CHECK THOSE TOWER INSULATORS — Page 12

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GM JOURNAL

- In the New Year, Mark Lapidus says program directors should rededicate themselves to working with air talent every day. — **Page 22**

OPINION

- Readers comment on AM modulation, Norman Corwin, First Phones and more. — **Pages 29–30**

WOR, Harris Test Power-Saving MDCL

New York 50 kW AM Anticipates Savings

BY LESLIE STIMSON

Harris Broadcast and WOR(AM) say they've had success with a power-saving Modulation-Dependent Carrier Level algorithm at WOR, with no effect on Arbitron Portable People Meter data encoding/decoding, HD Radio signal coverage or digital audio quality.

MDCL algorithms have been used by broadcasters operating high-powered AM transmitters in Europe for a number of years. Carrier control algorithms for AM transmitters enable stations to save money on operating costs by reducing the carrier without reducing overall transmitter power. Recently the FCC began allowing AMs to use the power-saving technology on a waiver basis.

According to Harris Broadcast Vice President of Transmission Research & Technology Geoff Mendenhall, the com-

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Insignia: A Glimpse Of Artist Experience

NS-HD02's Audio Works Fine But Visuals Are a Work in Progress

BY ALAN JURISON

When you visit Best Buy's Web page looking for "Boomboxes, CD Players & Radios," you'll see the

DIGITALRADIO

category Portables Radios represented by an image of the Insignia NS-HD02 HD Radio receiver. So how well does the unit perform?

A review of the NS-HD02 may seem tardy at first; after all, it is an updated version of an earlier portable HD Radio receiver and has been around a while.

Yes, it's better than the original: for one thing, with a 2.4-inch touch-screen display, it has a larger area to control most of radio's functions than the first model, the NS-HD01 (RW, Sept. 1, 2009).

But more importantly, this also is one of the first iterations of a portable product that can display HD Radio's newest feature, Artist Experience — the ability to display images that are

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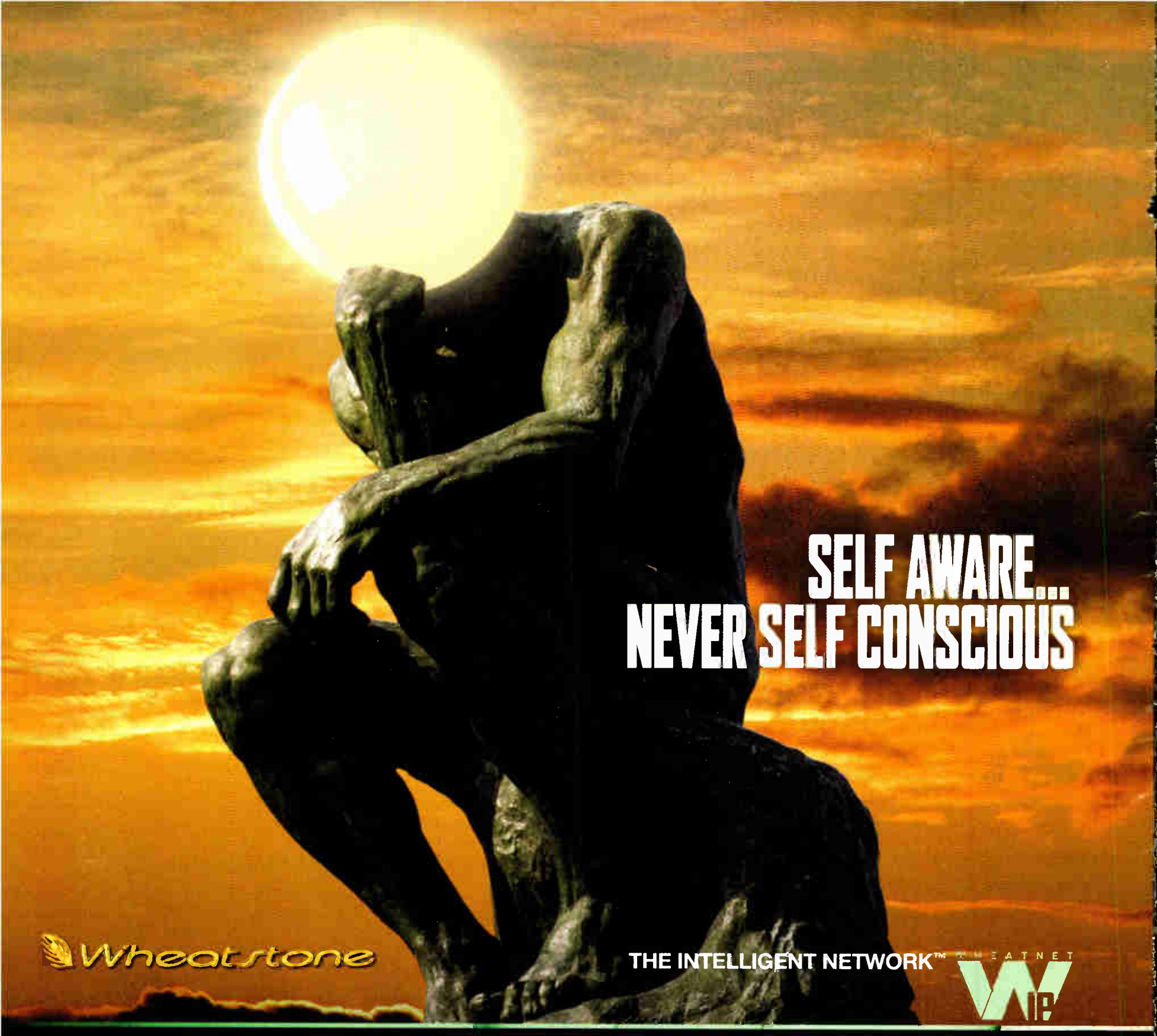

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MDCL

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mission is taking a case-by-case approach to waiving the rule that a station must maintain authorized power levels. He said the agency doesn't want to encourage struggling AMs that might otherwise be tempted to try to save money by lowering power and reducing coverage, as an alternative to going dark.

Harris engineers worked with Tom Ray, corporate director of engineering at Buckley Broadcasting/WOR(AM) in New York, to test the compatibility of two Harris MDCL algorithms.

Engineers tested Harris algorithms for Amplitude Modulation Companding (AMC) with a carrier reduction level of 3 dB at peak modulation, and Adaptive Carrier Control (ACC) at carrier reductions of 2 dB, 3 dB and 6 dB at minimum modulation. AMC reduces the carrier level during segments when modulation levels are high; ACC reduces the carrier level during segments when audio modulation levels are low.

The meter reading of about 38 kW is the approximate average power level reading of a 50 kW transmitter after the AMC (–3 dB) MDCL algorithm was turned on. Normally the meter would read 50 kW.

WOR at 710 kHz is 50 kW both day and night, and uses a pair of Harris 3DX-50 transmitters feeding a three-tower directional antenna array. It had the MDCL option installed on both transmitters. The station's programming is mostly talk radio with moderately to heavily processed audio.

Through testing that began in late November, participants found that AMC was the most compatible with simultaneous HD Radio operation, causing no noticeable change in HD Radio coverage, according to Harris and WOR. AMC also provided the largest reduction in transmitter power consumption, by saving 37 percent in average AC power input to the transmitter.

Ray estimated this translates up to a $3,000 per month savings on the electric bill at his New Jersey transmitter site. As RW has reported, Nautel, another MDCL proponent, has estimated that a 50 kW AM transmitter running 24/7 could easily save $20,000 a year or more, based on modest electricity rates of 10 cents per kilowatt hour.

The Fluke 434 power quality analyzer was used to measure the actual total AC power consumption of the transmitter with and without MDCL applied. The Sony ICF-SW7600 portable receiver was one of the receivers used to check for audio quality and coverage with the MDCL switched on and off.

Testing MDCL compatibility with PPM was vital, Mendenhall said. That's because if a station's PPM encoding is impaired, the station doesn't get listening credit while the encoding is not working.

During testing, WOR called the Arbitron PPM monitoring station in New York, which assured the station the PPM encoding/decoding was not affected by the power-saving technology, according to Ray and Mendenhall.

AMC remains on the air at WOR and Ray intends to keep it operating. During testing, the AMC was shut off every three hours so personnel could take carrier power measurements. Ray said WOR's carrier is only running at around 26 kilowatts of power with AMC, compared to 52.560 kilowatts of power normally.

WOR also tried the Adaptive Carrier Control algorithm, but the analog audio quality was affected, the digital signal was "destroyed" and the power reduction was only about 16 percent, according to Ray. "It sounded horrendous," though he said this doesn't mean it wouldn't work for an AM with a different type of format.

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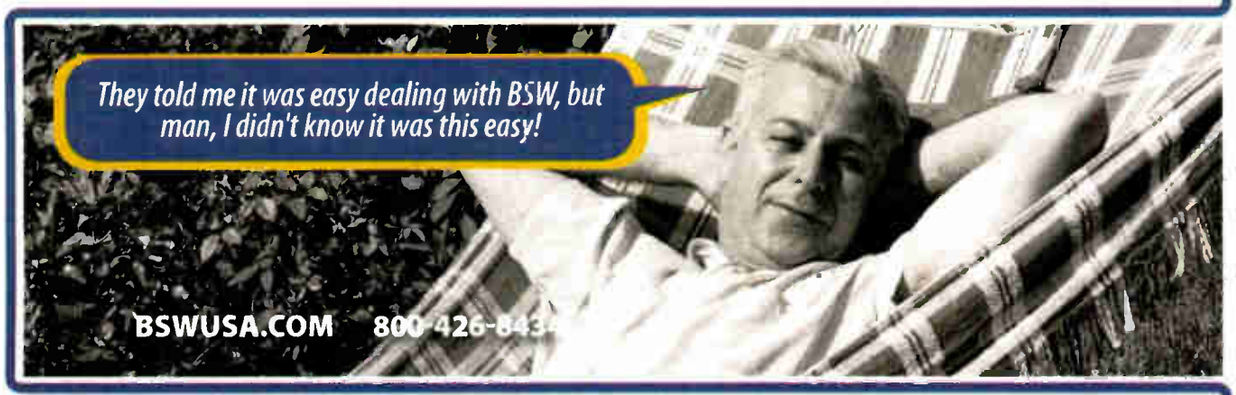

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In Alerting, Coordination Is Everything

Rudman Lays Out What to Watch for In the World of EAS, CAP and IPAWS

FROM THE EDITOR

Paul McLane

Richard Rudman is vice chair of the California EAS State Emergency Communications Committee and a core member of the Broadcast Warning Working Group. He knows EAS well from involvement in local, state and national emergency public information planning for more than 25 years. From 2000 to 2002 he served as the last chair of the FCC's EAS National Advisory Committee.

