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The AM push will continue in '25

Support from 330 members of
Congress wasn't enough yet



Paul
McLane
Editor in Chief

A

t times last year, the momentum and
support for the AM Radio for Every
Vehicle Act felt almost miraculous. Rarely
does legislation move as smoothly
through Capitol Hill as the AM bill did.

Nevertheless, the bill's backers were
unable to bring it across the proverbial finish line.
Congress was barely able to cobble together legislation
just to keep the federal government operating, and a bill
to require AM radio in new cars wasn't part of it.

We can expect to see the legislation again.

"While we are disappointed the AM Radio for
Every Vehicle Act did not pass this Congress, the

overwhelming bipartisan and bicameral support underscores the vital
role AM radio plays in keeping Americans safe during emergencies and
connected to their local communities," said Curtis LeGeyt, president/CEO of
the National Association of Broadcasters, in his statement.

He thanked the bill's sponsors and noted that it received favor from "more
than 125 supportive organizations, hundreds of thousands of listeners who
contacted their lawmakers and more than 330 members of Congress who
championed this effort." He said NAB plans to work with the next Congress
to pass the legislation.

I do think the bill eventually will pass. Broadcasters generally enjoy good
standing with legislators; protecting EAS is an understandable goal; and
the fact that radio stations tend to stay on the air at times of crisis even
when wireless networks fail is convincing. Also, a year ago, Donald Trump
promised his support in remarks to an NRB convention audience ("I will
protect the content that is pro-God").

But qualms about government putting mandates on manufacturers also
are real and understandable. And though lawmakers like broadcasters, they
also love carmakers, who are a very important and huge part of the U.S.
economy. So success still isn't a slam dunk. We'll watch and see.

On another note, I hope you will read
your latest free Radio World ebook.
We've returned to the topic of trends in
consoles, which we last visited a couple
of years ago. I gathered Q&As with
representatives of six manufacturers
as well as the comments of several
respected engineers with deep
experience in commercial and
public radio.

Find it at <http://radioworld.com/ebooks>.



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Commission Staff Hears Views on Software-Based EAS

U.S. broadcasters, FCC officials and technology manufacturers continue to discuss how EAS could be transitioned to a software-based infrastructure. The NAB says such a move would improve cybersecurity and make EAS more robust.

NAB recapped its argument at a December meeting with the FCC Public Safety and Homeland Security Bureau that also delved into technical aspects. It said benefits of a software architecture would include reducing or eliminating down time needed to repair equipment and install security-related patches. It would enable immediate failover to standby equipment if needed, and enable the use of redundant, geographically diverse locations of encoder/decoder operations in the event of a large disaster.

The association envisions testing and certification by vendors to ensure seamless integration with the existing EAS system. It said broadcasters are familiar with securing software-based systems, for instance with Nielsen PPM.

The NAB acknowledged a proposal from Digital Alert Systems, Telos Alliance and Nautel called EAS at the Edge, which involves a hybrid combination using IP-enabled hardware at the operator site, with virtualized systems for station operations and system monitoring, management, reporting and software updates.

NAB expressed appreciation for those efforts. "We also noted that the goals of NAB's proposal recognize the concerns raised by DAS and that the structure of our proposal aligns with DAS's approach to a certain extent," it wrote in a meeting summary.

"For example, like DAS's approach, our proposal would allow broadcasters to insert EAS processing in the modern audiovisual over internet protocol airchain, simplify the reception and playback of EAS messages, and allow autonomous EAS processing at either the local station or the local transmission site."


But NAB said the DAS approach involves an IP-enabled hardware appliance not contemplated in NAB's proposal. "A primary goal of NAB's proposal is to provide broadcasters the flexibility not to rely on a physical device, and certainly not on a specific branded device," the association wrote.


Yet NAB says it remains "agnostic" regarding development of the necessary software and would prefer that trusted vendors of EAS equipment take the lead in developing such a product.


The parties also noted the news that Sage Alerting Systems has stopped making hardware due to the difficulty of acquiring parts. NAB told the FCC that supply chain issues would not be a significant concern under a software-based approach. 




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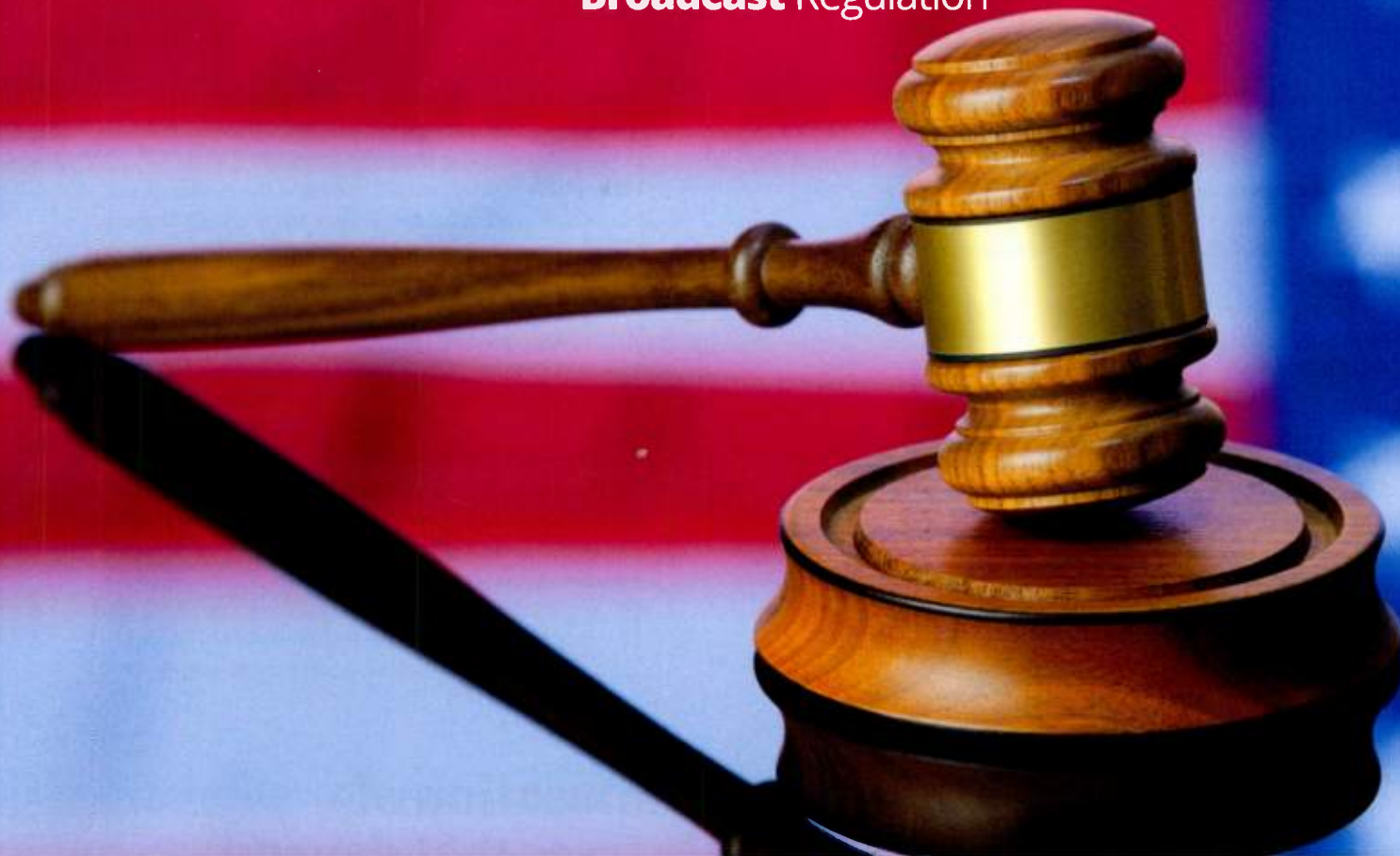
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5

