URBAN REAPS REWARDS. Page 15

Stream to the Maxx
With a new low-cost version on the market, Waves MaxxStream is making news.

Page 21

Digital Delights
Tools for producing superb audio are featured in *Buyer's Guide*.

Page 29

Radio World®
$2.50 The Newspaper for Radio Managers and Engineers March 13, 2002

INSIDE

NEWS

▼ Its rollout finally underway, Sirius hopes for at least 150,000 subscribers by year-end.

Page 2

ENGINEERING

▼ Thomas Weber and Jerry Whitaker peek at what's in store for you at the NAB show.

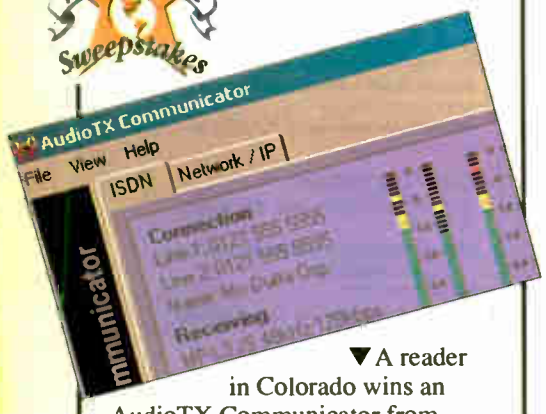
Page 7

GM JOURNAL

▼ Radio sales execs see promise in financials, health care and telecom markets.

Page 18

COOL CODEC



▼ A reader in Colorado wins an AudioTX Communicator from Radio World.

Page 4

imas Publishing Group
NewsBytes Now Every Business Day at www.rwonline.com

NPR Union Talks Drag On

NABET Contract for Technicians May be Up For Re-Vote This Month; Recent Offer Rejected

by Randy J. Stine

WASHINGTON An effort to redraw employee jurisdictional work rules in order to take advantage of new digital editing technology is the main stumbling block in contract talks between National Public Radio and its unionized technicians — talks that have continued for almost three years.

NPR management is seeking to change work rules governing who can record audio on location and mix pieces for broadcast at its Washington headquarters and at U.S. bureaus.

NPR wants its producers, engineers and reporters to share in those duties. Overseas bureaus would not be affected by a new agreement.

The jurisdictional work rules under scrutiny were implemented in 1989 when technicians were given exclusive right to mix audio for broadcast. NPR officials believe digital technology has made the arrangement outdated because audio editing has become more time-efficient.

Mike Starling

The National Association of Broadcast Employees and Technicians represents the approximately 80 technicians. According to NPR statistics, techs spend nearly 65 percent of their time mixing audio for broadcast. Union bargainers claim the latest offer contained no new assignments to compensate for the workload loss.

NABET-affiliated technicians overwhelmingly rejected an NPR contract offer in early January. The two sides have been working on an agreement for almost three years, since the union's certification

See NPR/NABET, page 5 ▶

World Radio History

◆ NEWSWATCH ◆

Sirius Begins Rollout

Satellite radio buyers now have a choice of services, at least in some markets.

Sirius Satellite Radio is launching its product gradually. Consumers can buy Sirius hardware in four markets: Phoenix, Houston, Denver and Jackson, Miss.

At retailer Cowboy Maloney's store in Jackson, about 1,000 people lined up to hear the service on its Feb. 14 debut, said Con Maloney, chairman of the board of the Cowboy Maloney's chain, with 13 locations in Mississippi and Tennessee.

The launch kicked off with a country music concert featuring Randy Travis, Earl Scruggs, Tom T. Hall and others.

Singer Randy Travis, third from left, looks on as Charles Byram of Madison, Miss., right, buys the first Sirius-ready radio system at Cowboy Maloney's in Jackson, Miss. Joining them are Sirius President/CEO Joe Clayton (left), and Johnny, Con and Eddie Maloney of Cowboy Maloney's.

Travis stopped by the Cowboy Maloney's in Jackson to sign autographs.

Sirius President and CEO Joe Clayton said manufacturing partners Clarion, Jensen, Kenwood and Panasonic would have a combined total of 10,000 to 15,000 units for sale by the end of February.

Sirius radios are available at 200 storefronts including national retailers Circuit City and Best Buy, regional retailers Cowboy Maloney's, Tweeter, Ultimate and the Crutchfield catalog.

Sirius is offering equipment rebates in the rollout markets to test price sensitivity, such as a $50 rebate in Denver, a 30-day "money-back guarantee" if buyers later reject the service in Jackson and three months free off of a year's subscription in Phoenix.

Sirius plans to expand the rollout in the south and then work its way north, with radios available nationwide by Aug. 1. Clayton estimated Sirius would have between 150,000 to 200,000 subscribers by the end of the year.

A week before the launch, Clayton was named in a class action lawsuit filed in federal court in New York along with several other current and former executives of Global Crossing. Before assuming his position at Sirius, Clayton was president/CEO of Global's North American operations.

The suit seeks damages for investments lost when Global filed for bankruptcy Jan. 28.

Meanwhile, DirecTV planned to begin offering XM service to the satellite TV firm's 10 million customers. DirecTV has a 10-percent ownership stake in XM, and its parent company, General Motors Corp., owns 7 percent of the satellite radio company.

Asked if Sirius is considering a similar marketing deal, Clayton said it's a possibility, but so is a deal with an automaker.

— Leslie Stimson

BIG EASY

TECHLINE STUDIO FURNITURE

Easy to INSTALL – Easy to AFFORD!

- machine-tapped rack rails
- built-in top and bottom ventilation
- removable doors
- punchblock enclosure available
- compatible with Wheatstone Wiremax System
- available with type 66 or Krone™ blocks
- modular design for variety of configurations
- both standup and sitdown heights
- above counter turret accessories
- fast installation
- generous wireways
- built-in levellers

STARTS at $2900

Available options include prewired punchblocks

OUR HIGH-STYLE TECHLINE STUDIO FURNITURE

boasts uncompromising QUALITY tailored to the TIGHTEST BUDGETS, with all the features a well-designed studio calls for.

A TRULY COST-EFFICIENT SOLUTION FOR YOUR NEXT STUDIO PROJECT!

copyright © 2001 by Wheatstone Corporation

Wheatstone Corporation

tel 252-638-7000/fax 252-635-4857/sales@wheatstone.com / www.wheatstone.com

Index

NEWS

NPR Union Talks Drag On — by Randy Stine — 1
Sirius Begins Rollout — by Leslie Stimson — 2
Newswatch — 3
FCC Tries to Sort FM Allotment Backup — by Leslie Stimson — 3
Radio Marti Project Wraps Up in Miami — by Paul McLane — 4
IBOC: Getting From Here to There — by Leslie Stimson — 5

FEATURES

SBE Plans Events for NAB Show — by Thomas P. Weber & Jerry C. Whitaker — 7
Workbench: Got Your Sterno and Spaghetti-Os? — by John Bisset — 10

GM JOURNAL

Tech Tools for Radio Streamers — by Craig Johnston — 15
Urban Radio Formats Reap Rewards — by Vincent M. Ditingo — 15
RAB2002: Where Is Sales Growth? — by Laura Dely — 18

STUDIO SESSIONS

Taylor Runs With the Big Boys — by Ken R. — 21
MaxxStream Provides Streaming Audio Quality — by Carl Lindemann — 21
Al's Back on Air, Be Very Afraid — by Alan R. Peterson — 22

BUYER'S GUIDE

Digigram, EuroNews Speak Languages — by Bruno Tézenas du Montcel — 29
360's Short/cut Is Radio Magic — by The Greaseman — 29
Roland VS-2480 Drives Imagination — by Jim Giberti — 30
Wis. Public Radio Embraces SADiE — by Marv Nonn — 30
AudioCube Restores Audio — by Roger Wolski — 33
Mediatron Works in Singapore — by Daniela Back — 33

OPINION — 46

World Radio History

◆ NEWSWATCH ◆

NAB to FCC: 'IBOC Is Ready'

WASHINGTON The NAB is urging the FCC to act quickly to authorize the introduction of terrestrial digital radio.

"It works, it's ready," stated NAB about Ibiquity Digital Corp.'s FM in-band, on-channel digital audio broadcasting technology in comments submitted to the commission.

Now that satellite radio is a reality, it is "critical" for terrestrial radio to be able to compete on an equal footing, the association stated.

NAB called for the FCC to adopt a single IBOC transmission standard, to avoid the "folly" that occurred when no single standard was set for AM stereo.

NAB also urged the FCC to delineate a clear transition procedure for stations that choose to make the transition early.

D.C. Circuit Split On Pirates

WASHINGTON The District of Columbia U.S. Court of Appeals upheld an FCC decision ordering a Cleveland pirate off the air and imposing a fine.

But the same court decided against the FCC in another pirate radio case it reviewed.

Legislation passed by Congress and enforced by the commission states that anyone who has ever operated a pirate station cannot receive a low-power FM license. The court said a broad ban is unconstitutional.

For example, the LPFM statue does not prohibit former pirates from holding other types of FCC licenses. The court said the FCC may reject pirates on a case-by-case basis.

FCC's New Media Bureau a Go

WASHINGTON The merging of the FCC's Mass Media and Cable Bureaus into a new Media Bureau was expected to be complete by early March.

FCC Chairman Michael Powell notified Congress of the changes in January after the commission approved the formation of the new bureau. Employees of the division will handle duties performed by the former Mass Media and Cable Bureaus.

Former Cable Bureau Chief Ken Ferree will head the new Media Bureau, while former Mass Media Bureau Chief Roy Stewart becomes head of the Office of Broadcast License Policy within the bureau.

Media Bureau employees will handle policy and licensing programs for media services, including cable television, broadcast television and radio. They will be responsible for multichannel video programming distribution, radio and television and direct broadcast satellite service policy.

The bureau will conduct rulemakings, resolve waiver petitions and adjudications, and process applications for authorization, assignment, transfer and renewal of media services, including AM, FM, TV and the cable TV relay service.

The bureau will handle staff and functions from the current Mass Media Bureau and Cable Services Bureau and will consist of the following organizational units: Management and Resources Staff, Office of Communications and Industry Information, Policy Division, Industry Analysis Division, Engineering Division, Office of Broadcast License Policy, Audio Division and Video Division.

Expanded-Band Major Mods Frozen

WASHINGTON The Mass Media Bureau has stopped accepting applications for major changes in authorized AM expanded-band stations. However, pending major change, applications will be processed.

The reason for the freeze? The bureau hopes to issue a public notice soon accepting for filing all pending AM expanded-band major change applications the FCC determines are in compliance with its technical rules.

Minor change applications will continue to be accepted under established first-come, first-served basis.

As part of a plan to allow some AMs to move to a portion of the band where they would get more bandwidth, the commission developed an allotment plan for some AMs to move to the rarified air of 1605 to 1705 kHz.

The commission issued 65 permits for AM expanded-band stations in 1997 and 1998. The final allotment plan list included 88 stations, but the FCC accepted additional applications for stations that wanted to move to the expanded portion of the band.

The allotment plan became final on Dec. 5, 2000. A freeze on the filing of major change applications will provide the commission time to study new and complex AM expanded-band licensing issues, including protection standards, facility classes and eligibility requirements.

The bureau also is concerned that continuing to accept AM expanded-band applications that specify new communities of license and propose relocating facilities substantial distances may be limiting opportunities for additional expanded-band stations.

The FCC said a freeze will preserve the rights of potential applicants for new AM expanded-band stations and the opportunity to use competitive bidding procedures to award these authorizations.

FCC Tries to Sort FM Allotment Backup

WASHINGTON The FCC is trying to clear a license backlog for more than 500 vacant FM allotments.

The glut was created when a federal appeals court in July 2001 ruled the FCC couldn't force noncoms to bid at auction for spectrum, even when the spectrum in question is on the commercial portion of the FM band.

In voting for the proposal in February, FCC Commissioner Kevin Martin said the courts decision placed a "conundrum" on the agency. Commissioner Michael Copps said it was imperative to restore certainty to all broadcast license applicants.

Since Congress passed language in the 1997 federal budget requiring commercial stations to bid for new spectrum at auction, that has been the case for commercial broadest entities. Noncoms, however, are exempt from the auction process when vying for a station in the reserved portion of the FM band.

But sometimes noncoms are eligible to place a station on a commercial frequency if space is not available on the reserved portion of the band.

Last April, the FCC decided noncoms had to bid for commercial frequencies. The appeals court struck down that decision, and competing applications have been piling up since.

Many of the backlogged allotments involve commercial and noncommercial applicants vying for the same frequencies.

The FCC asked for comment on new procedures (FCC 02-44) to license commercial spectrum when both commercial and noncoms want the same frequencies. The FCC could adopt one or several of these options or add additional choices.

The three suggested options are:

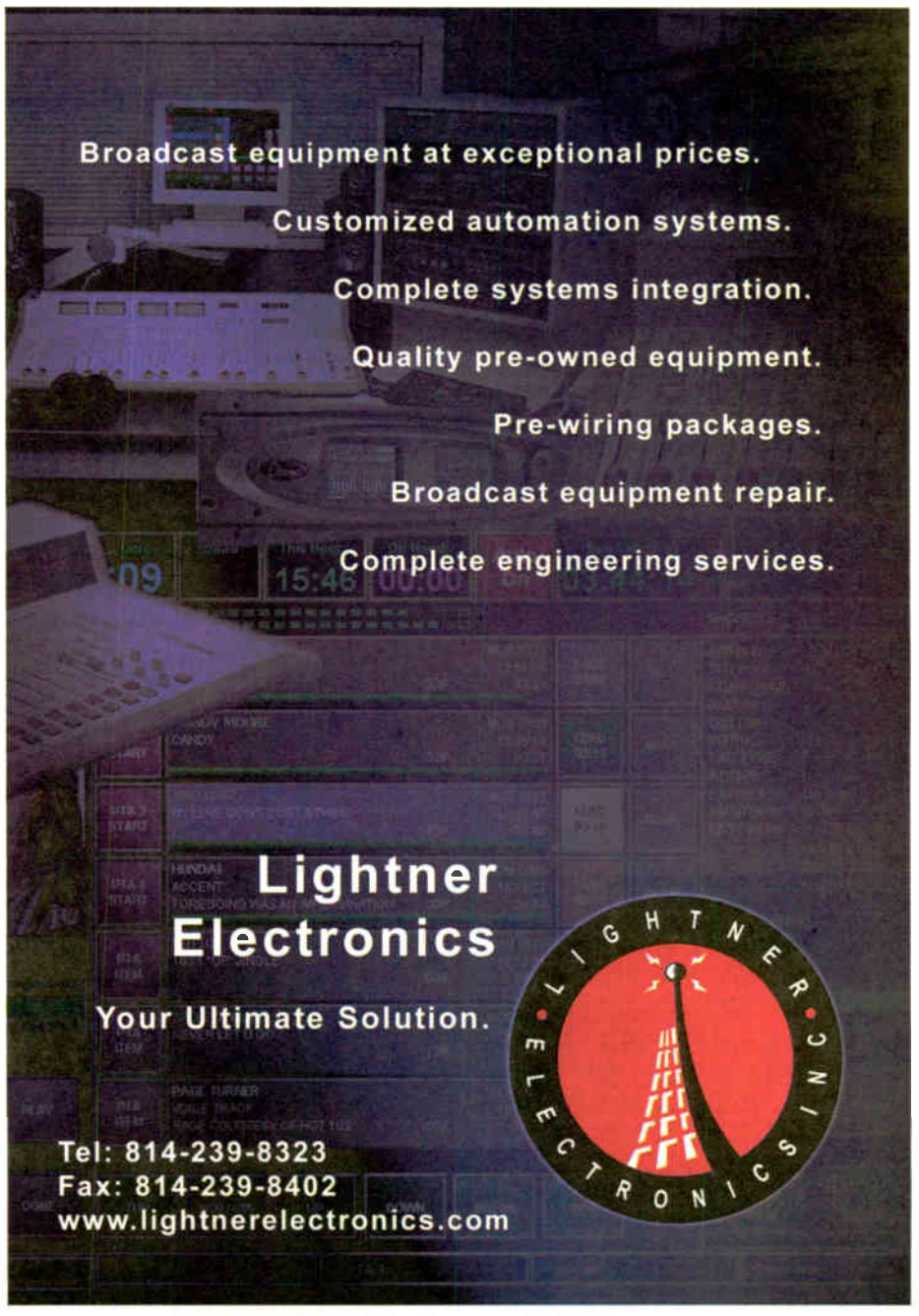
1) Make noncoms ineligible for licenses for commercial channels. Limit noncoms to FM and TV channels specifically set aside for them either in the reserved band or through the allocations process.

2) Allow noncoms to acquire licenses for commercial channels when no commercial entities apply for them; and

3) Give noncoms opportunities to reserve additional FM and TV channels.

Representatives for both commercial and noncommercial broadcasters have pledged to resist any solution that each perceives to favor their competitors. In other words, commercial broadcasters don't want noncoms to have an unfair advantage, and vice versa.

— Leslie Stimson



World Radio History

FROM THE EDITOR

Radio Martí Project Wraps Up in Miami

by Paul McLane

Radio Martí is putting the finishing touches on a two-year, $1.5-million studio renovation and digital upgrade project in Miami.

I got a taste of the project when SAS sent me a news item about their routing products being used there. So I thought I'd look into it a bit more and see what other technical decisions the staff had made.

Funded by the U.S. government to air programming to listeners in Cuba, Radio Martí went on the air in 1985. Five years later, the government added TV Martí and the operation became known as The Office of Cuba Broadcasting. The operations moved from Washington to Miami in 1998.

Broadcasts are from a medium-wave transmitter in Marathon, Fla., operating at 100 kW during the day and 50 kW at night on 1180 AM. Radio Martí also broadcasts on a dozen shortwave frequencies, four simultaneously, from Greenville, N.C., and Delano, Calif.

Racks hold SAS routers and controls, digital patchbays, ISDN and Comrex Hotline equipment and the PCs for Studios A and B.

Thomas Warden is OCB's chief of radio technical operations. He told me that among the major hardware choices, his facility team selected Harris Pacific consoles, BSI automation and audio products, and Syntrillium Cool Edit software. Turnkey services were provided by Innovative Technologies Inc.

En route

The heart of the operation, he said, is the SAS 64000 audio routing switcher, augmented by two SAS 32000s. The system can handle combined digital and analog audio. Hard controls and soft-panel controls on PC workstations offer access to router functions.

The SAS-64000 is used for primary audio routing, including control rooms, studios, desktop workstations, office monitors and the technical operations center.

One SAS-32000 can generate 10 simultaneous mix-minus audio paths for telephone and remote/field operations. The second SAS-32000 is the intercom/IFB system for technical locations, headphone positions, telephone hybrids and remote/field location.

Warden gave more details about the facility in response to my questions:

RW: What was the scope of the project?

Warden: The scope was primarily to upgrade our on-air and production studio operations. This included some physical space modifications and the addition of a news booth situated between the primary and secondary air studios, and the renovation/upgrade of nine mini/combo production studios.

Master Control was included to house the routers and remote the PC CPUs from the studio areas for noise and heat considerations. We had already evolved significantly into the digital realm with the implementation of Cool Edit Pro, Wave Station and Wave Cart audio software programs.

See RADIO MARTI, page 8 ▶

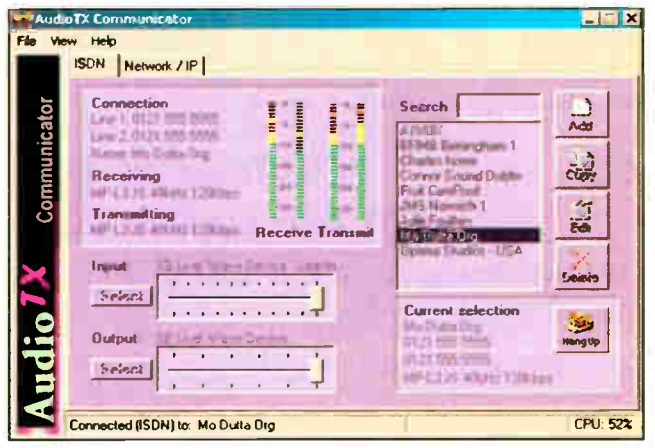
Tom Warden is seated at the technician's position in Studio A. BSI WaveCart runs on the left, Stinger on the right.

2002 Radio World READERS' CHOICE Sweepstakes

Larry Selzle in the engineering department of KUNC(FM) in Greeley, Colo., wins an AudioTX Communicator in our Reader's Choice Sweepstakes.

This is a neat software product that turns a Windows PC or laptop into an ISDN codec, compatible with most other brands like the CDQ Prima and Telos Zephyr.

The software offers live audio over IP networks including LANs, WANs, wireless networks and the Internet.



MPEG 2, MPEG 3, G.722 and linear audio connections are available. The retail value is $790.

You can still sign up for the sweepstakes at *www.rwonline.com*.

I can't tell you exactly what the rest of our prizes are yet, but if you win, you won't be sorry!

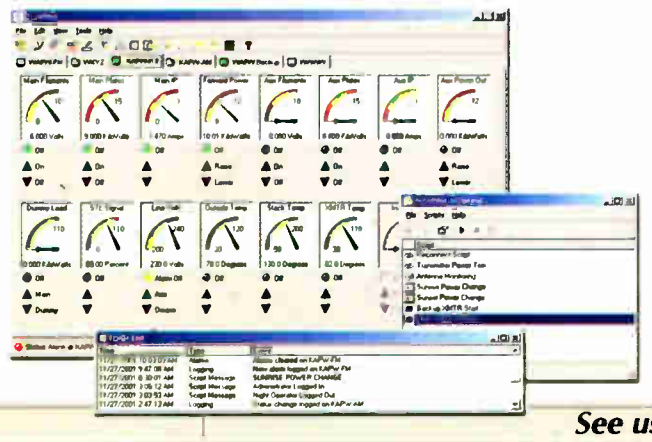
AutoPilot

All-New AutoPilot® 2...

Unleash the Power!

Broadcast Transmitter Control Software

- Control all sites from one PC
- Wizards for easy setup
- Powerful Scripting



"AutoPilot 2 has not missed a beat -- which is critical for a high powered AM station. It's very dependable."
Paul Reynolds, Chief Engineer
Cox Radio.

"AutoPilot 2's open architecture has really expanded our monitoring capabilities. The power of the scripting wizard can't be overstated."
Jeff Kuhne, Engineer, WRPI-FM

See us at NAB, Booth L1923, April 8-11, 2002!

Special Offer!!

Order now and receive free ARC-16 5.4 firmware with your purchase!

5.4 Firmware Features include:
- Adjustable Alarm Delays
- Adjustable Raise/Lower Durations
- Autoload for PC Based ARC-16 Configuration

BURK TECHNOLOGY

Tel: 800-255-8090
Web Site: www.burk.com
Email: sales@burk.com

World Radio History

NPR/NABET

▶ Continued from page 1

in April 1999.

Although playing down the chance of a lockout or strike, both sides expressed frustration with the pace of negotiations. Contract talks resumed in February, but no new vote had been scheduled by press time. Sources said the earliest a possible vote could come would be later this month.

NPR wants to modernize its work rules to take full advantage of its digital mixing equipment, which replaced the network's reel-to-reel tape decks and other analog recording and playback devices.

It began its digital transition within the news division in 1997 with the purchase of workstations from Dalet Digital Media Systems. Technicians now mix audio exclusively on computer.

Integrated process

"We are seeking to have a broader base of employees contribute in certain areas of the production process. We envision a more integrated system," said Mike Starling, vice president of engineering at NPR.

"However, only those with the skills and track record to do it adequately would be used in addition to the broadcast recording technicians."

Technicians say they play a crucial role in the overall "NPR sound" to which listeners have become accustomed. They say the creative process is at stake and that allowing non-technicians to mix sound recordings would threaten the quality of NPR broadcasts.

"Certainly that is not our intent. Our sound is a notable aspect of the NPR brand," Starling said. "The technical group certainly helped build this organization and we believe they will play a crucial role in our future."

NPR's recent offer included a stipulation to allow technicians to have final approval on broadcast audio using three sources that was mixed by non-technical people. If not satisfied, the technician could order a remix of the piece no matter how close to airtime the story was. Currently, a senior NPR producer can override a technician's decision, Starling said.

Ken Stern, executive vice president at NPR, said the only way to ensure the continued quality of NPR broadcasts is if the network changes outdated work rules.

"We'll only maintain that excellence if we move forward and use the technology that is available," Stern said. He estimates NPR has spent nearly $2 million on the transition to digital.

Paula Olson, the NABET staff representative for NPR, said job security is the main concern for technicians, even though NPR included a no-layoff guarantee in its offer.

"The job guarantee would have been only for the life of this contract, which was four years. What would happen after that concerned our membership," Olson said.

Starling said NPR's offer included "unprecedented" job security for technicians. "We feel there are other things within the production support arena that technicians could do to supplement their duties so that they remain a vital part of the operation," Starling said.

He declined to identify those areas because they could be part of the new contract offer.

The economics of the latest package, which included a new two-tier wage scale for new hires, also were deemed unacceptable by the bargaining unit, Olson said.

NPR technicians would have received a 5-percent raise retro-active to 2001, followed by 3-percent raises in the next three years of the agreement.

That "rankled membership somewhat," Olson said.

"When compared to what the AFTRA people at NPR received when they signed their new deal, technicians would not have been compensated fairly for the work they perform. These are very skilled and dedicated employees," Olson said.

Ken Stearn

The American Federation of Television and Radio Artists covers NPR reporters, producers, anchors, editors, correspondents and assistants within the production unit. AFTRA secured a 5-percent, across-the-board raise covering four years for its members in late 2000.

"We do not believe it is appropriate to compare the two groups from an economic standpoint," Stern said. "Clearly, the AFTRA contract was completed during better economic times. This current situation is what we all have to live with now."

He said the NPR offer was a "very generous" package. Technicians now earn a top annual wage of $62,059 after four years of service. Under terms of NPR's latest offer veteran technicians would have earned $67,111. The average tenure of NPR technicians is 10 years.

Strike ad

By comparison, recording broadcast technicians in master control at Voice of America earn a top yearly salary of $69,014, according to Joe O'Connell, VOA spokesman.

NABET-affiliated technicians were alarmed when NPR placed a recruitment ad with an industry trade magazine in late December. In part it read, "Experienced radio technicians needed on short notice as possible replacement strike workers for Washington-based radio network."

"(NABET) was surprised by it. We have never intimated that we would engage in any kind of walkout," Olson said.

NPR officials said there is no threat of a lockout and that the advertisement was only intended as a means to prepare the network in the event of a strike.

"We would be derelict in out duties if we had not taken steps to make sure we could have continued operations in a worse-case scenario," Stern said. "We still expect a successful conclusion to these negotiations."

Olson said NPR's unionized technicians are committed to the process of negotiation.

NEWS ANALYSIS

IBOC: Getting From Here to There

Radio Facility Conversions, Consumer Education And IBOC User Fees Lie Ahead for Industry

by Leslie Stimson

For years, Ibiquity Digital Corp. and its former incarnation USA Digital Radio have pursued several paths in the hope of making in-band, on-channel the terrestrial radio digital technology for the United States.

In Ibiquity's view, this is the year those paths converge.

Among the groups talking to or involved with Ibiquity are transmission and receiver equipment manufacturers, radio owners, the FCC, the standards-setting body of engineers on the National Radio Systems Committee, chip makers and car makers.

Ibiquity is a privately held company with funding from most of the major radio groups, plus Harris Corp. and venture capitalists. Recently, Ford Motor Co. took an undisclosed equity position in the company.

Convert in Q4?

Several things must happen if Ibiquity is to realize its hope of converting approximately 100 stations in Chicago, Los Angeles, Miami, New York, Seattle and San Francisco in the fourth quarter.

Ibiquity wants to give IBOC something resembling a national footprint as soon as possible. One NRSC source said Ibiquity wants to put the technology on enough stations to gain 50 percent of the listeners in each of those markets.

Subsequent markets would include Atlanta, Boston, Dallas, Denver and Detroit.

At present, the engineers evaluating Ibiquity's AM IBOC system is reviewing test results. As it did for FM tests, the NRSC plans to determine whether Ibiquity's AM system is measurably better than analog and hopes to issue a public report on the system by early April.

While Ibiquity hoped the NRSC would finish reviewing its AM system in less time

See IBOC, page 6 ▶

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

SMART CHOICE

EXCELLENT VALUE
The bottom line is that Millenium consoles work because their performance, look and sound present the best console value around.

PROVEN
Over 500 broadcasters use more than 3000 Millenium and RS series consoles to stay on the air every day. Most users who have bought one of our consoles bought another.

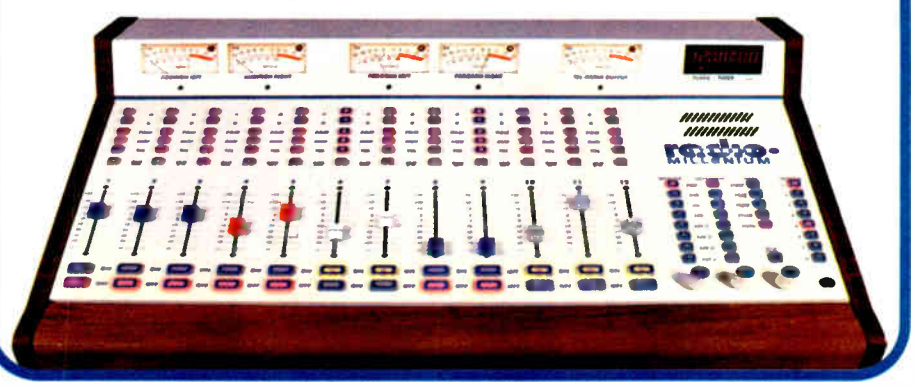
FULL FEATURED
You can buy options for a Radio Systems console – but you don't have to! From full remote control to complete monitoring, Millenium consoles work right out of the box!

GREAT LOOKS
Millenium consoles are beautifully styled with glowing soft-touch keypads and rich mahogany side-panels. And, owners can even inexpensively update their older consoles to a Millenium model.

GUARANTEED
Our consoles come with the best warranty in the business with 2-year no charge overnight parts delivery to keep you on the air.

EASY INSTALLATION
Make an afternoon out of installing your next console – not a career! These boards almost seem to wire and install themselves.

SUPERB ENGINEERING
These boards have the low noise and distortion specs that you need to compete with digital alternatives. And full DC control and modular construction keeps the performance clean and repairs a snap for the life of the console.



World Radio History

IBOC

▶ Continued from page 5

than it did for FM, the NRSC said the review has to be thorough.

"In many ways, AM is more complicated than FM, although the structure for (the AM report) will be the same as for FM," said NRSC Chairman Charles Morgan.

Sources from the NRSC, NAB and Ibiquity agreed the FCC acted quickly in seeking public comment on the NRSC report on Ibiquity's FM system. They expected the agency to act as quickly on the AM system report, perhaps in April.

Ibiquity hopes the FCC will issue an endorsement for IBOC this summer, and craft final rules by the end of the year.

FCC officials do not comment on what the commission might do specifically. But consistently, FCC staff engineers and commissioners have indicated that the agency wants to help radio with the digital transition, that they recognize the importance of DAB and have confidence in the NRSC. At the same time, the FCC staff says they want to do it right.

Fast-tracked

NRSC sources believe the FCC has IBOC on a fast track and is prepared to devote considerable resources to crafting transition requirements, though the exact regulatory path for the IBOC transition is unclear.

For example, the first stations that convert might need to do so on an experimental basis, by going through a Special Temporary Authorization application process, according to several sources. But at the same time, the commission would not want to be deluged with STA applications, so Ibiquity is believed to be discussing other transition mechanisms with the FCC.

How long might the FCC process of crafting IBOC rules take? It's hard to say.

"Once the FCC gets the comments, if there are no real problems, things should move quickly. If not, the FCC will have to resolve problems," said Morgan.

One potential problem being handled now is how Ibiquity's FM system would affect SCA receivers given out by radio reading services for the blind and sight-impaired. Previous tests were inconclusive, so new tests with more receivers were being conducted by the Advanced Television Technology Center in February.

Transmitter manufacturers Harris, BE and Nautel plan to have IBOC-compatible gear for sale at NAB2002. All three have licensing agreements with Ibiquity.

Ibiquity declines to state how much the transmitter makers are paying for the right to its technology, saying such agreements are proprietary.

Typically, Ibiquity Senior Vice President Jeff Jury said, there are not "huge fluctuations" in how much each company pays Ibiquity "because market forces tend to drive things to an acceptable price."

Companies aligning with Ibiquity usually start with a development deal to explore the feasibility and cost-effectiveness of making IBOC-compatible equipment. Later, the deal can become a more formal licensing agreement that allows the manufacturer to use Ibiquity's intellectual property in its equipment.

Ibiquity is working with other transmitter manufacturers as well as companies that make filters, combiners and STLs. While easier to roll out the technology with a few companies at first, Ibiquity expects to license more companies to manufacture IBOC-compatible equipment.

NRSC sources believe the FCC has IBOC on a fast track.

