



RADIO WORLD

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Congress Reconsiders Domestic BBG Ban

Should the Government Lift Smith-Mundt's 1948 Restriction on Internal Dissemination?

BY RANDY J. STINE

The U.S. government will have fewer restrictions on its ability to communicate directly with its own citizens via certain media platforms if proposed dissemination changes are adopted by Congress.

Repeal of the domestic ban spelled out in the Smith-Mundt Act of 1948 would allow the U.S. Broadcasting Board of Governors to recirculate content to listeners and viewers in the United States via private broadcast partners.

Supporters on Capitol Hill believe this change is long overdue, considering that technological advances make such content readily available in this country already. Lifting the ban, they believe, would aid in diplomacy, increase transparency and help the government reach international communities on U.S. soil.

Opponents fear the legalization of government-issued propaganda. They worry about allowing the government undue domestic influence on citizens and think BBG would shift focus and finances away from its important foreign mission.

The BBG sets policies and provides

satellite broadcasting.

The measure was included in a version of the National Defense Authorization Act approved by the House and forwarded to the Senate in late May, according to Alison Lynn, Thornberry's office press representative. The Senate was expected to take up the NDAA in July but Lynn said it was delayed. Most observers agree it's likely the bill will

oversight of U.S. government-funded operations that broadcast overseas. This includes the Voice of America, Radio and TV Martí, Radio Free Europe/Radio Liberty, Radio Free Asia and the Middle East Broadcasting Network.



This shortwave curtain antenna at the transmitting station in Saipan serves the broadcasters of the U.S.-government-funded Broadcasting Board of Governors.

Reps. William "Mac" Thornberry, R-Texas and Adam Smith, D-Wash., introduced H.R. 5736, the Smith-Mundt Modernization Act of 2012, in May to update the law covering how the federal government communicates to foreign audiences through broadcast and other means. The provision has been considered outdated by broadcasters at BBG since the spread of the Internet and

end up in conference as the chambers resolve differences.

The Smith-Mundt Act was created shortly after World War II to prevent any sitting administration from using U.S. government media to influence the American public and promote a specific political agenda, observers said.

"H.R. 5736 eliminates the existing (continued on page 6)

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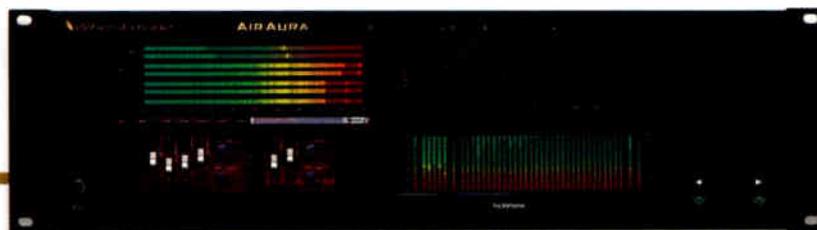
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Selected content from Radio World's "The Leslie Report" by News Editor/Washington Bureau Chief Leslie Stimson.

ALL-DIGITAL AM TESTS CONSIDERED

For years, we've heard from some HD Radio proponents that perceived ills of the AM band, like susceptibility to massive interference, could largely be solved if stations went all-digital on a wide-scale basis.

After all, the IBOC system always was envisioned as a transitional one, allowing the industry to operate "all-digitally" someday, rather than in hybrid mode, should it choose to do so and the FCC allow. But this question was seen as one for the distant future, given market realities; and many broadcasters have resisted talk about ever "turning off the analog."

However, the matter of AM's

'SURVIVAL OF AN INDUSTRY'

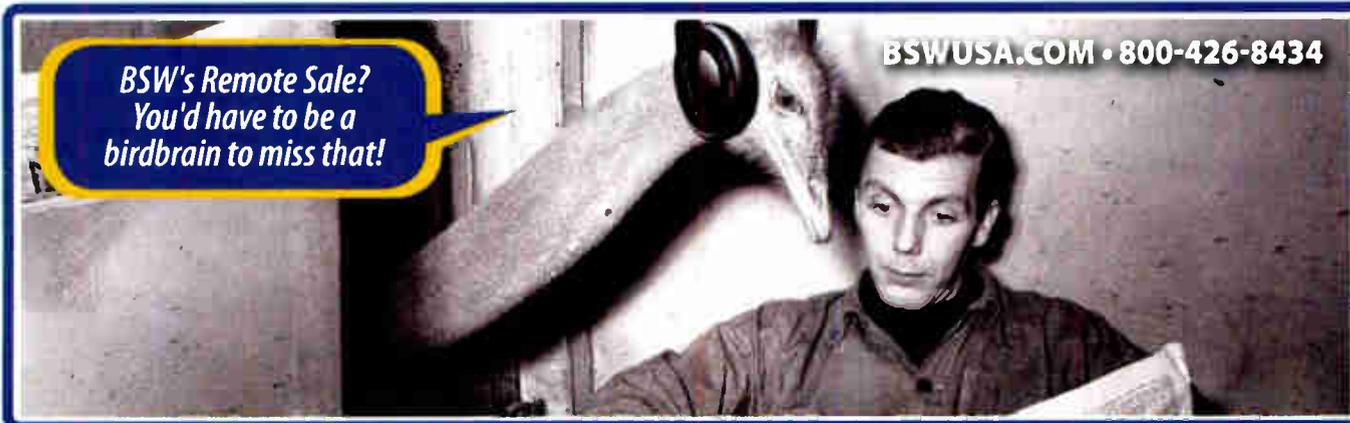
The idea of all-digital testing is gaining traction among committee members. They believe the FCC is more open to the concept than in the past. Stations would need experimental authority to do all-digital testing, and the commission has acknowledged that many licensees are in a battle for survival. Meanwhile some AM owners have been talking openly about economic challenges as well as rising noise levels and other interference sources.

One member of the committee, a head of engineering for a radio group, asked to remain anonymous but warned that this idea is in the very early stages. It's one of several possible technology or regulatory solutions the committee is considering as it digests an engineering report about AM commissioned by NAB. He

ABC, Cherry Creek Radio, Clear Channel Radio, Cox Media Group, Cumulus, Delmarva Broadcasting Co., Emmis Communications, Entercom Communications, Greater Media, Hubbard Radio, Journal Broadcast Group and Lincoln Financial Media. More groups are joining, I hear.

A number of NAB member groups, including CBS and Clear Channel, have indicated they want to participate in all-digital testing.

Beasley is another. Vice President of Engineering and Chief Technology Officer Mike Cooney tells me the key is to find an underperforming station and turn off the analog temporarily in order to test the all-digital system, both day and night. Beasley particularly is interested in all this, having previously turned off the digital on several of its AMs due to interference



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health and future is a current industry debate topic. Against that background, members of the NAB Radio Technology Committee now want to test iBiquity Digital's all-digital AM system to quantify any such improvements. This would entail putting one or more all-digital AM signals on the air experimentally at existing stations.

The idea, I hear, is one of several being bandied about in discussions about how to help AMs, particularly medium- and small-market AMs that lack powerful signals, to remain economically viable.

The committee was formed last year. Television has such a technical committee, and NAB members felt there should be one for radio. Barry Thomas, vice president of engineering at Lincoln Financial Media, stepped away from chairing the NRSC subcommittee on RDS to head this group, as we've reported.

couldn't discuss specific options with me because the work is ongoing, the report is not public and the various options involve many business and regulatory implications.

"We have to be very considered about what we're saying, because we're talking about the survival of an industry," he said. The group is prioritizing "things that can be done first on several fronts." For instance, another possible approach is to re-transmit AM programming on more FM translators.

"There's no one silver bullet" for AM because the laws of physics do come into play as to what can be done to improve the viability of the AM signal, he stressed.

TESTING

But the thought is provocative.

About 14 radio groups are members of the committee, including Beasley Broadcast Group, Buckley Broadcasting, CBS Radio, Disney/

concerns, as we've reported.

Years ago, I remember, iBiquity conducted tests of its AM all-digital technology and anecdotally reported an increase in coverage. But that was with the HD gear of several generations ago. It would be critical to see all-digital AM performance with the HD Radio gear of today. iBiquity has also said for years that interference issues on the band could be improved with an all-digital system.

Further, with all-digital, "your bandwidth goes from 30 kHz back town to 20 kHz," said Cooney. An all-digital AM system also requires less transmission power. Benefits could include enhanced audio fidelity to the listener and a bigger "data payload" with which AMs could offer some data-oriented services. Again, engineers need testing results to quantify the perceived benefits.

But when a broadcaster goes all-

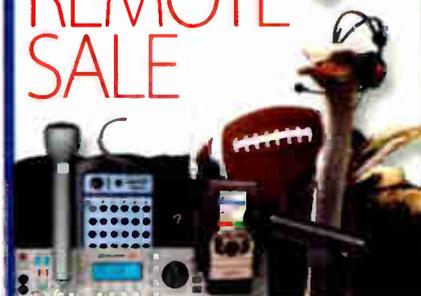
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Talking Tech in America's Dairyland

Need Engineers? In Wisconsin, They're Working on 'Growing Their Own'

I wrote in June that state broadcast associations should do much more to help encourage development of engineering talent by getting directly involved in training. I cited an effort by the Alabama Broadcasters Association as an example.

Another comes from the Wisconsin Broadcasters Association, which recently held its first Media Technology Institute in conjunction with its summer conference; 24 people took part in the workshops.

The WBA has a history of being responsive to the interests and needs of engineers (recall our coverage of the Broadcaster Emergency Personnel ID Card Program; see <http://radioworld.com/links>). This new training was a joint effort of the WBA and its Educational Foundation, and funded in part by WBA and Midwest Communications.

'PRACTICAL, INSTRUCTIONAL'

Veteran engineer Terry Baun was chief instructor and focused on "practical, instructional courses for prospective, beginning and current broadcast/media engineers." This was no two-hour overview, either, but a four-day program. Consider it a possible model for such a program in your state.

Day 1 offered a general intro to the profession and covered the business model of broadcasting, how engineering fits at a station, skill sets needed and how "traditional" engineering is evolving. It explored radio and TV

studio design, program distribution and delivery, and the role of engineering in development, construction and modification of facilities, plus changes wrought by digitization.

Day 2 was "RF Day." According to the program materials, "The instruction begins with basic atomic/electrical theory and proceeds to detailed discussion of the development of the art and science of RF generation, including

program did not include a visit to a transmitter site, as Alabama's did, but it sounds like that is on the radar for future.

Day 3 was spent at the WBA Summer Engineering Conference, which included technical presentations by vendors and clients and an engineering luncheon. An engineering reception included technical exhibits and discussions with vendors.



telegraphy, AM and AM directional, FM, and television VHF and UHF." Also included were antenna theory and a demo of test and measurement equipment. The students heard about IBOC digital radio and the 8VSB digital television transmission standard. The

And the last day covered IT/network fundamentals and more advanced areas of IP management and network design, then moved on to FCC rules and chief operator duties for radio/TV; safety and security for engineers and the public; and a final Q&A.

**FROM THE
EDITOR**



Paul McLane

MUCH NEEDED

The cost to each student was \$399, which included the three hotel nights and numerous meals. The program was funded in part by WBA and Midwest Communications.

"Since this was a joint venture between the WBA and the WBA Foundation, it was not meant to be

a moneymaker but rather provide a much needed service to our industry," Vice President Linda Baun said, putting emphasis on the word "much."

She continued, "Action to the question 'Where is the next engineer coming from?' rests on us to grow our own. The return on this program is not measured in money but rather in the knowledge and seed planted to ensure the future of the broadcast engineer."

The association's Education Committee, made up of university and technical school faculty, promoted the program; WBA provided PR material to its members and asked SBE chapters and its own Clinic Committee to spread the word too.

Linda Baun tells me that President/CEO Michelle Vetterkind was instrumental in getting approval from station leaders who make up the board and in presenting the idea of a joint venture to the WBA Foundation. (Says Baun of Vetterkind: "She also has an engineer's heart.")

Well done, WBA and Midwest Communications. Congrats as well to the students who put their own money forth to expand their professional horizons, and to TV station WSAW in La Crosse, which provided scholarships for three people to attend the institute. Another great idea.

Does your state have a similar program? Are you planning one? Tell me about it at radioworld@nbmedia.com.

