



RADIO WORLD

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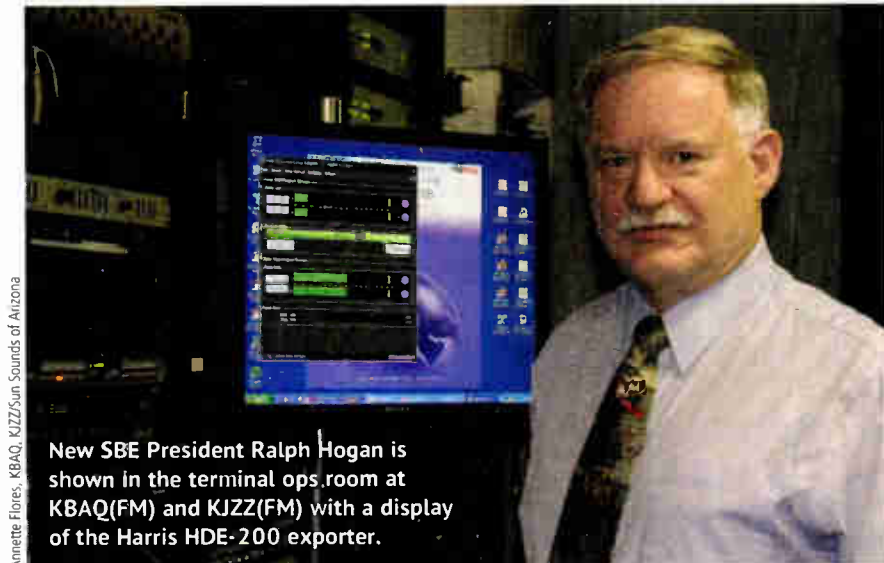
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MXL's R77L mic



Annette Flores, KBAQ, KJZZ/Sun Sounds of Arizona

New SBE President Ralph Hogan is shown in the terminal ops room at KBAQ(FM) and KJZZ(FM) with a display of the Harris HDE-200 exporter.

Hogan Keeps an Eye on Noise

A Conversation With the New President of The Society of Broadcast Engineers

BY RANDY J. STINE

TEMPE, ARIZ. — Ralph Hogan has been around the broadcast engineering

NEWSMAKER

field long enough to have installed public radio's first touchscreen master control

facility at KSLU(FM) at Southeastern Louisiana University in 1984.

Hogan always has been quick to embrace new technologies. In fact, he's been doing that at every stop throughout his 40-plus years in the industry.

"My strength as an engineer is designing and building facilities and working with new technologies in doing so. I've worked on a number of technologies through my career. Some real leading-edge stuff," Hogan said.

That background should serve him well in his role as new president of the Society of Broadcast Engineers. He hopes to pass that passion for adaptation and lifelong learning along to its membership through the release of at least one new certification level and other

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Radio/Audio Trends for Holidays

Internet Connectivity, HD Radio, AM/FM Are Among In-Car, Aftermarket Options

BY LESLIE STIMSON

This holiday season, Internet connectivity is a growing trend while AM/FM and HD Radio compete in the dash among a proliferating number of audio entertainment choices in new car dashboards. Personal music services like Pandora continue to make gains via in-car streaming using connected smartphones. Automakers have sent new cars into dealerships with larger entertainment screens and varied apps controlled by smartphone.

HD Radio's first data-only device is hitting store shelves, and iBiquity Digital and the HD Radio Alliance have holiday promotions underway. Work continues on HD chip integration into cellphones and other devices and on closing the "back-channel loop" so consumers can interact with their devices as well as with stations and advertisers.

Observers disagree on how much consumers will spend for electronics this holiday season. Without releasing exact figures, NPD in October said its research leading into the holiday shop-

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Selected content from Radio World's "The Leslie Report" by News Editor/Washington Bureau Chief Leslie Stimson.

EAS TEST REVEALS GLITCHES, SUCCESSES

Regulators and broadcasters began poring over data received in the first nationwide test of the Emergency Alert System.

The FCC and FEMA are collecting results from some 30,000 test participants. Of those, about 14,000 are radio stations, the commission told Radio World. Station reports are due to the FCC Dec. 27, electronically or via paper.

Around the country, engineers reported glitches and posted audio samples for colleagues to hear. Some noticed nearly inaudible audio accompanying the alert tones, double audio, no audio (just the alert tones) or distorted audio. Some received the

Point station level, he said, though as of mid-November FEMA didn't know exactly what had happened and planned to try to recreate the anomaly in its lab.

The test shone a light on other issues that need to be addressed, though Centeno didn't delve immediately into those, saying his team would create a list of things to fix and go from there. "We've established a baseline. We're going to re-test," he said, though a timeline hasn't been established.

Until now, Centeno said, the industry has had only anecdotal information about how EAS performed in various parts of the country, rather than a factual look at EAS across the nation. "The EAS was tested at the national level because we knew it was necessary. None of

COLLINS PREPS BILL TO ENSURE FEMA USES 'CUTTING-EDGE' ALERTING TECH

The EAS test garnered attention on Capitol Hill. Sen. Joe Lieberman, the Connecticut independent who chairs the Senate Homeland Security and Governmental Affairs Committee, said weaknesses in the system exposed by the test are "unacceptable," according to the L.A. Times, which noted that Lieberman praised regulators for conducting the test.

The paper also quoted Lieberman as saying "government and media carriers must work together to make sure the system does what it is intended to do, which is to transmit a nationwide



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message late from the station ahead of them in the daisy chain, or not at all. There were PEP failures reported in Alabama, Oregon, Michigan and New Mexico.

Other engineers reported no problems at their stations, which were able to receive and pass along the test message.

The FCC and FEMA reported that large areas of the country received the test while others did not. After the test, regulators stressed its value as an assessment tool.

FEMA IPAWS Program Director Manny Centeno told Radio World the test went out on time and was delivered across the country.

Initially, he said, the quality of the originating message was good. Then a second set of message headers and another audio message were introduced into the system alongside the original, leading to the garbled audio, according to Centeno. The malfunction happened at the Primary Entry

us ever thought it would be a perfect outcome," he wrote on the SBE listserv. He'd warned before the test that there could be problems, as RW reported.

NAB Executive Vice President of Communications Dennis Wharton said that initial feedback showed that "most radio and TV stations aired the test successfully, although some isolated glitches may have occurred." NAB would work with the federal government "to diagnose and improve EAS," he added.

The test was the topic of a blog entry by Damon Penn, FEMA assistant administrator of National Continuity Programs. He called the test "our opportunity to get a sense of what worked, what didn't and additional improvements that need to be made to the system as we move forward."

FEMA invited feedback about how the test worked and ways EAS can be improved via email to ipaws@dhs.gov.

message from the president in a crisis."

Maine Sen. Susan Collins, ranking Republican on the committee, says FEMA needs to make sure the alerts reach the most people possible. Collins announced she plans to introduce a bill to ensure FEMA uses "cutting-edge technology" for emergency alerting.

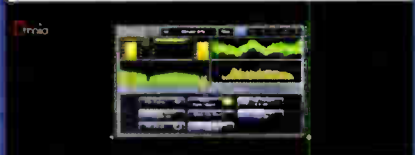
"Traditional radio and TV broadcasts remain integral to communicating emergency information, but Americans are also getting a constant stream of information from Twitter, Facebook and other social networking platforms," she said in a statement.

Collins told the Portland Press Herald the measure would require FEMA to continue conducting regular national alerting tests and that training would be available for state and local emergency officials on implementing new technology, FEMA's so-called IPAWS CAP-EAS, to also enable the public to receive alerts on various digital devices.

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EAS Test Offers Many Lessons

Czarnecki: Let's All Pull Ourselves Together to Identify and Fix the Issues

Some people threw around the word "disaster" to describe November's national EAS test. That was wrong. The problems that occurred served a significant purpose: to point up flaws in a system so that it will work when it must.

As Manny Centeno of FEMA wrote in a personal post on an SBE listserv, "Regardless of the shape of the audio message any of us heard on Nov. 9, it is important to note that the activation worked and spread all over the country. Some areas did not receive it at all and some heard an incomplete message. The fact of the matter is: Millions of Americans, coast-to-coast, heard the message, even with warts and all. ... For the first time in almost two decades, we and others with a newfound, vested interest are paying very close attention to the EAS."

Radio World's website has featured post-test analysis from observers including Harold Price, Gary Timm, Adrienne Abbott, Dan Mettler and Cris Alexander; you can find their comments by searching for their names at radioworld.com.

I asked Edward Czarnecki, senior director of strategy, development & regulatory affairs for EAS gear manufacturer Monroe Electronics Inc. and Digital Alert Systems, for his perspectives:

What did the industry learn?

There are a variety of lessons that can be taken away by government, broadcasters and EAS equipment manufacturers. We found out some good news in areas where the EAS relay worked, delivering

the EAN test message as anticipated. Similarly, we found out some areas where the EAS relay needs some attention. Finding out that kind of information is also a good result from this test.

Aside from the relay, there were problems with the EAN message itself that need to be addressed. There were apparently several technical and operational issues at FEMA and some of the PEPs that warrant attention.

Still, it deserves to be noted that the FCC and FEMA took a considerable risk by conducting such a high-profile

Calling this a 'test' was unfortunate, in that the word implies a pass or fail.

— Edward Czarnecki

nationwide test. The reward should eventually be a much improved public warning capability. Inevitably, there has been much criticism in both the mainstream press and within industry. However, these agencies should at least be credited for finally taking the leap to conduct this long-needed test of the national EAS, not something many agencies would dare to do in today's political climate.

What's your understanding of why the test did not go off entirely smoothly?

There were a range of monitoring and configuration issues at individual broadcast and cable sites and at various EAS relay points. However the largest and most fundamental issues arose at

the origination of the message, which had a cascading effect across the nation. The most common problems witnessed nationwide were severe audio issues, either echoed secondary EAS tones within the audio portion of the message, or tones without any audio. These echoing EAS header and EOM echoes originated from within the PEP system, an internal feedback loop from one of the PEPs back into the FEMA bridge and out again. These additional EAS tones seem to have posed several challenges in the airing of the alert, such as prematurely terminating the audio. ...

We examined audio captures of the EAN test from sites across the country, both DASDEC users and users of other

equipment, and were able to fully decode one of the feedback headers that erroneously appeared in the audio. Decoded, the second "mystery header" appeared as follows: ZCZC-PEP-EAN-011001+0015-3131903-WCCO. This string identifies the PEP station that was the source of the audio. Evidently, there was an equipment failure in the connection between the FEMA Operations Center and that PEP radio station. [Neither FEMA nor CBS had confirmed this at press time.]

Parenthetically, note that if you listen carefully to the audio portion of the message, you'll notice a continued feedback loop. So there was not just one set of EAS tones, but several, each increasingly less audible — a fading echo.

FROM THE
EDITOR

Paul McLane



A successful outcome from this national test will be the identification of what caused that audio feedback, and implementation of safeguards so it doesn't occur again.

Another problem in at least one region was caused by a possible malfunction in the EAS equipment at another PEP, which resulted in no transmission of the EAN from the PEP in that area. That, of course, posed a challenge in relaying the EAN to at least one region.

Yet another issue was found in the timing of the EAN message originated by FEMA. The effective time of the message was found out to be three minutes after it was sent out by FEMA. It also appears the EAS encoder used by FEMA has a clock that was not properly set, and was fast by some three minutes. That effective time appeared of course in both the intended EAN header, as well as the "echo headers" within the audio.

Was the national test a success, failure or somewhere in between?