He's an important voice in the world of the Emergency Alerting System so I asked him his thoughts, given all that has transpired in recent months.

Richard Rudman

Richard, what should radio engineers be thinking and doing right now in regards to EAS?

First, everyone needs to check with the manufacturer of their new EAS equipment to make sure they have software updates installed that will be able to poll the IPAWS Atom server by the June 2012 deadline.

After receiving comments on the liabilities of RSS feeds, FEMA listened and changed to Atom feeds. When that happened, all manufacturers needed to implement a new operational selection for FEMA IPAWS Atom. As of Dec. 13, not all manufacturers had released the required software to poll a CAP Atom feed.

Second, broadcasters need to actively participate in updating their local EAS plans. I have always looked at LECCs as "committees of the whole" that have a few worker-bees who write and maintain what is needed for each locale. Everyone in every market should at least take an active interest in what the LECC will come up with.

Third, licensees in states without a clearly mapped-out CAP strategy need to work with their local broadcaster and cable associations so CAP implementation for local and state EAS can happen.

With the current economy, the best (and possibly highly provocative) question to ask state and local governments in discussions is, "What value do you place on warning people at risk so they might be able to take better protective actions to preserve lives and property?" Value equals money, time and effort invested by government into creating a viable warning origination plan.

Fourth, we need to find out if we want to cripple CAP EAS any longer than necessary by preserving legacy EAS SAME messaging.

If we really want to improve public warnings by taking full advantage of CAP messaging, we need to come up with a near-term transition strategy to retire legacy EAS SAME messaging. This is unfortunately an issue that broadcasters who bought add-on CAP devices for their legacy EAS equipment may not be happy with.

On the other side of the argument, some of us believe that allowing CAP converters to be built and offered for sale was a mistake. One thought: Considering the age of first-generation EAS SAME equipment, problems with their power supplies, printers, etc., purchasers of CAP converter devices may have just postponed the inevitable: purchase of a 100-percent CAP-capable box.

Fifth, we know we have a serious issue with cable override of on-air television stations during EAS events. Not all cable systems can do selective override. I would suggest our goal (including the FCC) should be to assure that EAS and follow-on emergency information broadcast by on-air stations is not interrupted, while also assuring that all EAS events come to the attention of cable viewers with "crawl" information that really tells viewers what is going on.

While I am aware that the cable industry is aware this is a problem and cable experts are working on it, the reality is that fixing this for all systems will have to wait for the next generation of head-end equipment and set-top boxes to be rolled out.

When the next generation of cable head end and set-top replacement equipment is available, I hope that CAP awareness can be built into the set-top converters so they will be true "warning appliances" apart from video monitors hooked to them. Where that to happen, set-top converters could store and forward EAS events, trigger alarms for the hearing and sight-impaired communities, and have the ability to be user-programmed to wake people up in the middle of the night.

What's your assessment of the success of the national EAS test?

We do EAS tests to expose problems with the goal of fixing what's broken and also making overall improvements to assure alerts and warnings will get through. Tests are tests. The only failed test in my opinion is a test that does not take place.

However, results of tests can be graded. From that point of view, the data-gathering portion national EAS test was a success since it gives us benchmark data for what is in place now that will help us improve in the future. The jury will have to remain out on the success of mitigation until we do another test. The next test will almost assuredly find other problems that will have to be addressed.

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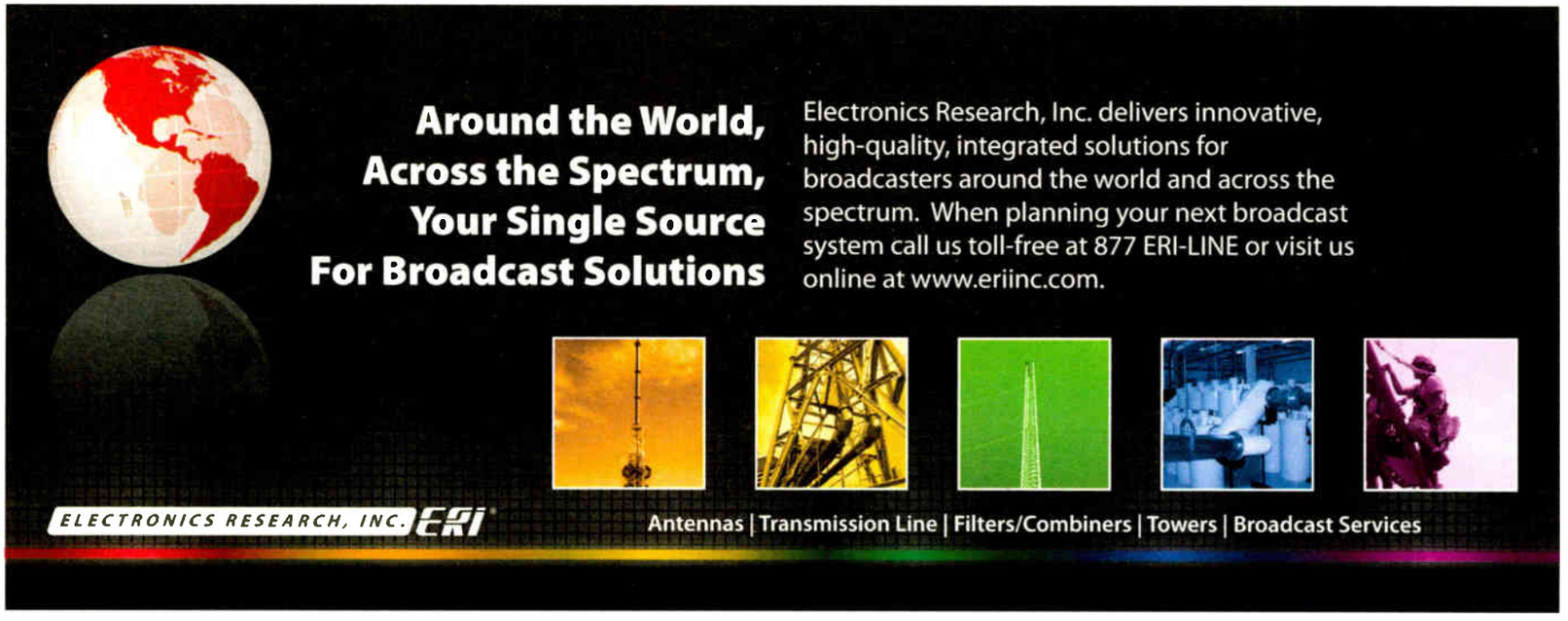
'Everyone needs to check with the manufacturer of their new EAS equipment to make sure they have software updates installed that will be able to poll the IPAWS Atom server by the June 2012 deadline.'



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NEWSROUNDUP

TOWER SITING: In interim regulations governing tower siting, the FCC says the likely impact of towers on migratory birds increases with tower height. Proposed towers over 450 feet will face more scrutiny. Owners would need to conduct an environmental assessment and allow the public time to comment on where a new tower would be sited.

ASCAP: The Radio Music License Committee and the American Society of Composers, Authors and Publishers reached a tentative agreement on music royalties. When finalized, the settlement would cover 2010 to 2016, end ongoing Federal Rate Court litigation and move stations to a revenue-based fee.

EAS-CAP: FEMA IPAWS Program Manager Al Kenyon posted a status update on the SBE EAS listserv indicating that FEMA is sending a series of RWTs to states/territories in each time zone to allow users to confirm that their CAP/EAS device is properly configured to receive CAP alerts from IPAWS OPEN.

NOT RADIO: Bob Pittman says Internet-based music services like Pandora, Slacker or Spotify are not radio and that radio shouldn't let those services define stations that way. The chairman of Clear Channel Media and Entertainment Platforms calls such services "personal music collections" and "playlist generators." Consumers who listen to these music collections listen for awhile, then become bored and turn to broadcast radio, because radio is dynamic and has live hosts, he told attendees of the Arbitron Client Conference in December.

World Radio History

INSIGNIA

(continued from page 1)

synched with the digital audio.

The unit became available in late 2010 but it was difficult at that time to find stations transmitting Artist Experience data along with their HD signals. Radio World and I wanted to try AE as part of this review so we waited. I bought two units in the months after its introduction, and tested them in several cities.

USER INTERFACE

It takes a little time getting used to the touchscreen interface. I was frustrated for the first few minutes until I read the manual and learned how to control the device.

(Hint, slide your finger at the bottom of the radio where the tuning controls are, like you would to unlock an iPhone or Android phone, in order to access the menus.)

There are only three physical buttons: the Power/"Unlock" button, Volume Up and Volume Down. However, there's a lot to be said about physical buttons for efficiency. If you want to change the station when the radio is in your pocket, you have to press the unlock button and then touch the screen properly to unlock it. Then you have to press the correct button on the screen scan/seek or tune. In the case of using the presets, you have to navigate to a secondary menu, go into presets and then select your station. While the touch screen is trendy, some aspects of using this radio are not as convenient as they would be if there were physical buttons.

The unit has an issue when you are seeking FM stations; it stops on the first adjacent channel on most HD stations. Broadcast engineers are quick to figure out what's going on in this case; the radio is seeing the HD digital carriers and stopping one channel short.

But this is not desirable, because all you hear is noise. A typical listener will think the radio is defective. There have been complaints about this problem on the Insignia consumer forums (*community.insigniaproducts.com*).

Customers on the forums also complain that the Preset system is cumbersome and that the auto lock of the screen is difficult to work with; I agree.

SENSITIVITY

Like the older model, the new NS-HD02 seems to have excellent sensitivity on analog FM broadcasts. However, I have noticed on several units that its sensitivity on HD broadcasts is not as good as the older model. This concerns me, because it seems that this radio does not perform as well on HD broadcasts as it should. While I can use a set of earbuds and pick up analog FM broadcasts from far away stations in adjacent markets like the older model, this one seems to have a tougher time decoding HD broadcasts of local stations.

Promotional image of the radio shows off the concept.

I have even gone so far as taking this radio, alongside the older unit, and putting one in my left pant pocket and the other in the right. Then, feeding the earbuds into the ear on that side, I tuned to an HD2 broadcast. I walked around an interior office. While the older NS-HD01 model didn't glitch at all, I had multiple audio glitches and even periods of silence on the NS-HD02.

While this test isn't scientific, other colleagues have noticed this trend as well. Unfortunately, it seems like we've taken a step backwards in HD Radio reception performance with this model, which is not only unfortunate but creates a big problem with Artist Experience.