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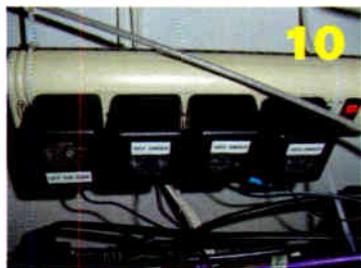
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DIGITAL AM*(continued from page 3)*

digital, for testing purposes or for real, it needs to turn off its analog transmission; and analog listeners are the vast bulk of its audience and revenue. So in discussing testing, the committee has only begun to dip an industry toe into murky water.

With a smaller receiver base capable of AM digital reception, the topic of a widespread all-digital conversion raises huge implications and may involve years of market preparation and coordination among broadcasters, iBiquity Digital, the National Radio Systems Committee and transmission and receiver manufacturers — as well as FCC approval. Those are long-term questions but they suggest why engineers are so leery of talking about the idea openly.

LONG-TERM QUESTIONS

Test costs, at least, for radio groups that have already invested in AM HD Radio equipment, would be minimal. If a station is transmitting a hybrid analog/digital signal, going all-digital just involves a software change on the transmitter and menu selection on the exciter. However, if the industry were to move toward "all digital" more broadly, stations that don't have HD Radio gear — which is most AMs — would have to choose whether to invest in it.

Some AMs, particularly those with multi-tower directional antennas that are too narrowband to pass a digital signal, might never be able to make AM HD Radio work without huge investments. There might be another technical solution or solutions plural for those facilities. That's one of the reasons the committee is looking at multiple options.

The idea of the testing is to get some real-world data over a sustained period of time and quantify the results. "We would do before-and-after signal measurements to compare analog and digital coverage differences," Cooney tells me. Testing also would determine whether an all-digital signal caused any first-adjacent interference, or improved existing interference. Drive tests would be conducted in rural and city areas in several markets. The other engineer with whom I spoke says the committee hopes several stations in one market would take part in the tests.

Again, any talk of an all-digital AM future, either for individual stations or the industry at large, is likely to be contentious given the money to be lost if a station — or an industry — chases away analog listeners. Where to test, which stations to test

NEWS

on and how long to test are questions to be determined; but that conversation would only foreshadow a huge industry debate should the idea go very far.

"You can't look at current ROI," said my unnamed committee engineer. "We need to look at it as 'If I don't do this now,' meaning turn off

ger "digital platform" debate yet to come out there.)

I hope the NAB will release the details of its engineering report soon. These conversations need to happen in the industry at large. But the idea of testing the all-digital system is intriguing. While big-market AM powerhouses may remain profitable,

The committee is just dipping its toe into 'all-digital AM' but the question raises huge implications that may involve years of market preparation and coordination.

the analog for long-term gain, 'how much will I lose three years from now?'"

After I reported about this topic online, I received several comments from engineers asking whether AM HD would be compared by the researchers to the Digital Radio Mondiale system as well. I have the sense that may not happen initially given the lack of DRM consumer-grade receivers in the United States. (You start to wonder if there's a big-

the economic picture is not so rosy for many AMs, some of which have turned to rebroadcasting their signals on FM translators.

"The radio groups want their AMs to remain viable. Some 40 percent of the industry is still AM on a station count basis," estimated the first committee engineer. "We want to identify ways that stations can remain viable or become viable again."

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SMITH-MUNDT

(continued from page 1)

ban on domestic dissemination of public diplomacy material, which prohibits such material from being viewed in the United States,” Thornberry said in a statement.

“Eliminating the ban updates the law to reflect technology advances, removes a barrier to more effective and efficient public diplomacy programs, provides transparency of these programs to U.S. citizens and allows the material to be available to inform domestic audiences.”

Thornberry also stated, “This is not 1948 when everyone was tuned to a few radio stations. The 21st century media environment is already very diverse and open.”

The bill emphasizes that the State Department and BBG are not to compete with private news organizations.

THORNBERRY BILL

The BBG is supporting the effort. It listed repeal as a goal in a strategic five-year plan set out late last year, a plan that included broader changes in its identity and goals.

(Its new mission statement: “To inform, engage and connect people around the

Most of VOA’s material is already available online, according to the BBG, and this amendment would not change the BBG mission to broadcast to foreign audiences, she said.

“Our funding is provided only to produce programming to foreign audiences. The BBG would not produce programming for domestic use, nor would it use agency resources to transmit programming in the U.S. The bill restates language in previous legislation stating that the State Department and BBG shall not seek to influence public opinion in the United States.”

The bill specifies that the Smith-Mundt Modernization Act of 2012 only applies to the Department of State and the Broadcast Board of Governors.

According to an analysis by Matt Armstrong, former director of the U.S. Advisory Commission on Public Diplomacy, the Thornberry bill would “authorize the domestic dissemination of information and material about the United States intended primarily for foreign audiences and for other purposes.”

“Even though the material is online and available to people in the United States, the BBG [today] must still say

MORE ON SMITH-MUNDT

The Smith-Mundt Modernization Act of 2012 amends the United States Information and Educational Exchange Act of 1948, also known as Smith-Mundt, to authorize the U.S. secretary of state and the Broadcasting Board of Governors to prepare and disseminate information intended for foreign audiences abroad about the United States — including information about its people, its history and the federal government’s policies.

The information can be disseminated through press, publications, radio, motion pictures, the Internet and other information media, including social media, and through information centers and instructors.

H.R 5736 states: “Except as provided, the Secretary of State and the Broadcasting Board of Governors may, upon request and reimbursement of the reasonable costs incurred in fulfilling such a request, make available, in the United States, motion pictures, films, video, audio, and other materials prepared for dissemination abroad or disseminated abroad pursuant to this Act.”

The bill further states that no funds authorized for the Department of State or the BBG shall be used to influence public opinion in this country.

Glassman said. “Diaspora communities in the United States, seeking information in their native languages, can benefit from the accurate news and information delivered by BBG language services — and they can and do pass it on to relatives and friends in BBG target countries around the world.”

If the amendment passes, Glassman predicts the BBG would use the opportunity to increase U.S. engagement with the rest of the world through social media.

‘SMALL, VOCAL CONSTITUENCY’

Debate on the bipartisan bill has stirred up a “mostly small and vocal constituency,” said Dr. Gregory Newton, an associate professor and associate director in the School of Media Arts and Studies at Ohio University. He follows international broadcasting developments.

“Any law intended to limit information flow and that is based on a 60- or 70-year-old conception of propaganda, media infrastructure, not to mention an irrational fear of Communists in the State Department, is naïve and outdated, at best; or worse, maybe even counter-productive,” Newton wrote in an e-mail to Radio World.

“Most audiences are sophisticated enough to recognize blatant propaganda and other less-than-honest journalism by a government broadcaster.”

Newton, who also is president of the Broadcast Education Association, added that “there are some voices that just want to get rid of the BBG.”

Armstrong and others don’t expect BBG to spend resources on homeland dissemination. “If BBG decides to direct resources and efforts domestically, then I’d say the leadership failed,” Armstrong said.

However, there are observers of U.S. international broadcasting who worry the plan will do just that and allow the BBG to propagandize American citizens.

“Allowing the BBG to market their

programs in the U.S. without any restrictions is a dangerous idea because it counts on government bureaucrats to restrain themselves on their own,” said Ted Lipien, a former Voice of America official. He co-founded the Committee for U.S. International Broadcasting, which describes itself as a non-partisan media freedom advocate.

Lipien’s group also raises concerns about transparency and accountability if the changes are enacted.

“Any modernization should make clear that the BBG is not allowed to actively market their programs domestically, target any specific groups of Americans and spend taxpayer money on domestic advertising,” according to Lipien.

Most audiences are sophisticated enough to recognize blatant propaganda and other less-than-honest journalism by a government broadcaster.

— Dr. Gregory Newton, School of Media Arts and Studies

world in support of freedom and democracy.” BBG wants to become “the world’s leading international news agency by 2016, focused on the agency’s mission and impact,” and hopes to reach 216 million people in global weekly audience by that time.)

A BBG spokeswoman said the Thornberry bill “accomplishes what the agency (with the current administration’s support) has been seeking in its FY 2012–13 authorization request to Congress — which is an easing of the Smith-Mundt domestic dissemination ban. The administration’s legislative request for FY ‘12–13 relates specifically to BBG programming.”

‘no’ to requests to re-use and disseminate BBG products in the U.S. That would change if the proposed amendment is approved,” said Armstrong, who also publishes the blog *MountainRunner.us*.

A case often cited by supporters of the changes is that of a Minneapolis-based radio station, which serves a large Somali-American audience. It was denied permission to replay a VOA-produced piece rebutting terrorist propaganda.

“Even after the community was targeted for recruitment by al-Shabab and other extremists, government lawyers refused the replay request, noting that Smith-Mundt tied their hands,” according to a press release issued by Thornberry’s office.

Former BBG Chairman Jim Glassman, founding executive director of the George W. Bush Institute, supports the amendment and believes the current prohibition is anachronistic.

“All BBG programming is readily available in the United States through websites, and many language services are active on YouTube, Facebook and other social media platforms,”



NEWS ROUNDUP

LIVIO, GENIVI: Radio designer and manufacturer Livio has joined Genivi, a member-based automotive infotainment platform that uses the Linux operating system. The automobile manufacturers and their suppliers are using the Genivi platform as a common framework. Their goal is to create less work for automotive companies, reduce development costs and accelerate innovation. Livio Founder/CEO Jake Sigal says Genivi’s goals are complimentary to Livio’s strategy for connecting apps to cars.

COX: Cox Media Group is realigning its broadcast portfolio to focus on larger markets. The broadcaster plans to sell six radio clusters as part of the change. Those are Birmingham, Ala., Greenville, S.C., Hawaii, Louisville, Ky., Richmond, Va. and southern Connecticut. Cox owns 86 radio stations and 15 TV stations.



1664: Just what it looks like. Two tin cups and a string. But it transmitted sound!



1876: Alexander Graham Bell's commercially viable telephone.



1900: Phones become fixtures in more well-to-do and steam-punk homes.



1920: Every home is working toward having a telephone!



1936: The advent of the dial desk phone. No more asking the operator to connect you.



1963: Push buttons usher in the thoroughly modern world. Touch tones enter pop culture.



1983: The mobile phone is a reality. Plots in all TV shows get a boost!



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NEWSROUNDUP

TOWERS VS. BIRDS: American Tower Corp. can resume construction of a 314-foot structure in Marshall, Ark. The FCC decided a case in favor of the company, the first such decision since new migratory bird-sensitive tower rules went into effect in June. Environmental assessments are now required for proposed towers over 450 feet above ground level. Because the tower would be within 4,000 feet of a wildlife management area, Michael Pearson alleged the structure would negatively affect migratory birds and endangered species. The FCC said Pearson didn't identify specific endangered species that could be affected and therefore his complaint didn't meet the standard for requesting environmental review. The proximity of a tower to a wildlife management area does not, by itself, mean that a structure may have a significant effect on the environment, according to the agency.

CHIPS: Emmis Communications Chairman, President and CEO Jeff Smulyan expressed hope, after a closed meeting at the FCC, about integrating FM chips into wireless phones and other mobile devices. He characterized talks between broadcast and wireless industry representatives as well as commission staff as "very robust and frank." The FCC asked participants to keep details private. Asked by Radio World whether there may be more such meetings on FM chips, Smulyan said that's up to the commission; he hoped there would be more.

CHIPS II: In a letter to commissioners before that meeting, Apple, HTC, Motorola, Nokia, PCD, RIM and

Samsung, as well as CTIA, The Wireless Association, asked regulators to "continue to follow a light regulatory touch" and decline pleas from NAB to have FM chips included "beyond the devices already available" in this country. NAB spokesman Dennis Wharton said it was "disappointing, given the unreliability of cellphones in times of crisis, that CTIA would resist embracing an idea that can save lives." CEA President/CEO Gary Shapiro suggested NAB "do what real businesses do" and cut a deal with a manufacturer to include a radio chip, then use the airwaves to build consumer demand. "We don't seek guidance from Gary Shapiro," Wharton said in reaction.

