



# RADIO WORLD

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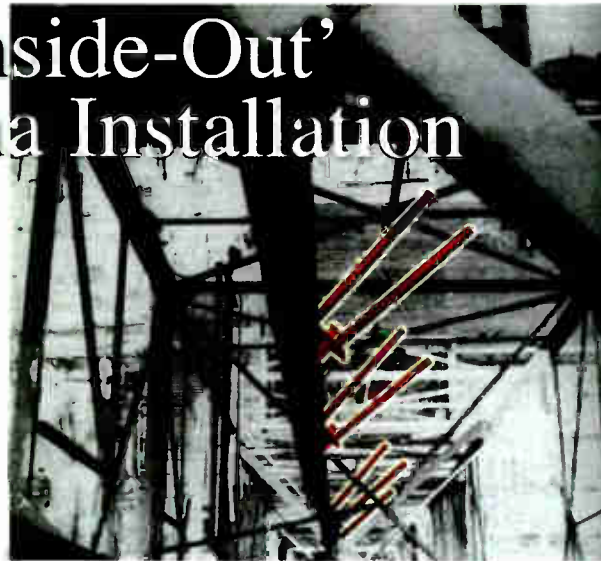
• Get heart-smart with these Valentine's Day promotions. — Page 28



iStockphoto/Dmitrii Brighidov

## The 'Inside-Out' Antenna Installation

How WTOP Wound Up With An Unusual FM Antenna Configuration



Electronics magazine photo

### ROOTS OF RADIO

BY JAMES E. O'NEAL

The WTOP(FM) antenna in 1952. View is from near the top of the tower looking down through the center. The 'V' radiating elements have been colored by RW for identification. The fourth set is partially obscured. The large vertical beam is the support mast.

Have you ever seen an FM transmitting antenna mounted *inside* its supporting tower?

It was not a case of installers misreading blueprints. The job was intentional and planned at every step.

The site was at the intersection of 40th and Brandywine Streets in downtown Washington; the time was the early 1950s. AM radio was still king,

but many in the business were predicting a real future for FM and television. As a result, old-line owners were adding FM and television construction permits to their holdings and the FCC was eager to open up the new territory.

To set the stage, a brief history lesson involving some of Washington's pioneer broadcasters is in order.

The catalyst was WTOP(AM). Though its roots can be traced to 1926 and Brooklyn, N.Y., for our purposes it's only necessary to go back to the 1940s when WTOP was a 50 kW CBS O&O.

It was common for newspapers to be joined at the hip to broadcasting outlets; the Washington Post was no exception. Its broadcasting involvement started with ownership of a "local channel" AM outlet, WINX, which oper-

(continued on page 16)

## N.Y. Tests Video Game EAS

State Officials Explore Alerts to Gamers As Way to Reach Younger Audience

BY RANDY J. STINE

ALBANY, N.Y. — State emergency administrators here are testing code written to interact with video gaming systems. They're exploring the state's ability to send alerts via online gaming networks.

New York authorities envision a time when important weather alerts and other information can penetrate the awareness of even the most diehard gamers, who otherwise might be ignorant of what's happening in the world outside their family rooms or basements.

Nintendo, Sony, Microsoft and others operate online networks that allow players to compete with others around the world. State emergency planners, in concert with gaming console vendors, began conducting the tests late last year, officials said.

This effort, believed to be the first of its kind, also will go a long way toward determining if Xbox and PlayStation gamers will sign on for emergency warnings that could disrupt their games, warning experts say.

Observers in the public warning (continued on page 8)

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# Welcome Addition: FM Comes to iPod Nano

Author Likes Unit's RDS Support, iTunes Tagging, Radio Live Pause

BY ALAN JURISON

Apple does a good job of keeping product launches and features silent before release. To much of the radio

## FIRSTPERSON

industry's surprise and pleasure, FM capability was part of the package when Apple issued the fifth generation of the iPod Nano in the second half of 2009.

Finally, years after portable MP3 devices emerged, the most popular brand of portable music players incorporates an FM tuner.

Apple lets potential consumers sample functional units in their stores. These

that allows you to record the last 15 minutes of radio programming temporarily.

### FM RADIO REVIEW

If you have used the classic iPod user interface, you'll be right at home. For those new to the iPod, the wheel user interface may take a little time to get used to.

Apple also does a great job with its music playing, display, interface and organization on this device. Seeing album art when playing a stored song is a cool and slick feature, and the buttons and controls within the Music, Video and Photos section are intuitive.

The radio, though, is why I ran out and bought one. (Note that we're talking

### PRODUCT CAPSULE

#### APPLE iPod Nano

- Thumbs Up
- + FM tuner
  - + Radio Live Pause
  - + Supports RDS, RT+
  - + Tagged songs can be purchased in iTunes
  - + Great sensitivity for a portable
  - + Compact, popular well-known design

- Thumbs Down
- Tuner functions can be cumbersome
  - Can't sort presets in preferred order
  - Requires hard-wired connection to sync to iTunes, no Wi-Fi
  - No HD Radio or AM
  - Small issues with RT+ support

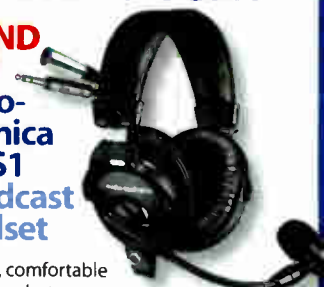
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include pre-loaded songs — as well as earbuds for customers to experience the player as they would after purchase. This is important because without headphones, this radio has no antenna. My suggestion to other retailers is to include headphones on floor demonstration models so customers can experience the device properly.

After test-driving one at the Apple store, I decided to buy an 8 GB model, which retails for \$149. Apple also offers a 16 GB model for \$179.

The player is lightweight at 1.28 ounces and compact (3.6 inches by 1.5 inches); it is amazingly thin (0.24 inches) and has a great 2.2 inch display. It's offered in nine colors. This version includes an integrated video camera for recording small movies as well as a small speaker for listening to music without headphones.

Notably, the device provides RDS support and iTunes Tagging. Apple also provides a radio "Live Pause" feature

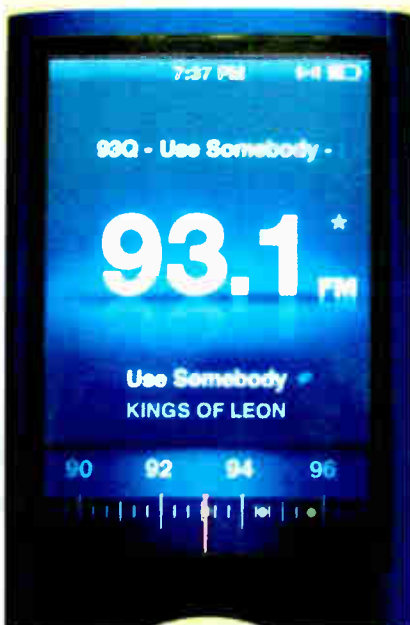


Photo by Alan Jurison

The author's device displays frequency and time as well as song, title and artist information.

about only analog FM here; there's no HD Radio and no AM capability.)

The FM tuner works internationally. When you launch the radio for the first time, it asks what region you're in (Americas, Europe, Japan, etc.). You can then select "Play Radio" and you're ready to scan the dial. You can use the outer "wheel" or circle of the control pad to scan the virtual radio dial at the bottom of the screen. Clockwise moves the frequency up in the FM band, counterclockwise moves down.

Once you've tuned to a station, or after a period of inactivity, the virtual radio dial display goes away and the functionality of the outer wheel changes to become your volume control. Again, for the non-Apple person, this can take time to get used to. At first, I found myself inadvertently changing the volume when wanting to change the station.

If the virtual radio dial has disappeared and you want to change the

(continued on page 5)

# 'Hello, This Is Your President'

## Federal Authorities Lay Out the Groundwork for a National EAS Test

In an era of instant access to thousands of mass media and personal channels, one might wonder if the concept of a Cold War-style presidential alert capability is outdated.

The FCC's Emergency Alert System rules are intended to ensure that national activation would enable the president to communicate with the public within 10 minutes from anywhere. Can we doubt that should the president need to reach the public in a crisis, he could do so without activating such an alert?

However, the philosophy among emergency planners is that the more channels, the better. Federal authorities believe national EAS remains relevant and are putting in place plans for an annual national test. It means possible changes for your station including a requirement to provide certain information to the commission.

The FCC issued a rules proposal in January. Highlights of its report:

- Although most of us are familiar with EAS in local weather situations, it is a national system that exists primarily to enable the president to issue warnings during emergencies. (Broadcasters are among the EAS participants required to take part in national EAS. State and local EAS participation is voluntary.)

But no president has issued such an alert; remarkably, the national capability has never even been tested systematically, even though FCC rules provide for regular testing at the state and local level (and a recent test of national EAS, limited to Alaska, is a good start). Would national alerting



President Barack Obama talks with former Presidents George W. Bush and Bill Clinton in the Oval Office in January. No president has issued a national alert via EAS, EBS or Conelrad.

work if it had to?

- The FCC, the Federal Emergency Management Agency, the National Weather Service and the Executive Office of the President have begun planning for the first national EAS test. The FCC is asking for comments on its proposed rule changes, which envision an annual test and certain reporting requirements.

- Because of the structure of EAS, the FCC says, the system could be vulnerable to "single point of failure" problems in which failure of one station results in failure for all points below that station on the daisy chain. The FCC points to what happened in 2007 when FEMA tested a satellite warning system in Illinois; its contractors triggered a national-level alert that caused confusion until it was terminated not only by participant intervention but equipment failure. Authorities realized later that

some EAS equipment "simply did not pass on the alert."

Anecdotal evidence also suggests problems with state and local delivery architectures and the readiness of Primary Entry Point stations, the FCC says.

Further, EAS is administered "by multiple agencies at multiple levels," which may cause operational problems or gaps in coverage. FEMA tests PEP stations but typically not others; the NWS tests National Weather Radio facilities but may focus only on their interaction with state and local alert architectures; and emergency operations facilities are tested by state officials. No entity is responsible for "top-to-bottom" national testing.

The FCC also acknowledged EAS criticism by the Government Accountability Office, which I wrote about in November. "GAO specifically cited lack of redundancy, gaps in coverage, a lack of testing and training and limitations on how alerts are disseminated to the public," the commission noted.

- Current rules focus on testing of components rather than the infrastructure as a whole, the FCC says. Also, data about EAS tests is limited; and any special testing typically is at the state or local levels and looks at specific situations such as child abductions that trigger AMBER Alerts.

- While a next-generation EAS is in the works (spurred by FEMA's adoption of Common Alerting Protocol as part of its Integrated Public Alert and Warnings System), there is no timetable for the

FROM THE  
**EDITOR**

Paul McLane



replacement of existing EAS. The FCC thinks FEMA will rely on the EAS daisy chain structure for at least the early stages of IPAWS implementation. "The various states and localities also appear to be at different stages in their ability to adopt and utilize CAP-based EAS architecture."

### REPORTING MECHANISM

The proposal on the table is for an annual test that will involve nationwide transmission of the Emergency Action Notification and associated messages and codes within the EAS. The FCC would require EAS participants to take part.

"Such tests will consist of the delivery by FEMA to [Primary Entry Point/National Primary] stations of a coded EAS message, including EAS header codes, Attention Signal, Test Script and EOM code."

Stations would have two months' notice that a national test was pending. The test would replace the required monthly test for that month. Participants would have to log results and submit them within 30 days; that information would be made public to help emergency planners learn.

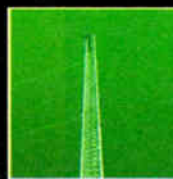
Specifically, a station would be required to record and submit diagnostic information for each alert received from each message source monitored at the time of the national test. That includes whether it received the alert message; whether it retransmitted the alert; and, if it could not receive or transmit the alert,

*(continued on page 29)*



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**NANO***(continued from page 3)*

station, lightly tap the center button; the dial will return.

If you've come across a station you like, hold the center dial position for about a second and you can select "Add to Favorites." Once you've added several stations to favorites, use the left/right "Last Track/Next Track" buttons to navigate to your presets. This will navigate the stations in order by frequency, from the bottom of the band to the top. There's no way to have your own preferred sort order, or to position your most favorite stations first, which could be an improvement.

The sensitivity of the receiver is excellent; even with the supplied earbuds, the radio works as well as you'd expect any portable. I've used it indoors in many occasions, especially in larger business structures, and it performs well. The Nano seems to do a great job at decoding RDS even on stations that have a low RDS injection rate.

**RADIO LIVE PAUSE**

By default, the radio "Live Pause" feature is turned off; as far as the user interface is concerned that's probably a good thing because when you turn it on, it does make navigating the iPod a little more difficult.

That's because the center tap and next track/previous track/volume buttons now serve three purposes: to turn up the volume, change the station and fast forward/rewind the recorded audio from the station.

This gets a little tricky and at times annoying, so it has been my preference to turn off the Live Pause function unless I want to use it. I would suggest that Apple add another physical button or two in future models to reduce the many functions of the center button. Perhaps moving the volume controls to dedicated buttons like on the iPhone and Touch models would be the best way to handle this.

The radio "Live Pause" feature is neat. Once you turn it on, it continuously records the station to which you are tuned. It even caches the RDS messages the station sent in real time with the audio and displays a little marker of the time of the event; e.g., if you go back at noon through five minutes of recordings, it shows 11:55 a.m. as the time of recording.

You can use the left/right "Last Track/Next Track" buttons to jump one minute behind or ahead, or you can use the wheel "circular" control for precise fast forward/rewinding. Keep in mind that you cannot store the recordings. This feature is just a way to pause 15 minutes of live radio; the content is lost as soon as you tune away from the station.

**NEWS**

While this is an interesting feature, I'm not sure of the usefulness for consumers other than to pause something they are enjoying if they are interrupted and need to attend to something else, or to "rewind" something they just heard that they wanted to hear again.

For some, however, this will be a noteworthy addition. It means that if you are listening to a station and you have "Live Pause" activated, you can go back at any time to re-hear the last 15 minutes of radio content. This "radio rewind" lets you go back for a phone number, or the name of a song that the

DJ gave at the top of the song but not at the end; or to listen to what a fast-talking traffic reporter just said about the backup on I-81.

A user can now catch anything that normally goes by too fast on the radio.

**RDS SUPPORT**

When you tune to an FM station that has RDS, the Nano immediately resolves the short, eight-character PS field. If the station also transmits the longer RadioText (RT), or the 64-character field, it will replace the short PS

*(continued on page 6)*

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## NANO

(continued from page 5)

with the full RT.

The Nano does a great job displaying your RadioText, and will scroll it if it's too long for the display.

It's important for stations that have RDS to make sure their PS and RT are correct. I know of stations that have focused on the short eight-character PS because many car receivers only support that field or only display that field automatically.

More radios are supporting RT and more radios are now displaying it prominently, so make sure your station's PS and RT have the station name, song information and other information you want conveyed in the RadioText. If your station doesn't do RadioText right, your listeners will miss out on what you want them to see.