THE ARTIST EXPERIENCE

The Insignia NS-HD02 is one of the first new radios that support the Artist Experience feature developed by iBiquity. This technology allows radio stations to send images via HD radio broadcasts.

For now, most implementations are focused on sending album art on music stations. This, coupled with the Title/Artist/Album text data being transmitted by HD Radio stations, gives over-the-air radio broadcasts that "MP3 player" feel, and allows listeners to see album the art of the current song that's on the air.

While the radio supports the Artist Experience, finding an HD Radio station that is transmitting the Artist Experience is rather difficult.

I did a lot of travelling across the country in early 2011 and could never find an HD station that was encoding with Artist Experience. It took until late March for me to finally come across two FM stations in New York that were encoding (WHTZ and WLTW). Shortly thereafter, I came across KWNR in Las Vegas while I was at the spring NAB.

Since then I have found a few more stations transmitting album art, but the number of stations encoding it appears limited, the adoption rate among broadcasters extremely slow. This has been a topic of discussion on the Insignia product forum as well from consumers. The radio is advertised with the Artist Experience being one of its main features, yet very few stations support it, and people are frustrated that Artist Experience "isn't available in their market" yet.

Further, your local HD Radio station may be airing Artist Experience images but you may not notice them immediately.

That's because, according to iBiquity, the album art is only sent once or twice shortly before the next song starts. So, if you tune to a radio station in the middle of the song, you will not see any album art. You will get the Title/Artist/Album text display, but no image until the next song.

After the next song starts, assuming no HD signal impairments, I started receiving the album art within 15–20 seconds. After a few seconds, the album art goes to a larger screen.

I like how the album art gets larger; however, I dislike that the radio now doesn't show you the frequency you are tuned to, station call sign nor album title. These are all important, and they should be accommodated in the larger album art view.

You may have noticed I said "assuming no HD signal impairments," and that's important. If the receiver has any data errors during the limited time when the image is being transmitted, the image will not display.

In my opinion, this is a big problem, especially with this radio. As I mentioned, this radio's HD performance is not as good as the older Insignia model, and I've noticed more digital reception issues with this newer model. This directly affects the display of the image.

For example, when I was using the radio in an interior office environment in midtown Manhattan, I rarely saw images until I relocated to an office with a window. Likewise, taking the radio on an outdoor stroll on the Las Vegas Strip, I also rarely saw images. If I remained stationary, eventually I would see an image. To be clear however, there were few HD audio dropouts in these cases.

Sending images via HD Radio is a great idea, but as implemented here, it needs work thanks to two major issues: the Insignia NS-HD02's apparent sensitivity issues decoding HD radio transmissions, and the design, in which album art images are only being sent once or twice. It appears that if there are any interruptions in the reception of the image's data stream, you will not see the image for that song.

This receiver was my first experience with Artist Experience. I have since used other models on display at NAB in Las Vegas to compare.

In the HD Radio booth at NAB there were two mobile (car) radios that supported the Artist Experience on display: a Volvo OEM model, and a JVC KW-NT3HDT. These two perform much better and were much more consistent with displaying the album art. They had better antennas and generally better reception conditions than the portable Insignia. However, these radios experience the same issue in which an image is

(continued on page 8)

PRODUCT CAPSULE

INSIGNIA NS-HD02
HD Radio Portable Player

Thumbs Up
+ Attractive design
+ AE (album art) via HD Radio
+ Live Pause
+ Analog FM RDS support

Thumbs Down
– HD reception/sensitivity not as good as previous model
– Battery life not as good as previous model
– RDS display and implementation bugs
– Presets cumbersome to access
– AE (album art) not widely supported

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World Radio History

INSIGNIA

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only received when you are tuned to the station before the next song starts. Songs that are in progress when you tune in will not display album art because you've essentially tuned in after they were transmitted.

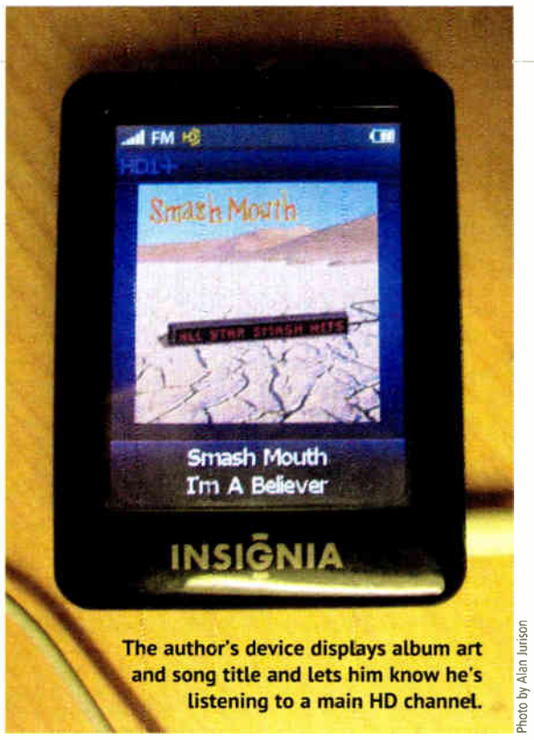
One thing I noticed using these two automotive receivers was that when commercial or non-music elements were playing, I would see the radio station's logo. I never saw that on the Insignia NS-HD02. I heard some speculation that the NS-HD02 has limited memory for image storage and will only store the current image, and not the default station image. On this topic, Insignia notes: "Decisions not to render station logos were made based on broadcaster implementation expectations." That's unfortunate, because station branding via the Artist Experience is something I think is a really important development.

Of note, the JVC KW-NT3HDT stood out of the three radios I've evaluated so far; it's use of image caching and storage gives the listener the best experience yet.

RDS SUPPORT ON ANALOG FM

The NS-HD02 also supports analog RDS/RBDS on stations that are not running HD broadcasts, and I applaud Insignia for supporting RDS in this product. However, I have noticed some software-related bugs related to how the NS-HD02 processes RDS. It appears that the radio glitches the RDS display in and out of RDS mode if a data error occurs when it receives the Program Service RDS field.

Since most stations in the United States employ a dynamic PS, this field is changing values every two to five seconds. Since the radio constantly is getting new data, if there's a data error it briefly switches out of RDS mode and comes back in.



The author's device displays album art and song title and lets him know he's listening to a main HD channel.

Photo by Alan Jurison

Some stations scroll the RDS PS field faster (in two seconds or less), and I found that if you are using the NS-HD02 in an area with a weak signal or multipath, the RDS may never display properly on these stations.

An additional issue is trying to add an analog FM station that has RDS as a Preset. If you are in the Preset menu, every time the RDS PS field changes on the radio station, the unit kicks you out of the Preset menu. For those stations scrolling the PS fast, it's a race to see how quickly you can follow the sequence of commands to add a preset. I think many listeners would just get frustrated and not use the Preset feature.

Unfortunately, I am not surprised at these RDS issues. Insignia had issues with the PS field on the older NS-HD01, which I brought to the company's attention but have not seen addressed.

I am disappointed Insignia didn't use more of the screen in analog RDS mode to display the entire RadioText (RT) field. There is enough real estate on the screen to display all 64 characters, yet the radio only shows about 22. The software code that they use to scroll RTs that are longer than the screen displays doesn't work very well, it seems to reset the scrolling of the RT every time the PS is changed. On stations scrolling the PS, that reset makes it so you cannot see the other 42 characters of the RT. I would recommend that Insignia's engineers compare how their unit handles RDS processing to the iPod Nano fifth and sixth generations, which handles this feature well.

I am also disappointed that Insignia didn't implement more advanced RDS technology RT+ standard like other portables on the market such as Apple's iPod Nano. The same look and feel on HD stations could be duplicated on RT+ enabled stations, which are growing. It's a relatively simple standard to support and perhaps Insignia will consider supporting RT+ in future models.

Unfortunately, battery life is also an area where the older unit performs better than the newer one. Insignia rates the NS-HD02 of having a battery life of "up to seven hours" and the NS-HD01 as "up to 10 hours." However, my tests on two NS-HD02 units lasted six hours 15 minutes, and six hours 27 minutes. The older NS-HD01 units lasted 10 hours 42 minutes, and 13 hours 21 minutes. My runtime tests only had the display active for the first 20 seconds of operation, to ensure that the larger display wasn't necessarily the cause of the lower battery life on the newer unit.

LIVE PAUSE

Live Pause is another notable feature available on the HD-NS02 radio, and it works reasonably well. While the radio stores the HD Title/Artist/Album data with the audio, it does not do this with the analog FM RDS data.

Many of the issues I've discussed have been brought to Insignia's attention. I noticed that an HD-NS02 purchased later had a slightly newer software version, and the RDS PS Preset implementation issue mentioned above had been fixed in the newer software.

This radio does not have the ability to update its firmware. Insignia told me in an e-mail: "There are different software versions in play at this time as we have made some improvements as running changes. Unfortunately, the means does currently not exist to update players beyond the pre-installed firmware. We're working on possible software upgrades for both existing and future new units."

SUMMARY

While the advanced features of this unit are promising and exciting for our industry, there are still a lot of areas that could be improved. I hope that Insignia learns from these issues and incorporates these into future software updates for newer NS-HD02 units. I also hope Insignia keeps these issues in mind when developing newer, future products and I encourage them to allow firmware updates on any newer models. As to Artist Experience it appears to be a work in progress.

Alan Jurison most recently was a regional IT manager/broadcast engineer for Cumulus Broadcasting in Syracuse, N.Y. He holds several SBE certifications including CSRE, AMD, DRB and CBNT. Opinions are his own. Reach Jurison at ajurison@gmail.com.

MDCL

(continued from page 6)

Indeed, Mendenhall said ACC gives a user the greatest power savings with formats whose levels are not running at peak all the time, such as a lightly processed music format. In contrast, WOR's talk levels are processed heavily.

In ACC mode, if the format pauses are long enough, the automatic gain control in the receiver will start to turn up the gain in the radio, which can cause the HD to unlock, and blend back to analog, according to Mendenhall. Such HD dropouts did happen on WOR with ACC. In contrast, with AMC turned on "we never saw any HD dropouts," he said.

From left: Tom Ray, corporate director of engineering at Buckley Broadcasting/WOR(AM) in New York, and Harris personnel Terry Cockerill, systems engineer; Geoff Mendenhall, vice president, transmission research and technology; and Brian Szewczyk, district sales manager.

Listening tests at weak signal areas on several types of receivers with digital, analog and synchronous AM detectors showed no noticeable loss of audio quality. During drive tests with AMC turned on and off repeatedly, Ray said WOR actually was louder in fringe areas.