I would simply observe that this test was intended to be a system-wide diagnostic. As a result, all parties — government, broadcasters and equipment manufacturers — finally have an opportunity to objectively examine a range of issues, and systematically address them. Calling this a "test" was unfortunate, in that the word implies a pass or fail. I don't think that was intended to be the case, though of course any nationwide exercise like

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ping season indicates more traffic will come to stores, though that may be at the expense of online business. As retailers run more promotions and put more products on sale, NPD predicts, consumers won't spend more but differently, looking to get the best price regardless of location.

In contrast, the International Council of Shopping Centers predicts retail sales for November and December 2011 combined will rise 3.5 percent compared to the same period a year ago. That compares with 2010, when sales were up 4.4 percent, in what industry analysts called the best holiday results since 2006.

Despite low consumer confidence in the economy and unemployment figures of around 9 percent, the council expects months of solid sales to carry through to the end of the year.

Three years after the recession-haunted 2008 holiday season, retailers have become savvier about not being stuck with too much unsold inventory and keeping prices budget-friendly, according to the ICSC.

IBiquity Digital Senior Vice President of Marketing Stephen Baldacci agrees, saying consumer electronic brands "are trying to make sure their barns are empty before CES. There's not a lot [of product] being introduced now so they're not left with unsold inventory."

LISTENING WITH SMARTPHONES

Regarding radio consumption in the car, eight in 10 consumers say they listened to the radio while in their vehicle during the previous three months, according to an NPD survey released in October. That's down two percentage points from last year.

Nearly a third (29 percent) of survey respondents said they used a smart device — including the iPod touch, iPhone or Android smartphone — an increase of nine percentage points since last year. The 3.5 hours per week consumers spent listening to music on smartphones also rose 9 percent compared to a year ago. The findings are based on about 10,000 surveys of respondents age 13 and older.

A tipping point is approaching as vehicles and portable devices move from a tethered connection to a more integrated connection, according to NPD Entertainment Analyst Russ Crupnick.

"Smart devices streaming music could end up being the largest threat to CDs and broadcast radio since the dawn of digital music."

While not voicing so dire a prediction, Livio Radio Founder and CEO Jake Sigal agrees that a number of consumers are looking to have smartphone



Livio Bluetooth Internet Radio Car Kit is a plug-and-play gadget that brings Internet radio and music from a listener's iPod or iPhone to any FM car stereo.

capability built into the dash or some way to connect them to the dash so they can use the devices in their vehicles.

Consumers change phones "faster than cars," he said. "The big thing at retail now is app-powered devices that

control an app from an accessory while the phone is in your purse or pocket."

That's why his company released the Livio Bluetooth Internet Radio Car Kit, a plug-and-play gadget that brings Internet radio and music from a listener's iPod or iPhone to any FM car stereo. The kit also offers Bluetooth hands-free calling, USB charging and buttons to control the Livio Car Internet Radio application.

A forecast from the Consumer Electronics Association supports an expectation of growth in Internet-capable car radios, meaning Internet radios that work with a smartphone adapter. CEA predicts such in-car stereo system sales will increase 83 percent over the next two years. It projects 410,000 aftermarket car radio systems with Web capabilities will be sold this year, with that figure growing to 749,000 by 2013.

Alpine, Pioneer, JVC, Kenwood and Sony have expanded the number of aftermarket radios that offer Pandora control with apps on USB-connected smartphones. Clarion, Pandora's newest and sixth aftermarket supplier, unveiled a Pandora-ready headunit in early November. The man-

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HOLIDAYS

(continued from page 5)

manufacturer said the CD source unit, the CZ202, would be available during the holidays.

Another example is Pioneer's AppRadio, featuring a six-inch touch-screen display that, when used with the unit's advanced app mode, facilitates the use of a connected iPhone 4's applications in the car. In addition to functions like AM/FM radio and Bluetooth hands-free calling, when an iPhone 4 is connected, the user will have access to music, photos, Google maps, iTunes apps and (if parked) Internet streamed video.

TODAY'S DRIVERS

Many aftermarket units that control Pandora with an app and USB-connected smartphone receive HD Radio stations as well.

Buick's IntelliLink system with Pandora will be available this year. Pandora also says its personalized music service is available in some 2012 Chevy, Ford, Hyundai, Toyota, Scion, Mini and BMW models that offer connectivity in the car.

Automakers believe the ability to hear personalized music from several devices is what drivers want.

"About 70 percent of all new car buyers want some form of connectivity," said a GM executive director, Micky Bly, earlier this year.

Respondents to a Harman survey released in November showed most car commuters want Internet radio in the vehicle (64 percent), a navigation system that provides real-time traffic updates (83 percent), and voice control of their car's infotainment systems (80 percent).

Consumers "want their car to be a place where they can stay productive and informed and not be forced to break away from a busy day," according to Harman, which said 500 people took part in the October survey.

About 19 percent of respondents this summer told Arbitron, Edison Research and Scarborough they listen to Internet radio in the car; the bulk of those listeners were 18-24 years old, a prime demo for aftermarket radios.

Responding to demand from customers, Ford Sync and Toyota Entune offer



In addition to AM/FM radio and Bluetooth hands-free calling, when an iPhone 4 is connected to Pioneer's AppRadio, the user will have access to music, photos, Google maps, iTunes apps and (if parked) Internet streamed video.

multimedia systems that feature AM/FM, HD Radio, satellite radio and the ability to stream iHeartRadio, Pandora or other Internet personalized music systems via a connected smartphone. The first cars with iHeartRadio were showing up on Toyota lots in November as part of the Entune system, according to both companies.

Cadillac is the latest to offer connectivity with its recently-announced CUE system for certain models in 2012.

CUE, which stands for Cadillac User Experience, will pair entertainment and information data from up to 10 Bluetooth-enabled mobile devices, USBs, SD cards and MP3 players with a vehicle infotainment system that the automaker promises will reduce complexity through customized information, natural voice commands, fewer buttons and larger icons. The system includes AM/FM, HD Radio and XM Satellite Radio. Users will be able to stream Pandora to their dash via a connected smartphone.

VISUALS

These new vehicle entertainment systems are visually oriented, aiming to serve drivers without distracting them.

Visual interaction is why iBiquity Digital and the HD Radio Alliance are encouraging stations to implement the advanced data capabilities of digital radio. FM HD stations, they say, should sport a user interface similar to what young people see on personalized music and Internet radio services.

The alliance has a task group headed by CBS Radio Senior Vice President Engineering Glynn Walden and Emmis Senior Vice President/Chief Technology Officer Paul Brenner to get station managers on the same page with engineers about implementing so-called Artist Experience, which syncs audio with visual elements, at their stations. The group is surveying member stations to

determine which ones have implemented the power increase and other HD data capabilities needed to support AE and which need help, according to Brenner.

Clear Channel has implemented the capability in several markets. Greater Media plans to implement AE on the bulk of its stations in the New Year, it recently told Radio World.

Beasley Broadcast plans to also make its commercial messages visual on several digital stations in the New Year, calling the tech the "Advertiser Experience," a play on iBiquity's Digital's Artist Experience. Generally the number of HD stations implement-



CUE — 'Cadillac User Experience' — will pair entertainment and information data from up to 10 Bluetooth-enabled mobile devices, USBs, SD cards and MP3 players with a vehicle infotainment system. The system includes AM/FM, HD Radio and XM Satellite Radio.

ing AE has been small, with Clear Channel beta testing AE in 18 markets.

Emmis President/CEO Jeff Smulyan credits a new HD Radio smartphone app being developed by Emmis Interactive, iBiquity and Intel, with support from NAB's FASTROAD technology project, as innovative.

Forty-one models of cellphones on the market have enabled FM chips, according to CTIA, The Wireless Association. Along with the radio industry's efforts to integrate HD Radio chips into cellphones, the app provides a back

channel so consumers listening to a station can interact with the station or its advertisers. Smulyan said on an earnings call recently that the app "has a chance to be truly transformative to our industry."

Brenner of Emmis also is president of the Broadcast Traffic Consortium, which has about 25 participating radio groups. NAVTEQ is their customer, supplying traffic information via analog FM RDS and FM HD Radio signals, to Garmin, for example.

TRAFFIC

The Garmin NUVI 3490 LMT is now at stores. It's the first Garmin personal navigation device that uses HD Radio data only and is not also an audio receiver. The digital data pipe can transport more data at a faster pace than analog FM, say iBiquity and the BTC; so the unit can provide faster updates and more detailed coverage of alternative routes around an accident. Updates are made every 30 seconds, as much as 10 times faster than traditional traffic receivers, according to Garmin.

Garmin HD Digital Traffic also will be available as an upgrade to other Garmin products through an adapter.

iBiquity is working with Garmin on promotion; Baldacci expects wide distribution for the product, including placement on the Crutchfield catalog cover.

"We're working with Garmin and retailers on why HD Radio traffic is better and different than traditional traffic services."

Aftermarket car stereo retailers with "assisted sales floors" tell iBiquity that "up-selling" customers \$20 to \$30 for an HD Radio model can happen easily, he said. "Their experience with HD is positive. That's good for a retailer."

He used an example of a \$20 up-sell on a \$110 car stereo to \$130, producing some 18 percent higher revenue.

"There are two ways retailers measure performance: gross margin and average revenue per sale. Getting \$20 to \$30 more for the same sales effort is worth it," said Baldacci.

Finally, Sirius XM released its 2.0 service; the new platform features additional channels and data bandwidth. It introduced the SiriusXM Edge, the first satellite radio able to receive the expanded programming lineup, in October. It hoped a plug-and-play tuner, Lynx 2.0, featuring WiFi and Bluetooth, would be available by the end of the year.



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World Radio History

RALPH HOGAN

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training opportunities in 2012.

Hogan, 63, succeeds Vincent Lopez as president of the organization; he began a one-year term at the SBE National Meeting in September. SBE is the professional organization of radio and television engineers and those in related fields; it has approximately 5,100 members and more than 100 chapters.

Hogan, CPBE, CBNT, DRB, is associate general manager for Tempe stations KJZZ(FM), KBAQ(FM) and Sun Sounds of Arizona. He has been active in many professional societies including the Institute of Electrical and Electronic Engineers. He was a founding member of the Association of Public Radio Engineers and recently stepped down as its president.

He sees his role as SBE president as carrying out the initiatives of the board and providing direction for the society for betterment of the membership.

"The board is elected by the membership and there to represent them and work with the executive leadership to run the organization. Our focus is on member benefit in everything we do."

CONTINUED EDUCATION

The priorities of the current SBE board include the completion of a new strategic plan for the organization, the first update since 2006, said Hogan. He wrote about that in a commentary in the Nov. 16 Radio World.

"We've accomplished many of our goals and have just started piecing together some new points to focus on. Continued education and training for members will be a part of it," he says.

To help formulate the next strategic plan, Hogan said SBE will invite its chapter chairs to attend a planning meeting next year.

Online courses and on-demand webinars will continue to be a focus of SBE University, the society's online instruction tool, he said.



A new certification is expected to be introduced formally in 2012, according to Hogan. SBE hopes the Certified Broadcast Network Engineer (CBNE) will be available prior to the NAB Show next April, once a training module and proficiency exam are completed.

CBNE will be the equivalent to a five-year certification level, such as Certified Broadcast Radio Engineer or Certified Broadcast Networking Engineer, Hogan said.

"CBNE is a whole new certification that will delve deeper into networking and IT issues such as firewalls, routing tables, cloud computing and other topics permeating the broadcast technical environment."

Knowledge of IT will continue to be crucial as broadcast engineers are asked to manage computer networks, software and firmware. "Seems like every broadcast system and hardware has some sort of IT component. Whether it's connected to a network or firmware, it's become a necessity. Everything is software-supported now. The technology element is so critical because of its quick turnover rate."