CHIPS III: STMicroelectronics has introduced a digital radio chipset that enables simultaneous AM/FM reception and multiple digital-radio standards. The chipset supports DAB/DAB+/DMB-A, Digital Radio Mondiale and HD Radio. Developed with Bosch Car Multimedia, ST says its multi-standard digital radio chipset shortcuts the path to cost-effective car infotainment systems — technologies that support synchronized streaming of text and visual information, including real-time weather and traffic updates.



STL FINE: Wyoming Mount Rushmore Broadcasting owner Jan Gray calls the FCC's proposed \$68,000

fine for missing STL paperwork "baloney" and told the Casper Star-Tribune he will fight the charges. Mt. Rushmore is licensee of Casper FMs KASS, KHOC, KQLT, KMLD and studio-transmitter link WLP722. The agency in July said Gray had no authorizations for years for any of the STLs associated with the stations and that's why it proposed the penalty. Gray has since filed paperwork to authorize the STLs.

WGBH+PRI: WGBH Boston acquired Public Radio International. The companies say public radio program producer and distributor PRI will be an affiliated company of the broadcaster yet continue to operate independently as a non-profit organization based in Minneapolis. Financial terms were not disclosed.

HEATHKIT: The electronics kit company Heathkit defaulted on its lease and declared bankruptcy. Owner Don Desrochers said the company earlier had shifted from electronics to focus on educational materials and was trying to reverse course, but was losing the educational business faster than it could grow the electronics business, a situation that was not sustainable.

PPM: The Media Rating Council has accredited the average-quarter-hour monthly PPM ratings data in five additional markets: Los Angeles, Tampa-St. Petersburg-Clearwater, Fla., Baltimore, Riverside-San Bernardino, Calif. and San Antonio, Texas. Three — Los Angeles, Baltimore and San Antonio — were granted MRC accreditation for the first time. The other two regained accreditation. MRC now has accredited 14 of the 48 PPM markets.

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World Radio History

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What Caused His Erratic VSWR?

Also, Here's Yet Another Use for That Handy P-Touch Label Maker

Here's a little troubleshooting quiz for you to think about.

Let's imagine that the weather has been hot, with record high temperatures; afternoon storms are the rule, not the

WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

exception. After one such storm you're called to a newly built FM site, where the transmitter is showing high VSWR.

You suspect the transmitter but there are no alarms; and readings are close to normal except for reflected power. You can't verify what the transmitter will do using a dummy load because the site doesn't have one.

You can't see the antenna bays because they are covered with radomes. You check the transmission line, figuring it has lost pressure, but then you remember that the line is foam; there is no nitrogen pressure.

Fortunately, the transmitter is not

folding back ... yet.

The next day, VSWR is a little lower but still there's nothing obvious. The transmitter is staying on the air, albeit with the high reading, though you're worried how long it will last. Yet by the end of the week, the VSWR is nearly back to its normal low reading.

Then another storm hits. And the problem repeats.

Do you have ideas of how to fix this? No, I'm not going to make you wait until the next column to reveal the answer. We'll disclose the answer at the end of the column, so stay awake!

Curt Yengst handles IT for Star 99.1, WAWZ, in Zarephath, N.J. Curt has found another way to put his Brother P-Touch Labeler to good use.

When you are plugging dozens of devices into power strips in the back of an equipment rack, label your plugs and "wallwart" power supplies. This way you can tell at a glance what each plug or supply is powering, thus eliminat-

ing guesswork. The extra moments it takes to label things also will eliminate the worry of whether you might take the station off the air if you unplug something. Labeling also ends tedious fumbling in the rack while trying to trace power cords. And it helps too

prevent anyone from needing to unplug anything in the first place. Curt Yengst, CSRE, can be reached at cyengst@star991fm.com.

(Curt's suggestion has helped him toward recertification. Snap a few pictures of something you've done around your station to make your life easier and email them to me at johnpbisset@gmail.com. Remember, published *Workbench* submissions qualify for SBE recertification credit.)



Fig. 1: Wallwarts lined up like soldiers – and identified.



Fig. 2: Label plugs at the outlet strip to speed troubleshooting and identification.



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when you should need to relocate the station (as Curt did recently; see radioworld.com, keyword Irene). It's no fun rummaging through a box of wallwarts trying to figure out which goes to what piece of gear.

Figs. 1 and 2 demonstrate Curt's efforts.

Curt also suggests including a few extra outlets — or even a short power strip — for plugging in a soldering iron, trouble light or the odd piece of test gear. Adding the extra outlets would

Back to our VSWR problem. The giveaway was that the problem recurred with a subsequent storm. You may have guessed lightning; however, rarely does lightning damage to an antenna repair itself.

A tower rigger was dispatched to the top of the tower. When he got there, he saw no weep holes in the radomes — until he looked at the top of the radome clamshell. Yes, the tower crew had installed the radomes upside down.

(continued on page 14)

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MEET THE NEW AXIA xNODES!

IP-AUDIO JUST GOT AN UPGRADE.

Everybody knows that Axia introduced broadcasters to IP-Audio in 2003. 3,000 studios and 30,000 connected devices later, the competitors who said "it'll never work" are now eating their words. How do you follow up that sort of success? If you're us, you open up a case of Monster and go back to work. So we did.

The result: Axia xNodes, smart new AoIP interfaces that transform your audio devices into an intelligent network. Use them to turn analog, digital or mic-level signals into routable IP-Audio, with associated GPIO logic. They're so advanced, they won two major awards at their NAB debut.

WHAT CAN YOU DO WITH THEM? HERE ARE A FEW IDEAS.

- » **BUILD A ROUTING SWITCHER.** One stand-alone xNode is an 8x8 (4x4 stereo) routing switcher. Connect 8 xNodes to a switch and make a 64x64 routing switcher. Need more I/O? Connect more xNodes. Like all Ethernet-based networks, Axia systems are naturally scalable, up to 10,000 stereo signals (plus logic).
- » **STL OVER IP.** Today's cluttered RF spectrum makes IP a great alternative. Put an xNode at either end of a fiber run, OC-3 circuit or a pair of inexpensive Ethernet radios to send eight channels of uncompressed audio to your TX – and get eight channels of audio backhaul too.
- » **SAY SO LONG TO SOUND CARDS.** PCI, PCIe, USB3, FireWire... who needs 'em? Load the Axia IP-Audio Driver onto your PC workstation and connect it to an xNode to get eight professional, balanced outputs and eight inputs. Use an industry-standard DB-25 breakout cable for pro XLR connections. You'll get studio-quality audio and save some green, too.
- » **ADD MICS TO THE MIX.** xNodes make awesome multiple Mic preamps. They have ultra-low-noise, ultra-high-headroom, studio-grade preamps with selectable Phantom power. Put your Mics in, bring your analog line level out. And that IP-Audio network jack? Ready to be used whenever you upgrade to a full IP-Audio network.
- » **MAKE AN A/D/A.** Take one analog and one AES/EBU xNode and rack-mount them side by side. Voila! Eight precision A/D converters and eight precision D/A converters, in just 1RU. Studio-grade, 48 kHz, 24-bit Delta-Sigma A/D and D/A converters, with 256x oversampling, make difference you can hear.
- » **SLIM DOWN YOUR SNAKE.** Connect two analog or AES xNodes with a single Ethernet cable for an instant 8x8 bi-directional snake and bid the multi-pair bundle goodbye. Add a few more xNodes on each end for a 16x16, 32x32 or 64x64 snake. Use off-the-shelf media converters for long-haul fiber connections.

XNODES ARE SMALL. Mount them on your wall, under the counter — mount 'em on the ceiling if you like. Optional rack- and wall-mount kits provide plenty of options.

CONFIDENCE METERS on every xNode mean you'll never have to wonder where the audio's at. Audio presence and levels are both displayed at a glance.

INFORMATION OVERLOAD? Not here. Sharp, high-res OLED displays put all the information you need right on the front panel, without the need for a distracting multi-colored lightshow.

xNODES WORK WITH BOTH LIVEWIRE AND RAVENNA AoIP networks — making them compatible with IP-Audio gear from over 40 major broadcast companies.



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NO NOISY FANS HERE. Front-mounted heat sinks keep xNodes calm, cool and collected using air-conditioned air (instead of that hot air in the back of the rack).

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RJ45 OR DB-25? xNodes give you I/O both ways, so you can choose whichever industry-standard breakout cable you prefer.

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DUAL ETHERNET PORTS for redundant network links. The overnight jock kicks out a connection? No problem; the other one takes over so your programming never skips a beat.

xNODES HAVE AUTORANGING INTERNAL POWER SUPPLIES, but can use PoE (Power over Ethernet) too. Perfect for those out-of-the-way places where a power cable is inconvenient. Hook 'em both up for redundant, auto-switching backup power.

VERY VERSATILE. 5 different xNodes handle nearly any signal type. AES/EBU, Analog, Microphone and GPIO xNodes are perfect when you've got a lot of one audio type to work with. But what if you need a little of everything? This is the Mixed Signal xNode. Think of it as your utility MVP, with a switchable Mic/line input, 2 dedicated analog ins, 3 analog outs, a digital AES/EBU input and output, and 2 GPIO logic ports.

TWO xNODES MOUNT SIDE-BY-SIDE, so you can create your own custom mix of I/O types within a single rack space. Pair up an AES/EBU xNode with a microphone xNode, or match a GPIO xNode with an analog unit. Or combine a couple of Mixed Signal xNodes for the ultimate mix of mic, analog, AES3, Analog and logic I/O.

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Timely Visit Helps Bring Justice

Oklahoma Radio Engineer Has the Satisfaction of Seeing a Guilty Verdict

BY ED DULANEY

There are days when you can feel that some level of justice has finally been served. Last fall, I was able to experience that for myself.

FIRSTPERSON

The story begins about a year ago. During a routine inspection of my Lawton, Okla., transmitter site, I noticed that things were a little out of place.

A spool of 3-1/8-inch Heliac line — stored a month earlier after removal from the KVRW(FM) tower — had been stripped. My examination revealed that the coax had been cut into short pieces and dragged across the field. Of nearly 400 feet of line, only 30 feet or so remained on the spool.

I inspected the fence area and found that the chain on the gate had been cut. Another part of the fence, about 20 feet from the gate, also had been cut open. Outside the gate I saw two bays of what had been a 10-bay Shively FM antenna. Another two bays had been left inside the fence.

Apparently the thieves had loaded their truck to capacity and didn't have room for anything else.

HELP FROM TV

I made a call to the Comanche County Sheriff's office. A deputy arrived at the scene to take my report. We examined the area and saw that a truck had been parked at the south end of our property for use as a loading area by the thieves. The deputy took photos of the tire tracks, hoping they'd lead him to the truck owner. Nothing else seemed to have been disturbed.

After I secured the property and was leaving to return to the studio, I saw a deputy's car about a quarter-mile up the road. They were looking at some five-foot pieces of coax that had been dropped in a ditch about 10 feet from the road.

We talked further and decided to leave it there in hopes that the thieves would return to the scene of the crime. The sheriff's office would have a regu-

lar patrol in that area and keep an eye out for the perpetrators. The coax pieces would not be visible to someone casually driving past; a person seen loading it likely knew the coax was there.

It took only a couple of days for the criminals to return. However they weren't spotted by the sheriff's office but by a news crew from KSWO(TV).

The crew was in the area talking with neighbors about the copper theft. As they were leaving they noticed two men loading what looked like conduit into

a number of days in court and in meetings with the DA's office as they built a case against the men. The authorities discovered that one of the suspects had previous felony convictions and had been on parole at the time of the theft. The DA had planned to offer a plea bargain, but this revelation meant nothing would be offered to the man who they believed was primarily responsible for the theft.

The trial date came. The man on parole was found guilty by the Coman-



their pickup truck. The crew stopped and asked the men if this was their property; they claimed that they had "found" the coax and were loading it onto their truck. Upon being confronted by the TV crew, the men drove away at a high rate of speed.

With the help of the video taken by the news crew, the sheriff's department tracked down the men and arrested them. (A neighbor's son also discovered a stash of some of the pieces of cut line on a field. After the sheriff photographed these pieces for evidence, the radio station donated them to the boy so he could sell them to purchase feed for the cattle he was raising in a 4H project.)

When I was informed of the arrest by the district attorney, I felt a great deal of satisfaction. So many times we read about instances of copper theft at radio stations, and we never heard about a positive resolution. I felt this was a victory not only for the radio station but for every station and engineer that has had to deal with this problem.