We recently reported that Crawford Broadcasting received a waiver to test MDCL algorithms on station KCBC(AM), San Francisco. The station, which operates at 50 kW power daytime and 4.1 kW night, planned to test using a Nautel NX50 transmitter, according to Crawford Director of Corporate Engineering Cris Alexander. That system supports the AMC algorithm as well as Dynamic Amplitude Modulation. DAM reduces the carrier amplitude at lower modulation depths where the full amplitude is not required to prevent negative peak distortion. The audio level is not adjusted, so this has the side effect of increasing audio volume at low modulation depths out of the receiver. There is also a corresponding decrease in signal-to-noise ratio at low modulation depths.

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RUDMAN

(continued from page 4)

What conclusions did you take away from the recent FEMA webinar?

I think many broadcasters were disappointed that more specific details on the audio loop-back issue were not outlined. Everyone needs to understand that some parts of EAN origination take place within the boundaries of national security. So, it would do more harm than good to give out too many details that could float around the Internet to be exploited. I have confidence that the people close to the process in FEMA will make sure that there will be no audio loop-back problems for the next test.

The webinar did reinforce the strength and value of the across-the-board cooperation between EAS stakeholders that led up to the test. A large number of people have so far contributed to best practices and other information we will all need to have as the EAS improvement process continues, and the webinar did a good job recognizing this fact. The webinar was also an opportunity to recognize all those who have devoted the better part of their recent working lives to carry out this first-ever national live code test.

As some of your readers know, FEMA has a few people working on EAS issues who have great broadcast experience. I would go as far as to say that without these people, FEMA would have been severely challenged to conduct such a test in partnership with broadcast and cable stakeholders.

What are the next important steps for the industry to watch for in the world of EAS, CAP and IPAWS?

First, release and testing of Atom feed software by EAS equipment manufacturers. Second, release of the FCC's rewrite of Part 11. Third, activities concerning rewrite of local and state EAS plans.

Then, plans for state and even local CAP servers, followed by activity to reinforce what we all know is a highly vulnerable and un-resilient Internet distribution structure for CAP messages, both nationally and locally. And then, CAP-awareness built into end-user radios, TVs and cable/satellite set-top boxes, to turn them in to "warning appliances."

What should other EAS stakeholders do differently in future to improve this system?

I do not see a dividing line between broadcasting and other stakeholders. For EAS improvements to happen, we need a new public/private partnership that includes all stakeholders. There is pending legislation in Congress offered by Sen. Susan Collins (R-Maine) to support this effort. However, apart from that, I would like to see more broadcasters learn "Emergency Management 101" and more emergency managers learn "Broadcasting 101" so we can all work together more effectively.

Is the EAS system unfairly maligned? If so, what would you say to its critics?

EAS works where local broadcasters have teamed with local emergency management, weather service and other stakeholders to make it work. The complaints and complainers all seem to be in places where no partnerships exist, or they have fallen apart.

What I would say is that everyone who embraces the goal of saving more lives and property by issuing more timely and accurate EAS warnings needs to get on the same side of the rock and push in the same direction. I think there are enough of us already on the right side of the rock, so I would issue my own respectful but clear "warning" to those standing on the other side to get out of the way.

Other thoughts at this juncture?

Gary Timm came up with a seminal document several years ago he named the EAS Roadmap. In it he laid out formation of various working groups that would work on how we could implement enhancements to the EAS. The pending legislation I mentioned may be able to lay out where the road goes now by putting in place a new broad-based stakeholder group to advise the government. This group could build on the model we developed for the Partnership for Public Warning back after Sept. 11.

This pending legislation could also reinforce putting EAS warning training solidly into existing federal emergency management training programs. This single effort has a fighting chance to win over more emergency managers as to the true value of better warnings to support their efforts during emergency response.

Finally, we can all benefit from efforts to support the circulation of day-to-day EAS two-way information that we all need to both educate ourselves, and to let us answer questions others need to have answered. Among these are your publication, the Broadcast Warning Working Group's EAS Forum, the SBE's EAS list and Gary Timm's AWARE forum. The NAB and the National Alliance of State Broadcaster Associations also have sites and pages for EAS support. For more information, all of the above can be "Googled."

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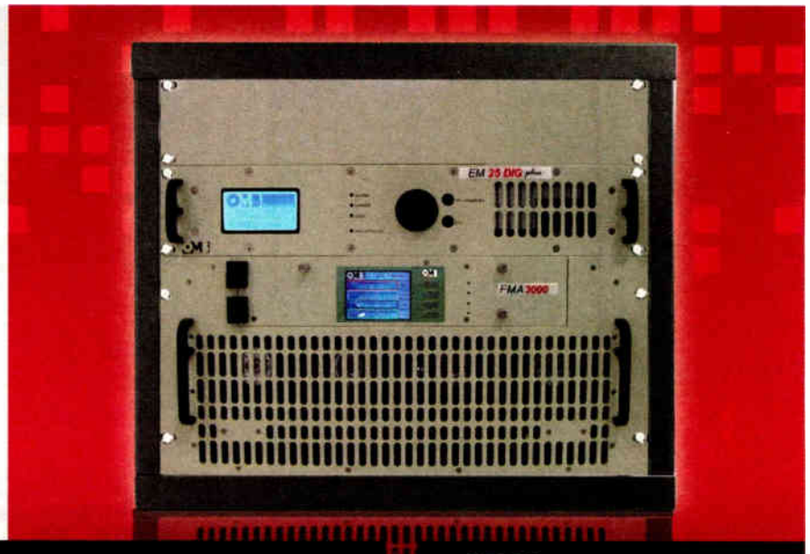

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World Radio History

Check Towers After Ice and Snow

Watch Insulators Not Only for Failures but Also Hairline Cracks

WORKBENCH
by John Bisset
Read more Workbench articles online at radioworld.com

Crawford Broadcasting Director of Engineering Cris Alexander wrote in depth in the Aug. 17, 2011, issue of Radio World Engineering Extra about the replacement of a self-supporting tower's insulators. The article caught the attention of North Carolina contract engineer Tim Walker, who experienced a similar situation at WMVA(AM) in Martinsville, Va.

In December of 1994, an overnight ice storm deposited approximately 1 cm of rime ice on the members of the station's 425-foot self-supporting tower, constructed in 1950. As if ice weren't enough, high winds followed.

The next morning station personnel noticed that three of the four base insulators were cracked or completely broken. Fig. 1 shows the northeast insulator, with a portion of the cracked porcelain lying on top of the cement pier.

Fortunately Sky Tower Service of Lynchburg, Va., was in the area to perform maintenance on a nearby tower. The crew responded immediately and secured the tower leg, which was supported by the demolished insulator.

The temporary repair to the northeast tower leg can be seen in Fig. 2. The support foot, under the jack on the right, was left over from previous tower work.

Sky Tower Service then replaced the broken insulator with an on-site spare

(continued on page 14)

Fig. 1: The insulator on the northeast leg sustained the most serious damage.

Fig. 2: Here we see Sky Tower Service's temporary repair to support and restrain the northeast leg.

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www.AxiaAudio.com/iQ

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World Radio History

WORKBENCH

(continued from page 12)

insulator assembly that the station had in storage. Over the course of the following months, the damaged insulators were shipped to LeRoy, N.Y., for evaluation by Lapp Insulators Co. (*www.lappinsulator.com*).

Fig. 3: Porcelain insulators can also crack, as seen in the northwest leg.

Tim's frightening experience suggests one more thing to check after ice and windstorms.

Not only can the stresses of an ice storm cause major insulator failure, as seen in Fig. 1, but insulators should be checked for hairline cracks, clearly seen on the northwest leg's insulator, Fig. 3. Damage to the southeast leg's insulator, Fig. 4, was almost as bad.

It would be interesting to model this damage, given that the most serious breaks occurred on the northeast and southeast legs. Curiously, there was no damage to the fourth insulator. Could the ice and wind direction have contributed to the severe insulator damage on one side? We'll leave that answer for the mechanical engineers.

Tim Walker can be reached at *tim@clee.com*.

HCJB's Alan Shea, CSRE, CBNT and N2UDV, offers a worthy comment about the use of Sharpie brand markers to indicate critical adjustment locations on satellite dishes, as we described in the Nov. 16 Workbench.

Alan notes that vandals often carry Sharpies to create graffiti; someone intent on ruining your day conceivably could make spurious marks on your dish settings just to confuse you.

That's why he keeps a bottle of red nail polish in his tool bag. For critical situations he recommends real "thread lock," but for marking the settings/locations of set screws, nuts and other adjustments, the nail polish is king. Most vandals aren't into carrying red nail polish around. Now that black nail polish is so popular, you might consider that color, too.

Frankly, Alan says he would use both a Sharpie Industrial marker and red nail polish for his dish settings. He says Sharpie Industrials can be found at most home improvement stores or online.

By the way, if the bottle of nail polish isn't made of plastic, you might want to seal it in a small plastic sandwich bag. If your tool bag is anything like mine, there's way too much stuff rolling around in it. Save your tools from being "painted" and use a sealed bag.

Reach Alan Shea at *ashea@hcjb.org*.

Fig. 4: The damage to the southeast insulator was almost as bad as that suffered by the northeast leg.

You know, Alan's idea of red nail polish can be applied elsewhere.

It's customary to use colored cable for stereo analog pairs, where the color helps distinguish "left" from "right." But if your plant uses conventional Belden 8451 (black) shielded audio cable, a red dot of nail polish atop the connector feeding your "right" audio signal can guard against audio mix-ups. (Red and Right both begin with "R.")

Any other ideas? Sharing tips is what *Workbench* is all about. Email me with a high-resolution picture. Your published submission qualifies for SBE recertification credit. Send thoughts to *johnpbisset@gmail.com*.

Contribute to Workbench. You'll help your fellow engineers and qualify for SBE recertification credit. Send Workbench tips to johnpbisset@gmail.com *or 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.

MARKETPLACE

PALEY JUKES: Ron Paley Broadcast signed a distribution, support and business agreement with Digital Jukebox, a maker of automation, production and scheduling software headed by Jim Barcus.

RPB will be responsible for sales, marketing, turnkey hardware systems and tech support for the Digital Jukebox client base. It has hired specialists in automation, networking, IT and scheduling to answer sales calls and provide support, including Robert Parsons and Ginny Crowe, while Van Clough of Broadcast Technical Management in Fayetteville, N.C., will provide integration services. Jim Barcus will concentrate on product development.

