in industrial power.

LAMBDA

"Portable Matchbox"

It's PORTAMATCH, the Matchbox that runs on batteries! Great for remotes, field recording, ENG, or anywhere you don't have AC power. Just add two 9-volt batteries and go!

HENRY ENGINEERING

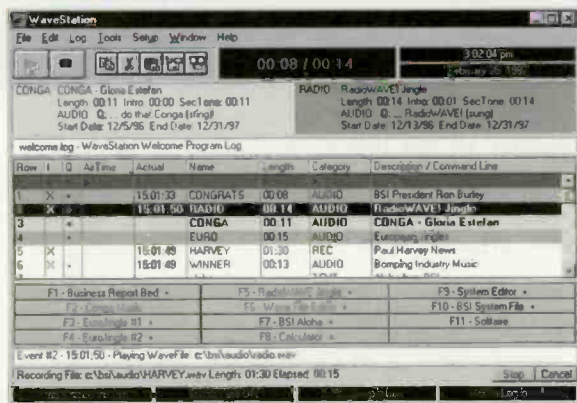
TEL (626) 355-3656 FAX (626) 355-0077
FAX-on-Demand Doc #125 (626) 355-4210
http://www.henryeng.com



We Build Solutions.

Circle (57) on Free Info Card

Affordable Digital Automation



Broadcasters around-the-world are discovering our easy-to-use WaveStation automation. Install our software on your PC and you have a powerful, versatile music-on-hard drive or satellite automation system. WaveStation comes with its own digital audio editor and uses standard or compressed WAV files. Full automation, voice track or live assist. Win 3.1 or 95.

24 HOUR
FREE
TECH SUPPORT

888-BSIUSA1

Only

\$999

Try Before You Buy.
Download the Actual Software!

www.bsiusa.com

BSI
Broadcast Software International

Circle (56) on Free Info Card

Single, Multi, Consolidation - MITS does it all... and now it's DIGITAL!

This **Broadcast Telephone System** fits as easily into the single studio as it does into multi-studio and consolidated stations. No other multi-line system offers the expandability and flexibility of MITS: handle up to 15 telephone lines per studio; tie multiple studios together (up to 30 systems can be connected with the built in network interface); you can even combine multiple mainframes for larger systems. Each system comes with Talk Show screener software built right in.

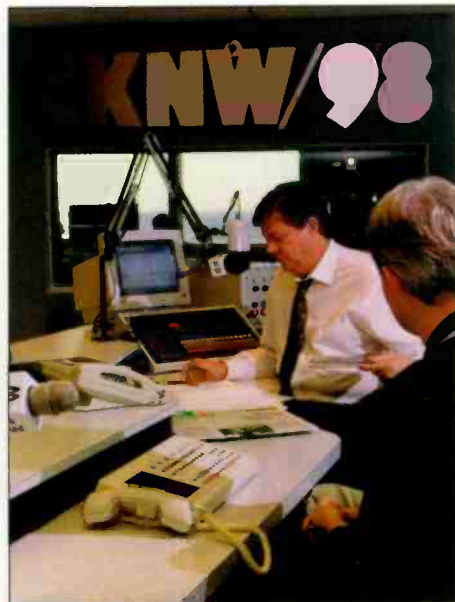


NEW! Digital Hybrid technology has been designed into the internal digital conference bridge to let you put up to six callers on air at once. Caller send (mix-minus) is automatically handled by the new DSP based Digital Hybrids.

Two sizes of work surfaces allow you to tailor MITS to fit your requirement. The **MS Work Surface** can handle up to 10 lines and 2 MS Work Surfaces are packaged together with a 10 line mainframe for as little as \$3425 (list price). The **LS Work Surface** comes with 15 line capability, in rack-mount, desk-top, or **Roadshow** configurations. The **Roadshow** gives your remote broadcast crew total control of callers just as if they were back at the studio. Whether the calls are screened on remote or in the studio the remote crew knows the caller information and status of each call, and has full control over how and when each call is processed.

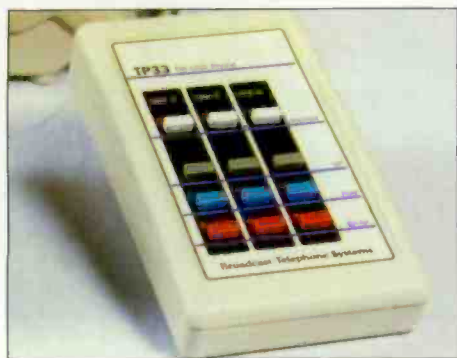
Not all studios are created equal. Our design team is always ready to provide a custom or semi-custom solution to meet your specific needs. We have the expertise to provide a system that will work for you. For more information on MITS, call 888-890-7424.

Circle (101) on Free Info Card.



TP33 Hits the Spot

With the new **TP33** any studio can have slick talkshow and contest operation. The **TP33** accepts up to three incoming phone lines and has the capability of taking all three callers to air at once using the new **DSP based Digital Hybrid technology**. Caller audio levels are maintained and adjusted by the system to provide natural sound on air and back to the caller in full duplex without objectionable 'ducking'. Other features include send and return audio level controls, 'Next'



caller capability and a separate Hold Audio line input. A unique feature of the TP33 lets you use any regular single line telephone as its handset unit. You can provide your talent with any phone features they desire without being limited by your on air telephone system's capabilities.

The 4"x7" desktop control unit is connected to the main rack unit by a slim 4 conductor cable: all other connections are made to the main rack unit. For more information on the TP33 Tri-Line Phone, call 888-890-7424.

Circle (102) on Free Info Card

HOT! The PD1 Goes Digital

Now the full-featured PD1 has new **DSP based Digital Hybrid technology**. The PD1 Phone Dock is ideal for newsroom applications, but also offers capabilities for



studios, remotes, auto-coupler and other broadcast solutions. The Phone Dock includes auto answer and DTMF touch tone control of audio and relay outputs for IFB listen lines, dial-up transmitter monitoring, and other unattended operations. Get'em while they are hot at \$599. For more information on the PD1 Phone Dock, call 888-890-7424.

Circle (103) on Free Info Card

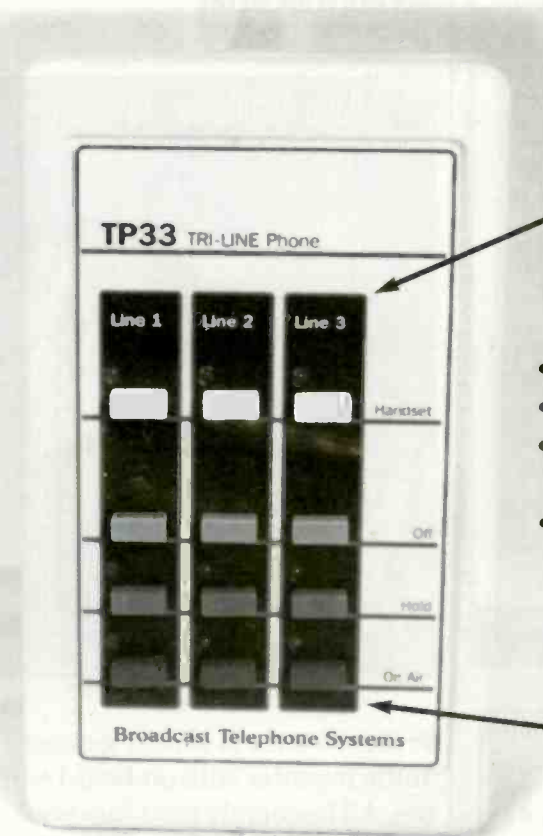
Newsroom Flash



The **PD1** is now supported by the **Burli System** comprehensive Newsroom Software. RadioStar, Burli's flagship software program, integrates newswires, audio feeds, faxes, e-mail, web access, and more, in a simple drag-and-drop editing environment. Contact Burli Software Inc. for more info at 604-738-3140.

Circle (104) on Free Info Card

When the power of MITS is more than you need... Have a look at the TP33 Tri-Line Phone from Broadcast Telephone Systems



handle 3 incoming phone lines.

- super fast operation for contests.
- separate audio feed for callers on hold.
- optional pre-fader mic. input/mix output for speakerphone and off air recording.
- use any single line telephone or feature-phone for handset and call screening.

take any or all callers to air at one time.



The TP33 connectors and controls are all mounted on a 1u high rack chassis. Only a single 4 conductor cable runs to the 4" x 7" desktop control unit.

Take control of your phones!

CALL 1-888-890-7424



Innovative Devices, Inc.

1-801-486-6556

1-250-260-2861

Circle (40) on Free Info Card

Coaxial Dynamics'

NEW Line of Liquid/Air Terminations are quickly becoming the choice of "Chief Engineers" for testing, adjusting and alignment of R.F. Transmitters. The NEW design of the Coaxial Liquid/Air Cooled Loads gives you the capability to handle requirements from 1 Kw to 10 KW.



COAXIAL DYNAMICS, INC.

SPECIALISTS IN RF TEST EQUIPMENT & COMPONENTS

15210 Industrial Parkway, Cleveland, OH 44135
216-267-2233 800-COAXIAL FAX: 216-267-3142
E-Mail: coaxial@apk.net
Web Site: <http://www.coaxial.com>

Circle (41) on Free Info Card

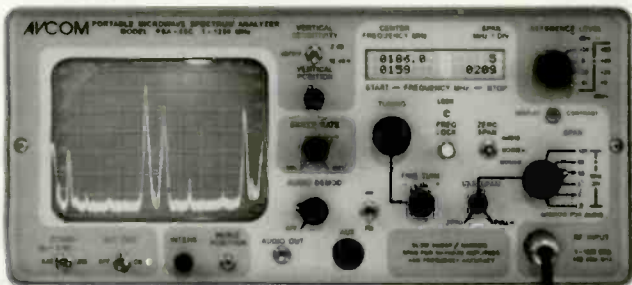
NEW MULTIFUNCTION LCD

AVCOM's PSA-65C Portable Spectrum Analyzer

Microprocessor Controlled, 1-1250MHz In One Sweep!

AVCOM's newest Portable Microwave Spectrum Analyzer, model PSA-65C, incorporates a microprocessor and attractive multifunction, backlit LCD, with an expanded frequency range from less than 1MHz to over 1250MHz, for the amazing price of \$ 2930.