The Nano also supports RT+, which is the internationally recognized RDS standard to allow you to denote where the Artist and Title reside in the long 64-character RadioText field. With stations that support RT+, this gives a listener with the Nano an "MP3 Player Feel" while listening to your station.

As soon as the Nano decodes the RT, and if the station has RT+ tagging packets, it will copy the Artist and Title

out of your RadioText and display the Artist and Title in a separate section of the screen. Kudos to Apple for keeping the original RadioText on the screen, as this allows people to see other promotional messages and station branding still while tuned into the station. It's quite a handsome display.

If the station you're tuned to has RT+ encoding, you'll also note that, next to the title, is a paper clip icon; this denotes that you can "tag" the song. Hold the center button of the Nano when you see this for about two seconds, and a menu will pop up that allows you to "tag" the song for later purchase. This is a great way to enable listeners who like the song you're playing to purchase it later when they connect their Apple Nano to their computer with iTunes. Here in Syracuse, Citadel (my employer) and Clear Channel stations are encoding; other stations are not.

In future versions, Apple should explore integrating Wi-Fi (802.11) connectivity so you wouldn't need to hook it to a computer to purchase a song.

The Nano supports Apple's proprietary iTunes Tagging RDS protocol as well, which allows encoding stations to send the specific Apple ID of a song to allow the listener who tags a song to download the exact version of the song you played. This is particularly helpful

for songs that might have various different versions, which will provide a better user experience.

It also allows you to transmit a unique identifier so your station can get credit for a song purchased through iTunes and allows the station to get a commission from Apple if you participate.

Luckily, Apple does not require this in order for the Nano to do tagging, so stations that just encode with the international RT+ standard don't appear to be much different than those who use Apple's proprietary iTunes Tagging protocol.

The next time you attach the Nano to your computer and it synchronizes, any tagged songs show up in iTunes for download. You can click on the tag and look at the song, preview it again, and look at the album art and other songs on the album. If you already have your iTunes associated with an account, you can buy the song with one click.

While some critics have questioned the usefulness of this feature, I think this is an important way to stay relevant with our listeners. Now, when they hear songs our stations play, they can tag them for later purchase.

The "killer app" will be when Apple develops a device using this technology that has a Wi-Fi or 3G/4G connection, which is probably not far from happening. Once the music player is connected

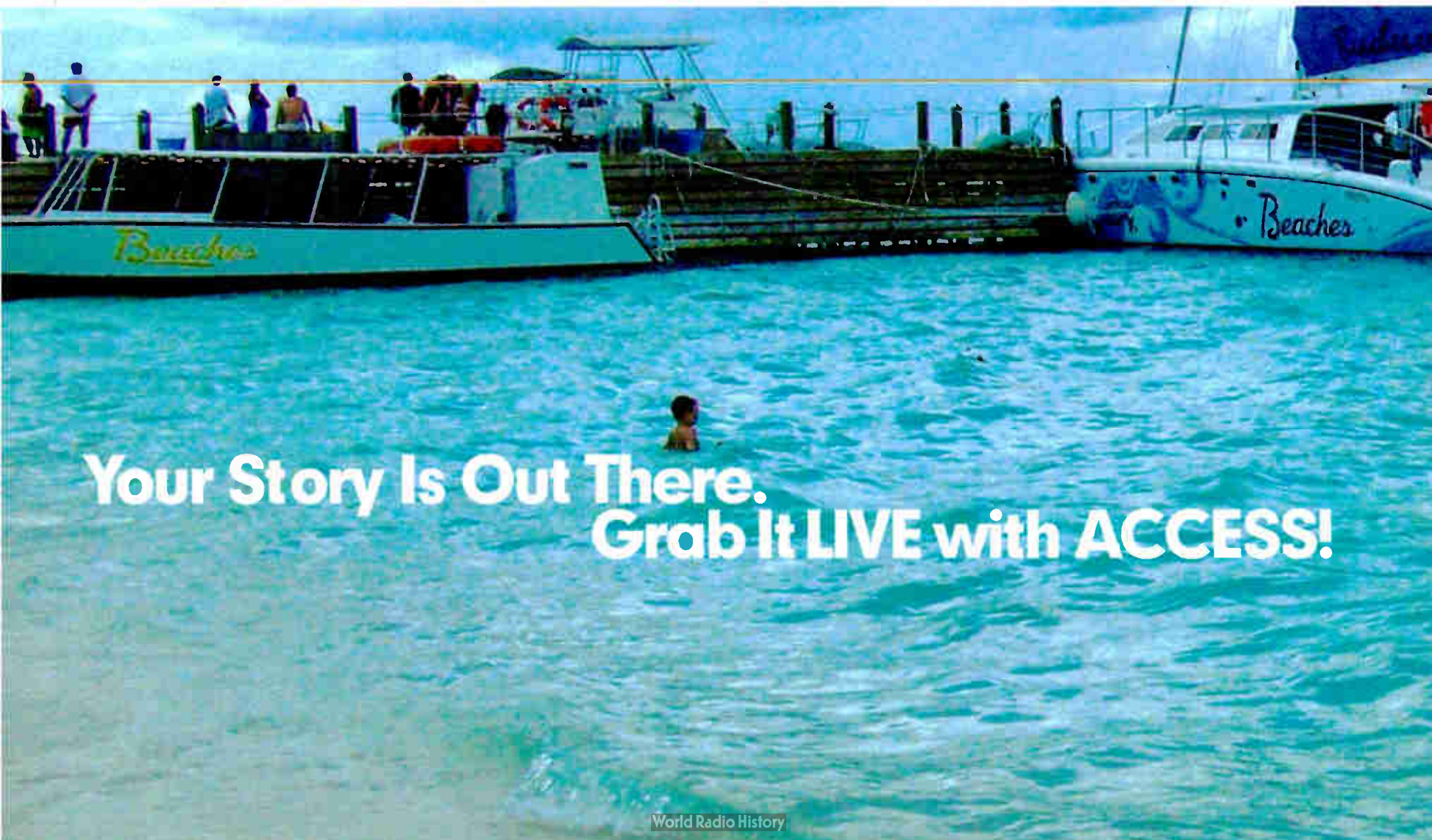


to the Internet directly, the listener would be able to tag and download that song to their personal connection immediately.

### RDS ISSUES

On the whole, Apple did a great job for its first attempt at an FM receiver with RDS support. I did discover a few issues related to the RDS RT+ support.

I found that the Nano initially had a problem in its software and would not decode RT+ packets that are placed in a station's Open Data Application (ODA) groups of 8A or 9A. There was also an issue where the Nano was using the RadioText (group 2A) "Text A/B Flag" as defined in section 3.1.5.3 in the U.S. RBDS Standard as part of the



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in relatively quickly. I think Apple is going to be a great partner: there are exciting possibilities when broadcasters and Apple work together.

While the new software release is out, remember that many Nano units in the field probably haven't been upgraded. Also, I'm sure most stock at retail outlets will have the original version of software for some time.

If your station is airing RT+ tagging, I would review which ODA group you are running it in. Some RT+ hardware installations use 8A as a default, and that means it won't work on the Nano until the user has upgraded their software version. Since it's difficult to predict if and when all Nanos will have the newer software, I would suggest moving your RT+ ODA groups away from 8A or 9A just to avoid this problem.

After the 1.0.2 release, I noticed another small issue with the Nano's RT+ tagging support that Apple has acknowledged and is working on. If you're tagging more than just ITEM.ARTIST and ITEM.TITLE, you should note that in some cases the Nano doesn't like when these two fields are separated in separate tags.

So, for example, if you are tagging ITEM.ARTIST, ITEM.TITLE and ITEM.ALBUM, be sure to put ITEM.ARTIST and ITEM.TITLE in the same RT+ tagging packet, and then

send ITEM.ALBUM in a different RT+ packet. This is a simple work-around until the problem has been addressed by Apple, and it's compatible with other RT+ receivers like the Zune.

Also, I hope that Apple starts supporting ITEM.ALBUM on the display. Right now, if your station encodes and send the song's Album data via RT+, it never will show up on the display of the Nano. The Zune HD supports this feature and I hope the Nano does someday too.

**SUMMARY**

The new Apple Nano offers a good FM tuner and a great user experience for its first product to support an integrated radio. I hope Apple continues to work on improving the user's experience by improving on some of its issues with RT+ support that I noted above. I also hope Apple publishes its proprietary iTunes Tagging RDS protocol public for the entire industry to see.

If your station isn't encoding with RDS, you should consider encoding to support this device and a whole host of new products that support RDS on the marketplace.

If your station is encoding with RDS, make sure that you're paying attention to the data you're sending in the short eight-character PS, as well as the longer 64-character RadioText.

My testing with the Nano shows that most stations are not encoding with the new RT+ standard. With the Nano and the Microsoft Zune line of products, it's important for all stations that support RDS to add RT+ encoding. Those that don't encode with RT+ don't offer the same user experience; and your competition might already be encoding. I strongly suggest you consider adding this functionality: it's in the best interest of your listeners. As more broadcasters ask for their vendors to support RT+, better, lower-cost solutions should come to market as well.

If broadcasters get on the RT+ encoding bandwagon, it will encourage receiver manufacturers to embrace the standard and incorporate FM tuners and tagging in their devices. I think this is a great opportunity for broadcasters to rally for the RT+ standard and start rapid deployment. If we can get this done, I think we'll all be delighted at the results.

Meanwhile, I hope Apple will consider FM (and HD Radio) tuners in future revisions of its iPhone and iPod Touch flagship products.

Maybe even AM?

*Alan Jurison is a regional IT manager/broadcast engineer for Citadel Broadcasting in Syracuse, N.Y. He holds several SBE certifications including CSRE, AMD, DRB and CBNT.*

decision process of whether to display a tag instead of solely relying on the Item Toggle Bit as defined in the RT+ ODA Standard, Annex P.

Upon finding these issues, I got in contact with Apple's engineers and presented my findings. They were very interested and immediately started working on a solution. Apple quickly released the Nano 1.0.2 revision of software on Nov. 9 that corrected the issues.

Your Nano can be upgraded by just connecting it to iTunes; it should suggest that you download the new version of software. My contact at Apple was easy to work with and I am encouraged that the company was able to dedicate resources and respond to this problem

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World Radio History



# Waste Not, Tangle Not

You Can Turn Holiday Packing Trash Into A Nifty Test Lead Holder

Do you still have your holiday lights displayed? Given the amount of effort necessary to put them up, maybe it's not a bad idea to keep them running into February!

## WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

Here's a tip that you might tuck away for next holiday season.

Sunbury Broadcasting's Director of Engineering Harry Bingaman decided this year to go green with the Christmas decorations. What also prompted this move to LEDs was the age-old question: "How does an incandescent set of 100 lights go bad sitting in a storage box for one year? They were working when I

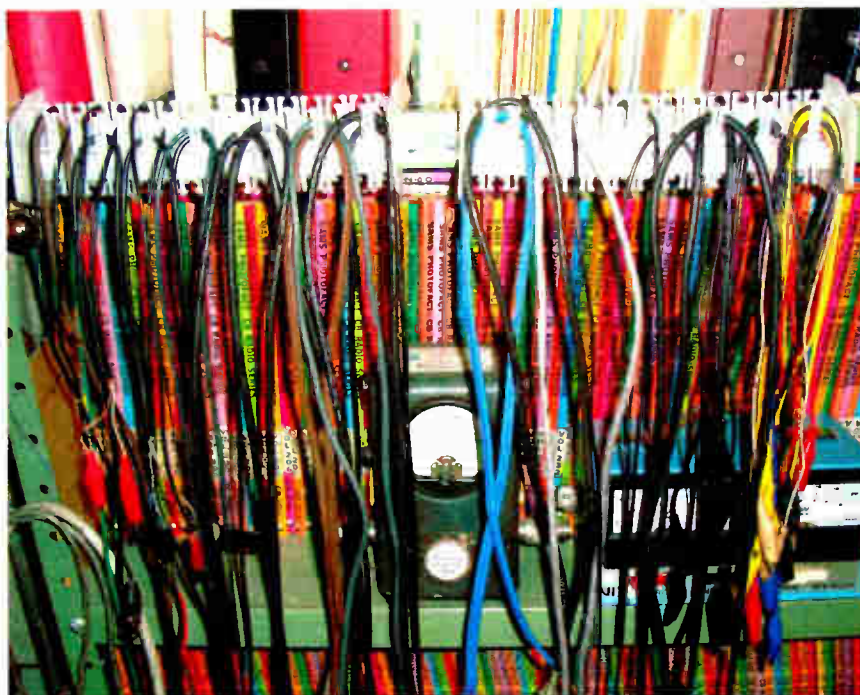


Fig. 1: This test lead holder, top, comes courtesy of the post-holiday trash pile.

put them away the year before!"

Rather than design a TDR for light strings, Harry made the switch to LED. When he finished, he started to clean up the packing material that came with the new holiday lights, including those neat little plastic holders that keep the contents secure for shipping.

Seeing these holders, Harry's own light bulb came on. Now he has repurposed them. These are perfect for organizing workbench test cables and probes, as seen in Fig. 1.

Harry used a heat gun to warm the plastic tabs. This permitted him to bend them over to form mounting tabs. He selected self-tapping screws to mount the modified plastic assembly to the front of one of his many steel book cases.

The little project turned out well and he saved plastic from the landfill.

If you dream up a solution like this, be sure to take a picture, then copy a page from a catalog showing "professional" cable holders. Show the pix to your GM and explain how you saved the station money. "See? Engineers don't always just spend!"

(continued on page 12)



Fig. 2: The project starts with the holiday light wrappings.

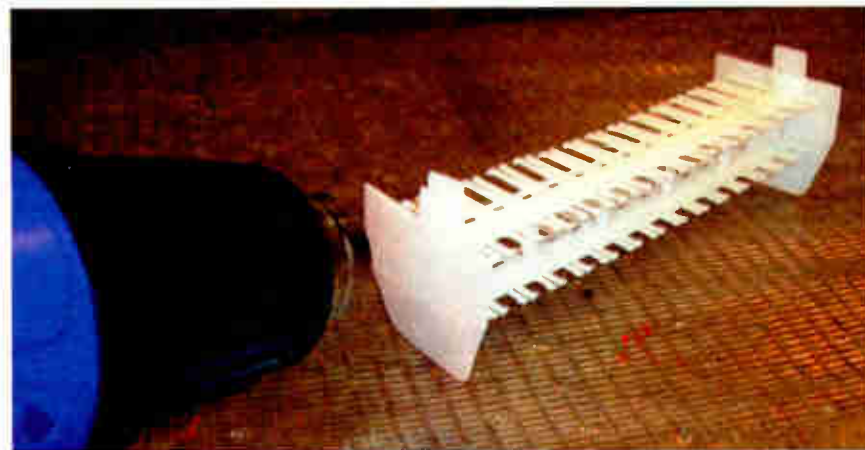


Fig. 3: A heat gun is used to make the plastic tabs pliable.