FCC's ability to conduct spectrum auctions still on hold

Some worry that the situation will lead to brain drain at the commission

Writer



Randy J. Stine

The author wrote last issue about changes at the FCC expected under Brendan Carr.

The FCC's authority to auction unused spectrum expired almost two years ago and Congress has failed to extend it.

Outgoing Chairwoman Jessica Rosenworcel has called several times for lawmakers to restore the authority. She said in 2023 that auctions "are indispensable tool for harnessing the promise of new wireless technologies while also spurring economic growth, creating jobs and strengthening our national security and global leadership."

The situation has not sparked much concern among broadcast industry observers so far, given that demand for a new filing window for AM or FM spectrum appears limited in the near term.

"Falling behind"

Congress first authorized the FCC in 1993 to use competitive bidding to grant licenses for the rights

to use specific frequencies for commercial wireless communications. It extended the authorization on several occasions before letting it lapse in early 2023.

The FCC says auctions are an effective means to manage spectrum access and use. When Rosenworcel made her remark, the FCC had held 100 auctions and had raised more than \$233 billion in revenues.

Brendan Carr, slated to become chairman, has talked about a "next broadcast spectrum auction," according to FCC watchers.

"We're falling behind without a real plan to get more spectrum out there, so we've got to get going," Carr told an audience of policy experts and industry leaders at a session at last year's CES show, according to Bloomberg.

Many observers say the situation has had little impact on radio.

"There simply isn't much broadcast spectrum out there to auction off. And, perhaps more importantly, there isn't

too much demand," said Brad Deutsch, office managing director and principal at Foster Garvey PC.

"That said, if the broadcast multiple ownership limits, and especially the radio subcaps, were to loosen, which some folks are suggesting might happen under the upcoming Trump administration, that might produce some new demand."

Attorney David Oxenford, in his Broadcast Law Blog, wrote that the lack of auction authority can have a limiting effect on the FCC's ability to open commercial filing windows.

While the commission can use a points system to resolve mutually exclusive applications in noncommercial windows, he noted, decisions as to who will be awarded a contested commercial frequency are made through auctions.

New broadcast filing windows were uncommon even before the interruption in auction authority.

"There has been no window for new AM stations in well over 20 years, except for special windows to allow applicants for channels where station licenses had been

do with broadcast. "Spectrum auction authority currently is wrapped up in a broader set of telecommunications-related negotiations in Congress," he said.

There have been proposals to extend the authority, but Republicans want to be more aggressive in terms of trying to auction the 3.1–3.4 GHz band, used by the Department of Defense, while Democrats have been more hesitant to move forward quickly on that band, Skall said.

Scott Flick, a partner with Pillsbury Winthrop Shaw Pittman LLP PLC, says in the short term the impact from the impasse on broadcasters is small. He too noted that the process for resolving MX groups differs between noncommercial and commercial spectrum.

"This could be an issue if there are mutual exclusive applications for a proposed allotment and the two parties are unable to come to an agreement. If they can get what they want and engineer a solution and not interfere with each other, you don't have a need for selecting, and if the FCC doesn't need to select the auction authority doesn't kick in. You only get an auction if there are conflicting

“Ultimately, the efficient allocation of spectrum benefits businesses that depend on spectrum access and their customers across the country.”

surrendered to the FCC," Oxenford wrote.

"And no window for new FM translators has been open since 2003, except for the special windows for translators to be used with AM stations, and the last of those windows closed in 2017."

And he said there has not been a window for filing for new FM stations since 2021, immediately after the pandemic; he said many channels in that auction went unsold and could be re-auctioned at some point.

For now the FCC has been relegated to opening windows for applicants not subject to auctions, like the window for new low-power FM stations in 2023.

Oxenford said the difficulty of getting Congress to resolve complex issues in the absence of an immediate crisis or broad industry consensus may play a role in this lack of resolution.

Losing FCC brainpower?

Gregg Skall, an attorney at Telecommunications Law Professionals and a Radio World contributor, said the issues holding up auction authority don't have much to

applications," Flick said.

Congress may look to exert more control over the broader auction authority of the FCC, Flick believes.

"Perhaps in the future, if there is ever an auction of FM spectrum the FCC might need to get special authority from Congress to do it. These are policy decisions, and Congress might want more of a say," Flick said. "That way Congress can specify where it wants the money from the spectrum to go."

Seth Williams, member at Fletcher, Heald & Hildreth PLC, says non-broadcast wireless auctions are likely to be the most affected right now.

The FCC's Wireless Telecommunications Bureau opened a docket earlier this year to explore how it could use its existing regulatory tools to roll out technologies like 5G. Comments in the record didn't include any responses from broadcasters.