NRSC sources agreed Ibiquity is confident that the industry and the FCC will endorse IBOC, but say licensing agreements probably are contingent upon FCC approval of the technology.

It's growing increasingly likely, sources said, that the commission will want to see a formal standard for IBOC, and perhaps ask the NRSC to set that standard.

More system info?

That would require Ibiquity to share more-detailed information with the NRSC about how its system works. Given that the NRSC already holds much data, the normal three- to six-month standard-setting process might be shorter and could occur along with the early rollout, sources said.

Stations that want to go digital also must pay Ibiquity a licensing fee, based on station class, much like the FCC's annual regulatory fees. The total average station fee would be roughly $10,000 to $12,000, which could be spread over a period of years.

"We are in discussions with all the major broadcast groups and are moving forward to having agreements in place with as many groups as possible," said Jury.

For any of this to succeed, however consumers also must hear IBOC. Ibiquity plans to have IBOC receivers ready for the 2003 Consumer Electronics Show in January and has licensing deals with Harmon Kardon, Kenwood and Visteon.

World Radio History

SBE NEWS

SBE Plans Events for NAB Show

by Thomas P. Weber, CPBE, CBNT and Jerry C. Whitaker, CPBE

Radio World offers this space to the Society of Broadcast Engineers as a service to the industry.

NAB2002 is an opportunity to learn about the trends and changes that your operation is about to see. The Broadcast Engineering Conference will offer a multitude of topics relevant to your needs.

Are you about to dip your toe into IBOC? Pick up techniques and practices for transmission and reception. Discover trends in facilities design. Given the occurrences of 2001, everyone ought to be reviewing their emergency practices and procedures.

New designs in station automation and centralcasting are making for radical revisions in many stations' operations. It's your chance to study what many are already doing, what more will be changing to and how it will affect your operation.

Broad offerings

On Saturday, April 6, you can take in the IEEE tutorial on streaming media or attend the SBE Broadcast Networking Tutorial (more on that in a moment).

On Sunday, Oded Bendov of Dielectric and Bill Baker of WNET will show you what went into the original New York City central transmission center at the World Trade Center and what's being done to build its replacement. Then review DAB developments and discover what others are doing worldwide to make the DAB transition, what they did right and what mistakes they made.

On Monday, the NAB convention keynote address will be given by Richard Parsons, who is about to take over the reins as CEO of AOL Time Warner.

After the keynote, immerse yourself in the latest ins and outs of tower siting and zoning. It may not seem exciting, but it's crucial to making your DAB transition or your new centralized broadcasting facility work. In the afternoon, discover the details of how IBOC is being implemented at real stations and learn the various techniques of how it can work at your station.

Tuesday is devoted to facilities design. Learn how to make your stations more efficient and run better. Later in the afternoon, John Bisset presents his popular practical workshop on radio transmitters. Get the lowdown on making a rig run right.

Wednesday, review emergency preparedness before the Technology Luncheon, when Robert X. Cringely, known from InfoWorld and PBS, will tell us that "Broadband Is Dead." Then there's more nuts and bolts practicality in the afternoon, as we review "AM Directional Antenna Essentials."

Don't forget the Amateur Radio Operators Reception starting at 6 p.m.

The Ennes Educational Foundation Trust, in cooperation with the SBE, is offering a day-long workshop focusing on computer networking for broadcast engineers as part of the NAB Broadcast Engineering Conference.

Set for Saturday, April 6, this workshop will present an overview of the technologies and protocols involved in broadcast networking. Following the instructional workshop, presented by Terrence M. Baun, CPBE, president of Criterion Broadcast Services, optional testing will be offered for SBE Broadcast Networking Technologist (CBNT) Certification.

Among the subjects covered in the tutorial:

- Network topologies and layouts
- Common network protocols
- Wiring and connector types, system standards and installation practices
- Maintenance, troubleshooting and connectivity issues
- Challenges unique to media-based network platforms
- An overview of digital compression technologies and related storage issues

This presentation is scheduled for four hours, including breaks, and is followed by administration of the CBNT examination. Thus, in a single day, engineers who have an interest in acquiring this certification level can attend the tutorial and take the exam.

This workshop follows on the successful program offered at the 2001 NAB Broadcast Engineering Conference. Updated with new material covering a range of subject areas, including the latest network wiring systems, this program is unique in scope.

Pre-registration with SBE is strongly suggested for the certification exam portion of the workshop, although on-site

See SBE AT NAB, page 12 ▶

What do you get when you cross a Matrix with a HotLine?

The BlueBox:

The audio quality of the Matrix at a fraction of the price.

Order yours today!

15 kHz on a single POTS (Plain Old Telephone Service) line for $2800!

Want to save even more $$$? Buy a **HotLine** for just **$1995** while they last!

Comrex Corporation, 65 Nonset Path, Acton, MA 01720 USA
Tel: (978) 263-1800 Fax: (978) 635-0401 Email: info@comrex.com
Toll-free in North America: (800) 237-1776

COMREX
www.comrex.com

World Radio History

Radio Martí

▶ Continued from page 4

Because it was necessary to renovate existing studio space, we were mostly concerned with accomplishing this project without disrupting our normal operations. Radio Martí broadcasts on medium- and shortwave frequencies, so any improvement in signal quality that would be gained through digital was incidental to improving the efficiency of our operation.

RW: Who managed the project on staff? Who did the install and wiring?
Warden: In addition to myself, other OCB employees involved in the project were Patrick Folts, the overall project manager handling coordination and contracting; Hector Ortiz, chief of computer services, who coordinated computer/networking issues; and Terry Blankenship, our telecommunications manager, who dealt with telephone and broadcast circuits issues.

The Studio B producer position overlooks the technician's position. Note the live view of Studio A talent on the PC monitor.

The Studio B talent area looks into the control room; the news booth is in the rear. On-air programming originates from both Studios A and B.

The physical space modifications were contracted to Electronic Site Services from Colorado Springs, Colo. The studio design and installation was performed by Innovative Technologies Inc. from Chantilly, Va.

ITI subcontracted the furniture construction to Interpretive Woodwork and Design Inc. in Manassas, Va.

With the exception of the network switches and servers and just a few other minor items, this was primarily a turnkey project handled by ITI.

RW: How long did it take?
Warden: In order to keep operations running, this was a leapfrog process.

While ESS was making the space modifications on the first studio, ITI completed the upgrades to the nine mini/combo studios. This included new Harris Pacific AirWave digital audio consoles and new networked DAWs running Cool Edit software.

The actual construction and installation of any given area went quite fast, generally four to six weeks. Renovation of the main production studio, the final phase of the overall project, is expected to be complete by March or April.

From start to finish, the entire project duration will be just about two years exactly.

RW: What special considerations did you have? Any unusual aspects to the project?
Warden: Our News and Programs departments presented us with unique requirements as regards the telephone mix-minus, headphones and IFB system.

Rather than stacking callers, it would be required to put up to six telephone calls, two remote sites and ISDN/Hotline feeds on the air simultaneously for panel discussions.

This is where the two SAS 32000s come in. The mix-minuses can travel to wherever they are required via the switcher. The talent has the capability of selecting any source available from the switcher to their headphones.

A pre-selected "Salvo" position on the switcher control will return all headphones to a default setting. Full duplex IFB is available to talent positions, telephone hybrids, two remote locations and technical areas.

PCs with Internet, news wires, replicated views of the Wave Cart information from the technician's PC and television access was required at all talent and producer positions.

RW: For digital audio systems, what special considerations did this involve or solve? How big is your audio storage capacity?
Warden: The two most important considerations were reliability and to adhere to the "KISS" principle as much as possible.

There are some very elaborate — meaning complicated or expensive — digital audio systems on the market, and we've tested most. We settled on Cool Edit, Wave Station and Wave Cart because these products provided the necessary tools to very cost-effectively meet the requirements of the project.

In addition to the technical areas, there are DAWs at virtually every desktop for news, programming and supervisory personnel. We created our own in-house audio file management system that has served us well. We couldn't see where our operation would benefit by changing to another system at this time.

Server audio storage capacity is currently 0.6 Terabyte plus 1 Terabyte on a DVD jukebox. Logging and long-term archiving of programs is on compact disc.

RW: Is this an all-digital facility?
Warden: We are still somewhat of an A/D hybrid facility.

Audio retrieval and archiving is done via desktop PCs over the LAN using fiber-optic cable. The SAS 64000 provides the capability of both analog and digital switching in one mainframe. Existing analog wiring between the switcher and studios will continue to be used for the few remaining analog devices.

Digital cabling is implemented within the studio confines and between the switcher and the studios.

Gear List

The following new broadcast equipment is part of the Radio Martí upgrade.

BSI Wave Station/Wave Cart and Stinger
Cygnet DVD/RAM Jukebox
Denon 961FA CD Players (10)
Denon DNM991R MiniDisc Recorders (8)
Gentner DH30 Digital Hybrids (34)
Harris Pacific Airwave Audio Consoles (9)
Harris Pacific PR&E BMX 30 Digital Audio Console
Microboards CD Duplicator
SAS-32000 Audio Routing Switchers (2)
SAS-64000 Audio Routing Switcher
SAS upgraded Windows controller software for switchers, including switcher in Marathon, Fla.
Syntrillium Cool Edit

Related infrastructure:
Blackbox Port Replicators
Brocade Fiber Switch
Ciprico Fiber Storage Area Network
Dell PCs
Powersync Replication Software
Various Flat Screen and Touch-Screen Monitors

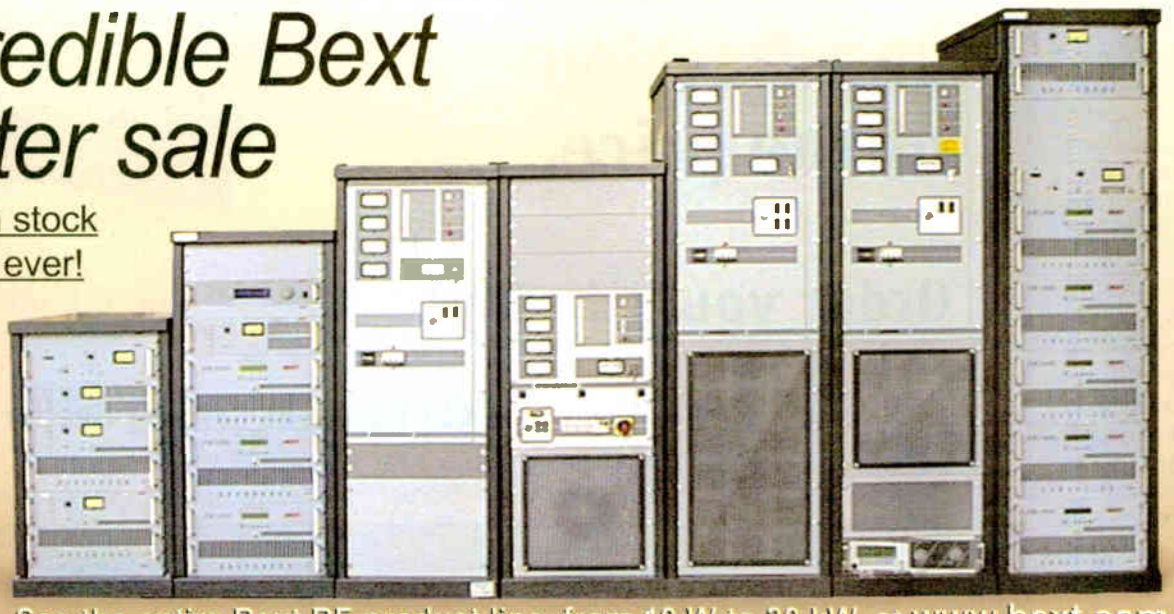
The incredible Bext transmitter sale

Bext transmitters--in stock at our lowest prices ever!

Give us a call to confirm yours is still available, and join the growing Bext family--the easy way!

800-500-5769

BEXT



2 kW solid state
List $20,345
Sale $14,995 (demo)

3 kW solid state
List $28,645
Sale $21,525

5 kW solid state
List $41,645
Sale $30,930

5 kW tube
List $28,490
Sale $21,950

10 kW tube
List $39,990
Sale $29,990

20 kW tube
List $47,940
Sale $36,790

Other power levels offer similar limited-time discounts. Call today.

See the entire Bext RF product line, from 10 W to 30 kW, at www.bext.com

World Radio History

MEET THE OMNIA-4.5

A feature list as long as your arm:

DSP based processor

2 AGC bands

5 limiter bands

96 kHz 24 bit sampling

AES3 and analog I/O

Ethernet remote control

DSP stereo generator

Bright color display

Upgradable PCMCIA slot

Famous Omnia sound

...at a price well within your reach.*

Omnia
A Telos Company

www.omniaaudio.com

Omnia is used in 4 of 5 leading stations in New York, 2 of the 3 top stations in Los Angeles and 5 of 6 of the most listened to stations in the US. It's on the leading stations in Paris, all of the BBC's FM stations in the UK and the number one stations in Canada, Ireland, Germany, Finland, Australia, India, China, Denmark and Sweden.

**$7,530 (US) MSRP for Omnia-4.5fm model. Prices may be slightly higher outside the U.S. due to duties, freight and other costs.*

World Radio History

Workbench

Radio World, March 13, 2002

Past columns are archived at *www.rwonline.com/reference-room*

Got Your Sterno and Spaghetti-Os?

by John Bisset

One of the benefits of doing contract engineering and project work is the breadth of experience each job brings. No two jobs are the same, and each brings a new twist to "the same old task."

Years of this kind of experience helped Mike Patton of Michael Patton Associates in Baton Rouge, La., develop a list of emergency transmitter site needs that he shares with *Workbench* readers.

Fig. 1: Expanding foam can be used to seal coax and control pipes at tower buildings.

The first sub-category is "Emergency." These items include a first-aid kit and a fire extinguisher. Mike recommends that you make sure the fire extinguisher is a carbon dioxide or Halon type, and not the dry chemical kind. Some fool will select the dry chemical extinguisher, and ruin your equipment as well as put out the fire!

Two or three gallons of clean potable water is helpful. Storing the water in one-gallon plastic jugs makes them easy to carry and store.

Add to the emergency list a fluorescent trouble lamp, a flashlight with spare batteries and bulb. Place the flashlight near the door, so it can be reached if the power is out, which will probably be the only time the flashlight is used.

To Mike's emergency list, I would add a change of clothes and some cans of Spaghetti-Os. Also include a blanket, and if you want to get fancy, a can of Sterno brand chafing fuel and some matches.

If it sounds like you're preparing for a camping trip, keep in mind that you could be snowed in for several days. It's not an experience I'd wish on anyone, but with a little planning, it's not unbearable.

When I was doing contract work, we equipped some remote transmitter sites with fold-up cots and blankets. The cots were on sale for less than $10 at a surplus center — good insurance.

Many of these items can be added to the trunk of your car, too. After all, you might not *make* it to the remote transmitter site, so camping in your car with a few comforts isn't the end of the world.

The idea here is to think ahead.

★ ★ ★

Cleaning supplies are next, including isopropyl alcohol. Note, this is not rubbing alcohol, which is 30-percent water. You can buy gallon-size containers of alcohol at a medical supply store. Pick up a box of clean rags as well as paper towels and toilet paper. A spray cleaner like Formula 409 brand is helpful.

Waterless hand cleaner can come in handy, along with a small vacuum and brush/dustpan. Bug spray, ant/roach/rat poison and a serious herbicide are useful.

An assortment of lubricants should be included, ranging from WD-40 or similar brand to a light machine oil and grease. Add a tube of liquid graphite for lubricating padlocks used at the tower fences.

★ ★ ★

In a category of their own are caulk and other sealers. The expanding foam sealant seen in Fig. 1 was used by Multicultural's Chief Engineer Mike Gilbert in Blane, Wash., to seal coax and control pipes leaving his tower coupling buildings.

Older lines were treated the same way in Figure 2. Because these lines were

See WORKBENCH, page 12 ▶

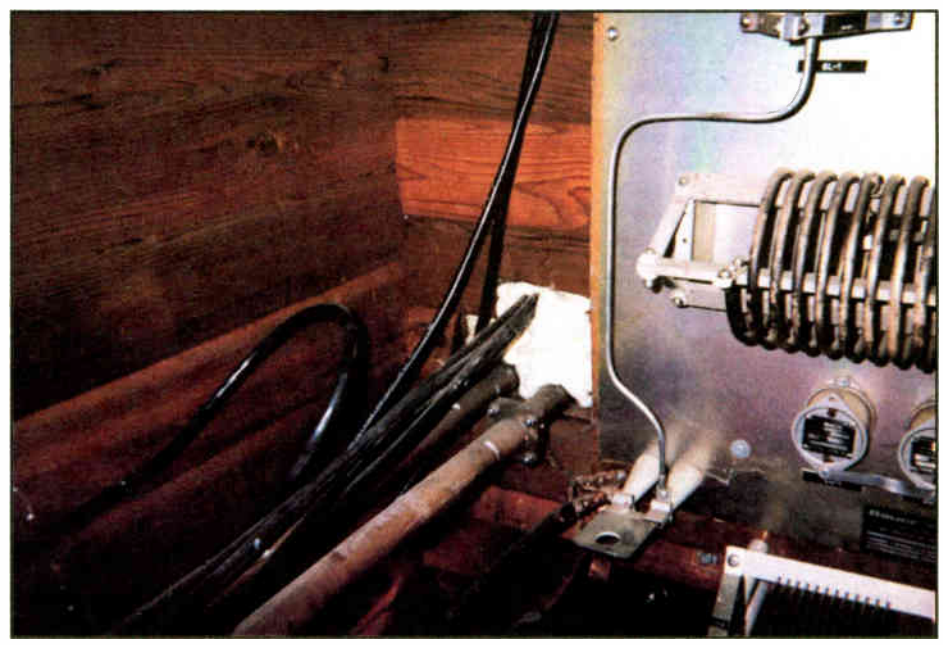


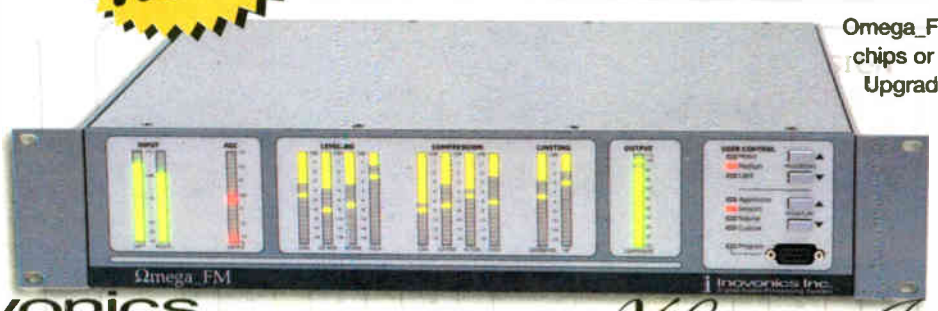
Fig. 2: The foam gives a good seal and is easier to install than PVC pipe.

Digitally Different

Ωmega_FM – $5880

NEW!

OUR GOAL WAS TO DEVELOP A DIGITAL PROCESSING SYSTEM FOR FM THAT WOULD RIVAL ANYTHING ON THE MARKET. WE MET THAT GOAL...AND THEN SOME.



Omega_FM is a 100%-digital, software-based design. It doesn't use DSP chips or other application-specific parts that rapidly become obsolete. Upgrades don't plug into 'expansion slots,' they're simply uploaded.

Omega_FM is straightforward and uncomplicated. Hardware simplicity keeps the signal path short and your audio clean. Low latency lets you monitor off-air.

Omega_FM is loud, clean and versatile. We don't expect you to take our word for this, and you shouldn't. Schedule a demo at your station through an equipment supplier of your choice.

Inovonics
1305 Fair Ave. • Santa Cruz, CA 95060
TEL: (831) 458-0552 • FAX: (831) 458-0554
www.inovon.com • e-mail: info@inovon.com

SEE IT Hear It... *Processing doesn't get any better than this.*

World Radio History

Sight and Sound

by
Ron Bersani
Talking Information Center

Marshfield, MA: As a radio reading service for people who are blind or visually impaired, The Talking Information Center Network has some very specific equipment needs. First of all, as a non-profit service dependent on government and foundation grants, corporate and private contributions and fund raising events we don't have a lot of money to spend on equipment. We have to be absolutely sure that whatever equipment we do purchase is reliable, reasonably priced and durable. When you have to justify every dollar you spend to people who donate those dollars in good faith, it helps to be absolutely confident you've made a good choice!

A second factor that always weighs heavily on any decision we make regarding studio design and equipment purchase is the volunteer factor. We have volunteers, lots of them!

Over 500 people volunteer their services as readers at our six affiliates scattered throughout Massachusetts. Over twenty thousand people with disabilities depend on us to bring them everything from the daily newspaper to the supermarket ads every day throughout New England.

Very few of these volunteers have any professional experience when they come to us. Because our staff is so small both at the network center and in all of the affiliates, our studio equipment HAS to be user friendly. That's where Radio Systems comes in.

The RS-12 series and the RS-12a Millenium Audio Consoles are the only consoles we buy. They fit every criterion important to us. They're affordable without sacrificing quality and durability. They are full-featured. They are easy to use. As a matter of fact even the least technical of our volunteers can learn how to operate the console in one easy training session. On top of that, the straightforward, tactile nature of the console makes it a favorite with our blind operators.

The consoles aren't the only great things at Radio Systems. All of our distribution amplifiers are Radio Systems models. We have several of every model they make. In some of our applications, the DA-8 is perfect for a mono application. The DA-16 gives us flexibility in stereo applications and the DA 2X4 and DA 4X4's have the ultimate flexibility. The prices are much better than you'll find for comparably featured models from other manufacturers.

Another great product from Radio Systems is their telephone hybrid. We just took advantage of a great sale to replace all of our older hybrids. We had some 1X6 hybrids that seemed like a great idea at the time. The problem was no one could figure out how to use them. They were cumbersome, and on top of that, conferenced callers could hear each other and the host without adding another hybrid. The Radio Systems DI-2000 completely solved our problems and made it so easy to answer calls, place the caller in cue and then to air that all of our operators can make it work smoothly.

Radio Systems clock and timing systems can fit any need. Each of our affiliate locations needs to be able to join and leave network feed at various times during the day. With the use of Radio Systems clocks and master drivers we can be sure everyone is on the same page at the same time.

Perhaps the best part of dealing with Radio Systems is the close personal connections I've been able to establish over the years. It's nice to call somewhere where people remember your name, are friendly AND knowledgeable whether it's Dan Braverman who happens to be the owner, Jo-Ann Dunn in sales or any member of their technical support team. Radio Systems has definitely proven to me that they're a company that cares.

radio SYSTEMS

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

World Radio History

SBE at NAB

▶ Continued from page 7

registration will permit "walk-in" registration for the exam. Further information on registration can be found online at *www.sbe.org*.

The Broadcast Networking Technologist Certification program is designed to demonstrate the certification holder's basic familiarity with network hardware and operations within the broadcast station environment. The subject matter is not software-specific and is designed to place an emphasis on the hardware and installation issues common to all network platforms as typically used in media support.

This type of certification helps bridge the gap between the role of "traditional" broadcast engineering and the increasingly important area of information technology and network hardware support.

Registration begins at 8:30 a.m. The tutorial commences at 9 a.m., breaks for lunch and concludes at 2:15 p.m. Handouts of selected slides will be provided. From 2:30 to 5:30 p.m., participants will be able to sit for the certification exam.

This should give you a good idea of what broadcast engineers can expect to learn at NAB2002. However, SBE also has several meetings, including the National Membership Meeting on Tuesday, as well as our usual booth that you'll want to squeeze into your visit (see sidebar). In fact, you may want to bring some ginkgo pills so you can remember it all.

See ya there!

Convention Highlights

Members of the SBE have several things to look forward to at NAB 2002. Whether it's keeping up with important issues at SBE meetings and events, saving money with member discounts or just reconnecting with old friends at the booth, there are benefits to being an SBE member at NAB.

Opening a week of key events, the SBE Board of Directors is tentatively scheduled to meet Sunday morning, April 7. The SBE Membership Meeting is planned for Tuesday at 5 p.m. Both are open to SBE members and are an opportunity to hear what SBE is working on.

Several issue-oriented groups, such as SBE Frequency Coordinators and the EFD Committee, will be meeting. If you aren't SBE-certified, consider sitting for a certification exam on Tuesday. (A schedule of SBE events is posted on the Web at *www.sbe.org* and will be published in the March issue of the SBE Signal.)

With the opening of the exhibit floor on Monday morning, the SBE booth will be ready with smiling faces to greet you at its new location at the east end of the Central Lobby (booth No. 22). Browse through the SBE bookstore where SBE members can purchase books at up to 20 percent off retail; purchase SBE logo items, such as shirts, mugs and pins, to display your SBE pride; and don't forget SBE has valuable educational materials, such as newly-updated certification sample test disks, to keep you in top form.

If you're not an SBE member, isn't it time you considered joining the 5,500+ broadcast engineers and those in related fields who are members? SBE provides education, certification and event frequency coordination services to the industry and has more than 100 chapters that can bring you together with other broadcast engineers. SBE members are eligible to register for NAB at the Partner Rate, a $230 savings!

NAB and Las Vegas can be a little overwhelming. However, at the SBE booth, you'll find friends and colleagues, as well as valuable tools to aid you in your career.

Workbench

▶ Continued from page 10

existing to the building, it was not practical to encase them in PVC pipe. The expandable foam provides a good seal, which can always be removed to add or remove cables or line.

★ ★ ★

Emergency tools can help you make a good impression. We're talking basic screwdrivers, pliers, wrenches — enough tools to make most repairs if you get called out without your "real" toolbox.

This may seem like a high-odds situation, but it's been Mike's experience that if you can go directly from wherever you are and make good things happen, without detours for keys, tools and so forth, your resourcefulness will be remembered by good general managers.

The basic tool kit is helpful if another engineer or non-engineer arrives at the site instead of you. One of the biggest issues with tools is keeping them put. Nicely said, they tend to want to walk off.

A digital volt meter is another tool with a reasonable price tag. Even the cheapest of DVMs can be useful in diagnosing a problem, and perhaps getting you back on the air. Don't forget the extension cord and include a couple of lengths.

I visited a site once that was experiencing air conditioner problems. The extension cord was not long enough to get to the air handler. Talk about frustration with a trouble lamp!

Also consider one of those little ceramic heat boxes. The transmitter may keep the building warm when it is running, but when the glow leaves the tubes, that room can get mighty cold.

Along those lines, a small box fan can be useful. If a driver or other fan-cooled equipment loses a fan, aiming a box fan at the equipment to be cooled may resurrect the equipment.

Besides, if the site is not air conditioned, a box fan can help keep the room cool, making for a better work environment.

★ ★ ★

We'll continue Mike's list in the next column.

Fig. 3: Be on the lookout for exposed radials.

To identify tools, we used that multicolor plastic to dip tool handles. There are enough colors to keep even the most ambitious contract engineer with a different color for each station.

Emergency tools should include an Xcelite-brand "greenie," Phillips and slotted screwdrivers, a Crescent or similar brand wrench, and Channellock or similar brand pliers. A set of Allen wrenches is invaluable. Visit a welding supply store and buy a combo "air fitting" wrench, to handle nitrogen tank fittings.

Soldering irons, particularly the gas-fired models, are getting cheap enough that one can be added to each site. If you buy the fuel-fired iron, include some spare fuel. Don't forget the solder and a cheap solder sucker or wick.

Until then, take a walk around your AM site, looking at the ground as you walk. If you uncover exposed ground radials, mark them so you can find them later and arrange to get them covered up.

Not only will disruption of the ground system ruin your station's coverage, the exposed radials will earn you a violation from your friendly FCC field inspector.

John Bisset has worked as a chief engineer and contract engineer for more than 30 years. He is a district sales manager for Harris Corp. Reach him at (703) 323-8011.

Submissions for this column are encouraged, and qualify for SBE recertification credit. Fax your submission to (703) 323-8044, or send e-mail to jbisset@harris.com.

World Radio History

Rave Reviews!

"Excellent Product" — Doug Walker, Clear Channel, Cincinnati

"Telos has taken two great products [the Zephyr and the Zephyr Express] and made them better. They listened to the customer." — Raul Velez KNBR, KFOG, Susquehanna Broadcasting of San Francisco

"Telos asked us what we wanted and they put it in there... you can't ask for anything more than that." — Paul Burt, Clear Channel, New Orleans

"It's even easier to use than the original Zephyr." — Michael Black, WEOS, Geneva, New York (NPR affiliate station)

"The most popular ISDN digital transceiver in the country has a fresh new look... Zephyr Xstream, a slick, updated version of [the] familiar Zephyr." — Steve Kirsch. Silver Lake Audio, New York

Telos

www.zephyr.com

Zephyr Xstream, Telos and the Telos logo are registered trademarks of TLS Corporation. Copyright 2001, TLS Corp.

World Radio History

Legacy: The Digital Future–Value Packed

In today's marketplace, we know finding an innovative solutions at a reasonable price is difficult. But at Harris's Pacific Research and Design Center, our engineers refused to compromise on any of their goals for Legacy. It had to have everything: looks, intelligence, robustness and affordability. So they developed new design concepts and manufacturing technologies that combine the finest quality components with incredible styling and functionality – all at a very attractive price. Which means you get unparalleled ease of use, quick and easy format changes, low cost of ownership and legendary Harris reliability.

Contact your Harris representative for the rest of the story.

Legacy

next level solutions

SERVICE

SYSTEMS

AUTOMATION

TRANSMISSION

HARRIS

www.**broadcast.harris**.com • 1.800.622.0022

World Radio History

GM Journal

Radio World | Resource for Business, Programming & Sales | March 13, 2002

RAB2002
See Page 18

SPECIAL REPORT

Tech Tools for Radio Streamers

by Craig Johnston

The Internet offers almost limitless opportunities to present listeners with enhanced information and entertainment. One broadcaster recently described the possibility of Internet radio as "turbo-charged" radio.

Radio online offers some exciting opportunities to enhance listeners' experience by supplying pictures, graphics and text while music or commercials are playing.

Internet studies find that the addition of visual information to an Internet radio experience is important.

Picture show

"Anything that can help make the process more compelling for the consumer and makes Webcasting distinct from other choices will help," said Arbitron's vice president of Webcast Services Bill Rose.

The Wowcaster Internet Radio Audio Processor From SRS Labs

"That's exactly what song title, artist album and the interactive element provide the user."

RCS, known to radio for its Selector music scheduling system, markets RCS RadioShow, a product that adds title and artist information to a station's Web site and facilitates ad replacement.

RadioShow also features a "buy it now" option, to allow the listener to buy the CD of the song currently playing.

"Stations needed a way to put more than just pictures of the DJs on their Web sites," said Tom Zarecki, who handles RCS marketing and public relations. "We developed a product that stations could use to look unique and have a player presence on their Internet sites."

Flinn Broadcasting Corp.'s WMPS(FM) in Memphis, Tenn., uses RCS RadioShow to add visual information to its audio stream.

"It does its job," said Station Engineer Alan Smith. "We use it to add song title and artist information." The station also presents the previous 12 songs played.

RCS RadioShow helped WMPS to create its alternative-formatted Internet site and player to reflect a "pig" theme used by the station.

RCS offers a version of RadioShow for a station that is not streaming buts want to give "now playing" on-air information on its Web site.

Pricing

RadioShow pricing varies depending on the options and levels of service a radio broadcaster or Webcaster chooses.

Even before the American Federation of Television and Radio Artists action late year turned Net radio upside down, the ability to target ads to individual Internet radio listeners has been the brass ring of

See TECH TOOLS, page 20 ▶

MANAGEMENT CORNER

Urban Radio Formats Reap Rewards

by Vincent M. Ditingo

Reflecting a shift in popular music trends and population diversity in the United States, advertisers and ad agencies are re-examining and increasing their ethnic marketing efforts.

Black consumers constitute one of the most attractive demographics for agencies. Some media executives consider this demographic as one of the last markets for new business dollars.

Case in point: Toyota's new $150 million campaign targeted to black consumers, making it the largest African-American advertising account in history.

There has been a 22- to 25-percent increase in

See MANAGEMENT CORNER, page 16 ▶

Rob Drucker, director of affiliate relations and head of urban programming for Jones Radio in New York, poses with Rev. Al Sharpton, founder of the Madison Avenue Initiative to promote minority media and advertising agencies, at the Interep 'Power of Urban Radio' seminar.

World Radio History

Management Corner

▶ Continued from page 15

automotive spending by African-Americans since 1998, said Steve Jett, national manager of car advertising for Toyota, addressing an Interep symposium on urban radio and ethnic marketing in early February.

Indeed, there is no question that most stations programming any of the various urban radio formats that include hip-hop, rhythm and blues and disco, have seen an audience surge in recent years.