SBE's legislative goals for 2012 include passage of a bill that would add a broadcast engineer to the staff of each

FCC commissioner. Efforts fell short last year when the congressional session ended before any action was taken; the bills have been reintroduced in the current session as the FCC Technical Expertise Capacity Heightening Act, or the "FCC TECH Act" for short, S. 611 and H.R. 2102.

"We are getting bipartisan support. It's moving through the system and we hope for passage in this Congress," according to Hogan.

One reason to boost the "technical competence of policymaking" is the explosion of new technologies directly affecting the broadcast industry, Hogan says, which brings with it additional FM noise.

"Noise in all the bands is a serious issue. And as we add the technology that demands connectivity the noise floor will continue to grow," Hogan said.

Technological breakthroughs have been good for most broadcast engineers in that engineers no longer are tied to their facilities, he feels.

the market. I installed the third system they had sold."

Hogan moved in 1990 to the Boise State University Radio Network as director of engineering and operations and was responsible for designing, installing and maintaining broadcast facilities, including transmission, microwave, uplink/downlink and studios.

In 1998 he moved further west to Washington State University as assistant general manager of engineering services for the school, which included managing a total of some 40 radio and television sites in Washington, Idaho and Oregon.

While at Washington State, Hogan was one of four principal engineering investigators for the Advanced Digital Distribution Entity, a project financed by the Future Fund of the Corporation for Public Broadcasting.

"The project represented the public broadcast stations' interests in developing a joint master control and digital

'We hope to work on the local level with our chapters to see more apprenticeship programs initiated.'

"However, for all of us engineers it is getting more difficult to have time to ourselves. Unfortunately, in a way, technology has helped make our jobs 24/7, with even more responsibilities. Balancing work and personal time for (SBE) membership is more challenging than ever."

NEXT-GEN ENGINEERS

That time crunch also has meant fewer opportunities for mentoring of young broadcast engineers.

"As our headcounts have dwindled, we have lost very valuable years in mentorship within our industry. At one point there was an experienced technical operator who would mentor the more inexperienced staff at each station. That doesn't happen anymore," Hogan said. "We hope to work on the local level with our chapters to see more apprenticeship programs initiated."

Hogan's career began with a Bachelor of Science in engineering science from Louisiana State University in New Orleans. The Louisiana native made stops at several video production companies in that city before moving on to become chief communications engineer for KSLU(FM) at Southeastern Louisiana University, where he installed one of the first touchscreen master control facilities.

"It was 1986 and MediaTouch had just come out with a touchscreen automation system. It was one of the first on

distribution facility for the Northwest with possible implications for the next-generation distribution system for PBS.

"The ADDE would centrally capture programming from PBS and other program providers. The ADDE would then aggregate customized program feeds."

At Northwest Public Radio, Hogan helped move many of the automation functions to Denver and used store and forward technology to deliver on-air underwriting messages to specific transmitter sites within the NWPR network.

KJZZ/KBAQ, licensed to Rio Salado College in Tempe, Ariz., has been Hogan's workplace since 2008. There, he supervises a five-person engineering department and is responsible for operations and maintenance, facilities planning and systems integration for a radio system consisting of two radio transmitters, eight translators, five studios in three locations, a cable channel and a multi-channel-capable digital satellite uplink.

Sun Sounds of Arizona is the school's radio reading and information service; it airs on the 67 kHz subcarrier of KJZZ and on KBAQ HD3.

"The biggest challenge to radio reading services has been HD Radio," Hogan said. "We made the decision to place our service on an HD channel, but there have been a lot of radio reading services eliminated as stations go HD and do multiple programming to utilize the full 200 kHz of spectrum."

NEWSROUNDUP

SUPREMES TO HEAR INDECENCY: NAB asked the Supreme Court to reject the FCC's fleeting indecency rules, calling the policy "a vast expansion" of the agency's regulatory authority that should be struck down. The two cases going before the justices are TV-related, however the commission's FCC fleeting expletive rules do affect radio. NAB says in a joint brief filed with the Radio Television Digital News Association the rules have a "dramatic nationwide chilling effect on broadcast content that is not actually indecent." No date for arguments has been set on the court's calendar.

FM AUCTION 93: The FCC Form 175 "short form" must be filed during the Jan. 3-12, 2012 window for the upcoming Auction 93. Upfront payments are due Feb. 22. Bidders will vie for 119 FM construction permits. The commission is instituting a freeze on minor-change apps for FMs, coinciding with the auction filing window. The actual bidding begins on March 27.

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NEWSROUNDUP

FM UPGRADE CHANGES: Several large-market and large-signal broadcast owners oppose a proposal by station owner Matt Wesolowski of SSR Communications that he says would make it easier for short-spaced commercial FM stations to upgrade their facilities. NAB opposes the idea as well.

In the petition, SSR seeks to: eliminate the requirement to specify theoretical fully-spaced allotment/assignment coordinates for non-reserved FM minor modification applications; modify Section 73.215 of the FCC rules to allow contour protection only to existing facilities, not maximum class facilities, for all non-reserved FM band stations (not just those authorized under 73.215); and eliminate the minimum spacing distances in Section 73.215(e). Comments on RM-11643 were due Oct. 28.

Filing together, Beasley Broadcast Group, Bryan Broadcasting Corp., Clear Channel Communications, Delmarva Broadcasting Co., Merlin Media and Radioactive oppose the changes, calling them detrimental to the non-reserved FM band and the public interest. They say a contour protection system is inefficient.

The proposed changes could impede the development of HD Radio, said NAB, adding that digital broadcasting must be allowed to develop in an environment that is as free of interference as possible.

The Mississippi Association of Broadcasters supports the proposal, writing that the system has worked well in the reserved portion of the FM band and would provide commercial FM stations "with much-needed flexibil-

ity to improve service to wider areas, without causing interference to adjacent or co-channel stations." MAB calls the FM band "mature" and says stations "have had ample time to reach full operations."

The Association of Federal Communications Consulting Engineers suggests the FCC propose rule changes to address the issue and consider alternative proposals.

NEW OWNERS FOR NAUTEL: Nautel founders Dennis Covill, David Grace and John Pinks sold their shares after 42 years. The sale had been in the works for about a year; the deal closed at the end of October. Financial details were not released. The new owners hold 100 percent of Nautel's shares and are local to the Halifax business community. CEO Peter Conlon said the ownership change has no effect on customers or employees.

NAB TRIES TO 'FREE' FCC NOMINEES: Sen. Charles Grassley, R-Iowa, is sitting on nominations of two FCC commissioners, saying the commission has not produced documents related to his inquiry into wireless broadband provider Lightsquared and the White House. In a letter to Senate Commerce Committee Chairman Jay Rockefeller, D-W.Va., and ranking member Kay Bailey Hutchison, R-Texas, NAB President/CEO Gordon Smith asks the committee to move forward on the nominations of former FCC and Capitol Hill staffers Republican Ajit Pai and Democrat Jessica Rosenworcel. The FCC is at four commissioners, and will be down to three when Democrat Michael Copps leaves at year-end.

SBE SEEKS BAS HELP: The Society of Broadcast Engineers has made two filings to the FCC seeking better support for broadcast use of Broadcast Auxiliary Service spectrum. The first is a Petition for Rulemaking seeking changes to remote pickup rules to allow both digital and analog modulation on RPU channels. The SBE also hopes to correct an anomaly created by the commission in 2002, "by realigning the center frequency specification to allow for more efficient use of the spectrum while preserving the ability to stack channels for wider bandwidths."

The SBE said the change would expand equipment choices available to broadcast engineers to include devices currently restricted to non-broadcast use. SBE Frequency Coordination Committee Chair Joe Snelson said the proposal would make digital-modulation, narrow-band operation permissible.

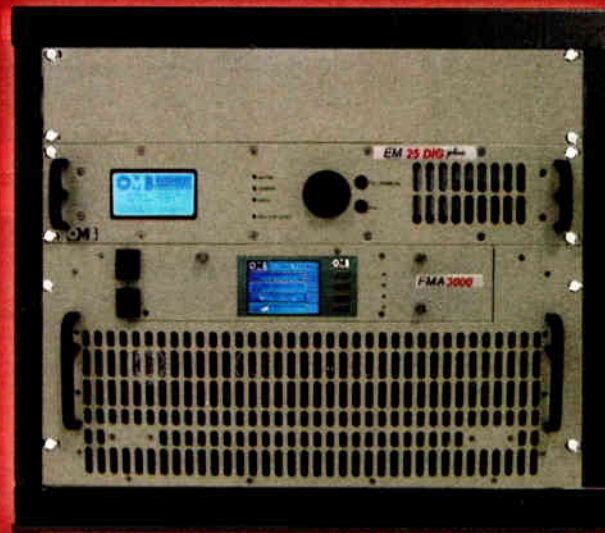
SBE also asked for an immediate rule waiver to allow use of digital radios and communications equipment, resolving what SBE calls "a serious disconnect between the broadcasters' need to maintain and update their RPU fleets and the availability of suitable replacement equipment."

SWEEPING CHANGES FOR BBG: The Broadcasting Board of Governors says steps proposed or being considered include a further "sharp drawdown" of U.S. shortwave capacity outside of a half-dozen key target countries and repeal of the 1948 ban on "domestic dissemination" of content to the United States. The BBG hopes to increase weekly audience by 50 million people in five years.

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Workbench readers are sharp! Seeing our tip about eliminating battery corrosion, a number of readers looked closely and noticed that the corroded batteries were not carbon-zinc or lead-acid.

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Longtime San Francisco market engineer Bill Ruck writes that baking soda is the traditional choice to clean corroded batteries, but only for carbon-zinc or lead-acid types. These have an acid electrolyte, neutralized by the alkalinity of the baking soda.

NiCad and manganese dioxide batteries have an alkaline electrolyte (and thus are called alkaline batteries). Although baking soda will work, the fastest way to clean up corrosion here is with a diluted acid.

Vinegar fits the bill. The cheap stuff works fine: Bill says he wouldn't waste his balsamic on such a task. (For a list of things you can clean with white distilled vinegar, see <http://tinyurl.com/wbvinegar2>.)

If you can isolate the battery compartment, just

pour some vinegar and then scrub with the toothbrush. If there's a chance the vinegar may get on other components — for instance, if the battery compartment cannot be separated from the equipment — apply with a cotton swab. This takes longer but you end up with nice shiny clean contact terminals.

Whether you use baking soda or vinegar, clean the contacts with fresh water, and dry thoroughly.

I missed Leon Amstutz, CBRTE, at the recent Indiana Broadcasters Association Annual IT/Engineer Workshop.

Leon is with Taylor University in Upland, Ind. As with Bill's cautions, Leon sent me a note about the vinegar and alkaline battery corrosion problem (he prefers white vinegar).

After cleaning up corrosion debris that had spilled onto a printed circuit board, he coated the damaged portion of the board with clear fingernail polish. This resealed it against future spills.

Leon Amstutz, WB9BAT, can be reached at wb9bat@sbcglobal.net. Bill Ruck can be reached at billruck@earthlink.net.

Bill is part of a group that is tackling component corrosion head on. As part of a group of engineers



Fig. 1: This is one of two sockets to be rebuilt.