REGULAR VISITS

Over the next several months, I spent

che County Court and sentenced to five years in prison and ordered to pay restitution to the station for over \$14,000. At the time I'm writing this story, the restitution has not been received, and we don't expect the payment to come through. But we have the satisfaction of knowing the thieves were caught. To me,

Every one of these things makes it that much more difficult for the bad guys to win.

Ed Dulaney is the regional engineering manager for Townsquare Media in Wichita Falls, Texas, and Lawton, Okla. He also handles engineering for Cumulus radio stations in Wichita Falls.

WORKBENCH

(continued from page 10)

He drilled a few holes in the bottom radome, unleashing a torrent of water — and curing the problem.

I remember a similar problem at a higher-power installation where the rigger could hear gurgling as he approached the bottom bay. The water actually was boiling inside the bottom half of the radome.

In addition to the VSWR issue, the weight of water inside a radome can generate unwanted "beam-tilt" and possible bend the bay or interbay line. This is serious stuff.

Even if your radomes are installed properly, debris from birds or insects

can clog the weep holes. Make sure your rigger checks the holes when inspecting your antenna. The lesson here is to supervise installations at your site regardless of what they are. Know what your contractor is doing and don't be afraid to speak up.

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

Bisset has spent 43 years in the broadcasting industry and is still learning. He is SBE certified and is a past recipient of the SBE's Educator of the Year Award. He works for Elenos USA, an FM transmitter company based in Miami.





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World Radio History

Summer is when many companies begin shipping new products they introduced earlier in the year. Over several issues, Radio World has been featuring new notable products that manufacturers have introduced to serve the U.S. radio broadcasting industry.

AETA PORTABLE AUDIO CODEC GETS LTE

The Scoopy+ portable audio hardware codec supports LTE. AETA Audio Systems says LTE is an alternative to congested 3G networks, enabling up to 100 Mbps download and 50 Mbps upload, with lower latency for better performance during live transmissions, and improved coverage in rural areas by using lower frequencies in the 700 MHz band. The codec is prepared for IPv6 support for further ease of use.

Internal LTE modules are available in European and Japanese version of the Scoopy+ units, and the latest firmware for the Scoopy+ supports several LTE external USB sticks, allowing LTE to be used with standards in Japan, Europe and the U.S. With an external USB stick, LTE capability can be added to existing units and used in conjunction with an internal HD Voice module. Scoopy+ supports internal and external mobile network devices in parallel.

Separately, AETA is targeting STL applications with its Scoop 5 IP. The rack-mount codec features X24/V11 and Ethernet interfaces, a variety of coding algorithms and 4SB ADPCM at a low latency in 15 kHz quality. The Scoop 5 IP is equipped with audio analog I/O, simultaneous AES, additional I/O and the option to configure and manage via embedded Web page.

AETA's Scoop 5 studio codec builds on the feature set of the Scoop4+ with an enhanced software platform for faster operation, and profile management and supervision via embedded Web page.

Info: www.aeta-audio.com



DAVICOM HAS NEW MAC OFFERINGS

Davicom's AM/FM Broadcast Monitor, shown, adds AM and FM signal monitoring capability to the Davicom MAC line of remote products.

It can monitor AM and FM signal strength and power, AM modulation index, FM peak multiplex deviation, FM carrier frequency, stereo pilot, L & R audio, RDS strings, all with user-defined threshold levels. It has high- and low-level inputs to accommodate on-site and off-air monitoring. It interfaces to the Davicom MAC through a USB connection.



Davicom also has upgraded MAC firmware MacComm software. Version 5.46 adds functionality such as PPP operation (for IP over telephone connections), installs an onboard SNMP manager for interconnection to various site devices (including transmitters), adds a configurable home page on the MAC's Web server and provides an improved interface with the FMBM.

And the new AEDS is an AES/EBU detector-switcher. It adds digital audio detection and switching capability to the Davicom MAC line of products. The AEDS has dual digital AES/EBU audio inputs. A third audio input (analog) is available as a final backup source. Interface with MAC equipment is through a USB connection.

Info: www.davicom.com



NEOGROUPE GOES INTERACTIVE

NeoAgent is an interactivity management system for NeoWinners and NeoScreener software. It is designed to handle ingest, moderation and publishing for audience feedback.

NeoAgent permits the NeoScreener software to receive SMS messages, e-mails, Facebook and Twitter messages on a single screen. The user therefore is no longer required to have multiple logins and screens in the studio in order to view audience feedback in real time.

NeoAgent allows the operator to change or add a topic from a call, SMS or any other contributed source, utilizing the same screen he or she uses for handling call management.

Also, by clicking on a button, NeoAgent warrants the moderator to publish messages on a website, to send to broadcast or to transmit to a third party in charge of the traffic information.

Info: www.neogroupe.com

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Send RDS without losing loudness by using the built-in RDS encoder. Loudness is maintained due to the method of embedding the RDS signal. (More of that special sauce makes this possible)



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SONIFEX SUPPORTS IP AUDIO AND CAT-5

Among new devices from Sonifex is the line of Pro Audio Streamers. They allow audio to be streamed around a building using IP audio and Cat-5 cabling infrastructure.

There are three professional audio IP streamers in the line, providing encoding and decoding in different formats.

The PS-SEND converts an audio input to an IP stream, the PS-PLAY reads an IP stream and outputs to balanced and unbalanced audio line levels and the PS-AMP reads an IP stream and outputs audio to stereo speakers.

Each unit also has an Ethernet Web server to allow configuration.

Info: www.sonifex.co.uk/prostreamer/index.shtml



HUGHEY & PHILLIPS OFFERS LED LIGHTING

Here's a new choice for tower owners looking for LED obstruction lighting. Ohio company Hughey & Phillips has rolled out a line of LED-based obstruction lighting, the Horizon family of L-810 low-intensity products.

It's suitable for FAA L-810 steady burning light applications and, the company says, it can be powered using a solar array for renewable energy applications. "Horizon L-810 is a steady-burn obstacle light and is available in both single and double configurations operating at a range of 95-277 VAC and also in a range of 9-48 VDC," it stated.

Both configurations are available as new fixtures and as replacements light modules for incandescent obstruction lights.

H&P promises a life 15 times longer than traditional incandescent lights and consumption of approximately 96 percent less than standard incandescent lamps.

Info: www.hugheyandphillips.com



25-SEVEN INTRODUCES PRECISION DELAY

25-Seven Systems now offers a Precision Delay that promises high-quality, sample-level accuracy and audio delay adjustable from a fraction of a second to over an hour.



Artifact-free time compression/expansion builds and collapses delays smoothly, leaving watermarking data such as PPM intact.

Precision Delay can enter and exit HD "ball game mode," synchronize analog and HD Radio transmission signals, as well as solve repeater/translator sync issues.

The manufacturer said it's also suitable for longer fixed time-shift applications, such as delaying programs across time zones. "Precision Delay also provides advanced data delay capabilities, so serial data over IP or RS-232, as well as contact closures can be delayed in sync with audio."

Its Web server provides control from Internet-accessible locations. It is configurable for AES digital, analog or Livewire IP audio.

Info: www.25-Seven.com

BURLI UPDATES RADIO NEWSROOM SYSTEM

Burli has introduced several features into its Radio Newsroom System software.

Users may now receive automatically combined audio and text feeds from ABC News Radio's Newscall RSS feed. Burli also supports Internet delivery of the Associated Press text wire via AP Web Feeds and automatic capture of AP PrimeCuts audio. The latter is inclusive of suggested intros, speaker names and other text data.

Burli also now supports automatic combining of audio and text data from the Metro Source wire. A single click feature can now post stories into Burli's main In-Queue.

Support for additional audio formats such as μ -law, m4a, aiff and aifc permits automatic import from email, FTP or iOS devices.



The option to automatically check online for updated software licenses virtually eliminates the need for manual periodic license maintenance. Twitter API integration allows Tweets to appear as a news source in Burli, like wire stories, RSS feeds or emails. Any text can be converted to a Tweet in Burli with a single command. This may be sent to one or more Twitter accounts.

Additional features include additional support for 64 bit Windows 7 and 2008 Server, expanded support for Atom-formatted XML feeds and improved integration with NexGen, Genesis, Maestro and Master Control broadcast automation systems.

Info: www.burli.com

NEUMANN PROVIDES CAPSULES TO SENNHEISER

Neumann has made available to sister company Sennheiser a pair of capsules culled from its stage microphone lineup.

The KMS 104 and the KMS 105 handhelds are the microphones in questions. Christened the KK204 and KK 205 respectively, the heads are aimed for the handheld transmitter of the Sennheiser 2000 wireless series, the SKM 2000.

The KK 204 is a cardioid pattern microphone while the KK 205 is a super-cardioid model. They are available in nickel and black. They ship with a nylon carrying bag large enough to hold a handheld transmitter and battery packs.

Info: www.neumann.com,
www.sennheiser.com



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Meet the LX-24...Wheatstone's flagship, multi-award-winning advanced modular networkable console control surface

The design initiative behind the LX-24 was to create the world's finest control surface. The result is a console that redefines the entire genre. The LX-24 is an intelligent surface that can store and recall all your settings. Its totally modular design lets you configure it exactly as you like - you can even hot-swap modules at any time without having to reconfigure.

Assign any source of any type anywhere on your network to any fader. Each input channel can be assigned to four stereo busses, plus four pre/post-selectable aux sends, a stereo CUE bus, four mix-minuses and the panel's own bus-minus. Full Vorsis EQ and Dynamics let you sculpt and control your sound with the quality of the finest dedicated outboard

processors. The visually-stunning meter bridge features up to four sets of bright, high resolution LED meters, as well as circular LED displays for auxiliary send levels and pan control. A digital count-up/count-down timer is also included.

The LX-24 is made in the USA in our home town New Bern, NC facility and it's advanced in ways that can make a HUGE difference in your capabilities. But it's also immediately familiar to anyone who has ever sat behind a board at a radio station. Use it to make your programming the best it can be. Just plug it into your WheatNet-IP Intelligent Network - with it, and the BLADES across the page, you can, dare we say it, rule the world.

THE LX-24 CONSOLE CONTROL SURFACE FEATURES

- Low-profile** table-top design - no cutout required
- Meter bridge** with up to four bright, high-res LED meter sets
- Control room and headphone outputs** with level control and source selection
- Two independent studio outputs**
- Stereo cue speakers and amplifier**, built-into meter bridge
- Onboard VGA and USB-Mouse connectors**
- Event storage** (snapshots) and recall

- Each input channel features:**
- Four stereo bus assigns
 - Four pre/post-fader aux sends
 - Four mix-minuses
 - Bus-Minus®
 - Source name display
 - A/B source selector
 - 2 programmable buttons
 - Vorsis EQ and Dynamics including 4-band parametric EQ, High- and Low-Pass filters, Compressor and Expander/Noise gate

price. it's called The WheatNet-IP Intelligent Network, and it rules.



Our BLADES carry out your orders network-wide at Gigabit Ethernet speeds - no bottlenecks

As an integral part of the WheatNet-IP Intelligent Network, BLADES interface, move, bend, shape, route and control everything you want to do with your audio. If it's audio, a BLADE will handle it - at lightning speed.

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As you need more functionality, just plug in more BLADES - they come in configurations to handle whatever you need (analog, digital, a/d, mic, MADI). Each BLADE is self-configuring and has the DNA of the entire self-healing network.

With BLADES, you can do everything from a simple (or complex, if you like) snake to STL-over-IP to full-on multi-studio/facility networking - even processing. And because of Wheatstone's partnership with the top suppliers of automation and remote gear, you'll have control over your entire system right from WheatNet-IP. Ruling the world has never been easier.

And this is ALL the extra stuff you need to wire-up the Intelligent Network:

Four CAT-6 cables and a low-cost switch that handles the gigabit speed WheatNet-IP runs at.

Let's do the math - plug in eight connectors, power up a console and three BLADES, add your audio and you are ready to rock, roll and rule the radio world. Brilliant, you ask? Nah - just really, really intelligent.



Want to know more?