"The number of wireless auctions has significantly outpaced the number of broadcast auctions in recent years, and the FCC has some ability to get broadcast allotments into use without auctions, such as the NCE and

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LPFM windows," Williams said.

Williams said the FCC's lack of power to originate spectrum auctions doesn't necessarily weaken the commission.

"It's probably more accurate to say it weakens the U.S. as a leader in spectrum allocation and management. Ultimately, the efficient allocation of spectrum benefits businesses that depend on spectrum access and their customers across the country."

Foster Garvey's Deutsch also pointed out a less obvious consequence.

"The FCC is running the risk of losing its expert auction staff — game theory experts, economists, lawyers, etc." he said. "It's an understatement to say that FCC auctions are complicated events, and it requires lots of expert staff to run the FCC auctions properly."

Commissioner Anna Gomez made that argument in public remarks in October. According to the website Broadband Breakfast, Gomez said the absence of auction authority has hindered talent retention and led to an atrophy in agency expertise and loss of credibility in relation to spectrum management in other countries.

In December, the website quoted House Communications and Technology Subcommittee Chair Bob Latta saying he hopes the authority to conduct spectrum auctions can be restored in a budget

“It’s an understatement to say that FCC auctions are complicated events, and it requires lots of expert staff to run the FCC auctions properly.”

reconciliation bill next year.

For now, wrote David Oxenford on his blog, "Until this congressional issue is resolved, don't expect any big windows for commercial broadcast frequencies. Even when it is resolved, there will likely be a backlog of auctions in all FCC services, not just broadcast ones, that will mean that these broadcast windows will likely trickle out over time. Let's all hope that Congress acts quickly on to resolve the lack of FCC auction authority." 📺



Gregory Disalvo/Getty Images

FCC Issues Marketplace Report; Republican Commissioners Scoff

The FCC released its latest report on the state of the communications marketplace, which Congress requires it to do every two years. The next one will probably look a lot different.

The two sitting Republicans dissented over how the FCC defines markets it regulates, something broadcasters have been complaining about for years.

Commissioner Nathan Simington wrote, "Broadband" is high-speed internet connectivity, whatever its modality of delivery (and, at this point, we have a few). Similarly, "media" is audio or visual content, whatever its modality of delivery (and, at this point, we have more than a few)."

Commissioner Brendan Carr, soon to become chairman, wrote: "But the

good news is that there will soon be an opportunity to correct course."

Generally speaking, the FCC's treatment of broadcast media — as constituting a universe of their own, rather than being part of the broader competitive audio and video marketplace — has been seen as a justification for not easing or removing broadcast ownership caps. A commission that broadens the definition of the marketplace for broadcasters presumably will be friendlier to deregulating ownership further. And one item to be completed under Carr will be the 2022 Quadrennial Media Ownership Review. The remaining ownership rules (the Local Radio Ownership Rule, the Local Television Ownership Rule and the Dual Network Rule) are a focus of that review.

The report assesses competition in several categories: fixed broadband services; mobile wireless; voice telephone; satellite; video; and audio. Broadcast radio is a subsection of the audio category. You can download the report as a Word document at <https://tinyurl.com/rw-market>. (The audio category starts on page 179.)

— Paul McLane

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John Bisset

CPBE

The author is in his 34th year of writing Workbench. He handles western U.S. radio sales for the Telos Alliance and is a past recipient of the SBE's Educator of the Year Award.



Send your tips

Workbench submissions are encouraged and qualify for SBE recertification credit. Email johnpbisset@gmail.com.

Above

A label is great when you can't read the fine print.

Right

The USB cable in this photo provides a sense of scale to demonstrate just how tiny the lettering is on that black power adapter.



Not all labels are judgmental

Make your life easier ... stick more labels on stuff!

Over the years, we've shown wall-adapter power supplies labeled with a variety of methods. Systems Engineer Ihor Slabicky in Rhode Island goes a step beyond, writing a label that indicates the voltage and current.

He does not note the polarity, since most supplies are positive, so unless the adapter is negative, Ihor and his team do not label for that. But voltage and current capacity are useful. His label is written in big, legible lettering on a white or light-colored slip of paper taped to the adapter with a wide piece of clear packing tape. (And of course you could also do this with a label-maker.)

Ihor also labels USB cables. Every electronics manufacturer seems to have a USB cable with its own unique USB termination that fits only their products. With so many different ends, the team labels USB cables using the equipment brand name (Canon, Olympus, HP, etc.). This simple addition to the label has saved them a lot of time looking for "that" one charger cable amongst all the others.

Recently his team bought several Samsung Galaxy A03S mobile phones. They all need to be charged. The phones come with a USB-C cable with male connector at each end, but no charger. Easy, right? Just plug one end

of the USB-C male cable into the phone and the other end into — wait a minute!

For some reason, none of the equipment in his lab had a USB-C connector. An emergency run to a dollar store brought back a USB-A male to USB-C male cable and a USB-A to USB-C male AC plug adapter. Plugging into a 5-volt power adapter that had a USB-A connector put them back in business — almost. Checking the cell phone, they saw that it was "slow charging." The adapter being used was labeled "5VDC 500mA" — not enough current to fast-charge the phone.

A quick look located an adapter labeled "5VDC 1A" that



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also
prevents cable
mixups, as might
occur between
these Olympus
and Samsung
cables at far right.



charged up the phone nicely. Another good reason to label the adapters with both voltage and current.

Ihor writes that readers are probably still laughing about him getting his cables at a dollar store. But the cables were inexpensive and the problem was solved in 45 minutes.

The first two photos illustrate how small the print is on some supplies and adapters. The third image shows a labeled adapter.

The fourth image shows an Olympus USB connector on the left and a Samsung on the right. On first glance they look the same. Grab the wrong one as you're heading out into the field, and you may regret it. So take the time to label cables, adapters and supplies.

EV powering a translator?

GM electrical vehicles with Lithium batteries — like the 2024 Chevrolet Silverado EV and 2024 GMC Sierra EV Denali Edition 1 — will boast bidirectional vehicle-to-home charging capabilities to power up homes or businesses. The technology allows consumers to store and transfer

energy to help offset electricity needs during peak demand days and mitigate the impact of power outages, making the transition to an all-electric future even more compelling, GM said in a statement.