Ron Paley hinted at new products planned for the spring NAB Show and said dealer inquiries are welcome. Ron and Ted Paley have a long background in audio equipment, having built recording studios starting in the late 1960s. They began distributing audio and broadcast equipment in the 1970s and branched out into installation. They also were involved in the creation of automation provider OMT Technologies.

Info: store.digitaljukebox.com; www.ronpaleybroadcast.com

Ron Paley, left, and Jim Barcus

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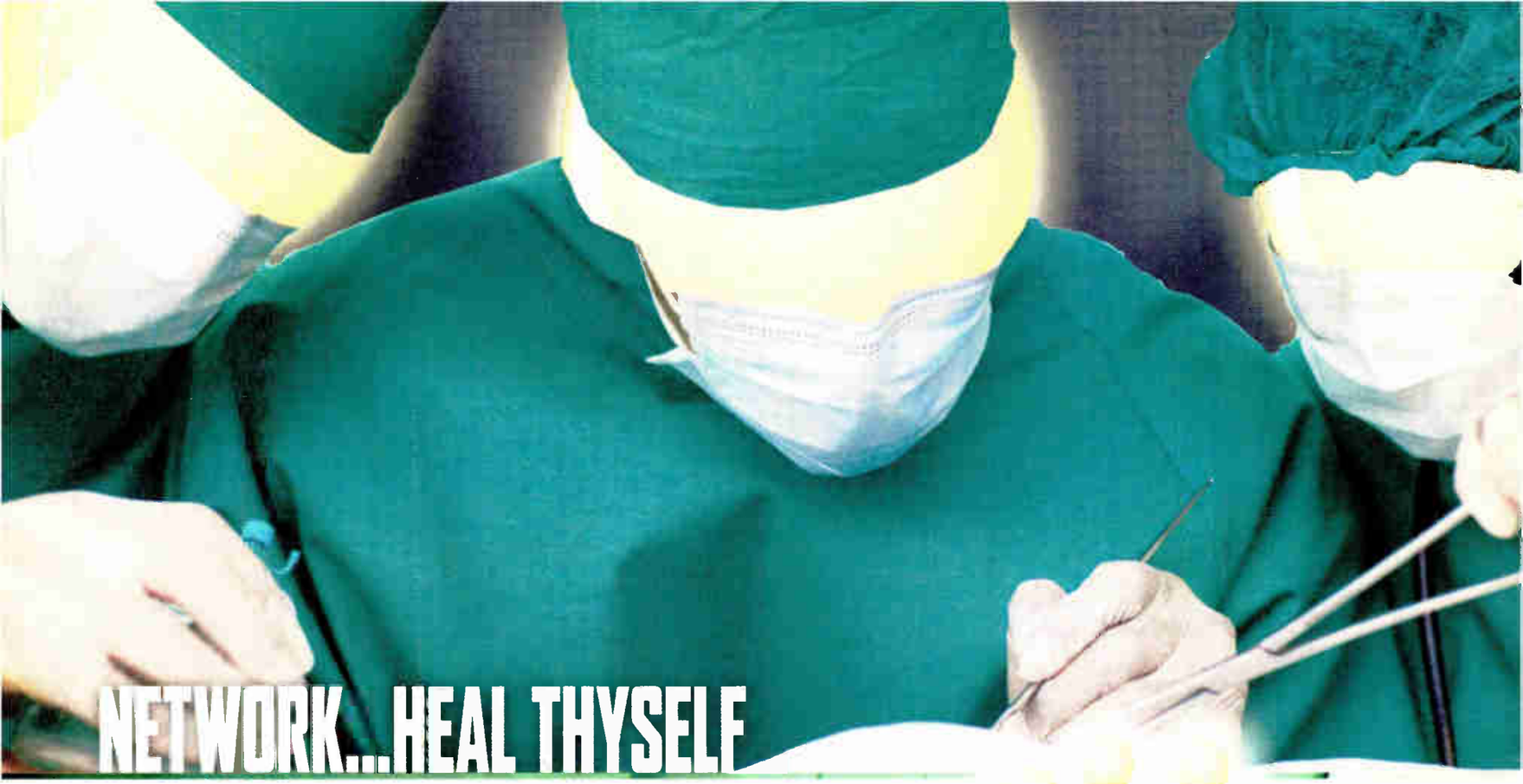

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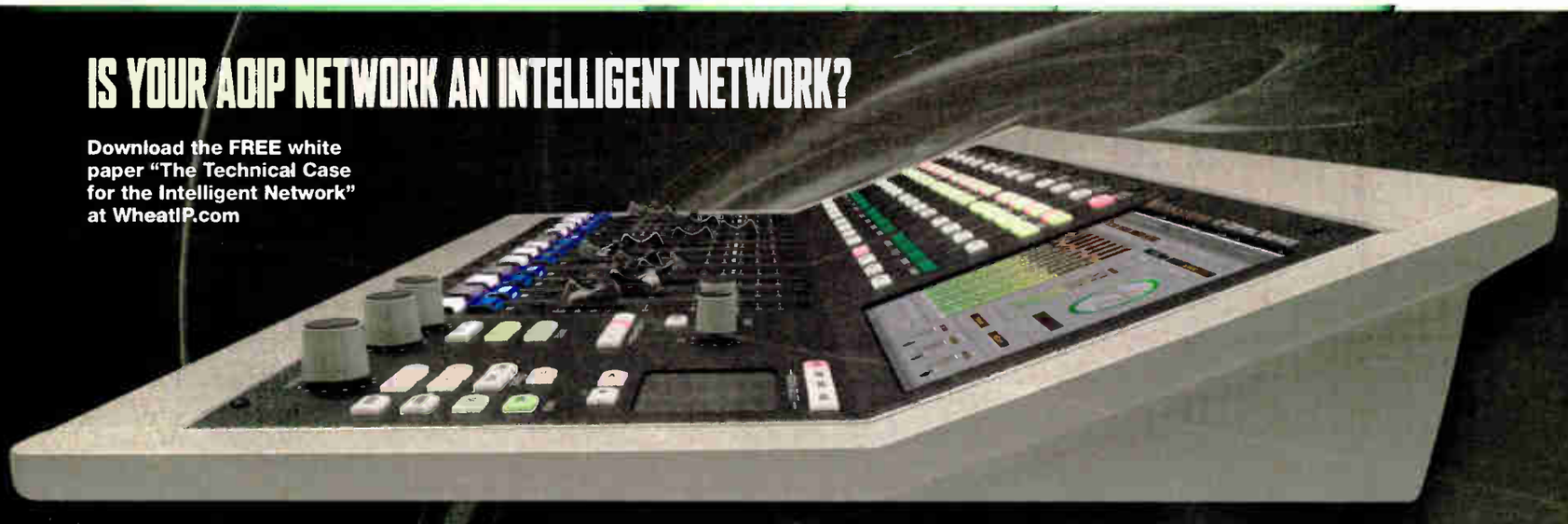

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AUDIOARTS

World Radio History

Give Your FIM a New Handle

For a Few Dollars and 15 Minutes, Replace That Ratty-Looking Grip

BY ROBERT W. MEISTER

The carrying handles on Nems-Clarke 120E or RCA WX-2 Field Intensity Meters are leather-covered spring steel units, certainly state-of-the-art in the 1950s.

TECHTIPS

Unfortunately, the leather breaks down and falls off. The meters I've seen or worked on have had their handles taped up with gaffer's tape or dozens of layers of electrical tape, in an attempt to keep them attached and functional. Some people take them to leather shops and have them rebuilt or recovered.

Fig. 1: The original leather handle on a WX-2A meter.

For a few dollars and 15 minutes of time, you can replace that old ratty-looking handle with a nice functional and comfortable plastic handle.

I purchased mine on a popular auction site for about $4 plus shipping. Search for "replacement luggage handle" and choose the style and color that suits you. I'd recommend a black or gray plastic handle with silver-colored hinges. I had bought a pair of similar handles for a few dollars more that I used on two other RCA meters. You could also purchase a handle that doesn't fold down at all. It's your meter; choose whatever you like.

The author is amateur radio operator WA1MIK and an FCC licensed contract radio engineer in Southern Connecticut.

PROCEDURE

Follow these simple steps to replace the handle.

1. Remove the cabinet from the unit. Unplug the battery cable from the chassis. Put the chassis in a safe place away from the area you'll be working in.

2. Use a screwdriver to pry the handle's mounting tabs away from the inside of the top of the cabinet. Then use a pair of stout pliers (lineman's pliers or Vise-Grips) to bend one tab vertical so the mounting clips can be removed from the slots. Pry the clips out of the cabinet and remove the handle. Discard these parts unless you want to save them for nostalgic purposes. Fig. 2 shows the beginning of this process.

Fig. 2: Begin by bending the tabs away from the inside of the cabinet.

3. Align the new handle with the slots occupied by the original handle and center the mounting holes. Mark them with a center punch (the cabinet is hard steel) and drill the appropriate size holes. I used a 5/32-inch drill to accommodate the #6-32 hardware that fit my handle's hinges.

4. De-burr the holes inside the cabinet. File them flat if necessary. Blow out all loose metal filings and chips. Clean the inside surface of the cabinet with alcohol (or another strong degreaser) so the tape will stick really well. Here's the top of the cabinet ready for the handle:

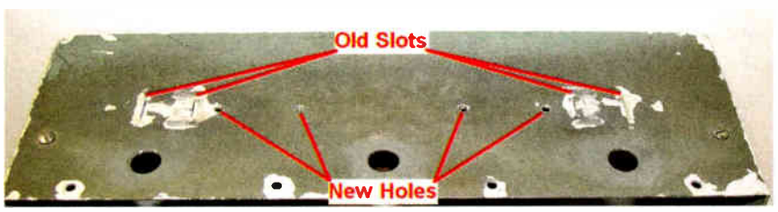

Fig. 3: The original handle is gone and new holes are drilled.

5. Use a 10-inch-long piece of real metal (aluminum) foil tape, the kind used to seal heating ducts, on the inside of the cabinet to cover the old slots and new holes. Poke or re-drill holes through the tape for the screws. On a previously repaired meter I put the tape on after attaching the handle, but it looks better if you put it on first. Here's the inside prior to the handle being mounted:

Fig. 4: Inside the case with the foil tape covering the openings.

6. Mount the new handle with the appropriate size hardware. I used 3/8-inch-long #6-32 flat-head Phillips-head screws with #6-32 hex nuts. If the handle you buy can't fold flat in both directions (like the one used on the Potomac Instruments FIM41), make sure it folds flat towards the back of the cabinet so it doesn't impede normal meter operation or get in the way of the cover/antenna.