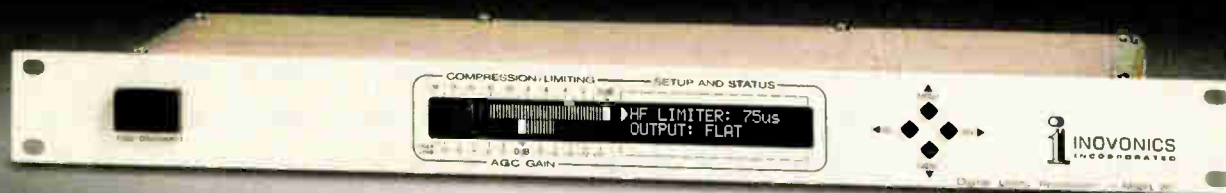
who are refurbishing an old RCA T3 transmitter. This is a 20 kW HF model. The sockets had to be completely disassembled and rebuilt, as seen in Fig. 1.

After a good soaking in ammonia, things looked a lot better. Just as vinegar works wonders on battery corrosion, ammonia helps you overcome salt air's corrosive effect on silver-plated parts.

Note the round cylinders around the perimeter of the socket; they are actually screen bypass capacitors! The end caps on the capacitors were so rusted that they were

(continued on page 14)

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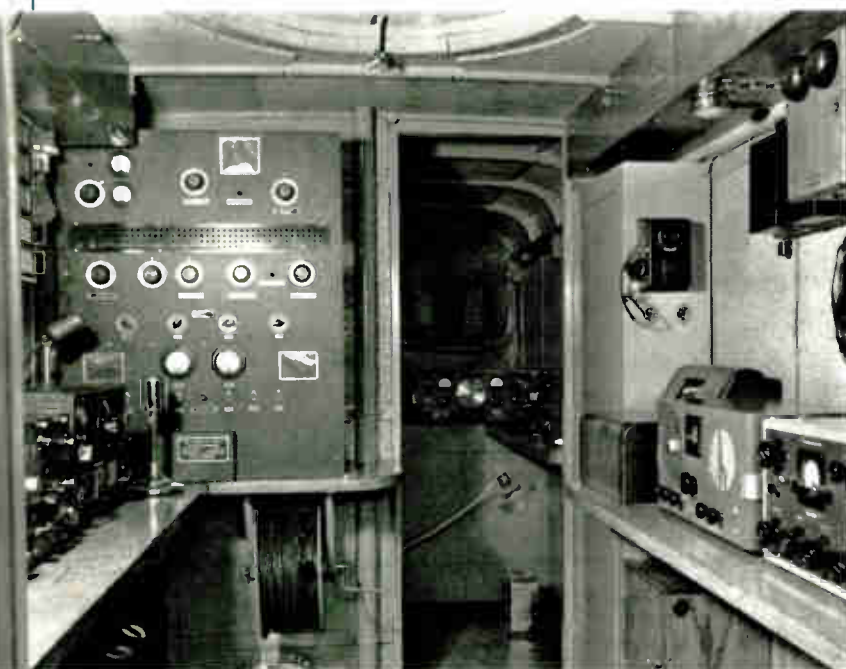
Inside a 1938 Remote Broadcast Van

BY JOHN SCHNEIDER

Here are two views of WWJ's elaborate remote broadcast truck in 1938. The lettering on the exterior of the

vehicle shows the Detroit News radio station's 960 AM frequency as well as W8XWJ, the call sign for WWJ's early ultra-high frequency high-fidelity AM "Apex" station, which oper-

ROOTS OF RADIO



ated on 41,000 kHz.

The interior view shows a shortwave transmitter on the left, with the W8XWJ call sign on the microphone. The nameplate at the bottom says "The Detroit News Radio Transmitter — Power Output: 100 Watts — Freq. Range 1,500 — 50,000 kc. — Designed and built by the staff of WWJ-W8XWJ."

Elsewhere in the vehicle we can see a number of National HRO, Hallicrafters and Collins shortwave receivers.

The wooden cabinet on the right rear is an especially interesting device. It's a Finch

radio facsimile printer, which could be used to receive news bulletins and photographs transmitted by the W8XWJ. (WWJ was one of the stations that experimented with facsimile broadcasting in the late '30s.)

These photos are from the Detroit News Archives.

John Schneider is a lifelong radio history researcher. Write the author at jschneider93@gmail.com. This is one in a series of photo features from his collection. Find more under the Columns/Roots of Radio tabs at radioworld.com.

WORKBENCH

(continued from page 12)

replaced with new ceramic caps and hardware, to make things fit and sparkle.

Fig. 2 shows Bill next to the PA assembly. Several panels were removed to facilitate cleaning. What a beautiful

result when all is completed. Everything was stripped from the transmitter, down to the bare metal frame.

Here's a neat tip that doesn't cost a lot of money.

How many times have you rushed to your RF site after a failure, only to find both transmitters running, one into the

antenna and one into the dummy load? It takes a moment to figure out what's going on, doesn't it?

Greater Media Boston has a simple yet effective solution, seen at the top of Fig. 3. The string of green LEDs gives you a quick visual indication as to which transmitter actually is on the air.

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help your fellow engineers, and qualify for SBE recertification credit. Send Workbench tips to johnpbisset@gmail.com. Fax to (603) 472-4944.

Author John Bisset has spent 43 years in the broadcasting industry, and is still learning. He is SBE Certified and is a past recipient of the SBE's Educator of the Year Award.



Fig. 2: The RCA T3 PA cabinet.



Fig. 3: LEDs, top, provide a quick visual indication to identify which transmitter is 'on the air.'

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And such audio... amazing. Thanks to our partnership with Fraunhofer (FHG), we were able to build a processing architecture that's specially optimized for MP3 and MPEG-AAC encoding algorithms. The result: detailed, commanding, blow-you-out-of-your-office-chair streaming audio, even at aggressive bit rates.

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Obviously, the correct answer is *software*, with the power to stream multiple channels from a single PC. Meet Omnia A/XE, the professional all-in-one software solution for Internet streaming.

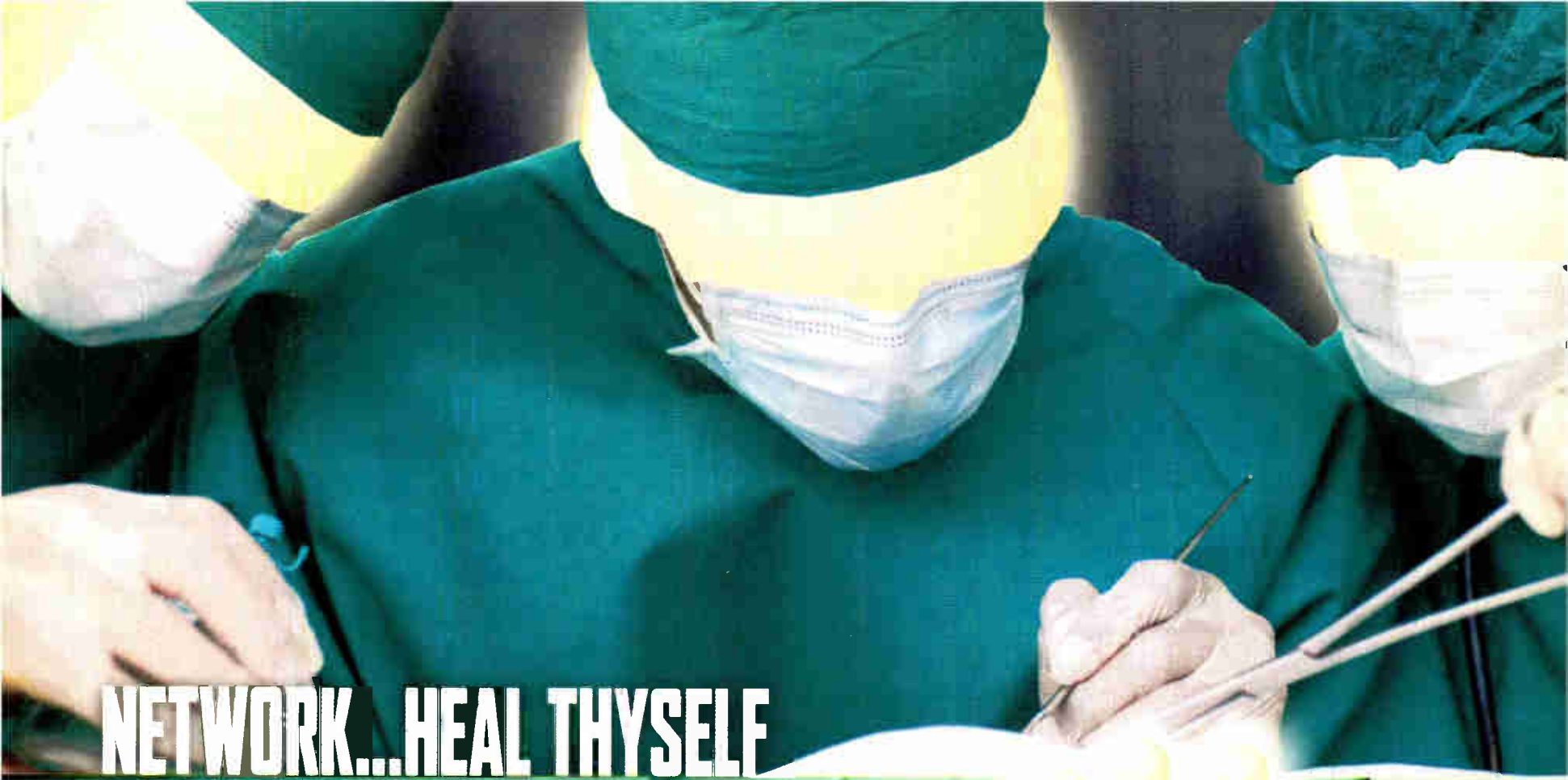
Omnia A/XE can turn a couple of lonely servers into a supercharged streaming network. It runs in the background as a Windows service and can process and encode multiple streams in various formats simultaneously. Just hook up your audio, choose a bit rate and processing preset, select your Shoutcast or Wowza server, and *Voila!* Streaming audio, simple as A, B, C.

And that audio packs the clean, clear competition-crushing punch Omnia is famous for. Each stream is sweetened with its own adjustable wide-band AGC with three-band compressor/limiter, EQ and low-pass filter, and precision look-ahead final limiter. The result: clean, clear streams with more presence and character than you ever thought possible.