Homes or businesses? How about a radio transmitter site? These vehicles may not handle the power requirements of a full-power station, but for a translator ... who knows?

Bow-wow

Frequent contributor Dan Slentz found a car horn with a USB thumb drive attachment for playing custom audio tracks like jingles — or in Dan's case, a barking dog. Why? He wanted to install it in the Hot Rod Lincoln, a remote vehicle for new LPFM station WDOG. (The car is also known as The Dog Catcher.) Do you have any fun tricks to make a station's remote vehicle more noticeable? Drop me a line.

And speaking of barking dogs, you haven't lived until you've attempted to take AM directional proof measurements on private property, protected by a barking dog. But for a chuckle, go to YouTube and search "Mailman fake dog bark prank." (After watching it, our editor Paul McLane thought engineers might be tempted to rig up a security system that adds the sound of a dog barking.)

Right
The remote
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plays?



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Radio is not just about sound anymore

"Appoint someone with clear responsibility and KPIs for station metadata"

Laurence Harrison is chief partnerships officer for Radioplayer Worldwide.

RW You and others have preached the importance of good metadata management for stations to stay competitive in the amazing new dashboards of today.

How well do you think the message has sunk in?

Laurence Harrison: The importance of robust metadata management cannot be overstated, especially in today's visually enhanced dashboards. It's not just about sound anymore; it's about delivering a complete and engaging radio experience. At Radioplayer, we've championed this cause for years.

While many broadcasters recognize the need for quality metadata, there's still considerable room for improvement. We often encounter instances where stations suffer from incorrect logos, missing now-playing data or inconsistent branding in-car, which can detract from the listener experience. This underscores the critical need for broadcasters to prioritize metadata accuracy and consistency. Radioplayer is here to support broadcasters in enhancing their in-car presence and ensuring a seamless user experience.

RW What's a good example of a feature or capability that metadata makes possible but that broadcasters may not be taking full advantage of?

Harrison: A "more-like-this" feature is a good example. If a driver or passenger is listening to a radio station in the car and likes the station, the show, the presenter or the song, they can click on a "more" button to do a deeper dive in to that station brand and content. The "more" content they are presented with could be sister stations from the same



Above
Laurence
Harrison

group, catch-up shows from the one they're listening to or related podcasts from the presenter or about the artist that's playing.

This feature not only keeps listeners engaged but also strengthens the station's brand identity. It's a prime example of how metadata about the great radio content enhances the overall listening experience and promotes deeper audience engagement.

RW What resources would you recommend for engineers

and managers to learn about best practices and healthy metadata management?

Harrison: Well, I am biased, but the first thing you can do is speak to Radioplayer. Whether you're already part of our network or exploring integration, our team ensures that metadata flows seamlessly to leading car manufacturers like VW Group, BMW, Renault and NIO. We simplify the process, even for smaller stations, through tools and guidance tailored to their needs. Additionally, industry resources from organizations like WorldDAB, RadioDNS, EBU and NAB provide valuable guides and FAQs to further enhance metadata practices. And do challenge your streaming providers: Ensure they deliver in-stream metadata.

RW What do you think is the most common mistake or error that broadcasters make?

Harrison: Metadata is vital, so treat it with that level of importance internally. When your station is off-air, you'll hear for sure. But who notices — or even cares — when your logo or artist image is missing? Often, it's shrugged off with a casual, "Oh well, not my responsibility."

To prevent this, appoint someone with clear responsibility and KPIs for station metadata. Without dedicated oversight, outdated metadata or missing now-playing data can easily go unnoticed. Make metadata a priority and ensure it stays front of mind.

RW Do you have a favorite tip, trick or best practice?

Harrison: Have a single, integrated approach to metadata for all your different connected products. We often see examples of stations that are clearly focusing on

“We often encounter instances where stations suffer from incorrect logos, missing now-playing data or inconsistent branding in-car.”



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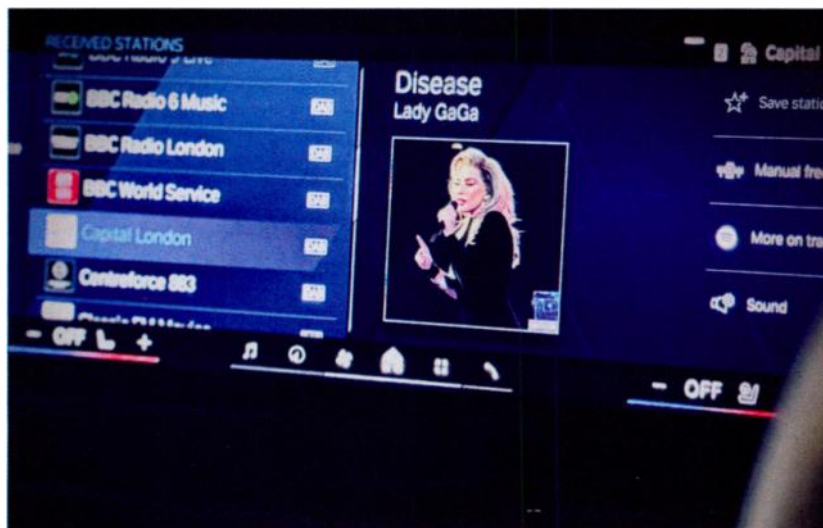
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Above and Below Metadata displayed in BMW vehicles via Radioplayer. Detailed track info, artist image and album art transform radio into a richer, more connected listening experience.

great metadata for their mobile apps or websites but they haven't thought about using the same metadata for the car. Although there are many great automotive features that could be enabled by specific metadata for the car, all the base-level metadata should be the same: station logos, now-playing, stream URLs. You then just need to work with a partner like Radioplayer to maximize its impact on car dashboards.