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EVERY BLADE FEATURES

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Front panel routing control - any system source to any destination on that BLADE

Front panel headphone jack with source select and level control - monitor any system source

Flexible GPI logic - 12 universal logic ports, programmable as inputs or outputs, routable throughout the entire system

Built-in web server so you can configure and control locally or remotely without having to run dedicated software

SNMP messaging for alerts

Silence detection on each output that can trigger alarms or make a routing change

Silent - no fans - can safely be located in a studio with *any* noise



First Things First: Fix Your Website

It's Necessary If You Want People to Invest in Your Online Presence

Not a week goes by without someone asking me about how to make more money selling a radio station's online assets. With so many eyeballs on websites, social media and mobile, there is a consensus that stations aren't getting a fair share of dollars spent on digital.

During a recent interview with NetNewsCheck, Radio Advertising Bureau President/CEO Erica Farber said, "Digital is still one of radio's fastest growing sectors. Although it currently represents 4 percent of the industry's total revenue, there are some stations I've heard about looking to increase their digital revenue by as high as 30 percent."

While spurring growth of radio's online sales is a fantastic goal, there is one vital element that is consistently absent from conversation about revenue growth. Can you guess what's missing?

WHAT'S MISSING

While it's easy to agree that radio stations need to generate more money from online assets, it's much more difficult to point out that, as a whole, we don't have much to sell.

For more than 10 years, I've watched in amazement as both large radio companies and individual stations hire sales reps for websites that contain little interesting, entertaining or informative content. In the early 2000s one large com-



pany hired a dozen sales people to sell its group of websites six months before the websites were even launched! The outcome predictably was unsuccessful.

Here's a news flash: Your station may have an amazing on-air brand and great ratings, but if you don't produce freshly updated content for your website, you will neither attract nor retain a very large online audience.

If you really believe that consumers are flocking to your radio station website to see pictures of your disk jockeys,

read about your station events or get concert listings, you're living in the last century.

One of the big questions we face as an industry is whether or not we are truly ready to hire professionals to produce compelling content for our online product. While there are several all-news stations in major markets that have hired full-time content producers and writers, it is rare to find music or talk station websites with anything more than syndicated feeds and station

PROMO POWER



Mark Lapidus

promotional elements.

It is not fair to blame the radio station program directors for the shortcomings of website content. They are in their positions because they are experts at on-air audio programming; they're not experts at creating online content, understanding digital metrics or hiring journalists, photographers and videographers.

Most radio groups now have, at minimum, corporate digital executives. This is a significant step forward, but it is

If you don't produce freshly updated content, you will neither attract nor retain a very large online audience.

just the beginning. If we are to take advantage of radio's strength as a local medium, we must accelerate the hiring of digital content leaders in markets capable of driving significant Web traffic.

Is this approach to creating website content for radio station websites financially feasible? Market size, the local competitive environment and the state of the economy are important variables to determine if the investment is warranted. It may be feasible now for you to hire a staff that is mainly freelance and/or part-time, to create and maintain web-only content.

You may be able to save money and maximize Web traffic by creating one "city" site for your cluster. Some smaller-market stations find this approach more appealing because it permits them to compete with local newspaper and community websites.

Creating great local websites to attract an audience starts with a solid commitment to content. As your metrics grow, so will advertising sales. Expecting Web sales before you can deliver solid results only invites failure. The mantra "content is king," has been used in radio for decades. Sometimes we just need to remind ourselves that while sales may be our master, the king rules all.

Mark Lapidus is president of Lapidus Media.



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World Radio History

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10 Eye-Catching Small-Market Websites

Low Budgets and a Snazzy Online Presence Are Not Necessarily Mutually Exclusive

BY JAMES CARELESS

Small-market radio stations may not have the big bucks to spend on Web designers and special features. However, when it comes to attractive, effective Web design, there are plenty

of creative ways to compete with the majors.

Here are 10 examples of small-market sites (owned by companies large and small) that are doing such a nice job they couldn't help but catch Radio World's eye.



What: WAXS(FM), "Groovy 94.1"

Where: www.groovy94.com

Owner: Plateau Broadcasting

Hometown: Oak Hill, W.Va.

Why we like it: With its 1960s-feeling bubble font station logo, an ode to its "groovy" name and a rapid flood of news stories, photos, box ads — plus the famous faces banner up top, with Diana Ross and Elton John — all fit in with their retro theme. But the large "listen live" box with mock equalizer and links to previously played songs (which are available for purchase with a click-through) keep it feeling very much up to date. Here's a station that knows its niche and still provides a whole bunch of content. Who would have thought that 1960s style and 21st century tech would make such a happy couple?



What: KIXY(FM), "KIXY 94.7"

Where: www.kixyfm.com

Owner: Foster Communications

Hometown: San Angelo, Texas

Why we like it: KIXY's website manages to bridge the gap between rock 'n' roll frenzy and good taste, by confining its content to a vertical box that sits in the center of the page, atop a background of small KIXY 94.7 logos. The heart of the page is a mix of station promos (including a "now streaming live" link) and paid advertising. On the left side there's a small tab of links to staff bios, programming, contests and other features. Collectively, this is a site that communicates high energy without clutter.



What: WHBL(AM), "WHBL News Radio 1130"

Where: whbl.com

Owner: Midwest Communications

Hometown: Sheboygan, Mich.

Why we like it: Sheboygan may rank as Arbitron market No. 265, but WHBL's cleanly designed news website is anything but small-town. You've got current news stories — from local to global — and accompanying photojournalism. The Weather page offers forecasts and an interactive radar/satellite map that can layer on natural disasters and alerts. Add blogs on local topics, station bios, text subscriptions for breaking news, WHBL podcasts of on-air content, a Listen Live link, community events calendar and even movie listings and obituaries, and WHBL's website has the area covered. It's a real information draw for residents as well as outside listeners.



What: KLAZ(FM), "KLAZ 105.5 Hit Music"

Where: www.klaz.com

Owner: Noalmark Broadcasting Corp.

Hometown: Hot Springs, Ariz.

Why we like it: The Hot Springs home page is stylish and sleek, with big photos, a prominent "Listen Live" equalizer link, photos,



news stories and a wealth of other features. Worth noting: See the big, bold buttons for KLAZ's Facebook, Twitter, MySpace and Request links. This is how you get your listeners to notice such links, and to use them.

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(continued on page 24)

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“I have always found WideOrbit to be one of the few companies that actually ‘get it.’ They’re not just software guys but radio guys just like me. If you are looking for a system that will adapt to your station’s needs, with granular user customization and easy integration with your existing infrastructure, then WideOrbit is the one you are looking for.”

—GREG HANSON

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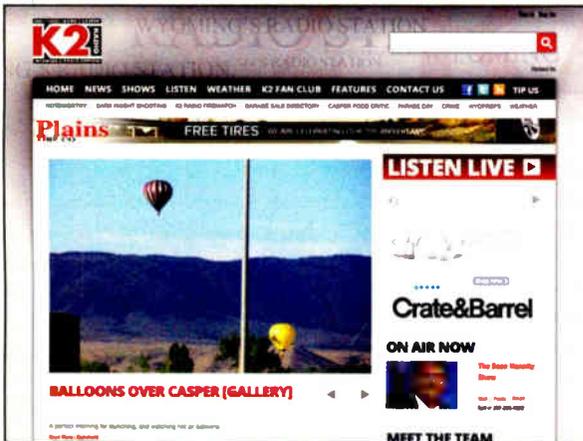
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WEBSITES

(continued from page 26)

What: KTWO(AM), "K2 Radio"
Where: k2radio.com
Owner: Townsquare Media
Hometown: Casper, Wyo.

Why we like it: This is Arbitron market No. 277 — out of a total 277 markets. But, like many of the examples cited here, we see a website that goes beyond its humble roots into something bigger. The website for K2 Radio, a Townsquare Media station, features bold news stories with lots of photos; then lots more photos for staff bios, Facebook links, contests, prizes and advertising. Photos are one of the best ways to get people interested in your site, and KTWO mines this idea. To save money, Digital Managing Editor Tom McCarthy says, "Our sites are built on a common platform along with the rest of the Townsquare Media sites around the country."



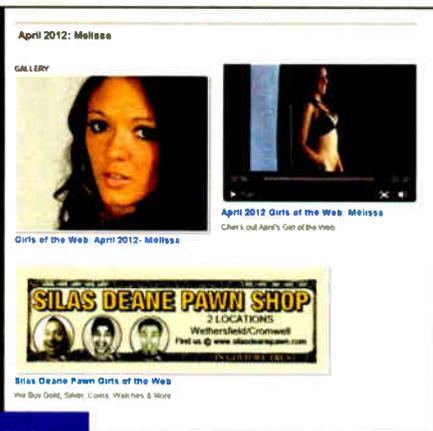
What: WZDQ(FM), "95Q"
Where: www.95q.com
Owner: Neuhoff Family Ltd. Partnership
Hometown: Decatur, Ill.

Why we like it: 95Q's site combines strong, clear design with an excellent range of country-themed features. A quick inspection of the home page reveals all kinds of links tied to programming, concerts, weather, advertising and streaming — plus tabs to on-air staff, photos, contests, and the "Qmunity" — yet despite the chaos, the 95Q page seems unified and balanced. We think the unity comes from the big 95Q banner at the top, with its rotating background of top country stars. Classy yet feature-packed.



What: WPLR(FM), "PLR FM"
Where: www.wplr.com
Owner: Cox Radio
Hometown: Milford, Conn.

Why we like it: It is impossible not to like a radio website that boldly displays a red stiletto shoe with the title "Daddy Drag Race" beside it. (Apparently WPLR's Chaz & AJ were convincing dads to dress up in drag and run to win One Direction tickets for their daughters.) On a larger scale, WPLR's male-skewed content is honestly male-skewed; unlike so many mock-male sites



on the Web. And really, who, male or female, isn't going to be at least intrigued by a video link showing how to open a can of beer with a chainsaw? Add various quirky features, ads and tabs to "Stuff You Should Know," and the PLR FM site is fun, fun, fun.

What: WBDX(FM), "J103"
Where: www.j103.com
Owner: Partners for Christian Media

Hometown: Trenton, Ga.
Why we like it: J103's Christian-themed website is colorful, eye-catching and packed full of useful features. The front page is dominated by a large window that promotes local Christian events and station Web features. There are also windows and links to a live on-air feed, weather, traffic cameras, a daily Bible verse, J103 listener polls, staff blog entries and advertising windows. The integration of spiritual and secular is low-key and harmonious, while the site itself has lots of features, yet feels uncluttered.



The site was created on a "very affordable" budget by local company Level 2 Design, says J103 Production Director Brett Ritchey. It is maintained by Level 2 Design and two J103 staffers on a part-time basis.

What: WMSR(AM/FM), "Thunder Radio"
Where: www.thunder1320.com
Owner: Coffee County Broadcasting
Hometown: Manchester, Tenn.

Why we like it: This website, which gets 175,000 page views a month in a town of a 10,000-population town, is eye-catching and feature packed. The front page alone features local breaking news stories with photos, a prominently placed link to the station's AM/FM simulcast, staff bios and a local community calendar. Ads are large enough to be seen easily, but not so much that they overpower the content.



To keep costs down, designer Brian Marcom used WordPress. "It's a total team effort and really the key to our success," says WMSR owner/GM Rob Clutter.

What: WSLU(FM), "North Country Public Radio"
Where: www.northcountrypublicradio.org
Owner: St. Lawrence University
Hometown: Canton, N.Y.

Why we like it: North Country Public Radio — NCPR — covers parts of New York, Vermont and Ontario, Canada. Despite its small-market roots, NCPR's website offers regional news, blogs, weather, photos, events listings, program info and Twitter feeds. And despite the fact that NCPR.org has NPR's resources to draw on, this site is clearly about the "North Country" first and foremost. In 2001, NCPR received a \$300,000 to fund site development and three years salary for two staff. Since 2004, the station has carried the staff cost. "We put a lot of work into finding smart, inexpensive ways to get things done, which often means building it ourselves," says NCPR New Media Developer Bill Haenel.



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World Radio History

Yamaha 01V96i Stands on Broad Shoulders

The Latest in the Line of Digital Desktop Mixers Loses Nothing and Adds Helpful Features

PRODUCT EVALUATION

BY CURT YENGST

Yamaha has an impressive history providing digital mixing to the masses.