At the Interep urban seminar, from left: Sherman Kizart of Interep; Howard Robertson of Trust Marketing; Yvette Moyo of Marketing Opportunities in Business & Entertainment; Carla Griffin of Griffin Productions; Marc Guild, Interep; Kendra Hatcher of Don Coleman Advertising; Mathew Warnecke of Mediacom Communications; Verdia Johnson of Footsteps Group; Al Anderson, of Anderson Communications; Ken Smikle of Target Market News.

The music continues to grow among young, white Hispanics and certain ethnic groups, especially black consumers, who remain among radio's most loyal listeners.

Crossover

According to Interep, 53 percent of African-Americans now rate urban radio as the format they listen to the most.

Since the late 1990s, many of the leading hip-hop and soul artists once featured solely on urban radio formats have been crossing over onto mainstream contemporary and top-40 stations in increasing numbers.

To that end, it's safe to say that any remaining barrier between contemporary hit stations and urban stations has virtually vanished, which raises the question: Why do some agencies continue to issue "no urban" dictates when buying media?

Wide appeal

A good barometer for the growing appeal of urban radio artists is this year's annual Grammy Awards nominations, in which the relatively new hip-hop duo, OutKast, was nominated for five major Grammy awards. Other popular urban artists with very broad appeal include Usher, Alicia Keys and Janet Jackson.

At Interep's symposium, which attracted 300 media buyers and other advertising executives to New York's Grand Hyatt Hotel, the national representation firm released an updated study on radio's role in multi-cultural marketing titled, "Marketing to the African-American Community."

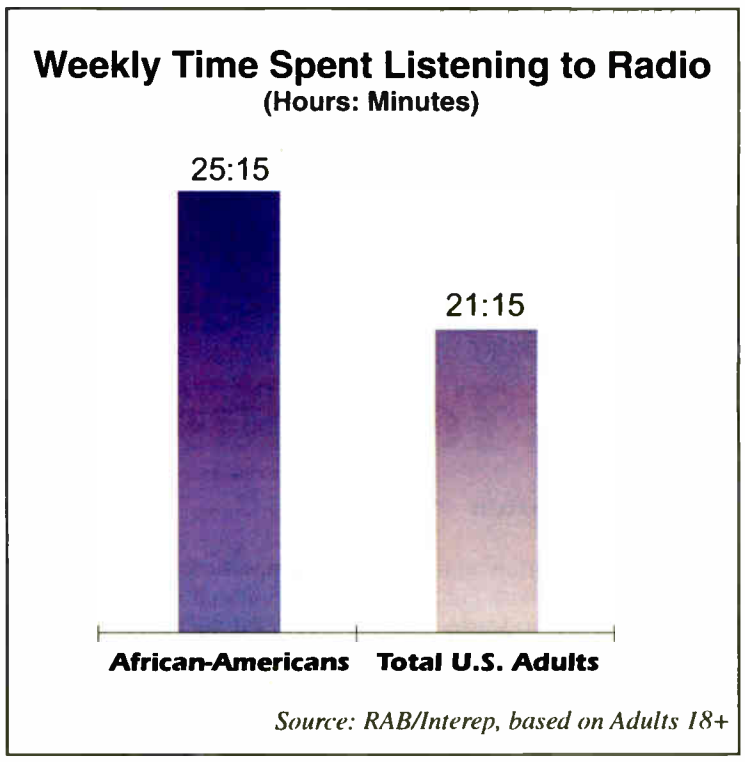
The study noted that African-Americans are more than 12.3 percent of the total U.S. population. Currently one out of every eight Americans identifies him or herself as African-American, the report said.

More important, this group now surpasses all other minority groups in buying power, with an estimated $572 billion spent by this demographic annually.

Speaking at the conference, Lamont Swittenberg, urban marketing manager for Hewlett-Packard Co., said that African-American households in the mid-income ranges index higher than similar earning white households for computer ownership. As Hewlett-Packard is one of the few computer companies aggressively targeting this market, Swittenberg said he hopes HP emerges as the "go to" brand for African-Americans.

For advertisers and radio programmers alike, it is important to underscore the fact that, based upon U.S. Census data, the African-American population is projected to grow at twice the rate of the non-Hispanic white population for at least the next 25 years.

There are more than 400 of the various urban-formatted stations in the United States today. According to Arbitron, urban radio's average quarter hour share of listening, which includes urban AC and urban oldies, registered 9.0 among adults 12 and older in the Summer 2001 report.



As a consumer group, African-Americans are heavy radio listeners, spending on average four more hours listening each week than the average adult.

African-Americans now surpass all minority groups in buying power, with an estimated $572 billion spent annually.

The report was created for the top 50 markets, which have the heaviest concentration of urban radio listeners. Urban radio is fourth among Arbitron's 14 listed format categories.

Using the same parameters for one of the format's core audience cell, 18- to 24-year-olds, the urban radio format emerges second only to contemporary hit radio in AQH audience share.

Smart broadcasters will recognize that ethnic groups are a big marketing opportunity, said Chuck Morrison, senior vice president of the Uniworld Group, a keynote speaker at Interep's symposium.

"Ethnic marketing can no longer be an afterthought for corporations or dabbled in as a politically correct gesture. Rather, it must be viewed as a key opportunity for market expansion," Morrison said.

Morrison stressed that while ethnic marketing budgets usually include both Hispanic and urban programs, the two ethnic markets should not compete for a greater share of a small slice of targeted ad dollars, but to fight for a greater share of the overall marketing pie.

Meanwhile, taking into account the different ethnic segments that make up the black consumer market, Arbitron has released a new study on the subject. "The Arbitron Black Consumer Study 2002," combines the African-American community with other ethnic black groups of different cultural backgrounds, heritages and regions of the world including, but not limited to, populations from different Caribbean nations.

Old ways of thinking

The study goes a long way to dispel many myths about black consumers, noting that black American radio listeners mirror the general population in levels of education and home ownership, among other lifestyle and buying-pattern characteristics.

The overriding message here is about growing awareness among media decision makers who remain reluctant to target an important consumer market that continues to be significantly untapped. It is an especially relevant message given today's sluggish economy.

When buying urban radio, media buyers should think more about the quality of an audience and not focus solely on cost per thousands, said Linda Jefferson, group media director for Burrell Communications.

Vincent M. Ditingo is an assistant professor of communication arts and coordinator of the radio program at the New York Institute of Technology.

Contact him via e-mail to Vditingo@aol.com.

STATION SERVICES

'God-Fearing, Jewish And Ultra-Conservative'

Salem Communications' affiliate WROL(AM) in Boston has a new "man on the street" talk show, "The Chuck Morse Show." The show is broadcast live, 7 to 8 p.m. Monday through Friday. Morse describes himself as "God-fearing, Jewish and ultra-conservative." He planned to have Caspar Weinberger, the former secretary of defense and former Attorney General Edwin Meese to be among his early guests.

Photo: Stewart Woodward, Visual Talent Group

Chuck Morse

Morse was a host on WMFO(FM), the Tufts University radio station, in the mid-'90s and has been a guest on the American Freedom Network in Colorado.

He has worked as a cab driver, waiter and loading dock laborer — occupations that Morse stated developed his "deep respect for the voice of the street."

Morse is the author of two books based on his online columns, "Why I'm a Right-Wing Extremist" and "Thunder Out of Boston," with a third due in May, "The Difference Between Us and Them."

His columns appear online on Web sites such as *www.worldnetdaily.com*, *www.frontpagemagazine.com* and *www.enterstageright.com.*

For more information, contact Sara Cohen in Boston at (617) 964-0824 e-mail scohen@cohenpr.com *or visit* www.chuckmorse.com.

World Radio History

Our Secret is Behind the Scenes!

- **Integrated platform concept**
- **Fiber optic networking**
- **Any audio source, anywhere**

KLOTZ DIGITAL's unique VADIS Platform provides the perfect solution for facilities searching for the ultimate in digital audio integration. From single studio build-outs to new mega-facility operations, KLOTZ DIGITAL provides a cost effective and time saving option to traditional analog and digital facility installations. *Our secret is behind the scenes.* Fiber optic based, the VADIS Platform integrates all audio functions, combining operator tasks, reducing the need for traditional wiring, and paving the way for effortless future expansion. And, the elimination of a central router means distribution of "any audio source anywhere at any time!"

Compare the costs for yourself. When it comes to savings, quality and performance...nobody even comes close. That's why the most sophisticated and technologically advanced facilities throughout the world choose KLOTZ DIGITAL.

KLOTZ DIGITAL GERMANY Phone:+49-89-45672-300

KLOTZ DIGITAL FRANCE Phone:+33-1-48874681

KLOTZ DIGITAL ASIA Phone:+60-3-5193233

KLOTZ DIGITAL AUSTRALIA Phone:+61-2-95186795

KLOTZ DIGITAL
5875 Peachtree Industrial Blvd.
Bldg. 340
Norcross, Georgia 30092
Phone: +1-678-966-9900
www.klotzdigital.com

KLOTZ DIGITAL

World Radio History

RAB2002: Where Is Sales Growth?

New radio ad dollars will come from the areas of health care, financial services, telecom and entertainment.

That's the outlook from industry managers who took part in the Radio Advertising Bureau convention last month.

The RAB also reported final figures for the past year. Radio sales dropped 7 percent in 2001 after a decade of growth.

Also down was RAB show attendance — down about a third from last year's show. Fourteen hundred attendees convened at the Coronado Springs Resort at Disney World in Orlando, Fla.

Radio Advertising Bureau President and CEO Gary Fries praised attendees for their success in selling themselves to their management that got them to the show.

"You came because you wanted to learn," Fries said.

While two years ago the exhibit floor was saturated with Internet tools and goods, this year it displayed many more traditional radio goods and services. Overall exhibitors were also fewer at this year's show.

Dick Orkin of Orkin's Radio Ranch delivered an impassioned and funny keynote speech that demonstrated how to use storytelling to improve radio advertising effectiveness.

"The medium isn't the message — it's a mistake to think that radio is what you're selling to your clients. It's the story that you create in your ad copy that is the message," Orkin said.

Radio sellers need to find a client's "unique selling proposition" and connect it with a past memory or story, according to Orkin, who will be inducted into the National Association of Broadcasters Hall of Fame at NAB2002.

"Everybody loves a great story. They are powerful in shaping ideas, educating, changing perception," Orkin said.

Commercial radio was off 7 percent overall in 2001. National sales plummeted 19 percent, while local figures were down 4 percent.

But Fries said the industry exceeded most analysts' predictions, especially in comparison with other media.

"Remember that many forecasters predicted a double-digit decline for radio in 2001. To be down only 7 percent is pretty remarkable."

The year 2001 was still the second-best in total radio revenue, Fries said, with $18.3 billion.

By comparison, sales in 2000, the record year, reached $19.8 billion.

Fries said January 2002 numbers looked good and could be the first positive numbers the industry had seen since November 2000. Those numbers were to be released this month.

Fries predicted growth in 2002 in the financial services, health care, telecom and entertainment categories.

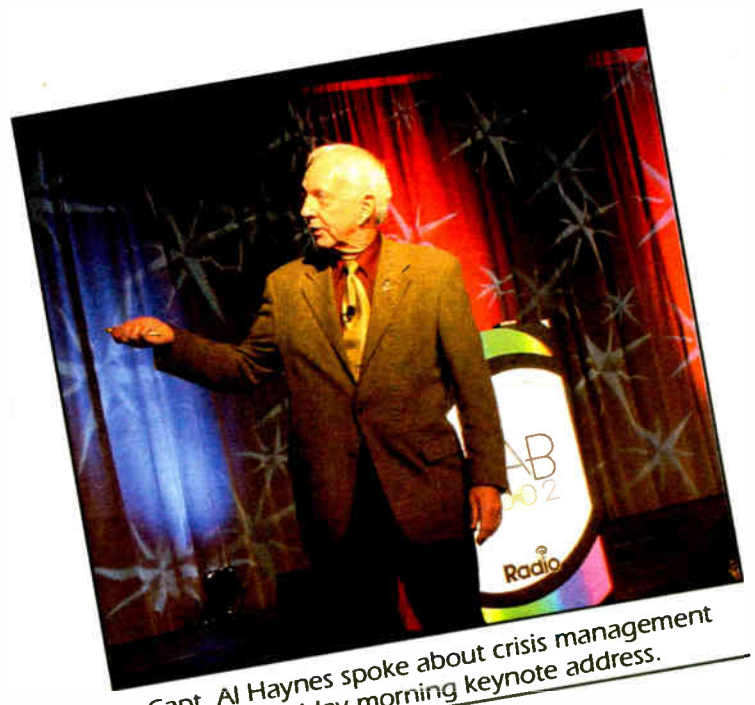
Liquor ads, which are beginning to appear in large market radio revenue reports, are expected to grow in 2002 and eventually could equal radio beer ad sales, Fries said. Last year, the beer category was worth about $100 million, according to the RAB.

— Laura Dely

From the Left: Cindi Routh of KCTY(FM) and KOIC(AM) in Omaha, Neb., Joan Gerberding, Nassau Media Partners President and Chair of RAB2002 and Debbie Reed From WDAF(AM) in Kansas City, Mo.

Dave Gifford, president of Dave Gifford International, works the session 'Keeping Your Sellers Motivated,' one of four 'Consultant's Showcases.'

Citadel CEO Larry Wilson and RAB CEO Gary Fries at the RAB Board of Directors Reception. Fries said radio's performance in the economic downturn has been 'pretty remarkable.'



Capt. Al Haynes spoke about crisis management at his Friday morning keynote address.

Like radio sales, the number of attendees and exhibitors were down this year.

STATION/STUDIO SERVICES

BALSYS
TECHNOLOGY GROUP, INC.
PROFESSIONAL BROADCAST ENGINEERING SERVICES
Analysis – Installation – Support
7141 Tallowtree Lane
Orlando, FL32835
Tel:407-822-7055
Fax: 407-296-2587
www.balsys.com
sales@balsys.com

MAGIC OF THE 80s
Hosted by Tom Furci of WHUD-FM New York Billboard, R&R and Gavin Nominee and Programming Award Winner
2 Hours Weekly, Featuring the Best Soft Rock Music from the 1980s, Artist Interviews and News Clips.
TBC
Taylor Broadcasting Corporation
P.O. Box 212 • Franklin Park, NJ 08823
(866) 810-7330 (Toll Free)
(732) 398-3655 • (702) 554-2585 (Fax)
info@magicofthe80s.com

ATTENTION PROVIDERS!
Promote your services to **Radio World's** readers. Reach Radio Station and Recording Studio owners/managers and engineers with your message.
For information on affordable advertising
call **Simone** at **1-703-998-7600, ext. 154.**

World Radio History

We won't be at NAB.

We don't need to be there.
You can try our software
on your computer, at your convenience.

Did you look at the CD that came with this issue of Radio World? It's from BSI, makers of Simian digital automation and other great software products. Our software is so easy to use that you can try it ***on your own computer*** and make it work. That's one of the founding principles of BSI. Any automation company can make their product look good using their own equipment. The real test of good software is when you get it home.

So install our software and play with it for as long as you want. Once you've decided that it's the software for your station, give us a call or order online.

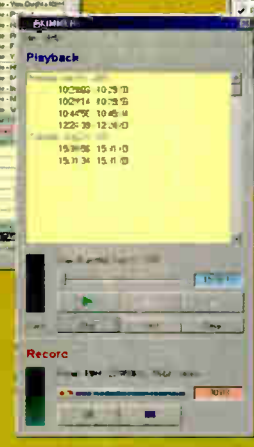
7 Reasons to Put Our CD in Your Drive

Simian
digital automation

$1499

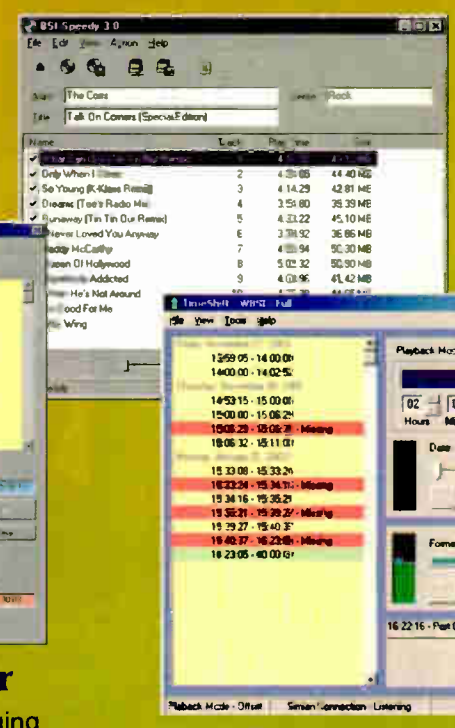
WaveCart
digital cart machine **$299**

Stinger **$199**
instant audio player



Skimmer
easy audio logging
$299

Speedy
CD-to-PC recorder **$199**



TimeShift **$999**
continuous record of audio and tones with time-delay or random-access playback.

You could win!

You could win an AudioScience 4344 sound card. It's a quadruple-play, one-record professional audio device with an on-board CODEC to play MP2 and MP3 files. An all-around great card from the best manufacturer in the industry. All you have to do is click the exclusive link on the CD to enter.

Over 5000 users have discovered how easy and versatile BSI software really is.

Test and try before you buy.

Broadcast Software International

888-bsiusa1 www.bsiusa.com sales@bsiusa.com

BSI

World Radio History

Tech Tools

▶ Continued from page 15

streaming radio.

Now that radio commercials that feature AFTRA talent and are streamed online mean triple rates for performer fees, ad-replacement technology has gone from an option to a necessity for some managers.

Ad insertion

There are two types of ad-insertion systems: server-side and client-side. In the former, the ad is replaced in the stream before it is sent to the listener. In a client-side system, the ads are sent to the listener's computer prior to the break and inserted at the appropriate time by the listener's PC.

HiWire's ad-insertion technology is a client-side system, which incorporates a customized player that listeners download.

Through an opt-in data-collection system, HiWire collects basic information about listeners, including location, so that targeted ads can be sent to selected listeners during breaks.

Stations needed a way to put more than just pictures of the DJs on their Web sites.

— Tom Zarecki

The ad-replacement service is available to stations through a revenue-sharing program. HiWire maintains an ad sales staff to sell replacement inventory.

In June 2001, HiWire signed an agreement with Clear Channel Worldwide to handle ad-replacement for Clear Channel's radio properties in the top 50 U.S. markets.

Brian Parsons, Clear Channel Radio Interactive's director of technology, said the task was daunting.

"HiWire has been quick in fulfilling our needs and ramping up our stations. This wasn't an easy challenge. Their performance in keeping pace with our crunched timeline has been impressive and puts us on track with our revenue goals for the first part of 2002."

Web audio, like terrestrial radio, benefits from audio manipulation. Processing of streamed audio produces louder, clearer and more consistent audio and can reduce the bits necessary to stream, resulting in lower bandwidth expenses.

Octiv Inc. offers two models of audio processing software: the OctiMax StreamSolo, with one-input, one-output capability, and the OctiMax StreamPro, which offers one-input/four-outputs.

Processing preferences

Octiv says many stations prefer the StreamPro version so they can process and send audio for high- and low-bitrate audio to both the Real and Windows-Media encoders.

After processing, Octiv's virtual audio cable routing system directs the audio signal to the appropriate encoder.

HiWire uses the Octiv system. Interfacing between the Octiv system and its ad-insertion system is key, said HiWire's President and CEO Steve Goldberg.

"Managing the complexities of audio ad replacement and delivery — for example, stream quality and volume consistency and terrestrial spot lengths — is critical. Octiv has been a strong partner in this regard," Goldberg said.

The OctiMax StreamPro is priced at $1,099, the StreamSolo at $599.

SRSWowcast Technologies markets the Wowcaster Internet Radio Audio Processor. It incorporates audio enhancement technologies from SRS Labs to improve the quality of compressed mono or stereo audio streamed over the Internet.

"I like it," said Steve Wolf, owner and operator of Internet-only radio station WOLF(FM) in Nashville, Tenn. "I like what it does to the sound. It enhances it and boost the highs."

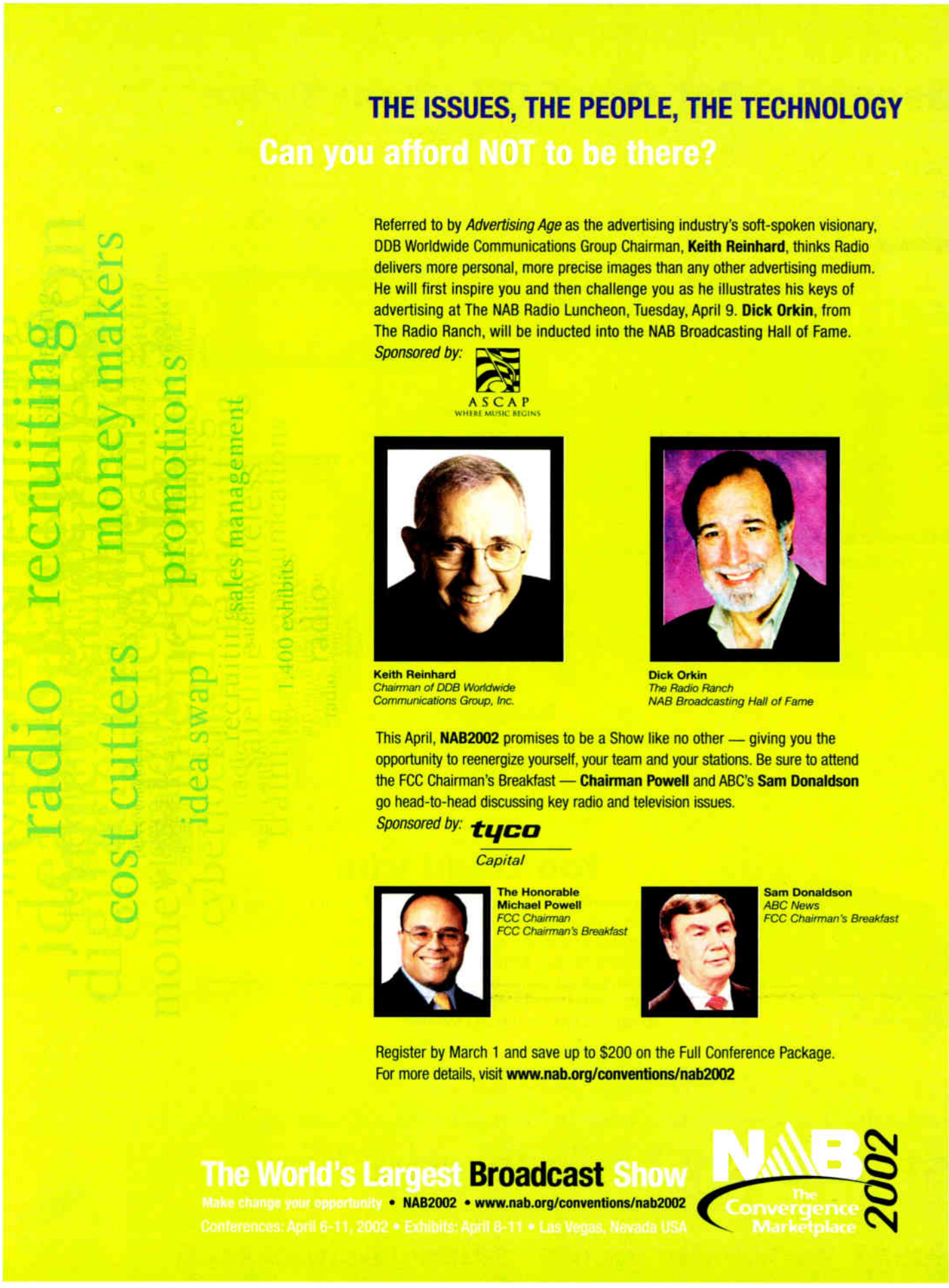
Wolf has done some testing of the Wowcaster and finds it similar to a parametric equalizer. "It does improve the sound quality," he said.

Where the SRS Labs' Wowcaster can be used to reduce the bitrate necessary to stream at a given level of quality, Wolf has chosen to go the sound enhancement route instead.

"My purpose is to enhance the sound at the bitrate we're using," he said.

The rack-mounted Wowcaster sells for $995 and is available in software format for $1,195.

What tools have helped your station take better advantage of the Internet? Tell us via e-mail to radioworld@imaspub.com.



World Radio History

Studio Sessions

Radio World — Resource for Radio On-Air, Production and Recording — March 13, 2002

ARP's Back On the Air
See Page 22

PRODUCER PROFILE

Taylor Runs With the Big Boys

by Ken R.

By the time David faced Goliath with his slingshot, the young lad was not without previous battle experience. He had killed a lion as well as a bear that had threatened his flock. Living in the fields with the animals made David strong and fearless.

You know how that story ended, but in today's radio, one does not "slay" one's opponents. One tries to find a spot where the monster doesn't live and then coexist peacefully in the valley.

Rob Taylor, president of Taylor Broadcasting, lived among some of the ferocious competitors and had plenty of experience before he started his own program syndication company.

Starting at the top

"My first real radio gig was in 1988 at WHTZ(FM) New York when I was 19 or 20," Taylor said. "I just dropped off a cassette demo of some song remixes I edited together to Dave Foxx, the 'Z-100' production director, who is still there, by the way. I never had a chance to learn any bad habits anywhere else."

In what could be seen as a reverse of the typical career path, Taylor began to look to smaller markets, where he could expand his duties and learn more about the business.

He found a home at WVIP(AM/FM), Mt. Kisco, N.Y., where he met a man who would greatly influence his future in the syndication business.

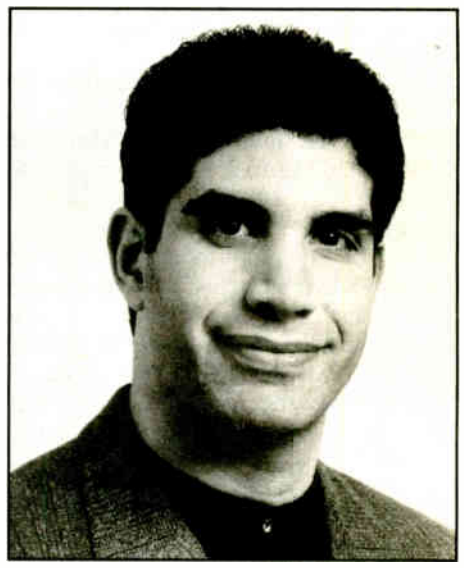
"The program director was Tom Furci, and we instantly hit it off," Taylor said. "He said he didn't have a lot of money to pay me, but I got (to do) everything there, from working on the transmitter to editing commercials to taking out the garbage. Tom really gave me a free hand, something I wouldn't have gotten at a bigger station."

Taylor left WVIP for the opportunity to put WTBQ(AM), Orange County, N.Y., on the air from scratch, but remained on good terms with Furci.

"Talk about learning the ropes," Taylor said. "I got involved with sales, production, programming and really rounded out my knowledge of radio."

The station was running a syndicated program distributed by NBG Radio Network in Oregon.

"The show was not put together too well," said Taylor. "I contacted NBG and tactfully offered some suggestions and they flew me out to Portland to talk to them. It was a young company and they told me, 'Here's your desk; here's your phone.'"



Rob Taylor

Taylor moved to Portland for a career in syndication, which turned out to be a little more work than he bargained for.

More than he bargained for

"We built a new talk studio with capability for call-ins and ISDN. They had a show with Shadoe Stevens, so I flew to Los Angeles for that," said Taylor.

"I got involved with a show out of Phoenix called 'Men Are From Mars, Women Are From Venus,' and a country oldies show with Steve Warren in Florida."

Taylor edited Selector music rotation logs, wired the top of the building for an ABC satellite and discussed arcane subjects such as automation tones with

See ROB TAYLOR, page 22 ▶

PRODUCT EVALUATION

MaxxStream Provides Streaming Audio Quality

by Carl Lindemann

There's an old joke about a bear riding a bicycle. Whether he rides it well is not the point — just that he can do it at all is enough.

The same principle held true not long ago in streaming audio. Whatever system a station had in place was good enough. Streaming a single format at only one bit rate was still cutting-edge.

Optimal quality demanded

That is no longer the case. Now that we are well past the initial hysteria over online audio, the challenge is to develop systems that optimize sound and economize bandwidth. If these solutions are easy to install, configure and maintain, so much the better.

The Waves Ltd. MaxxStream line of products takes on the task of audio capture, conditioning and encoding with a single integrated solution running on the PC platform. The core building block is a soundcard with DSP capabilities.

Two versions are available. The entry-level MaxxStream LX ($1,000) is a basic version with onboard unbalanced analog and digital S/PDIF I/O and only essential audio processing capabilities.

The MaxxStream PCI ($2,000) ups the ante with a range of DSP power and the flexibility of breakout connectors on the card that allows unbalanced RCA analog or

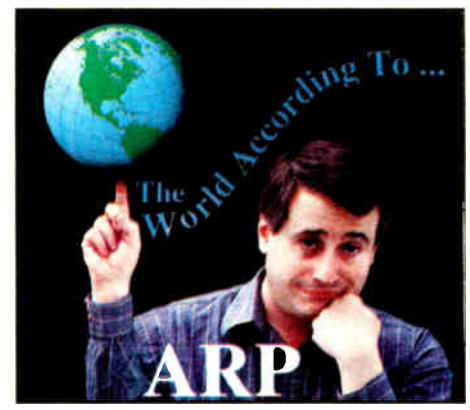
See MAXXSTREAM, page 26 ▶

A Selection of MaxxStream Screens

World Radio History

Al's Back on Air, Be Very Afraid

by Alan R. Peterson



When the progenitor of this column, *From the Trenches*, was first published in 1989, it was intended as a slightly sideways look at life from my end of the station.

Of course, it stood to reason that if I was writing it, I was actually *at* a station somewhere.

Through the '90s, the direction of my career changed somewhat (and whose did not?). My last full-time on-air gig was in 1993. I shifted to a production director position until 1995 when I assumed an editorial position at this fine paper.

For the first time since 1979, I was not earning a living perched in front of a console. Which was fine, actually. When the great Consolidation Crush began in '96, I avoided layoffs and firings by staying on the sidelines, nice and safe. I felt a little like Matthew Brady, the Civil War photographer, inasmuch as I was up on the hill out of the line of fire, documenting the fall of my comrades every time a station changed hands.

I am happy to report that, starting in January, I once again am gainfully employed in a full-time broadcast position, doing on-air and production work for Salem's WAVA(FM), Washington.

Can I get a witness?

I had always hoped I would be able to handle any format flung at me from out of left field, no matter what it was.

In the past, I had gone from big band afternoon drive to CHR mornings over one weekend. In another instance, I slid into classic country from full-service AC with nary a hiccup.

But how's *this* for a wild segue: going from assisting the syndicated Greaseman morning show right into contemporary Christian!

WAVA and its sister stations — WITH(AM) in Baltimore, WABS(AM) in Arlington, Va., and WBTK(AM) in Richmond, Va., — are formatted for Christian talk and music. Inside our studio complex overlooking the Potomac River, Salem also generates programming for three XM channels.

I currently handle midday duties on WAVA and WITH, wander across the hall to be sure the WBTK computer hasn't stripped a gear, and occasionally keep an eye on the WABS VU meter when the on-duty jock slides down the hall for coffee. The closest I got to an XM studio was when I had to tweak the settings on a Symetrix processor for one of the channels.

One of the toughest things for me to do was give up helping out the Greaseman on a daily basis, especially after lending a hand constructing his studio. But he understood I had to make a living, and I surmise he works best alone in his own world anyway. He still welcomes comedy material I write for the show, so that eccentric facet of my psyche lives on.

I occasionally think about one day when he dropped me off at a commuter rail station in Rockville, Md., after a particularly fun show.

The old President Nixon joke crossed my mind, the one where Nixon barked to his limo driver, "You're going too slow. Let me drive!" The driver could not refuse a presidential order, so he got in the back seat and let Nixon take the wheel.

The limo took off with an abrupt leap over a curb as the president flew through town with a lead foot. He went up on sidewalks, knocked newsstands apart, ran red lights and terrified the pedestrians. Finally, the cops took off after him, flagged him down and prepared to write a ticket. The horrified limo driver, sitting in the back seat of his own vehicle, rolled down the window. The cop took one look at the two of them ...

It's right about here that I rewrite the punch line to my own benefit. When other rail customers at the curb saw the driver of the car I stepped out of, I imagined them saying, "I don't know who this guy is, but isn't his chauffeur The Greaseman?"

So how will a guy like me, with a punch line ready for any occasion and armed with a wacky crack for any song title, ever hope to survive in a format as seemingly restrictive as contemporary Christian?

Easy: It really is not restrictive and I am in good company.

Always be creative

As I have always told up-and-comers who I have worked with, it is always possible to be creative within the limitations of any format.

Three of the talk shows we run, "Moore On Life," "New Life Live" and "Urban Alternative," feature hosts that seem to have a drop of stand-up comic blood in their veins. Their topics and sermons are often peppered with one-liners and a few vaudeville groaners.

It clearly is like matching your performance to a song. You know, when the CD

See ARP, page 26 ▶

Rob Taylor

▶ Continued from page 21

affiliates on the phone. He also had to install the antenna for a GPS master clock receiver in the CFO's window because building management wouldn't allow an additional antenna on the roof of the vintage office building.