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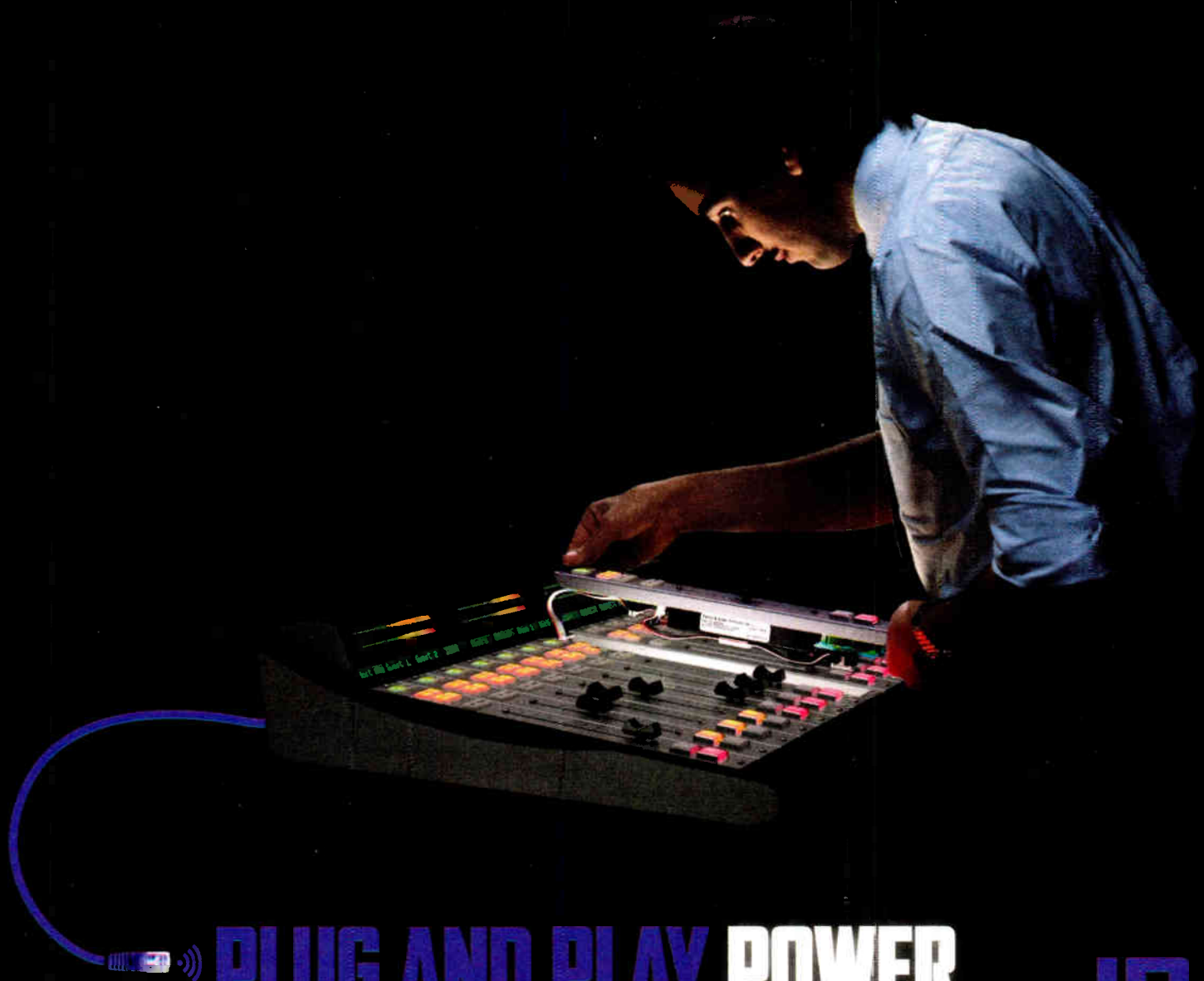
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HFCC Expands Focus Beyond Shortwave

Recent Conference Meeting in Texas Was First Such Event in the United States

BY JEFF WHITE

The author is with Radio Miami International. He is president of the National Association of Shortwave Broadcasters and chaired the HFCC/ASBU B11 Conference Committee.

The B11 Seasonal High-Frequency Coordination Conference took place in Dallas in September, organized by

SHORTWAVE

Continental Electronics and the National Association of Shortwave Broadcasters. In my mind, four significant points came out of the conference.

First was the fact that this was the first HFCC Conference to take place in the United States since the organization starting meeting in 1990. The HFCC, now in combination with the Arab States Broadcasting Union, meets twice each year in various countries; but it had never met in the U.S. In 2004, the NASB attempted to organize the A05 HFCC Conference in Miami, but Arab attendees were afraid that they would not be able to get visas, and the meeting was moved to Mexico City.

But the worlds of 2004 and today are different. This year the Arab countries and Iran supported the idea of having the HFCC in the U.S., and delegates attended from Algeria, Iran, Kuwait, Oman, Saudi Arabia and Tunisia. Now that the precedent has been set, hopefully some of the future meetings of the HFCC can take place in the U.S. again. Major thanks need to be expressed to the U.S. International Broadcasting Bureau and to Trans World Radio for their sponsorship of the meeting, along with that of Continental and the NASB.

The second significant fact about the Dallas conference was that the attendance was fairly similar to that of other recent HFCC meetings.

Many people thought that recent reductions in shortwave transmissions by some of the major international broadcasters would lead to a much-reduced



to introduce some new low-cost (under \$100) DRM receivers at the IBC in Amsterdam.

Maes showed three of these new



From left: Dowell Chow, president of Adventist World Radio; Horst Scholz, HFCC vice chairman; Lauren Libby, president of Trans World Radio; Oldrich Cip, HFCC chairman; and Jeff White, NASB president

attendance at the HFCC in Dallas. But some 100 delegates from 32 countries and 40 frequency management organizations around the world took part.

And it was obvious from the "collision lists" produced at the conference that even though a lot of stations have cut back on their shortwave frequencies recently, the HF bands are still quite crowded and it can still be difficult to find a clear frequency amidst the congestion of the shortwave bands.

BROADER SCOPE

The third important news item from Dallas was the decision by HFCC members to expand the scope of their organization.

Chairman Oldrich Cip made it clear that this will still be primarily a shortwave frequency coordination conference, but members voted to amend the articles of incorporation to expand the scope of the HFCC to include so-called "alternative delivery platforms" for international radio — things like the Internet, satellite, podcasts, local AM and FM radio relays, etc.

Chairman Cip suggested that future meetings might devote one day of the week-long conference to these alternative delivery methods. In part, this move is intended to counter the outflow of HFCC members who have ended or might end their HF broadcasts for budgetary or other reasons.

Finally, DRM — Digital Radio Mondiale — stood out as a highlight of this HFCC/ASBU Conference.

While some people had written off DRM as a "savior" of shortwave due to the lack of mass-market, low-priced DRM receivers, DRM Consortium Vice Chairman Ludo Maes showed up at the HFCC in Dallas a few days after helping

receivers at a DRM presentation at the HFCC in Dallas, and he told delegates that more of these types of receivers are coming soon. He told the HFCC that the governments of Russia and India have decided to undertake major expansions of their domestic and international transmitter networks, all using the DRM system.

Adil Mina of Continental Electronics, the only manufacturer of high-powered shortwave transmitters in the United States, said that while many stations have reduced their shortwave transmissions, others are investing in new, modernized DRM-capable units. He said that all new orders for HF broadcast transmitters are requiring DRM capability.

So things are not as bleak as some would suggest in the shortwave industry. And if new low-cost digital receivers appear on the market in the near future, DRM could still spur a renaissance of shortwave radio. Some cynics will say "We've heard all this before," but Adil Mina proclaimed that "Now our promises are coming close to reality."

'WAKE UP AND SMELL THE COFFEE'

As noted in Jeff White's accompanying commentary, the High-Frequency Coordination Conference is expanding its scope.

The following summary of the event is excerpted from an HFCC wrapup.

"There are some compelling reasons for doing this," stated Chairman Oldrich Cip. "TV and radio organizations for home listeners and their unions are busy discussing the future of distribution of the media content and the use of new — mainly digital — technologies. We would like to become a forum for such debate in international broadcasting. ... We believe that the debate should help develop a stable and effective system of content delivery and the synergy and cooperation between the old and new technologies."

Lauren Libby, president of broadcaster Trans World Radio, told the September gathering: "Digital vs. traditional broadcast platforms are vying for audiences. Medium-wave vs. FM vs. shortwave ... the list just gets bigger every day ... We live in a world where change and competition for the media consumer is getting fiercer monthly."

He exhorted delegates to "wake up and smell the coffee ... It's time to not do things 'business as usual.' Shortwave platforms will remain viable with new awareness campaigns and cross-promotion from the digital platform being employed. Quality content and quality delivery can help keep this multinational content delivery platform viable and appreciated. ... Shortwave has a future ... if we are willing to once again make it an attractive platform that is easily accessible to the general public that is cross-promoted from other media platforms."

Charles Caudill, president of World Christian Broadcasting, which operates KNLS shortwave in Alaska, said his organization remains dedicated to shortwave and is planning to open a new station in Africa, Madagascar World Voice.

"That new station and the some \$11 million we are spending on expansion is the reason I have been asked to speak to you today," said Caudill. He said only 1 percent of people in Madagascar have access to the Internet. "Millions and millions do not have satellite receivers." Areas like Siberia have little or no Internet or cell phone capability. Organizations that cut back shortwave hours, he said, "have just left a larger audience for World Christian Broadcasting."

NASB member Adventist World Radio hosted a trip for delegates to Southwestern Adventist University in Keene, Texas. AWR has a network of shortwave, AM and FM stations, as well as podcasts and an LPFM. It recently upgraded its shortwave station KSDA in Guam. Attendees also visited Continental Electronics' facilities, where they saw DRM transmitters under construction and witnessed a DRM exciter test.

Two new members were admitted to the HFCC: the Voice of Russia and Spaceline from Bulgaria.

EAS

(continued from page 4)

this is going to come with some fairly high stakes. If we all come away with a better understanding of the process and of areas to improve, the test could be considered a success.

However, I think we need to separate the process from the results, isolate the methodology from the outcome. We now have some information from which to learn and improve. At the same time, the methodology of this national test deserves examination, and this may also be an area where future tests can do better. A number of commentators have observed that the test may have been contaminated in various ways, importantly where EAS participants monitored sources other than those they would usually monitor. By doing this, a random variable was allowed to be introduced into one of the key points of the test — to determine if the national EAS relay works.

For the EAS system overall, there are a large number of potential lessons emerging. More will likely emerge as a result of the FCC's survey of all EAS participants. Parts of the national EAS relay continue to need to be addressed — there are still relay gaps that may need to be filled in either by adding additional Primary Entry Points, or by adjusting monitoring assignments. There were issues in the origination of the EAS message and communications systems between FEM A and the PEP stations — and this is certainly something that FEMA is already looking into.

What issues were reported by users of your equipment, if any?

We've received a good amount of feedback from our customers who are using the Digital Alert Systems DASDEC II CAP/IPAWS compliant EAS encoder/decoder (broadcast radio and television) and the OneNet (cable TV and IPTV). Customers have observed how the DASDEC IIs were really put to the test by some truly challenging input from the PEP system — multiple EAS tones, poor audio, etc. By far, our customers have been pleased with how the DASDEC performed. Potential improvements we learned could easily be provided to our customers via a quick software update.

Several of our customers have noted that a big asset of having a DASDEC or One-Net is the amount of information we can store in the log. ... As these folks look to fill out the FCC Form 2 and 3, this will be their best tool to understand what worked and what didn't.

What next?

Overall, the broadcast community did what it should, and then some. Credit should go to the many engineers across the

nation who invested significant amounts of time and effort to supporting this national test. This needs to be acknowledged.

I think one thing we all can do is to step back and take a breath. We need to think carefully about what happened. Stay calm. Don't panic. File your Forms 2 and 3. And let's see what the findings are from the FCC. Let's all pull ourselves together and work as a team to identify and fix the issues.

I think another national EAS test should be run in the relatively near future, perhaps sometime after the FCC publishes its revised Part 11 EAS rules. This test

needs a re-do for a variety of reasons so we can better examine additional issues in the EAS national relay. The FEMA alert product was fatally flawed from the outset, so that in and of itself should require another go.

However, I'd suggest segmenting the test into several elements. Perhaps a next try in several months with a nationwide Required Monthly Test (RMT) instead of an EAN. That would avoid the need to ramp up with so much public outreach, but still allow FEMA and FCC to test the EAS relay across the nation. I think the relay itself deserves a re-test since, in some

areas, folks were improvising and trying to find ways to "fix" the EAS relay even before the test, and in a few other areas the PEP could not transmit the alert. I'd suggest that it would be more appropriate to test the entire system "as-is" rather than let the diagnosis be contaminated.

After a national RMT, try the EAN test code again in a year or so. Learning from this national test will hopefully be incorporated into revised FCC Part 11 EAS rules that are anticipated to be released somewhere around the end of the year. And after that, perhaps a national RMT based on the new CAP capability.

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Stations Try ‘Social Radio Format’

These Vegas FMs Are Programmed Entirely by Listeners. How’s It Going?