AVCOM's new PSA-65C is a low cost general purpose spectrum analyzer that's loaded with standard features including FM audio demodulator, AM detector and digital frequency lock. The PSA-65C covers frequencies thru 1250 MHz in one sweep with a sensitivity greater than -95 dBm at narrow spans. The PSA-65C is ideally suited for 2-way radio, cellular, cable, satellite, LAN, surveillance, educational, production and R&D work. Options include new 1250 MHz frequency extenders, BNG-1000A tracking (noise) generator, log periodic antennas, carrying case (AVSAC), and more.



AVCOM 500 SOUTHLAKE BOULEVARD
RICHMOND, VA 23236 USA
804-794-2500 FAX: 804-794-8284

Phone, fax or write for more information or to order.
Visit our website at www.AVCOMofVA.com.

Circle (44) on Free Info Card

PHASETEK INC.

- CUSTOM AM/MW PHASING SYSTEMS•
- AM/MW ANTENNA TUNING UNITS•
- DIPLEXERS AND MULTIPLEXERS•
- DETUNING UNITS/UNIPOLE KITS•
- COMPLETE LINE OF RF COMPONENTS•

PHASETEK INC.

550 CALIFORNIA ROAD
UNIT 11
QUAKERTOWN, PA 18951
PHONE: 215-536-6648 FAX: 215-536-7180

FOR MORE INFORMATION
OR
TO PLACE AN ORDER, CONTACT:

hotam@phasetek.com

Circle (43) on Free Info Card

BE Radio

PRODUCT SOURCE

Space Wise: Delux radial furniture



Designed to have many style and quality feature henceforth only available in higher-priced studio furniture systems, Delux Radial is a contemporary-styled version of the standard "Delux." Radial incorporates six four-inch radial corners for a more contemporary appeal and look. In addition, there is room in the two enlarged 23"x32" base pedestals for four PC audio systems with easy access to wiring and disc drives. All Delux systems share these features: 1.5" thick top counter surfaces; raised solid oak wood trim around the top counters; added trim on vertical and bottom edges; kickboards; heavy-duty rack rail systems with easy rear access; and the versatility or modular construction for easy shipping and installation.

800-775-3660; fax 1-520-531-1078; e-mail spacewise@flash.net; www.spacewise.com

Circle (292) on Free Info Card

This new publication details the Heliac coaxial cable range and a complete line of cable installation accessories. The 36-page illustrated brochure describes the company's line of Heliac coaxial cables, connectors, accessories, assemblies, training and services, and contains information and detailed technical specifications for the cable range, including foam-dielectric, air-dielectric, superflexible foam-dielectric, and extraflexible coaxial cables.

708-349-3300; fax 708-349-5222;

www.andrew.com

Circle (293) on Free Info Card

Andrew Corp.: Heliac products



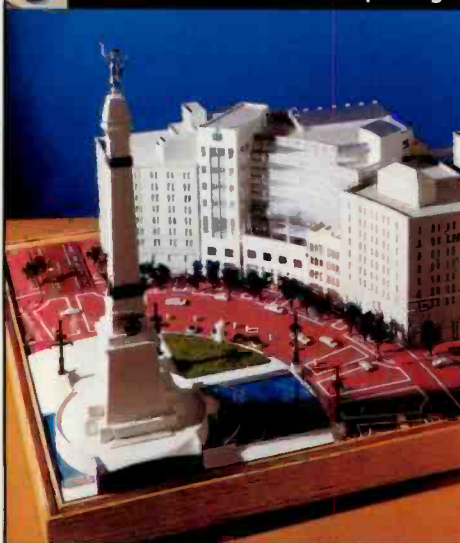
Through the years, Ratio has built a solid core of experience in many area, including ratio broadcast facilities and corporate headquarters. The firm's current projects include the world headquarters for Emmis Communications in downtown Indianapolis (pictured), Chicago radio station Q101 for Emmis, and the Radio/TV building on the campus of Indiana University.

317-633-4040; fax 317-633-4153;

mail@ratioarchitects.com; www.ratioarchitects.com

Circle (294) on Free Info Card

Ratio Architects: Facility design



Easycorder is a next-generation digital audio recorder with on-board editing facilities. All frequently used functions are within direct reach, and all settings and action performed by the user are permanently visible on a large, illuminated, liquid crystal display. Though simple in operation, the Easycorder includes several innovative capabilities. For example, Time Shift Recording, enabling the unit to start recording before the record button is actually pushed.

Internal memory, another unique feature, offers users all advantages of PC cards without the heavy cost involved. The unit's battery pack provides over four hours of operational recording time. A smart system keeps track of individual battery statistics, thus providing a precise indication of the remaining capacity.

+31 481 377740; fax +31 481 377380; e-mail sales@maycom.nl; www.maycom.nl

Circle (295) on Free Info Card

Maycom: EasyCorder



Allen Osborne Associates: Mast systems

Allen Osborne Associates offers a complete line of pneumatic, hydraulic, electric or manually telescoping mast systems. In addition integrated masts with antennas and RF conductors, shelter, trailer or vehicle pneumatic and electric systems are available. Special units built to customer specifications are also available.

805-495-8420; fax 805-373-6067;

e-mail aoa@aoa-gps.com; www.aoa-gps.com

Circle (296) on Free Info Card

Allen Osborne Associates offers a complete line of pneumatic, hydraulic, electric or manually telescoping masts with antennas and RF conductors, shelter, trailer or vehicle pneumatic and electric systems are available. Special units built to customer specifications are also available.



◀ Equi=Tech announces the launch of its multilingual website. The site, which allows access in English, French, German, Italian, Portuguese and Spanish, provides technical papers, product information and reviews, and technical support for countries all over the globe. Conventional power standards vary greatly from country to country, continent to continent. With minor adjustments for voltage

and frequency, Equi=Tech's balanced power technique effective at reducing background noise and enhancing the sonic quality of recordings and other audio related applications in international venues, as well as in the US. The site's URL is www.equitech.com.

541-597-4448; 541-597-4099; www.equitech.com

Circle [297] on Free Info Card



◀ This family of high-current capacitors is designed for use in demanding RF applications and are a reliable and cost-effective alternative to using mica, ceramic "door-knob," or banks of ceramic chip capacitors that can have limited current-carrying capability and tend to show considerable thermal instability. The units offer a compact design with a conservatively rated hold-off voltage of 15kV peak test. The unique design results in minimal internal inductance and features high-quality RF electrical connections that allow the capacitors to perform reliably at frequencies up to 100MHz and higher.

203-852-1231; fax 203-838-3827

Circle [298] on Free Info Card



▲ MicroSound's workstations employ the standard Windows file and drive formats rather than a proprietary format. As such, multimedia MIDI sequencers, DSP plug-ins, or other audio programs can record, play and process MicroSound .WAV files. Compatible drives include IDE, SCSI, JAZ and ZIP. Multiple users can share files over a LAN or transfer by removable media. Flexible recording allows manual start/stop, trigger to time code, or record while playing (overdub) with manual or automated punch in/out. Additionally, with the release of MicroEditor 5.2 software, full support is being added for DSP plug-in modules so third-party DSP software can access MicroEditor .WAV files.

919-870-0344;
fax 919-870-7163;
e-mail info@mtu.com;
www.mtu.com

Circle [300] on Free Info Card

PICK HIT HONORABLE MENTION
Moseley: Starlink SL9003Q



◀ The latest addition to the Starlink series is the 9003Q. Quadrature amplitude modulation technology allows the SL9003Q to deliver four 16-bit linear audio channels and two data channels over narrow-bandwidth 950MHz STL channels. Features include AES/EBU I/Os, a built-in sample rate converter, plug-in MPEG audio modules and digital multiplex for additional program, voice, FSK asynchronous and synchronous data channels. An ultra-linear four watt average transmit power out is achieved with redundant RF power modules.

805-968-9621; 805-685-9638; info@moseleysb.com;

www.moseleysb.com

Circle [299] on Free Info Card



◀ The console line includes: the bullet-proof IC/AC series with rotary pots; the new workhorse Pace-maker series; the RTV series with computer control; the mini-Mix series; and the soon-to-be-available DIAS group of digitally integrated audio systems. In addition to the consoles, Autogram now offers a complete range of accessories including the Autoclock, with time, timer

and temperature; the CYA-4 emergency switcher; and the Solution 20 series of problem solvers. Many different cards are available for the Solution 20 mainframe to aid in studio construction and operation.

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

Circle [301] on Free Info Card

Frontier Design Group: Tango



◀ Tango is a 20-bit external digital audio conversion system in a 1U rackmount enclosure, providing high-resolution A/D and D/A converters and ADAT optical digital I/O.

Tango has eight balanced outputs on professional 1/4" TRS jacks, and is available with zero, four, or eight balanced inputs. Upgrade kits are also available, so Tango users can easily add input modules themselves, four inputs at a time. For excellent clarity and sonic performance, Tango features 128 times oversampling delta-sigma A/D and D/A converters with 20-bit resolution. Tango's S/N ratio is >98dB, and distortion is rated at just 0.002% THD+N. Its frequency response is 20Hz to 20kHz, ±0.1dB.

603-448-6283; 603-448-6398;
e-mail info@frontierdesign.com; www.frontierdesign.com

Circle [303] on Free Info Card



▲ Switchcraft has recently released the third edition of its Molded Cable Assemblies and Patch Cord Guides. The 32-page cable catalog is a subset of the company's 350-page Engineering Design Guide and includes a variety of molded cable assemblies and patch cords.

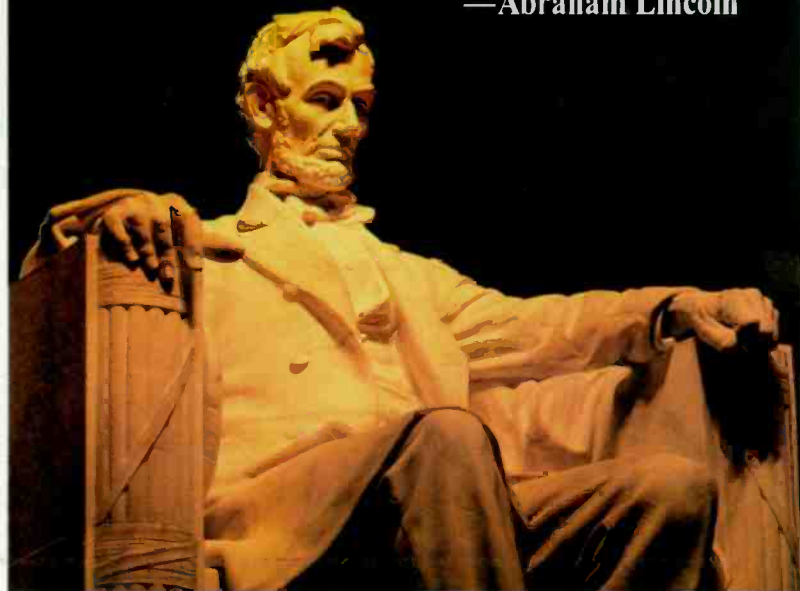
773-792-2700, ext. 243;
fax 773-792-2700;
www.switchcraft.com

Circle [302] on Free Info Card

ADVERTISEMENT

"Things may come to those who wait, but only the things left by those who hustle."