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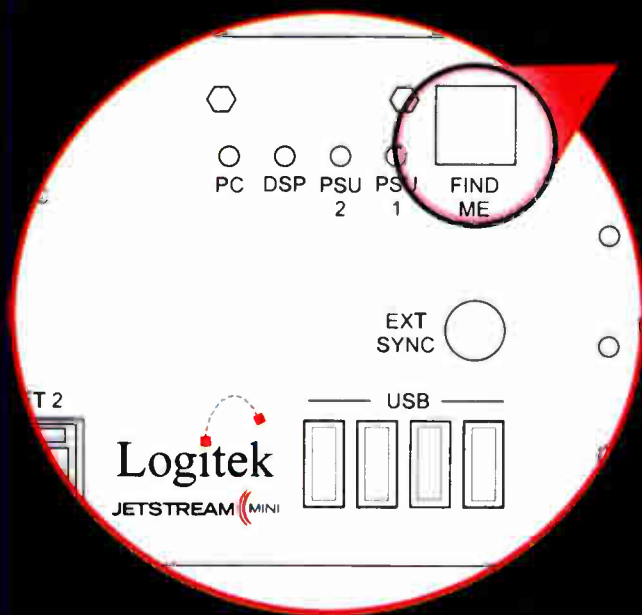
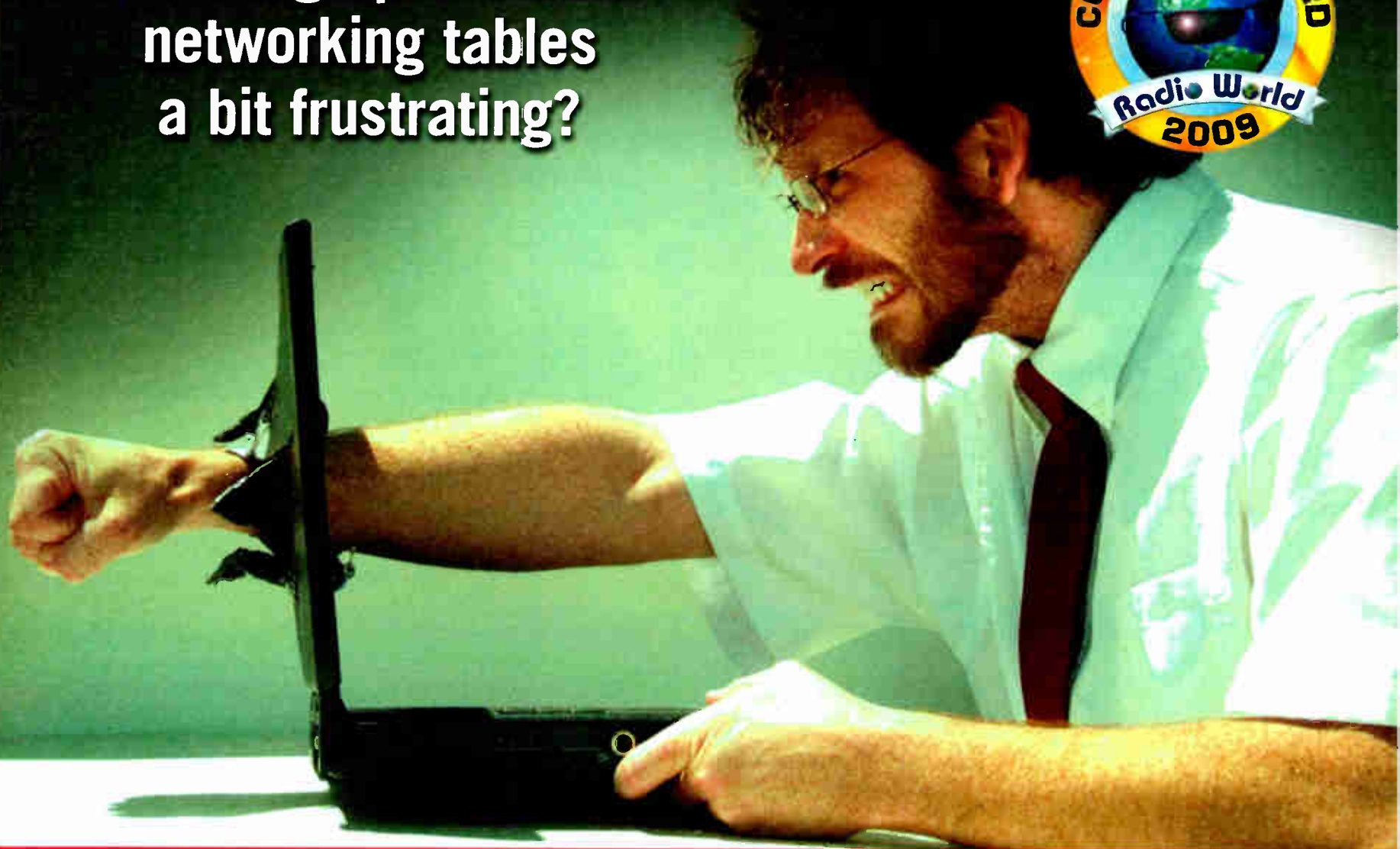
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## FEATURES

# With HFC-227ea, an 'Absolute' Fix

## London Radio Station Protects TOC From Fire and Suppression Damage

BY JAMES CARELESS

Fire is a major concern for any radio station, particularly when most of the important electronic equipment has been consolidated into a technical operations center.

### TECHTIPS

However, conventional forms of fire suppression aren't much better than fire itself when it comes to damage. Electronics simply do not fare well from being drenched in water.

London's Absolute Radio has long been concerned about fire — and fire suppression damage — to what it calls the Central Technical Area, or CTA. That's why Paul Brown, the station's head of technology, recently installed an HFC-227ea-based gaseous fire sup-

pression system.

"Due to the amount of electrical equipment in our CTA, a standard water system was not an option," he said.

The organization already had an Xtralis VESDA system — an aspirating smoke detector that regularly samples the air to provide an early warning for the presence of smoke — installed. "However it relies upon manual intervention to extinguish any fire."

The new HFC-227ea-based gaseous fire suppression system is triggered by the VESDA, completing the chain of automatic fire detection and response.

HFC-227ea, the ISO name for 1,1,1,2,3,3,3-Heptafluoropropane gas, works well in CTAs because of how it and other gaseous fire suppression systems extinguish fires.

Rather than smother flames with water or wet foam, a gaseous fire sup-

pression system releases a large cloud of an inert gas, in this case dry HFC-227ea, into the room.

"The extinguishing gas works primarily by physically absorbing heat so that the temperature of the flame falls to a point below which it cannot spread," Brown said. Other systems work by forcing oxygen out of a space, denying the fire fuel.

This gas is also non-harmful to equipment and surfaces, meaning that once the fire has been doused, the room can be cleared and brought back into normal operation quickly.

Another consideration: "HFC-

227ea gas has zero ozone-depletion potential and a short atmospheric lifetime and is therefore considered as an environmentally acceptable extinguishing agent," he said.

In the event of discharge of the system, an alarm sounds warning anyone in the CTA to evacuate. Once a fire is suppressed, the CTA needs to be ventilated thoroughly before staff can reenter the room.

"The install took approximately two weeks to complete including the final room compression test," said Brown. "With it in place, we now have properly protected the

most important room in this building."

*Help your radio colleagues and earn money at the same time. Share your radio engineering tech tips. Write to radioworld@nbmedia.com with Tech Tips in the subject line.*



Paul Brown

## WORKBENCH

(continued from page 10)

Harry Bingaman can be reached at [kc3qhhmb@aol.com](mailto:kc3qhhmb@aol.com).

Speed problems are a complaint that consultant and RW contributor Tom Osenkowsky encounters when he's working with cassette decks. Yes, some stations still use them.

For machines with an internal speed adjustment pot, one normally employs a test tape with a pre-recorded 1000 Hz tone and then adjusts for that frequency as measured by a frequency counter monitoring the playback.

For those who do not have access to such a test tape, here's a method to set the motor speed with great accuracy.

You will need a dual-trace scope, an audio oscillator and a new cassette tape (C-90). Wind the tape to mid-span. Clean the heads, capstan and pinch roller using a cotton swab and isopropyl alcohol. Install a new pinch roller, if you have one.

Feed the audio oscillator output to the cassette deck audio input and to Channel 1 of your scope. Set the oscilloscope sync to Channel 1. Adjust the time base for several cycles of the tone to be displayed. Feed the audio output of the cassette deck to Channel 2 of the scope.

Set the scope to dual-trace mode and adjust the oscillator to 1000 Hz or thereabouts. The exact frequency is not important, but it must remain constant. Now set the audio input level on the cassette deck to 0 VU. Record 60 seconds of the tone.

Play back the tone you just recorded, and adjust the motor speed until the two sine wave displays sync up as close as possible. You have now adjusted the motor speed to match the frequency of the audio oscillator (which has remained constant), accurately setting it to standard speed.

Repeat this procedure for the other speed if you

have a dual-speed deck.

(Then there was the jock who was adjusting the production room cassette machine heads so his tapes sounded good! That's right, his home machine was out of alignment and he was using that as a standard. A quick sweep of the studios to remove any and all Greenies cut down on this kind of unwanted "help." That the PD threatened the jock with his job didn't hurt, either.)

Tom Osenkowsky can be reached at [tosenkowsky@prodigy.net](mailto:tosenkowsky@prodigy.net).

We're still getting suggestions to Bruce Blanchard's osprey problem, first discussed in the Nov. 18 issue.

Contract engineer Jack Elmore works full-time for the communications division of a power company and is familiar with bird issues on its microwave towers. Jack points *Workbench* readers to Bird-X ([www.bird-x.com](http://www.bird-x.com)). This company has provided humane bird and pest control methods since the 1960s.

Non-metallic bird spikes placed on the rim of the dish and along the feed horn assembly discourage birds from using these surfaces as a perch. The non-metallic construction means no detuning or pattern distortion.

There's a picture of this on the home page. The curved spikes look like eyelashes as they run the circumference of a satellite dish.

Jack also has mounted plastic owls on his microwave towers to discourage birds. In this case, the problem is not so much interference but the real mess caused by their droppings.

Jack Elmore can be reached at [elmer11469@yahoo.com](mailto:elmer11469@yahoo.com).

Long-time San Francisco engineer Bill Ruck showed our osprey *Workbench* column to his wife Siobhan, whom he describes as a "major bird geek." She works with the Golden Gate Raptor Observatory ([www.ggro.org](http://www.ggro.org)).



Fig. 4: Bird-X makes bird and pest control products.

She says the time to do something is right now because once the birds nest, you cannot disturb them in any way, as they are protected by federal law. They begin nesting during March and April.

As to a solution, Bill suggests using some light black netting tied around the rim of the dish and to the feed horn. This netting also can be found on the Bird-X Web site. At first I was hesitant to print this suggestion, thinking that if a bird's feet or wings got caught in the netting, you'd have an even bigger problem, especially if they are a protected species. But the netting shown on the Bird-X site is a very close weave, with squares that look to be 1/2 inch or less.

Bill Ruck can be reached at [billruck@earthlink.net](mailto:billruck@earthlink.net).

John Bisset marked his 40th year in broadcasting recently. He is international sales manager for Europe and Southern Africa for Nautel and a past recipient of the SBE's Educator of the Year Award. Reach him at [johnbisset@myfairpoint.net](mailto:johnbisset@myfairpoint.net). Faxed submissions can be sent to (603) 472-4944.

Submissions for this column are encouraged and qualify for SBE recertification credit.





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# PowerStation: the new console system from Axia.



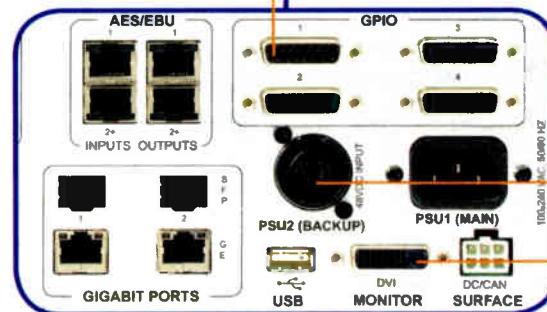
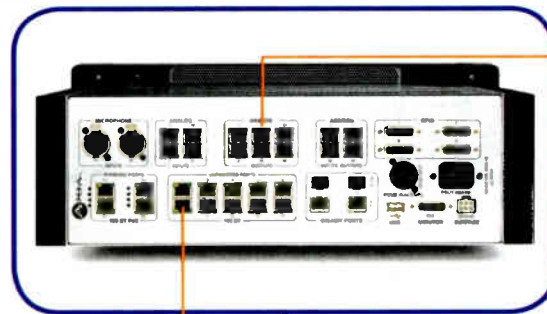
## Because there's no such thing as too much uptime.

**All stops removed** • Twenty years from now, you'll have forgotten this ad. But you'll still have your PowerStation, the full-featured one-box IP-Audio console/router system hardened with **industrial-grade components** and redundant power capabilities. Tough enough to take a football to the groin and keep on going. PowerStation **minimizes setup** and **maximizes "bang for the buck."** Engineered without compromise for broadcasting without interruption.

**Easy as  $\pi$**  • PowerStation combines a console DSP engine with audio and logic and a network switch, **all in one box**. As its name implies, there's a whole lot o' muscle inside that burly frame, but that doesn't mean it's complicated. In fact, setting up PowerStation **couldn't be easier**: connect your studio gear with standard CAT-5 cables, connect your console with just one cable, name your sources and set preferences with a browser, and you're ready to rock. PowerStation makes building studios about 3.14 times easier than ever.

**GPI Oh!** • **GPIO ports are built in** to PowerStation — no breakout boxes or add-on converters needed. One day, you might not even *need* logic ports: more and more products from companies like 25-Seven Systems, Audio Science, ENCO, Google Radio Automation, International Datacasting, Omnia Audio, Radio Systems and Telos (to name just a few) use the Livewire™ standard to send their audio and logic control directly to Axia networks over a **single CAT-5 connection**.

**Everything's included** • Yeah, we said *everything*: PowerStation combines half-a-dozen essential tools into one compact unit. No hidden extras to buy, no "gotchas" after purchase. Inside that muscular chassis you'll find a **bulletproof mixing engine** capable of handling consoles up to 40 faders, a beefy power supply (with optional **redundant power**), machine control ports, and **audio I/O**, all in one box. And of course, since it's from Axia, the IP-Audio experts, a studio built with PowerStation can stand alone — or it can become a part of a large network quite easily. Thanks to **PowerStation Simple Networking**, you can daisy-chain up to 4 PowerStations directly for easy multi-studio installation without the need for a separate core switch. Just another way Axia makes IP-Audio easy.



**E-I-E I/O** • Finding space in the equipment racks is like living in a barnyard: too many chickens, never enough coops. So our team of obsessive designers fit **an entire studio's worth of inputs, outputs, logic and network connections** — plus an advanced DSP mixing engine and a massive console power supply — into just 4 RU. There's inputs for 2 mics, 4 analog inputs and 2 AES/EBU inputs, with 6 analog and 2 AES outputs. 4 GPI/O logic ports round things out. Want even more? Just connect the PowerStation Aux to instantly *double* the I/O — or plug some Axia Audio Nodes into its **built-in Ethernet switch**.