Starting in 1987 with the DMP7, on to the ProMix01 and 02R, followed by the introduction of the 03D and the 01V in 1998, Yamaha is clearly no newcomer to digital mixing technology. The 01V found homes in many small production and bedroom studios.

The 01V96 was a complete redesign, offering not just increased sample rates, but greater flexibility and a more professional feel.

Yamaha now introduces the 01V96i. Side by side, the two look almost identical. The control surface remains unchanged, aside from differently colored knobs and a slightly darker paint scheme. Rear-panel connections are also unchanged from the earlier version. The real changes happen "under the hood," the biggest being in the USB port.

On the original 01V96, the USB port was used to allow mixer communication with a host PC to manage the mixer's automation scenes. Now in addition to that, the 01V96i USB port allows up

to 16 channels of digital audio to pass directly between the mixer and the host PC or Mac and interface with many popular DAW applications. In other words, the mixer is also a 16 x16 sound card.

The 01V96i also boasts improved input preamps, with a dynamic range

of 110 dB. It retains the Virtual Circuit Modeling technology of the 01V96VCM, with its ability to model the sounds of well-known analog signal processors, including Yamaha's own venerable SPX series. Anyone accustomed to previous incarnations of the 01V96 will feel right at home. The various screens and menus are unchanged, save for the addition of available USB inputs and outputs.



PRODUCT CAPSULE

YAMAHA 01V96i
Digital Mixer

Thumbs Up

- + Extremely flexible
- + Good sound quality
- + Multichannel I/O

Thumbs Down

- Included documentation needs improvement

Price: \$2,699

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

LAYERS

For the uninitiated, the 01V96i is a 32-channel, 8-bus recording console, featuring eight auxiliary sends, EQ, compression and gating on every channel, and built-in effects such as reverb and delay. A comparable analog console would be the size of a dining room table, yet the 01V96i takes up no more space than a computer. How? Everything between the 18 analog inputs (12 mono mic/line inputs, two stereo line inputs, stereo "tape" return) and eight analog outputs (stereo out, four "omni" outs, stereo "tape" out) is completely

digital. All 32 channels, aux masters, and eight buses, as well as the main stereo outputs, are represented by just 17 100 mm faders. The function of these faders is determined by what "layer" is selected. Think of it as taking a larger console, slicing it three ways, and stacking those slices on top of each other.

Space is also saved by consolidating common controls into just one set of knobs and buttons, assigned based on which channel or display screen is selected. The display gives access to scene libraries, I/O setups, routing controls, dynamics and EQ controls and other options. While the numerous screens and available options may seem overwhelming at first, a quick read of the abridged owner's manual provides enough information to get started. This hard copy manual is supplemented by a CD-based reference manual that goes into greater detail. Where I found the documentation to be lacking was in covering the mixer's ASIO driver for the USB I/O. The instructions for the driver

(continued on page 30)

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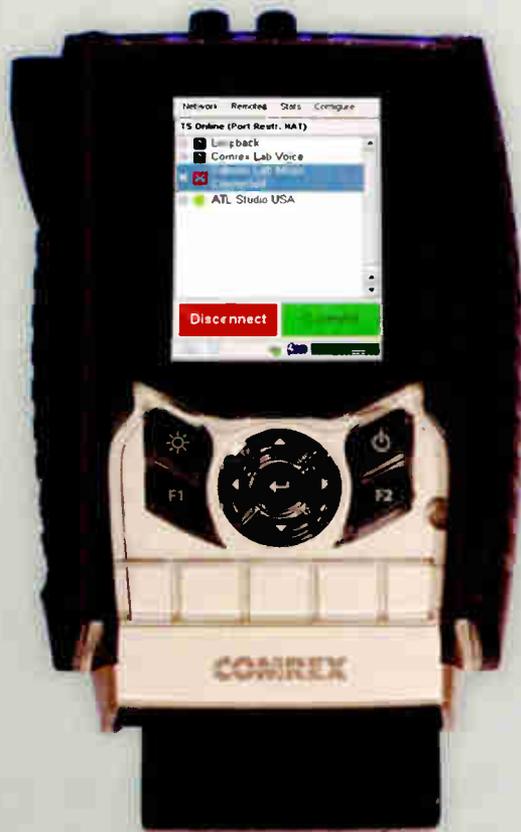
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World Radio History

YAMAHA*(continued from page 28)*

are included in the driver ZIP file available from www.yamahaproaudio.com. I would have preferred this information be included in the owner's manual, since that's the first place a new user is likely going to look.

Included is a DVD copy of Steinberg's Cubase AI 6, providing "out-of-the-box" functionality. Additional software includes Yamaha's Studio Manager and 01V96i Editor. The former allows PC or Mac control of various pieces of Yamaha hardware, while the latter works in conjunction with Studio Manager to provide a computer-based control interface. The Editor presents a "virtual" version of the mixer on-screen. With a few clicks of a mouse, mixer configurations can be created and saved. This is especially useful if a user prefers not to operate the mixer via its own LCD screen. Up to 99 scenes can be saved in the mixer. If a setting for a particular venue or production is used regularly, the user can save it for later recall. With the push of a button all settings, from EQ to effects to output level, are instantly recalled. The only settings that cannot be automated are the analog preamp gains.

Using the pan/routing and patch views, it's possible to assign any input to any number of outputs. Signal sources can be hard-wired to the analog or digital inputs and then assigned channel inputs, aux inputs, effect inputs, etc. with a push of a button.

Let's say a mic processor is connected to Channel 2. If I wanted that source

to come up on Channel 11, it's just a matter of selecting that route. Even the hardware insert points on Channels 1-12 can be patched pre- or post-EQ or even post-fader. All patch setups can be saved in their own separate library for later recall.

EXTRAS

Other useful features include a built-in tone generator that can be routed to any bus, aux send or stereo output; four "omni" outputs on the back panel that can be fed by aux sends for mix-minus or headphone feeds, insert points, or even a surround matrix; plus the ability to lock the controls with a password. This is especially handy if the mixer is used in a radio production room that is shared. There are also eight user defined keys — buttons that can be configured as shortcuts for many different functions.

The 01V96i also has the ability, via MIDI or USB, to act as a control surface for several popular DAW programs, including Pro Tools, Nuendo and Cubase. There is also an eight-channel ADAT I/O on the rear panel, as well as S/PDIF and word clock. The expansion slot on the rear can accept several I/O cards, available from Yamaha, for even more options, including additional analog and AES/EBU I/O.

As mentioned earlier, the other improvement is in the mic preamps. I compared them to the preamps in the original 01V96, using dynamic, condenser and ribbon microphones. My

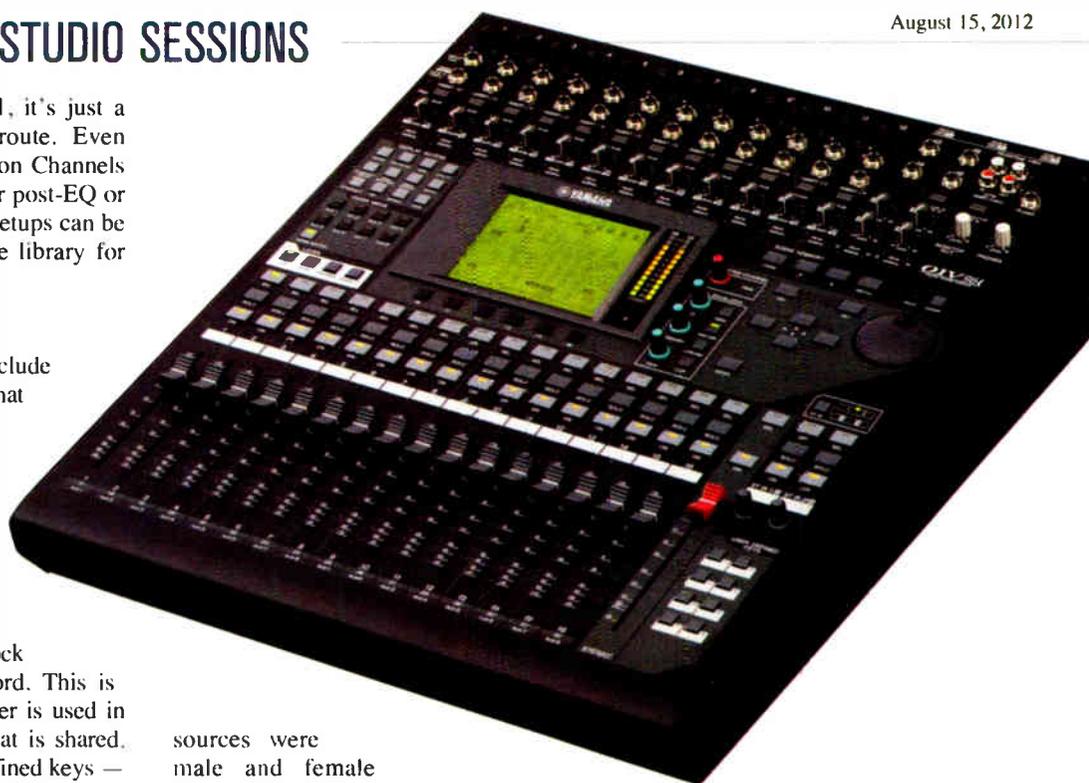
sources were male and female voices and acoustic guitar.

For starters, the 01V96i's preamps definitely have more gain, especially handy when dealing with ribbon mics. My ribbon also sounded punchier than on the older preamps, particularly on male voice, which can sometimes suffer from a ribbon's darker tone. A dynamic mic seemed to have more bottom, but without sounding muddy. The condenser mic benefited most from the upgrade, needing less gain and sounding much brighter without sounding harsh.

Overall, I found the 01V96i enjoyable to use. Granted, my experience with its predecessor, limited as it is, gave me a leg up on the learning curve. It's solidly built and sounds good. As I mentioned, I

thought the documentation could have been a little better, but it by no means left me in the dark. If you already own an 01V96, is it worth replacing with the 01V96i? Chances are you've already got a viable I/O solution between the mixer and the DAW, so that will certainly affect your decision. (If it ain't broke ...) On the other hand, if you're looking to get into a hardware-based digital recording and mixing solution for a production studio or road rig, the 01V96i fills the bill as an all-in-one solution.

Curt Yengst, CSRE, is assistant engineer at WAWZ(FM) in Zarephath, N.J.

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World Radio History

ALCO Professional Aids Field Reporters

Software Codec Offers More than Simple Connections

PRODUCT EVALUATION

BY AMANDA ALEXANDER

ATC Labs' ALCO Professional is a handy product that I think many radio stations will find useful on a number of fronts.

It is a software codec designed for use on laptop or desktop computers. But besides being a simple connecting codec, it offers useful traffic management features. This product is helpful to the person on the go who needs to record but it also enables broadcasting live as well as doing file transfers, chatting via text or voice. The options on what this program does can become limitless.

ALCO Professional is easy to install from the ATC Labs website. Find the link at radioworld.com/links. The installation is very straight forward. It took only a matter of minutes to complete the process. Unfortunately downloads are only for the Windows platform for now. Once installation is complete, all that is needed is a username, password and station ID that either you create or that someone created for you. Then you are off to the races.

SIMPLE TO USE

ALCO Professional is simple to use. When you run the program, it displays your contacts and who is online or not online. It shows what the selected outgoing codec is as well as the input sources. Before a call is made, only Input 1 works. Input 1 is for the microphone. Once a call is made, Input 2 becomes accessible for choosing a playlist or a report to play to the person on the call. Once connected, I had few issues with it staying connected. The one time it did disconnect was due to many of our local board operators downloading various shows at the same time, which bogged down the network. Helpfully, a list of regularly used contacts can be built. All it takes to start building a contact list is a click of the + key and then typing the

name of the person you want to add. A search function will look to see if the name is already recorded. If the search turns up no results, it will prompt the user to enter the name to create a new contact. When you first create your login, you have to select a station ID. This ID helps differentiate you from the thousands of users all over the country. You can create a station ID as your company name, and give that to the other users you want created. When they join that station ID, you can only see each other when searching for contacts to add to your list.

In addition, a user can set up the program to show them as an invisible overseer, so while other users can be seen online, the overseer cannot be seen. This would be useful for a studio engineer who would not participate in the airing portion of a program but who is involved in the technical portion of the production.