—Abraham Lincoln



Circle [45] on Free Info Card

Minidisco: Retail minidisks



Minidisco is an Internet-based mail order retailer providing blank minidisks and accessories. By combining low overhead and high volume while keeping all catalog items in stock, all items ship within 24-hours via UPS ground, with second day and next day service available. Substantial quantity discounts are available for orders above 100 discs, and all items come with an unconditional one-year guarantee.

510-848-6703; fax 510-848-6083;

e-mail sales@minidisco.com; www.minidisco.com

Circle [304] on Free Info Card

Broadcast Electronics: AudiTronics COMET



Built upon a universal motherboard system that supports numerous module sets, the COMET series offers the superior engineering, components, and technological options to satisfy every engineer's preference. Unit allows complete creative control over a 24, 30 or 36-position mainframe. Hot-swappable modules allow for the convenience of on-air maintenance, while the VCA or thru fader level control options offer cost-effective studio solutions. Additions include gold-plated contacts, five stereo and four mono output buses, premium linear faders, solid-state switching, and easily accessible wiring for ease of maintenance.

217-224-9600;

fax 217-224-9607;

e-mail bdcast@bdcast.com;

www.bdcast.com

Circle [305] on Free Info Card

ADVERTISEMENT

THE NAB RADIO SHOW

It's 100% RADIO!

Management

Programming

Sales & Marketing

TECHNOLOGY

Engineering

See
you
in *Seattle*

October 14-17

Seattle, Washington



For more information
on attending...

www.nab.org/conventions/

Call 800.342.2460

Call Fax-On-Demand at
732.544.2888

Want to exhibit?

Call 800.NAB.EXPO or
202.775.4988



Bay County Broadcast Equipment: Used equipment



All of Bay County's used equipment is serviced and thoroughly cleaned, then shipped with a 15-day return guarantee certificate. They also purchase used broadcast equipment. Bay County's latest equipment lists can be viewed at <http://home.sprynet.com/sprynet/steve7117>.

phone/fax 410-335-3136;
e-mail steve7117@sprynet.com;
<http://home.sprynet.com/sprynet/steve7117>

Circle [306] on Free Info Card

ADVERTISEMENT

VACUUM CAPACITORS



- Variable or Fixed Types
- Capacitance Ranges from 3pF to 6600pF
- Peak Test Voltages to 100kV
- Current Ratings to 1000 Amperes

Ideal for Semiconductor Fabrication, Broadcasting, RF Heating/Drying, Medical (MRI), Avionics, Scientific, and other RF power applications.

COMET North America, Inc.

89 Taylor Avenue, Norwalk, CT 06854 USA
Phone (203) 852-1231 Fax (203) 838-3827



Circle (47) on Free Info Card



GREAT RADIO! HOT TOPICS! I NEED TO BE THERE! Send me more info right away!

Fax this completed form to 202.429.5343

Name _____ Title _____

Company _____ Call Letters _____ AM FM

Address _____ City _____ State _____ Zip _____

Country _____ Email _____ Phone _____ Fax _____

MGE UPS Systems: Power Management Module



highly responsive, reliable power management.

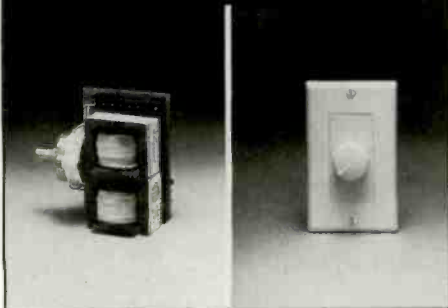
714-557-1636; fax 714-557-9788; e-mail info@mgeups.com;

www.mgeups.com

Circle (307) on Free Info Card

◀ The new Power Management Module from MGE UPS provides electrical isolation and conditioning for sensitive equipment, distributing power and offering power quality monitoring to ensure continuous broadcast operations. This advanced module supports 30 to 225kVA loads and comes with up to six panel boards supporting 42 to 252 poles for highly flexible power quality management. In the event of local circuit or equipment problems, AC-line power fluctuations or weather disturbances, the Module supports seamless switching of only the affected circuits, equipment or systems to the uninterruptible power supply bypass mode, backup power generation, or redundant backup transmission equipment if necessary. The result is highly flexible,

Russound: In-wall volume controls



Russound's Ultra-Match impedance matching system, the controls eliminate the need for a speaker selector, just calculate the total system impedance and connect two shorting bars. The SALT line has locking quick-connect terminals and can accept up to 12-gauge cable. The ALT line handles 14-gauge cable and the quick-connect terminals are pressure fit.

800-638-805; www.roussound.com

Circle (309) on Free Info Card

◀ The new lines, designated ALT and SALT, incorporate precision-wound autoformers, impedance matching, 12-step volume adjustment, 43dB of attenuation, and are rated to handle up to 126 watts. Due to their precision windings, SALT and ALT controls provide accurate sound reproduction with minimal insertion loss, low noise and low distortion. The units have frequency responses of 20Hz to 20KHz, +1, -0.5dB at their rated power. By employing

New Frontier: Surge-X Model SX-115-R/RT/RL



test circuit and additional LED indicator assure the user that the unit is functioning properly. The RT model includes a remote turn-on capability, while the RL model adds two front-panel connectors for Littlite gooseneck lamps.

215-862-9344; fax 215-862-0270

Circle (312) on Free Info Card

◀ Housed in a magnetically shielded, single-rack-space enclosure, the SX-115-R surge suppressors feature eight standard grounded-AC receptacles and improved EMI/RFI filtering circuitry. Six of these receptacles may be switched on or off by the user via an illuminating red rocker-style switch, while two remain permanently on. A power LED lights up when the units are plugged in, while a self-

RGB Spectrum: SuperView 500



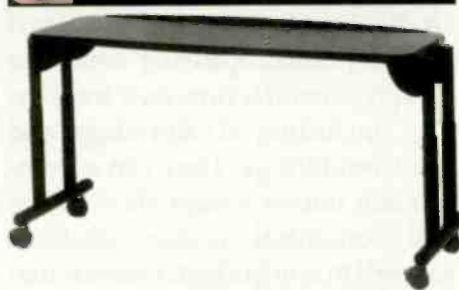
◀ The SuperView 500 is an advanced display input system that combines up to 10 computer screens on a single monitor or projector. The unit is compatible with virtually all PCs, workstations, and monitors. Input signals may be in a variety of formats, including tape recorders, DAWs and desktop computers. Each input can be panned and zoomed to emphasized areas of particular interest.

510-814-7000; fax 510-814-7026;

www.rgb.com

Circle (313) on Free Info Card

Anthro: Keyboard Cart



board unit comes with a lifetime warranty and ships out in 24 hours. More than 50 accessories are available to customize the unit, and it is available in black, bone, light gray, or wood.

503-691-2556; fax 503-691-2409; www.anthro.com

Circle (308) on Free Info Card

◀ Ideal for MIDI applications, Anthro's new cart can be used alone or with other Anthro carts. The unit measures 51" wide and 18" deep and comes with one shelf and four telescoping legs capable of adjusting the height of the shelf from 25 to 30" off the floor. The cart rolls easily on four 2³/₈" soft rubber castors. Like all Anthro carts, the key-

Radio Systems: Millenium consoles

Available in six, 12, 18 and 24 channel sizes, Millenium consoles all feature three output buses, complete remote control and metering, a comprehensive monitor section with standard eight position selector, and a clock/timer. Models differ only in their channel count and meter overbridge. (The six-channel has three meters, the 12 and 18 have five, and the 24 has seven. The 18 and 24-channel units also feature an auxiliary cutout for an extra meter or clock/timer.) All I/O audio wiring is via removable barrier strips. These connectors simplify initial installation and provide for quick future wiring changes. All parts and sub assemblies, including faders and circuit boards, are socketed or connectorized, making any necessary repair a matter of simply removing the bad part or circuit board and plugging in a new one.

609-467-8000; fax 609-467-3044;

e-mail sales@radiosystems.com;

www.radiosystems.com

Circle (310) on Free Info Card

PICK HIT HONORABLE MENTION

Inovonics: 520, 540, 701, PBX

Inovonics introduced four new radio products offering low-cost solutions to several different ideas. The 520 AM Modulation Monitor is a one RU unit that offers full monitoring of AM signals. The 540 FM Subcarrier Monitor/Demod can be used to measure performance of SCA, RDS/RBDS and high-speed data subcarrier signals. Fed with a composite signal from an FM modulation monitor, it can also reformat many data streams to RS-232. The 701 RDS/RBDS Mini-Encoder offers an inexpensive and easy solution for stations needing to transmit basic RDS/RBDS data streams. With so many devices having POTS line capabilities for modems or alerting, the PBX telephone switch can tie seven devices to a single telephone line, and more units can be daisy-chained for even greater flexibility.