"I was sleeping and breathing the job and they would always tell me to go home and not work so hard," Taylor said. "I didn't listen. For relaxation I organized their voicemail system and stuffed envelopes and ran them down to the mailbox."

After a year and a half, he was burned out and ready for a change.

Tom Furci has acted as mentor to Taylor.

New door opens

By this time his mentor Furci was ensconced at WHUD(FM), Peekskill, N.Y.

Taylor got together with him to design a syndicated show called "Magic of the '80s." Taylor would produce and distribute, Furci would host.

"We saw the need out there for a softer '80s show and we decided to do it," he said.

Taylor put a computer with a 30-GB hard drive in the middle of his kitchen table in Franklin Park, N.J., loaded Samplitude software by SEK'D onto it and started ripping music, voice tracks and production pieces onto it. Taylor Broadcasting was born.

'The PD said he didn't have a lot of money to pay me, but I got to do everything from working on the transmitter to editing commercials to taking out the garbage.'

"It's been a battle," said Taylor. "We're finding that a lot of stations are owned by Clear Channel and they have an unwritten rule to take programming from Premiere Radio Networks (a division of the company), but we did pick up a Clear Channel station in Honolulu for our show, KSSK(FM). Paul Wilson is the program director and he did an endorsement on our demo reel."

"Magic of the '80s" is offered on a 100-percent barter basis in the United States and on a cash basis outside the country.

"Response has been good," Taylor said. "We've grown considerably from our humble beginnings."

Taylor hit another small stumbling block when he discovered a new law prevented him from using faxes to market to potential clients. Timing is everything.

"Right around Sept. 11, we bought a mailing list and printed up 900 flyers and took them to the post office. We were told our town name was the same one the anthrax letters came from, so that delayed things a bit too," Taylor said.

"Actually the anthrax letters were *not* mailed from Franklin Park, but from the Hamilton post office. Once we got that sorted out, we began to get a good response."

Taylor also learned that if the promotional flyer got to a disk jockey, a demo was often requested, but that jocks usually have no say in the programming.

"We learned to qualify our leads," Taylor said. "Even when program directors claim to have the authority, it turns out in many cases the general manager may be the real decision-maker.

Wait and hurry up

"I got frustrated because this process takes several weeks. Then once the show is accepted, we need to hurry to get customized liners cut right away because they want to put it on the air the following weekend."

Another timing dilemma: Because of recent copyright rulings, the program's demo couldn't be streamed over the Internet.

Visitors to *www.magicofthe80s.com* are given contact information to request demo materials.

"That allows us to qualify everyone over the phone," Taylor said. "If they have a hot adult contemporary format, they wouldn't like our show. Our main competitors are 'Delilah' and John Tesh's show, both of which have sent us leads. We have a good relationship with those folks."

Taylor discovered that in addition to producing a show each week, he had to spend a certain amount of time educating general managers around the country about the '80s format.

"This isn't just a music show," he said. "We have artist interviews, clips from the era, contests and much more. Some of these GMs have been burned by cookie-cutter voice-tracked shows that sounded stiff."

Taylor also has had to explain to program directors that occasionally "Magic of the '80s" plays a song that is not on most tested consultant-proofed '80s playlists.

"It's tough to convince a conservative program director that it will add a freshness to the show if a nontraditional tune is thrown in occasionally."

Taylor also learned more about the financial end of running a syndication company. He has some national advertisers and runs a lot of "per inquiry" spots, which have been successful.

"The show makes a profit, but only because the host and I are not taking huge salaries," Taylor said. "We're still in the building stages, but writing is actually the biggest expense.

"It's a great show, but we're not getting rich ... yet."

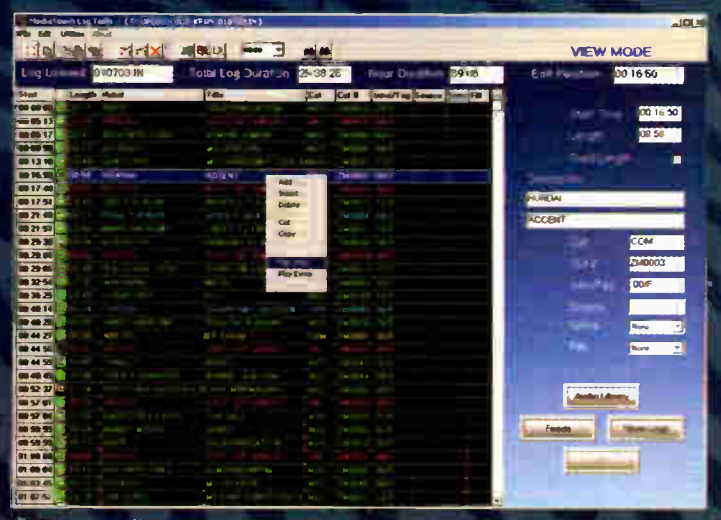
Ken R. is a former broadcaster who tried his hand at syndicating in the mid '80s with a show called "Rare and Scratchy Rock 'n' Roll," which was heard on 103 stations at its peak. That's another story, though.

Reach Ken via e-mail to ken@KenR.com.

World Radio History

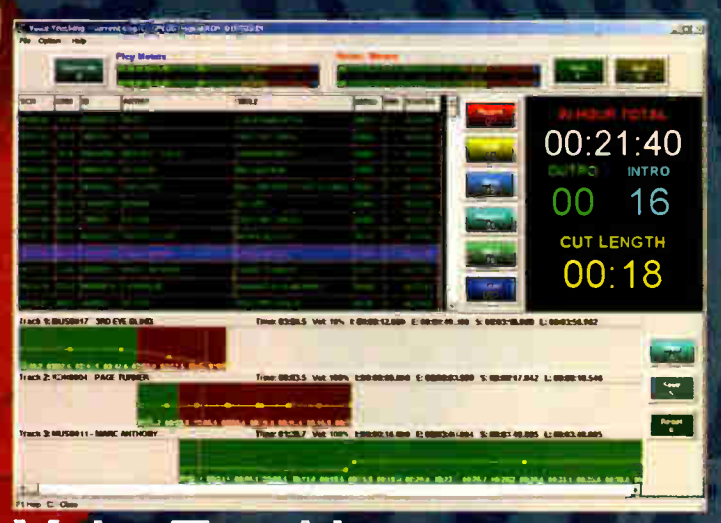
i can run my station for $995

On-Air



Log Tools

Production



VoiceTracking

Record and Play MP3, MP2, PCM, ADPCM, and Windows Media Audio on any ordinary sound card.

iMediaTouch does more for less!

i will be at...

NAB 2002 The Convergence Marketplace

April 8 -11, 02
Las Vegas, NV
Booth # L1916

Download it Today!
www.imediatouch.com

iMediaTouch

by OMT Technologies
Toll Free - 888-665-0501

World Radio History

Special Offers!

Complete Studio Mic Package

Behringer's new B-1 features a 1" capsule that captures sounds with incredible realism, sensitivity and accuracy. Its cardioid polar pattern, switchable high-pass filter and -10 dB pad, SPL of 148 dB and unusually low inherent noise make it perfect for close miking and extremely flexible. The B-1 also comes with a FREE carrying case, shock mount and windscreen.

SALE $99.00

B-1 List $129.00 **ONLY $99.00**

BSW Price Reduction On dbx Voice Processor

One of our most popular mic processors now reduced to under $200.00.! Such a deal! The dbx 286A features a studio quality mic preamp with phantom power, compressor limiter, de-esser, high and low-frequency eq, expander/gate, balanced mic and line level inputs, insert jack for utilizing outboard effects, balanced XLR inputs, balanced 1/4" TRS outputs. Take advantage of our sale price today.

SALE $199.00

286A List $249.95 **ONLY $199.00**

SALE $69.00

GREAT VALUE!
Audio Technica Headphones

Time For Some New Headphones. These AT professional headphone offers bulletproof durability in a sealed-ear format. Ear pads rotate 180° to permit one-ear monitoring. Flat frequency response from 5 Hz to 28 kHz.

ATHM40FS List $150.00 **ONLY $69.00**

audio-technica.

SALE $199.00

100 Watt Power Amp for Under $200.00!

Need a boost in the power amp department but short on rack space? The SLA-1 from ART is rated at 100 watts/channel into 8 ohms. This slim amp features a toroidal transformer, XLR and 1/4" inputs, ground lift switch, fan-cooled design, power, clip, signal and protect LEDs, all in one rack-space design.

SLA1 List $279.00 **ONLY $199.00**

SALE $499.00

FREE 20 CDR's with purchase

REDUCED PRICE

Professional Compact Disc Recorder

The CDR830 has a full complement of professional features, as you'd expect from HHB, without the high price! Features: records CD-R and CD-RW discs; SCMS-free digital input; double speed CD finalization; analog audio inputs are unbalanced with RCA connectors; digital inputs/outputs are optical and coax.

CDR830 List $569.00 **ONLY $499.00**

FIRST WE LISTEN

Hurry, Sale Ends 3-31-02

Some items are limited to stock on hand.

The World's Best

BROADCAST SUPP

AUDIOARTS ENGINEERING

Up to a $300
Exclusively

The R-17 offers high-quality mixing with al air board in a compact package. Standard co ules and either 4 or 8 stereo line input modul ules as well as a blank slot. Features: modular buses; illuminated machine start/stop switch gold audio switches and connectors; conduct nal rack mount power supply; top-rate docum **Choose an Audioarts copy stand or L5-17 st console purchase. Offer expires 3/31/02.

R17-10 List $4,355.00 ONLY $3
R17-6 List $3,044.00 ONLY $2

FRE
BSW CATA
Call Too

Order Today 1.800.426.8

World Radio History

t Source for Professional Audio Products.

BSW®

LY WORLDWIDE

lioarts Console
le Free Copy Stand
or Line Selector
Module**

R17-10
Only
$3,695.00

alue FREE!
from BSW

the necessary features of a full-sized on-
figurations come with 2 mic input mod-
s, master output and control room mod-
construction; program, audition and cue
s built-in cue speaker, studio talkback;
ve plastic faders and monitor pots; exter-
entation. Dimensions: 21 W x 17D x 6.8 H.
rec line selector free from BSW with your

595.00
595.00

LOG
day

434 or www.bswusa.com

GIANT Middle Atlantic Sale

Affordable Desktop Racks

Our most popular racks now marked down even more! They ship flat and assemble quickly with the included allen key. Racks are constructed of 5/8" thick, high-density particle board covered with black laminate. Snap-on screw caps are included. 15 7/8" deep.

RK12 12-space (21") equip. rack List $143.00 **ONLY $89.00**
RK16 16-space (28") equip. rack List $156.50 **ONLY $96.00**

Blank Rack Panels

Fill the gaps in your rack with these economical blank panels. You'll be looking sharp while saving a pile of money. Save even more in an economical 10 pack, exclusively from BSW.

EB1 1-space blank rack panel
ONLY $6.00 ea. **ONLY $49.00** (10-pack)

EB2 2-space blank rack panel
ONLY $8.00 ea. **ONLY $69.00** (10-pack)

2-Space Utility Shelf

Rack em' up people. This heavy-duty 2-space rack shelf is perfect for racking gear without rack ears. Fits equipment up to 17-3/8" wide. Save even more money with our 4 pack!

U2 2-space utility shelf List $55.75 **ONLY $24.00** ea.
U2 U2 shelf 4-pack List $223.00 **ONLY $89.00**

Rack Screws and Washers

You can never have enough, so buy em' by the bucket. Includes 500 screws and attached washers.

HW500 **ONLY $79.00**

Vent and Security Covers

Ventilate your racks with these vent panels.

EVT1 1-space vent panel **ONLY $7.00** ea.
EVT2 2-space vent panel **ONLY $10.00** ea.

Keep those pesky fingers off your gear. Each security cover is 1" deep to allow for protruding knobs. Small holes allow visual indication of metering etc.

S-1 List $27.75 1-space security cover (1-3/4") **ONLY $16.00** ea.
S-2 List $31.00 2-space security cover (3-1/2") **ONLY $18.00** ea.

Middle Atlantic Products, Inc.

UNBELIEVABLE Deals on 5 Packs!

KOSS

Great low cost headphones for studio or remotes. Light weight with a full enclosure design!

TD60PKG (pack of 5)
ONLY $89.00

PROCO

Quality, low-loss 25' mic cables at a great price. Complete your new mic package with this 5 pack!

M25PKG (pack of 5)
ONLY $49.00

BEHRINGER

You'll be pleasantly surprised at the first rate sound from these very well built very inexpensive mics! Includes a hard case for each, and an on/off switch. An unbelievable deal!

You can also purchase multi-colored windscreen 5-packs for only $24.00!

XM2000SPKG (pack of 5)
ONLY $99.00

WS912 WINDSCREEN (pack of 5)
ONLY $24.00

These durable mic stands also include a mic adaptor and cable clips. An incredible bargain exclusively from BSW.

MS200PKG (pack of 5 mic stands)
ONLY $89.00

World Radio History

ARP

▶ Continued from page 22

track is upbeat, so is your delivery. When "Honey" by Bobby Goldsboro comes up in rotation, you pull down the intensity and play the mic close. And a transition from one tempo to the other requires your voice to do the same.

This is obvious when airing a music format, but not so obvious in airing long-form programming. There is no difference.

Our segments are 15 or 30 minutes in length, with occasional live programs running an hour or more. We cue up the show, play the front end in Audition to hear the tease, and match the intensity of our setup to the delivery of the topic.

Folks, anyone can do this! What's the mystery? Why make talk segments sound dull and uninteresting? Sell your product!

It is not just the funny stuff that appeals to me. I recently was moved by a guest who came in for an interview that is set to air later this year.

You have heard of Air Force Lt. Col. Brian Birdwell, haven't you?

No? Not by name you say? Well, have you heard about the soldier wounded in the Pentagon attack who was saluted in the hospital by President Bush? The soldier who was in the news because he made the pained effort to raise his burnt and bandaged arm to return the salute?

That's the guy. And I got him on tape.

When it rains, it pours

Along with my new permanent position at WAVA, the folks at Montgomery College in Maryland also gave me a jingle in January, asking if I would teach evening classes in studio operations and production using Cool Edit.

I was already teaching a similar course at the Washington campus of the Connecticut School of Broadcasting, so the material would not be a stretch. Plus, now I have a mortgage again, so the green stuff would come in handy.

I never thought of myself as the scholarly elbow-patch type of fellow, so I guess I could be classified as an academia nut.

(Note: reread the part above regarding a punch line for any occasion. That was one of them.)

In addition to several well-equipped and-maintained production studios, I came across Internet radio station "e-Radio WMCR," driven by a Scott Studios Windows system and tricked out with all new studio gear and furniture.

A pleasant surprise was a computer program called "Shram 95," a custom piece of cart replacement software written for use at the college.

It is too bad this was never commercially pursued, as it had definite possibilities. It does not overlap audio, but I suppose with a little tweaking and DirectX 8.0, it could scream with the best of them.

It is fully networkable; can auto-segue; has a built-in audio editor, countdown timer and bars that change color based on play status; and can fire off cuts simply with the numeric keypad.

The screen does not fully emulate a cart deck for us old-timers, but what's a "cart deck" to new radio students? Why emulate something they may never get to use anywhere at any station? They seem to enjoy it just fine.

Sadly, this program may never progress beyond its current state. Shram, the programmer who created this marvelous software, died a few years ago. I never met him, but I'd like to think he would have enjoyed seeing folks use his program on the air.

Imagine, given the uniqueness of his name, if the product title had become generically accepted by broadcasters to mean any kind of cart emulator. Then today we would be saying, "Plug the Shram and the Roland into the Mackie."

Nod to Shram

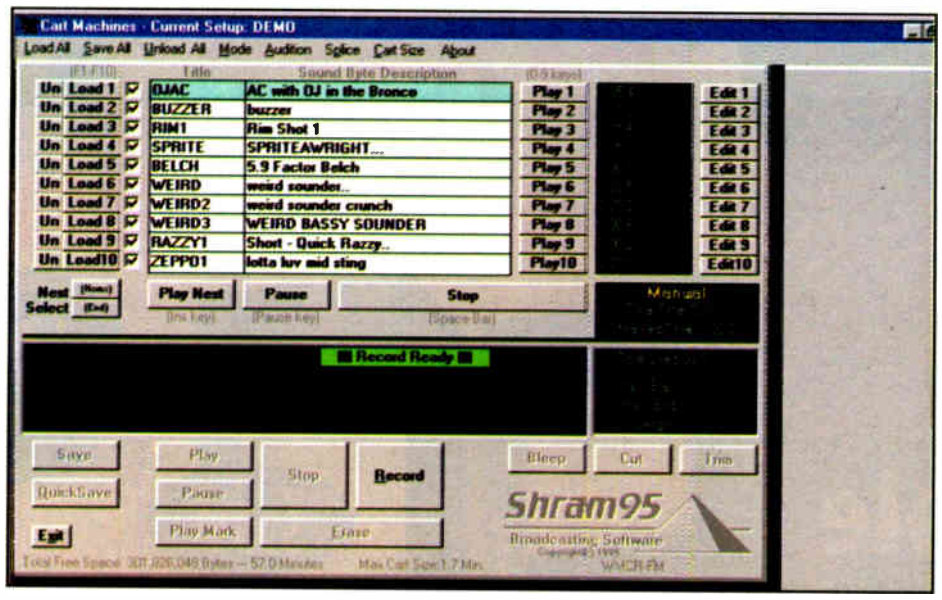
There are all kinds of free audio players on the Web today, and goodness knows Arrakis Systems shook things up with its free automation program last year. But a nod should be tossed toward Shram for his efforts. He earned it.

So here I stand before you now ... certainly a very different dude than I was when the old *From the Trenches* series started.

Back then I was content to be little more than a jock. I still want to be, but I have to admit the ride is getting to be a lot more interesting than it once was. I am back on the air, and now also doing that college thing.

Just don't call me "perfesser." That sounds so ... so ... Gilligan.

Got a great radio tale to share? Look for Al at NAB2002 in Las Vegas or drop him a line via e-mail to alan peterson@earthlink.net.



Shram 95 is the cart emulator of choice at the radio lab at Montgomery College, Rockville, Md.

MaxxStream

▶ Continued from page 21

balanced XLR and digital connectors for either S/PDIF RCA or XLR AES/EBU.

The MaxxStream PCI and LX both are suitable for the standalone Webcaster or terrestrial broadcaster to deliver a range of bit rates and streaming formats to the online audience.

It is a scaleable solution. Multiple cards can be configured to handle multiple signals. A single PC can manage as many signals/Web stations as there are available PCI slots.

Waves incorporates the MaxxStream PCI into turnkey rackmount solutions. The models M100 and M200 can, depending on configuration, hold up to four cards. All are controlled by a core application that manages the audio processing modules then feeds it to multiple encoders running on the same box, e.g., Windows Media Encoder, RealProducer Plus and Sorenson Broadcaster.

The result is the ability to generate digital audio information in various formats and multiple bit rates simultaneously for distribution. The idea here is to create a "signature" sound for a stream while serving up a higher-quality audio with less bandwidth.

Sips bit rates, saves bandwidth

By maintaining quality at lower bit rates, MaxxStream can pay for itself in savings in bandwidth costs. Also, it serves the audience well by offering a variety of bit rates appropriate to their Internet connection.

The test PC used was a Pentium IV running at 1.8 MHz with 512 MB of RDRAM and Windows 2000 OS.

Installing the MaxxStream PCI into a PC was simple. After plugging it into an open slot, Windows identified new hardware. Running the "add new hardware" application to the proper directory on the CD-ROM, Windows installed the correct driver with no problem.

Loading the Maxxstream 3.0 software from the disc was nonproblematic. Windows Media Encoder 7 is included on the disc. For RealProducerPlus, the install utility includes a link to the RealNetwork Web site where the Real encoder can be ordered and downloads for $199.95.

Configuring MaxxStream 3.0 was easy. The Settings tab sets which inputs are enabled on the card(s) installed. Audio can also be drawn from most any Windows audio player. While the card's I/O is intended to take an external feed off, say, an on-air automation system, an online-only Webcaster could just as well draw music off the hard drive with any of the many jukebox applications available to consumers.

With the source material properly routed, audio can be processed through the extensive variety of DSP plug-ins. Given that Waves LTD has built its business around developing such audio processing software, it is no surprise that the 20 bundled here is impressive.

Assemble your rack

The interface for creating an individual virtual audio rack is intuitive. Basically, you just snap in whichever module you like and adjust the settings accordingly.

A decent variety of presets are included covering a range of audio material covering music and talk formats at different bandwidths. So it is easy to start from scratch or use the presets as a starting point and customize.

With all this in place, I plugged in an external CD player through the unbalanced RCA jacks for my source material. For monitoring, I connected the RCA outs to a Behringer MX 602A mixing board and attached a pair of powered HHB Circle 3s.

See MAXXSTREAM, page 27 ▶

World Radio History

MaxxStream

▶ Continued from page 26

Each plug-in has a real-time display of the signal. Adjustments immediately were apparent through the monitors. Unfortunately, the sound coming through was not very good.

Consulting the manual — included as an Acrobat document on the disc — I discovered that this is how it should be. The presets are geared to compensate for the artifacts/degradation created by the various streaming media codecs.

Product Capsule:
Waves MaxxStream

Thumbs Up
✓ Easy install
✓ Terrific range of plug-ins
✓ Simple, intuitive interface

Thumbs Down
✓ Inherent delay in coding/decoding makes tweaking a lengthy ordeal

Price: LX version: $1,000; PCI version: $2,000; "M" models, which can hold up to four cards depending on configuration, range from $4,000 to $9,000

For more information contact Waves at (865) 546-6115, e-mail maxxstreaminfo@waves.com or visit www.maxxstream.com.

Monitoring off the card comes prior to encoding — a dubious proposition. It gives no clear indication of what the listener will actually hear. To properly tweak the sound, streaming the signal to another computer via Internet or LAN is recommended by Waves.

This still will not yield real-time monitoring in that there is an inevitable delay (10-plus seconds) between adjusting a setting and hearing it come through the full process. This is, however, inherent in the encoding-streaming-decoding process.

I managed a workaround in RealProducerPlus by saving the processed file then playing it back. This is reminiscent of the early days of digital audio editing where you had to render finished files before you could hear what they sounded like and make appropriate changes — an awkward and inefficient process.

Even so, the effort was justified by the payoff. I was particularly impressed by two of the Waves plug-ins. The UltraMaximizer normalizes the signal on-the-fly so that sound levels are consistent.

Little speakers, big bass

MaxxBass uses psychoacoustic modeling to create the impression of bass even through tinny, tiny computer speakers. Fortunately, no one is likely to make continual changes in their sound. Once you have made the effort, save the settings and leave them.

This process has to be repeated across all encoding formats, bit rates and streams. It is the only difficult aspect of this system, and Waves has gathered a number of third-party consultants/integrators, as well as offering assistance itself, to handle this if you find it is too much of a hassle.

Running the system full-bore with both RealProducerPlus and Windows Media Encoder was definitely a drain on the system resources. Most of that is devoted to the encoding — the audio processing is offloaded to the Motorola 56301 ONYX 400MIPS chip on the MaxxStream card.

I set the CD on continuous loop and let it run overnight. By morning, things were still going steady and strong. Given the stability of Windows 2000, it should run indefinitely. Because I only tested with a single card, I was not able to push the limits on the number of separate signals this could carry and test the impact of using a slower system.

Adding additional cards should multiply demand. With the single signal being crunched into both Windows Media and Real formats, a Windows Media utility indicated that CPU usage was up around 25 percent. It seems that a limit of four cards per PC is about right for a fast (Pentium IV) machine.

I also had a chance to examine a rackmount turnkey unit consisting of a Pentium III 800 with 256 MB of SDRAM. This 1 RU box was built to last with a rather loud cooling system. This beast is best tucked away out of earshot and connected with balanced connectors over a long cable run.

Dedicated system is best

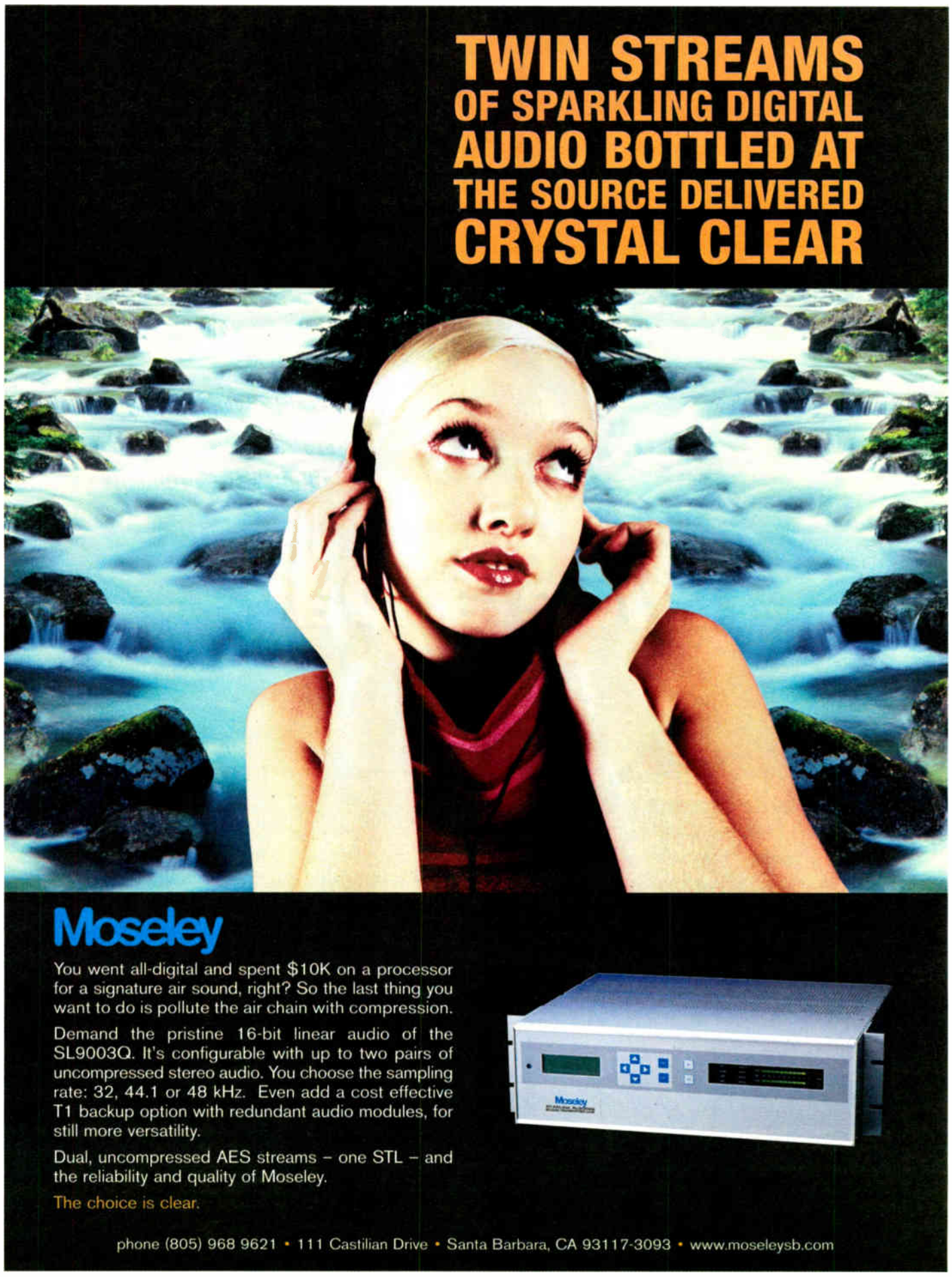
Whatever hardware is used, expect that the box will be dedicated to this purpose. It is not feasible to cut corners and add this application to a general office machine running other tasks.

Aside from the monitoring issue, the MaxxStream makes good on the promise of making the most of today's low-bandwidth streaming audio environment. Although Waves offers turnkey packages and has consultants ready in the wings to do the installation and integration, do-it-yourselfers with a modicum of PC skills should have no problem.

The basic concept here may make this a regular part of the radio engineer's workday. While the current configurations are targeted for outputting via 10/100 NIC card for dissemination over streaming servers, the architecture is applicable to most digital formats.

Sirius Radio is using 15 of the four-card rackmount units to sweeten the sound for 60 of its channels. This would also adapt nicely to IBOC DAB. Obviously, settings would have to be adjusted to suit the differences between IBOC and the streaming codecs.

Whatever the possibilities, the Waves MaxxStream is ready to take today's Webcasters beyond the "gee whiz" initial implementation into something more refined.



World Radio History

PRODUCT GUIDE

Affordable Digital Console From Soundcraft

The 328XD digital mixing console from Soundcraft improves on the functionality of the 328 production mixer and offers dynamics processing on every channel, group and mix path.

The 328XD is capable of straight sound mixing and production and can control sequencers and desktop synths. With this ability, it can be used as a production control center for computers, DAWs and dedicated HD recorders, including dynamic automation and moving faders.

The 328XD has a compact footprint and is suitable for small- to mid-sized professional studio setups, broadcast production stations, ad agencies, voiceover studios and jingle houses.

The console has an intuitive control surface. Functions are accessible through the mixer's "E-Strip," which can act as a horizontal channel strip, controlling EQ and aux sends or a dynamics control panel, or as level controls for the tape returns.

The console's features include gate and compressor/limiter on every channel, configurable direct outputs, two high-resolution Lexicon effects processors and status recall at power-up. Price: $4,995.

For information contact the company in Tennessee at (615) 360-0471 or visit www.soundcraft.com.

Web Store Now Open for VocALign

Synchro Arts Ltd., the developers of VocALign automatic audio alignment software and other pro audio software products, recently opened shop online at *www.synchroarts.com/store*.

The site provides access to a simplified order procedure and secure online payment in U.S. dollars, U.K. pounds and Euros. The site also accepts credit card payments.

Products include specs and background information. Free demo downloads are available.

The range of applications for VocALign include tightening up double tracking, backing vocals and instruments, modifying the time of one music track to match another, lip syncing, foreign dialogue replacement and multimedia applications.

Synchro Arts launched VocALign Project, a Digidesign Pro Tools-compatible software product at NAMM 2002.

VocALign Project is available at the Web store and features an editing tool for synchronizing two audio signals automatically at the touch of a button. The tool works by automatically "micro-editing" the new or replacement audio signal to align the timing of its modulations to match that of a guide signal.

For more information about VocALign and the online store contact Synchro Arts in Surry, U.K. at +44-20-8823-9100, fax +44-20-8823-9105, e-mail info@SynchroArts.com *or visit* www.synchroarts.com.

Correction

The Audion Labs VoxPro product evaluation that appeared in the Feb. 13 issue of Radio World (p. 35) contained conflicting information.

Audion Labs is indeed discontinuing its Mac version. The company is offering an upgrade path for legacy Mac customers, who can purchase the PC software only and use the control panels they bought for their Mac computers.

World Radio History

USER REPORT

Digigram, EuroNews Speak Languages

by Bruno Tézenas du Montcel
Chief Technical Officer
EuroNews

LYON, France EuroNews is Europe's leading television news channel, covering world news from a European perspective.

Our marketing theme: "Many voices. One vision," refers to the fact that each news story on EuroNews is broadcast simultaneously in English, French, German, Italian, Portuguese, Spanish and Russian.

In our newsroom, seven journalists write seven different stories, in their own languages, to the same picture. Our voices and vision reach 120 million homes in 76 countries in Europe, the Middle East, Africa, Asia, North and South America via cable, digital satellite and through terrestrial channels.

When we added Russian as our seventh language last year, we took that opportunity to overhaul the news voiceover recording system. No cost-effective, off-the-shelf solution was available, so we really had to go for our own in-house development.

A Newsroom at EuroNews

International track

We asked **Digigram** to help for two main reasons: We were familiar with the quality of Digigram sound cards, having used them in the previous system, and we expected the integration to be quite easy, as Digigram has constantly improved its development kit and the associated DLLs over the last years.

Within the Digigram range of products we decided on a combination of the miXart 8 soundcard and the PCXedit Digital Audio Editor. We felt that the miXart 8/PCXedit installation allowed us to build an open platform, which would not only cater to our present needs, but would also meet future requirements like integrating new functions.

It was important that the miXart 8 had Word Clock, LTC, AES/EBU and video synchronization capabilities. Finally, a single miXart 8's eight input/output paths could handle our seven languages plus the natural sound (which we call the "international track").

As for PCXedit, we liked that it came with an extensive development kit and features comprehensive editing and processing functions within the DLL. This was a top priority because of the very tight schedule we had: The work could only start by the end of June and we had to be on air by mid-September.

We completely redesigned the user interface and benefited from the editing engine. It provides accurate syncing capabilities, which are crucial to our application.

All told, we outfitted 16 PCs as workstations and four others as transfer stations. All had the miXart8/PCXedit combination with our own piece of software on top. They all worked in a network along with an EMC2 Clarion NAS driven by two (main and backup) database servers (PCs running a Linux version of SQL).