7. Optionally, add another piece of tape inside over the new hardware, to keep it from falling into the FIM in case someone decides to loosen it from the outside, or if the screws you use are long enough, add a second nut to each one. You could use locking nuts instead of regular nuts too.

8. Reattach the battery cable. Reinstall the unit into the cabinet.

Fig. 5: Here's the meter with its new hinged handle standing proud.

Fig. 6 is a family photo, including several RCA meters and a Potomac Instruments FIM-41. All of the RCA meters are using seven 9V batteries for power (see RW, Oct. 19, p. 16). All four meters indicate 180–185 mV/m on one local station, which is surprising considering their ages and dates of calibration.

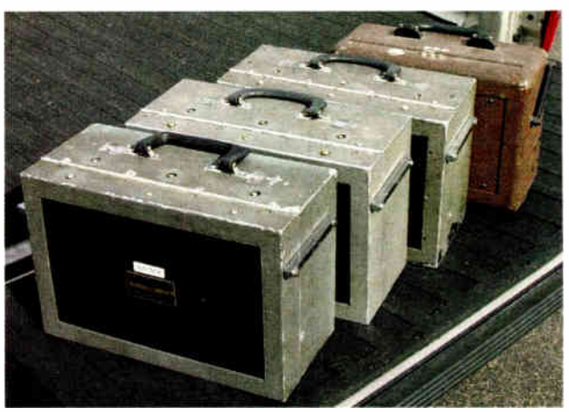

Fig. 6: From left to right, an RCA WX-2A, an RCA WX-2C, an RCA WX-2D, all with new handles, and a stock Potomac Instruments FIM-41.

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World Radio History

In St. Louis, Emmis Pushes HD Radio

Gordon Atkins Is a Believer in the Potential Power of the Platform

BY JAMES CARELESS

The HD multicast channels of two Emmis stations in St. Louis were an important part of a successful promotional campaign in 2011.

RADIOSALES

KIHT-HD3 is the home of Emmis St. Louis' "Smooth" jazz channel, while KFTK-HD2 plays "My Red Lounge," a format described by Senior Account Manager/HD Sales Manager Gordon Atkins as martini music. (The main channels of those stations air classic rock and news/talk, respectively.)

When it comes to ad sales, Atkins is a believer in the potential of HD Radio, a belief drawn from having watched FM move to the forefront of radio broadcasting decades ago. That background helps explain why Atkins is willing to promote HD Radio's potential aggressively.

When Grammy-winning vocalist Steve Tyrell was booked into the city's Sheldon Concert Hall for a May 2011 concert, Atkins spearheaded a promotional campaign running on KFTK-HD2 and KIHT-HD3.

"We had Steve Tyrell do a series of voice spots promoting the concert and our stations," he says. "We also produced a one-hour special that was aired on The Red Lounge and Smooth."

The combined one-two punch to promote the Tyrell concert paid off. "The event was sold out, which impressed the organizers," Atkins says. "For us, it proved the selling power of HD Radio, a power that is vastly underestimated."

Digital radio, he said, "allows you to target a specific audience at a cost that is in a better relation to the event." The Tyrell campaign ran only on the HD channels; it was combined with digital Web elements that were accessed from the home station page. The ad campaign was for $1,000, supporting an event held in a 600-seat venue. "A terrestrial radio campaign for the two weeks would have been significantly more expensive, especially with the digital elements."

Gordon Atkins

Tony Colombo is promotions director of KFTK(FM).

IBiquity Digital, seeking to highlight such successes, awarded $5,000 to Atkins, Jason Church and Tony Colombo, who also worked on the campaign. They took first prize in an iBiquity contest that asked sales managers to submit examples of selling HD Radio advertising.

A $1,000 second prize was given to Delmarva Broadcasting's Graffiti Radio, WSTW-HD2 in Wilmington, Del., for its Mojo Restaurant campaign. Third prize, an HD Radio in-car and home tech makeover, went to CBS Radio Hartford for its New Britain Rock Cats minor league baseball campaign on WTIC-HD2's channel. They were recognized at the fall Radio Show.

HD3 channel 'Smooth' is programmed by jazz enthusiast Jason Church.

MAKING IT PAY

Emmis St. Louis uses automation to run My Red Lounge and Smooth.

"Our music director records the voice spots, and puts them into our automation system," Atkins says. "Given the depth of our music library, the song rotation takes nine days. Even with recorded voice tracks, it sounds fresh."

Also to keep costs under control, Emmis St. Louis encourages sponsors to underwrite shows rather than buy specific commercial spots. "We will sell spots if this is truly what they want," Atkins says. "But the underwriting approach is more low-key and fits with the style of our HD-only broadcasts."

Atkins is aware that HD Radio receivers remain scarce in his city.

"We do a lot of promotional events to generate interest in HD Radio, which is helping matters," he said. "But until HD Radios become standard in car — and this day is coming — this technology will not be mass-market.

"The same was true for FM: It wasn't until FM converters started turning up in cars, followed by AM/FM radios, that the public embraced this technology on the road and subsequently at home ... The future of HD lies ahead."

Faced with the "chicken-and egg" situation, Emmis St. Louis' strategy is to wait for the egg of mass-market receiver penetration to hatch. But they are not sitting on their hands.

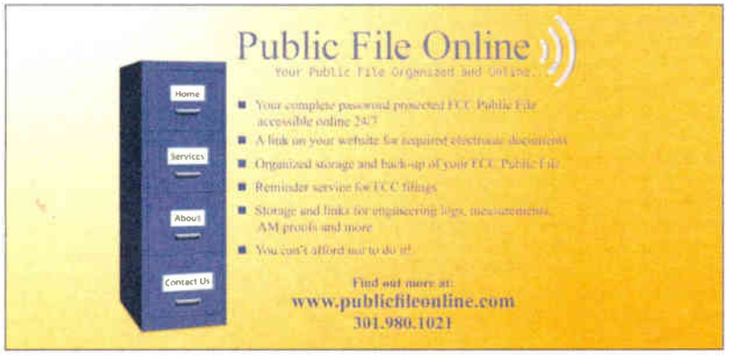
"We are not going full-force on HD Radio, because we want some room to maneuver once HD Radios are common in cars," Atkins says. "But we are doing what we can to raise HD Radio awareness, to give people reasons to buy HD Radios based on content, and to make some money from it through underwriting and channel leasing."

In December, the cluster celebrated the fifth anniversary of the HD2 channel on KSHE(FM) with an event called Art Feast, featuring a drawing for HD Radio receivers and information on where consumers could buy one, along with CDs of the music on each station.

Asked what lesson radio managers might learn from this experience, Atkins said they should be ready for the increase in digital receivers in the market.

"We currently have five stations that are fully functional and ready for the arrival of receivers in the market. We are also working on other potential formats and possible collaborations with third-party groups. It is also important to activate social media to grow awareness."

STATION SERVICES



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World Radio History

A Radio New Year's Resolution

PDs Should Rededicate Themselves to Working With Air Talent on a Daily Basis

"You've been on the air for 45 minutes!" the program director screamed at me on the hotline. "I just want to know one thing: When does the show start?"

Without waiting for an answer, he hung up.

I later learned he wasn't the only PD using this as his "signature move," purportedly to motivate young disk jockeys.

I've never been fond of this type of negative reinforcement, but the experience taught me to remember that I was performing a "show" and that I was supposed to be entertaining.

Subsequent PDs taught me how to map out a program, utilize guests and interject sound. As I coach talent today, I cut to the chase and explain that these tactics are intended to stimulate a listener's imagination. Simply announcing song titles, reading liners and teasing the next element will not do much to create fans for DJs or station brands.

THINK FRESH

There's nothing like a new year to make resolutions. Let this be the year that program directors rededicate to working with on-air talent on a daily basis.

Think twice before copping out and rationalizing that you're too busy to engage each other. The second half of a program director's title should be enough for both the manager and the talent to realize that "directing" is an essential part of the process dedicated to driving entertainment, which leads to successful ratings.

Regardless of how many years somebody has been on the air, they need to dissect shows with a PD who can assist by pointing out great elements, along with segments that need improvement. Aircheck sessions do not have to be long. Much can be accomplished in 10 to 15 minutes. It is an absolute must that the program director start with something positive and conclude in such a way that the talent feels good about his or her progress and future.

Shown at left are a few easy suggestions to freshen content.

No medium can stimulate imagination quite like radio. Put the word "show" back in your day-to-day vocabulary by meeting with talent regularly and encouraging creativity. During 2012, take the risk of being great or you'll really run the risk of being dull.

The author is president, Lapidus Media. Contact marklapidus@verizon.net.

1) Take a look at what's trending on Twitter on any given day. You can even set it up by telling listeners that's where you've got it from; reading a tweet or two on the subject can get listeners mentally engaged.

2) It is likely that the mobile phone your talent has in his pocket can record sound. Having real people tell stories or voice opinions can make radio come alive.

Example: "Today we're talking about the worst blind dates ever. I was at a party last night and got this one from a woman I had just met named Dani ..." While taking phone calls on a subject can be great, you give up control and can end up with boring material.

3) Regularly schedule interesting local personalities as guests, even if they're just "guest DJs" for an hour or two. "I've got a dentist appointment today; fun for me ... and actually more fun for you because the weather guy from Channel Two is gonna sit in for the last hour of my show today. Let's see if a TV guy can actually do radio."

4) Plan surprises. "While we don't usually play more than one song by any artist, we just got a bunch of new songs in from Kenny Chesney. Let's break our usual format and play three of them; then we'll open the phone lines up and see how you like 'em ..."

5) Change the way your DJs or hosts begin and end their shows. Odds are that people are listening at the same time daily, so why are you boring them with the same thing every day? For an entire week recently I was in the car at exactly 2 p.m. Each day, the talk show host played the same song and introduced his show nearly word for word the same way. Dull!

6) Celebrate stuff. People love anniversaries. "Today is the 20th anniversary of Nirvana's 'Nevermind.' In their honor I'm headed down to Pete's bar at 5 p.m. today. I'm not sure how many people with show up, but we'll make sure they've got the CD on the sound system and I talked Pete into 1991 beer prices. Put on a flannel shirt and drop by ..."