800-733-0552; 408-458-0554;

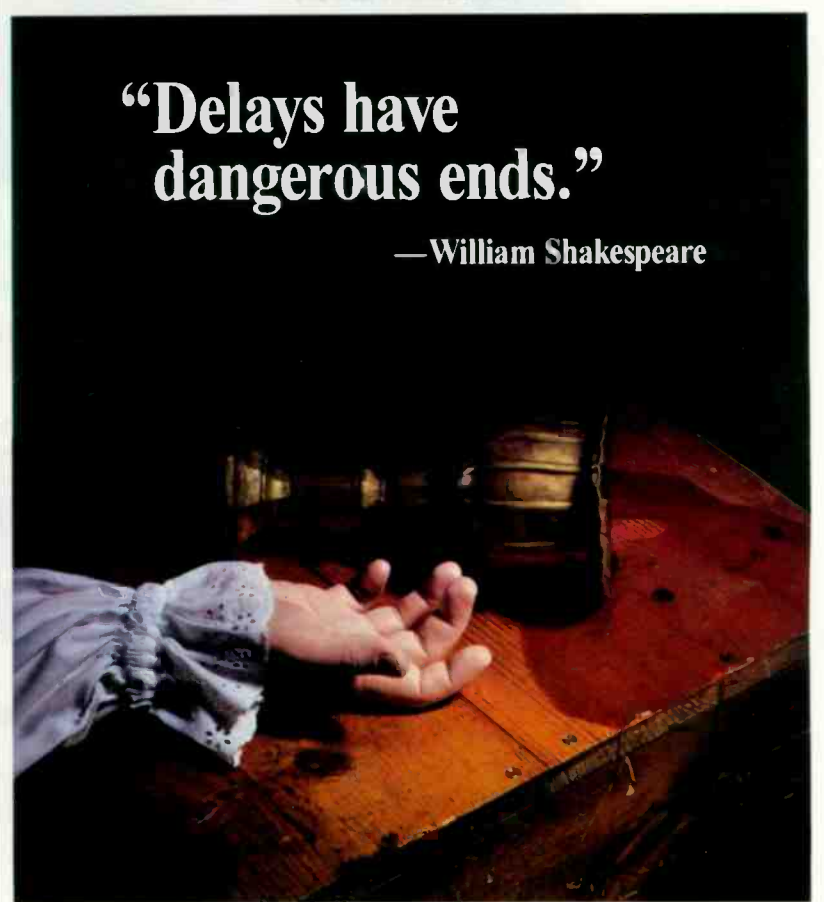
www.inovon.com

Circle (311) on Free Info Card

ADVERTISEMENT

“Delays have dangerous ends.”

—William Shakespeare



Circle (29) on Free Info Card

Mager Systems: Studio Furniture



wood interior structures, and unparalleled construction techniques and high-heat glues allow Mager Systems to offer high-quality furniture that is built to last. They are certified and accredited in solid surface materials and offer a full 10-year, no-cost replacement warranty on solid surface applications.

602-780-0045; fax 602-780-9860

Circle (307) on Free Info Card

◀ Mager Systems offers 18 years' experience in the construction of studio furniture for the broadcast industry, encompassing complete design, manufacture and installation, including 3D drawings and color renderings. They can accommodate one-of-a-kind showplaces and economical furniture solutions to work in any budget. Exterior materials ranging from laminates and wood to high-tech synthetic products, solid wood and engineered

Shively Labs: 2530LP

The Shively Model 2530 LP combiner module offers the low-power broadcaster superior performance in a small package. Single modules can be used to diplex two stations with frequency separations as close as .8MHz, or combined with additional modules for multi-station installations. Modules are convection cooled and can be re-tuned. The unit is designed for operation in tight quarters with a typical 1kW diplexer having a footprint of only 33" x 17".

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

www.shively.com

Circle (308) on Free Info Card

EASI - SET:

Post-tensioned building



▲ The improved post-tensioned design of the precast concrete EASI-SET building will withstand a 100lb. block of ice dropped from 200ft. without sustaining any damage. The improved post-tensioned design increases the punch shear resistance of the roof and floor by 28% over the previous EASI-SET system. The design also increases the uniform radial compression forces in the slab by 33%. The result is a roof and floor system impervious to water penetration without the use of concrete sealers or membranes.

800-547-4045;

fax 540-439-1232;

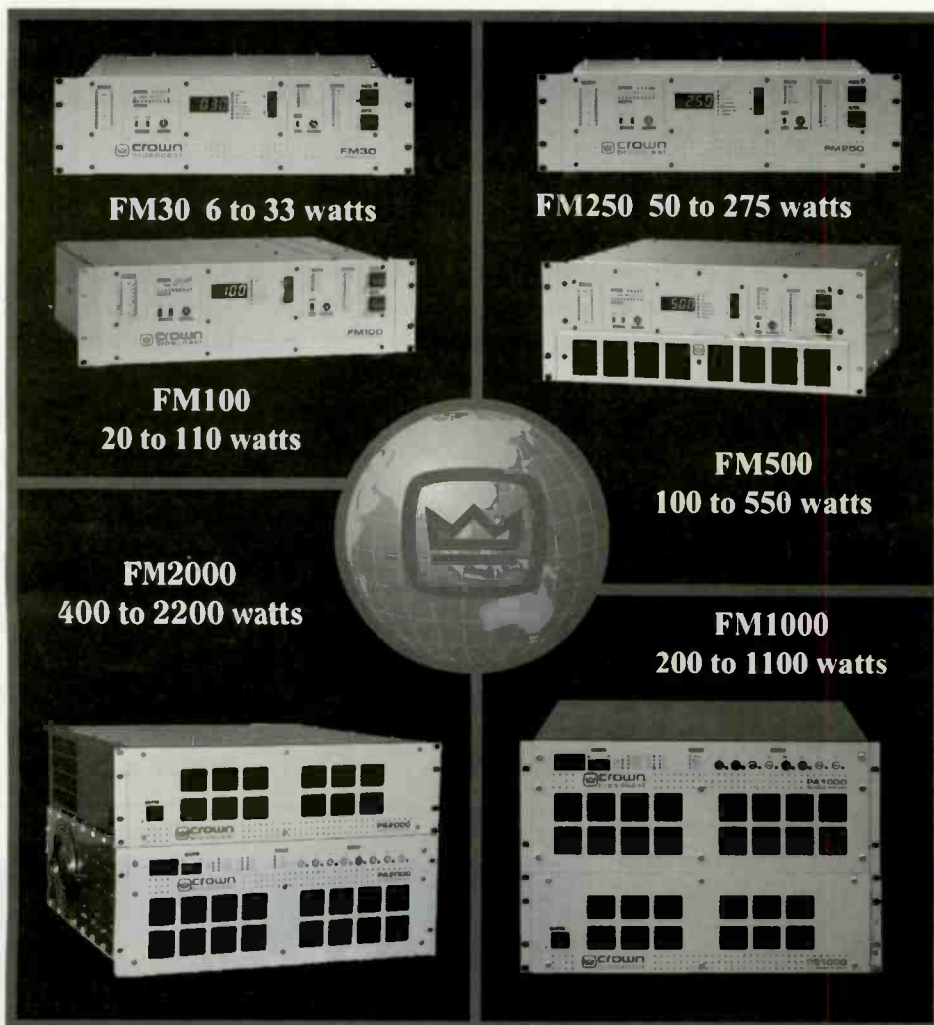
e-mail easiset@msninc.com;

www.easi-set.com

Circle (309) on Free Info Card

ADVERTISEMENT

A World of Possibilities. . .



FM30 6 to 33 watts

FM250 50 to 275 watts

FM100
20 to 110 watts

FM500
100 to 550 watts

FM2000
400 to 2200 watts

FM1000
200 to 1100 watts

- Fully integrated, **solid-state** transmitters, exciters, translators, and satellators engineered to provide broadcasting **confidence**.
- Highly **efficient** and **reliable** power amplifiers **innovatively designed** to be lightweight and compact.
- Custom configured** and **delivered within days!**

Give Us a Call When Your World Depends on Ours!

CROWN
broadcast
Innovative Technology for Broadcast Confidence

1718 W. Mishawaka Road, PO Box 1000, Elkhart, Indiana, U.S.A. 46515-1000

Phone: 800-294-8050 or 219-294-8050; Fax: 219-294-8222

Email: broadcast@crowntnl.com; Internet: www.crownbroadcast.com

Circle (29) on Free Info Card

ADVERTISEMENT



How about the drive, and technical expertise needed for radio in the next century?

Prophet Systems, the leader in digital audio broadcast systems, may be the place for you. Opportunities for tech support, programmers, engineers and sales. Great salary and benefits.

Check out listings on our web site:
www.prophetsys.com
or call us at (308)284-3007.



Circle (30) on Free Info Card

Crown Broadcast: Narrow band transmitters



that demand continuous on-air performance.

219-294-8050; fax 219-294-8222; e-mail broadcast@crowntnl.com;
www.crowntnl.com

Circle [310] on Free Info Card

◀ Modeled after Crown's line of FM transmitters, these integrated exciters and power amplifiers provide reliability, efficiency and audio quality. Available in 200, 400 and 1000W power levels, these units are designed with dual redundant capability for applications

Sierra Automated Systems: SAS 160000



digital audio input signals, and the unit is compatible with the complete range of SAS remote control panels, console and rack-mounted, with full alphanumeric or push-button capability.

818-840-6749; e-mail sales@sasaudio.com; www.sasaudio.com

Circle [311] on Free Info Card

◀ The digital audio routing switcher's 32x32 matrix is housed in a two RU chassis and provides alphanumeric controls on the front panel. A unique monitor has been provided to allow the user to listen to the AES3 or S/PDIF

Orban: Optimod-FM 8200 v. 3.0



status bits to accommodate digital STLs. Another Optimod 8200 feature included is perfect peak control (no composite clipper needed) that is preserved through 32kHz digital STLs.

510-351-3500; fax 510-351-0500; www.orban.com

Circle [313] on Free Info Card

◀ Among the top features of version 3.0 are 21 new format specific presets, each named for a programming format (Urban/Rap, Rock, Pop, Classical, Instrumental, Jazz, News, Oldies, etc.). 3.0 retains the power-user features of the 8200, including phase rotation on/off, adjustable output balance on the five-band compressors, adjustable bass clipper threshold, and control of AES/EBU sta-

Amek: Software update for DMS

Version 2.5 presents a large portfolio of new features and modifications. Surround sound capability has been extended on to two individual buses so users can implement individual stems. Also proposed by broadcasters was the requirement of 4x clean-feed buses and a mix minus facility. The dynamic resources have been improved: the number of algorithms has been increased, and EQ and dynamics now go across all buses with insert send and return. Variable frequency low- and high-pass filters have been added to the EQ section. After significant enhancements, V. 2.5 now has a comprehensive M-S decoding facility enabling DMS to provide unlimited numbers of parallel outputs in analog or digital to be assigned to any output path.

+44 (0) 161 834 6747; fax +44 (0) 161 834 0593;
e-mail amek@console-city.com; www.amek.com

Circle [316] on Free Info Card

JK Audio: Inline Patch



from both sides. Audio input jacks let you mix sound bites or music into your conversation. One stereo output jack provides your voice on one channel and the caller's voice on the other. A second output jack contains a mix of both voices. Front panel control for each output offers all the control the user needs. All outputs offer 50Ω impedance, +10 dBm max, and variable line level output. The 1.6lb unit offers 20dB nominal separation of phone line transmit/receive audio.