ALCO Professional allows people to communicate in two ways: chat or voice. Users of Skype will be familiar with the chat/texting feature. It is helpful when you need to send a message to

a host who is recording or live on the air or conducting an event; or even if you don't have a microphone to talk to the person. If the host is on air, this would allow the host and station manager to discuss what's coming up next, any changes that might need to be made, how many minutes or seconds are left until the break and more; all without skipping a beat on air. A chat message can be sent to several people at once depending on who all have been selected to join that conversation.

When placing a voice call, much like with the chat, you can call one or more people (contacts) at the same time. When you place the call, you select whether you are going to be the host or if you are a field reporter. When you are being called, if the person calling has decided to be the host you are automatically selected as field reporter. However, if the person calling is a field reporter, before you accept the call you can select if you are going to be the host or another field reporter.

The station host has more control privileges than a field reporter. He or she can add more people to the call,

PRODUCT CAPSULE

ATC LABS ALCO PROFESSIONAL Software Codec

Thumbs Up

- + Easy to use
- + Multiple ways to be in contact
- + Allows for file transfers

Thumbs Down

- No mobile app for smartphones yet
- No vocal talkback from a console
- Contact add requests are not always instant
- Windows only, no Mac operation

Price: \$1,795 for six seats; \$1,995 for 8 seats; \$3,000 for 12 seats.

For information, contact Mike Lyons at ATC Labs in New Jersey at (973) 624-1116 or visit www.atc-labs.com.

drop people from a call, select a specific person to send a message to in a call, and pretty much try and keep everything sounding good. If a reporter is too hot coming in, the host can adjust audio levels to try and get things back to normal.

The host records the main program or acts as the broadcast conduit. There



Randy Frongillo, writer/producer for 560 KLZ, makes use of ALCO Professional in the studio.



STUDIO SESSIONS

is a useful “delay dump” that can be pushed if someone says something they shouldn’t, as tends to happen during in-studio live shows.

The field reporter can do some of these same things: record and add participants to the call.

If you have more than one remote activity going on, you can run simultaneous calls and chats.

FILING

Sometimes venues don’t have broadband/wired Internet connections available to be used by the public. To compensate, a field reporter can easily “File a Report” as a way of saving it to the computer being used for later transmission.

Let’s face it, even with the 3G and 4G cards you can get from the various wireless carriers, when you are in a crowded place with people using that same network, the connection may not be ideal so just recording it locally for playback later would make more sense.

This opens up more doors to go out in public and get feedback for the radio station. I have heard over the years stations that run promos with listeners saying something like, “You’re listening to WXYZ,” or, “Hi! I’m Joe Bob from Denver and I listen to WXYZ.” Man-in-

the-street interviews become simple with ALCO Professional. If the station participates in activities in the community, people might even give a brief testimonial about how the station impacted them. When you aren’t live, the possibilities are endless with what can be done just by recording locally.

As we all know, depending on where we are and the time of day, Internet speeds may not be what we hope. ALCO Professional allows choices that provide decent audio but allow for the slower connections: 128 kbps, 64 kbps and 32 kbps are the three choices. The best choice, 128 kbps, provides quality comparative to “CD quality” audio. The lower bit rates, 64 kbps and 32 kbps, don’t sound as great but still sound good enough to be used for most radio programs. If you are on a call with someone and notice



issues with the audio quality, ALCO allows you to easily change it during the call to get better sound.

ALCO Professional also has a playlist manager which allows various audio files to be stored for playback. How often does a host request an audio clip to be played back during their show for them to talk about? This playlist manager allows the host to play one or more “reports” during the show.

Audio levels can be controlled with a sliding bar, making it easy to fade in or out. When creating the playlist, you can set start and end points of what you want played.

Need to send a file to a field reporter or to your host? No problem. With just

a few clicks of the mouse a file can be sent over.

ALCO Professional is a great product that will no doubt help many stations with remote recording and live remote broadcast. I personally like the fact that you can chat or talk over voice as well as record everything for later use.

One major concern for me is the fact it is not currently available for smartphones. Who wants to carry an expensive laptop around and maybe even a USB mic and headphones just to record? While it is still easier than carrying all the equipment around that is normally used for remotes, the whole idea, at least for me, to get a product like this is because it makes it super simple to be out in the field. ATC Labs tells me that they are in the process of working on an application for Android users. I have no doubt that with some more work ATC Labs will become a well-known company whose products are used at many stations around the country.

Amanda Alexander is chief engineer for Crawford Broadcasting Co. in Denver.

Adobe Audition CS6

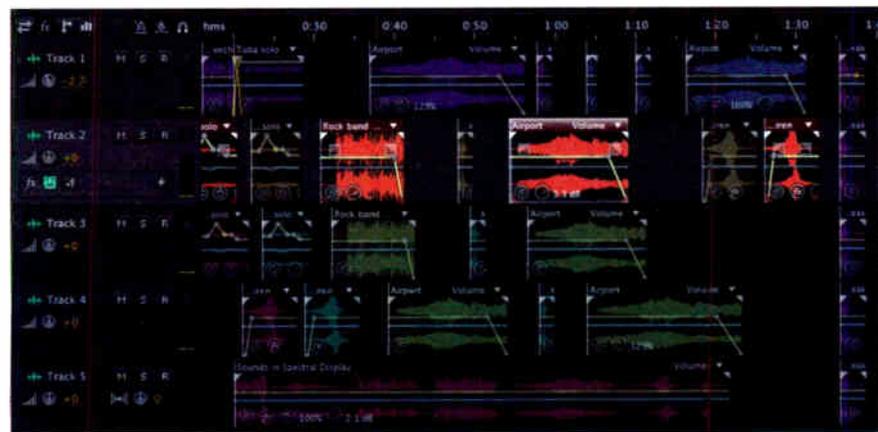
SHORT TAKE

BY DAVE PLOTKIN

You asked, they listened! A little less than a year after the release of Adobe Audition CS5.5 (see my review, Radio World, Sept. 7, 2011), Adobe has unveiled Audition CS6. Many of

Editor. Not only can you keep the clips grouped, but Audition CS6 allows you to time-stretch either the entire group or just one clip, all without adjusting the whole group. Users are even allowed to remove the focused clip while keeping the others grouped. Very cool.

Cart Data is back, too. This feature also performed a disappearing act in



the coveted features missing in CS5.5 have returned in version 6 as well as new features to make work flow easy and smooth.

Enjoying a triumphant return among the features to once again grace the stage of Audition CS6 is the ever-so-popular Clip Grouping in the Multitrack

CS5.5 but has reappeared better than ever. By entering the metadata information for your promo or commercial in Audition, it will simply ingest into your digital delivery system — a huge time-saver in my book.

Among many other returns to Audition
(continued on page 34)



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Shure VP89 Shotgun Family

SHORT TAKE

BY PAUL KAMINSKI

If a person needs to get critical audio at a distance from the source of that audio, a hypercardioid "shotgun" microphone is often the tool of choice. After all, that is what it was designed for.

The Shure VP89 family of shotgun microphones comprises three capsules (VP89S, VP89M and VP89L) with varying angles of coverage (70, 50 and 30 degrees respectively), length (5.4 inches, 9.4 inches and 15.2 inches respectively) and bass roll-off (140, 100 and 60 Hz) to a published high-frequency response of 20 kHz. All of them are phantom-powered with a recommended optimal voltage of 48 volts. They can operate with voltage as low as 11 volts DC. Shure recommends a minimum input load impedance of 1000 ohms.

For this quick test, I powered the units with phantom power from an audio recorder, a USB audio dongle and mixer microphone input to replicate conditions that are found in the field and, perhaps, in a pinch found at a makeshift studio location.

Each of the aircraft-grade aluminum



microphones and capsules are interchangeable. The units also have a 12 dB per octave roll-off below the published low-frequency response, to lessen rumble and low-frequency room noise. They come with a standard foam windscreen and a durable travel case. Rycote makes optional custom wind protection and suspension mounts for the VP89 shotgun system.

I used the VP89M to record rope line

audio at the NASCAR Hall of Fame Induction ceremonies (a snippet of that audio with Darrell Waltrip is available at radioworld.com/links). I used the VP89S capsule to record my voice tracks from that coverage and used the VP89L to record a voice track in my home studio.

Though shotguns have a reputation for field use-only, with all the compromised audio quality that might entail, many voice over talents use a shotgun mic (e.g. Sennheiser MKH 416) in this manner.

Shotgun microphones certainly solve audio problems in the field. Though pricey, the Shure VP89 shotgun microphone family will provide the user,



whether a radio reporter or sound recordist, with high-quality sound reproduction in a rugged road-ready package that will satisfy 99.9999 percent of all audio recording requirements that arise in field work.

The manufacturer's suggested retail price for the VP89S is \$799; the VP89M is \$899 and the VP89 is \$999.

For information, contact Shure at (847) 600-2000 or visit www.shure.com.

Paul Kaminski is the RW Radio Road Warrior columnist; since 1997, a Radio World contributor and a contributor for CBS News, Radio. Email him at motorsportsradio@msrp.com. Follow him on Twitter at [Twitter.com/MSRnet](https://twitter.com/MSRnet).

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AUDITION

(continued from page 33)

CS6 are the tone generator, Doppler Shifter, Spectral Pitch Display and the use of control surfaces.

So what is actually new?

Have you ever been working on a piece of imaging and had many files open in Audition? Maybe you had only dragged half of them into the session and decided that was enough for the day? However, then when you reopened Audition, only the files that were open (being used) in the session appear. Now when you relaunch your session in Audition CS6, there's a preference for the program to reference all of the audio and video files that were open in Audition at the time you saved the session, not just the files that were active in the session. I expect that to be a huge time-saver.

If you're anything like me, you might think you have an excellent singing voice ... when, really, you don't. For that the built-in automatic

and manual pitch correction tools may help. It can pitch-correct anything with very few artifacts. There are even new tools for displaying pitch: A blue line shows the original pitch and a green line shows adjustments before corrections are applied.

The time compression feature also sees a pitch feature added in Audition CS6. You may now choose from three modes in which to adjust your piece: monophonic, designed for a single sound; polyphonic (as the name suggests, for many voices) and varispeed, allowing for control of the pitch.

It's great to see the folks at Adobe listened to the many suggestions and have created a powerful tool with a sleek and ergonomic design. Audition CS6 is friendly for both recording studios and radio stations. I'm looking forward to seeing what Adobe has in store for the next release ... but I think this will hold me for a while.

Price: \$349 or \$75 for upgrade.

For information, contact Adobe at (800) 833-6687 or visit www.adobe.com/products/audition.html.

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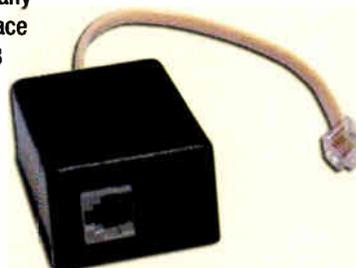
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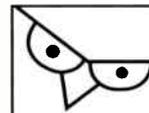
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Looking for a broadcast excerpt of a San Francisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by Willie Mays and Felipe Alou stealing second base, running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

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

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Owners Are Investing in the Future of AM

Equipment Manufacturer Tom King Has an 'Encouraging Perspective'

COMMENTARY

BY TOM F. KING

It seems that AM radio is being redefined. What we knew in the 20th century as antenna-to-antenna AM terrestrial radio is now described, post-millennium, as "program content delivery." As a result of rapidly expanding technologies, the role of terrestrially delivered

AM radio has been framed increasingly as an inferior media, old fashioned and irrelevant.

I want to set the record straight.

From the perspective of an AM radio antenna system manufacturer who works with AM broadcasters every day, I can say that broadcast station owners in the U.S. and abroad are investing in the future of AM analog and digital radio. Why is this? The model of a free single point source of information to the

masses is still needed, and still works.

AM radio propagation is unique from FM radio and television, in that it propagates along the ground as well as via ionospheric skywave bounce at night, which is the reason that I often listen to WCBS in New York City, WWL in New Orleans, WSB in Atlanta and WSM in Nashville, "The Legend," the Grand Ole Opry's famous station.