The workstations are located in soundproof booths, where our reporters record their commentaries. The resulting soundtracks are then stored in the audio database on the production system (NAS and servers). The eight inputs/outputs of the miXart 8 and its LTC input allow the transfer stations to play out all seven languages and natural sound synched to the corresponding video for recording onto the broadcasting servers.

We are already looking at software enhancements for the system, like storing the journalists' voices separately from the natural sound, allowing better quality control through remixes, or automating the insert of audio headers. It is really a plus when you can quickly develop an efficient tool which exactly suits your needs and allows simple evolution and enhancement.

For more information contact Digigram in Virginia at (703) 875-9100 or visit the company Web site at www.digigram.com.

USER REPORT

360's Short/cut Is Radio Magic

by The Greaseman
Syndicated Morning Show Host

POTOMAC, Md. As a morning show host, I rely on telephone calls to spur bits and audience interaction, but I'm going to let out a little secret: I prefer to have the calls prerecorded. That way I can launch into a story right after the call and make it look even more off the cuff than it really is.

In previous years, during the breaks and songs I'd roll tape and mark the calls I liked with bits of paper jammed in a 10-inch reel. Talk about a mess.

Once the call was recorded I'd be rewinding tapes, counting the flying bits of paper till I found the call I wanted. And saving calls for later use? Would never happen. I'd bulk the reel and start fresh the next day.

Salvation

Enter the **360 Systems** Short/cut personal audio editor. Salvation at last! A call comes in, and I simply hit the record button and I've got it. The keyboard on the Short/cut makes it easy to label, and I never forget what a little treasure I have. If the break is fading fast and I need to run with it right then, I hit "stop" twice and it's cued and ready to rip.

The beauty of it is, if I really like the call, I'll go back and label it with the time and the date it ran. Who says a killer bit that aired at 6:15 one morning can't run again to a different audience two weeks later at 9:45? It's a breeze to find the cut and pull it up again.

We boss jocks have been killing ourselves for too long! The Short/cut is blessed relief for "boss jock fatigue." Now that I work from the studio at my home, the "Grease Palace," if I get a wild hair in the evening, I'll check e-mail, and if someone needs to call me with a problem or a zesty story, I can lumber down to the studio, fire up the Short/cut, give 'em a call, edit out all the nonessential BS, and the next day I'm ready with a great bit ready to rip. Editing is as easy as spinning a wheel. The only time I use a razor these days is on my face.

The new software on the Short/cut 2000 is way faster then the old software, and I can't live without the new DSP gain-change and Crossfade features. If you don't have the new software, get the upgrade! I never have to wait for the Short/cut to catch up to me when I'm cranking on editing a fast phone call. It's there when I want it and I love not having to use "yet another PC with buggy software."

The DSP feature comes in handy when I get a caller on the phone who speaks too softly or forgets to talk into the phone.

See 360 SYSTEMS, page 32 ▶

The Grease at Work

World Radio History

USER REPORT

Roland VS-2480 Drives Imagination

by Jim Giberti
President
The Imagination Co.

Jim Giberti With a Roland Workstation

BETHEL, Vt. Since 1985, The Imagination Co. has provided award-winning creative and production services for radio and TV clients around the country.

Our main offices and production facilities are in a historic brownstone in downtown Bethel, Vt. Another full recording/video studio and offices are located five miles up the mountain on our 200-acre horse farm.

But don't let the rural location fool you; we have some of the most modern facilities in the business.

We ride the high-tech wave in every department: recording studios, film/video suites and graphic design. So when **Roland** introduced the VS-2480 Digital Studio Workstation last year, I jumped all over it. With digital audio recording, editing, mixing and effects processing in an intuitive system, the 2480 was a no-brainer.

First of all, I'm no stranger to Roland digital workstations. Back in 1996, when Roland introduced the first VS-880, I quickly pulled out the MDMs we had been using and put in a pair of VS-880s. When the VS-1680 came along a few years later, I added three.

On the farm

Soon after Roland announced the VS-2480, I was shipped one of the first available in the United States. The 2480 is now the cornerpiece of my farm studio. Another 2480 is on the way for the downtown facilities.

Now for the specifics. The VS-2480 is a complete digital recording, mixing, editing and production system. It provides 24 tracks of pristine digital audio, plus a fully automated digital mixer with motorized faders and studio-quality effects. It has a 30-GB hard drive and supports sample rates from 32 kHz to 96 kHz. The VS-2480 is loaded with inputs and outputs.

Of the 16 mic inputs, the first eight are XLR with switchable phantom power, and 9 to 16 are balanced TRS connectors. CD players or DAT machines connect via stereo digital inputs in both coax and optical formats. There are eight balanced TRS outputs, two stereo digital (coax and optical) and two stereo headphone jacks.

Setting up the VS-2480 in my studio took five minutes. Even with a flat screen monitor connected to the VGA output, a mouse (included), and an ASCII keyboard (optional), it has a small footprint.

But enough with the statistics. As a producer, what's most important is that the VS-2480 is incredibly easy to operate and sounds amazing. It's the easiest and fastest editor I've ever used, thanks to plenty of dedicated buttons like Cut, Copy, Move and Delete.

People who prefer computer-style editing will be just as happy with the VS-2480. Just grab the mouse, click, drag and cut using full-sized waveforms. Did I say I love this machine?

The 2480's automated mixer with motorized faders is worth the investment alone. I've got the analog inputs filled with sound modules and MIDI gear.

At one moment, I'll need to hear just those inputs. A second later, I'll need to hear my tracks. The VS-2480 stores 100 scenes per session. In a complex mix, when I need to change mixer settings 10 times a minute, a touch of a Scene button switches everything instantly. The VS-2480 moves as fast as I think, which is really fast after a cup of coffee.

The effects in the VS-2480 are impressive. It has two stereo effect processors built in, and room for six more by installing optional VS8F-2 Effects Cards.

You don't have to go outside this machine for anything. Each of the stereo effects has hundreds of presets (just about anything you can imagine) that you can tweak and save as your own custom effects. It's great to know you can simply press the Effect button and find whatever a session may call for, for as many tracks as you need.

The VS-2480 imports and exports WAV files. This is vital for how I work.

A typical session involves casting studios around the country, so the talent could be anywhere. I'll direct the session from my Vermont studio, with multiple talents reading copy over ISDN lines. The host studio coordinates it all and posts me a WAV file on its ftp site.

After the session ends, I'll take a few minutes to refill my coffee, maybe go outside and nuzzle a horse, then head to the FTP site, download my takes in an instant and import the files into the 2480 for post production. Simple.

I've been using Roland V-Studios to produce hundreds of projects over six years, and these systems are bulletproof. They can be ridden hard and put away wet (which we don't do to our horses!).

I've never (knock on wood) lost a single second of audio in a Roland system due to a crash or lockup. For a producer who moves daily between comedy spots, TV post and music composition, the Roland VS 2480 is the Holy Grail of digital workstations.

For more information contact Roland in California at (323) 890-3700 or visit the company Web site at www.rolandus.com.

USER REPORT

Wis. Public Radio Embraces SADiE

by Marv Nonn
Production Director
Wisconsin Public Radio

Marv Nonn and His SADiE Digital Audio Workstation

MADISON, Wis. What happens when a major public radio production facility, deep into high-quality analog recording, contemplates replacing its analog tape machines with digital audio workstations?

For a long time, nothing.

While we kept up on the latest developments in digital technology, budget limitations forced us to watch anxiously as our tape machines got older and older.

Classic

Dozens of Ampex 440s, nine Studer A810s, a pair of MCI/Sony JH-24s and dozens of channels of Dolby SR were used every day. What we wanted was the digital equivalent of what we had: a system that we could record on, edit within and use to generate a *digital* copy for broadcast and archival purposes.

Everything came together with the millennium. Hard drive costs dropped, CD burner technology became widely accepted and the **SADiE** Classic Digital Audio Workstation looked as good as ever.

We'd spotted it before and were impressed with what it could do, but were concerned about the cost and reliability of digital storage at the time. But the pressure to convert to DAWs grew and we decided it was time to take the plunge.

We brought in SADiE's Vice President of Marketing and New Business Development Jeff Giedt to demonstrate the Classic to some engineers, producers and editors. His audience ranged from people with their own DAWs to individuals who could only use e-mail, but were well-versed in analog tape production.

We were impressed with what the Classic could do, and it did everything it claimed. Among the features we liked were how intuitive the system was and its extensive editing capabilities.

Most impressive, it automatically saves everything. A SADiE rep demonstrated this by pulling the power while we were editing. When the computer came back up, the system asked if we wanted to restore the current EDLs. We continued as if nothing had happened. That feature alone sold us.

We ordered three Classic Systems and were on our way to conversion to DAWs. Within a year we bought 11 more RADiAs, the replacement for the Classic, and one 24/96, the eight in/eight out model. All our units have 9-GB hard drives, Plextor CD burners and 15-inch LCD monitors.

The next question was how to house the units.

Because 11 of them would be replacing Ampex 440s, why not use the Ampex consoles? We mounted the CPU on the power supply shelf, the keyboard and mouse where the transport had been and the monitor on the overbridge.

Using a power strip and a Benchmark headphone amp, we had a complete editing system with one power cord. We didn't want the CPUs in the control rooms, so those units have the mouse, keyboard and monitor on the carts with the CPUs in a central machine room.

Hard copy

We tried to maintain past procedures as much as possible. All the work from a control room is recorded to a SADiE and burned to CDR. This provides "hard copy" to the producer, similar to the reel of tape of old. It also provides immediate backup.

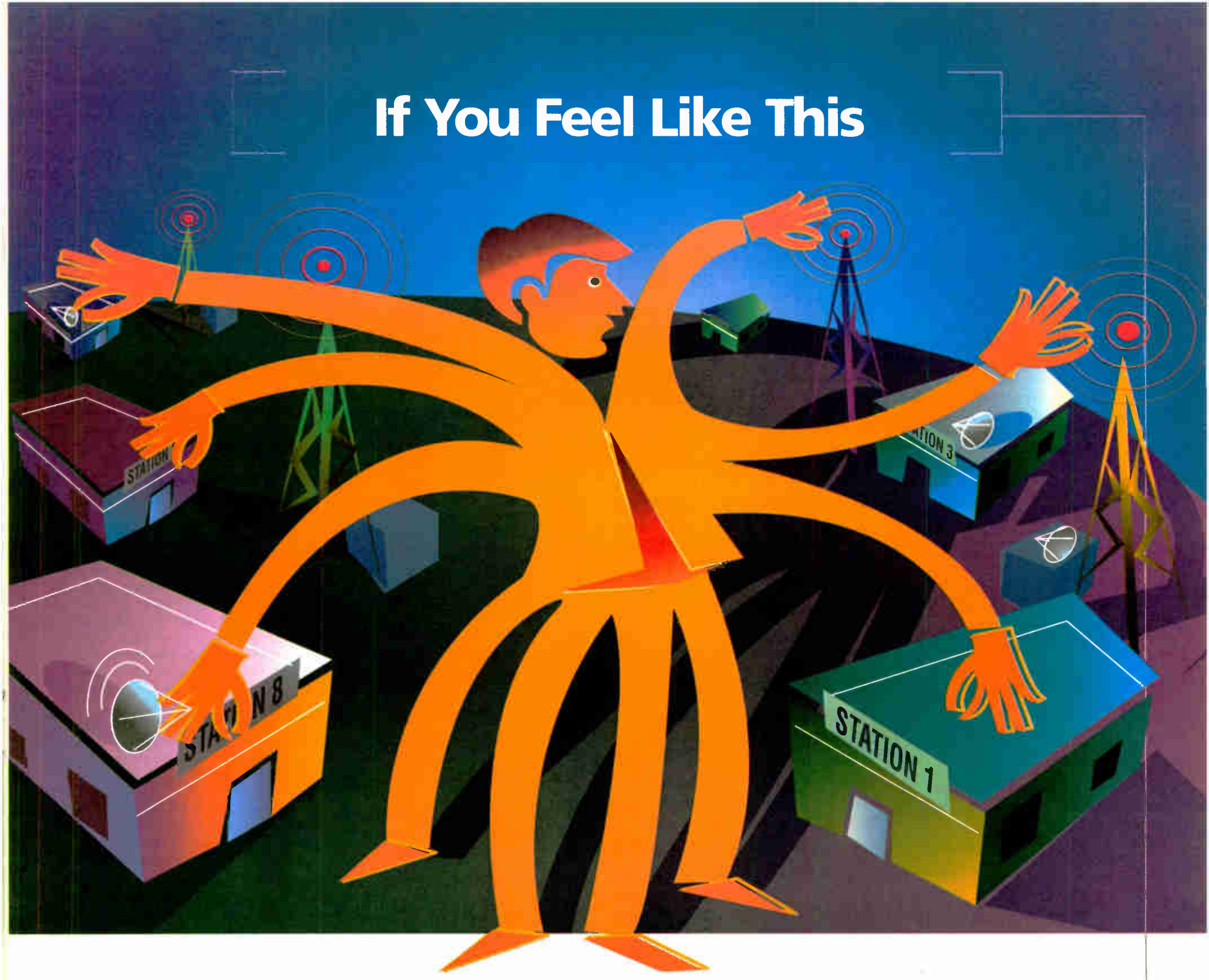
The producer and/or editor can load the CDR into a machine and edit or process at will. The completed project is burned to CDR for broadcast and archiving. An engineer burns the master CDRs.

I use nearly every capability of SADiE in the production of the show "To The Best Of Our Knowledge." Interviews are recorded in stereo and immediately burned to CDR. The program editor creates a project file for each program and loads all the interviews and production

See SADIE, page 32 ▶

World Radio History

If You Feel Like This



You Need This

Looks like you've got your hands full again. Except you're running out of hands. And because you have many facilities you could use a few more legs, too.

Let Harris' Intraplex STL PLUS™ give you a hand getting your new station up and running quickly and profitably or upgrading your station to the best quality digital on-air sound available today.

STL PLUS™ gives you bi-directional program audio transport over a T1 line, fiber or microwave link. So you can interconnect your studios, offices and transmitter sites. And because it's is a digital system, you're delivering pure, crystal clear sound – regardless of the distance. Even if you're surrounded by the highest mountains or tallest buildings.

Now for the PLUS in STL PLUS™: You can also transmit LAN/WAN data, telephone, intercom, and remote control over the same digital line. All of which can rack up some pretty impressive cost savings for your inter-facility communications.

Best of all, STL PLUS™ grows with you as no one else can. It has the industry's largest assortment of plug-in modules. So you can design the perfect system for today and quickly, easily, and affordably upgrade it for tomorrow.

So, contact your Harris representative about STL PLUS™ today. You'll be a leg up on the rest.

next level solutions

SERVICE

SYSTEMS

AUTOMATION

TRANSMISSION

www.broadcast.harris.com

HARRIS

World Radio History

360 Systems

▶ Continued from page 29

All I have to do is highlight the waveform in the screen and pump it up another 6 or 12 db to get the audio level in balance.

The best part is that I don't have read a 400-page manual or be a rocket scientist to use it. The Crossfade feature comes in handy when I want to edit background audio or recorded conversation because it eliminates that nasty "pop" where the audio is joined at the new splice.

It's great having those digital splices come out nice and smooth automatically so I don't have to worry about something sounding goofy. And the internal 12-hour storage in the new Short/cut holds way more than I need for the show, and 360 tells me I can upgrade my older Short/cut to the same storage.

I don't know a radio guy who doesn't need an "a** saver" from time to time … the record is fading, nothing is cued and disaster is a heartbeat away.

Clip, cut and fade

That's when I reach for the hot keys on my Short/cut. I know I have 10 bits, jingles, bumper music and whatever else I need to slam on as necessary. It's like having a board-op helping me, and man is it easy to use. I clip, I cut, I edit, I cross fade at lightning speed. The 2000 software makes all the difference. If a spaz like me can run that puppy, anyone can.

E-mail comes in from around the world, as my show is heard 24/7 on *www.Live365.com*. With the Short/cut it's such a breeze to edit out "Good evening" when the caller should be saying "Good morning." After 30 years on the air, I've learned that being relaxed and prepared is the key to a smooth-flowing show. With the Short/cut in my arsenal, I'm ready to rock at home or on the road. I just plug it in and I'm ready for action.

It's an investment I wish I'd made years ago. Call the show one morning at (866) 724-9338 and I'll edit you up one side and down the other. It's magic. It's my Short/cut.

The Greaseman is on WKMZ(FM) in Hagerstown, Md., WCDW(FM) in Binghamton, N.Y., WPHD(FM) in Elmira, N.Y., WBZV(AM) in Altoona, Pa., and WKHZ(AM) in Ocean City, Md., with more stations to come.

For more information contact 360 Systems in California at (818) 991-0360 or visit www.360systems.com.

Enter to win one of 26 great prizes in Radio World's reader appreciation contest giveaway!

Go to www.rwonline.com to participate in our first Readers' Choice Awards. Vote for the radio products that work well for you. The results will be announced in April.

VOTE TODAY!

2002 Radio World READERS' CHOICE Sweepstakes

Dear *Radio World* Reader: Last year, many of the greatest names in our industry teamed up with *Radio World* for a year-long sweepstakes extravaganza that resulted in almost $50,000 in prizes given away. Due to the overwhelming response from you, we've decided to do it all again in 2002 as a way of showing our appreciation to our loyal readers.

Throughout 2002, *Radio World* will conduct 26 random drawings. Prizes and winners will be announced in every issue of Radio World.

That's 26 chances to win!

To enter the contest you need to complete these three easy steps:

1. Go to our Web site: www.rwonline.com
2. Click the Readers' Choice icon on our home page.
3. Follow the instructions and fill out the electronic entry form —that's it, you're done!

This is your chance to participate in our Readers' Choice program and win great prizes from these fine *Radio World* supporters:

AETA AUDIO · AKG · ANTEX ELECTRONICS FOR THE SIGHTS AND SOUNDS OF THE WORLD · APT AUDIO PROCESSING TECHNOLOGY · AUDIOSCIENCE Sound Engineering Sonic Excellence · BROADCASTERS GENERAL STORE · Audio TX · audio-technica · BROADCAST BRADLEY · BSI · BSW BROADCAST SUPPLY WORLDWIDE · BURK TECHNOLOGY · COMREX · ERI · ESE · Fibox · GEPCO INTERNATIONAL, INC. · HENRY ENGINEERING · FIRST WE LISTEN · Lighthouse Digital · MACKIE · MediaTouch · RDL Radio Design Labs · S.C.M.S. · SONIFEX · YAMAHA

Contest Rules: To enter the drawing, simply register online at www.rwonline.com/sweeps. 26 drawings will be held throughout the year. Contest registration expires Dec. 4, 2002. Final contest prize announcement on Jan. 1, 2003. One prize per winner. All contestants MUST reside in the United States and have a valid mailing address. Winners should receive prizes within 30 days of notification; however, actual delivery time may vary and is not guaranteed by IMAS Publishing. Federal, state and local tax laws may apply to prizes and are the sole responsibility of the winner. Employees and affiliates of IMAS Publishing are not eligible.

SADiE

▶ Continued from page 30

elements into that file.

When mix time comes, the SADiE gear really shines. We mix in "real time," so we use the system as an insert machine that plays elements as needed through the console. We record the mix, preproduced elements and live host into the system using the "background recording" function. Afterward I create a new folder in the same project, make edits and burn the CDR. Really slick.

Concerns about exchanging files ended up being no big deal. Between removable hard drives containing entire projects and the ease of burning CDRs, we have abandoned any thoughts of networking the DAWs. As a direct replacement for the reel of tape, the CDR has eliminated any concerns about programs being lost on a hard drive.

I can't say enough good about the SADiE machines and support services. With 15 machines, we've had every problem that occurs on a computer-based system. In every case, SADiE service remedied the situation immediately. We've had one hard drive and two burners go bad under warranty, and they were promptly replaced.

The best part is that we made the conversion without user problems, major equipment problems and, most important, without losing a minute of recorded audio.

When I was a kid, my mom said that good things come to those who wait. We couldn't have waited any longer, and we couldn't have done any better.

For more information contact SADiE in Tennessee at (615) 327-1140 or visit www.sadie.com.

TECH UPDATE

IQS Closes; SAW Future Unclear

What happened to SAW?

Manufacturer **Innovative Quality Software**, which helped bring affordable audio production to many desktops in broadcasting, is no longer open for business.

"Due to the vastly changing dynamics of the Windows environment, in combination with many factors relating to other hardware/driver technology, SAWStudio is no longer a viable product for the generic PC, and therefore not available to the general public as a stand-alone piece of software," according to the IQS Web site.

However, the company said, SAW will continue to advance and be expanded, but be sold only as a customized turnkey package through approved system designers. It was unclear who or what would be leading that effort. Direct technical support for SAWStudio is unavailable, but Help files and sites are located on the Web. The company promised to contact registered users with information regarding a new update policy.

For more information visit www.sawstudio.com.

World Radio History

USER REPORT

AudioCube Restores Audio

by Roger Wolski
Vice President/Senior Producer
Radio Spirits Inc.

CHICAGO I felt that Cube-Tec's AudioCube was the best choice for audio restoration when I upgraded Radio Spirits' production studios in the early part of 2000.

The one question I didn't have the answer to at the time was, "How will this workstation affect productivity with our syndicated radio show production?"

In addition to being the largest distributor of old-time radio on cassettes and CDs, Radio Spirits features these programs from radio's past on four nationally syndicated radio shows: "When Radio Was," "Radio Movie Classics," "Radio Superheroes" and "The Radio Theatre."

Could this powerful workstation enhance our broadcast production as well? Here's what we found.

Cleans interviews

What the AudioCube primarily is known for is its exceptional processing tools when it comes to restoring damaged audio. It has what are called Virtual Precision Instruments that are used in conjunction with Steinberg's WaveLab editor.

The traditional use of VPIs such as DeHiss, DeHum and DeClipper are to correct the problems suggested by their names. However, they can be used in broadcast production situations as well.

If you have an interview that was recorded out in the field, for example, that has unwanted background noise, Spectral DeHiss and DeMotorizer are great tools for "learning" the background noise and giving you control over lowering or removing it from the intended audio element.

Voiceovers benefit from the Loudness Maximizer, an excellent compressor that sounds transparent. The DeEsser, one of the best I have ever heard, is very accurate at addressing sibilance without affecting surrounding material.

These VPIs work in real time due to the NT platform and dual CPUs. You can chain six processors together and hear your results instantly. Each of the VPIs has an Audition feature that allows you to hear what's been removed, making the right settings easy to find. But processing audio is not the only intuitive aspect to using the AudioCube.

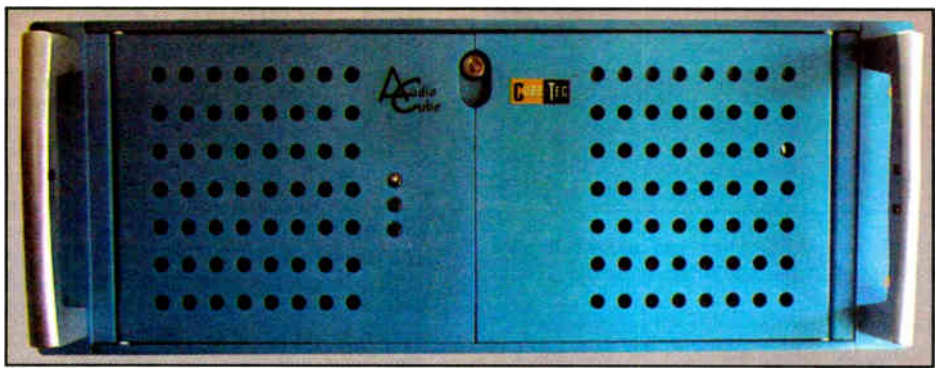
As mentioned earlier, the AudioCube's VPIs are the processing muscle used with Steinberg's WaveLab editor. WaveLab is a very straightforward editor. What impressed me most with using WaveLab is that everything is accessible from one window called a Montage. You assemble all your elements in a multitrack setup, accessing them through the "Files" tab in the Montage. Simply drag and drop your elements to their respective tracks.

Editing is nondestructive, with multiple levels of undo and redo. Fade, level and panning adjustments are at your fingertips. This makes production much faster by not having to open other windows to make your changes. Once your production is finished, you can insert start and end track IDs and burn it right to CD.

One other area that streamlines the workflow is that the windows and keystrokes can be user-defined. This was important to us.

There are six engineers using the workstations. All were more productive when the screen layouts and key commands were organized in a way that made sense to them. Each workstation has two to three custom appearances to accommodate the particular engineer using the workstation. Individually, the AudioCube is a fast and powerful tool, but collectively, productivity was further accelerated.

Another time-saving feature is the networking capabilities. File sharing is accomplished through a standard Ethernet 10/100 Mbit card. This allows the engineers to grab elements common to all the shows, such as commercials, from a central hard drive without having to copy the sound files to an individual workstation. Networking offers other options such as processing remote sound files as well as burning CDs of montages located on other workstations.



If you passed on Cube-Tec's AudioCube, thinking it was only for mastering or audio restoration purposes, I recommend you give it a second look. I knew this workstation could handle the audio restoration side of our business, but was surprised at how much it increased productivity within our broadcast production.

If you are in the market for a workstation for broadcast production that provides powerful processing coupled with an easy-to-use editor, Cube-Tec's AudioCube may be the answer you're looking for.

For more information contact Cube-Tec in Ontario at (905) 469-8080 or visit www.cube-tec.com.

SPECIAL REPORT

Mediatron Works in Singapore

by Daniela Back
Marketing Executive
Daxco Pte. Ltd.

SINGAPORE David Smith works as a free-lance correspondent in Singapore and reports for numerous news agencies, public radio stations and Internet radio stations on economic events and news from Southeast Asian.

Smith supplies his customers with approximately 10 audio news bits daily. Fulfilling the demand for news requires that a correspondent be quick and efficient.

Until recently, Smith carried out daily productions using a small audio studio, fast Internet access, a notebook computer and a fax. He installed this small studio years ago and equipped it with a mixing console, an MD recorder, a Logic Audio System workstation with Cool Edit editing software and an ISDN audio codec.

When he decided that Cool Edit and Logic were not really suited for working, editing and sending news, he began to search for a different system.

Windows-friendly

Daxco Digital, Mediatron's dealer in his region, offered him a NewsEdit NT Journalist Audio System with content management, archive and research functions for a practical test.

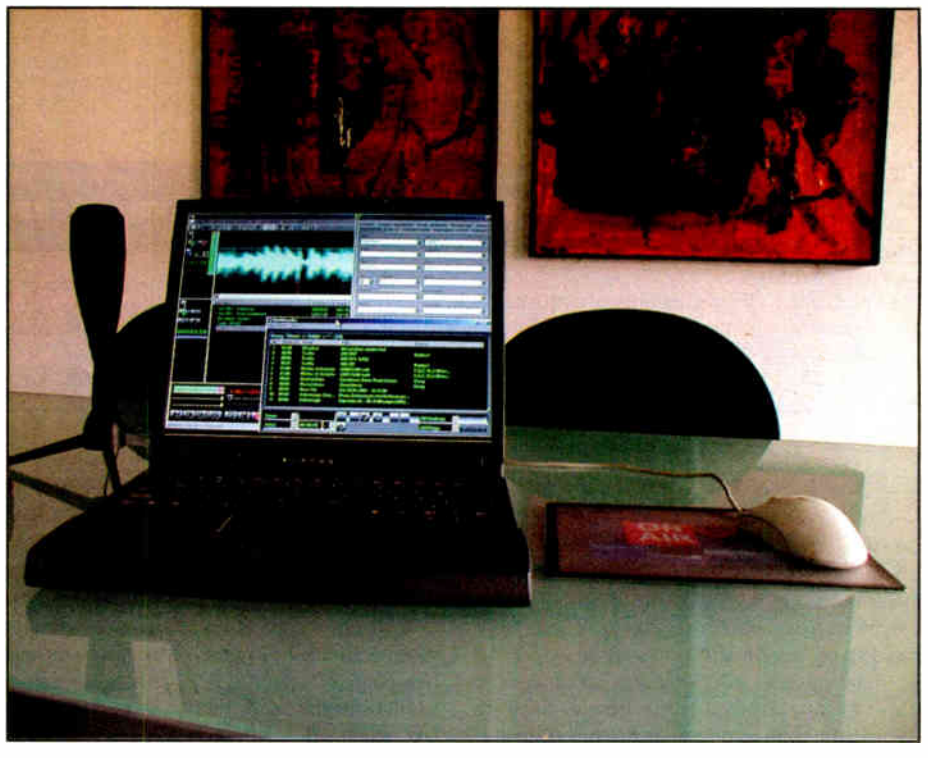
NewsEdit NT is an integrated system with a database and browser for finding files, a database manager and an archive system. The system works on a standard Windows PC with a soundcard.

Apart from the audio editor with its clipboard, which is easy to use and nondestructive, an important feature is the integrated content management system. Various audio news files can be fixed with metadata and filed in categories, manipulated and recalled again later easily.

The system supports the other audio formats necessary in Smith's line of work. Besides WAV, MPEG-1 and -2 are available in mono and stereo with professional bit and sampling frequency rates, as well as the Broadcast Wave Standard BWF, an ISO standard designed by EBU and AES to exchange digital audio files among different manufacturers.

Smith learned to use NewsEdit NT in about an hour. After a week he said he was carrying out his correspondent's work faster, more easily and more professionally. Filing and administration required less work and the search function worked in seconds.

Apart from standard search areas such as the title and author of a piece, more search criteria are available. Combined with simple metadata, it can work with additional formats, such as Microsoft Word/Excel, RTF, HTML documents and Acrobat Reader Files.



With the help of keywords, multimedia objects like short MPEG films and photographs of an interview can be recalled. Text and data can be joined with audio data and sent with a few mouse clicks.

After three weeks, Smith wanted the NewsEdit NT installed on his laptop computer. The notebook was equipped with a PCMCIA soundcard from Digigram. Using the soundcard, the notebook could be connected with a microphone so high-quality recordings could be produced.

Afterward, he took the system to every press conference he attended. Audio can be ported directly into the system and edited. For particularly urgent news it's possible to send audio files directly from a press conference, creating an almost live capability via e-mail or FTP. Now Smith says he can't work without it.

Backup

For transferring recorded news quickly and easily from a laptop to a stationary PC, NewEdit NT also has a backup function that allows productions to be transferred with matching data via LAN or ZIP drive.

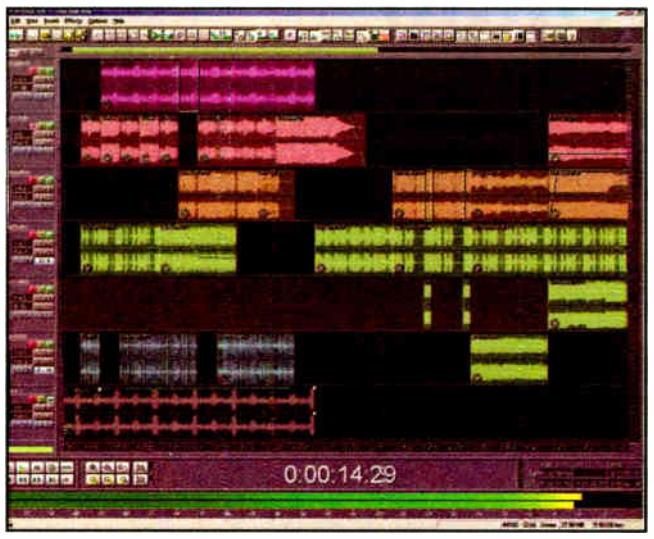
Considering the price and performance ratio and comparing them with other content management systems, it was easy for Smith to decide on the Mediatron tool that made his work faster, less complicated and more efficient.

For more information contact Mediatron in Germany at 011-49-8131-83050 or visit www.mediatron.com.

World Radio History

TECH UPDATES

Cool Edit Pro Makes Major Upgrade



According to **Syntrillium Software**, Cool Edit Pro 2.0 digital editing/mixing software recently went through its most significant upgrade in the product's five-year history.

Cool Edit Pro 2.0 has new features for PC users such as real-time effects and track EQ, disk-at-once CD burning, MIDI and video playback support, MTC master generation, six new DSP effects, loop-based music composition and a compressed loop file format.

To Syntrillium, major important improvements are the real-time effects and EQ. Users can add 40 supplied DSP or third-party DirectX effects as well as EQ on the fly, instead of applying the settings once the recording process is complete.