**Fan free** • PowerStation is **silent and fanless**. Because studios today are already full of PCs, laptops and playout servers clicking, whirring and generating heat — who needs more of that? Not only is there no in-studio noise with PowerStation, those **big extruded heat sinks** are just plain cool. No pun intended (or maybe it was. We're like that, you know).

**Built like a tank** • Remember when consoles were built to last? We do. At Axia, we're all about the long haul. **There are no compromises**: PowerStation uses only best-of-the-best components. Like studio-grade Mic preamps and A/D converters. A rigid, steel-framed, EM-tight chassis that shrugs off RF like Walter Payton brushing off tackles. An industrial CPU designed for high reliability in harsh environments. Beefy extruded heat sinks. Big, brawny handles to make rack-mounting easy. (And it looks cool, too.)

**Redundant power redundancy** • The power supply is the heart of any broadcast equipment, right? That's why PowerStation is **hardened against failure** with a **super-duty power supply** that sports enough amps to power an arc welder. And for those of you who like to wear a belt *and* suspenders, there's even a connection for **redundant auxiliary backup power** — with automatic switchover, naturally — that kicks in if it's ever needed.

**Screen play** • Yep, that's a DVI connector. **Your favorite monitor** — standard or widescreen — plugs in to present the console operator with Axia's "so easy an overnight jock could do it" **info-center display**. Meters, timers, fader assignments, mix-minus settings and more, all on-screen, on-demand.

**You're covered** • Axia has the most comprehensive warranty in the industry — **5 years parts and service**. And (not that you'll need it), **free 24/7 technical support**, 365-days-a-year. We've got your back, my friend.



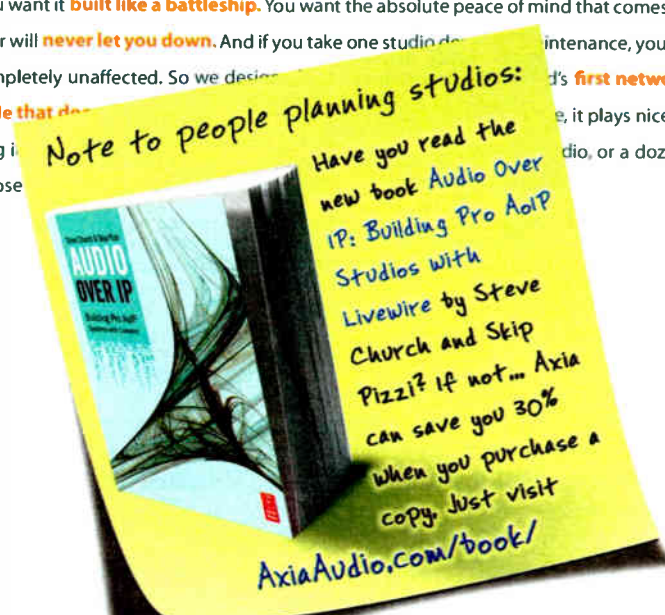
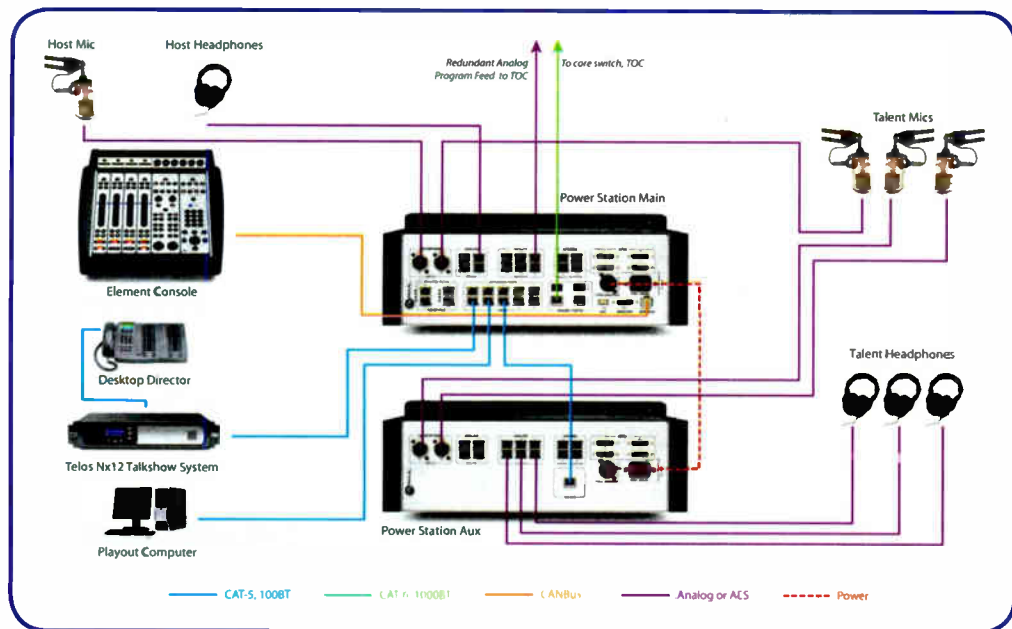




**Element 2.0** • With more than 1,000 consoles already on the air, Element is a huge hit. And now, thanks to suggestions from our clients, it's better than ever. Element 2.0 has cool features like Omnia™ **headphone processing** presets to give talent that "air sound", **super-accurate metering** with both peak and average displays, **one-touch phone recording** with automatic split-channel feed, **automatic mix-minus** for every fader, an eight-channel **Virtual Mixer** that lets you combine multiple audio streams and control them with a single fader, and metallic bronze or silver module overlays. And we haven't even begun to tell you about Element's **Show Profiles** that instantly recall talent's favorite settings, its **built-in Telco controls**, fully-integrated **talkback/IFB** and **Mic processing** by Omnia. And durable? Element is nearly indestructible, ready to take whatever pounding ham-fisted jocks dish out and keep going. You want examples? Element's **avionics-grade switches** are rated for more than two million operations. What look like ordinary rotary controls are, in reality, **bullet-proof optical encoders** — no wipers to wear out or get noisy. The silky-smooth **conductive-plastic faders** actuate from the side, not the top, so dirt and grunge stay out. The **high-impact Lexan** module overlays have their color and printing applied on the back, where it **can't wear or chip off**. The frame is made from **thick aluminum extrusions** that are stronger than truck-stop coffee. To find out even more about Element, visit [AxiaAudio.com/Element/](http://AxiaAudio.com/Element/). Grab some coffee and prep for a good, long read — remember, our marketers get paid by the word.

**Come together, right now** • Now that you know what you can do with PowerStation, let's build a studio. The diagram below shows how a typical Talk Studio might look. Mics and headphone feeds plug into the built-in Mic inputs and Analog outputs... your payout PC, using the **Axia IP-Audio Driver** for Windows®, connects to a built-in Ethernet port... and so does the Telos Nx12 Talkshow System (which sends 12 lines of caller audio, mix-minus and take/drop/next commands over **one skinny CAT-5 cable**). Send a **backup audio feed** to your TOC for extra peace of mind. And after all that, there's still plenty of I/O left to plug in the turntables for the Saturday night Oldies show.

**The standalone network** • You want your console to be more than just reliable — you want it **built like a battleship**. You want the absolute peace of mind that comes from knowing your gear will **never let you down**. And if you take one studio down for maintenance, you want the rest to be completely unaffected. So we designed the **first networked broadcast console that doesn't need a network**. It plays nice with others, but unplugs itself from the network when you need it. At any pace you choose.



[AxiaAudio.com](http://AxiaAudio.com)

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## ANTENNA

(continued from page 1)

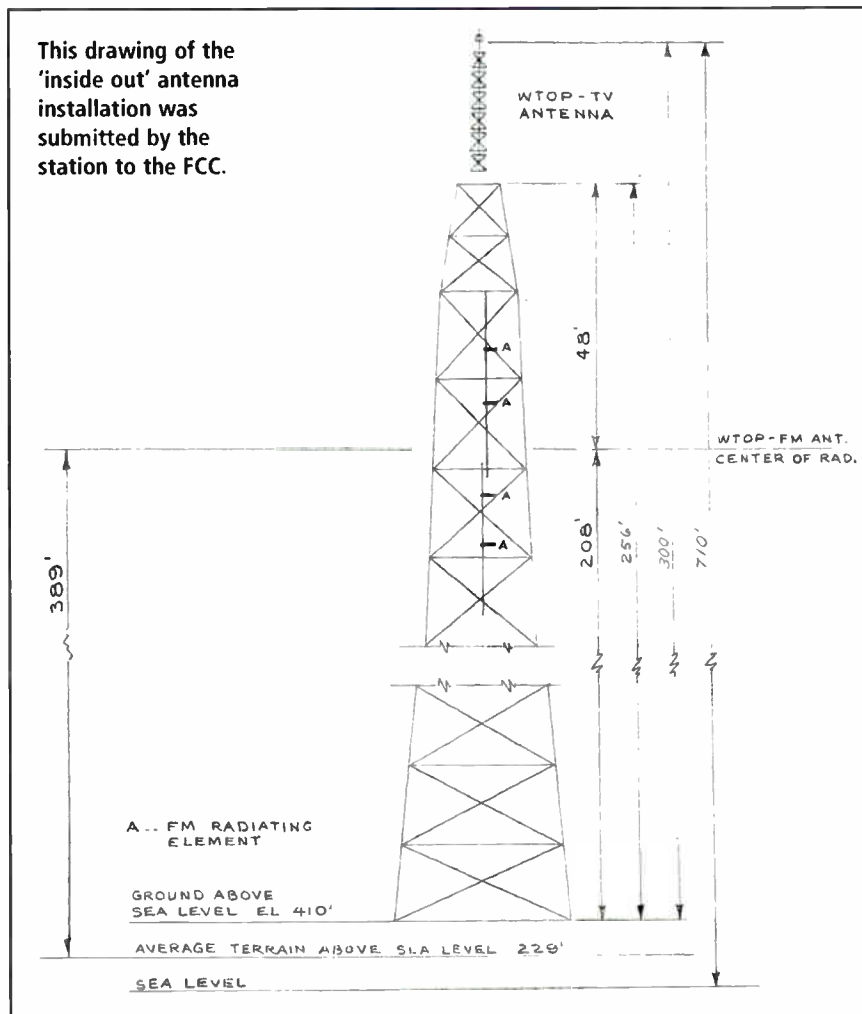
ated with 250 watts on 1340 kc. By the late 1940s, there was an FM outlet attached, WINX(FM), which had its start in 1939 as Washington's first FM station, W3XO (experimental).

The station was nurtured by the radio consulting firm of Jansky & Bailey. W3XO took to the air on 43.2 megacycles in the original 42-50 mc FM band; by the time our story starts, it was operating with a commercial license on both 44.7 mc and 96.3 mc. This was the result of the FCC's 1945 decision to "move FM 'upstairs' for its own good." Low-band FMs were given three years to migrate, with 1948 being the official twilight time for low-band operations.

When the curtain came down on 44.7, WINX(FM) was on the air with a new "high-band" REL 10 kW transmitter and Western Electric type 54-A "four-section cloverleaf" antenna on Lee Highway in suburban Arlington, Va.

During this post-war period the Post was interested in expanding broadcasting operations and negotiated with CBS to purchase controlling interest in the WTOP(AM) O&O. The deal was consummated in February 1949, and a new company name appeared: WTOP Inc. As part of the deal, the Post's 1340 kc peanut whistle had to be spun off.

This drawing of the 'inside out' antenna installation was submitted by the station to the FCC.



3. Main studio location: State DC City or Town Washington, D. C. Street and number Warner Building
4. Description of transmitter:  
REL, Type No. 520-DL, rated power 10 kw.
5. Description of antenna system:  
Andrew, Type No. 1304, 4-section Multi-V  
Antenna supporting structure: 256-foot steel tower also used as antenna for TV station WTOP-TV (FM antenna mounted inside tower, from about 26 feet below the top of the tower to about 72 feet below the top of the tower)  
Overall height above ground: 300 feet.
- Subject to submission of sufficient measurements made either during installation of the WTOP-FM antenna or after installation is completed to indicate that the radiation characteristics of the antenna are not adversely affected by mounting within the WTOP-TV antenna structure.
6. Operating assignment:  
(a) Frequency 96.3 Megacycles.  
(b) Transmitter output power 5.9 Kilowatts.  
(c) Effective radiated power 20 Kilowatts.  
(d) Antenna height above average terrain 390 feet.  
(e) Hours of operation - Unlimited

The WTOP(FM) construction permit details the unorthodox installation of the Andrew model 1304 four-bay antenna. The CP is dated Jan. 23, 1952. Note the provisional nature of the installation.

This action also generated some interesting paperwork involving the Post's FM.

### LEGAL SLIGHT OF HAND

In an exhibit before the commission dated Jan. 11, 1949, the sale of WINX(AM) is described as part of the requirement for acquisition of the WTOP share from CBS.

It was "subject to the condition that before the assignment is consummated The Washington Post Company has disposed of its interest in standard broadcast station WINX [the AM property] and its synchronous amplifiers, FM station WINX(FM) and developmental broadcast station W3XOT." (AM radio "synchronous amplifiers" were akin to today's "gap-filling" technology; they

operated on-channel and were frequency synchronized with the main transmitter to provide additional service area.)

In additional paperwork filed on March 31, WTOP's legal representative stated that "On March 23, 1949, the commission granted assignment of the license of FM broadcast station WINX(FM) from WINX Broadcasting to WTOP Inc. ... 'subject to the condition that the assignment be not effected until WTOP Inc. has surrendered its conditional grant for station WTOP(FM)'."

The communication went on to inform the FCC that the surrender took place on March 31 and that permission was being requested for WTOP Inc. to change the WINX(FM) call letters to WTOP(FM), effective the next day, April 1.

When the legalistic tap dancing ended, the Post wound up with its promised share of the formerly all-CBS WTOP(AM), and divested (on paper) itself of its WINX(FM) holdings. Yet it managed, again by paper maneuvering, to retain the 96.3 MHz FM outlet, which had been dubbed WTOP(FM).

Soon the Post/CBS partnership decided to expand its Washington broadcasting empire by adding television. After an unsuccessful effort to petition Channel 12 to the Washington area, it made an offer to the owners of an existing D.C. television station, WOIC, Channel 9. The acquisition was

approved in 1950.

### AM, FM AND TV

Now the WTOP organization was as complete as possible in 1950, with AM, FM and television.

However, operations were spread out. The WTOP radio studios were in the Earle Building (now the Warner Building, home of the Warner Theatre) a few blocks from the White House. The 50 kW AM transmitter was in Wheaton, Md. and the former WINX(FM) operation was over in Arlington, Va.

To make things more interesting, the television transmitter for WOIC — now rechristened WTOP(TV) — was located at 40th and Brandywine in northwest Washington, along with a small origination facility.

Upper management decided to consolidate operations and in the process create something of a showplace. After all, this was the nation's capital, home of statesmen and diplomats and an occasional stopping point for a celebrity or two.