RW You made an announcement in October of a partnership with NPR. What does that entail at the network, and how are stations affected by it?
Harrison: Our partnership with NPR will enable their member stations to deliver a richer and engaging experience to listeners in cars with the providing of their metadata to our automotive partners. Using

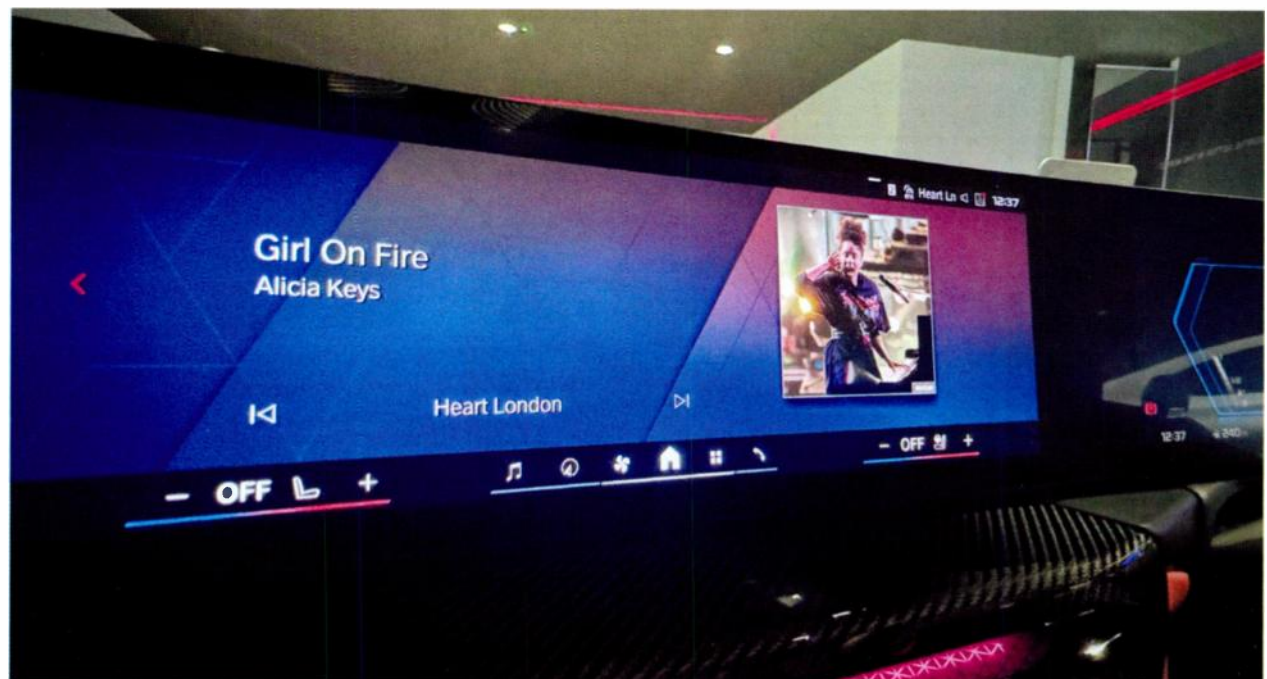
“Often, it’s shrugged off with a casual, ‘Oh, well, not my responsibility.’”

Radioplayer’s technology and APIs, NPR stations can provide an enhanced in-car radio experience that aligns with the expectations of modern drivers, ensuring radio remains a vital and engaging part of the connected car ecosystem.

RW What else should we know?

Harrison: Metadata is more than a necessity; it’s a cornerstone of innovation in radio. As technology evolves, staying ahead with robust metadata will enhance your station’s interactive features and keep you at the forefront of digital broadcasting.

We prioritize direct integration with broadcasters, empowering them to manage and update their metadata through our MyRadioplayer portal. We offer a range of metadata tools designed to support broadcasters of all sizes, including automated logo resizing and real-time now-playing data capture using AI technology. Our goal is to enhance radio station brand engagement and listener satisfaction in connected cars, making the process seamless and effective for our partners. **RW**



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Writer



Dan
Slentz

The author wrote the article "10 Tips for Starting Your LPFM Station" last year.

Comment

on this or any story. Email radioworld@futurenet.com.



Dan tries out the Shure SM4 condenser mic

The company promises natural audio and good protection from interference

I was glad to get the opportunity to test Shure's new SM4 microphone. The company markets it as a home recording mic for vocals and instruments; could it find a place in your station or home studio?

Just as you have your Chevy people and your Ford people, broadcasters have their favorite speakers, headphones and microphones. To be frank, I often have chosen another manufacturer's mics, so I can say I am not biased towards Shure.

I've been using and testing the mic over three weeks. I do voice work, as do both of my daughters, and we've put the SM4 through some tough testing with variations in voice and delivery.

First, let's talk the tech. Specs listed for all mics can often be "generous," and let's face it, a spec doesn't really give you an real impression of the sound. This is a condenser mic, so it needs phantom power. It has a cardioid pattern, and its specs show it at 20 to 20,000 Hz. Impedance is 150 ohms with output of

1 Pa = 94 dB SPL on a XLR connection. It weighs a little over one pound and is made of die-cast zinc.

The mic comes in a nice, well-padded case and includes a shock mount that holds it in the correct position for use. Unlike the SM7 or the EV RE20, you address this mic from the side pick-up, more like the AT2020.

As the shock mount holds the mic in the correct position and the included pop filter shows where to talk, you shouldn't have an issue with inexperienced people addressing it from the end and thus being completely off-axis. Between the mic's internal pop filtering and the external filter, it handles plosives with no issue.

It's robust and solidly built. The shock mount is a thread-on style rather than using a set-screw or other means of attachment, and it's solid. The mic, when attached, is not going to fall off.

Shure did something I haven't seen, using a "tongue and groove" approach to attach the wind screen; it's easy to place but stays there.

Now to a much more subjective opinion. Under the testing of three voices, it has done a very nice job handling

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my lower voice and louder delivery as well as my daughters' upper range and less "force" to delivery.

The output is hot but not distorted, and between the mic itself and wind screen, it can handle a loud input. Highs are crisp and clean, and Shure's graph on the output shows a boost in the high end above about 9 kHz through about 16 kHz. The EQ graph reflects the mic's output realistically. There is no roll-off switch or other control on the mic.

Shure claims exceptional RF rejection so I tried a dial-in call to my cell to see if I'd hear the "wireless chatter" that can interfere. I wanted to see if that claim was legit, and it is. It was clean.

I also put it right up against my dual-mode wireless switch (2.4 and 5 GHz) and I hear nothing. (To be fair on knowing WHAT picks up the RF, I went direct from the mic's XLR output directly into an XLR-to-USB converter, to avoid using a mic cable that might work like an antenna.)

I'm not in an AM RF hot zone, but I do suspect that it handles all RF equally as well.