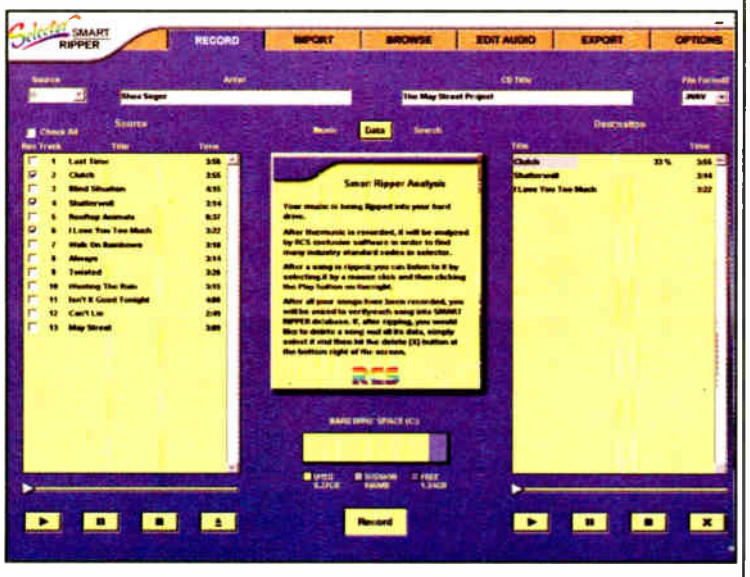
Syntrillium also publishes the Cool Edit 2000 audio recording and editing software, part of the Cool Edit line of products for desktop audio, publishing audio on the Web and CD mastering. Syntillium touts the software as designed to be user-friendly, stable and within the price range of studio professionals and hobbyists alike.

For more information contact Syntrillium in Arizona at (888) 941-7160 or visit www.syntrillium.com.

RCS Software 'Selectorizes' Audio

The Selector Smart Ripper from **RCS** takes CD audio and rips it, analyzes it, then "Selectorizes" it.

The software can read an audio file and determine the song's tempo, energy, texture, beats per minute, what key the song begins and ends in and whether the ending is fade or cold.



Users can employ the Smart Ripper to edit songs to create different versions or overwrite the original file. New versions can be reanalyzed with one click. Songs can be imported from other sources and analyzed and added into Smart Ripper. This includes CD audio and WAV files. Songs can be exported into multiple Smart Ripper databases with one click.

Operators can use the software to set standards for a station or group. Smart Ripper also includes the new RCS Editor.

For more information contact RCS at (914) 428-4600 or e-mail info@rcsworks.com.

Yamaha Adds Waves Card to DAWs

The Professional Audio division of **Yamaha Corp. of America** is upgrading its AW4416 and AW2816 professional audio workstations with the Waves Y56K DSP add-in processor card.

The card is a development of Yamaha and Waves Inc., and is a hardware and software solution that expands the workstations' recording, mixing and mastering capabilities. It eliminates the need for rackmount or computer-based processing.

The Y56K inserts into a Mini-YGDAI slot on the rear panel of the workstations and uses two 120 MIPS Motorola 56K DSPs. Audio processing is supported with 48-bit internal precision on a 24-bit I/O.

The Y56K includes ADAT Lightpipe fiber-optic digital input/output in Master or Slave Mode, control software and six Waves audio processors: TrueVerb, SuperTap Delay, L1-Ultramaximizer, Renaissance Compressor, Renaissance EQ and DeEsser.

The card supports eight chains of effects, which can be set to mono or stereo pair and independently configured to process audio to or from the workstation or the Lightpipe I/O. Each effect chain supports five effect functions, and each function's order is individually controllable. Effects chains and processor settings may be saved, loaded and accessed using the snapshot automation of the workstation.

Version 2 software is required for operation with the AW4416. Current owners are eligible to receive the upgrade by mail and can register at the Yamaha Web site.

For more information contact Yamaha Professional Audio in California at (714) 522-9011 or visit www.yamaha.com/proaudio.

Tascam Releases SX-1 Workstation

Tascam seeks to provide an all-in-one solution for professional-quality music and post production with its SX-1 Digital Production Environment workstation.

This is touted as a system for editors who want high-end DAW-style recording and editing, but without a dedicated computer.

The workstation combines automated digital mixing, hard-disk recording, MIDI sequencing, DSP plug-in technology and multiformat mixing capabilities. It is suited to professional project studios, commercial recording facilities and broadcast production.

The SX-1 has 40 inputs in a 32 x 8 x 8 digital mixing console with 100-mm, touch-sensitive faders, automation and a 16-track hard-disk recorder. It records at 48 kHz/24 bits (with future 96-kHz support planned) and uses an internal IDE disk drive.

Additional SCSI drives can be connected via a front-panel slot or rear-panel SCSI interface.

Interfacing features include: 16 XLR and 1/4-inch TRS line inputs, inserts on each analog input, an onboard speaker switcher, eight channels of ADAT Optical, two stereo S/PDIF connections, wordclock In/Out/Thru, Video In/Thru, LTC In, two MIDI inputs, four MIDI outputs, an UltraWide SCSI port, two USB ports, a 100-Mbit Ethernet jack for FTP capabilities and separate studio and control room monitoring.

Expansion slots are available for additional channels of digital I/O (AES/EBU, TDIF, ADAT Optical) or analog I/O. Other features include an onboard LCD screen, an XVGA output, MP3 authoring capabilities and a jog/shuttle wheel for scrubbing audio and MIDI data simultaneously.

The unit can be cascaded with DM-24 Digital Mixing Consoles for additional input channels and interfaces.

For more information contact Tascam in California at (323) 726-0303 or visit www.tascam.com.

Cakewalk Upgrades SONAR System

Cakewalk recently released version 1.3.1 of its SONAR digital multitrack recording system. The upgrade provides editing and mixing enhancements, and is free for registered customers.

SONAR uses Windows technology for recording, editing and mixing digital audio and MIDI projects on a PC.

Microsoft's WDM audio driver technology provides low-latency, kernel-level audio mixing, live effects processing with monitoring on input and low-latency DXi software synth playback.

Features include unlimited digital audio and MIDI tracks, a centralized interface design for improved workflow, audio looping and editing tools, DXi synthesizer plug-ins, automatable DirectX 8 audio plug-ins, real-time MIDI FX plug-ins and ACID-format audio loops and SoundFont libraries. New DXi and Direct X 8 plug-ins are available separately.

Among its new editing options are Audio Scaling, which allows users to zoom in on quiet audio to make detailed edits without changing the track heights; Extract Timing, for extracting the timing from audio to create tempo maps that enable the seamless locking of audio clips and MIDI data with live-recorded tracks; and a Scissors Tool for the Track view, which allows users to split audio and MIDI clips on the fly.

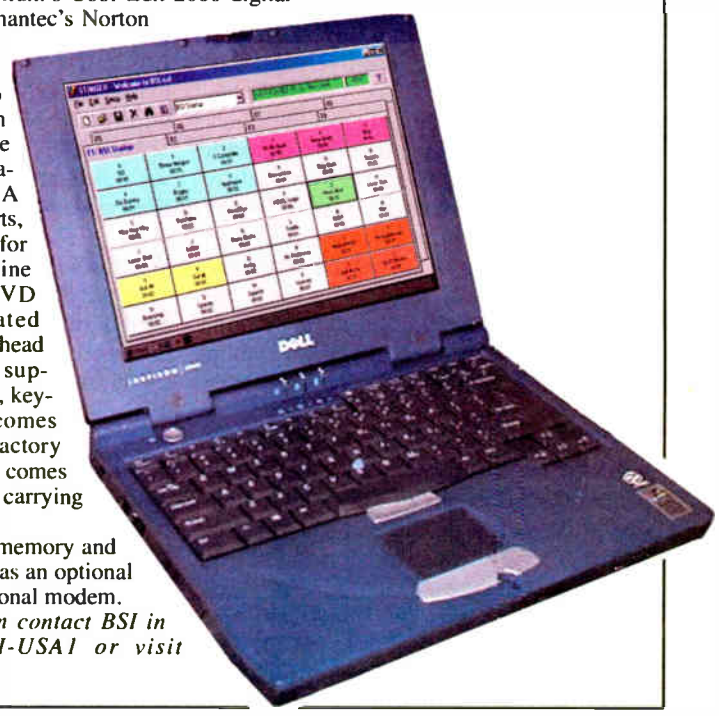
New mixing features include an Offset Gain Stage that allows users to adjust a mix without editing the automation, smoother mixing via envelopes that eliminates gapping or pausing for mix adjustments and fade tool enhancements that gives users more flexibility in deciding what type of fade curve to apply to audio clips.

For more information contact Cakewalk in Massachusetts at (888) CAKEWALK or visit www.cakewalk.com.

BSI Offers Laptop Workstation

The **Broadcast Software International** FieldStation is a portable audio workstation intended for live use. BSI uses a Dell Inspiron Laptop with a 1-GHz Intel Pentium III processor. The laptop comes with 128 MB RAM, a 20-GB hard drive and a lithium ion battery.

The workstation uses a Windows 2000 platform and comes with three BSI programs: the WaveCart digital cart machine, Stinger instant audio and Speedy CD-to-PC dubbing. Other software includes Syntrillium's Cool Edit 2000 digital editing software and Symantec's Norton Anti-Virus.



Stereo audio is standard, with the option to upgrade to a Digigram Pocket series card for the laptop. Other laptop features are the dual PCMIA slots, serial and LPT ports, a USB port, connections for an external mic and a line output, fast CD or DVD ROM drive, integrated mouse pad and an eraserhead pointer. The computer supports an external monitor, keyboard and mouse and comes with a three-year Dell factory warranty. The laptop also comes with a dual-compartment carrying case for portability.

BSI offers additional memory and hard drive space, as well as an optional Ethernet card and an optional modem.

For more information contact BSI in Oregon at (888) BSI-USA1 or visit www.bsiusa.com.

World Radio History

Smooth.
Fast.
Easy.

That is what people are saying about the new phone gear from Telos.

Smooth audio, thanks to hybrid enhancements for clear, consistent calls — even cellular phones sound better. ISDN option for pure digital connection to the Telco network.

Fast operation and fewer errors due to the intuitive Status Symbol icons and LCD displays on the new Desktop Directors.

Easy show production, with the Assistant Producer PC software giving you flexible screening and control capabilities over any IP network via the standard Ethernet port.

Telos

www.telos-systems.com

TWO x 12, Status Symbols, Telos and the Telos logo are registered trademarks of TLS Corporation. Copyright 2001, TLS Corp.

World Radio History

TECH UPDATE

D.A.V.I.D. Offers Editor

D.A.V.I.D.'s EasyTrack Editor is a software tool for the production and editing of audio takes in the DigaSystem environment.

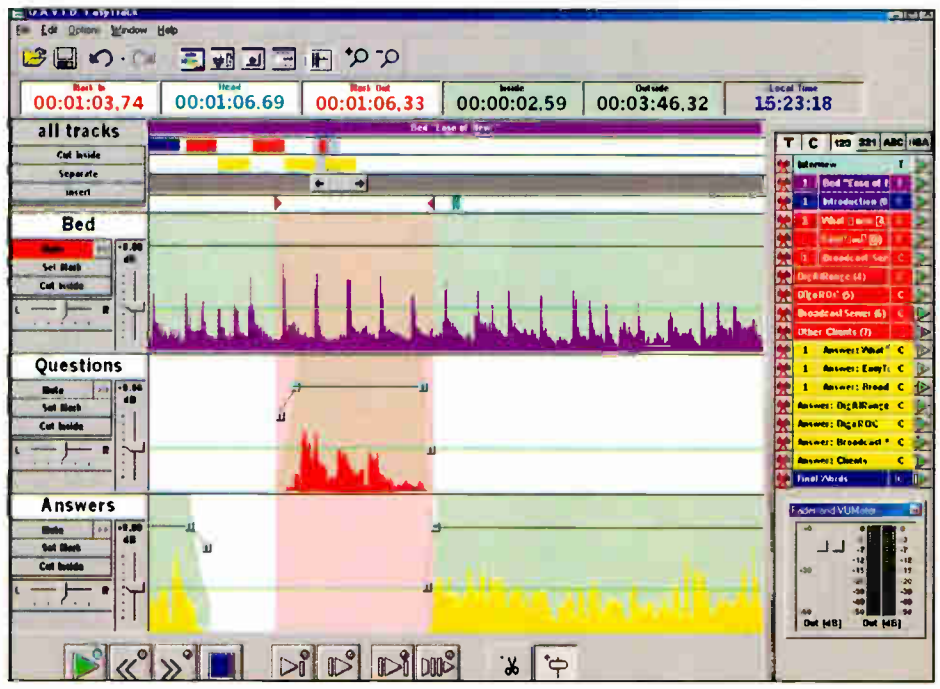
It allows recording and editing of audio takes on three tracks, providing a midlevel tool between the company's Edigas (single-track) and Multitrack Editor.

The company says one of EasyTrack's best features is its usefulness when a quick turnaround is necessary, such as in the production of an interview with a music bed. With EasyTrack, comments and notes can be added to new recordings or existing entries via an integrated RTF-Editor. The editor is compatible with DigaSystem applications and supports PCX and multimedia cards. Its format converter allows the manipulation of multiple audio formats. An optional Reporter Box enables lifelike production of contributions consisting of preproduced and original audio without a conventional studio.

The editor GUI is grouped into four working areas: the EasyTrack Page, the One-Track Page, the Recorder Page and the Reporter Box. Each page is designed to handle specific tasks, displaying only those functions essential to the current production stage.

Transport control buttons and a level slider and meter section are available throughout the system, as well as the multiformat clipboard, which is capable of storing audio and RTF text clips at the same time.

For more information contact D.A.V.I.D. in Virginia at (540) 341-8550 or visit the company Web site at www.digasystem.com.



Products & Services SHOWCASE

ERI ELECTRONICS RESEARCH, INC.

SHPX Series FM Antenna

For single or multiple frequencies
15 Mhz diplex bandwidth
120 kw input power rating

Accept No Imitations!

www.ERIinc.com 812-925-6000

RAPIDFIRE

the most reliable digital automation system

Save over $10K

- New Windows Programs & Utilities
- Powerful and reliable software at prices YOU can afford
- A fully featured system including on-air, production, and music scheduling software
- Live! Product Support 24/7
- Complete integration with all traffic and music schedulers
- Add last-minute spots and reconcile them for billing
- Record & edit phone bits
- Record & time-shift audio programs
- LAN & WAN compatible
- Se habla español

www.pristinesys.com 1-866-240-6497

DON'T FIGHT IT...

JUST BUY IT!

Pristine Systems

NAB BOOTH #L3255

NANOAMP SERIES™ Problem Solvers
MIKE, LINE, SUMMING AND DISTRIBUTION AMPLIFIERS

Compact • Low Noise & Distortion • Servo Balanced Outputs @22dBm • Field or Studio Use • Desk or Rack Mount Kits.

SUM100 Stereo to Mono Summing Amplifier
L200 Two Channel Line Buffer & Isolation Amplifier
ML200 Two Channel Microphone to Line Driver
DA103 Line Input to Three Isolated & Protected Balanced Line Outputs
DMA103 Microphone XLR Input to Three Isolated XLR Balanced Outputs

Free Brochure Available Upon Request

ATI AUDIO TECHNOLOGIES INCORPORATED

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

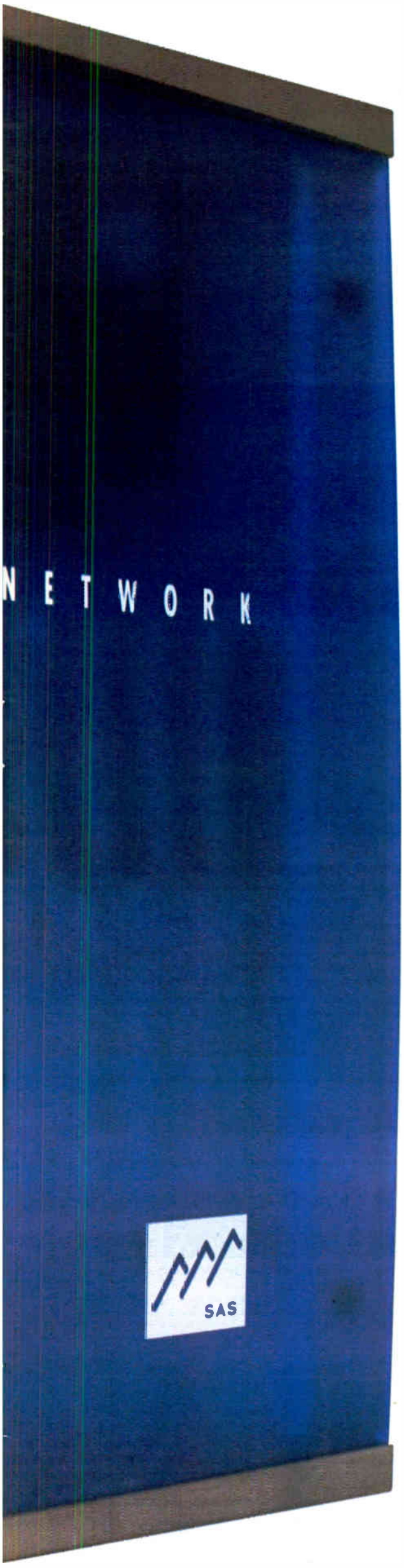
May we present...

YOUR AD

RADIO WORLD'S
Products and Services Showcase provides a perfect medium for marketing your products and services.

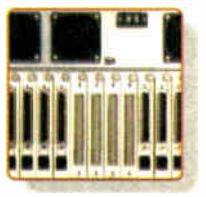
For more information, contact your sales representative or Simone at
703-998-7600, ext. 154
to request a media kit.

World Radio History



Rhapsody in Blue.

- **Digital Core Routing System**
- **Scalable Up to 4,096 Channels**
- **Digital & Analog 24 Bit I/O**
- **Mix Multiple Inputs to Any Output**
- **IFB-Talk to Remotes**
- **Integrated Intercom Functions**



Introducing the new 32KD Digital Audio Network from Sierra Automated Systems.

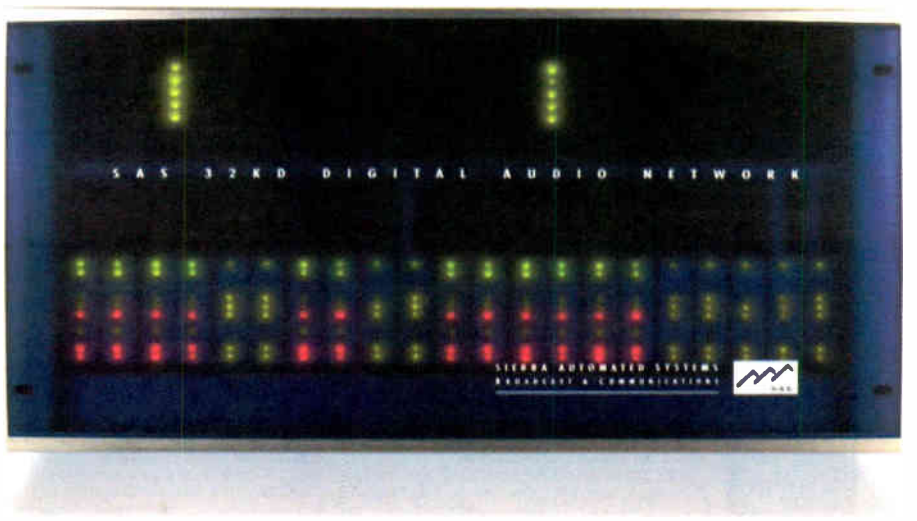
This modular, digital-core routing system processes more audio, routes more signals, and provides more user control than any other system in its class.

Routing, mixing, signal processing, IFB, mix-minus, and more, run simultaneously without conflict. All this functionality is readily accessible via PC, mixing boards, or dedicated control panels. And the performance? Like music to your ears.

27

For more details about the impressive capabilities of the 32KD, give us a call or visit our web site.

SAS. Doing more for radio. Again.



SIERRA AUTOMATED SYSTEMS

818-840-6749
sasaudio.com

See us at NAB2002 Booth #L1714

World Radio History

Products & Services SHOWCASE

SIX MILLION THUNDERSTORMS HIT PLANET EARTH EVERY YEAR! IT TAKES ONLY ONE TO PUT YOU OFF THE AIR!

STATI-CAT

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.

This affordable and rugged system has proven itself in the field for over 15 years.

Cortana Corporation Inc.

Write or call for a free brochure and design
P.O. Box 2548, Farmington, N.M. 87499-2548
Toll Free Ph: 888-325-5336 • Fax: 505-326-2337

NEW

PATCH ME IN!

Feed your mixer to a bunch of stuff with **PATCHBOX!**

PATCHBOX is a "passive DA" that gives you 11 stereo outputs! 5 balanced and 6 unbalanced outputs can feed DATs, sound cards, tape decks, efx loops, VCRs, dub racks. XLR, 1/4", and RCA outputs can all be used without interaction or signal degradation.

only $195!

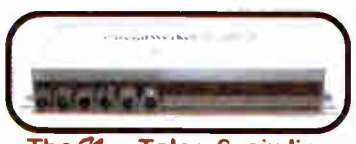
IN STOCK at all Henry Engineering dealers.

For detailed info, visit www.henryeng.com
Tel: 626.355.3656 Fax: 626.355.0077

Telephone Solutions by CircuitWerkes

The HC-3 hybrid telephone autocoupler

The HC-3 is ideal for many tasks like listen & concert lines, remote broadcasting, IFB interfaces, & More.



The *New* Telco-6, six line, incoming, ring detector

Is someone calling? Find out with the new Telco-6! The telco-6 detects telephone ring signals from one to six lines and provides a dry relay output for each line.

More Features. Better Price.

CP-1 & CP-2 call progress decoders

Did you ever connect a telephone coupler to a phone line or PBX only to discover that it won't hang up? CircuitWerkes' call progress decoders can save the day on most systems. They listen for dial-tone or busy signals and, when present, force your couplers offline.

The AC-12 telco autocoupler bank

Get up to a dozen, full featured, telephone autocouplers in just 5.25" of rack space. The coupler bay features a common power supply and two audio busses for easy mass feeds. Individual couplers can be used for sending or receiving seperately from the rest - perfect for IFBs. Newly updated design improves audio performance and overall reliability to a new standard of excellence!

CircuitWerkes - (352) 335-6555 Fax 380-0230 http: www.circuitwerkes.com 2805 NW 6th Street, Gainesville, FL 32609

RAMSEY

The Complete Radio Station... IN A BOX!

Everything you need to get on the air FAST!

- ✔ 35 watt FM stereo transmitter
- ✔ Integrated CD player
- ✔ Integrated cassette player
- ✔ Integrated audio mixer
- ✔ Professional microphone and cables
- ✔ Omnidirectional antenna and coax
- ✔ Installed and prewired in a high impact road case!

ONLY $3795.00

One of the most requested FM broadcast products over the past year has been a "radio station in a box". Overseas customers, as well as some of the new LPFM licensees have a need to quickly "get on the air" at temporary locations or in the interim to their installed studio/transmitter setup. A number of overseas customers also had to originate short term programming from various remote origination sites for disaster preparedness broadcasts! Well, here you go...a radio station in a box!

RAMSEY ELECTRONICS, INC.
793 Canning Parkway • Victor, NY 14564
(800) 446-2295 • (585) 924-4560
www.highpowerfm.com fmsales@ramseyelectronics.com

BROADCASTtools, INC.

Satellitetools

BROADCAST tools™ INC.

Innovative Problem Solving Tools for Broadcast

PSC-II Programmable Schedule Controller
With 512 events intended for controlling up to two RS-232/RS-422 serial devices; 16 - SPDT relays; auxiliary serial ports and relays all in a single rack space. The PSCII controls functions by either scheduled time and date, time and day of week, serial port commands and remote input contact closures.

DSC-32/64 Satellite Channel Controller
The DSC-32/64 allows complete remote control of two StarGuide II/III, Wegener Unity 4000 or ComStream receivers. An encoder control with a 16 x 2 LCD display provides local control and program descriptions, while external control may be in the form of serial or 64 contact closures. Custom programming is accomplished with a non-dedicated computer.

SDD-8 Serial Data Director
The SDD-8 is a Serial Data Director, with one master RS232 port, and 8 – RS232 target ports that can be selected under software control, from a host computer, or other serial device. The function of the unit is very similar to a mechanical port selection switch (A, B, C, etc.)

DSC-20 Dual Satellite Controller
The DSC-20 adds remote control capability to two StarGuide II/III, Wegener Unity 4000 or ComStream receivers, allowing complete control of receiver functions by serial or contact closures. Customized programming is accomplished with a non-dedicated computer.

COA-37 Connect O' Adapter 37
The Connect O' Adapter 37 provides an effective way to convert the DB-37 connector to removable screw terminals. The COA-37 is designed to plug into the male 37-pin D-Sub connector on any StarGuide II or III Relay Module.

COA-15 Connect O' Adapter 15
The Connect O' Adapter 15 provides an effective way to convert the DB-15 connector to removable screw terminals. The COA-15 is designed to plug into the male 15-pin D-Sub connector on any StarGuide II or III Audio Module.

COP Connect O' Pad
The Connect O' Pad, (COP), provides an effective way to connect and adjust the audio outputs on your StarGuide II and III receiver. The COP is equipped with an eight-position removable screw terminal for connection to the balanced left, right, monaural outputs, audio and chassis ground.

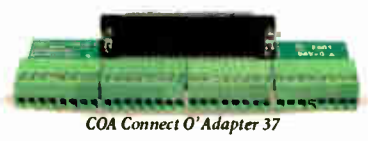
USC-16/SG Upgrade
The USC-16/SG is a firmware upgrade for the USC-16, Universal Satellite Channel Controller. The USC-16/SG is field programmable to switch all functions on StarGuide II / III or other satellite receivers.

PSC-II

DSC-32/64

SDD-8

DSC-20



COA Connect O'Adapter 37

COA Connect O'Adapter 15

COP Connect O'Pad

Check out our web site for product information, list pricing, and distributor locations!
web: www.broadcastools.com • email: support@broadcastools.com • phn: 360.854.9559

Designed by broadcast engineers for broadcasters, our controlers and connectors give you the functionality you need for your satellite system. Choose the model that best fits your application.

World Radio History

TECH UPDATES

DAL's CardDeluxe Links to Editors

Digital Audio Labs' flagship soundcard, the CardDeluxe, offers audio editing features besides its normal functions as a high-fidelity, dedicated playback and recording card for PCs.

The soundcard can be used as the hardware side of a hardware-software editing system.

The CardDeluxe interfaces with most editing software. It can work with audio editors through 96 kHz and 24 bits, and has the ability to mix and monitor any input or output to any of its outputs via the software Monitor tab of its driver.

The monitor utility is useful when audio is being edited for two destinations. For example, audio can be sent to a digital device (DAT machine) while the user monitors the analog outputs. Monitor latency is small (approximately 1 ms at 24/96).

The card uses a PCI interface and a pair of 24-bit/96-kHz balanced analog I/Os and an S/PDIF digital I/O. An AES/EBU plus optical digital interface adapter is available optionally. It supports 11.025- to 96-kHz sample rates.

Multiple CardDeluxes can be synched with a 20-pin ribbon cable for multichannel requirements. With the WavSync feature, multiple cards can be configured to act as one device, with sample-accurate starting and stopping of multiple channels.

For more information contact Digital Audio Labs in Minnesota at (763) 559-9098 or visit www.digitalaudio.com.

Mackie Upgrades Soundscape 32 DAW

Mackie Designs Inc. recently assumed marketing, support and distribution activities for Soundscape products and is releasing a new version of the Soundscape digital audio workstation.

The product line has two components: the Soundscape 32 Embedded Hard Disk Recorder and the I/O 896 Audio Interface module.

The products are the first piece of the new Mackie Broadcast Professional family, designed for high-end broadcast and post-production facilities.

The workstation is available in 32-track or 16-track versions and provides tools and features common to DAWs, but doesn't use a native (motherboard-based) record engine. Instead, the workstation has a dedicated microprocessor board and an embedded record engine.

Audio travels straight from the I/O to the hard disk, unaffected by possible instability in a PC motherboard or operating system.

The DAW has digital and analog audio I/Os, real-time mixing through a user-defined environment, DSP-based effects, an automation package, professional synchronization support and Edit Decision List compatibility with a variety of video editing systems. It supports popular plug-ins.

The I/O 896 Audio Interface module is an I/O box that includes eight channels of AES/EBU digital I/O, eight channels of analog I/O and eight channels of ADAT optical. It supports MADI.

The workstation's software features enable customized mixing, surround applications, editing functions, DSP, multiple undo/redo, video editor file support, audio file import/export and CD burning and has a flexible dynamics package.

For more information contact Mackie in Washington state at (800) 258-6883 or visit www.mackie.com.

Tascam Improves US-428 Controller

Tascam upgraded the capabilities of its US-248 digital audio workstation controller with the release of Version 3 software and functional improvements.

Major additions include higher compatibility with Windows operating systems, control of virtual synthesizers, compatibility with Tascam's GigaStudio sampling software and a chromatic tuner. The Version 3 driver includes Steinberg's Cubasis VST audio recording/MIDI sequencing software for PCs and Macs.

According to the company, the US-428 combines a hardware interface with computer functionality; it interfaces with computers via a USB port. The controller does not require an additional interface card, and is compatible with applications that accept standard MIDI controller messages.

Users control software tracks through eight hardware faders. The unit's control surface also supports transport, EQ and control functions for sequencers and DAWs. Four simultaneous analog inputs of 16- or 24-bit resolution at 44.1 or 48 kHz are supported. The controller also has a two-channel digital input and a 32-channel MIDI interface. Two audio output channels support stereo or mono at the same resolution and sample rates as the inputs.

The controller is compatible with a variety of audio software applications and can work with sampling applications.

For more information contact Tascam in California at (323) 726-0303 or visit www.tascam.com.

NOW, a digital exciter that does what all digital exciters should do.

The new FXi 60 digital FM exciter from Broadcast Electronics is the first exciter to offer all of the following in a single package, and all of it as standard equipment:

- Direct to channel digital synthesis
- Accepts all of the following inputs:
  - Composite
  - AES/EBU
  - Mono
  - Left and Right analog
- Automatically switches between inputs
- All operational parameters programmable from full color front panel screen
- Fully IBOC compatible: Allows for low level combining implementations without the use of a second exciter or costly external combiners and filters.

The latest in a long line of innovative FM exciters from **Broadcast Electronics**. A 250 watt version is also available.

www.bdcast.com (888) 232-3268

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

World Radio History

Products & Services SHOWCASE

FOR AM DIGITALLY COMPATIBLE ANTENNA SYSTEMS.

All Aluminum Construction
AM Tuning House

WCBS/ WFAN
New York, NY

Kintronic Labs Will Supply
What You Need
When You Need It
With Top Quality
At A Competitive Price

Wideband AM Diplexer
Installed In Prefab Building
660KHz/880KHz 2 x 30kW

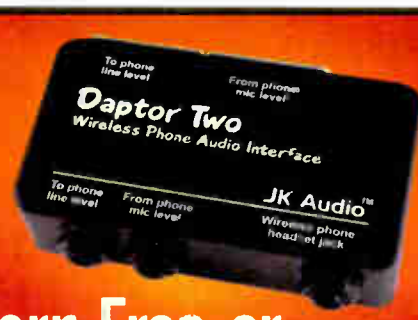
Kintronic Labs, Inc

Phone: (423) 878-3141 Fax: (423) 878-4224

Product Brochures Available At www.kintronic.com

We Design And Build For DRM Or IBOC Digital Audio Broadcasting

---



Born Free-er

Remote Broadcasts or IFB Feeds From ANY Audio Source Over A Cell Phone Are A Snap With Daptor Two!

Seamless interface between audio feeds and your cell phone (using its 2.5mm headset jack) are now a reality. The Daptor Two provides XLR balanced or 1/4" unbalanced inputs and outputs, allowing you to connect to your mixer, recorder or other audio device to send and receive audio through your cell phone. And since the Daptor Two is passive, you never need to worry about batteries. It doesn't get any easier or more convenient than this.

JK Audio
REMOTE BROADCAST GEAR

Toll Free (USA & Canada): 800-552-8346
Tel: 815-786-2929
Fax: 815-786-8502
www.jkaudio.com

S.C.M.S., Inc

Charlotte, N.C

26 Years of Service 1976-2002

- ✓Competitive Prices
- ✓Extensive Rental Fleet (RF Codecs Test Equipment, Audio)
- ✓Experienced Staff
- ✓Used Trade-Ins Welcomed
- ✓New and Rebuilt RF and Audio
- ✓Custom Studio Design and Furniture
- ✓Representing Over 600 Quality Manufacturers
- ✓Turnkey Installations Available

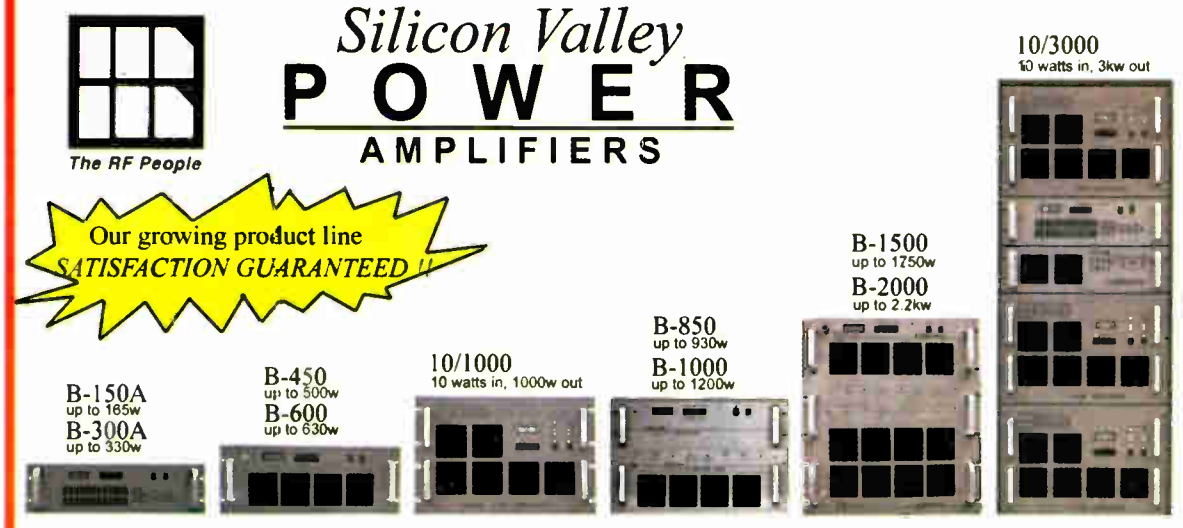
You Know We Know Radio

800-438-6040 • www.scmsinc.com • Fax 704-889-4540

The RF People

Silicon Valley POWER AMPLIFIERS

Our growing product line
SATISFACTION GUARANTEED !!