The suburban Maryland AM three-stick directional transmitter plant couldn't be relocated easily and was too remote from the city to serve as a base of operations. Ditto the Arlington FM transmitter location.

This left the TV transmitter site. It was on one of Washington's several hills, some 410 feet above sea level overlooking downtown Washington and its suburbs.

### BROADCAST HOUSE

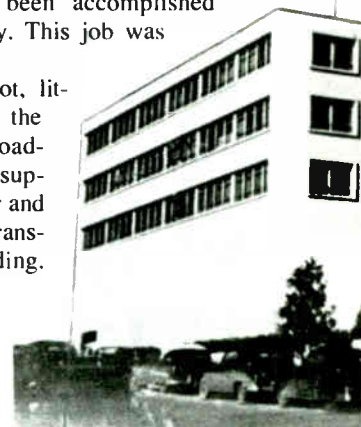
Plans were drawn up for a five-story building that would become Washington's first purpose-built structure for radio and television broadcasting. To maximize space, the architect planned the building to fit around the existing self-supporting television tower.

Ground was broken for the combined facility, which would be known as Broadcast House, in late 1951.

But after the initial excitement there was little joy.

The site was on a small hillock and much excavation work was required to create the foundation for the planned 92,500 square foot building. Ordinarily, such site work is routine. Even in 1951, with the proper power equipment it could have been accomplished fairly quickly. This job was different.

At the root, literally, were the existing broad-based self-supporting tower and associated transmitter building. The staff worried that removal of too much dirt from the





wrong place could cause the tower to topple.

"Excavation for the basement footings surrounding the existing tower was a tedious and frightening job," recalled Clyde M. Hunt, then vice president of engineering at WTOP Inc. He was quoted in Broadcast News, a publication of RCA, in 1955.

"The wall of earth around the tower base was held together by hand-digging in alternate four-foot slits, each one being filled with reinforced concrete to prevent slippage of earth under the tower footings before another slit was dug."

This was a squeaker, but Hunt reported that it was accomplished "without undue incident" and eventually work commenced on the new building.

The first technical build-out was in the space designated for the station's garage. The idea was to create a temporary studio and control room to run technical operations until a permanent space was ready.

From our vantage point of more than 50 years later, it's interesting to imagine what the production and engineering personnel must have been up against. This was a garage, not a sound-proofed

and air-conditioned studio/control room complex. Construction noises, mud, occasional power outages and other unpleasanties had to be endured.

"It was a difficult year for management and staff," Hunt told Broadcast News in what must have been a gross understatement. "Many temporary expedients were necessary for continuity of operations, requiring duplication of facilities and personal effort through many months."

**THE FM MOVES IN**

This hectic activity was complicated

by the decision — for reasons unknown, possibly economic — to relocate the FM transmitting operation from suburban Virginia to the 14th and Brandywine site while the building construction was underway.

A construction permit to allow the facility change was issued on Jan. 23, 1952. It provides an early sign of something out of the ordinary in its "description of antenna system" section:

*"Antenna supporting structure: 256-foot steel tower also used as antenna*

*(continued on page 18)*



The completed five-story Broadcast House. Photograph probably taken in late 1953.

Broadcast News photo

# Where Great Radio Begins Intraplex® HD Link™

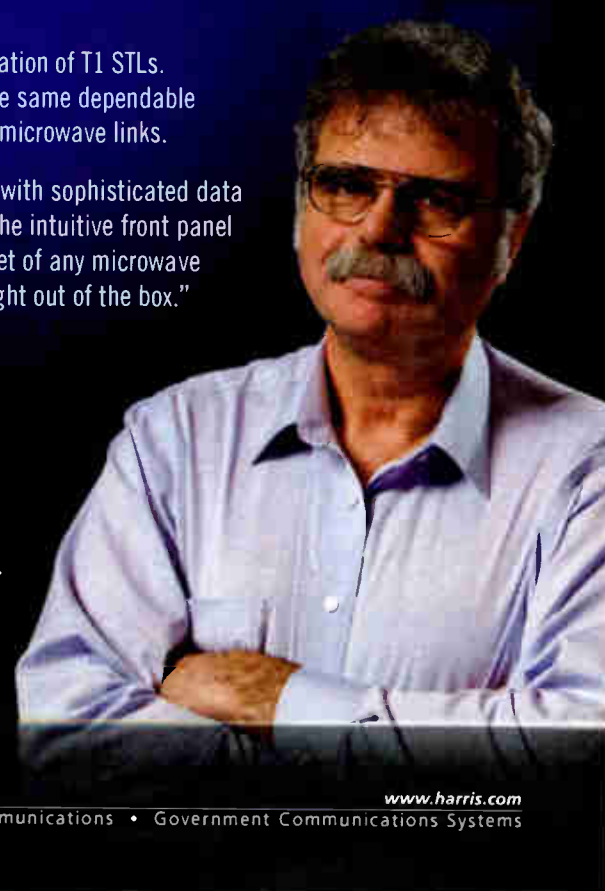


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*Chuck Alexander, Director of Intraplex Products at Harris, has been helping customers choose the best "always on" audio link solutions for more than a dozen years.*

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# FEATURES

## A TOUR OF BROADCAST HOUSE

Several months after moving into Broadcast House, the WTOP operation celebrated with a 30-minute live television tour of the new facility.

This aired on Feb. 10, 1954, and was captured on kinescope (the videotape recorder was still more than two years into the future). A copy is available for viewing by visiting the online version of this article at [radioworld.com](http://radioworld.com) under Roots of Radio.

1954 WTOP Broadcast House Opening



Not only does the video provide a thorough tour of the new broadcasting facility, it provides a priceless glimpse at what television (and radio) programming was like 50-plus years ago.

Everything was overwhelmingly

live, including musical acts, a daily children's show and a how-to-cook program. Viewers should take note of the Spartan nature of the news set. On the radio side of things, disc recording was still viable, even though the station had installed new Ampex tape machines.

## ANTENNA

(continued from page 17)

for TV station WTOP(TV) (FM antenna mounted inside tower, from about 26 feet below the top of the tower to about 72 feet below the top of the tower) Overall height above ground: 300 feet."

A CP proviso that today reads like a cruel joke stated that the installation was "subject to submission of sufficient measurements made either during installation of the WTOP(FM) antenna or after installation is completed to indicate that the radiation characteristics of the antenna are not adversely affected by mounting within the WTOP(TV) antenna structure."

### WHY INSIDE?

Legendary Washington engineer Granville "Granny" Klink joined the WTOP operation in the 1930s, when the call was WJSV. I had the pleasure of meeting him on only one occasion before his death. He was in his 80s then, and still working for WTOP.

I'd heard rumors about the unconventional FM installation and made it a point to ask if these were true. "You know about that? I'd almost forgotten," Klink replied.

He not only confirmed the story but supplied much information from memory about the details of the installation. He was particularly proud of the way it worked, telling me that the tower essentially was invisible to the top three antenna bays. The bottom-most bay couldn't quite be positioned to "see" through the tower lattice as well as the others, but this proved not to be a



Broadcast News photo

serious impediment.

As for the reason behind the unorthodox antenna mounting, Klink said it was simply a case of "no room at the top." The existing television antenna took up all available space there, and as the self-supporting tower had such broad faces, mounting of the FM elements on a side or even a corner would cause a large amount of coverage "shadowing."

Remember that FM broadcasting at the time was a loss leader for most operations. It was hobbled severely by the FCC's 1945 relocation of the FM broadcasting spectrum, which orphaned the nearly half million 42-50 MHz receivers sold to early FM adopters.

It's easily imagined that the WTOP Inc. bean counters didn't want to put any more money than absolutely necessary into the FM station and that this precluded



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**Left: The WTOP(TV) tower/transmitter site at 40th and Brandywine as seen during initial construction of "Broadcast House," circa 1951-52.**

**Below: The Broadcast House building today. The original 300-foot tower still stands, flanked by a taller mast installed in 1972. Broadcast use ceased in 1992.**



Photo by James O'Neal

multiple radiators on the tower sides. When the order was given to consolidate operations and move out of the Virginia location, Hunt, Klink and others probably did the best they could to please management.

I've found two published accounts of the "inside out" antenna project. The first includes Klink's description of the way the antenna worked when "caged" by the tower. A 1952 article in Technician-Engineer magazine stated: "Granville Klink, chief engineer, compares the principle to that of looking through a plain glass window and then looking through a large mesh screen. You can still see the outside without difficulty."

Three years later, Klink and M.W. Scheldorf, director of research at the Andrew Corp., which supplied the WTOP(FM) antenna, authored a short paper about the installation; it was published in Electronics magazine.

The story provided a technical overview of the unusual antenna installation and gave details about system performance. The authors stated that because the bay spacing was "slightly different than normal," overall antenna gain was reduced by 0.3 dB.

Ogden Prestholdt, CBS corporate antenna engineer, was brought in from New York to perform admittance measurements on the system. These showed that, with the exception of the bottom bay, radiator performance was very close to what might be expected in free space conditions.

"The element in the bottom position is affected by the proximity of the tower by an increasing amount as the frequency is lowered," Klink and Scheldorf summarized. "At the operating frequency, the admittance is changed by about 17 percent. Since only one bay out of

the four is affected by the tower it is reasonable to expect that deviation from the free space pattern is probably less than 3 dB."

Years later, Klink organized into scrapbooks a great amount of personal and engineering material that he had amassed. This included the Electronics magazine article. Klink included an undated note with it:

"The above article explains our thought processes on mounting the new Andrews [sic] Multi-Vee antenna in the top center of the existing WTOP(TV) antenna tower. The Multi-Vee had a gain

of 2.3 which covered the Washington area very well. It turned out to be a wise decision and the antenna was in service until the Post gave the station to the Howard University ..."

#### END OF AN ERA

The unconventional antenna remained in service for some two decades.

In 1971, the Post donated WTOP(FM) to Washington's Howard University, where it was renamed WHUR(FM). Studios were shifted to the school's campus; the transmitter and antenna remained

(continued on page 20)

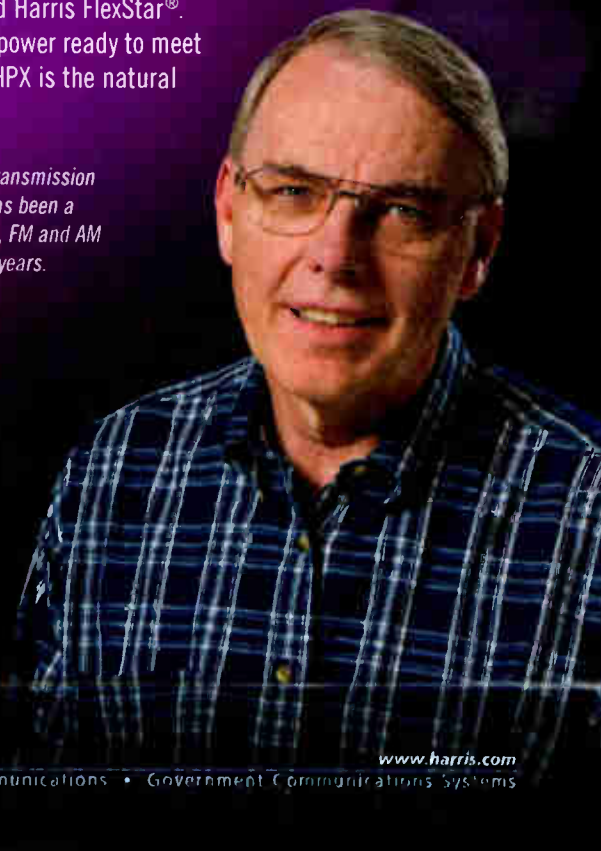
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*Geoff Mendenhall, Vice President of Transmission Research and Technology at Harris, has been a key part of countless, groundbreaking, FM and AM transmitter designs for more than 30 years.*



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## LIKE RADIO, STARBUCKS TRIES TO ENGAGE CORE CUSTOMERS

The Starbucks guy who spoke at the recent Arbitron Consultant Fly-In in Annapolis, Md., was interesting, reminding me of the executive from Procter & Gamble who addressed the group a couple of years ago.

The overarching theme from Arbitron CTO Dr. Taymoor Arshi was that all media use should be measured.

He said mobile infrastructure is improving and ready to deliver faster Internet access. Internet-enabled car entertainment systems soon will deliver online radio, video and games in addition to GPS. Television and

Internet are converging, and audience measurement must be designed for any media, anywhere, anytime, Arshi said at the December event.

Knowledge of brand management is emerging as a key driver of successful ratings.

Heavy radio users have 31 occasions of radio listening per week, or five a day, on average, according to Tripp Eldredge of Direct Marketing Results in Covington, Ky. The average heavy user spends 15 hours a week with radio. A P1 station would therefore win 7.5 hours. This amounts to 6 percent of a person's weekly waking hours.

When someone is not listening to this P1, what do they think of the station? This is the brand relationship, the "mind share" compared to the market share, and this is what creates loyalty, according to Eldredge.

in early 1992, relocating then to new quarters a few blocks away. The television transmitting equipment remained in Broadcast House until 1996.

The 1500 kHz WTOP(AM) operation no longer exists as such. The current station owner — Bonneville International, the Salt Lake City-based media group — acquired additional FM frequencies in the Washington area and moved the station's all-news format exclusively to the FM band. Bonneville now uses the 1500 kHz 50 kW facility to air its Federal News Radio programming, using the call WFED.

The Broadcast House building was sold in 1996 and transmitting equipment was removed. However, visitors to the site still can see the original WOIC(TV) tower that was such an integral part of the structure that had to be "abandoned in place."

The "inside-out" FM antenna elements are long gone, but if you look carefully, it may be possible to spot some of the mounting hardware used for the most unusual installation.

Curiously, in paperwork to the FCC, Andrew engineer Scheldorf stated that the concept of installing an antenna inside a tower structure "is not an original plan technically." If readers are aware of other such installations, the author would be interested in hearing about them. Write to [radio-world@nbmedia.com](mailto:radio-world@nbmedia.com).

*James O'Neal is technology editor for TV Technology and a frequent Radio World contributor. He thanks James Snyder and John Reiser for help in the preparation of this article.*



Granville Klink, longtime Washington broadcast engineer.

Radio operations at 40th and Bradywine ceased in 1978 after WTOP(AM) was sold and relocated.

The television operation went through a series of ownership and call letter changes — it's now WUSA(TV) — and originated the last broadcast of any type at the Broadcast House facili-



Photo by Craig Oliver

Employees dressed a snowman as a 'Barista' outside a Starbucks in Silver Spring, Md.

So how does a station develop the brand relationship with prime listeners? Starbucks Director of U.S. Store Level Marketing Bill Black spoke to the program consultants about how the coffee vendor is learning to better serve core customers. He appeared at the podium wearing his Starbucks barista green apron.