The pattern produced very good audio rejection on the back side. Considering I did this test in a living room and not a recording studio, it performed well in a generally un hospitable recording environment.



Above
The author holds
the pop filter.

The mic comes with extra bands for the shock mount, plus the thread adapter for post-style supports.

I have no negative feedback to offer. My testing was with the mindset of using it for voice work, though based on the response and sound, I could see this mic used with acoustic guitars and some string and wind instruments. Shure shows the mic in the company of a guitar in many of its marketing photos.

I've worked with a lot of mics over the years, including SM7s, Telefunken tube mics (in recording studios in Spain), RCA 44s and 77s, Audio-Technicas, many different Electro-Voice mics, even Neumann 87s and a few others. My own collection of about six mics includes a shotgun, large-diaphragm mics, EV RE320s and Chinese knock-offs.

This SM4 is a respectable and impressive mic retailing for \$269 with shock mount or \$199 without. (I recommend the mount; it's well made and helps the user address the mic from the correct position, plus it provides great isolation from boom arms and mic stands.)

With an affordable price that is yet above "entry level," this would be a good studio mic for guests, talent or in production, and most certainly a home studio.

Dan Slentz is director of engineering for three TV stations. He has more than four decades of experience in radio, TV, cable and AV. He has designed and engineered large 4K TV facilities to low-power FM stations.



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What Audacy looks for in consoles in 2025

Clay Walker says the company applied “a blueprint of flexibility” across 50 studio projects

A new Radio World ebook explores trends in the design and use of radio consoles. Clay Walker is vice president of content operations for Audacy. He works intimately with its studio technology design, infrastructure and automation systems.

RW Clay what would you say is the most important recent or ongoing trend in the design of consoles for radio broadcast studios?

Clay Walker: Flexibility is key. With broadcast consoles being the heart of our operation, having the ability to move sources, endpoints, layout and function is critical to our ability to serve our fans regardless of where they consume our content.

We lean into our strategic partners at Telos Alliance to build a frictionless content creation studio that can be utilized for a live and local morning show and then quickly convert to network headend for a national midday show, voicetrack studio or a home for social video production when an artist stops by. Our talent does it all with such grace and our console systems should follow suit.

RW What will the console of the future look like, if we use one at all?

Walker: We're living in a world of virtualization, and I see a future where a browser-based audio console can send commands to a mix engine. I'd also like to see our future leaning into AI, making source decisions, mix levels and other controls for our talent predictive. This way, they can focus on connecting with our fans, not trying to ensure their mic channels are hot enough.

RW Can you expand on the implications of software- and cloud-based mixing for how radio stations use consoles and control surfaces?



Above
Clay Walker

Walker: There are a few tactile implications we have to be cognizant of when we roll out software-based or cloud-based mixing. Thinking about workflow in all-news, our anchors are utilizing their audio consoles like a piano player, with their eyes and ears on presenting the news, not looking down to know what fader is which and what their respective levels may be.

I've yet to see a way to provide that tactile muscle memory via touch screens, software, etc. However, leaning into cloud computing like

virtualized mixing via software, there's much more upside with regards to collaboration between talent in multiple markets, using WebRTC in Telos' Altus for example.

RW What role, if any, does artificial intelligence play in console trends or in how other products interact with consoles?

Walker: The best part about AI is that today it's the worst it will ever be. Training AI to make mixing decisions based on playlist, target audience, external conditions like market tone, weather conditions and all that cool stuff that made us fall in love with radio seems very interesting to the future of console trends and their respective engines. This evolution will allow the console to be more than a tactile remote control of a few audio sources. Rather, it will be the heartbeat of our content distribution system. Leaning into machine learning, AI should be able to assist with predictive maintenance, identify network fabric issues, etc. so we can have a head start on fixing problems before they manifest into off-air events.

RW How has the evolution of consoles into control surfaces changed the way engineers view them and plan around their installation?

Walker: This evolution has helped transform our internal definition of “The Control Room.” The flexibility and fluidity we're afforded by our Axia systems gives our tech ops teams the ability to plan fewer purpose-built bespoke studios while building less complex (thanks to AoIP conversions) and flexible content creation studios that can better serve the wide variety of talent in our markets.

“COVID taught us that our talent are scrappy and will find a way.”

”

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at <http://radioworld.com/ebooks>.

RW Are AoIP-based consoles for radio now truly interoperable? Why or why not?

Walker: I don't think so. In our experience, each manufacturer creates a unique enough spin on AoIP that we have to settle on a single standard. Certainly, AES-67 has helped us get Livewire into a SAS or WheatNet plant, but nuance at scale is difficult to manage.

RW How has the explosion in hybrid and remote workflows influenced the design of broadcast consoles and related infrastructure?

Walker: COVID taught us that our talent are scrappy and will find a way. We all worked hard to find solutions to connect with our fans. That remote workflow taught us that our broadcast facilities have to have fluidity and flexibility too. Thankfully, Telos found a way to easily integrate remote talent with Altus and their Quasar Soft functionality, so they don't feel limited in their ability to create and connect with their fans.

RW Do you have a recent project that you think is a good example of these trends?

Walker: Our Nashville Hard Rock Sound Space is an excellent example of building for flexibility. Katie Neal, host of our nationally syndicated "Katie & Company" show, calls this space home. She hosts middays across our portfolio of country brands and creates exclusive content for the Audacy App and social channels. This space is also equipped with a live performance space and a fireside chat area for more intimate conversations with the country's biggest stars.

We've outfitted this studio with 4K video production capabilities and will continue to do so with others across the nation. With a simple profile change in the Axia Quasar console, this space is fully flexible and can serve broadcast, podcast, streaming, video or any other production needs for Audacy.

This blueprint of flexibility has been duplicated to 50 studios across Audacy in 2024. **RW**

“Our anchors are utilizing their audio consoles like a piano player, with their eyes and ears on presenting the news, not looking down to know what fader is which and what their respective levels may be.”

Buc's Winter Tips

On the Radio World website, longtime contributor Buc Fitch recently shared several suggestions to prepare a transmitter site for cold weather. Here is a sampling. Already snowed in? Save for next year.

#1 Don't Wait to Check Deicers — We need to go a little further than just making certain the circuit breaker for deicers is turned on. If a current measurement of the consumption of your deicing system does not match its factory value or last check number, get the problem fixed.