Simulcasting with FM does not replace the nighttime coverage you get

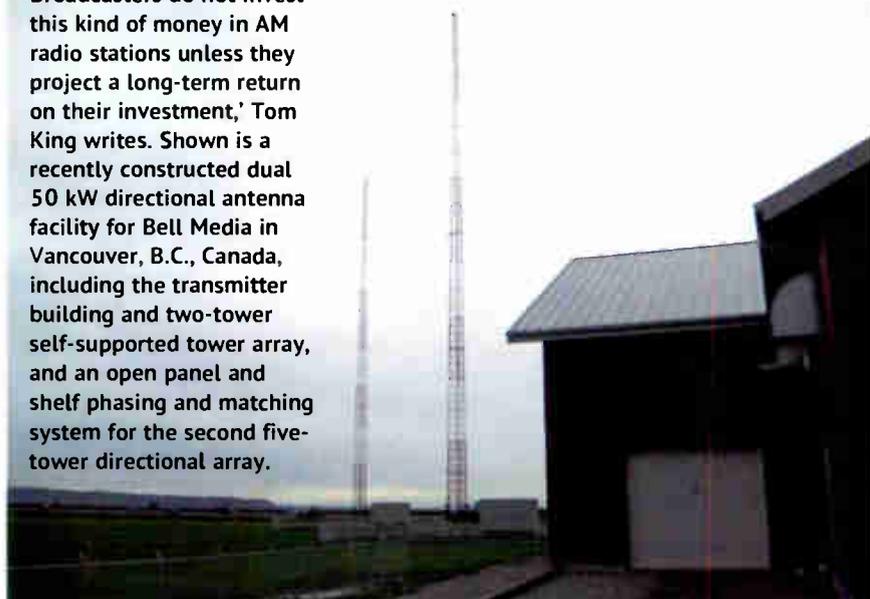
with AM stations.

I was just speaking recently with Saul Levine, owner of KMZT(AM) in Beverly Hills, which operates on 1260 kHz with a Kintronic Labs 20 kW DA-D and 7.5 kW DA-N wideband phasing and matching system, about his experiences as an AM radio station owner and operator. He has been using a classical music program format on analog AM for several years, and has found it to be very successful in the L.A. market.

In fact, he informed me that he frequently receives calls from listeners who live in the canyon suburbs of L.A. and want to express their great appre-

(continued on page 38)

'Broadcasters do not invest this kind of money in AM radio stations unless they project a long-term return on their investment,' Tom King writes. Shown is a recently constructed dual 50 kW directional antenna facility for Bell Media in Vancouver, B.C., Canada, including the transmitter building and two-tower self-supported tower array, and an open panel and shelf phasing and matching system for the second five-tower directional array.



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Scott Bailey
President/General Manager
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Gallatin, TN



READER'S FORUM**PLAYING IT COOL**

I just wanted to drop a note about the nice article in Radio World about cooling a site ("Keep That Transmitter Building Cool," RW June 20). The approach Mark Persons described is one that I often used when I was a chief engineer. I grew up working in stations in upstate New York, near Albany. Like Mark, we didn't use AC to cool the sites but rather, outside air. The ratio of intake air to exhaust saved me many clogged filters.

The article's use of some great photos, I think, makes this a great "how to" for those in the field looking for some guidance and suggestions. Thanks for the great effort.

Rich Redmond
Vice President, Product Management & Strategy
Harris Corp.
Mason, Ohio

HERE'S TO YOU, NON-PROFITS!

Paul McLane's editorial about college radio ("Why Radio Should Go Back to School," RW July 18) was right on. I got my start at WWUH at the University of Hartford. Now a consultant engineer, I appreciate the value of college radio still.

Here in Connecticut, we worked with the state broadcasting association to lower their membership dues for non-coms. Initially their dues were the same as a daytime-only commercial AM station, several hundred dollars, which was a huge amount to those non-profits with annual budgets of four figures or less.

The association lowered the membership fee to \$25 and enrollment jumped. They understood that having college stations as members would benefit commercial radio and could result in better programming, greater participation in the Alternative Broadcast Inspection Program and a trained pool of qualified potential employees.

A few years ago, I founded the CT Radio Alliance (ctradioalliance.org), an informal association of the state's

non-commercial broadcast stations. We have meetings several times a year, held around the state. This has been very effective in getting all of the non-commercial stations on the same page about issues surrounding the ABIP, FCC and EAS.

The state broadcaster's association has embraced our new group and even provides a room for us to hold a meeting at their annual convention. So thanks for the good work, and we'll keep supporting from this end.

John Ramsey
President
Ramsey Communications Services
West Hartford, Conn

CORRECTIONS

The story "FM SSBSC Faces Questions" (July 4) stated that Bob Tarsio's field testing of SSBSC on New York FM stations included use of a "modified Optimod 8100 using normal programming received on several stock models of car radios." Tarsio actually designed a separate stereo generator, the output of which was compared to that of an Optimod-FM 8100. He tells RW, "The audio from the 8100 test jacks was used to drive our generator so that both stereo generators got the same audio fed to them for an accurate test." Tarsio also disputes that because his generator used an analog design it lacked the ability to perform as effectively as a DSP approach of today. "The issues dealing with SSB transmission are due to the mathematics of SSB waveform generation not technical method," he argues. Look for more coverage of the SSBSC debate in upcoming issues of Radio World.

The wrong photo ran with "RemoteMix One Plays in Pittsburgh," published in Radio World on Aug. 1. The correct photo of the JK Audio RemoteMix One is below.

**AM RADIO**

(continued from page 37)

ciation for the fact that they are able to receive his station even when FM reception is impossible.

Levine emphasized that he is successful with AM radio because he gives people what they want to hear. He thinks AM has a bright future.

In 2010, my company Kintronic Labs was involved in supplying a 50 kW AM directional antenna system for a new metro D.C. radio station, starting in a farm field. As envisioned, this station was to serve a targeted demographic that was not, at the time, being reached by radio at all. Today, this multi-million dollar is yielding yielding dividends.

Another example of a recent major AM radio investment we were involved with, to much success, took place across the border in Vancouver,

British Columbia. A two-tower, 50 kW AM station and a five-tower, 50 kW AM station were placed on the same site, again starting from scratch, in an alfalfa field. Our company was grateful for the opportunity to participate in what proved to be a well-managed and exceptional team effort to implement this complex project.

Both stations were designed for analog or digital AM radio operation. Broadcasters do not invest this kind of money in AM radio stations unless they project a long-term return on their investment. With the demise of DAB radio in Canada, the Canadian broadcasters are turning more and more to AM and FM terrestrial radio, particularly to compete with U.S. stations as HD becomes more commonplace.

At the moment, Kintronic Labs is involved with AM radio customers in the design, supply, installation and commissioning of new analog or digital-ready AM transmission facilities

in various states domestically and in numerous countries worldwide. When you listen to the difference between analog and digital AM radio and analog and digital FM radio, AM stands out.

This is why we see digital AM radio as remaining a player in the future. Whether the station is analog or digital, what drives the decisions for new investment in AM radio is the demand for unique programming to an unserved targeted audience in growing markets.

I hope that this provides you, the reader, with a more encouraging perspective regarding the future of AM radio. There are many more success stories like the examples above, in which AM radio broadcasters are providing reliable free news, information, sports and entertainment to their respective communities across the United States.

Tom F. King is president of Kintronic Labs Inc.

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BOSTON, MASSACHUSETTS



left:

The 'TIC' newsroom airs a Public Affairs Program

below:

A graduate of Talking Information's Voice Training Program; Kati Crocker is now the Public Service Director

below left:

Janet LaBreck; commissioner for the blind and creator of the VOICE program with her guide dog, Osborne

A V.O.I.C.E. FOR THE VISUALLY IMPAIRED



Special software provided by Radio Systems allows the visually impaired to operate their broadcast consoles unassisted.

From high above Boylston Street, at their new custom studios at the Massachusetts Commission for the Blind in Boston, four blind or visually impaired students are the first class of VOICE, or Vocational Opportunities in Communication Education.

The program was created by Janet LaBreck, commissioner of the Massachusetts Commission for the blind as an intensive, interactive and hands-on learning experience with longtime collaborator Ron Bersani, executive director of the nearby Talking Information Center.

To build the new studios, Bersani contacted long-time supplier Radio Systems. Says Bersani; "their StudioHub+ wiring system made meeting our multiple deadlines easy and when we needed special software to aid our visually impaired operators in using the console, Radio Systems provided it at no charge."

VOICE program participant Kati Crocker, 24 says: "In a way I think this is life-changing. I didn't think I could do this before, but it has really broadened my scope for employment."

Commissioner LaBreck feels they've all worked closely to develop a curriculum that bolsters students' confidence in broadcasting but also "diminishes the isolation" felt by many blind people entering the job market.

below, from left to right:

Gerrett Conover
Vice President

Daniel Braverman
President

Michael Sirkis
Chief Engineer

Dennis Greben
Manufacturing Manager

Jo-Ann Dunn
Sales Manager



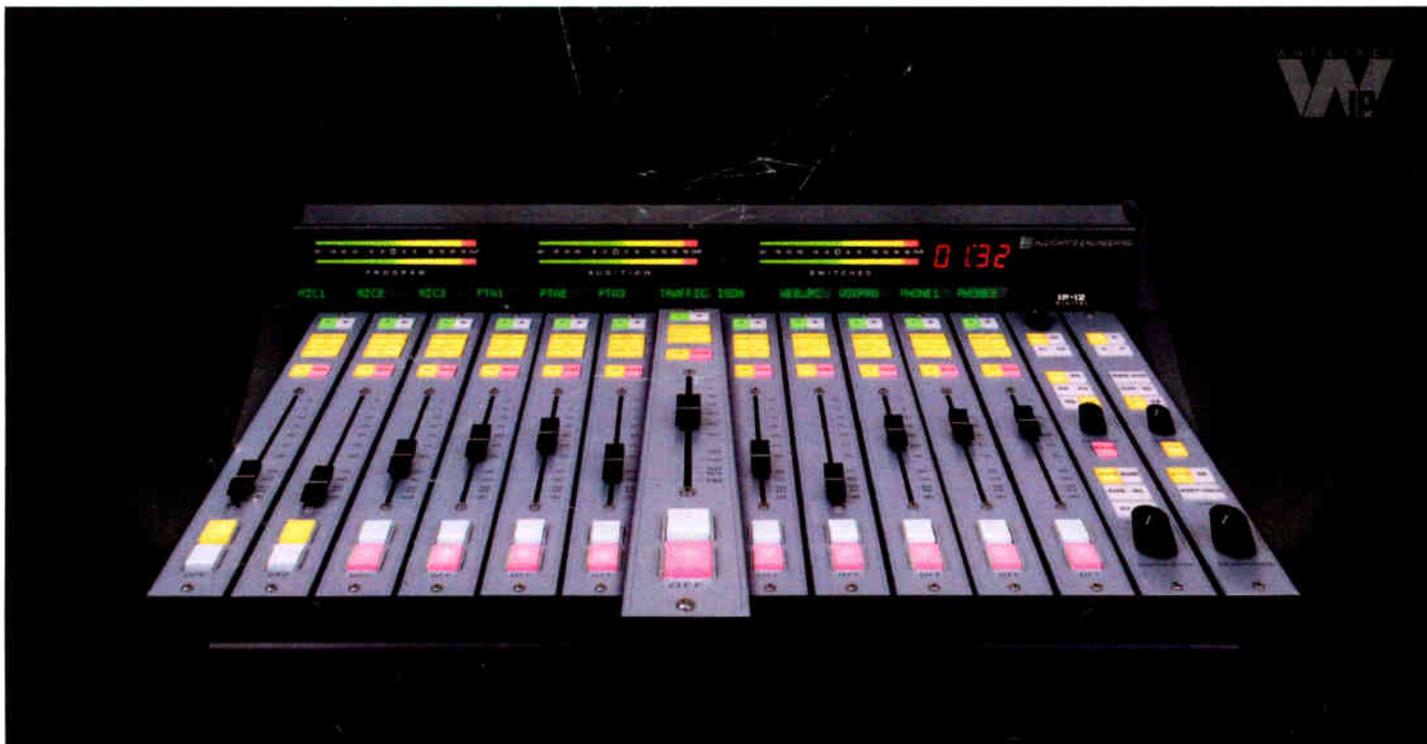
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