Before his time, he said, Starbucks did little to no market research. The company knew a lot of customers were coming to the stores but didn't know anything about them, including what they were buying or how often. Now it does. Starbucks has segmented its customers into five groups:

**Super Regulars**, who visit stores 16–18 times a month

**Coffeehouse Enthusiasts** (8–12 times a month)

**Treat Seekers** (once a week)

**Basic Occasionals** (once a month)

**Youth Occasionals**

Super Regulars are 4 percent of the customers but bring 20 percent of revenue. Coffee House Enthusiasts are 17 percent of customers and 37 percent of revenue. If Starbucks were to increase overall revenue 5 percent, Coffeehouse Enthusiasts would deliver more than \$150 million annually. Super Regulars would deliver another \$87 million.

Super Regulars skew male, with an average salary of \$93,000 per year; 45 percent are not married. They spend an average of four minutes in the store. They spend over \$1,000 in Starbucks annually and their average ticket is \$4.36.

Enthusiasts, in contrast, skew female, with an average salary of \$85,000; 64 percent of this group is married. They spend some \$468 annually at Starbucks and their average ticket is \$4.70. They're buying more specialty drinks whereas Super Regulars stick to plain coffee.

In 2008, the away-from-home coffee market experienced its first revenue loss in years, but Starbucks maintained its share at 29 percent, according to Black — the largest share except for "other, mom and pop" coffee vendors.

Starbucks niche is espresso beverages. It is outsold by McDonald's and Dunkin' Donuts in the brewed coffees niche.

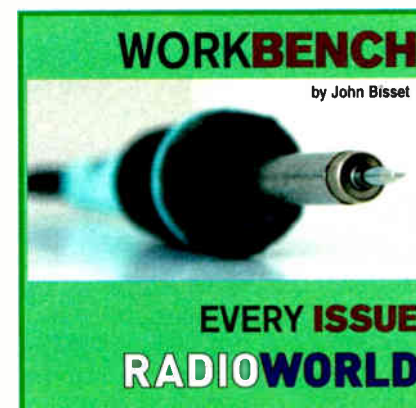
Its strategy is to maintain Super Regulars, which are akin to radio's P1 listeners, and to grow the Coffeehouse Enthusiast and Treat Seekers segments — in other words, sell more coffee, plus specialty drinks and food, which have a higher markup than plain coffee, he said. Youth Occasionals don't have the disposable income for Starbucks, but soon will, and Starbucks expects them to move directly into the Super Regular or Coffeehouse Enthusiast groups.

Eldredge and Black agreed that it's critical to know your core customers/listeners and what they care about so your station can build the brand relationship with them on and off the air. That way, when they're not listening to your station, and when they choose to listen later, they choose you.

On a related topic, when asked what Starbucks is doing to go after radio listeners, Black said it's rare to see the company use radio or TV ads; its practice is to become part of an event, like the lighting of a local Christmas tree, for example. The idea, said Black is: "We're not home or work. We're the third place where you can have some time to yourself and get away."

One consultant asked when Starbucks would offer free Wi-Fi; Black said those who register can get free two hours of Wi-Fi a day in a Starbucks.

(I'm a once-a-weeker at Starbucks. I also learned I'm buying its most marked-up products!)



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# XB-14 Is a Radio Studio in a Box

Known for Live Sound, Allen & Heath Enters Radio Market With Winning Effort

## PRODUCT EVALUATION

BY DOUG MCLEOD

I can't remember the last time I got my mitts on a new product that was so obviously the result of paying attention to the marketplace.

Radio equipment budgets are downsizing. Broadcasters of all flavors are forced to rely on mixers that, however excellent their sound qualities, are designed for use by musicians. Thus all those add-on boxes that clutter up studios from New York to New Mexico to my house.

Sooner or later, deep in the back rooms of some mixer manufacturer, a light bulb was bound to turn on. In Cornwall, England, it did. Allen & Heath, which has turned out high-quality mixers for recording and live sound for decades, has found itself a new market. Meet the XB-14 Radio Broadcast Mixer.

Although it would be inexcusably un-British, A&H could justifiably have stenciled "We heard you" all over the box.

### NEEDED FEATURES

Look at all the outboard gear I was able to yank from my studio when I disconnected my name-brand made-for-



### PRODUCT CAPSULE

**ALLEN & HEATH**  
XB-14 Radio Mixer

#### Thumbs Up

- + Full-featured radio replacement for 'musician' mixers
- + Fader-up mic muting and machine start (machine start requires D-sub on back of unit)
- + Two dedicated, full-featured telco channels with talkback
- + Pushbutton-select A/B inputs with tally lights on stereo channels
- + 100 mm long-throw faders

#### Thumbs Down

- Machine start on stereo channels needs to be normaled (without need to wire-up a D-sub)

Price: \$1,295 retail

For information, contact Allen & Heath/American Music & Sound in California at (800) 994-4984 or visit [www.americanmusicandsound.com](http://www.americanmusicandsound.com) or [www.allen-heath.com](http://www.allen-heath.com).

musicians mixer and fired up the Allen & Heath XB-14:

- Relay box for muting studio speakers and switching four microphones
- Talkback box for communicating with voice booth talent
- Separate talkback box for communicating with telephone guest (and I could only work with one of those at a time, which I'll get to in a minute)
- USB audio interface box for sound in and out of the computer
- Auxiliary input selector box that brings in all the sources for which my mixer didn't have enough stereo faders
- Guest headphone control box
- Guest talkback box

Every one of these metal and plastic helpmates was in perfect working condition and doing what I needed it to do. But with the XB-14? Ancient history. Or in that priceless British phrase: made redundant.

Of course, if you're working with full-featured professional studio consoles, you may not need all those boxes. But what if you're a small station? A newsroom? A station where an extra studio would come in handy if only the cost came in handy, too. How about LPFM? Voice talent with a personal studio? You could equip all of them with combinations of mixers and outboard gear but now you don't have to. With the XB-14, it's all in the box. One box.

Let's take a look at features the XB-14

(continued on page 24)

## Throwing it away isn't an option.

Our competition may have led you to believe that you know them, or that you can trust them. But the plain truth is that they just want your cash, and lots of it!

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**A&H***(continued from page 22)*

brings to the studio that normally exist only in full-fledged consoles priced north of five grand — some far north:

- Fader-up mic muting/on-air light control? Check.
- Pushbutton-select A/B inputs on all stereo channels? You bet.
- Available fader start on all inputs of all stereo channels? Boom, baby!
- Dedicated telephone channels with individual talkback? The XB-14 has two, with individual EQ and program/aux feed select. Some so-called full-featured consoles don't even have one dedicated phone channel, never mind the gravy.
- Separate guest headphone control with talkback? Yessir.
- External monitor select? Oh, yeah.
- 100 mm long-throw faders? Ten, count 'em.
- Lots of inserts and auxiliary inputs and outputs? No fair, since many big boards have few if any.

When you sit down with the XB-14, you actually feel as though you're working with a real radio console, not a musicians' mixer with a herd of external boxes. The steel faceplate has a solid feel, and those long faders provide a downright luxurious range of mixing levels.

The XB-14 is customizable. Users don't have to have the mics muted when their faders come up. DIP switches on the back let the user decide what's on, what mutes and what doesn't. Machine start on the stereo faders is handled through D-sub plug sockets on the rear. Same for on-air light control and any external VU meters you might want to install. Everything else is ready to go out of the box.

The first four channels are for microphones or line-level inputs. Here users have a choice of XLR mic input, 1/4-inch line or 1/4-inch insert jacks. Each channel includes a trim pot that adjusts attenuation from -6 dB to +63 dB on the XLR jack or -10 dB to +26 dB for the line jack. Users can reduce pop noise and rumble on each of these pots by punching in a 100 Hz high-pass filter.

Each of the first four channels features Allen & Heath's musical four-band EQ — one high-frequency, two mid-range and one low-frequency equalizer. These channels also include an aux bus assign control that can send a signal to the auxiliary stereo bus.

The 100 mm faders are smooth and have a nice tactile feel. And yes, if users engage the proper activation button in the master control section, each will mute the control room speakers when it's moved up. This action is dependable and silent.



Faders 5 and 6 control the XB-14's handy Telco channels. These are identical channels that receive and send audio to two separate POTS and include: XLR jacks for signals coming from and going to the hybrid; a trim pot; switchable high-pass filter; and EQ pots for high- and low-frequency tweaking.

**TELCO CHANNELS**

A terrific feature of each telco channel is its integrated talkback button, which allows hosts on any of the first four channels to speak directly to callers through their mics with the mic faders down.

Another useful feature is the CLF SCE — or Clean Feed Source — button. In the up position, the caller is fed straight mix-minus audio including all program elements. Push it down and users can feed whatever is on the aux channel, which can be any combination of the XB-14's faders.

This setup is also great if the XB-14 is used as a main control console and the user wants to record phone conversations off the air. Using a combination of the CLF SCE button and mic channel prefader selectors users can record both sides of a conversation in the same way that they might use the audition channel of a larger console. This works great and is nice and clean.

There's also a Mix B button, which routes the channel signal to a separate stereo bus for recording or feeding other equipment.

While I did not have the opportunity to utilize both telco channels, I used one in conjunction with my JK Audio Broadcast Host Digital Hybrid to record a number of interviews. They went off flawlessly and sounded clean and professional. I kept my XB-14 review unit longer than usual because I wanted to use it for these interviews. It gets habit-forming quickly.

By the way, each telco channel includes a 1/4-inch line-in jack, so if one or both are not needed for phone work another mono source can be plugged into them.

Next on the XB-14's topography come three dual-input stereo channels. Each accepts one stereo input on 1/4-inch plugs and one on RCA connectors. A separate level control adjusts the trim for each input. Users select Stereo 1 or Stereo 2 with a pushbutton; indicator lights above and below the button show which input is selected. Each stereo channel includes a two-band EQ section. One

of the two stereo inputs for channel nine is USB audio coming from a computer.

Channel 10 features one stereo input.

All 10 channels include nice big illuminated ON buttons. PFL (prefader listen) buttons, which send the audio from that channel to the control room speakers and headphones but not to air, pan pots and peak and signal indicator lights.

Direct USB connections, which provide clean audio directly into and out of computers, used to be convenient extra features on mixers and consoles. More and more, however, they're becoming necessities. Since so much broadcasting and recording audio now interfaces directly with computers, it's good to be able to do so directly from the board — another external box eliminated. In my studio tests, the XB-14's USB connection shook hands flawlessly with both a PC and Mac.

In addition to the expected controls for control room and guest headphones, there's a Talk To Guest button that enables talkback to guests. Other selections allow users to feed Aux, Mix B, USB audio or external monitor signals

to the guest headphones.

The power supply is internal, though close listening reveals no audio effect. This does cause the board to run a little warm, but not noticeably so. According to the manual, components and construction are as on A&H's larger boards, "utilizing individual vertically-mounted channel circuit boards with each rotary control fixed with a metal nut to the front panel." The company says this approach resists damage and lengthens service life.

Adequate 12-segment LED meters show levels. Naturally, the board provides 48 V phantom power to the four XLR connectors.

I didn't use the board in a harsh RF environment so I can't comment on RF immunity.

In operation, the XB-14 is smooth and reliable. Before long, I began to refer to it as a board instead of a mixer because, with its complement of radio-specific features in addition to the clean audio we've come to expect from high-end tabletop mixers, it really does feel like serious professional equipment that belongs in a radio station instead of a musician's project studio.

You could run a busy radio studio with the Allen & Heath XB-14. With a street price at or below a grand, I won't be surprised if a number of stations begin to do just that.

*Doug McLeod is a longtime baseball play-by-play announcer, voice talent, sales management consultant and radio station general manager.*

**PRODUCTGUIDE****OMNIA OFFERS PRESET WEB PAGE**

Like the proverbial woman and her shoes, when it comes to processor presets can you really ever have too many?

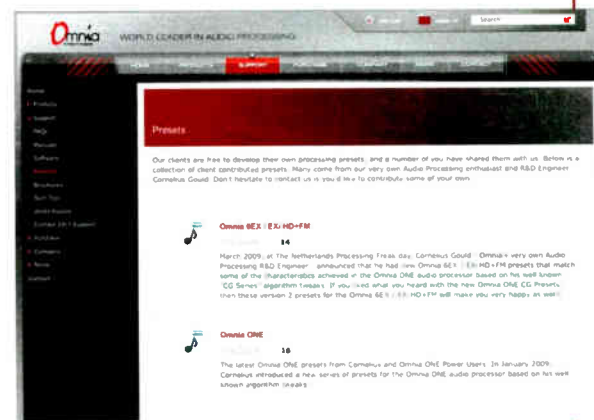
There may only be one time you'll use "CG NPR Pure" but it's great to have it handy for that special occasion.

To facilitate those times, Omnia Audio has opened a section on its Web site for preset storage and downloading.

Currently new presets Omnia ONE and 6EX and 6EXi HD+FM are available. Many are from Omnia's resident preset guru Cornelius Gould; but Omnia encourages users to offer their tweaked versions for general distribution. For instance, engineers Mike Erickson and Wes Keene have carved their names into Omnia preset marble.

Omnia notes that storing more than 20 presets can cause problems in the 6EX or 6EXi processors so some discrimination needs to be exercised. These presets are free.

For information, contact Omnia Audio in Ohio at (216) 241-7225 or visit [www.omniaaudio.com/support/presets.html](http://www.omniaaudio.com/support/presets.html).





**PRODUCTGUIDE**

**SURGEX PLUGS IN GLOBALLY**

Power protection equipment manufacturer SurgeX International has introduced a line of power conditioners and surge protectors, the SX1200 line, designed for worldwide use.

The line offers several regional variants including United Kingdom (13 A), Europe (16 A), China/Australia (10 A) and South Africa (15 A). The regionalized variants also use region-specific plug styles (different than traditional U.S. NEMA style).

All of the models share SurgeX's Advanced Series Mode and Impedance Tolerant EMI/RFI filtering. Some models (RLi and RTi) have SurgeX's Inrush Current Elimination (ICE) and Catastrophic Over/Under-Voltage Shutdown (COUVS) technologies. All also have 10 plugs, eight switchable and two permanently on.



The RLi models offer plugs for Littlites. The RTi models offer remote turn-on capabilities.

For information, contact SurgeX International in Pennsylvania at (610) 847-4956 or visit [www.surgexinternational.com](http://www.surgexinternational.com).

**COMREX OFFERS BRIC SERVER SOFTWARE FOR FREE**

Codec maker Comrex is making its BRIC Traversal Server software available for free to the general public.



Comrex Managing Director Kris Bobo said, "Some of our larger broadcast network customers have indicated an interest in being able to privately manage their own BRIC TS for a greater level of flexibility and we are happy to make this available for them and all of our ACCESS customers." Previously, the Traversal Server system was run exclusively through Comrex's installation.

The Traversal Server (TS) software allows Comrex ACCESS IP codecs like the one shown to locate each other, navigate routers, networks and firewalls.

Traversal Server requires VMware's VMware player application. Traversal Server is compatible with Windows and Linux systems.

For information, contact Comrex in Massachusetts at (978) 784-1776 or visit [www.comrex.com](http://www.comrex.com).