815-786-2929; fax 815-786-8502; www.jkaudio.com

Circle [312] on Free Info Card

◀ The Inline Patch from JK Audio connects between the base of an analog or cordless telephone and its wall jack. It allows the user to continue to talk on the phone and get access to audio on both sides of the call. The unit contains two back-to-back hybrids for complete control of audio

Sonifex: Redbox series

The series includes: the RB-DA6 six-way stereo, 2x6-way mono, or 1x12-way mono distribution amplifier; the RB-MA2 dual-microphone amplifier; the RB-SM2 dual stereo-to-mono converter; the RB-BL2 balanced-to-unbalanced bi-directional converter; and the RB-SL2 twin mono, or stereo, limiter. The units are housed in red anodized aluminum boxes which can be screw mounted to any surface, or rackmounted for conventional wiring in a central technical area. Units can be either 115V 60Hz, or 230V 50Hz and have a front panel LED power indicator.

+44 (0) 1933 650 700;
fax +44 (0) 1933 650 726;
e-mail marketing@sonifex.co.uk;
www.sonifex.co.uk

Circle [314] on Free Info Card

Solid Electronics Labs: DCP-1

Dynamic Composite Processor performs the functions of instantaneous limiting and composite low-pass filtering in a single structure, thereby permitting loudness, filter overshoot control, and dynamic range. Its design employs an active linear amplifier as the limiting device, and its filter structure is configured in four separate sections, each with its own overshoot compensation circuit. Front panel LED indicators are employed to allow direct indication of clipping level and overshoot compensator threshold levels. Composite signal I/O level adjustments are provided on the front panel of the unit, as well as in/out mode selection functions and a composite output signal sample port for external monitoring.

610-353-9449

Circle [315] on Free Info Card

ADVERTISEMENT

**"No worthwhile project
should ever have to wait."**

Quick Shipping. No Order Too Small.

**Tech
America**

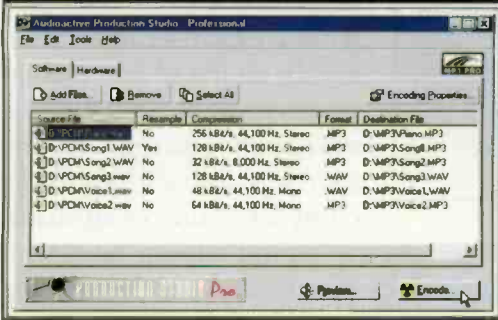
When You're Serious About Electronics...
We Deliver!

For a fast time, call
1-800-411-7828
(Ext. 25108)

Circle [31] on Free Info Card

WWW.BERADIO.COM

Telos Systems: Audioactive Studio Software Encoder



Audioactive Production Studio software encoder offers a high-quality solution for digital audio compression. The resulting files are dramatically smaller. The software converts PCM files and stores them in compressed MP3 (MPEG Layer 3) and compressed .WAV audio formats. Designed for optimal audio encoding, all bit rates between 8kb/s and 256kb/s are supported. Enhanced functionality includes unlimited batch capability and high-quality encoding options for production quality audio. A demo version is available at www.audioactive.com/mp3/download.

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

Circle (317) on Free Info Card

Panasonic/Ramsa: DA7



This 32-bit, eight-bus, six-aux mixer offers 24-bit I/O capability, surround-sound mixing mode, dynamic and snapshot automation capabilities and an ergonomic console with an analog feel. The "LED Farm" provides a quick look at the routing status, automation modes, channel on/off status, EQ on/off, dynamics on/off, panning and aux send status. The built-in screen graphic display shows the current console configuration. Parametric EQ and dynamics processing is available on all inputs and aux returns.

714-373-7227; fax 714-373-7903; www.panasonic.com

Circle (318) on Free Info Card

ADVERTISEMENT



Your #1 Source For Quality Used Radio Broadcast Equipment.

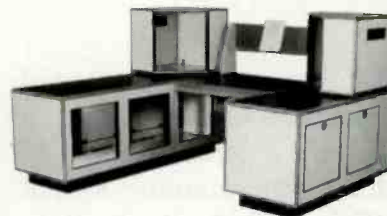
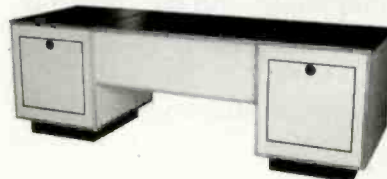
View our latest list of equipment on-line at: <http://home.sprynet.com/sprynet/steve7117> or call and we will fax it to you. All equipment sold with a 15 day return guarantee certificate.

7117 Olivia Rd. • Baltimore, MD 21220 • Phone/Fax: 410-335-3136
E-Mail: steve7117@sprynet.com

Circle (32) on Free Info Card

ADVERTISEMENT

The finest in Modular Studio Furniture



The AFS and New AFS-E Series starting at.. \$998!

AFS Advanced Furniture Systems

1545 N. Washington Ave, Loveland CO 80538
Phone: 970-663-4123 Fax: 907-663-6338
Email: afs@mail.omn.com Website: www.omn.com/afs

Circle (33) on Free Info Card

Audio Follow: DDO - NT

The DDO-NT range of audio digital products is aimed at the needs of national broadcasters as well as local radio stations. These products have been developed under Windows NT and are subdivided in various applications such as production, broadcasting, music and advertisements scheduler, news scheduler, grids scheduler, survey module, archiving module, etc. Added to this, Audio Follow has developed some useful tools such as the Crossfade Manager, the CD Cuer, the Voice Superimposer and the Associated Data Editor.

+33 1 46 07 26 26;
fax +33 1 46 00 26

Circle (319) on Free Info Card

ENGINEER'S BEST FRIEND!

- Eliminate flanging (hollow room) effect
- Eliminate bad room acoustics
- Hold absolute levels
- Correct voice symmetry
- Front panel input level select +4 to -50 dB
- Three section variable boost and cut equalization
- Compressor/Expander cross coupled for maximum punch
- Built-in earphone jack

AIRcorp 500PH
Microphone Processor



- DE-ESSER designed to protect pre-emphasis curves
- Simultaneous mic level and line level outputs
- Internal 48 Vdc Phantom Supply

AIR corp

Call your dealer... or call 972-304-0455 FAX: 972-304-0550

Circle (34) on Free Info Card

Cedar: Noise removal tools



The DCX declicker, CRX decrackler and DHX dehisser from Cedar offer noise removal solutions for any audio source. Particularly useful for archive recordings, each unit operates in real time with a minimum of user setup. A 24-bit AES3 I/O and 40-point floating processor is at the heart of each 1RU unit. The DCX removes up to 2500 clicks per second per channel and the DHX was recently upgraded to version 1.02 software.

+44 (0) 1223 414117;
fax +44 (0) 1223 414118; e-mail sales@cedar-audio.com;

www.cedar-audio.com/cedar-audio

Circle (320) on Free Info Card

It's What's Inside That Counts

The HEART of the PACEMAKER

Easy Access to all cards

Screw down the wire and plug in the connector... No crimping or soldering

Cable entry from bottom or top... Installation planning is EASY

4 mic preamps standard... Assign them anywhere you want

Conservatively rated power supply

All front panel parts plug in... for quick service

Extensive machine control capabilities... Remote starts even for machines on multitrack inputs

Pacemaker 1032 (shown)

Also available with 6, 8, and 16 channels.

Only from... **AUTOGRAM CORPORATION** Plano, Texas (800) 327-6901

It's What's Inside That Counts!

Circle (35) on Free Info Card

Whirlwind: PressMite



▲ A battery powered press feed system for distributing mic or line level audio with high amounts of isolation, this unit features a high-quality mic preamp, a built-in headphone amp and level control for monitoring, and active transformer-isolated outputs (12 mic and two line). The sturdy metal case can stand the most rigorous road use as well. **716-663-8820; fax 716-865-8930; e-mail sales@whirlwind.com; www.whirlwindusa.com**
Circle [321] on Free Info Card

RealNetworks: RealPlayer Plus G2

The latest version of Realplayer has higher quality audio and video, a hi-fi audio display, 10-channel graphic EQ, video quality controls and the ability to scan, preset, and record streaming feeds. Users can also keep the software current with Subscriptions and AutoUpdate which automatically upgrade software to the latest version. **888-768-3248; e-mail sales@real.com; www.real.com**
Circle [323] on Free Info Card

Prism Sound: DSA-1



▲ This handheld digital signal analyzer and generator has tests for jitter, bit-errors, polarity violations, carrier failure, block errors and more. It is also capable of generating various test signals for troubleshooting digital audio systems. The handheld unit is easy to transport and collected data can be downloaded and printed offline. **+44 (0) 1223 424988; fax +44 (0) 1223 425023; www.prismsound.com**
Circle [324] on Free Info Card

Furman: HA-6A headphone amp



707-763-1010; fax 707-763-1310; www.furmansound.com
Circle [322] on Free Info Card

◀ This 1RU headphone amp delivers an impressive 20W per channel with individual level controls for the master input and each output. Each output may also be used to drive small monitor speakers. Front panel LEDs also indicate the presence of an audio signal and overload conditions.



ERI, SHPX series FM Antenna and λ Mounting System

ADVERTISEMENT

ERI your single source for:

- FM Antennas and Filters
- λ Mounting System
- Towers & Poles
- Structural Analysis
- Lightning Protection
- Grounding Systems
- Installation & Service

Call for special package price

ERI ELECTRONICS RESEARCH, INC.
812-925-6000

Circle (7) on Free Info Card

NEW! Qbox[®] AUDIO LINE TESTER

The new Qbox is a battery powered audio line testing system that includes a built-in mic, reference tone generator, speaker, and headphone amp. It also has voltage presence LEDs to detect phantom or intercom power. You can send tones, talk back up the line, monitor mic, line, or intercom signals – even use two Qboxes as a basic intercom.



Call for the name of a Qbox dealer, and reduce installation and setup time anywhere audio XLR cables are used.



Drop a Qbox into every audio toolkit!

99 LING ROAD
ROCHESTER, NY 14612
<http://www.whirlwindusa.com>

Broadcast Audio Tools whirlwind 888-733-4396

Circle (6) on Free Info Card

Buy simplicity, reliability and service.

EAS

Price \$1750.00

Equipment in-stock for immediate delivery.