BY JAMES CARELESS

Will the “social music” concept have legs?

Since June 30, Las Vegas radio stations KXLI(FM) and KYLI(FM) have

PROGRAMMING

been programmed entirely by their listeners. The music has been turned over to Jelli, a “social music service” with a crowdsourcing system that is driven by music choices from listeners who indicate their preferences via Web or smartphone.

By connecting through www.jelli.com/vegas or the Jelli phone app, listeners can influence what they want to hear from an online music library. They can push choices to the top of the list by using one of the “rockets” they receive daily, or kill someone else’s choice by dropping a “bomb” on it. A song could be pulled mid-play if enough voters

say so. The service uses an automated announcer named T-Bone.

Jelli also has a presence on Facebook, Twitter and YouTube, where fans can interact with customized “stations” and with each other.

“Jelli is 100 percent user-controlled radio,” says Mike Dougherty, Jelli’s CEO. “We use a social media platform to attract listener interaction and to build a community amongst all of us.

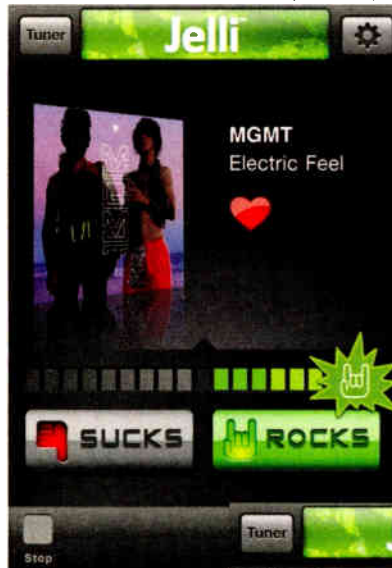
“This approach engages younger listeners, getting them involved with radio brands because they program the stations themselves.”

The result, he says, is “personal,

listener-relevant radio” that speaks to listeners in demographics that are most savvy about social media.

Privately held Jelli, based in San Mateo, Calif., was founded in 2009 by Dougherty and Jateen Parekh; the following year they secured \$7 million in funding from venture investment firms.

The only other full-time Jelli-formatted station at this writing is Brooke Communications station KSKR(FM), “Jelli 101.1,” in Roseburg, Ore., which flipped in



Gerry Schlegel, President of LKCM

strong ratings performance, time spent listening and user engagement.”

The owner of the two Las Vegas stations is LKCM Radio Group, based in Texas.

“Our Fort Worth station, KFWR 95.9 FM The Ranch, runs a listener-contact program called ‘Texas Music Interactive’ that encourages people to make music requests via text, phone and a listener chat wall,” says LKCM President Gerry Schlegel. “We also do a lot on Facebook, Twitter and YouTube, so social media is not a new concept for us.”

When LKCM decided to relaunch two struggling FM stations in Las Vegas — a city of 2 million with some 50 radio signals — it felt it had to cut through the clutter. (KVBE played dance, KHJ was country.)

Schlegel decided to sign a deal with Jelli, which handles the music programming and listener contacts for its radio clients.

“We knew we had to make a splash, and yet we wanted to keep our staff and facilities down to a minimum,” he told Radio World. “Rather than go the satellite/syndicated route, we opted to go with Jelli.” Schlegel declined to say how the business relationship works, whether it’s based on fee, barter or some other arrangement, though he confirmed he has no ownership or investment in Jelli. He described the agreement as the result of a long negotiation.

PROGRESS

The station chose call letters to align with the Jelli brand. Now KXLI is Jelli Rock 94.5, “100 Percent User-Controlled Rock Radio.” It draws from a catalogue of alternative and modern rock music. KYLI is Jelli Pop 96.7, “The New Beat of Las Vegas,” with top 40.

By using Jelli, LKCM Radio Group has been able to reduce its operations to

October. A number of stations use the service in off-peak hours (see sidebar). Among companies that have experimented with it are CBS and Clear Channel. Jelli has a distribution deal with Westwood One, which represents its barter ad inventory. In September, Emmis Communications began five customized Jelli-run stations for listeners that connect via Facebook’s new music platform.

CBS station WYSP(FM) in Philadelphia used Jelli but dropped it when the station changed format to simulcast sports. Greater Media’s WBOS(FM) in Boston no longer uses Jelli; a manager at WBOS declined comment on the reason.

Based on its experience to date, Jelli believes it has proven that it can “drive

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JELLI STATIONS

The stations featured in the story rely on Jelli 24/7. These stations also use the service, generally in non-peak-hours.

KDOT (104.5) Reno, Nev.
 KEEY (102.1) Minneapolis
 KENR (107.5) Missoula, Mont.
 KISN (96.7) Bozeman, Mont.
 KNDE (95.1) College Station, Texas
 KSMX (107.5) Clovis, N.M.
 KTRS (104.7) Casper-Riverton, Wyo.

WBLI (106.1) Long Island, N.Y.
 WCYY (94.3) Portland, Maine
 WJYY (105.5) Gilford, N.H.
 WKLS (Project 96.1) Atlanta
 WKRL (100.9) Syracuse, N.Y.
 WKZQ (96.1) Myrtle Beach, S.C.
 WPST (94.5) Trenton, N.J.
 WQPO (100.7) Harrisonburg, Va.

a Las Vegas sales office plus its KXLI/KYLI transmitter site in Clark, Nev., northwest of Sin City. "We have sales people plus an engineer who maintains the transmitters," Schlegel says. "We outsource our commercial production, and Jelli handles the programming." Both companies are involved in promotion and advertising.

The group has been able to maintain



Mike Dougherty, CEO of Jelli

ad sales and generate some media buzz.

"It's called Jelli Radio, and it is addicting," states a KLAS(TV) report posted online at 8NewsNow.com. "It is like a radio station and video game all rolled into one."

"Listener response to the format and user interface has been outstanding," Schlegel said. "The engagement metrics are off the charts compared to regular terrestrial radio or other forms of Internet radio." He said the stations have increased audience since the Jelli move, though he noted that one of them is a relatively new signal. "Share has doubled monthly for three consecutive months."

he said in November.

"Based on the last book," Jelli's Dougherty said earlier, "we have about 100,000 FM listeners split between both stations. As well, about 19 percent of our cume is listening via streaming media; that's on top of our 100,000 off-air listeners. And 3 percent of our cume are chatting with each other and interacting, so the Las Vegas Jelli community is starting to grow."

Schlegel is happy with the progress. "Jelli has created buzz for us in Las Vegas, and has got our listeners engaged," he says. "It gives us something

unique and timely in this market, and creates value for advertisers."

As for songs being cut off in mid-play, he says it doesn't happen often, in his listening experience: "It is alarming when you hear a song cut off, but rather amusing."

Does the Jelli approach mark an important change in radio programming, or might this be a creature of passing interest in social media, to be replaced by something else in the not-distant future?

"Jelli is not about people's interest in social media," Schlegel replied. "It's about giving people a sense of empow-

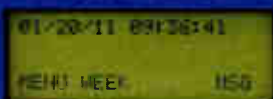
erment. Whether someone chooses to actively participate or passively listen, just knowing that you have the *right* to vote and program is very powerful and engaging. Listeners are personally vested in the brand and product development.

"Studies of 'Generation Y,' 'Millennials,' 'Generation Next,' whatever you want to call the emerging post-1970s generation, support there is not a 'passing interest in social media,'" he said.

"Gen Y wants to be asked their opinion and give their input. Jelli allows them to do that, in real time, and build a community around their music."

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With a stagnant economy, advertisers are applying pressure to radio stations to cut rates, offer better placement and drive better results. Ignore these requests at your peril.

When your account execs relay client demands, provide them with ammunition to assist with client retention. Fail to act, and one of your radio competitors — or another medium — may provide solutions and win your clients away.

Dropping rates may be the most time-efficient tourniquet but it is rarely your best choice for creating value for clients. Let's explore other ways to give clients more bang for their buck.

GET CREATIVE

One surefire approach to better results is to ensure your clients are airing effective creative. Account executives and sales managers too often accept whatever a client delivers, whether proposed copy or finished production.

You don't need a killer creative services director in-house; it's never been easier to outsource spot creative to experienced specialists. Many small production houses are being run by talented, formerly well-paid creative services directors who lost jobs due to consolidation or downsizing in our industry.

I am happy to recommend a few or ask others to do so. Before you sign such a deal, ask for radio station and advertiser references and for links to



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spots you can hear.

Step two in improving your client's creative is more difficult but not impossible: Read or play the finished product to a small sample of the intended audience.

You can do this entirely online, if you like, by posting one or several spots, then asking your recruited panel to write down what they remember from the commercials.

You finally will have to admit something that, deep down, you know. Messages often are not clearly communicated in many of your spots. Entertainment or emotive factors also can make a significant difference.

After you've got your effective creative wrapped up, make sure you are scheduling spots properly with high frequency over shorter spans of days. Rather than airing 50 spots over 10 days, run all of them over five days; this will certainly increase the recall needed to drive action.

Local celebrity endorsements for products, services and activities can garner a higher level of attention for clients. Sure, there are talent fees involved, but if you can provide a sought-after celeb to voice a spot and/or show up at an event, clients often will jump at the chance. You'll have to go beyond your on-air

PROMO POWER



Mark Lapidus

pool of talent. Every city has recognizable athletes or other glamorous personalities, many of whom are game to earn extra money and enjoy the limelight.

Do you ever look at your logs to see where spots are placed in stop-sets? Here's a shocker: More listeners will hear the first commercial than the sixth one in a stop-set.

This begs myriad questions. Are your clients getting a fair shake? Should you occasionally stack the deck in somebody's favor if a renewal based on results is on the line? Do clients with the best creative deserve to go first? Should you charge a premium for this position?

I'm not sure there are correct answers, but these questions sure can create an interesting discussion at your next sales meeting.

KNOW YOUR ASSETS

You may have to play the "added value" game to keep clients happy.

Make an asset list for easy reference. Here's a short one to get you started: Sponsorship billboards for news, sports, traffic, concert updates and other features; website section sponsorships mentioned on-air; banner ads; pre-roll on video, contests on-air and online; Facebook and Twitter plugs or endorsements; contextually embedded links from your site to a client site; naming rights for your studio, van, morning show or events. (Send me more ideas and I'll share them.)

Although many clients may ask you to cut rates, your response must be market-based. If competitors are holding rate and your sellout rate is fair, there is no reason to acquiesce.

Instead, assure them you can make their investment provide a greater return by utilizing several or all of the assets outlined above.

In some cases, it may be feasible for you to offer a few special clients the opportunity to trade out a portion of their schedule for services or goods that you really may be able utilize. For example, you may need to shred 10 years of documents and just happen to have a client who sells that service. You then take part of their next schedule half cash/half trade.

While there is never a one-size-fits-all solution for clients, I can't help myself in delivering a mantra I learned from my first GM many moons ago: "Great ratings solve many problems."

Mark Lapidus is president of Lapidus Media. Contact him at marklapidus@verizon.net.



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These Caught Our Eye at AES

Al Peterson Strolled the Floor in New York;
Here's a Sampling of What He Saw

BY ALAN PETERSON

Ten years ago New York was a different place. Reeling from the attacks on the World Trade Center, the city had pressed the Jacob K. Javits Convention Center and other large venues into use for triage. This meant postponing the AES convention until late November 2001.

In 2011, as the new Trade Center rises towards unprecedented heights, New York again feels optimistic and vibrant. As it does in alternating years, the Audio Engineering Society reconvened in October for the 131st AES Convention in the Javits Center to enthusiastic crowds, though now relocated from its more familiar space in the South Concourse to the North end of the main center.