Phone:- (408) 986 9700 **e-mail:- sales@svpa.com**

Fax:- (408) 986 1438 Website:- www.svpa.com

AUDIO ROUTING SWITCHERS

SR-10
10x1 STEREO SWITCHER
$396.00 **$597.00**

SR-10M
10x1 STEREO SWITCHER
WITH METERING & MONITORING

SR-210
DUAL 10x1 STEREO SWITCHER
$499.00 **$998.00**

SR-201
20x1 STEREO SWITCHER

SR-64
6x4 STEREO SWITCHER
$698.00 **$999.00**

SR-61M
6x1 STEREO SWITCHER
WITH METERING & MONITORING

RAM BROADCAST MANUFACTURING, INC.
www.ramsyscom.com PHONE: 800-779-7575 FAX: 847-487-2440

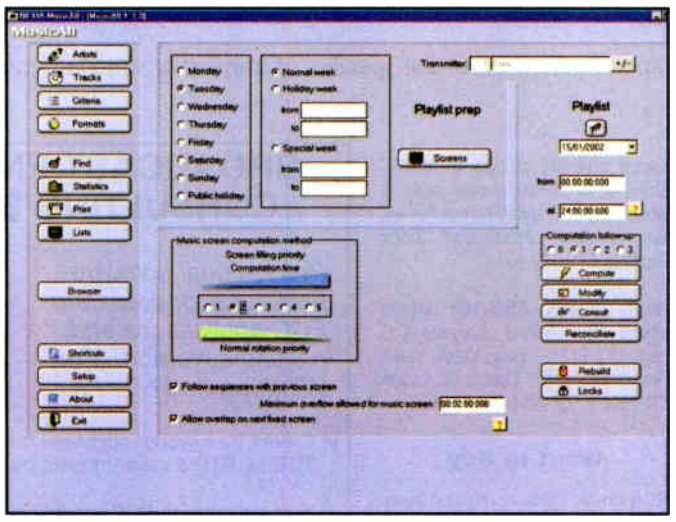
World Radio History

TECH UPDATES

Netia Ships Snippet Editing Tool

Netia hopes to capitalize on demand for high-performance digital editing software with its Snippet editing tool, part of the company's Radio-Assist software.

The program was created with input from radio technicians and journalists and is designed to give access to digital audio editing techniques on one screen.



Sequences can be selected at random while playing, and played in a loop while modifications are integrated. Several sounds can be edited on one track; each is identified by a different color.

In particular, the company says Snippet adds functionality to the cut feature. If a cut is made "outside the selection," the selection is retained instead of deleted.

This allows editing by adding and subtracting cuts. Cuts are stored so sound rejects can be played, named, pasted or saved later. After a cut, the leading head is positioned two seconds before the cut point so users can listen to the sequence lead-in.

The "actual time" function displays the start of an item at the time index when recording began. For example, users can pick a recording made at a certain time within a recording started earlier.

Another new function is automatic display of the duration between the start of a cut and its current position. Fade points can be set while editing.

The company added several procedures. Nine markers and several command modes can be accessed through the keyboard simultaneously. An automatic screen scroll function can be activated by the cursor, and one cursor is used for horizontal and vertical zooms. The work zone can automatically take on full-screen size for better legibility.

For more information contact Netia in New Jersey at (973) 575-9909 or visit www.netia.net.

Fairlight Ships DREAM Workstation

Fairlight wants to speed up the audio production process with its new Digital Recording, Editing And Mixing Station workstation, with a QDC operating system promoted as "a stripped-down, pumped-up drag-racing engine for audio applications, but built to last like a truck."

The workstation is part of the DREAM family of digital audio post-production systems.

According to the company, QDC technology enables seamless, gapless 48-track punch-in and punch-out across 48 tracks simultaneously at 48 kHz and with 24-bit resolution on one hard disk.

It uses 32 digital I/Os and 32 analog I/Os. Unlimited duration and simultaneous real-time crossfades are available. Playback is immediate after the crossfade range is set, eliminating rendering and waiting time and caching delays. Waveforms are displayed instantly and are in sync with the playback on the tracks.

The Binnacle editing system, designed to make the recording and editing process more comfortable, cuts time further by reducing keystrokes for straight edits. The platform integrates recording and editing capabilities with an automated mixing engine that can deliver final mixes in formats through 7.1.

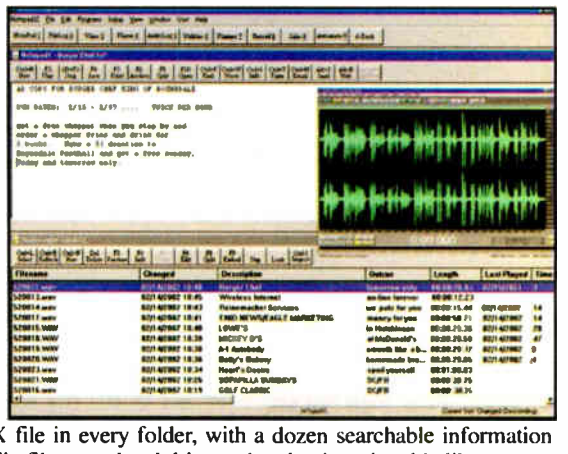
The DREAM Station can operate as a standalone workstation or a component of the DREAM suite. According to the company, it can serve as the primary workstation/mixer for smaller facilities or as part of networked systems at larger studios. Features include six-band EQ, dynamics processing and comprehensive grouping of faders and busses.

The Station has custom-manufactured key switches and motorized, touch-sensitive rotary encoders with tricolor LEDs to indicate each control's selected operating mode.

For more information contact Fairlight USA in California at (323) 465-0070 or visit www.fairlightesp.com.

WireReady32 Boosts Cool Edit

WireReady wants to take the functionality of Syntrillium's Cool Edit line of software audio editors to the next level with an interface provided by the WireReady32 database/production system.



The system adds storage and organization capabilities for WAV files, ad copy and job tracking management and automated delivery into automation systems or Web sites from Cool Edit.

A set of configurable folders on any set of drives can launch Cool Edit in a "record" or "edit" mode according to a station's file specifications. It maintains a database IDX file in every folder, with a dozen searchable information fields. Stations can use it to keep audio files on a local drive and maintain a sharable library on a server for other departments. According to the company, the system's most impressive capability is its automated Web publishing, archiving and SMPT/e-mail capabilities that require no html or ftp knowledge.

Stations can send/receive production jobs and audio via e-mail and maintain Web browser-compatible archives and matching Microsoft Access databases. It can integrate pictures and video with audio when it publishes. An automated scheduler can e-mail, publish or send a file into a stations' automation system.

WireReady 32 can be integrated into any automation system. It can encode/compress and can change file headers or create chunk or companion files for a direct push capability. It automatically samples, converts, MPEG-compresses and creates header and data packets required to update files in the log. Text files can embody a production cycle and can be linked to audio files.

For more information contact WireReady in Massachusetts at (800) 833-4459 or visit www.wireready.com.

Digidesign Releases Pro Tools|HD

Digidesign recently released the high-definition Pro Tools|HD version of its professional workstation.

The version has an integrated production environment, DSP power, new audio interfaces, a high track count and I/O capacity and routing flexibility.

It comes in three configurations that vary on the number of channels, tracks and processing cards it supports. Each system requires an HD audio interface (192 or 96 I/O) for I/O functionality.

The hardware side has new peripherals. SYNC I/O is the synchronization device, PRE has eight channels of mic preamplification and MIDI I/O is the custom MIDI solution. Networking is provided through the new DigiSnake and DigiLink cables.

Functions required to produce audio/MIDI compositions is accessible via the Pro Tools 5.3 software interface, including manipulating audio waveforms and editing MIDI notes and automation data. HD supports signal processing and sound design plug-ins and applications.

For more information contact Digidesign in California at (650) 731-6300 or visit www.digidesign.com.

Audion Offers Digital Phone Editor

VoxPro PC from **Audion Laboratories Inc.** is a Windows-based digital audio phone editor that offers quick audio editing of phone conversations. It is available as software only or as a software and control-panel package, and features an optional Network plug-in, the ability to import WAV files and export multiple WAV files, one-button recording, insert record and a large, single-screen interface and user-defined, unlimited Hot Keys.

The optional Network plug-in enables users to share files and access special group folders to create and edit files that all group members can see, reedit or play as desired. In addition, users maintain access to files they create in their own password-protected areas.

Users can log onto a VoxPro workstation on a network to play or edit files. Operators can create multiple folders to organize files and move them to a group or other users' folders. Files can be sorted by name, length or modification date. VoxPro supports importing and exporting files in WAV format for editing on other workstations or WAV editors.

The workstation requires a soundcard with 16-bit audio and 44.1 in/out that is Direct X8 compatible (nonemulated driver).

This product was reviewed in the Feb. 13 issue of Radio World.

For more information contact Audion in Washington state at (206) 842-5202 or visit www.audionlabs.com.

Dart Pro Works to Restore Audio

DARTech Inc. offers a product to help audio professionals restore and save a music collection to CD.

Users can employ Dart Pro 98 to record sound files from analog or digital sources, clean up the audio, organize the tunes into playlists and write a standard Redbook audio CD that can be played in any CD player. It works with many music media formats and various types of CD-R or CD-RW devices. An operator can record from most audio sources, add effects, remove hisses and pops and place a customized collection onto a CD.

Its audio restoration functions remove clicks, pops, scratches, hiss, hum and buzz. DeClick removes impulsive disturbances and low-intensity wideband noise. DeHiss eliminates wideband noise using a standard noise print. DeNoise is adjustable and is also used for removing wideband noise. DeHum gets rid of harmonic disturbances and works for hum and buzz removal. ReTouch & Duplicate fill small and large gaps and dropouts.

The system requires a Windows computer with a Pentium II processor or better and 64 MB RAM, a 1.2-GB hard disk and a 16-bit, Windows-compatible soundcard (for analog recording). The system also needs to support SCSI or EIDE CD-R or CD-RW drive (for writing music CDs).

For more information contact DARTech in Minnesota at (800) 799-1692 or visit www.dartpro.com.

World Radio History

BROADCAST Equipment Exchange

"Broadcast Equipment Exchange" accepts no responsibility for the condition of the equipment listed or for the specifics of transactions made between buyers and sellers.

ACOUSTICS

Want to Sell

AcousticsFirst™
Toll Free 888-765-2900
Full product line for sound control & noise elimination.
www.acousticsfirst.com

AMPLIFIERS

Want to Sell

Leitch FR-882 dist amp, power supply and 10 card chassie w/10 Leitch stereo DA cards, $350. Chris Fraley, KMA Recordings, 1222 Arch St, Philadelphia PA 19107. 215-816-4575.

WBS D8212Q dist amp, power supply and 12 card chassie w/12 WBS stereo DA cards, $400. Chris Fraley, KMA Recordings, 1222 Arch St, Philadelphia PA 19017. 215-816-4575.

Want to Buy

RCA, Altec tube amplifiers & mixers in any condition, working or not. Larry Drago, WELI, POB 85, New Haven CT 06501. 203-230-5255.

ANTENNAS/ TOWERS/CABLES

Want to Sell

AM GROUND SYSTEMS: Reliable, On-time Installation, Quality Workmanship, Ground System Evaluation & Repair. www.amgroundsystems.com, 1-877-766-2999.

THE ANTENNA SITE STORE
Tower Registration Signs
FCC and OSHA Compliance
Tower Leasing Signs
Your Wording Added
610-458-8418
www.antennaID.com
• Antenna ID Products Glenmoore, PA •

Dielectric 3-5/8" motorized four port coaxial switch . Continental Communications, 314-664-4497. Email: contcomm@fiastl.net.

AUDIO PRODUCTION

Want to Sell

Harris Solid State T-Table preamps. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Shure M-267 pro mike mixers (3), $200. Danny KJMJ, 601 Washington St, Alexandria LA 71301. 318-445-4843.

AUTOMATION EQUIPMENT

Want to Sell

Smarts Broadcast Systems IPC-610MB-260 Smartcaster digital audo automation system. Includes traffic & music scheduling. Like new, $12,000/BO. Gary Marmitt, MarMac Communications, 7515 Blythe Island Hwy, Brunswick GA 31523. 912-265-1707.

CART MACHINES

Want to Sell

Disan 600A and 600. One 600A R/P and (2) 600 play only. Older types with a release lever. Motors are good & all electronics check OK. Needs pinch rollers & cleaning, $900/all +shpg. James Cunningham, KEOR/KHKC, Rt 2, Box 113B, Stonewall OK 74871. 580-265-4496.

Dynamax CTR90 (2), BO; Dynamax CTR10 (2), BO; ITC Delta R/P cart machine, BO; ITC 99B R/P cart machine, BO; ITC triple deck cart machine, BO; Dynamax FSD 10 splicer finder eraser, BO. Stephen Yates, Yates Broadcasting, 121 Cotton Sq, Lufkin TX 75901. 936-634-4584.

COMPLETE FACILITIES

NEW OR USED COMPLETE PACKAGES
STUDIO/STL/TRANSMITTER/ANTENNA OR ANY COMBINATION OF ABOVE
-LEASE OPTIONS-
-EMERGENCY RENTALS-
-REMOTE BROADCAST RENTALS-
SCMS, Inc. (800) 438-6040
"You Know We Know Radio"

CONSOLES

Want to Sell

Harris Stereo 80 console, $1500/BO. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Shayne & Young 5 channel audio console, rotary pots with manual, $500 +shpg. Susan Ernest, KSID, POB 37, Sidney NE 69162. 308-254-5803.

Otari Series 54 studio console, 28 inputs x24 buss in a 32 mainframe, full TT patchbay. DiskMix automation. Large LEDs. Great EQ. $15,000, fob Austin TX. Bill or Joel, Production Block Studios, 512-472-8975.

WBS R2000 radio console with 2 power supplies, $3000. Chris Fraley, KMA Recordings, 1222 Arch St, Philadelphia PA 19017. 215-816-4575.

Want to Buy

Western Electric 25A. Paying up to $7500 for this console & always buying WE mics, tubes, catalogs & TT's. Larry Drago, WELI, POB 85, New Haven CT 06501. 203-230-5255.

LIMITERS/ AUDIO PROCESSING

Want to Sell

Orban 2200 digital, request processor in a small box, sinple to set up. In use 18 months, like new w/manual, $2500. Jack Taddeo, K-T Inc, 111 S Washington #150, Park Ridge IL 60068. 847-518-0340.

Orban 8000-A Optimod in good condition, $1200 +shpg. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Orban Optimod 8100-A/L in excellent cond, factory upgraded, $3850 +shpg. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Gates vintage limiter. Big & heavy. BO +shpg. Clarence Jones, WSHG Radio, 843-563-7097.

Want to Buy

Teletronix LA-2A's, UREI LA-3A's & LA-4's, Fairchild 660's & 670's, any Pultec EQ's & any other old tube compressor/limiters, call after 3PM CST, 972-271-7625.

MICROPHONES

Want to Sell

Radio Shack multi channel wireless mic, BO. Stephen Yates, Yates Broadcasting, 121 Cotton Sq, Lufkin TX 75901. 936-634-4584.

Want to Buy

RCA 77-DX, 44-BX, KU-3A's, WE-639's, On-Air & recording lights wanted, top dollar paid! 615-352-3456, FAX: 615-352-1922. E-mail: billbryantmgmt@yahoo.com.

RCA 77-DX's & 44-BX's, any other RCA ribbon mics, on-air lights, call after 3PM CST, 972-271-7625.

RCA 77DX/44BX. Will pay $1000 for these mics. Call anytime. Larry Drago, WELI, POB 85, New Haven CT 06501. 203-230-5255.

MISCELLANEOUS

Want to Sell

ROTRON BLOWERS AND PLATE BLOCKERS, new & rebuilt for Elcom, Harris, CCA, CSI, McMartin. Goodrich Ent. 11435 Manderson St. Omaha, NE 68164 402 493 1886 FAX 402 493 6821

BEST POWER U.P.S. SYSTEM: FE5.3KVA with batteries, transfer switch BPE-02MBB-1A, general signal-constant voltage transformer HS-12F 5AS, (2) disconnect switches. 301-627-2275.

BSR model EQ3000, stereo frequency EQ/spectrum analyzer. Has RCA connections, L/R In/Out, LR Tape 1 In/Out, LR Tape 2 In/Out, microphone In. Electric Paing & Design, POB 8822, Incline Village NV 89452. 775-831-3490.

Comrex Nexus ISDN codec unit. Works perfectly, used 1 year, $1300. Charles, Pitroad Racing Network, WCON, 706-886-0652.

Daven CP-354-T 100R taper etc; Shallcross 320-C1, 600 ohm straight T, etc; Challcross 120-2A2, 2235 ohm ladder, etc; IRC A-21 P-250M, 250K ohm taper. BO/all or individually. W.H. Brown, WWBC/WOGO, 645 Anderson Court, Satellite Beach FL 32937. 321-777-0265.

dbx PB-48, 48 point patch bays, new, still in box, never used, $130 ea +shpg. Susan Ernest, KSID, POB 37, Sidney NE 69162. 308-254-5803.

RW Online

Large quantity of new 5" and 7" small & large-hub plastic reels & white boxes. Package price for all. Bill or Joel, Production Block Studios, 512-472-8975.

Radio Shack SSM-100 stereo sound mixer with 8 channels & 5 band EQ, BO. Stephen Yates, Yates Broadcasting, 121 Cotton Sq, Lufkin TX 75901. 936-634-4584.

Want to Buy

RCA on-air lights in any condition, working or not, will pay best prices for them. Larry Drago, WELI, POB 85, New Haven CT 06501. 203-230-5255.

Advertise? Want to?
Call 703-998-7600, ext 154,
or e-mail: sfewell@imaspub.com.

MONITORS

Want to Sell

Used Mod Monitors, McMartin & Belar. Many to choose from, tuned & calibrated on your frequency, full guaranteed. Goodrich Ent. 402-493-1886.

Belar FMM2 FM modulation monitor, $650. Danny, KJMJ, 601 Washington St, Alexandria LA 71301. 318-445-4843.

RECORDERS

Want to Sell

Otari ARS-100C (3) stereo PB r-r's. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Tascam 122MKII cassette R/P workhorse in good condition, $250. Jay Swafford, Jay Swafford VoiceOvers, 173 Foxrun, Springfield TN 37172. 615-384-4121.

Tascam DA-30MKII DAT R/P in excellent condition, low hours, $700. Jay Swafford, Jay Swafford VoiceOvers, 173 Foxrun, Springfield TN 37172. 615-384-4121.

Teac A-7300 pro stereo audio tape recorder. 1/4" open reel, in original shipping box, well cared for with manual & 2 10" metal reels. XLR mike/line switchable inputs & outputs. VU meter for each channel. Accommodates reel sizes up to 10", may need new rubber drive bands, $690 +shpg. Electric Paint & Design, POB 8822, Incline Village NV 89452. 775-831-3490.

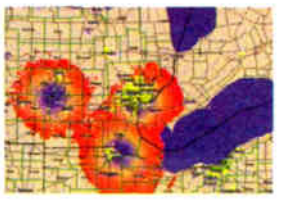
Otari MX 50/50 r-r, BO. Stephen Yates, Yates Broadcasting, 121 Cotton Sq, Lufkin TX 75901. 936-634-4584.

Panasonic SV-3700 DAT machine, $800. Chris Fraley, KMA Recordings, 1222 Arch St, Philadelphia PA 19107. 215-816-4575.

Panasonic SV-4100 DAT machine, like new, $1200. Chris Fraley, KMA Recordings, 1222 Arch St, Philadelphia PA 19107. 215-816-4575.

BROADCAST ENGINEERING CONSULTING SOFTWARE

Professional software packages for preparing FCC applications and plotting coverage. For Windows and NT.



✓ Create "real-world" coverage maps with Longley-Rice, TIREM, PTP & other models using polygon map features.

✓ Prepare concise FCC model coverage maps and allocation studies using USGS geographic map databases. Census calculations, tower and airport databases.

✓ Search for AM, FM, TV, DTV & LPTV channels with graphics oriented programs and FCC databases.

✓ Plot STL paths in 3-D using NGDC terrain databases... and more!

V-Soft Communications
800-743-3684
www.v-soft.com

REMOTE & MICROWAVE

Want to Sell

Burk TC-8 remote control, wireless, $1250 +shpg. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Moseley STL receiver 505/C, 950.150 mHz, $850 +shpg. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

REMOTE EQUIPMENT RENTAL
Silver Lake Audio
(516) 763-1776
silverlakeaudio.com

Micro Controls RCT-9 & RCR-9 wire line remote control for radio transmitters, for use with telephone line or your own balanced audio line. 1 send unit & 1 receive unit with manual. In good condition, it will take readings & adjust your transmitter, etc., $450 +shpg. James Cunningham, KEOR/KHKC, Rt 2, Box 113B, Stonewall OK 74871. 580-265-4496.

WE RENT FOR LESS
Hotlines
Zephyrs
Nexus
Audio
FM Exciters
STL's
FM Pwr Amps
Test Equipment
If we don't have it, we will get it!
SCMS, INC. (800) 438-6040
"You Know We Know Radio"

Wells Cargo Giant Boom Box, remote broadcast trailer 40', 11', 8', in excellent condition, totally reconditioned in 2001. Full carpeting, air conditioning, heat, windows that open on both sides, tables, built in on both sides, lights dance to music, plenty of lighted signage on both sides, $12,000. Ken Coe, WLOI/WCOE, 1700 Lincolnway Pl, #8, La Porte IN 46350. 219-362-6144.

Broadcast Equipment Exchange
For more information, call Simone at 703-998-7600, ext. 154.
Radio World

REPAIR SERVICES

Broadcast Equipment Repair

- AM Antenna Monitors
- AM/FM Modulation Monitors
- Audio Processing
- Exciters
- RPU Transmitters/Receivers
- STL Transmitter/Receivers
- Test Equipment
- Transmitter Field Repair

Rapid Turnaround - Professional Service

DCS DIVERSIFIED COMMUNICATIONS SYSTEMS
(814) 756-3053
E-mail: rpogson@aol.com

World Radio History

REPAIR SERVICE (cont.)

DAT Machine Service
Digital Audio Tape
Fast, expert repairs on all DAT recorder brands & models including ADAT and DA-88
Warranty Service on Most Brands
Over 3000 Machines Serviced!
New/Refurbished DATs Available
Compare Our Rates!
Pro Digital Inc.
DAT Recorder Service Specialists
(610) 353-2400

SATELLITE EQUIPMENT

Want to Sell

Fairchild Dart 384 satellite receiver, BO. Stephen Yates, Yates Broadcasting, 121 Cotton Sq, Lufkin TX 75901. 936-634-4584.

STATIONS

Want to Sell

PROFITABLE, CASH-FLOWING STATIONS, (2) FM's & (1) AM. BEST SMALL MARKET ANYWHERE! NEW EQUIPMENT, INCREDIBLE LOCATION & LIMITED COMPETITION. FAMILY ILLNESS FORCES SALE. POSSIBLE FINANCING. Email: radioonair@aol.com.

DUE TO DEATH OF OUR FATHER, TWO GREAT RADIO STATIONS FOR SALE: North East California, great hunting and fishing, 5000 watt AM 570, Class C1 FM 100,000 watt, $250,000/BO. Highly motivated! Phone 530-233-3570.

Radio World

Space is available!
To advertise, call
703-998-7600, ext. 154 or
e-mail: sfewell@imaspub.com.

Offered for Sale!
SW station
WSHB
Cypress Creek, SC
USA
(2) 500 KW transmitters
(12) Curtain Antennas
(3) 750 Kw Gen Sets
380 acres
For Prospectus or Information, contact Station Manager,
Ed Evans
803-625-5551
evansc@wshb.com

TEST EQUIPMENT

Want to Sell

Potomac 19D & RMP 19D antenna monitor. Useable for 2 to 5 tower array. Recently calibrated & has manual & power cords. Very good condition, BO. Mark Borchert, Triad Broadcasting, 2720 7th Ave South, Fargo ND 58103. 701-237-4500.

Potomac Instruments AG-51/AA-51 audio test pair, analyzer/generator, very good condition w/manuals, $1600. C. Scott, WKYU-FM, WKU-Academic Complex 242, Bowling Green KY 42101. 270-745-3834.

TRANSMITTERS

Want to Sell

BE FM-30-B 30KW FM. Continental Communications, 314-664-4497. Email: contcomm@fiastl.net.

Collins 820-D 10KW AM. Continental Communications, 314-664-4497. Email: contcomm@fiastl.net.

McMartin BF-5K, 5kW FM. Factory rebuilt in perfect, like new condition, includes new tubes, tested & tuned on your frequency. Guaranteed, fully adjustable from 0 to 5.5 kW. Goodrich Enterprises Inc, 402-493-1886.

RCA BTF 5-ES 5KW (grounded grid) FM. Continental Communications, 314-664-4497. Email: contcomm@fiastl.net.

Sparta-Cetec 602 2.5KW FM. Continental Communications, 314-664-4497. Email: contcomm@fiastl.net.

RCA BTF-20-E1, parting out or for sale as is! Has original 98.7 harmonic filter & combiner. Comark 30 kW low pass harmonic filter. L.D. Phillips, KCRT, 100 Fisher Dr, Trinidad CO 81082. 719-846-3355.

OFF THE AIR?
Emergency Back-up Rentals
FM Exciters - STL's -
FM Pwr Amps - Antennas -
Studio & Test Equipment
SCMS Inc (800) 438-6040
"You Know We Know Radio"

CCA 1000-D 1kW FM transmitter, $2800/BO +shpg. Joseph Bahr, Islands Comm, POB 656, San Juan PR 00914-6556. 787-725-4164.

Energy-Onix 15kW FM transmitter, $14,000 +shpg. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

CONSULTANTS

EVANS ASSOCIATES
Consulting Communications Engineers
FCC Applications • Design • Field Engineering • Tower Detuning
Upgrade & Relocation Studies • AM Directional Array Tuning & Proof
EXPERTS IN:
TV • DTV Transition • FM • Directional Antennas • RF Exposure
210 S. Main St., Thiensville, WI 53092. (262) 242-6000. FAX (262) 242-6045
http://www.evansassoc.com *Member AFCCE*

Consulting Communications Engineers
EMC Test Lab
• FCC Applications and Field Engineering
• Frequency Searches and Coordination
• AM-FM-CATV-ITFS-LPTV
• EMC Test Lab-FCC and European (IEC)
OWL ENGINEERING, INC.
E-mail: info@owleng.com **1-800-797-1338** Fax (763) 785-4631
8899 Hastings St NE, Minneapolis, MN 55449 (763) 785-4115 Member AFCCE

T. Z. Sawyer
Technical Consultants
www.sawyer.com
AM-FM-TV-LPTV
• FCC Applications & Exhibits
• Experimental Authorizations
• AM Directional Antennas
• High Power Antenna Arrays
• Frequency Studies
• Class Upgrades
• STL Applications
• Station Inspections
☎ 1-301-913-9287
FAX: (301) 913-5799
5272 River Rd, #460, Bethesda, MD 20816

GRAHAM BROCK, INC.
BROADCAST TECHNICAL CONSULTANTS
Full Service From Allocation to Operation AM/FM/TV/AUX Services; Field Work; Antenna and Facilities Design
Over 35 years engineering and consulting experience
912-638-8028
202-393-5133
www.grahambrock.com

Doug Vernier
Telecommunication Consultants
Broadcast Engineering Consulting
AM/FM/TV/LPTV/DTV
Custom mapping service
Frequency searches
Propagation prediction
FCC application preparation
VSoft Communications
Software for your PC
(800) 743-3684
www.v-soft.com

System One Communications
Broadcast Constructors & Consultants
Houston, Texas
888-625-5649
➤ AM-FM Site Construction Specialists
➤ Complete Tower Service
➤ Antenna & Transmission Line Diagnostics

Herb Kravitz
Broadcast Engineering Consultants
AM~FM
Professional Technical Support
Comprehensive Field Service
phone 609-347-4821
fax 609-347-6397
hkradio@msn.com

M Celenza
Communications Consultants
TV-$550; LPTV-$550; FM-$250;
AM Freq Searches-Call for quote
Applications, Amendments & Upgrades
Antenna Structure Registration,
Field Work Avail
631-928-0077
Fax: 631-928-1905

MULLANEY ENGINEERING, INC.
Consulting Engineers
•Design & Optimization of AM Directional Arrays
•Analysis for New Allocation, Site Relocation, And Upgrades
AM-FM TV LPTV
Wireless Cable
(MDS/MMDS/ITFS/OFS)
•Environmental Radiation Analysis
•Field Work
•Expert Testimony
9049 Shady Grove Court
Gaithersburg, MD 20877
Phone: (301) 921-0115
Fax: (301) 590-9757
email: mullengr@aol.com

FASTER...
MORE ACCURATE RADIO COVERAGE
• Real Time 3-D Displays
• Interference calculations
• Cost effective mapping
• Fully integrated databases
• Used by the FCC
• Latest standards built-in
RADIO SOFT
Visit us on the the web at www.radiosoft.com
109 West Knapp Ave. • Edgewater • FL • (386) 426-2521

dataworld
Market Analysis
Engineering Software
Ethnic/Demographic Data
Custom Full-color Mapping
Sales Marketing Packages
www.dataworld.com
800-368-5754
info@dataworld.com
fax: 301-656-5341

Communications Technologies, Inc.
Broadcast Engineering Consultants
AM FM TV LPTV
Cellular/PCS Site Analysis
P.O. Box 1130, Marlton, NJ 08053
Phone: (856) 985-0077
Fax: (856) 985-8124
Internet: commtechrf.com
Clarence M. Beverage
Laura M. Mizrahi

Radiotechniques
402 Tenth Avenue - PO Box 367
Haddon Heights, NJ 08035
856-546-8008 - Fax 856-546-1841
E-mail: ted@radiotechniques.com
Consulting Engineers
AM - FM - TV
FCC Applications
Directional Antennas
Transmitter & Studio Design
Edward A. Schober, PE
Member AFCCE

Structural Analysis
ERI
Electronics Research, Inc.
7777 Gardner Road
Chandler, IN 47610
(812) 925-6000
www.ERIinc.com
REGISTERED PROFESSIONAL ENGINEERS
STRUCTURAL ANALYSIS
ERI Incorporated 1943
TOWER REINFORCING

RW Online
To advertise in Radio World
e-mail:
sfewell@imaspub.com
Visit our web site:
www.rwonline.com

DISTRIBUTOR DIRECTORY

The following distributors serving the broadcast industry would be glad to help you with any of your requirements.

CORNELL-DUBILIER MICA CAPACITORS
FROM STOCK
JENNINGS VACUUM CAPACITORS
FROM STOCK
JENNINGS VACUUM RELAYS
SURCOM ASSOCIATES
2215 Faraday Ave., Suite A
Carlsbad, California 92008
(760) 438-4420 Fax: (760) 438-4759
e-mail: link@surcom.com web: www.surcom.com

...country, top 40, news, urban, talk, jazz, the classics, mixed bag...
RADIO! The beat goes on!
CROUSE-KIMZEY OF ANNAPOLIS
tops in broadcast equipment
1-800-955-6800
ask for Kathleen
kkannapolis@worldnet.att.net

STUDIO FURNITURE?
BEAUTIFUL TOP QUALITY
GENUINE WOODSHOP
MODULAR SYSTEMS
From $2345!
WHY PAY ANY MORE?
SPACEWISE
800-775-3660
spacewise.com

World Radio History

TRANSMITTERS (cont.)

ECONCO

POWER TUBES REBUILT

1/2 THE COST OF NEW!