Phone 740-593-3150

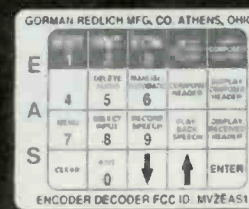
GORMAN-REDLICH MFG. CO.
257 W. Union St. Athens, Ohio 45701

FAX 740-592-3898

Now available with optional DTMF control via a phone line.



SCAN 48PT10E: 1/14/98 13:17:20 CST
DECODER: Scanning
ENCODER: Ready * PRINTER NOT CONNECTED * (manual)



- 5 two-way RS-232 inputs/outputs for computer, remote signboard & character generator
- 4 audio inputs on standard models (expandable to 6 audio inputs). All audio inputs & outputs are transformer isolated from encoder-decoder board
- Automatic interruption of program audio for unattended operation
- 4 line 40 character LCD display with LED backlighting
- 20 key keypad to program unit, set modulation level, set input levels

- Will handshake with automation equipment
- 2 year warranty
- 2 minutes of digital audio storage (expandable to 4.5 minutes)
- 25 pin parallel printer port for external printer
- 52 terminals on the rear to interface with other equipment by removable plugs

Web Site: www.gorman-redlich.com • E-mail: jimg@gorman-redlich.com

• Also available: printers, weather radios, antennas for weather radios, crystal controlled synthesized FM digitally tuned radios, remote signboards, cables for interconnection, Character generators.

Circle (8) on Free Info Card

ADVERTISEMENT

Affordable Custom Broadcast Furniture



Delivered and installed by



STUDIO TECHNOLOGY

32 Pennsylvania Avenue,
Malvern, PA 19355

TEL: 800-676-0216 • FAX: 610-296-3402

email: sales@studiotechology.com
www.studiotechology.com

Circle (12) on Free Info Card

ADVERTISEMENT

TRANSCOM CORP.

Serving the Broadcast Industry Since 1978

Fine Used AM & FM Transmitters and Also New Equipment.
For the best deals on Celwave products,
Andrew cable and Shively antennas.

100 W FM 1985	Harris FM 100K
100 W FM 1985	Harris FM 100K
1.8 KW FM 1993	QEI Solid State Quantum
2.5 KW FM 1982	Continental 814R1
5 KW FM 1971	Harris FM5H3
10 KW FM 1965	ITA 10,000B
20 KW FM 1977	RCA BTF 20E1

5 KW AM 1969	Harris BCH5H
5 KW AM 1979	Harris MW-5A
5 KW AM 1980	Harris MW-5A
5 KW AM 1980	Collins 828E-1
5 KW AM 1982	Continental 315B
5 KW AM 1982	Continental 315R-1
50 KW AM 1978	Continental 317C-1
50 KW AM 1981	Continental 317C-1
50 KW AM 1981	Harris MW-50B
50 KW AM 1986	Harris MW-50C3
50 KW AM 1982	Harris MW-50B

P.O. Box 26744, Elkins Park, PA 19027
800-441-8454 • 215-938-7304 • FAX No. 215-938-7361

VISIT OUR INTERNET SITE-WWW.TRCORP.COM

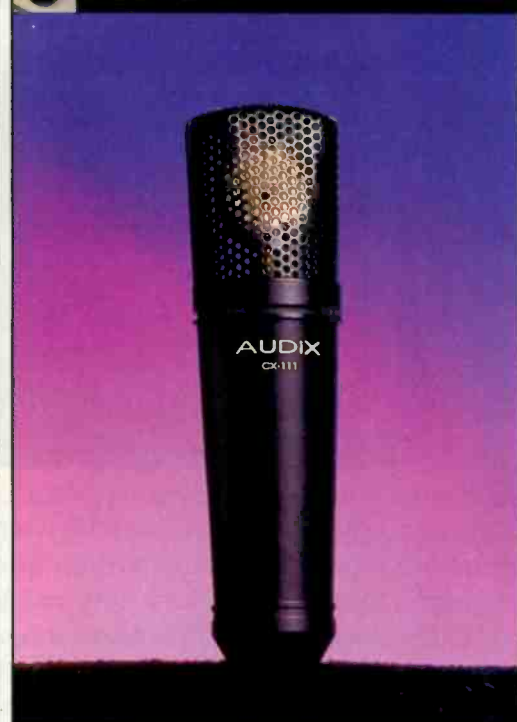
SEND YOUR E-MAIL REQUESTS TO:

TRANSCOM@TRCORP.COM

WE NOW ACCEPT VISA AND MASTERCARD.

Circle (14) on Free Info Card

Audix: CX-101 & CX-111



▲ Audix's two large-diaphragm studio condenser microphones offer sleek designs and economical prices. The one-inch gold vapor diaphragm produces a very low noise floor of only 17dB(A). The housing is brass with a black satin finish. Designed for voice applications, both mics come equipped with a shock-mount stand adapter and an aluminum carrying case. The units are identical except for the CX-111 (pictured) which adds a switchable 10dB pad and a bass rolloff switch.

800-966-8261; fax 503-682-7114;

www.audixusa.com

Circle (325) on Free Info Card

Minidisks!

SONY JVC/Victor



Top Quality
Blank MINIDISCS at absolutely
the BEST prices in the USA...
No order too large or too small
Discounts for bulk orders!

Minidisco

2124 Kittredge Street #56

Berkeley, CA 94704

510-848-6703

fax 510-848-6083

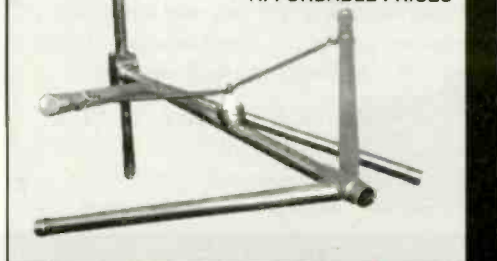
sales@minidisco.com

<http://www.minidisco.com>

Circle (13) on Free Info Card

PSI Ψ

QUALITY ANTENNAS AT
AFFORDABLE PRICES



FM BROADCAST ANTENNAS

- Power Levels from 500W to 50 kW
- Multi Station Antennas
- Circular or Vertical Polarization
- Directional Antennas

• PROPAGATION SYSTEMS, INC. •
719 Pensacola Road
Ebensburg, PA 15931 USA
814-472-5540 FAX 814-472-5676
E-mail: psiba@surfshop.net

Circle (9) on Free Info Card

MediaTouch: Oplog-2000

Oplog-2000 is a live assist on-air touchscreen controller for radio. Operating on Windows95/NT, the system is designed for the mission critical demands of on-air use. LAN configurations work with Windows 95, NT and Novell. It also interfaces easily with CD jukeboxes, switchers, routers and third-party digital audio players and software.

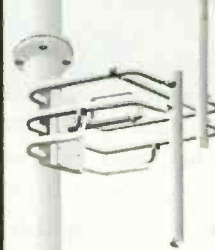
888-665-0501; fax 204-783-5805; e-mail
omt@omt.net; www.omt.net

Circle (326) on Free Info Card

ADVERTISEMENT

Shively Labs

Signal and Coverage
Are What It's All About.
Be Sure With Shively!



- Superior Engineering
- Multi-Station Solutions
- Filters & Combiners
- Translators
- Reliable Pattern Studies
- B-LINE Coax
- NEW Lindenblad Antenna

FM & TV Antennas
and Related RF Equipment

because ...
it pays to be heard!

P.O. Box 389, Bridgton, ME 04009 USA
Tel.: (207) 647-3327 FAX: (207) 647-8273
1-888-SHIVELY e-mail: sales@shively.com
Web: www.shively.com
• An Employee-Owned Company •

Circle (10) on Free Info Card

Trash your carts, burn CDs



Give all your production material the performance and reliability that only comes from CDs. CDs are the new standard in audio – compact, easy to use and efficient.

CD Architect is the professional mastering software that's accessible to untrained users. It verifies Red Book standard audio before burning, fully supports PQ code

editing, and lets you prepare the material in its own editor with multi-level undo.

From Sonic Foundry, the leader in Windows-based digital audio. Call us at 800-57-SONIC or visit www.sonicfoundry.com for more information.



Circle (11) on Free Info Card

GALLERY

Onyx: Recorder carriers



▲ Onyx manufacturers carriers for consumer MiniDisc recorders to make them more suitable for professional use and handling. The MobiDisc, PortaDisc and Carrier all work with Sony MiniDisc Walkman units and provide balanced XLR inputs and a larger battery pack for extended recording times. Other features vary by model, like a built-in monitor speaker, LED PPM recording meter and 1/4" head-phone jack.

+31 30 6373818; fax +31 30 6373818

Circle [327] on Free Info Card

Symetrix: 581E



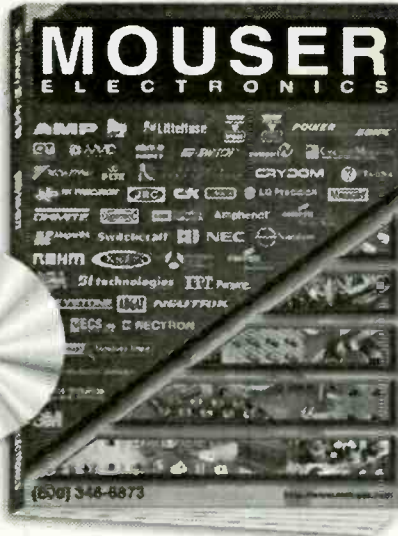
◀ This 4x4 distribution amp debuted at NAB98. With four inputs and 16 outputs, the 581E can be configured in several differing combinations with the independent one in/four out modules. Connections are made with Euroblock detachable terminals. THD+Noise is less than 0.009%, signal-to-noise ratio is >100dB and the dynamic range is over 125dB for totally transparent routing. Front trimmers adjust I/O levels, and each section has an input level LED.

425-787-3222; fax 425-787-3211;

www.symetrixaudio.com

Circle [328] on Free Info Card

ELECTRONIC COMPONENTS



Visit our web site!

www.mouser.com

FREE catalog is available on the internet, CD-ROM, or in paper!