7) It's never been easier to do great-sounding remotes at low cost. When's the last time you did a show from the middle of a crowded shopping mall, in a concourse at a concert venue, or at polling location during an election? How about doing a contest where you celebrate a holiday like Valentine's Day with a live broadcast from a listener's bedroom, bathroom and kitchen?

iStockphoto/Ryan Burke

PROMO POWER

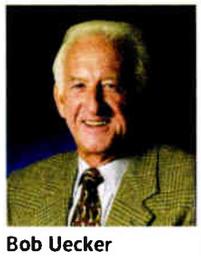
Mark Lapidus

PEOPLENEWS

Bob Schroeder, N2HX, said he'd retire from his job as communications and warning officer for the **New Jersey Office of Emergency Management** at the end of 2011. Schroeder was on the air doing top 40 radio in Columbia, S.C., in 1970, before he'd turned 21. He worked as a studio engineer for New Jersey Public Television from 1979 to 1982, then was hired by the state Office of Emergency Management as a radio tech. In 1995 became state communications and warning officer.

The **Telos Alliance** named **Raul Hun** director of sales for the Latin American region. Hun is a native of Panama and graduate of Southern Illinois University with a BS in engineering. He'll work with the dealer network in Mexico, Central and South America, and with users.

Baseball broadcaster **Bob Uecker**, "voice of the Milwaukee Brewers," will be inducted into the **NAB Broadcasting Hall of Fame** in April. He'll be in his 42nd year of play-by-play on the Brewers Radio Network and Journal Broadcasting Group's WTMJ(AM) in Milwaukee.



Bob Uecker

Spanish Broadcasting System Inc. named **Jackie Nosti-Cambó** as VP **of Business Analytics**. She has been with **SBS** since 1992, most recently as VP/general manager for four stations in Miami.

Jackie Nosti-Cambó

World Radio History

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World Radio History

RE320: New Version of an Old Fave

'Dual Personality' Switch Engages Two Different Performance Curves

BY CURT YENGST

Since 1969 the Electro-Voice RE20 has been a staple of radio and recording studios. It's a favorite for air and V/O work as well as for recording drums, bass amps and horns. The RE27, introduced in 1989, was an upgraded design, featuring a neodymium magnet and sleeker look. It packed a bit more punch but with a somewhat brighter sound, and added an extra roll-off filter.

PRODUCT EVALUATION

Recently Electro-Voice introduced the latest in its RE line, the RE320 — not intended to replace these studio workhorses but to present a new take on those proven designs.

What sets it apart from the venerable RE20? The most obvious difference is the color. The battleship gray of the RE20 and the brushed nickel of the RE27 have been supplanted by a jet-black finish that retains the RE20 grille design.

NEW AND OLD

This is still a cardioid large-diaphragm dynamic mic. It still uses humbucking coil technology to protect against EMI. It still uses the neodymium magnet technology of the RE27, but with a re-engineered diaphragm for better transient response.

It also features Electro-Voice's Variable-D pattern control, introduced back in the 1960s with mics like the RE15. This solution, according to EV, is designed to minimize tonal changes associated with proximity effect and with sources moving off-axis. It's intended to provide a predictable frequency response even if the source is moving around the mic.

Beyond a different color, you'll the frequency response contour switch. This takes the place of the usual bass roll-off switch found on the RE20 and gives the mic what EV calls "Dual Personality." Rather than providing a choice between a flat response and a bass roll-off, this provides a choice between a flat response and a "kick" curve, tailored for use with bass drums. It actually boosts the low end slightly while providing a 4.5 dB midrange dip centered around 380 Hz, along with some high-end "air" boost. According to the spec sheet, it also extends the low frequency response from 45 Hz down to 30 Hz. The drawback to this design is that it does away entirely with the traditional bass roll-off, which some users may still require. It would have been nice if they could have retained a roll-off switch in addition to the contour switch.

MELLOW

For radio, the obvious application is voice.

I immediately set about testing the

(continued on page 26)

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Johnny Stone is PD and morning host. He still gives his nod to the RE27.

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ProSTREAM makes sending programming to the Net easier than ever. Simple and bulletproof: analog or digital audio goes in, compressed audio streams out. Just hook up your input, select a bit rate and Omnia processing preset, send the output to your Shoutcast or Wowza server, and *Shazam!* Streaming audio, simple as 1, 2, 3.

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.

Telos

Telos-Systems.com/ProStream/

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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.

Omnia

OmniaAudio.com/AXE/

World Radio History

RE320

(continued from page 24)

RE320 by replacing the RE20 in our production studio. It was connected to our console via a Symetrix 628 voice processor. I turned one of our production engineers loose with some commercial copy.

Using the same presets we used for the RE20 (compression, EQ, etc.), he immediately fell in love with it. Next I introduced it to our on-air studio. The general consensus was that it had a mellower sound than the RE27 we normally use. It was tested using a Symetrix 628 and an Aphex 230.

In both cases, the brighter high end of the RE27 was evident compared to the RE320, almost to the point of sounding brittle. The operators also suggested that they didn't have to work as close to the mic when using the RE320, a testament to its improved Variable-D performance.

Our midday hostess, Beth Bacall, loved it. She raised quite a fuss when I had to take it back. Program director and morning show host Johnny Stone was ready to approve the purchase of one once he tried it, though he still preferred the RE27. He chalked that up to being accustomed to the latter's sound.

On vocals, the mic lends itself easily to providing more girth to a voice that might be lacking bottom end, such as a female voice. If the voice is already deep, the reduced proximity effect in the RE320's design takes the excessive "boom" out while still keeping things warm-sounding.

THUNDEROUS

Next, I tried the mic on a few other sources more likely to be found in a home or professional recording studio.

On bass amp, the result was absolutely thunderous. Buckets of low end while still preserving the snap of the strings. I found myself deleting takes that were previously recorded direct through my favorite tube preamp in favor of the RE320 going into a solid-state preamp. On a guitar amp, the RE320's performance seemed to rely more heavily on placement. Aiming it toward the outer half of the speaker cone sounded too mellow for my taste, almost muddy. But placing it dead center, aimed straight into the voice coil, yielded very satisfying results.

Midday talent Beth Bacall with the new EV model.

Compared to the Shure SM57, a mainstay of guitar amp recording, the sound had more body. While the SM57 gave plenty of bite, it almost seemed shrill in comparison.

Finally, I tried it on bass drum. The "kick curve" feature worked as advertised. It was hard to find a placement that didn't work in some way or another, but the best result was found simply putting it a few inches from the rim, aimed right at the point where the beater meets the head. Running it flat gave a very usable result, but it still had me reaching for the EQ. Engaging the contour switch saved me the trouble.

Could I have still tweaked it? Sure, if I wanted to; but I didn't want to. The kick drum had a tight, punchy sound that sat well in the mix.

As an engineer, I'm intimately familiar with the old saw "If it ain't broke, don't fix it." One could be forgiven for wondering why Electro-Voice would mess with such a time-tested design as the RE20.

Other engineers and DJs say the introduction of the earlier RE27 was met with divided opinions. Some loved it, others continued to swear by the RE20.

The RE320 seems to deliver the best of both designs. Overall, I thought it sounded great on just about everything I used it. It's well built and good looking. I even like the new design of the included case.

Is it good enough to serve as your main on-air or production mic? If the lack of a bass roll-off switch isn't an issue, absolutely. Most outboard mic processors include a roll-off control anyway.

Could it potentially replace your trusty RE20 or RE27? I thought it sounded better than both, but that comes down to personal taste. Think of it as another color in your audio palette. But the street price of around $299 makes it much less expensive than its predecessors and easily within the reach of freelance VO artists and home recording studios. It's worth every penny. Do I have to give it back?

Curt Yengst, CSRE, is assistant engineer at WAWZ, Zarephath, N.J.

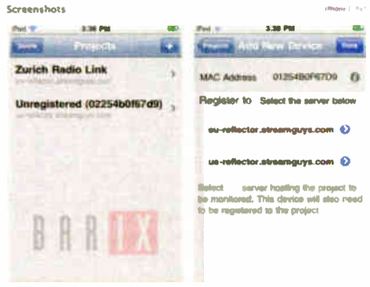
MARKETPLACE

CRAFT OF SOUND: For the neophyte sound engineer on the go, Harman's Soundcraft operation has made its handy "The Soundcraft Guide to Mixing" available for the iPad via the iTunes Store. Contents focus on the concepts, basics, functions and set-up of live sound/PA system. Besides text, the app has numerous instructional videos. Price: $2.99. Harman Mixing Group Marketing Director Keith Watson stated that the content has evolved from an original booklet into versions as a web page, as a downloadable PDF, on DVD and online video formats. A free teaser lite version is available with a full chapter and excerpts from other chapters.

DONGLE: SADiE, a veteran of the DAW wars, has made a few announcements concerning its eponymous flagship software. First is an upgrade to SADiE 6, now 6.0.2. SADiE broadcast consultant Peter Nash explained: "The new release software adds a number of advantages, particularly to editors with new functions in the trim editor that speed up workflow by allowing adjacent clips selection and pairing of clips ... Stability with certain Windows issues have now been resolved." The second part is the use of a dongle for portable security. Nash says, "The dongle support is particularly useful to customers who are using SADiE 6 for location recording, or in organizations where the software is more likely to move from computer to computer."

Info: www.sadie.com/products/series6/main.php

NICE REFLECTION: Swiss manufacturer Barix is making available its first iOS app, Reflector, designed to remote monitor audio streams using Barix's Reflector Service, an IP audio distribution platform. It can provide information on connectivity and network statistics, and provide live feed monitoring. Johannes G. Rietschel, CEO and founder of Barix, said the Reflector Service simplifies setup of IP for STL and remote contribution applications. "The Reflector app just moves the bar a bit further, allowing broadcasters to listen and check streams from a common mobile device with trivial setup and at no cost." The free app will function with iPhones, iPads and iPod Touch.



Info: www.barix.com/Reflector_Service/1551/

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3-bay Shively antenna, 107.9 FM, $650; 4-bay Jampro antenna, 107.9 FM w/de-icers, gd cond, $3500. Sherry, 606-287-9924 or sherry@prtcnet.org.

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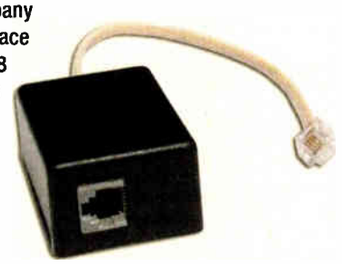
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Looking for a broadcast excerpt of a SanFrancisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by Willie Mays and Felipe Alou stealing second base, running time is 18:02, also looking for SF Giants games and/or highlights from 1958-1978 also taped off KSFO Radio. Ron, 925-284-5428 or ronwtamm@yahoo.com.