THE GEAR

Products drew conventioners to the 310-booth exhibit floor. While many folks wondered why players such as Adobe (Audition DAW software), Loud Technologies (Mackie) and Sony didn't make the trip, there was plenty to keep the 16,000 or so visitors occupied.

From the start, it was hard to miss the Avid exhibit. The company rolled out version 10 of its industry standard Pro Tools workstation. The new version boasts Clip Gain, allowing individual clips recorded at different times and settings to all start out at the same level.

Pro Tools is available as software only for the Mac and Windows, or in the HDX configuration with dedicated cards handling up to 256 audio tracks per card.

Only a few other workstation manufacturers peppered the exhibit floor, including Samplitude Pro-X from Magix, the veteran Pyramix from Merging Technologies and Harrison's MixBus, easily the best bargain on the floor at \$150, with the tonality of a Harrison console mated with an open-source audio engine.

Many mixers on display were primarily for music recording and complicated commercial mixing, but a number of

manufacturers were happy to show off radio broadcast-style consoles.

The Studer entry was the diminutive OnAir 1500, a six-fader control surface intended to work with the company's Nano Score engine. Among the surprises under the hood, an integral jingle player with USB audio storage, VoIP telephone connectivity and 12 assignable soft keys to implement any function desired by the on-air operator.

Lawo AG of Germany exhibited its Sapphire broadcast console line, with

table mixer, with mic/line-switchable balanced XLRs, a dedicated consumer mic-level input on a locking TA3 connector and an aux level output on a 3.5 mm connection. The MixPre-D has XLR and USB digital outputs to jack directly into a DAW computer or laptop running



The Studer OnAir 1500 is a six-fader control surface with jingle player and USB audio storage.



Harrison MixBus

Mac, Windows or Linux.

Sound Devices also had the Mix Assist software for its model 788T eight-input, 12-track digital audio recorder. While better suited for location audio recording for TV and film production, the primary feature of Mix Assist is that it turns down unused microphones while instantly activating only the microphones that are in use. For multi-mic setups in the field, Mix Assist assures a clean recording.

On the topic of remote recording, Yamaha stepped up with the Pocketrak W24 handheld recorder, capable of up to 108 hours of MP3 audio on a 16 GB SD card; Sony, courtesy of Shoreview Distribution, showed the PCM-D50

handheld stereo recorder, with a pair of flexible built-in X-Y mics and TASCAM exhibited the affordable (under \$100 street) DR-05 pocket recorder and the portable 8-track DP-008 unit for in-field multitrack recording.

Veteran radio newshounds would well have mourned the absence of on-the-go cassette and MiniDisc recorders. It truly was a new world on that exhibit floor.

TECH, TOOLS AND TOYS

On the technology front, Texas Instruments, flush from its recent acquisition of National Semiconductor, came to the show with free samples of high-performance

(continued on page 26)

PRODUCT SPOTLIGHT

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Intended more for television but suitable for radio program production, the Solid State Logic C10 mixer includes onboard spot and music playout and up to 512 audio paths. One product more relevant to basic radio production might be the company's Nucleus workstation controller, compatible with Pro Tools, Nuendo and other DAW environments.

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World Radio History

STUDIO SESSIONS

AES

(continued from page 24)

Burr-Brown audio ICs, including the OPA1602 op amp, boasting bandwidth up to 35 MHz and distortion figures of 0.00003 percent. If you still build little black boxes for audio, a circuit chip such as this is quite inspiring.

THAT Corp. likewise took the time to display a line of preamplifier chips, monolithic dynamics processors and digitally controlled mic preamps.

The NTI line of portable pocket-sized diagnostic devices gets better all the time. This year's lineup included the Minirator MR2 and MR-PRO analog signal generators, the Acoustilyzer AL1 acoustics analyzer, the ML1 analog audio analyzer and the precision MiniSPL measurement microphone.

NTI also featured the MiniLINK PC interface, allowing data from its measurement tools to be uploaded and displayed on a computer.

Gepeco International stepped up to help out engineers utilizing Cat-5e type cabling by introducing its CTS4504HDX digital cable, carrying four channels of digital data in a flexible and stage-worthy Cat-5e snake cable.

Across the hall, Belden rolled out new HD BNC connectors, a six-channel surround-sound mic cable using Cat-5 type cabling (model 3639) and a brand new flexible balanced analog/digital cable in a narrower gauge than normal (Brilliance 2221), sized to fit bantam plugs and 3.5 mm connectors without having to trim back the insulation jacket.

PLUG IT IN

For the radio production person, plugins are where it's at. Separate component recording devices and external processors have given way to doing it all "in the box" without having to leave the DAW environment.

Celemony made people sit up and take notice last year with Melodyne, which could "reach inside" polyphonic material and repitch individual notes without affecting the rest of the mix. This year's offering, Capstan, removes wow and flutter from tape and vinyl recordings made on questionable gear. This is salvation to anyone sitting on archival recordings made in the past with badly main-

tained or dying recorders.

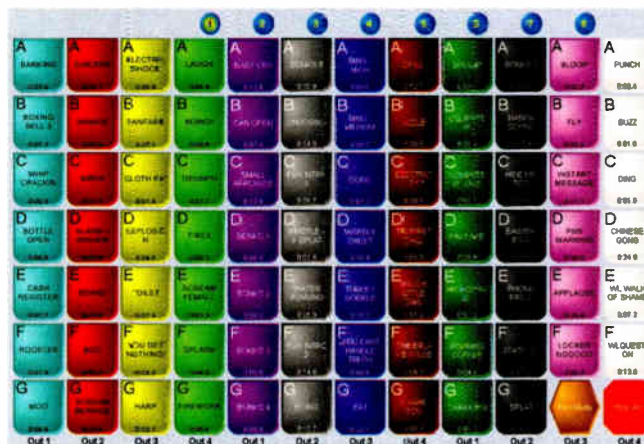
The NML RevCon-RR from Tac System performs an equally remarkable feat: de-reverbing recordings made in noisy and acoustically bad conditions, making the mic sound as if it closer to the subject being recorded and minimizing off-axis reflections. News reporters who could not get close enough to the action will find this useful.

BIAS showed off the Master Perfection Suite, combining numerous components necessary for high-quality mastering and sound design, including the PitchCraft frequency and formant corrector, Repli-Q spectral filters and the Sqweez multiband limiter/compressor.

A powerful mastering suite came out of the minds at iZotope. Ozone 5 consists of a paragraphic EQ, loudness maximizer, multiband dynamics and other components meant to polish a final release. Also, iZotope also began licensing its technology for mobile and handheld devices.

Keeping noise on one side of the wall and desired sound on the other was the goal of several companies at the AES convention. Taytrix exhibited its "Klick-It" interchangeable wall/sound-booth system, WhisperRoom worked its namesake sound isolation enclosure and Acoustical Solutions of Richmond, Va., displayed its product line of tiles, panels, glues and fixtures for constructing new rooms or treating existing spaces.

Of course, if you like lots of sounds all at once, the Sound Ideas display was where you could have auditioned the



HotShot is ENCO's instant playback box.

Radio stalwart ENCO Systems displayed its newest radio automation program Presenter, and was getting TV folks interested in its own instant playback box called "Hot Shot," with eight banks of 84 sounds each.

MAKE IT WITH MICS

Without microphones, radio would get mighty dull in a hurry. New mics on the floor touched all bases, from new designs of standard products to a resounding return of the ribbon mic.

On that front, Audio-Technica rolled out its AT4080 and 4081 ribbon units, both manufactured with MicroLinear manufacturing technology. The passive R44 and active A840 mics from Audio Engineering Associates paid tribute to the golden days of ribbon mics in their highly retro designs; as did Cloud Microphones with its JRS-34 and 34-P models, patterned after original RCA ribbon designs of some 70+ years ago.

Taking a more modern turn, Shure introduced its KSM313 and KSM353 ribbon mics, using the company's Roswellite ribbon manufacturing process. Breaking away from the standard rubber strap-based suspension cage, the 353 is shock-mounted with an industrial-looking ShureLock wire rope cage.

MXL took the retro experience all the way in its R77L mic — with a gleaming gold and silver body design, looking as if an original RCA

77DX fell out of a time machine. Stunning stereo ribbons from Royer and oddly retro mics from Cascade rounded out the ribbons on the floor.

Condenser mics are the default go-to mics when high accuracy and clarity are required. There were models for every kind of audio discipline; some from manufacturers you may never have considered before.

One such company might be Miktek of Nashville, Tenn., which came to New York with its C7 multipattern FET condenser and top-of-the-pile CV4 utilizing a NOS Telefunken ES800 tube. Or perhaps Lauten Audio, with its stubby but serious-looking Clarion FC-357 dual-diaphragm FET mic or even the MA-300 multipattern tube condenser from Mojave Audio, boasting a continuously variable polar pattern from omni to figure-eight and a military-grade JAN 5840 vacuum tube.

AKG has created a more cost-effective version of its popular C414 condenser microphone — the C214 — with a fixed cardioid pattern, 20 dB pad switch and 160 Hz rolloff filter. The company also rolled out its new Perception Series microphone line, with the tube-driven Perception 820 mic crowning the entire product line.

The 800-pound gorilla in microphones is Neumann, and the company's D-01 digital condenser mic set shows the company is not sitting still. This kit combines a large-capsule mic with a digital converter, shockmount, cables and software.

Telefunken won the "sticker shock" prize with its legendary U47/U48 mic, out there for \$8,000 and no doubt worth every penny.

But what good is a great mic if you cannot hear what is being recorded? A high-end set of headphones rounds out the sonic palette. For that you had to go back to the Shure display to try on the SRH940 pro reference headphones, which comes with spare ear pads and detachable coiled and straight cables.

And AKG got innovative with its K271 MKII headset: An automute feature actually turns the phones off when removed from the user's head.

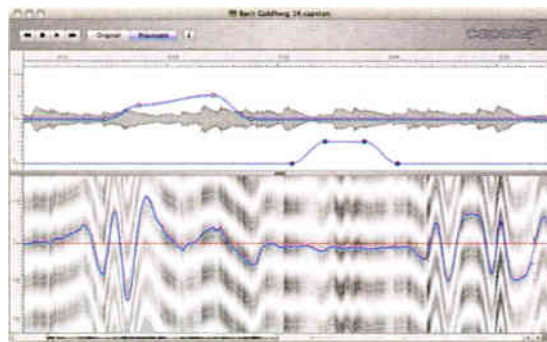
This avoids tabletop feedback near an open microphone.

Next stop for the AES is Budapest in April, and it will head west to San

Francisco next fall. See the schedule of conventions and conference at

www.aes.org.

Alan Peterson is the production director for the Washington-based Radio America Network. He has written for RW since 1989. Write him at alanpeterson@earthlink.net.



Capstan from Celemony removes wow and flutter from tape and vinyl recordings made on questionable gear.

25,000 cut "General HD" library, an all-new 24/96 digital sound effects collection on hard drive.

And to trigger those sounds on the air, two companies arrived in New York to show off some "instant playback" products: Merging Technologies (see Pyramix, above) exhibited its Ovation media server/sequencer for radio, TV, theater and corporate presentations.



Shure's KSM353 ribbon mic



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Looking for KFRC signoff radio broadcast from 1930 Andy Potter, running time is 0:22 & also the KLX kitchen the program guest is Susanne Caygill, a discussion of women's affairs with a long promotion for Caygill's appearance at a local store. Anne Truax, Susanne Caygill, running time is 13:44. Ron, 925-284-5428 or email ronwtamm@yahoo.com.