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## Open Sound New Orleans Creates 'Collaborative Sound Map of the City'

BY JAMES CARELESS

Creating content by using on-location interviews and ambient sound is nothing new. Letting a city's residents produce their own audio landscape? That's something else.

In a nutshell, this is the idea behind Open Sound New Orleans, "a community project that invites New Orleanians to document their lives in sound," according to Jacob Brancasi, curator and co-creator of the project with Heather Booth.

"Participants record, or make recording requests for, the important sounds and voices in their lives. The sounds they record are archived and organized geographically on a sound-map of the city, which can be found on the Web."

### HOW IT WORKS

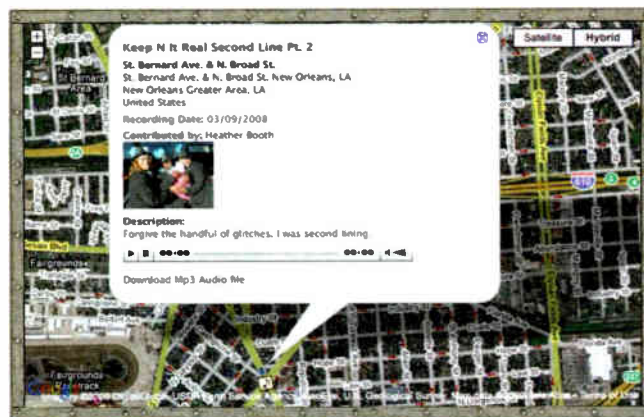
The focal point for the Open Sound New Orleans project is its Web site at [www.opensoundneworleans.com](http://www.opensoundneworleans.com). This is where people can upload whatever audio they have created for the project, be it their personal stories and recollections, "wild sound" recordings of actual events, street scenes or concerts; or whatever melange they might edit together themselves. (After all, with today's computer-based editing software, a thoughtful novice can put together a reasonably decent radio documentary.)

In those instances where people can't do their own recording, Booth and Brancasi are there to help.

"We have four Zoom H2s" — handheld stereo digital recorders with built-in microphones — "which were purchased with donations from friends, family and other New Orleanians," says Brancasi.



Mapmarkers indicate available audio files from around the Orleans Parish area, with the Mississippi winding through and Lake Pontchartrain at top.



Visitors click on a mapmarker for download information and details about the recording.

"Since August 2008, we have loaned these recording kits to community organizations, neighborhood groups and individuals to facilitate a diversity of

direct dispatches from around our city. A majority of the content on the site has been recorded by New Orleanians who use the equipment we lend out and train them on."

At the Web site, the sound clips are organized using an interactive "sound-map" of New Orleans. By clicking on various locations, surfers can take an "audio tour" of the city as heard through the ears and imaginations of its citizens.

"Our intent is to make more accessible the authentic, unedited sounds and voices of New Orleans," says Heather Booth. "We believe that archiving the sounds of our city as everyday people hear them, move through them and create them, is an act of preservation."

The site's list of available audio files suggests the difficulty in building a large-scale effort. Among their recent efforts to build content, Brancasi and Booth invited musician Quintron to contribute "ambient and musical snapshots" documenting the creation of a new album he is recording in 2010 in the galleries of the New Orleans Museum of Art, with museum patrons at hand.

Last year they issued a call to people who live in the area of the Dwyer Canal. The ground on one side of the canal is lower than on the other, making the historically African-American side more prone to inundation. Now flood mitigation efforts are being carried out, and Open Sound invited residents to share thoughts and experiences about their neighborhoods via audio recordings.

The Open Sound New Orleans site has a Creative Commons Attribution-Noncommercial 3.0 license. By contributing to the site, people automatically certify that all of their sound can copied, distributed, transmitted and adapted

(continued on page 28)

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**OPEN SOUND NEW ORLEANS**

A Collaborative Soundmap of the City

View: Track

**Immigration and Insecurities**

Submitted by Amleed ain Fro... on 06/04/2009

in Arrested on Frontiers businesses ESL family neighborhood St Anne's voice

Recording Date: 05/11/2009

Description: Enma Varela talks about the advantages of the United States, insecurities she has as an immigrant here, and her hopes for starting a business when she returns to Honduras. For a transcript, visit the news page.

Image:

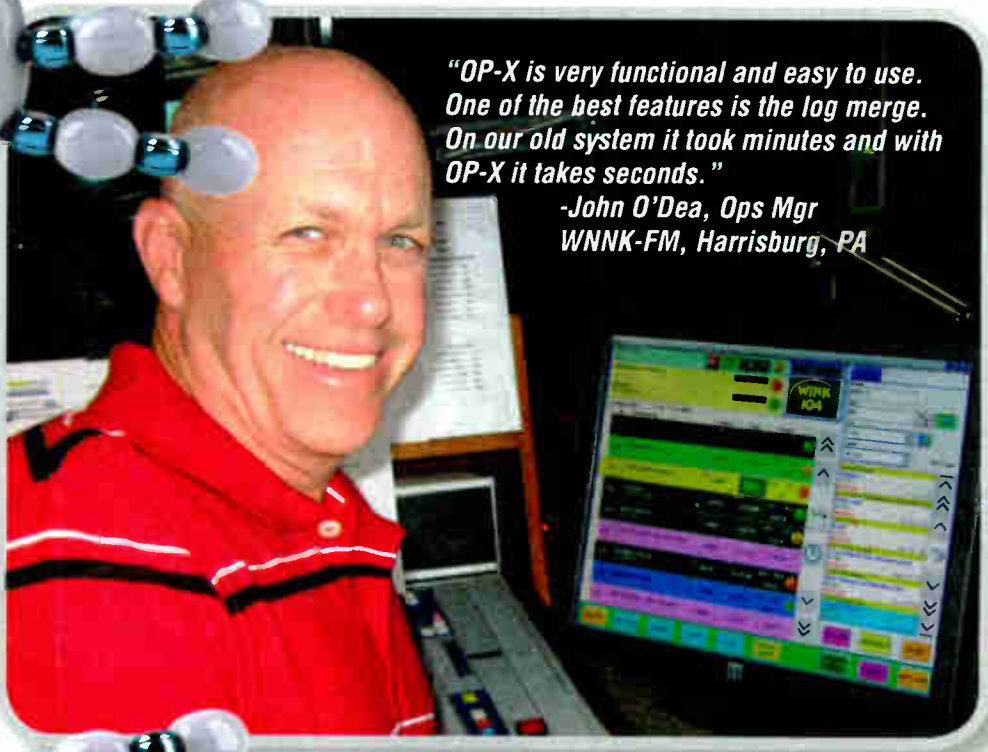
Sound File:

Location: St. Anne's Episcopal Church, 1213 Esplanade Ave, New Orleans, LA 29° 58' 4.9872" N, 90° 3' 57.3012" W

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An example of the specific sound file pages created for each sound added to the map.





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# Links of Love: Heart-Smart Ideas

## Tips to Get the Most Out of Your Promotions Around Valentine's Day

### PROMO POWER

Mark Lapidus



"But will the diamond we give away really be worth \$5,000, or is the jeweler inflating the price?"

If this rhetorical question sounds familiar, it's because it's asked at radio stations around the country every year just before Valentine's Day.

It's typically posed by the program director to the general sales manager, who punts it to the account executive, who asks the only sponsor of the contest: the jewelry store owner. The diamond man feigns surprise and the contest goes on.

The correct answer to this quiz is that owner should certify the value of the prize in writing, so you're then able to supply the contest winner with the correct tax form at the end of the year.

Are you going to go through the same old schtick? Or this year would you like to try something different for the most romantic day of the year on Feb. 14?

### SALES HOOKS

If you've got an active Web site, one way to go is by creating a "Links of Love" section.

Your GSM will be enamored of this idea because each page can be sponsored by clients who supply a prize, give you pictures of product and even do audio and video interviews.

Start by creating a listing of all the major florists in your market. Feature

only those that purchase the package, which includes an expanded listing, on-air mentions when you give away their prize and a spot schedule. Pick the title sponsor of this section to be interviewed online and perhaps on the air as well.

The next section features lingerie shops, and don't forget their online counterparts. Use the same model outlined above — and hopefully a few real models who can show off the merchandise, or at least describe it by holding it up and showing it to your video camera.

Restaurants will want to be part of "Links of Love," as Valentine's often involves the perfect meal out. Perhaps one of your air personalities can spend a week taste-testing meals out and blogging about the places in this section, while also mentioning them on-air.

Are there enough hotels in your area offering tantalizing Valentine one-nighters for locals? If so, build a section for them.

Other categories to consider for content and subsequent sales include limousine companies, theatre and dinner-theatre venues, beauty salons, gift stores, perfume and make-up counters, dating services, tanning salons, and of course, jewelers.



iStockphoto/Dmitrii Brighidov

### IT'S A DATE

Here are a few more Valentine's promotions you can have fun with on-air. Use these now or save them for next year:

— *Date Lab*: Arrange one blind date per day for at least five days in a row. Do this by taking calls on your morning show and by allowing people to enter online. Record calls the morning after a date with each person, getting the details. Pre-record these so that one can't hear the other's comments until after they've already done their own "date review." At the end of the run, the couple who seems to have the most potential goes on the ultimate Valentine's Day date.

— *Maid for Valentine's*: Nothing says romance better than having someone

else clean your house, so you can enjoy a special night out and come home to clean sheets.

— *Love Songs*: Every format has 'em ... maybe you should make a big deal about playing them on V-Day, all day and all night.

— *Instant V-Day Gratification*: Prompt your listeners to go totally red on this special day by doing something truly special: donating blood.

— *Date Night*: Take over a local bar and invite singles only. In fact, take over more than one bar and admit only those whose age corresponds to the decade ... One place for ages 20–30, another for 30–40, another for 50-plus.

— *Vasectomies Vanquished for Valentine's*: How about a new twist on the usual, where you have a doctor reverse the treatment for three or four men and then have a race to see who can have the first baby? This one could keep you busy for over nine months.

Valentine's is all about creating the fantasy of finding the perfect person or having the perfect night out with someone you love.

While everyone knows that trying to do anything "perfectly" is tough, they're willing to give it a shot, or at least hear or read about others' attempts to find love. In these times when it's harder than ever for radio stations to make emotional connections with listeners, don't be left sitting on the bench while others dance.

*The author is president of Lapidus Media. Contact: marklapidus@verizon.net.*

## OPEN SOUND

(continued from page 26)

without payment of rights claims.

### RADIO ANGLE

The project was featured in a recent broadcast of NPR's "Weekend Edition," with listeners given a "tour" of the city soundscape.

Booth and Brancasi had been working on the Web version of Open Sound New Orleans since early 2008. The idea of taking it to public radio occurred after they won one of eight 2009 grants from the Association of Independents in Radio Inc. with funding from the Corporation for Public Broadcasting. The project was funded under the Makers Quest 2 program,

according to AIR Executive Director Sue Schardt. The goal of that initiative was to encourage producers to bring "do it yourself" culture and new media to traditional public radio platforms.

That funding ended last August. But Open Sound New Orleans remains a going concern.

"We're eavesdroppers," Booth said. "We love sound and conversation, particularly the sounds and conversations of our city, New Orleans ... We chafe a little at the 'voice of authority' required in radio, and the gatekeeper strategy that has long kept so many voices out. That is why we were so surprised and thrilled that CPB and AIR wanted to support our project, which is simply about encouraging the people of our city to get involved in their own representation."

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# EAS

(continued from page 4)

its best analysis of why.

Participants would also be asked to provide the date and time of receipt of the EAN message by all stations; the date and time of the initiation of the actual broadcast of the presidential message; who they were monitoring at the time of the test; the make and model number of the EAS equipment that they utilized; and other data. (The FCC language was unclear about whether this additional info would be required or optional.)

## TELL THE FCC

Is the proposed annual testing the best way to make sure EAS works nationally? Is an annual test necessary; is it sufficient? Is two months' notice enough? These are questions the FCC is asking and on which it seeks comment.

The commission also noted a technical concern. It said coder/decoder manufacturers "may have programmed their devices to receive and transmit EANs in different ways." This may affect the ability of some devices to relay an EAN properly.

"In its 2008 Closed Circuit Test Report, the Primary Entry Point Administrative Council noted that many

ENDECs process EAN messages by ignoring FIPS, i.e. location codes for national level messages, on the assumption that a national message is intended for the entire nation," it stated.

"Accordingly, they transmit the message whether or not an EAN contains a FIPS code. At least one ENDEC manufacturer, however, has devices which require a FIPS code match. Thus in order to properly forward an EAN, the devices must receive a message that contains an appropriate FIPS code as authorized by commission rules."

The commission asks whether this situation raises further problems and what it should do about them. For instance, should the FCC require that encoder/decoders relay an EAN message irrespective of FIPs code? Should it designate a national-level FIPS code?

I agree with the FCC that a properly functioning national EAS remains important and that this national testing regime is appropriate. The proposed rules appear to reflect input from broadcasters and do not appear to me to impose an undue additional burden on stations. But you may feel differently. Tell me at [radio-world@nbmedia.com](mailto:radio-world@nbmedia.com). And make your thoughts known to the commission; you can file a comment on its Web site. Refer to EB Docket No. 04-296.

## PEOPLE NEWS

### MARKLEY'S LEGACY LIVES ON

Donald L. Markley passed away in late 2009. The president and founder of consulting firm D.L. Markley & Associates in Peoria, Ill., was 73. According to Senior Engineer Jeremy Ruck, Markley had multiple myeloma.

The company Markley started with his wife Phyllis in 1964 continues in business.

"Although Don is no longer with us physically, his spirit, vision and legacy live on in D.L. Markley & Associates, and we will be continuing his life's work, his passion," Ruck wrote in an e-mail to Radio World.

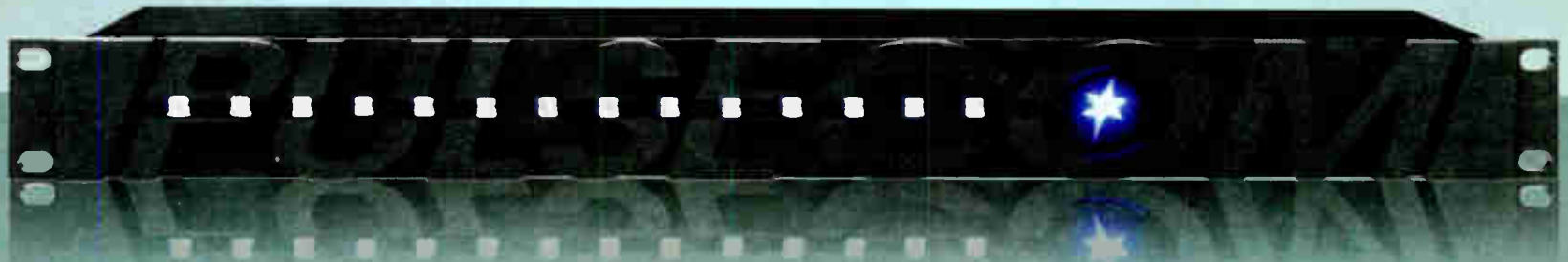
Donald L. Markley was graduated from Bradley University in Peoria, Ill., with a bachelor's of science in electrical engineering and master's of science in electrical engineering, according to the company Web site. Prior to full-time consulting, he was an associate professor of electrical engineering at the university.