- 70,000+ Products
- 145 Suppliers
- Same Day Shipping
- 34 Years In Business

MOUSER
ELECTRONICS

800-992-9943

817-483-6828

Fax: 817-483-0931

958 North Main Street • Mansfield • TX • 76063

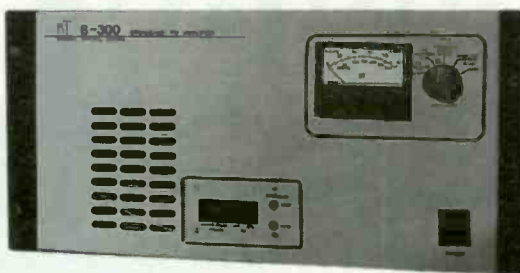
catalog@mouser.com

Circle (19) on Free Info Card

BACKUP FM TRANSMITTER

Inexpensive insurance against a main transmitter failure.

300 Watts • 600 Watts • 1.2 Kilo-watts



Features:

- 100% solid state
- No tuning required
- Rugged power supply
- VSWR, current & temperature overloads
- Power trim standard
- Full remote control capability, with outputs for all main parameters
- Compact 19" rack mount design

Broadcast Technology Company

P.O. Box 751, Lamar, Colorado 81052

Phone: 719-336-3902

Circle (15) on Free Info Card

ADVERTISEMENT

Station Yourself Under a KD Kanopy



Aluminum Frame:
Exclusive Manufacturer

KD Kanopy
1-800-432-4435

<http://www.kdkanopy.com>

- Lightweight Aluminum Frame
- Custom Silk Screened Graphics
- Variety of Colors & Accessories
- Water Resistant & Fire Retardant Fabric
- FREE Heavy Duty Carry Bag & Stakes
- Rust Proof
- Durable
- Sets Up in 30 Seconds
- No Loose Parts or Ropes
- 5' x 5', 8' x 8', 10' x 10' & 10' x 20'

Circle (18) on Free Info Card

Central To All Your Broadcast Tower Needs

Widely known for durability, reliability and superior service,



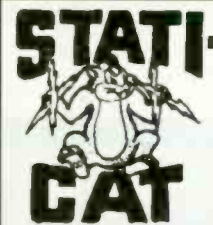
Central Tower provides one stop shopping for all your tower needs. From our versatile product line to full installation services - we provide what you need.

In our many years of service to the Broadcast industry, Central Tower has conscientiously lead the way in providing the most reliable products and service available. How may we serve you?



CENTRAL TOWER, INC.
1-800-664-8222
www.centraltower.com

Circle (16) on Free Info Card



If lightning strikes on your tower are causing equipment damage and lost air time - the cost of a Stati-Cat system may be recovered during your first lightning season.

AFFORDABLE - RUGGED LIGHTNING PROTECTION

The Stati-Cat Lightning Prevention System

provides a continuous, low-resistance discharge path for the static electric charge on tall structures. DISSIPATION POINTS ARE 1/8" STAINLESS STEEL RODS (not wires) ground to needle sharpness.

Cortana
Corporation, Inc.

Write or call toll-free for a free brochure!
P.O. Box 2548, Farmington, N.M. 87499-2548
Call 888-325-5336 FAX (505) 326-2337

Circle (17) on Free Info Card



Roscom
BROADCAST EQUIPMENT SPECIALISTS

For All Your RF And Audio Needs

Serving Broadcast Engineers for 22 Years

Feel like this last time you called your Equipment Dealer ??

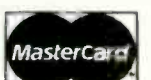


Order From Roscom and Put a On Your Face !!

- * Excellent Service
- * Knowledge & RF Experience
- * Great PRICES + Complete Studios
- * Call your local Rep TODAY !!



When You Want More Than An Equipment Dealer



Southeast Bob 770-992-2230 Fax: 770-992-6538
MidAtlantic Rick 804-974-6635 Fax: 804-974-9942
West John 970-482-9254 Fax: 970-482-6123

Circle (20) on Free Info Card

POWERFUL Dial-Up CONTROLLER



Shown with optional Rack Mount

The CircuitWerkes DR-10 Dial-up controller is perfect for studio & automation control.

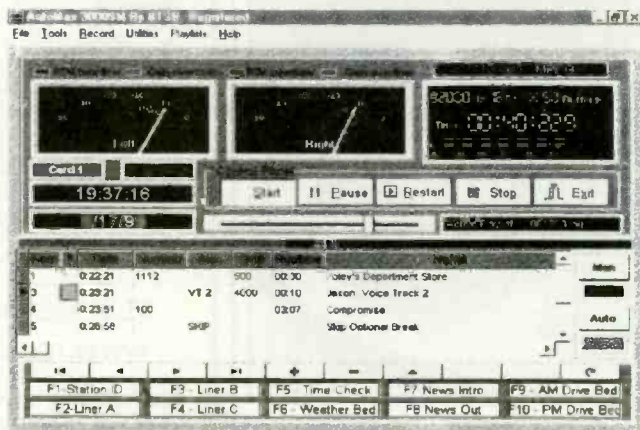
- ▶ 10 dry relay contacts out (2 are DPDT for switching bal. audio, etc.)
- ▶ Auto-answers on settable ring # and auto-disconnects with telco CPC.
- ▶ Each relay can be assigned to any tone & can be set to function as momentary, latching closure with distinct on/off codes, or interlocked latching with other relays. Any relay can be assigned to any tone(s).
- ▶ Up to 8 digit user set password prevents pirating.
- ▶ Each relay is programmable to close at beginning or end* of tone and can beep when activated. End of tone closures are after the beep!
- ▶ Two-tone & detection delay modes eliminate falsing for remotes, etc.
- ▶ 4 Status inputs beep when queried, dial 4 numbers & control relays.
- ▶ A simple, built-in audio hybrid, with active, balanced input & outputs, lets you control your equipment while monitoring local audio sources.
- ▶ All audio & control connections via easy to use screw terminals.
- ▶ Retains its settings & prior state after a power failure.
- ▶ Silencer option removes DTMF tones from output.
- ▶ List price only \$459.00. Compare our features & price to anyone else!

The DR-10 can do a lot more than space allows us to print. For complete info & downloadable manuals, check out our web site - <http://www.circuitwerkes.com/>
*end of tone closures function in momentary mode only.

CircuitWerkes - (352) 335-6555 / Fax 380-0230
3716 Southwest 3rd Place, Gainesville, FL 32607

Circle (22) on Free Info Card

Absolutely the "BEST BUY" in Radio Automation today! AutoMax 3000 Satellite & MOHD



Now Only
\$795

Complete Automation for your station at affordable prices. Satellite & Music on Hard Drive Automation on your Windows 95 Computer. Does Overlap & Voice Track. Live Assist. Background Recording. MPEG & Wav audio. Uses standard Sound Cards. Audio Recorder, Editor, and Traffic Pgm. Included!

Broadcast Technical Services Group

Free 24 Hour

Demos Software - www.btsg.com

Support

& Free

Upgrades

Ph: 512-573-8853

Circle (21) on Free Info Card

PRECISION TIMING



Designed for "Precision Timing", ESE Master Clocks & Accessories have been meeting industry needs for more than 25 years. Whether using GPS, WWV, Modem, internal crystal or line frequency accuracy, all ESE Master Clocks can drive digital or analog slave clocks, as well as interface with video or computer based systems.



PRACTICAL SOLUTIONS SINCE 1971

142 SIERRA ST., EL SEGUNDO, CA 90245 USA • 310-322-2136 • FAX 310-322-8127

Circle (23) on Free Info Card

INDEX

Advertiser	Page Number	Reader Service Number	Telephone	Advertiser	Page Number	Reader Service Number	Telephone
Acoustic Systems	22	62	512-444-1961	Logitek	43	67	800-231-5870
Advanced Furniture Systems	56	33	970-663-4123	Mackie Designs	13	38	800-258-6883
AIRC Corp	56	34	972-304-0455	Mager Systems	24	69	602-780-0045
AKG Acoustics Inc	37	74	615-399-2199	Mediatouch	19	58	800-636-0123
ATI-Audio Technologies Inc.	46	42	215-443-0330	Micro Technology Unlimited	45	51	919-870-0344
Audio Precision	23	68	800-231-7350	Minidisco	58	13	510-848-6703
Auditronics/Broadcast Electronics	2	1	217-224-9600	Mouser Electronics	59	19	817-483-6814
Autogram	56	35	972-424-8585	Murphy Studio Furniture	34	87	619-698-4658
Avcom of Virginia	50	44	804-794-2500	Muscam	41	63	908-739-5600
Bay Country Broadcast Equip.	56	32	410-335-3136	NAGRA USA Inc.	26	72	615-726-5191
Broadcast Electronics, Inc.	9, 39	26, 78	217-224-9600	NAB Broadcasters	52	17	860-434-5220
Broadcast Software Int'l	48	56	888-BSI-USA1	Neumann	17	50	514-344-5220
Broadcast Supply Worldwide	21	60	800-426-8434	Neutrik Canada	24	70	604-597-6281
Broadcast Technical Services	60	21	512-572-8853	Norsat International Inc.	46	53	800-345-VSAT
Broadcast Technology	42, 59	65, 15	719-336-3902	NSN Network Services	26	73	305-477-0974
Broadcast Tools	36	91	360-428-6099	OMB America	14	39	805-495-8420
Central Tower Inc.	59	16	812-853-0595	Allen Osborne Assoc.	38	77	760-438-3911
Circuitwerkes	60	22	352-335-6555	Pacific Research	47	54	215-536-6648
Coaxial Dynamics	50	41	216-267-2233	Phasetek Inc.	50	43	814-472-5540
Comet North America	52	47	203-852-1231	Propagation Systems Inc.	58	9	308-284-3517
Comrex Corp	7, 35	24, 89	978-263-1800	Prophet Systems	32-33, 54	86, 30	800-334-9154
Continental Electronics	16	49	214-381-7161	QEI Corporation	36	92	914-723-8567
Cortana Corporation	59	17	505-325-5336	Radio Computing Services	29	82	904-426-2521
Crown Broadcast	54	29	219-294-8000	Radio Soft	30	84	609-467-8000
Crown Satellite	12	37	219-294-8075	Radio Systems	22	61	317-633-4040
Custom Business Systems Inc.	61	2	800-547-3930	Ratio Architects, Inc.	34	88	770-992-2230
Cutting Edge	5	5	216-241-7225	Roscom	59	20	719-634-6319
Digigram	40	79	703-875-9100	Satellite Systems	40	81	860-434-9190
DPA Mics/TGI N.A.	40	80	519-745-1158	Sennheiser Electronics Corp.	31	85	207-647-3327
Enco Systems	3	4	810-476-5711	Shively Labs	58	10	800-255-HURE
Energy Onix	42	66	818-758-1690	Shure Brothers Inc.	8	25	408-986-9700
ERI Electronics Research Inc	57	7	512-925-6000	Silicon Valley Pwr Amplifier	46	52	615-228-3500
ESE	60	23	310-322-2136	Sine Systems	38	75	800-575-ONIC
Gorman Redlich Mfg. Co.	57	8	740-593-3150	Sonic Foundry	58	11	800-676-0216
Harris Corp.	11, 18	36, 93-99, 100	800-622-0022	Studio Technology	58	12	814-472-5436
Henry Engineering	48	57	626-355-3656	S.W.R. Inc.	48	55	805-373-1828
Innovative Devices	49	40	250-260-2861	TC Electronic USA	10	27	817-415-6441
Inovonics	42	64	800-733-0552	Tech America	51, 53, 55	45, 28, 31	800-441-8454
Intraplex, Inc.	20	59	978-692-9000	Transcom Corp.	58	14	416-438-6550
JK Audio	36	90	800-JKA-UDIO	Ward-Beck Systems Ltd.	30	83	252-638-7000
KD Kanopy	59	18	800-432-4435	Wheatstone Corporation	62	3	925-296-0700
Kintronics Labs Inc.	38	76	423-878-3141	Whirlwind	57	6	818-991-0360
Leitch Inc.	25	71	800-231-9673	360 Systems	15	48	

Streamlined PC Configuration Pleases Operators, Technical Staff

Automation systems that store audio at each studio workstation or demand high processing power at those locations have a hidden cost—the space and ongoing maintenance to accommodate the two, three or even four PCs per studio they demand for operation.