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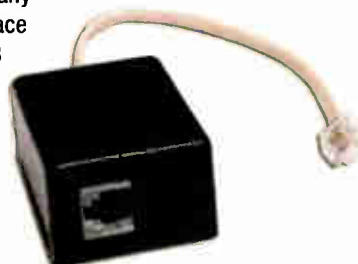
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Ambitious with extensive acting/modeling experience. Solid, authoritative news, journalism/sports abilities. Creative inspired copywriting/voice acting skills. Methodical, resourceful - ready to work! Andrew, 682-429-8298 or andrewruiz2@gmail.com.

Bold, competitive, creative leader. Sports/News, copywriting, Production, On-air or behind-scene talents. Versatile

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READER'S FORUM

THANKS MARK

Being from Minnesota, I read with interest Mark Person's article about the wireless Internet tower that interfered with KLIZ (AM) ("How Did That Wireless Tower Get There," Sept. 1).

We are fortunate to have Mark Persons in our state; he understands and deeply cares about maintaining quality radio. Our industry needs to foster the development of the next generation of quality engineers like Mark.

Leighton Broadcasting and many other broadcasters in our state are grateful for his work for us over the years.

*Bob Leighton
Chief Executive Officer
Leighton Broadcasting
St. Cloud, Minn.*

WHO PUT THAT THERE?

I sure enjoyed Mark Persons' "popped up antenna tower" article.

The story reminded me of a phone call I received years ago from a North Central Kansas client station, KFRM, a 5 kW, three-tower DA on 550 kHz.

Rod, the local engineer, told me that someone had just build a 200-foot tower across the highway from the station. After a quick check of the database, I told Rod the "someone" was the state of Kansas, and that the tower wasn't even half way constructed; the planned height was 450 feet.

I contacted the state communications director and was told that he would "check into it." Like Mark, I mentioned a couple of FCC regulations.

A half-hour later I received a return call saying, "You're right, we're wrong, make it right." Some

\$60,000 later, also with the help of Mr. Nott, the tight shotgun pattern to the south-southwest was back into compliance. The project resulted in a continuing association with the state, as their tower projects moved forward.

*Larry P. Waggoner, WØKA
Broadcast Technical Consultants
Wichita, Kan.*

THE FCC AND ABUSE OF THE RULES

Before my retirement last year, I was a broadcast engineer for 45 years. I received my FCC First Class License when I was 15. I have designed and constructed a number of big AM and FM stations in my long career.

I am disgusted with the direction that the broadcasting industry has turned. The FCC, once concerned primarily with the safe and legal operation of radio and television stations, has become a political puppet.

The broadcasting "big boys" have all but squeezed the "mom and pop" stations out of existence. With their political power, they have managed to change the FCC rules and regulations for their financial benefit.

In large markets, they put HD2 and HD3 streams onto their FM carriers and then get licensed to operate translators to rebroadcast the digital streams. Translators originally were licensed to provide fill-in service within the licensed contour of the station. HD2 and HD3 streams are an option. They should not be given the same access to the translator rules as the main analog carrier. It is simply an abuse of the FCC rules.

I have another example. KDRP(LP) is an FM station in Dripping Springs, Texas, that operates with 5 watts ERP (mostly vertical). They have a translator, K261DW-FM, which operates with 250 watts ERP (mostly vertical). How is it possible that the translator has so much more power than the primary LP station?

Why should an LP station even qualify to operate a translator?

I would certainly like to read somebody's "take" on the FM translator situation.

*Dr. Frank L. Berry
Midland, Mich.*

A TUBE ON THE BLINK

Thoroughly enjoyed John Schneider's article "WFBE's Home-Brew Rig" (Sept. 1).

Here's a true story about the old 204A tube. As a teenager my father, Art Nott, 5MM, W5MM and W5SL (SK), assisted Earl Hull build WKY in Oklahoma City in 1925. The transmitter was in Earl's garage, the studio was in a bedroom of his house and the antenna was a wire up in the back yard. Earl had little cash, so he paid my dad in excess parts.

One time Earl gave him a 204A tube, which was a real treasure for a young ham. Dad built a CW transmitter around it in the garage by his mother's house.

The antenna was a dipole with bicycle wheels at each end suspended just above the ridge of the house. When the rig was finally finished sometime after midnight, he tuned it up to about 500 watts and began calling CQ. In just a few minutes, his mother entered the garage saying, "Art, Art, all the lights in the house are flashing on and off!" So he tied the key down and took a look. Sure enough, all the bulbs were glowing dimly.

The house wiring was the old knob-and-tube type; the field from the dipole was just a few feet above the shingled roof and it coupled into the wires.

I don't know how he resolved the problem. Maybe my grandmother just had to ignore the flashing lights.

The WFBE rig is quite neat, but as John Schneider wrote, OSHA would come unglued if they saw it.

*Ron Nott
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Farmington, N.M.*

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Jan Lipski
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READER'S FORUM

PRODUCTION TOOLS YOU CAN AFFORD

What a terrific article ("These Tools Won't Break the Bank," Oct. 5)!

Years ago I used to subscribe to a production magazine and they would tout the latest bells and whistles of the latest DAW. But in the real world, the stations I always worked at had limited or no budget for production gear.

Don't tell me about the latest high end equipment. Tell me how to do high-end production with the equipment I have. An article like this is after my very own heart. How we can dazzle with what we *have*? That's what prod directors like me want to know.

I suppose Pro Tools is probably the standard and everything else is gaslight; but I loved Syntrillium's Cool Edit Pro 2.0 before Adobe got involved. I liked it because it was simple to use and I was able to churn out pretty decent production. I actually use Adobe 1.5 here because it so closely emulates the Cool Edit model. Adobe Audition 2 was horrible and 3 had just too many wacky features (I just want to produce spots, dig?).

The click-and-drag fade tool is pretty nifty. I have to admit. But give me back that Cool Edit Pro 2.0 any day.

Mark Ward
Production Director
Cumulus Wilmington
Wilmington, N.C.

Note: Read Curt Yengst's three-part series on affordable radio production software at <http://tinyurl.com/rwyengst>.

'LIVE' IS REAL

Jim Jenkins, owner of WAGS in Bishopville, S.C., wrote an inspiring letter in your Oct. 5 edition. He spoke of his dedication to "real people, in real time."

Doesn't matter if your station is in a shack. If the equipment is adequate and the on-air talent is good, the product is good.

The reason talk shows are so popular is they're "live" and connect with the audience. Music shows need to be the same, for there's something about "live" presentation that lifts the announcer's performance well above the sound of recorded announcements dropped into music on the hard drive. It's the vital connection to the listener.

Listeners somehow can sense the remoteness of pre-recorded announcements no matter how precisely they are woven into the music. "Live" involvement in programming has ... well ... presence, and listeners react positively to it.

Don Kennedy
"Big Band Jump"
Atlanta

BUILD YOUR BRAND

Another excellent column by Mark Lapidus ("Take Charge of Your Personal Brand," Sept. 7).

These days I only work part-time in radio but I've been thinking of my personal brand for years, even if I didn't use that terminology. My big break in radio was when Shadow Traffic came to New York City. In 1979 this was a new idea. I was lucky enough to be on drive-time radio in the No. 1 market at the ripe old age of 23. I didn't know it then but that decision helped to lead me to my brand today.

After being a traffic reporter on stations such as WINS and WABC I ended up working in the public sector in the transportation world. I wasn't the greatest traffic reporter, and I certainly didn't have the transportation expertise of my co-workers, but I did have a unique blend of the two that became my brand.

Twenty-three years later I unexpectedly found my way back on-the-air doing traffic reports. As with many broadcasters I do voice work, but thinking about my brand, I've focused on doing transportation-related voice work. Because of that, I've been able to land jobs as the voice on the NYC subway, the AirTrain at Newark and JFK airports and radio and TV spots for NJ Transit, among others.

Because of my experience and the connections, I've been able to grow my personal brand and enjoy some success. I think nearly everyone should consider their personal brand, whether or not they're in broadcasting.

Bernie Wagenblast
BW Communications
Cranford, N.J.

'TALK TO ME'

I enjoyed Stephen Winzenburg's article "Do You Remember 'Talk to Me'?" in the Sept. 7 issue. As a broadcast veteran since the early '60s, I've always watched with interest any time our industry is portrayed in other media, and I remember most of the TV shows cited by Winzenburg.

One program that should have been included is "Remember WENN," a skillfully crafted, thoroughly entertaining original series carried on cable's American Movie Classics from January 1996 to September 1998.

The series was the brainchild of Rupert Holmes; it was set in Pittsburgh at fictional radio station WENN just before World War II. There are several websites dedicated to the show and many — perhaps all 56 — of the episodes are available for viewing on the Web.

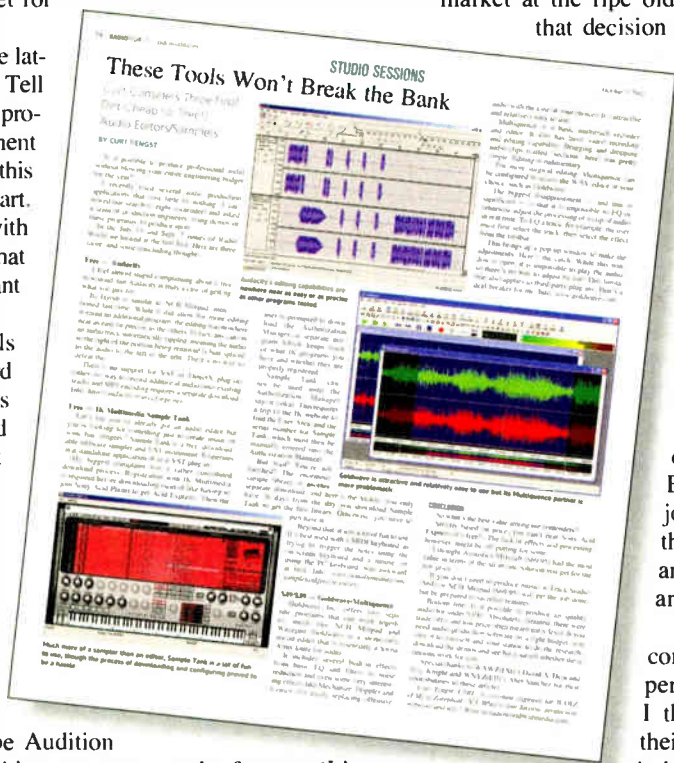
If any of you missed "Remember WENN," please explore and enjoy this gem of the radio-on-TV genre.

Jeff Hunt
Roanoke, Va.

WHERE'S DON?

How does the author of "Do You Remember 'Talk to Me'?" discuss radio personalities on TV and not mention Imus?

Yoshi Moro
Brooklyn, N.Y.



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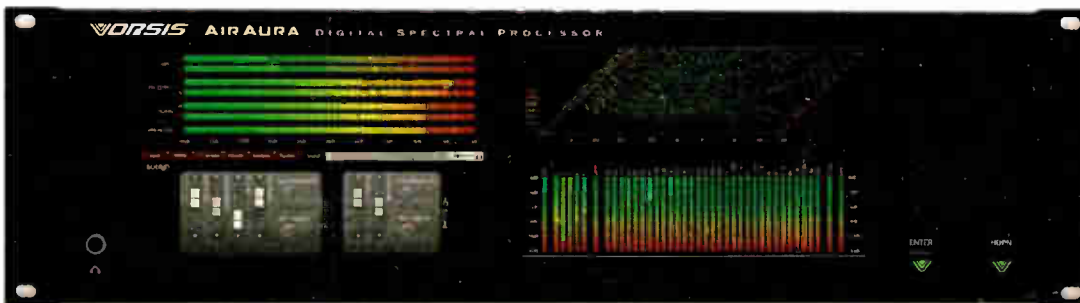
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