According to an obituary in The Journal Star newspaper, Markley was a member of the Association of Federal Communications Consulting Engineers and the Institute of Electrical and Electronics Engineers and other organizations, and had mentored a number of engineers throughout his career. He was a registered professional engineer in the state of Illinois and an amateur radio operator, K9WFG.

The firm does work in broadcasting, power distribution, safety and forensic engineering. Its staff consists of Phyllis Markley, Office Manager Paulette Hoskins, Staff Engineer Keith Turcot and Ruck, who had been overseeing day-to-day operations during Markley's illness.



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### MISCELLANEOUS

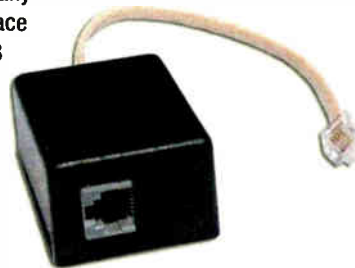
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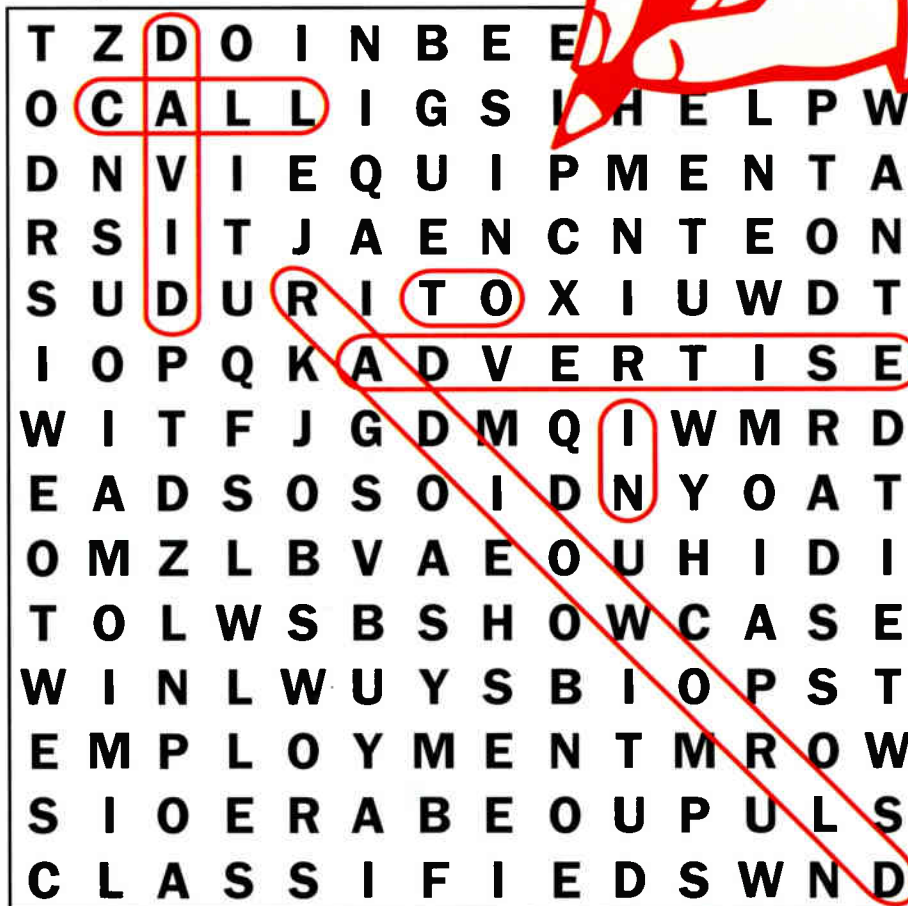
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# Stop Shouting, Start Talking

A Royalty May Be Inevitable. Both Sides Benefit by Dialogue

BY DAVE KOZ

As a recording artist and radio host, I'm fortunate enough to have two of the best jobs on the planet.

Working in businesses so closely linked has given me a unique perspective on how music is used on radio and how the music and broadcasting industries have benefited from their partnership over the years. So naturally, I've been closely following the debate about radio performance royalties and the pending legislation in Washington. As someone who has experience on both sides of this business, it seems like now is the right time to share some thoughts on the matter.

The arguments have been laid out clearly. Musicians claim their work is being used without permission or compensation; they're right. Broadcasters claim the system has been mutually beneficial for decades and that radio cannot incur this added expense in the middle of a recession; they're right, too.

But as is often the case in delicate legislative matters, clear-cut issues are rarely so clear-cut. As I see it, a performance royalty will likely be imposed in some form. The Judiciary Committee Chairs in Congress who oversee intellectual



Photo by Lori Stell

property support it, and both House and Senate Judiciary Committees have approved the bill.

Radio is the last business in America that is exempt from royalties, so most insiders say this is inevitable. The question is, how can it be implemented to minimize the impact upon the already struggling radio business, one that can ill-afford to take on this expense right now? And how can

we ensure that smaller, independent and minority-owned stations don't get irreparably harmed in this operational change?

## REAL INPUT

I am not an expert in this arena by any measure, but having lobbied Congress on other issues, one thing I've learned is that Congress needs help to get it right.

For it to do its job properly, it needs the input of real folks who work in the businesses affected — in this case, musicians, labels and broadcasters. But the lack of dialogue between the two sides, represented by the musicFirst Coalition and the National Association of Broadcasters, is leading to an impatient Congress that will do it its own way — and that could be a disaster for those of us with a vested interest in this outcome.

So with respect to resolving this issue the right way, I humbly offer a few suggestions for moving beyond the current stalemate. No matter which side of the aisle you're on — or which side of the dial you're on — we should be able to agree on some basic principles:

1) Turn down the volume. To musicFirst, while it's true that the U.S. is the only developed country in which artists don't get paid for radio

mutually beneficial one for years.

2) Begin the dialogue. Only real negotiations will head off runaway congressional action. But as I write, the two sides have only met once, at the insistence of legislators. Dialogue is productive — it's a start ... and shouldn't require an act of Congress.

3) Accept that the performance royalty is inevitable ... but let's make sure it's implemented in as painless a way as possible.

First and foremost, radio should insist that collections not begin in the middle of a recession. Broadcasters will need

**Only real negotiations will head off runaway congressional action.**

— Dave Koz

airplay, having the American broadcast industry equated to North Korea and other totalitarian states does us no good. It's hurtful and unfair and it should stop. And to the broadcasters, let's not cast the other side as "greedy foreign record labels." That's unfair too. The majority of this royalty will go directly to the artists, with the remainder divided up between major and independent labels — copyright owners who pay good old American taxes. Remember that while it does need to change to adapt to our current times, the relationship between radio and records has been a fruitful and

time to adjust with a delay or ramp-up over time.

Fees could be discounted to take into account the significant promotional value that radio provides and has provided artists and labels for decades.

Small radio stations should be capped in their royalty payments at a mutually agreed upon level.

And finally, Congress should help radio achieve its other legislative initiatives that will help the broadcasting industry boost revenue while it takes on this new expense. This could even be the

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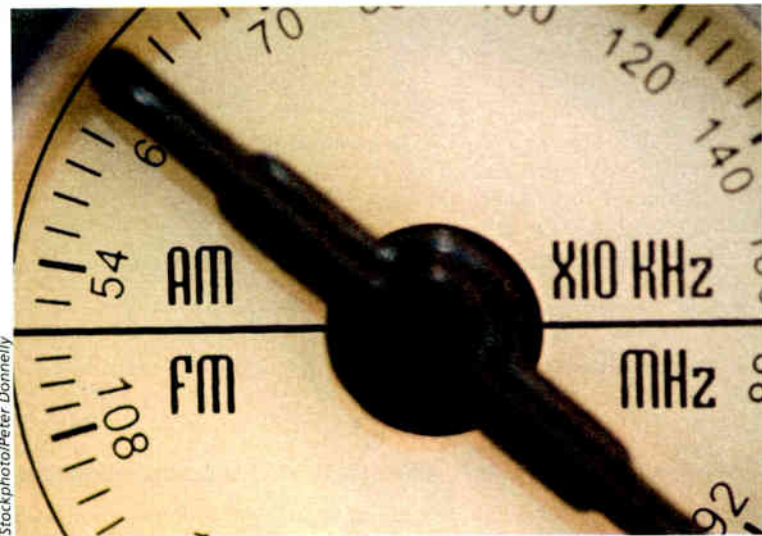
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**READER'S FORUM****GIVE 'EM WHAT THEY WANT**

Thank you for including WHOW(AM) Clinton, Ill., and our picture in your timely story on AM broadcasting ("AM, and How!" Nov. 4). I've gotten lots of e-mails from my broadcast friends across the country, as well as phone calls from broadcasters I know and some I don't.



The ones I don't know called to ask "How did you do it?" My answer was simple: Give the people what they want.

AM is still an important source of information and entertainment for many communities large and small.

*Randal J. Miller  
President  
Miller Media Group  
Clinton, Ill.*

**SERIOUSLY WORRIED**

I've been reading your articles regarding AM radio's outlook with extreme interest. I own two AM stations, one in Phoenix and another in Denver, and am seriously worried about the long-term future of the band.

As digital receivers reach a critical number, most large broad-

**KOZ**

*(continued from page 33)*

flashpoint needed to turn the business around and actually improve it significantly.

Even Gordon Smith, the NAB's CEO, was quoted as saying the issue has become "so tiresome to members of Congress that they'd give you a lot to get rid of it." Radio can work with Congress to make this beneficial for all.

All of this is easier said than done, of course. But nothing will be accomplished until both sides get in a room and begin talking. If we — musicians and broadcasters — don't take matters into our own hands, Congress will "fix" our business for us without our input.

So to both sides of this battle, I urge you to work it out, and let's do it soon. I may be the host of a music radio show, but on this issue, I'm asking musicFirst and NAB to adopt a "talk format."

*The author is a six-time Grammy nominee and multi-platinum pop instrumentalist. He hosts an afternoon radio show distributed on the Smooth Jazz Radio Network as well as the syndicated "Dave Koz Radio Show."*

casters will continue moving their AM content to the FM band (let's be honest, they don't have enough new content to fill up all those "new" radio stations). As they do, whatever little pressure they could exert on device manufacturers will disappear.

It is clear that the future of hand-held devices does not contemplate an AM option. This will shoot down the possibility of ever attracting young listeners to the band.

It won't happen overnight; but if this is the trend, the future of the AM band is, at best, bleak. If we consider that, in addition to digital radio, cars will have the option of Internet radio, then the last bastion for AM stations (cars) will be heavily fragmented.

You used to pay so much money to belong to the "exclusive club" of FCC license holders. When the exclusive club is no longer, how much is an AM license going to be worth? In the end, radio is a business and you need to make so much to pay the bills. If the value of AM licenses drops so much, what are we, the small radio owners, working so hard for?

*Herberto Limas-Villers  
President  
KNUV(AM)/KNRV(AM)  
Denver*

**GOVERNMENT INTERVENTION**

I am young and I like AM. I will hate to see AM radio go. I think it is time to create that new FM from Channels 5 and 6.

I recently tried to help a person start a new AM station with no success. We had plenty of listeners but when we tried to get commercials, people said "It is AM radio, we only advertise on FM." It was a Christian station and we only had a few churches take part. We probably could have done better if the economy was not in such a mess.

The only way people will do something is if the government signs something into law, just like they did with digital television. I have never listened to AM stereo but I sometimes wonder if this would not help AM, since so many people are crazy about FM stereo.

*Travis Arrington  
Chancellor, Ala.*

**TOUGH TIMES**

As a small-town operator, 2009 was the worst year we have ever encountered. We pay so much to ASCAP, BMI and SESAC, it eats up most of the profit. Since May I'm glad I get a social security check, because at this time we are just trying to meet expenses.

Locally we lost the Ford-Dodge-Jeep-Chrysler dealership, TrueValue hardware and three restaurants. Auto advertising, we've lost local and national. The grocery chain serving this town beat me up for twice the spots for the same price.

One local restaurant was taken to court by BMI for playing our station in the restaurant; another restaurant owner got a letter from BMI threatening him for playing soft jazz CDs. Yet it is all right to use XM for entertainment in public restaurants.

This is so screwy. Radio promotes the music yet we are penalized; while locally we are expected to do football and basketball games or we're schmucks.

Here it's a big deal for an advertiser to pay \$150 a month for 80 spots. I can't get 5 bucks. There is a newspaper to take what they can.

It's a rough ride.

*Harv Rees  
Owner  
KPKE(AM)  
Gunnison, Colo.*

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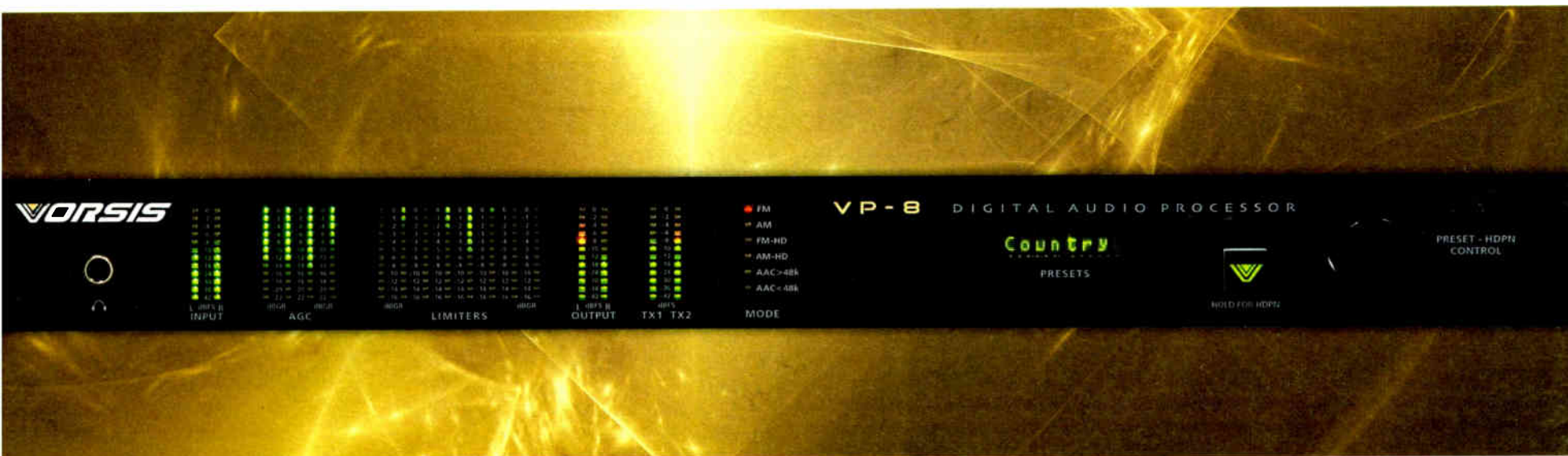
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