ECONCO

TEL: 800-532-6626
INTL: +1-530-662-7553
FAX: +1-530-666-7760
www.econco.com
SE HABLA ESPAÑOL

ECONCO

TRANSCOM CORP.
Serving the Broadcast Industry Since 1978
Fine Used AM & FM Transmitters and Also New Equipment

300W	FM	1988	Harris FM 300K Solid State Single Phase
1 KW	FM	1968	Harris FM 1H
2.4KW	FM	1995	QEI Quantum Solid State upgradeable to 6 KW
2.5KW	FM	1984	Harris FM 2.5K Single Phase
2.5KW	FM	1980	Harris FM 2.5K Single Phase
2.5KW	FM	1979	Harris FM 2.5K
2.5KW	FM	1976	Collins 831D Single Phase
6 KW	FM	1994	Henry 6000D Single Phase
10KW	FM	1974	Harris FM10H/K
15KW	FM	1980	McMartin BF15,000
20KW	FM	1974	Harris FM20H/K
25KW	FM	1978	Collins 831E2C
25KW	FM	1980	CSI T-25-F
30KW	FM	1983	BE FM 30
30KW	FM	1988	BE FM 30A
50KW	FM	1982	Harris Combiner w/auto exciter-transmitter switcher
1KW	AM	1982	Harris MW1A
5KW	AM	1980	Harris MW5A
5KW	AM	1980	Continental 315R-1
10KW	AM	1982	Harris MW10A
10KW	AM	1982	Continental 316F
50KW	AM	1978	Continental 317C-1

EXCITERS
Continental 802B
Harris MX-15
BE FX 50 + FX 30

Miscellaneous Equipment:
Potomac Ins. AA51 Audio Anyl. (new)
Belar SCM-1, SCA Monitor
Moseley TRC-15 Remote w/ Hallikainen
Moseley TRC-15-A Remove Control System
Delta 4 Port SW 1 5/8 mot. #6730E
SCA Generator (Mx-15 Module)
ATI Line Amplifier
Optimod 8100A (cards 3 thru 9)
Dummy Load, 5 KW water cooled
Dummy Load 1 KW air cooled
Dummy Load 25 KW air cooled

2655 Philmont Ave #200, Huntingdon Valley, PA 19006
800-441-8454 • 215-938-7304 • FAX No. 215-938-7361
VISIT OUR NEW INTERNET SITE: www.fmamtv.com
SEND YOUR E-MAIL REQUESTS TO: transcom@fmamtv.com

Energy-Onix 5kW AM transmitter, $12,000 +shpg. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Harris 10H, 10 kW FM transmitter, $8000 +shpg. Joseph Bahr, Islands Comm, POB 656, San Juan PR 00914-6556. 787-725-4164.

Harris Gates 2 2500W solid state AM xmtr. 6 Adjustable power levels, LED overload, Module Status indicator & many more features. 1510kHz, like new, never used, $21,500. Angie Sugalski, WCN, POB 444, Spartanburg SC 29304. 888-989-2299.

McPherson Radio Corporation
Specializing in pre-owned QEI FM transmitter products. All tuned and tested on your frequency, 6 month warranty included!
MRC has a facility to meet your broadcast needs for repair and complete overhaul of QEI exciters and low power transmitters. Other broadcast manufacturer products are also welcome.
Bob Brown
Phone: 856-232-1625 • Fax: 856-232-2075
Email: rjbeme@aol.com.

CSI 20W AM transmitters (2), presently on 620kHz. Ideal for standby or nighttime use, $250 ea +shpg. Clarence Jones, WSHG Radio, 843-563-7097.

Harris MW-5 AM transmitter, 5 kW, tuned to 1140 kHz, presently on air, some spare parts, $10,000. Located in Orlando FL. George Arroyo, WONQ, 1033 Semoran Blvd #253, Casselberry FL 32707. 407-830-0800.

Harris MW-5, 5 kW, tuned to 1290 kHz, missing plate transformer, new transformer cost $3750, located in West Palm Beach FL, $2500. George Arroyo, WONQ, 1033 Semoran Blvd #253, Casselberry FL 32707. 407-830-0800.

Harris SX-1 solid state AM 1 kW, tuned to 1190 kHz, located in West Palm Beach FL, $6000. George Arroyo, WONQ, 1033 Semoran Blvd #253, Casselberry FL 32707. 407-830-0800.

Want to Buy

BE or CSI 5.0 kW FM transmitter. Joseph Bahr, Islands Comm, POB 6556, San Juan PR 00914-6556. 787-725-4164.

Gates BC 250 GY wanted, any model, parts, etc., prefer 1967. Ken Kuenzie, KRMS, POB 225, Osage Beach MO 65065. 573-348-2772 ext 207.

Gates/Harris Vanguard I or II. Looking for parts/transmitters, tech help, ideas, etc. Ken Kuenzie, KRMS, POB 225, Osage Beach MO 65065. 573-348-2772 ext 207.

TUBES

Want to Sell

FOR THE BEST PRICE
& 24 Hr service on transmitting tubes & sockets/parts, new & rebuilt call Gaodrich Ent. at 402-493-1886 day or night, FAX 402-493-6821.

EIMAC, AMPEREX, ED-COM, 3CX2500F3, 3CX3000A7, 4CX250B, 4CX300A, 4CX1000A, 4CX1500B, 4CX5000A, 4-400C, 811, 833C, ETC. WESTGATE 800-213-4563.

D And C Electronics Co.
NEW TUBES
We have the alternatives for all your needs, at the lowest prices, direct from OUR STOCK!!!
Svetlana ELECTRON DEVICES
EIMAC, SVETLANA, PRO-TEK®, EEV and many others.
(352) 688-2374
PH: (800) 881- 2374
FAX: (352) 683- 9595
Eimac SE HABLA ESPAÑOL
WE EXPORT
VISA/MASTERCARD ACCEPTED

RF PARTS COMPANY
• Broadcast • Industrial Communications

• EIMAC • TAYLOR
• ECONOCO • SVETLANA
Also
Motorola • Toshiba • Thompson & Mitsubishi Semiconductors
Catalog: www.rfparts.com
Se Habla Español • We Export
760-744-0700 • 800-737-2787
Fax: 760-744-1943
E-mail: rfp@rfparts.com

TUBES, Eimac, Svetlana
Phone: 905-844-5772
Fax: 905-844-6263
ams@hard-to-find.net
www.hard-to-find.net

TURNTABLES

Want to Sell

Acoustic Research TT for 33-1/3 & 45 rpm single vinyl records. Drive bands are at least 10 yrs old & may need replacing. Well cared for, original manual with care instructions included, BO +shpg. Electric Paint & Design, POB 8822, Incline Village NV 89452. 775-831-3490.

Russco Fidelity-Master phono preamps (2), like new, $75 ea +shpg. Gene Whittenberger, Whittenberger Studio, POB 396, Mexico IN 46958. 765-985-2224.

Russco Studio-Pro turntables (2) with "Shure" tone arms, works good, $100 ea +shpg. Gene Whittenberger, Whittenberger Studio, POB 396, Mexico IN 46958. 765-985-2224.

Technics SL-1200MK2 (2) mobile unit TT's. Needs a little work, BO +shpg. Curt Rogers, KRRW, Highway 4 & 30 North, St James MN 56081. 507-375-3386.

RCA MI 4620 16" disc worm cutting lathe, Presto cutter head 1-D, BO. W.H. Brown, WWBC/WOGO, 645 Anderson Ct, Satellite Beach FL 32937. 321-777-0265.

Rek-O-Kut 12" rim drive aluminum (2), BO. W.H. Brown, WWBC/WOGO, 645 Anderson Ct, Satellite Beach FL 32937. 321-777-0265.

Technics Quartz SL-1800 MK1, BO. Stephen Yates, Yates Broadcasting, 121 Cotton Sq, Lufkin TX 75901. 936-634-4584.

ADVERTISE YOUR EMPLOYMENT AD ON OUR WEB SITE FOR ONLY $2 PER WORD!
ADS GET POSTED THE NEXT BUSINESS DAY AND WILL RUN FOR A FULL TWO WEEKS!
COMBINE THIS WITH AN AD IN OUR RADIO WORLD NEWSPAPER EMPLOYMENT SECTION AND REALLY COVER THE BROADCAST INDUSTRY AND THEN SOME!
www.RW Online.com
Call Simone Powell for all the details at
703-998-7600 Ext. 154
between 9-5 EST
E-mail:
sfewell@imaspub.com

EMPLOYMENT

HELP WANTED

NATIONAL PUBLIC RADIO

Engineering-Satellite Systems Maintenance Technician Distribution

Provides technical support to over 400 radio satellite earth station terminals. Bench type environment repairing equipment & resolving problems. Support on project assignment work. Some limited fieldwork. On call beeper rotation required. Successful candidate will have in-depth technical training in RF, audio and digital logic systems. Minimum of 5 years engineering experience in Broadcasting or electronic (RF) communications. T1 system experience beneficial. Mandatory ability to troubleshoot & repair equipment at the component level. Strong verbal and customer service skills required for assisting station personnel in isolating problems to a module level. Valid drivers license necessary. Send resume with salary history. #RW043.

System Technical Center Technician Satellite Operations

Operates the System Technical Center Transmission and Traffic facilities; operates NPR's transportable uplink and other remote transmission equipment, as assigned; and handles urgent scheduling and operations requirements. Works rotating shifts throughout the broadcast day and week - 24 hours a day, 365 days a year. Two years of college or equivalent experience required. Two years broadcast engineering experience; familiarity with the operations of computer I/O terminals and standard audio testing practices, operations, and procedures; experience using a digital audio network; and ability to work rotating shifts required. Knowledge of automated audio switching systems and RF transmission systems; and/or public radio experience preferred. #RW1184.

NPR is a not-for-profit corporation that produces, acquires, and distributes high-quality news and cultural programming to the nation's public radio stations and via the Internet and other new technologies. To apply, send cover letter and resume, identifying position by number and title, to: NPR; Human Resources Department; 635 Massachusetts Ave. NW; Washington DC 20001-3753; Fax - 202-513-3047; E-mail - employment@npr.org. Equal Opportunity Employer.

WMUB, Chief Engineer, Miami University: Duties include serving as FCC Chief Operator and associated duties; maintaining signal quality and equipment; administering budget; planning for expansions; coordinating remotes; supervising University tower facilities; maintaining computer and AP networks; responding to emergencies; and other duties as assigned. Requires a Bachelor's degree or equivalent; general class license from FCC or equivalent; SBE certification or equivalent; 5 years relevant experience; familiarity with FCC regulations; success in transmission and production system design, repair and maintenance; familiarity with FM systems and other, analog and digital production systems, satellite downlinks including the Public Radio Satellite System; ability to troubleshoot and repair equipment; familiarity with computers and LANs (preferably Mac and PC), remote systems and STLs; continuing professional development; communication, organizational and time management skills; ability to work within deadlines; experience with word processing and spreadsheets. Desired is a commitment to public broadcasting in a University context and experience with students, faculty, administrators and volunteers. *Review begins March 1, 2002 for July 1, 2002 or earlier hire.* Send letter of application, resume and three references with phone numbers to: John Hingsbergen, Chair, Chief Engineer Search, WMUB Public Radio, Williams Hall, Miami University, Oxford OH 45056. Ph: 513-529-5885, Fax: 513-529-6048, Email: hingsbje@muohio.edu. EQUAL OPPORTUNITY IN EDUCATION AND EMPLOYMENT. Miami University's report, *Campus Crime and Safety*, is available at www.muohio.edu/righttoknow. A hard copy may be obtained by contacting the Personnel Office. Visit our Web site at: www.MUOhio.edu.

Get noticed in Radio World's Classified Section!

ASSISTANT CHIEF ENGINEER

Cox Radio is seeking a *Assistant Chief Engineer* for it's 5 Richmond Virginia radio stations. Must have experience in maintenance and repair of "multi-station" studio facilities, digital storage & automation, PC networking & FM RF transmitting systems. Must have good people & time management skills. SBE Certifications a plus. Resume to: Jon Bennett, CPBE DOE, Cox Radio, 812 Moorefield Park Dr, #300, Richmond VA 23236 or email to: jon.Bennett@cox.com.

POSITIONS WANTED

Prodigious producer, air show talent. Corina, Corina, queen of the air waves, with super CA's, PSA's & more. Willing to relocate. 405-414-4440 or livecorduroy24@yahoo.com.

Radio announcer. I'm good & can only get better. David 918-683-0515.

Recent graduate of the American Broadcasting School is seeking for a radio job in the Tulsa area. Am specially interested in news, sales & promotions. Brandi, 918-455-1056.

Rookie broadcaster, desires news, announcing or production. Willing to relocate. Open minded & hard worker. Lori, 918-446-0095.

Love is in the air. Ready to be on the air bringing on-air & production talents to your station. Fresh from American Broadcasting School. Bobby Love 405-919-6088.

On-Air announcer/production manager looking for the right station. Three & a half years experience. Great on-air & production skills. Will relocate. Benjamin 405-843-9840.

Ready for work! Trained & experienced in news writing, production, & board operations. Hard working & energetic. Will get the job done! Call Rashonna 405-677-7360.

RW Online

World Radio History

ACTION-GRAM

EQUIPMENT LISTINGS

Radio World's Broadcast Equipment Exchange provides a FREE listing service for radio stations *only*. All other end users will be charged.This FREE service does not apply to Employment Help Wanted ads or Stations For Sale ads. These are published on a paid basis only. Send your listings to us by filling out the form below. Please be aware that it takes one month for listings to appear. The listings run for two consecutive issues and must be resubmitted in order to run again. Thank you.

Please print and include all information:

Are you currently a subscriber to Radio World?
❑ Yes ❑ No

Signature _____ Date _____

Contact Name _____

Title _____

Company/Station _____

Address _____

City/State _____

Zip Code _____ — _____

Telephone _____

Brokers, dealers, manufacturers and other organizations who are not legitimate end users can participate in the Broadcast Equipment Exchange on a **paid** basis. Line ad listings & display advertising are available on a per word or per inch basis.

WTS ❑ WTB ❑ Category: _____
Make: _____ Model: _____
Brief Description: _____
_____
_____
_____
Price: _____

WTS ❑ WTB ❑ Category: _____
Make: _____ Model: _____
Brief Description: _____
_____
_____
_____
Price: _____

*Closing for listings is every other Friday for the next month's issue. All listings are run for 2 issues unless pressed for space or otherwise notified by listee.

Broadcast Equipment Exchange
PO BOX 1214, Falls Church, VA 22041 • Tel: 703-998-7600 • Fax: 703-998-2966

Radio World
THE NEWSPAPER FOR RADIO MANAGERS & ENGINEERS

NEW SUBSCRIBERS, SAVE OVER 30% OFF THE COVER PRICE!

Don't Miss the Reader's Choice Sweepstakes Where 26 Lucky Winners Will Win Valuable Prizes! Look For Contest Details In This Issue.

Special Introductory Rates • For New Subscribers Only

❑ 1 Year for **$45.00**
❑ 2 Years for **$80.00** ❑ 3 Years for **$115.00** V35

Payment Options:
❑ Check or money order payable to IMAS Publishing
❑ M/C ❑ Visa ❑ Am Ex

Card # _____ Exp _____
Signature _____ Date _____
Please Print:
Name _____
Title _____
Company _____
Address _____
City _____ State _____ Zip _____
E-Mail _____
Phone _____ Fax _____

Your subscription begins upon receipt of payment.
IMAS Publishing appears on all financial transactions.

ADVERTISER INDEX

This listing is provided for the convenience of our readers.
Radio World assumes no liability for inaccuracy.

PAGE	ADVERTISER	WEB SITE URL
15	AEQ	www.aeqbroadcast.com
36	ATI	www.atiguys.com
48	Audioarts/Wheatstone	www.wheatstone.com
6	AudioScience	www.audioscience.com
47	Auditronics/Wheatstone	www.auditronics.com
18	BALSYS	www.balsys.com
26	Belar	www.belar.com
8	Bext	www.bext.com
39	Broadcast Electronics	www.bdcast.com
19	Broadcast Software Int'l (BSI)	www.bsiusa.com
38	Broadcast Tools	www.broadcasttools.com
24, 25	BSW	www.bswusa.com
4	Burk Technology	www.burk.com
38	Circuit Werkes	www.circuitwerkes.com
7	Comrex	www.comrex.com
1	Continental Electronics	www.contelec.com
38	Cortana	cortana@cyberport.com
36	Electronic Research Inc.	www.eriinc.com
14	Harris	www.broadcast.harris.com
31	Harris	www.broadcast.harris.com
38	Henry Engineering	www.henryeng.com
10	Inovonics	www.inovon.com
40	JK Audio	www.jkaudio.com
40	Kintronic Labs	www.kintronic.com
17	Klotz Digital AG	www.klotzdigital.com
3	Lightner Electronics	www.lightnerelectronics.com
23	MediaTouch	www.imediatouch.com
27	Moseley Associates	www.moseleysb.com
9	Omnia, a Telos Company	www.omniaaudio.com
36	Pristine Systems	www.pristinesys.com
5	Radio Systems	www.radiosystems.com
11	Radio Systems	www.radiosystems.com
40	RAM Broadcast Systems, Inc.	www.ramsyscom.com
38	Ramsey Electronics, Inc.	www.highpowerfm.com
40	S.C.M.S., Inc.	www.scmsinc.com
37	Sierra Automated Systems	www.sasaudio.com
40	Silicon Valley Power	www.svpa.com
21	Sine Systems	www.sinesystems.com
12	Software Authority	www.softwareauthority.com
13	Telos Systems	www.zephyr.com
35	Telos Systems	www.telos-systems.com
2	Wheatstone	www.wheatstone.com

Radio World
5827 Columbia Pike, 1st Floor • Falls Church, VA 22041
PHONE: 703-998-7600 • FAX: 703-671-7409

Classified Advertising Rates Effective January 1, 2002

	1x	6x	13x	26x
1-9 col inch (per inch)	$100	95	90	85
10-19 col inch (per inch)	$85	75	65	55
Distributor Directory	$125	120	115	110
Professional Card	$95	90	85	80
Station/Studio Services	$185	157	133	113
Classified Line Ad	$2/word			
Blind Box Ad	$15 additional			

Call Simone Fewell, Ext. 154, Classified Ad Manager, to reserve space in the next issue. Use your credit card to pay, we now accept VISA, MASTERCARD and American Express.

World Radio History

◆READER'S FORUM◆

Commando solo

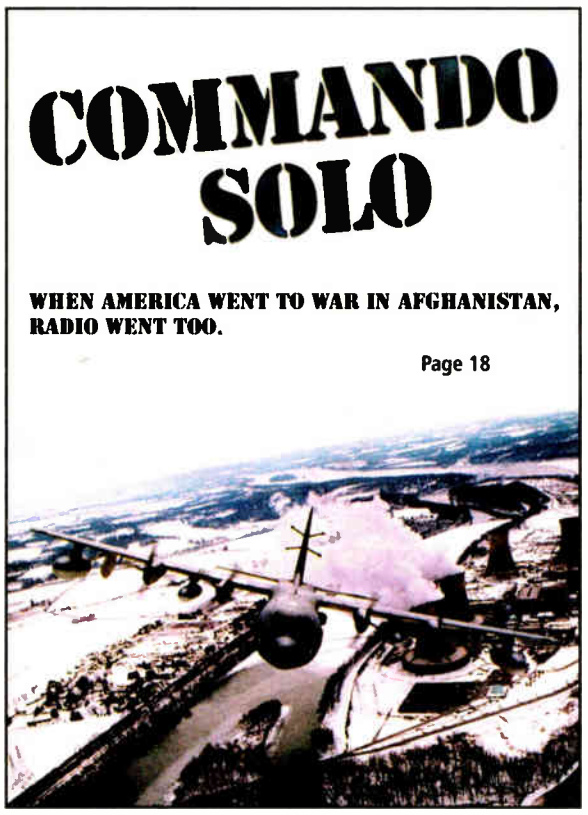
Excellent article on the 193rd Special Operations Wing of the Pennsylvania Air National Guard and their hard work in Afghanistan (Feb. 1, "In the Air With Commando Solo").

Readers may have done a double take in looking at the cover page photo. It's not the terrain of Afghanistan the EC-130E is flying over.

Anyone who has ever flown into the Harrisburg International Airport in Middletown, Pa., will recognize the cooling towers of Three Mile Island below the aircraft.

The 193rd is based at HIA.

Tom Ditt
Public Information Officer/
EAS Coordinator
NCEM
Raleigh, N.C.



Ed. Note: The terrain was identified in the small photo credit.

Also, some readers may have been unable to read part of the Commander Solo story due to a problem with glue on an advertising insert. The full story is available at www.rwonline.com *under the* Special Report *tab.*

Nouning verbage

As an overworked, unpaid lieutenant in the National Grammar Police, I am compelled to take Skip Pizzi to task for a few common goofs in his Feb. 1 RW article, "Every Verbage Can Be Nouned."

Admittedly, the title of his piece is a quote from someone else, but Skip should have mentioned at some point that there is no such thing as "verbage." Most likely the word in the mind of the original speaker is "verbiage" (the use of more words than are needed), although that doesn't fit his meaning.

He probably should've just said "every verb can be nouned." I think that's a (sorry — *an*) hysterical line, and I will commit it to memory for use at a future Mensa meeting.

It's all too common for folks to skip right over the correct word in their effort to sound like a Ph.D. candidate. I remember a great line from my buddy Jay Trachman's "One To One" service without which I never entered the studio (said he, refusing to use a preposition to end a sentence wi ...).

Anyway, Jay's line was an English professor advising, "Never use a big word when a diminutive one will do."

One more problem — what's a "metric" ("This serves as a good metric of the extreme")? My Webster's "Encyclopedic Edition" Dictionary defines metric only as having to do with the metric system, which we largely ignore in this country.

Perhaps Skip should have written "This serves as a good English of the extreme."

Korrect grammarischen über alles!

Jack Mindy
Rochester, N.Y.

Ed. Note: One definition of "metric" is "a standard of measurement," according to The American Heritage Dictionary of the English Language.

Country jingles

I am the owner of an Internet radio station, *www.deltastarradio.com.* The station is transitioning format from contemporary Christian music to a "hybrid" of southern gospel, country/gospel and classic country. I stream with *Live365.com* from 7:30 a.m. to 9 p.m. EST.

I was wondering if any old-timers might have a copy of the old Pepper/Tanner "country giant" style jingles that they would be willing to make a dub of. These were produced back in the late '50s or maybe the '60s and were used by small-town country stations quite a bit.

I have been unable to find anything in my Web searches and thought someone reading RW can help. I can be reached at (850) 878-1788 or *alanmccal@hotmail.com.*

Alan McCall
Owner
Delta Star Radio
Tallahassee, Fla.

Inflated Weather Warnings?

Reader comments in The Washington Post bring an issue formerly attached to television to the surface for radio as well. We bet it's pertinent in your town too.

Columnist Ron Shaffer's "Dr. Gridlock" is about transportation troubles. Several columns have focused on weather forecast "sensationalism" by radio and TV stations. Reader comments included:

"Solely to increase its ratings, and at the expense of reporting the facts, WTOP hypes every potential snowfall as if life as we know it on earth is about to be extinguished."

"Every time there is the remote possibility of a snowstorm in the metro area ... stations go absolutely wild with their reporting and predictions. Not only is this irresponsible on the part of the TV and radio stations because of the havoc it creates in the community, it is also unethical."

"Local radio and TV stations view weather forecasting as entertainment, not the science it's supposed to be ... Station owners and producers have created a meteorological show to pique the viewers' interest, instead of simply trying to report the daily weather conditions."

These comments contain an element of truth, but let's not jump on that bandwagon without looking first.

Yes, there is a fine line between an announcer's responsibility to report weather warnings and overdoing the drama of an anticipated weather event. Air talent, always on the lookout for a fresh twist or a timely topic, sometimes find it all too easy to whip up a frenzy over a minor weather forecast.

But here in Washington, folks run to the Safeway at the first mention of a snowflake to stock up on toilet paper, milk and the latest Teen People magazine. They drive unwisely and basically freak out. We can't blame radio and TV alone for this mentality.

Richard Rudman, chairman of the FCC EAS National Advisory Committee, notes that actual warnings from the National Weather Service are pretty "vanilla."

"The warning tells people to head for the hills," said Rudman. "A good warning tells people which hills to head for, which road to take to get there, what to do when they arrive and how long to stay."

But Rudman said the sociology of weather and other emergency warnings goes well beyond technology.

"Just like most people in L.A. are in denial about earthquakes, most people in D.C. are in denial when it comes to inclement weather and their ability to get out the door," said Rudman. "Media may be the fuse, but the public is the dynamite."

So don't just dump on the media, Mr. and Mrs. J. Q. Public. Apply common sense to everything you hear and see.

Dr. Gridlock has invited weather forecasters and broadcast news directors to comment on reader perceptions. We welcome your thoughts as well to *radioworld@imaspub.com.*

In the meantime, radio folks, let's keep the drama to a minimum. We are indeed the "fuse." People look to us for guidance and facts, not hype.

— RW

Write to Us

RADIO WORLD
READER'S FORUM
P.O. Box 1214
Falls Church, VA 22041
radioworld@imaspub.com

—EDITORIAL STAFF—

Paul J. McLane	ext. 117	Editor
Sharon Rae Pettigrew	ext. 126	Managing Editor
Leslie Stimson	ext. 129	News Editor/Wash. Bureau Chief
Laura Dely	ext. 198	GM Journal/Internet Radio Editor
Michele Kramer Peterson	ext. 149	Studio Sessions Editor
Michael Hedrick	ext. 146	Buyer's Guide Editor
Thomas R. McGinley	—	Technical Adviser
Alan Peterson	—	Technical Adviser
John Bisset	—	Contributing Editor
Skip Pizzi	—	Contributing Editor
T. Carter Ross	ext. 120	Editor-In-Chief (International)
Marguerite Clark	—	Editor (International), Milan
Rogelio Ocampo	ext. 121	Latin America Editor in Chief
Karina Gerardi	ext. 137	Latin America Editor
Renata Beck	ext. 196	Latin America Assistant Editor
Terry Hanley	ext. 130	Administrative Assistant
Peter Finch	—	Editorial Assistant, Milan

—EDITORIAL CONTRIBUTORS—

W.C. Alexander, Bruce Bartlett, Frank Beacham, Read Burgan, Naina N. Chernoff, Harry Cole, Troy Conner, Vince Ditingo, Mark Durenberger, Ty Ford, Scott Fybush, Harold Hallikainen, Paul Kaminski, Peter King, Mel Lambert, Mark Lapidus, Carl Lindemann, Ted Nahil, Tom Osenkowsky, Ken R., Rich Rarey, Bruce Rogow, Randy Stine, Travis the V/O Guy, Barry Umansky, Tom Vernon.

Radio World
Vol. 26, No. 6 March 13, 2002
Telephone: (703) 998-7600 • Business Fax: (703) 998-2966 • Editorial Fax: (703) 820-3245
E-mail: radioworld@imaspub.com • Web site: www.rwonline.com

—ADVERTISING SALES REPRESENTATIVES—

US Southeast & Mid-Atlantic: John Casey	330-342-8361	Fax: 330-342-8362	e-mail: jcasey@imaspub.com
US Northeast & Central: Sandra Marcum	765-966-0669	Fax: 765-966-3289	e-mail: smarcum@imaspub.com
US West: Dale Tucker	916-721-3410	Fax: 815-352-1698	e-mail: dtucker@imaspub.com
Classified Ads: Simone Fewell	703-998-7600 x154	Fax: 703-671-7409	e-mail: sfewell@imaspub.com
Germany, Austria: Raffaella Calabrese	+39-02-7030-0310	Fax: +39-02-7030-0211	e-mail: rcalabrese.imaspub@tin.it
France: Silvia Di Stefano	+39-02-7030-0310	Fax: +39-02-7030-0211	e-mail: sdistefano.imaspub@tin.it
European Sales Mgr., Africa, Middle East: Raffaella Calabrese	+39-02-7030-0310	Fax: +39-02-7030-0211	e-mail: rcalabrese.imaspub@tin.it
Japan: Eiji Yoshikawa	+81-3-3327-2688	Fax: +81-3-3327-3010	e-mail: callems@msn.com
Asia/Pacific: Wengong Wang	+86-755-5785161	Fax: +86-755-5785160	e-mail: wwg@imaschina.com
Latin America: J.O. Lima e Castro	+55-11-3873-1211	Fax: +55-11-3673-1499	e-mail: limcas@uol.com.br

NEXT ISSUE OF RADIO WORLD MARCH 27, 2002

For address changes, send current and new address to RW a month in advance at P.O. Box 1214, Falls Church, VA 22041. Unsolicited manuscripts are welcomed for review: send to the attention of the appropriate editor.

—ADMINISTRATION & PRODUCTION—

Stevan B. Dana	President/CEO
Carmel King	VP/Group Publisher
Marlene Lane	Editorial Director/COO
Chuck Inderrieden	CFO
Eric Trabb	Sales & Marketing Director
John Casey	Associate Publisher
Lisa McIntosh	Production Director
Annette Linn	Production Department Manager
Anissa DeLuca	Production Publication Coordinator
Kathy Jackson	Ad Traffic Manager
Amy Gutowski	Marketing Manager
Sheryl Unangst	Circulation Director
Robert Green	Circulation Manager

Radio World (ISSN: 0274-8541) is published bi-weekly by IMAS Publishing (USA), Inc., P.O. Box 1214, Falls Church, VA 22041. Phone: (703) 998-7600, Fax: (703) 998-2966. Periodicals postage rates are paid at Falls Church VA 22046 and additional mailing offices. POSTMASTER: Send address changes to Radio World, P.O. Box 1214, Falls Church VA 22041. REPRINTS: Reprints of all articles in this issue are available. Call or write Joanne Munroe, P.O. Box 1214, Falls Church, VA 22041; (703) 998-7600; Fax: (703) 998-2966. Copyright 2002 by IMAS Publishing (USA), Inc. All rights reserved.

—Printed in the USA—

World Radio History

AUDITRONICS SERIES 2600

IT'S NEW – IT'S A BARGAIN – AND IT'S *MODULAR*, giving you any combination of mic, line or accessory modules. It's also INSTALLER FRIENDLY, with a hinged meterbridge that opens wide for direct access to connectors, trimmers and logic switches. Onboard cue and headphone amps keep you in budget. BEST OF ALL, it's **AUDITRONICS,** so you know it's **TOUGH** AS **STEEL!**

- *FULLY modular*
- *All electronic switching*
- *Separate mic & line inputs*
- *Eight or twelve input channels*
- *Two stereo Program busses*
- *Two Mono/Mix-minus busses*
- *Full-featured monitoring*
- *Twin VU meter pairs (PGM & switched)*
- *Opto-isolated control logic*
- *Built-in cue and headphone amps*

AUDITRONICS

tel 252-638-7000/fax 252-635-4857/sales@auditronics.com

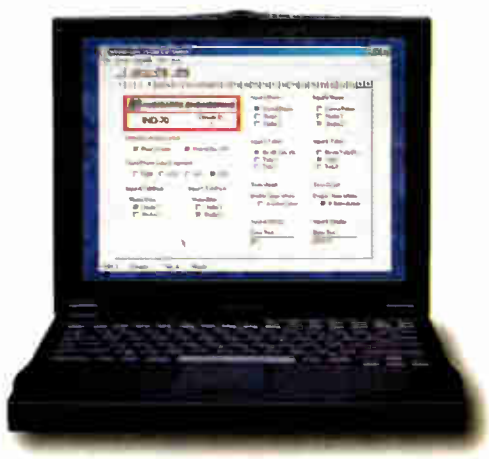
www.auditronics

World Radio History

AUDIOARTS DIGITAL D-70

The D-70 digital console from AUDIOARTS not only utilizes the latest in digital technology and chip sets, it can be ordered with a serial interface that lets it integrate with most popular automation systems and station routers; it even has WHEATSTONE's exclusive VDIP™ software system.

Plug-in modules let you have any combination of mic, analog or digital line inputs, and the 4 stereo busses give you plenty of flexibility (each has both digital and analog outputs). With sample rate conversion on all digital inputs plus selectable console clock rates of 32, 44.1 or 48KHz (and external house sync) the D-70 can fit right facility's present equipment.



WHEATSTONE'S VDIP™ Virtual Dipswitch Software lets you configure D-70 input channels with a laptop computer. Once configured console runs stand-alone.

With a compact, tabletop-mount footprint and a modular rear connector system that utilizes plug-in submodules for easy analog-to-digital field switches, the D-70 can be configured onsite quickly and easily. On the functional side, fullscale digital peak plus simultaneous VU metering, LED illumination everywhere, built-in machine interface, automatic timer and clock (standalone or ESE slave) all come standard, along with separate source selection for control room and studio plus built in talkback. You can even order the D-70 console with a SUPERPHONE module to support two callers with automatic digitally generated mix-minus. Both digital and analog line selector panels are also available.

THE D-70 DIGITAL AUDIO CONSOLE —benefit from WHEATSTONE's experience— at an AUDIOARTS price!

atstone.com/sales@wheatstone.com

AUDIOARTS ENGINEERING

World Radio History