Thanks to its robust client/server architecture, Digital Universe, new from CBSI, requires only one PC/monitor per studio. This means that you not only can reduce hardware costs substantially, but also tailor each Digital Universe workstation based on its intended application: a non-dedicated workstation with a consumer-grade audio card, perhaps, for a low-demand auditioning studio, and all the bells and whistles for your main air studio. And operators will appreciate having to deal with only one clean, uncluttered screen that supports touchscreen, mouse and keyboard operations. Contact CBSI at 800-547-3930 to find out more.

Year 2000 Issues An Increasing Focus

Concerns over software's ability to cope with the impending Year 2000 date change have been largely focused on the business office. What about the software which drives many of your core systems, such as your live assist/automation gear? All CBSI software, including the new Digital Universe system, meets the company's Millennium Certified criteria for Y2K compatibility. Learn more by visiting the Millennium Certified page at www.cbsi.org, where you'll also find instructions for testing both stand-alone and networked PCs for correct handling of the date change.



Client/Server Architecture Offers Strong Platform

In contrast to clumsy, multi-tier networks, Digital Universe, new from CBSI, meets the demands of even the largest facilities, delivering audio to each PC in real time from a single server. This centralized server administers all audio, balancing the load from all workstations and guaranteeing maximum hard drive performance. This streamlines your hardware configuration—and costs—dramatically, and reduces the potential for on-air failures.

Current standard PC technology is at the core of Digital Universe. Built around

Visual C++, Fast Ethernet and Windows 95/Windows NT, Digital Universe's performance will improve in speed and power with each advance in any or all of these technologies. Standard approaches to such areas as backup and fault tolerance, rather than proprietary procedures, also apply to this software-based system. Call CBSI at 800-547-3930 to learn more.

Open Systems Advantage Offers Options, Growth Path

The open architecture of Digital Universe, new from CBSI, does more than just allow you to allocate workstations with different memory and speed capabilities. It also allows you to determine for yourself which audio card—and by extension which compression schemes and playback qualities—you need at each location within your station. Perhaps the sales or traffic manager's PC needs only a standard

sound card for previewing spots. In the production or air studio however, you want a more advanced card capable of handling different rates and/or compression techniques. Digital Universe doesn't depend on any one audio card, as do most other systems. This opens up a world of choices for you, and protects your investment from being locked into any one compression algorithm, proprietary board, or out-of-date platform. More details are available from CBSI at 800-547-3930.



compressed audio cannot be processed to achieve your station's unique sound.

Digital Universe, new from CBSI, gives you a choice: with capacities specified for 25 simultaneous channels of linear audio or 100+ channels of compressed audio. (And it's been stress-tested to much greater levels.) Digital Universe makes linear, uncompressed audio from your automation system a viable option at last! Contact CBSI at 800-547-3930 for more details.

Why Compress If You Don't Have To?

Most automation systems depend on compressed audio in order to deliver the real-world channel capacity today's facilities demand. But compression can seriously reduce audio quality, particularly when your audio undergoes multiple compression cycles. And, of course,

How much audio does your digital system throw away?

It's time we stopped fooling ourselves. Compression is not just a smaller and more efficient kind of audio. It's less audio.

Every time you air a compressed signal, regardless of the algorithm you use, you discard a large portion of the audio. Literally throw it away. Forever. Sooner or later, that means a serious loss of audio quality.

If you're tired of throwing away audio with your digital system, listen to Digital Universe.

Digital Universe gives you 25 simultaneous stereo signals from a single PC. Uncompressed.

That's more than four times the uncompressed channels of any other system. With every bit of the signal intact.

You'll appreciate Digital Universe's robust, client-server architecture that carries even your heaviest multi-studio load without slowdowns. Your operators will like the clean, uncluttered screens and having just one PC in each studio. And the boss will sign off on the standard Windows™ NT hardware and open systems approach.

Sound too good to be true? Call CBSI today and get the whole story.

With Digital Universe from CBSI, you don't have to sacrifice quality or capacity.

cbsi

Custom Business Systems, Inc.

P.O. Box 67 • Reedsport, Oregon 97467

Telephone 541 271-3681 • FAX 541 271-5721

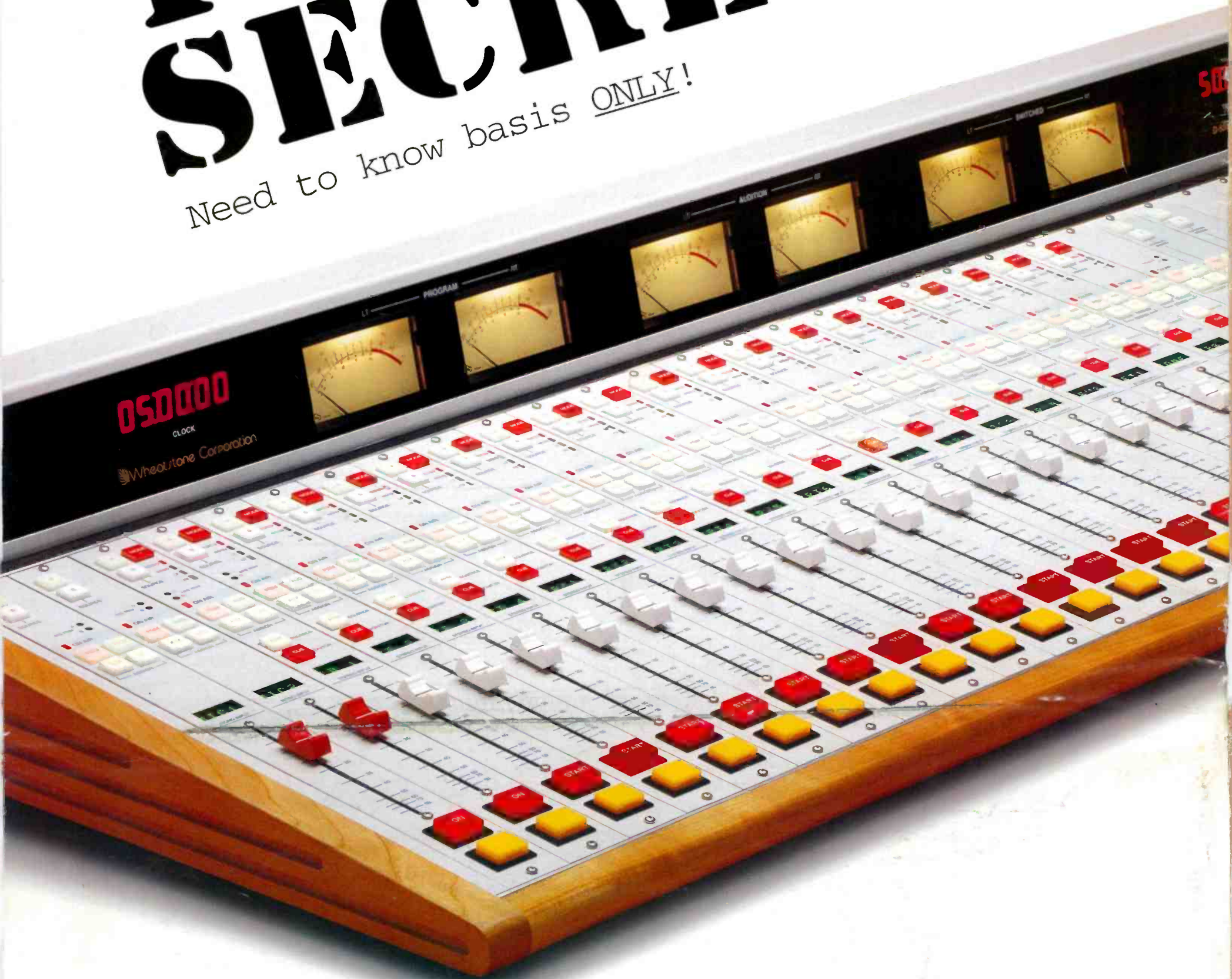
E-mail: info@cbsi.org • www.cbsi.org

800 547-3930

**DIGITAL
DU
UNIVERSE**

TOP SECRET

Need to know basis ONLY!




YOU ARE LOOKING AT A **DIGITAL** RADIO CONSOLE

The *latest*. The **BEST**. Yet to the unknowing eye it's identical to the standard analog consoles your staff has been running for years. No keyboards, no TV screens; just straightforward, hands-on controls.

Think of it: no retraining personnel, no long drawn out learning curves, no expensive on-air mistakes while your operators "get the feel" of a new technology—as far as they're concerned, it's business as usual.

And since the D-500 can accept and output both digital *and* analog signals, your existing equipment doesn't need to be replaced all at once. You can proceed with conversion at your own pace, according to your own financial timetable.

If you've decided to go digital, let WHEATSTONE help make the switchover as painless as possible. Get in touch with us and find out more!

 Wheatstone Corporation

600 Industrial Drive, New Bern, NC. 28562 USA (tel 252-638-7000)

Circle (3) on Free Info Card