#2 Monitor HVAC Systems — A strange quality of snow and ice is that they are great insulators (think igloo). Snow up to the windowsills and six inches on the roof can be enough insulation to capture transmitter heat, and suddenly your HVAC calls for cool in deep winter. Is your system sophisticated enough to handle these strange extremes?

#3 Winterproof — Make arrangements for clearing the studio parking lot and driveway to the transmitters. Make certain the site owner knows you expect clearing in a timely manner. Do not assume that clearance is to your door — it may be just to the gate! Make certain everyone has keys and door codes to access work areas. Winter-

proof key locks so they don't freeze. Mark drives and walks with snow stakes.

#4 Got Power? — Are generators serviced, block heaters running, batteries winter-capable, fuel tanks topped up? Schedule a mid-winter top-off to cover consumption from exercising, false starts etc. Check connections for tightness and corrosion. Store extra engine oil and filters.

#5 Get Your Priorities Straight — You

could get caught at the site by darkness or snow. Check emergency rations and survival gear: blankets for the car, cell charging cables, bottled water, jumper cables, tire inflator, etc. Think about consumables such as TP, paper towels and MREs. What about fuses, spray cleaner, thumb drives, manuals, flashlights and adequate first aid gear. Prioritize warmth and water.

#6 Keep the Lights On — Make certain the station can run without you and the staff. Something as simple as a station-wide flu outbreak could disable operation for hours or longer.

#7 Ready, Set, Stream — Catastrophe at other locations might cause loss of your STL hop site or streaming service. Set up alternate access paths to your transmitters and to the audience listening on their phones.

To read the full version, enter "winter tips" in the search field at <http://radioworld.com>.

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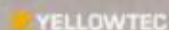
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The Society of Broadcast Engineers named its new executive director. **Michael Downs** succeeds Jim Ragsdale, who stepped

down in October after 3-1/2 years. Downs has 27 years of experience in non-profit management at an international level. Since 2012 he was director of conventions and meetings of Kiwanis International. Previously he worked for 10 years as chief staff executive of Key Club International. Downs lives in the Indianapolis area, where SBE is headquartered and is a past president of the Indiana Society of Association Executives. ...

Kelly Parker returned to **Wheatstone** to become director of product development. Parker was Townsquare Media's vice president of broadcast operations. He



originally joined **Wheatstone** in 2004 as a systems engineer and spent 14 years contributing to development of its AoIP technology.

Parker's responsibilities will include overseeing product development for AoIP, streaming, virtualization, mic and on-air processing and software server lines. He is based in New Bern, N.C. ...



Alfonso Lopez joined **Broadcast Electronics** as director of sales for Latin America and parts of the Caribbean. "Lopez brings extensive

experience in broadcast technology to the Elenos Group-Broadcast Electronics,

having held multiple senior sales roles with companies such as Elenos, among others," BE stated. "He is also widely recognized as the founder of 305 Broadcast, a leading distributor of broadcast technology in North and Latin America," which continues to operate as well. Lopez is based in Miami ...



SoundStack named **Rockie Thomas** as chief strategy officer, a newly created role. The company sells "audio as a service" products to digital

audio businesses. Thomas has been its chief revenue officer since 2017. She was an early employee at AdsWizz, co-founded the IAB Podcast groups and co-authored podcast measurement technical guidelines.

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Stay Alert



D-MSRP-3

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The D-MSRP-3 is a three station AES/EBU digital EAS relay/switcher that provides additional alert audio distribution and transparent audio interrupt switching for EAS encoders. Together with an ENDEC, a D-MSRP-3 will provide interrupt switching for four digital audio paths. Each alert can occur simultaneously on one or more station outputs, but alerts can not be overlapped. It features an internal ADC (with wordclock input) that accepts balanced mono analog audio, or it can be bypassed and switched to a digital input with loop-thru. RJ45 station audio I/O jacks make installation easy with Cat5/6 patch cables. Control via RS-232 serial port, TCP/UDP Ethernet port, or contact closure inputs. Includes test and station relay outputs.

Coming Q1 2025



ALERT Sentinel® 2

Two-Station Alert Switcher

The Alert Sentinel 2 is a two station analog relay/switcher designed to allow the insertion of alert audio into broadcast program signal paths. Perfect for weather alerts, remote broadcasts, or live sports. It features a POTS telephone hybrid interface and a balanced analog input compatible with 2-way/HAM radio as well as an internal 32GB SD-based MP3/WAV audio player for playing pre-recorded messages. Control with DTMF commands via its POTS telephone input or 2-way/HAM radio audio input, or via RS-232 serial commands. The Alert Sentinel 2 NET is available with a TCP/UDP Ethernet command interface instead of RS-232 serial.

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SteeleBoy bridges the gap with Comrex

Colorado production company deploys BRIC-Link and VH2

SteeleBoy Productions is a Denver-based TV and audio production company that has been in operation since 1996. "I got into radio in the '80s;

then in the mid-90s, I began doing audio work for studios in Denver that were making infomercials. I'd pull up with everything in my truck, and do their audio sweetening on-site," said Dirk Steele, owner of SteeleBoy.

"Eventually I decided that I needed a physical location to operate from, so I opened the studio and we've been doing both audio and video there ever since."

One of their recurring monthly projects is "Living Full Out," a radio show hosted by Nancy Solari from her home studio in California, where she seamlessly connects to the SteeleBoy studio through a Comrex BRIC-Link.

Each "Living Full Out" episode includes multiple segments. One



segment is a caller looking for guidance from the host, followed by an interview with an inspirational guest who has wisdom to offer the audience.

To get the best possible audio from these callers, SteeleBoy has two solutions: Comrex VH2 for those who only have traditional dial tone service, and Comrex Opal for those who have access to IP calling.

Dirk Steele began using VH2, a VoIP two-line phone hybrid, after his old POTS hybrid began to fail.

"It was getting old, and when looking for replacements, I just couldn't guarantee that the traditional copper pair telephone lines were always going to be available," Steele told Comrex.

"And the beauty of VH2 is it sounds much better than a traditional POTS hybrid. I'm getting better quality than I would be able to otherwise."

Cost savings is a benefit when it comes to using VH2. "I do still keep one POTS line active, in case I need it, and it costs me about \$80 per month through the phone company. But the SIP service for the VH2 costs me less

than \$20. It's negligible."