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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World Radio History

READER'SFORUM

NO HD CLONES

I wish some station owner would put something different on their HD2 stream instead of a "clone" of their HD1 feed ("Are HD2 Channels Compelling?", *radioworld.com*, Dec. 9). I mean a totally off-the-wall different format to get new listeners to their station and not just siphon off their HD1 listeners because their HD2 feed has such a similar format.

I'm waiting for a reason to show off my HD2 to others, as all three HD2s here are merely offspring of their HD1 hosts at best.

Maybe go so far as to hire some Internet station programming gurus to program your HD2 feed with deep oldies, beautiful music, all-comedy, all-weather, all-request super-decades, etc. ... and in exchange for their programming over your group's HD2 feeds, they agree to cease their own Internet feeds instead for one branded by your broadcast group and your HD2 OTA status.

If you can't beat them, join them by hiring them away from their own feeds, including use of their original identifiers on your OTA HD sub-channels and your broadcast site links.

John Pavlica Jr.
Engineer
Toledo, Ohio

CORWIN: GEMLIKE WORK

Regarding "Radio Great Norman Corwin Dies, Age 101" (*radioworld.com*, Oct. 19):

Corwin's professional legacy is secure, rooted in the gemlike quality and eternal nature of his body of work; his living legacy lies in the countless lives he touched with his enthusiasm to do better, to improve the small corners of the world we inhabit. He was, and remains, a beacon for those who believe in the power of optimism to nurture the better angels in our daily lives.

Long may he live in our memories and on the Internet.

Vic Cox
Goleta, Calif.

Vic Cox profiled Norman Corwin in Radio World's Jan. 12, 2011 issue.

MODULATE WITH CARE

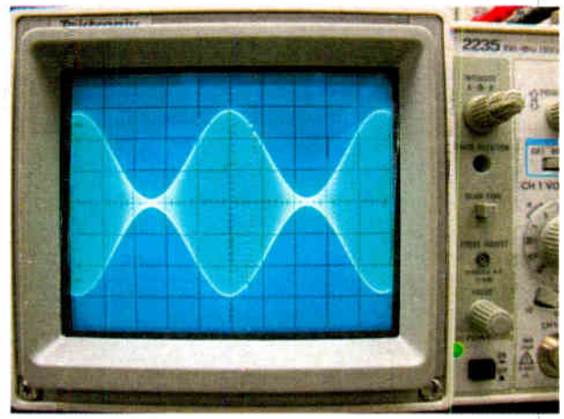
In the otherwise excellent article "Rebuild That Relic of an AM Transmitter" (Oct. 19), I may have misunderstood the two images of an oscilloscope display that author Mark Persons uses to illustrate asymmetrical modulation in an AM transmitter.

Often such modulation is considered reduced carrier in proportion to the sideband energy, and that's how I look at a waveform to compare. His example of 125 percent modulation seems to be over-modulation and hitting baseline in the negative direction, a condition that causes splatter and distortion.

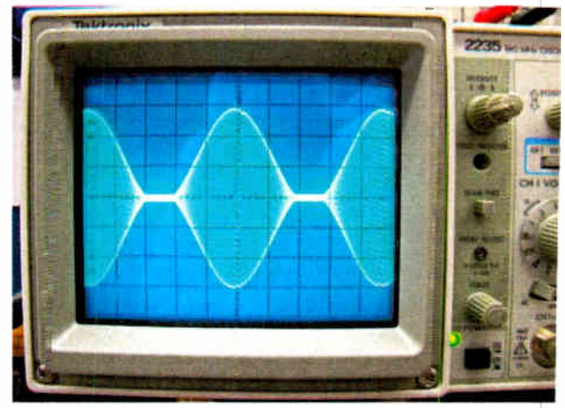
Instead, I would have expected to see positive peak energy without hitting baseline covering more vertical gradicules in the asymmetrical example than in the one showing 100 percent modulation.

Paul Courson, WA3VJB
Annapolis, Md.

Mark Persons replies: When testing AM transmitters, I look at the negative and positive modulation capability. Seeing the positive peaks go to 125 percent while achieving a full 100 percent negative is the desirable result of over-modulating the transmitter by 2 dB. That is done by putting a tone directly into the transmitter without any audio processing. Yes, it will cause splatter at that point. Once I know the transmitter can produce high positive modulation, then I know the audio processing can be set to limit to just under 100 percent negative modulation and allow positive peaks to achieve 125 percent modulation with program material. No splatter then and it fully makes FCC requirements.



100% Modulation.



125% Modulation.

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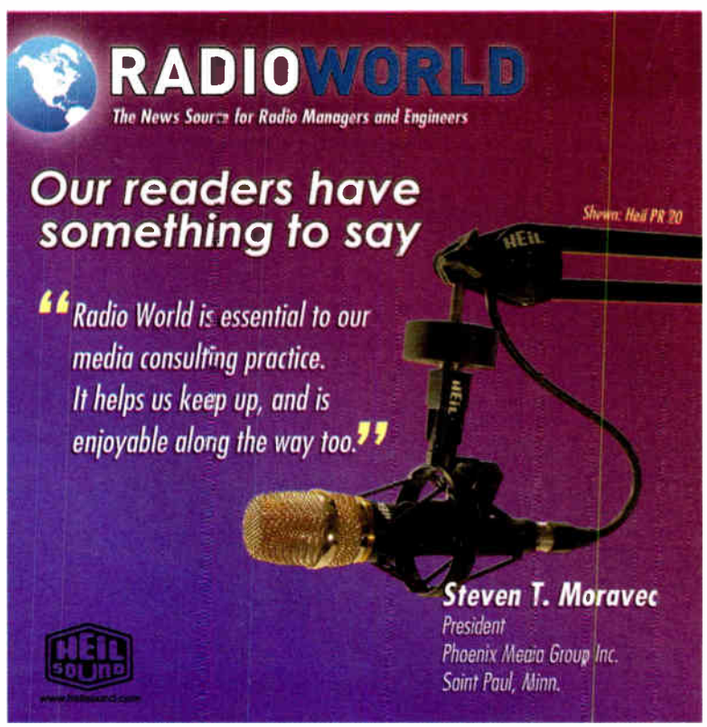

World Radio History

READER'SFORUM

IT'S NOT BROKE SO ...

Dan Mason of CBS Radio says he's concerned about AM radio. Bruce Reese of Hubbard says convert AM to digital and problems go away ("AM's Future," News Roundup, Oct. 19).

The problem that needs to go away is input from large corporate owners. Every time they buy into some "newfangled" idea, it costs me money, but nothing changes other than my bottom line.

We have a 1 kW AM, analog, gospel and sports programming. None of my listeners complains about not hearing us in digital.

Citadel, Clear Channel and others stay in the bankruptcy line because they buy into every piece of junk that is presented to them. The FCC isn't much better.

Most of the radio mess is a result of too many worthless 100 kW FMs, the FCC allowing FM/AM combos to be split and sold off, the destruction of local radio by the corporate giants and translators being bought up and held for more profit.

Our station is profitable, sounds good, pleases our community and we have fun.

What needs to happen is simple. No FMs over 25 kW. Every standalone AM gets an FM translator that when assigned is a part of the AM license and can never be sold away from the AM and must simulcast 100 percent of the time.

Our station is in the Baton Rouge market, which like many other markets has way too many radio stations because of corporate ownership. I would like to have a simple 100-watt translator to cover our area at night, but because of corporate manipulation of the FCC, the FM spectrum in Baton Rouge and New Orleans overlaps and there are no FM allotments for anyone. Our people suffer and no one cares.

I pray I live long enough to see the corporate giants finally buy themselves into total bankruptcy and have to divest themselves of about 90 percent of their holdings.

We like serving our little area. Our EAS plan is second to none. Our local governments can activate an EAS and access our transmitter for an unlimited amount of time and not have to listen to some overpaid moronic program director whine. We have been EAS-compliant for months and welcomed the national test. Our local system has been tested and works flawlessly. Our people are safe. There is not one radio station in Baton Rouge or New Orleans that will outshine us in an emergency situation. Katrina, Gustav and tropical storm Lee proved this beyond a shadow of a doubt.

So I say leave us alone to do what we do best: serve in the public interest with our analog signal that works just fine. It's not broke so don't try to fix it.

Harry Hoyler
General Manager
KKAY(AM)
Baton Rouge, La.

FREE SPEECH AND NEW MEDIA

This is in response to Craig L. Parshall's opinion article regarding the John Milton Project ("New Media Has a Free Speech Problem," Nov. 2).

The right to free speech is a right to speak, not a right to be heard on every media platform you want. If a religious group's doctrine is so radical that a media platform feels uncomfortable, you should look at the content. Are they propagating sexism, homophobia or racism? In those cases it's acceptable for them to decline to carry your content. Dismissing this as censorship is arrogant and entitled.

Being stymied by Apple, Facebook, et al. is frustrating, no doubt. But it's the same response you might get from a print publication or from a broadcaster when you bring them questionable content. This is not overt censorship. They are not obligated to taint their brand and/or their product with your hate speech. If you want a media platform that is wide open to troglodyte opinions, build your own, the Internet is a big place. There's plenty of room.

Jose Fritz
Arcane Radio Trivia
Hoboken, N.J.

FIRST PHONES

Kudos to John Schneider and the historical remembrances he brings to the page.

The color picture of the KRLD transmitter, published in the July 1 issue and reproduced on the letters page in the Oct. 19 edition, has a particular pleasing feature for me. I am referring to the pale blue FCC certificates on the wall. First Phones. The way it should be.

Bob Mayben
Broadcast Sales
SCMS Inc.
Gadsden, Ala.

John Schneider replies: I'm glad you liked our "colorized" image; it seems so much more real in color. I tried to reproduce accurately all the known colors and went to some effort to match the FCC blue correctly. The transmitter cabinet color was extracted directly from a color photo of a WE transmitter that I found on the Internet. I had to guess on some of the auxiliary equipment in the racks.

MORE LIKE A PERFORMANCE WRONG

Just read the comments of Maria Pallante ("Copyright Office Still Backs Performance Right," Radio World NewsBytes, Oct. 26). Here is another government official with no work experience, especially none in broadcasting or even the music industry.

Someone needs to teach her about the role of ASCAP, BMI and SESAC in the daily operations of broadcast stations. She needs to read some of our contracts ... and maybe she needs to see how big some of the checks are that broadcasters send to these music owners *every month* of the year.

And she needs to talk to recording artists and simply ask them what their careers would be like if their songs had *never* been played on radio, TV or cable. What other industry pays a chunk of its gross income (in our case, 8 percent) to the music industry and then also provides *free* airtime to promote their products?

Cal Zethmayr
General Sales Manager
WAAZ(FM)/WJSB(AM)
Crestview, Fla.

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