While VH2 is suitable for bridging phone calls, sometimes SteeleBoy's clients want to bring in guests who are thousands of miles away and have them sound like they're "next door."

In those cases, they use Opal, an IP audio gateway that enables guests to connect to the studio through a web browser using a unique custom hyperlink.

"The last time I used it was to connect a guest in England to an audio podcast we were recording here in Denver," said Steele. "It was so easy for them to connect, and it sounded far better than a regular dial-in phone would."

There was a learning curve when it came to implementing SIP for the VH2, but Steele was ready to tackle it.

"I felt confident about bringing this new equipment in because I knew that if I called tech support, they'd be able to help me," he said. "As an engineer with my own studio, it's good to know that I've got a lifeline. They've always been Johnny-on-the-spot and able to help me out." 📞

“The beauty of VH2 is it sounds much better than a traditional POTS hybrid. I’m getting better quality than I would be able to otherwise.”


More Info
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Systel IP supports Spain's TeleMadrid and Onda Madrid

AEQ platform fills needs across both TV and radio applications

A few years ago, AEQ's Systel IP was installed at and customized for TeleMadrid in Spain. According to the manufacturer, this eventually led to the creation of the Systel IP TV application.

Two Systel IP 16 TV units were installed in the television studios, and a Systel IP 16 unit was added for TeleMadrid's radio station Onda Madrid as part of an overall modernization of the station.

These systems enable phone calls from VoIP service providers (SIP), and for SIP-based VoIP PABX and PBX, audio codecs or conventional telephone systems to be part of the broadcast. AEQ says using Systel IP reduces communication costs and greatly improves audio quality.

The Systel IP infrastructure is based on a summing and distributing audio matrix. It provides access to a range of Dante, analog and digital audio circuits. These circuits are linked to SIP-compatible VoIP phone lines. The Systel IP 16 TV integrates with corporate PBX systems, allowing coordination of systems for TV broadcast productions. It works with AEQ's intercom systems like Conexia, Crossnet and Xpeak; it's also compatible with intercom systems from other brands and models used in production centers.

Each production control room at TeleMadrid is equipped with

Right
AEQ SystelSet equipment in the studio at Onda Madrid.



More Info
www.aeqbroadcast.com



Below
A Systel IP 16 sits in a rack at right among codecs and routing equipment.

a Systel IP 16 TV. "This device manages up to 20 lines for live content programs with external locations," AEQ stated.

"For every mobile unit or ENG

deployed, two calls are established: one for camera operators and another for presenters. Each communication connects to the intercom matrix. This setup enables individual intercommunication for every call via the Intercom panels."

The system is also linked to the audio mixer in each sound control room via Dante. This connection facilitates the reception of N-1 groups and the return feed to talents.

At the radio broadcast operation of TeleMadrid's Onda Madrid, the Systel IP 16 operates as originally designed: an on-air call or talkshow system where calls can be screened, queued and aired individually or in "multiplex" or party-line mode. Touchscreen SystelSet+ phone-sets were installed at each of the station control rooms for call management and pre-broadcast communication, providing an efficient solution that highlights the versatility of the Systel IP system. 



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NeoGroupe Adds NeoSIP Phone and Nano

"For stations wishing to switch their studio phones to VoIP, NeoSIP is an award-winning platform that can interface with any console," says NeoGroupe. "In the U.S., for example, we interface with Wheatstone's WheatNet-IP."

NeoGroupe has added an affordable, simple-to-use touchscreen handset called NeoSIP Phone. "The device is Android-based and will work over wire and Wi-Fi to answer and air calls just from anywhere — with no buttons, POE and standard SIP. This phone even works across internet."

NeoGroupe also introduced NeoSIP Nano, an all-in-one box to support one to four hybrids and up to four studios on the same site. "Combined with the NeoSIP Phone, it provides a cost-effective and modern solution to handle VoIP in smaller stations and bigger clusters alike."

A modular, software-based product, NeoSIP handles phone calls and codecs across studios and sites, even across the country. It can work in the cloud or on-premise, "and even operate in your OB/remote van, using the station's lines."



Info: www.neogroupe.com/en/neosip_en/

VX Duo Provides Compact Broadcast VoIP

Telos VX Duo is a broadcast VoIP system that is tiny yet can grow from its base two-line configuration to a total of eight lines per unit in two-line increments via licensing.

It uses an industry-standard mini-PC form factor and fits in very small studios, "living unobtrusively on countertops or shelves in about the same space a couple of stacked CDs would require." It's suitable for single-studio situations, production or news assembly but can service up to four studios with two VoIP lines each.

VX Duo software incorporates three-band adaptive digital dynamic EQ and a three-band adaptive spectral processor, noise gating, a "smart" AGC and a wideband acoustic echo canceller to eliminate feedback for talent who take calls using open monitor speakers. Dual Ethernet ports are dedicated to VoIP services and Livewire+ AES67 AoIP networking.

For call screening, free Broadcast Bionics XScreen software ships with each system; or use any VX-compatible screening software or Telos VSet phones.



Info: www.telosalliance.com/vxduo

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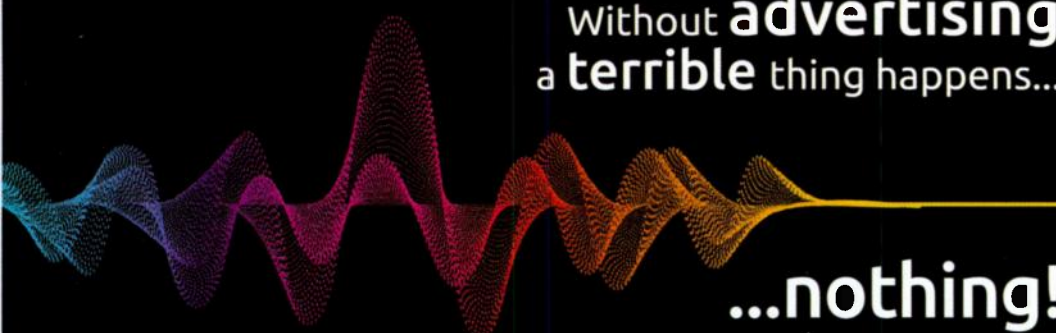
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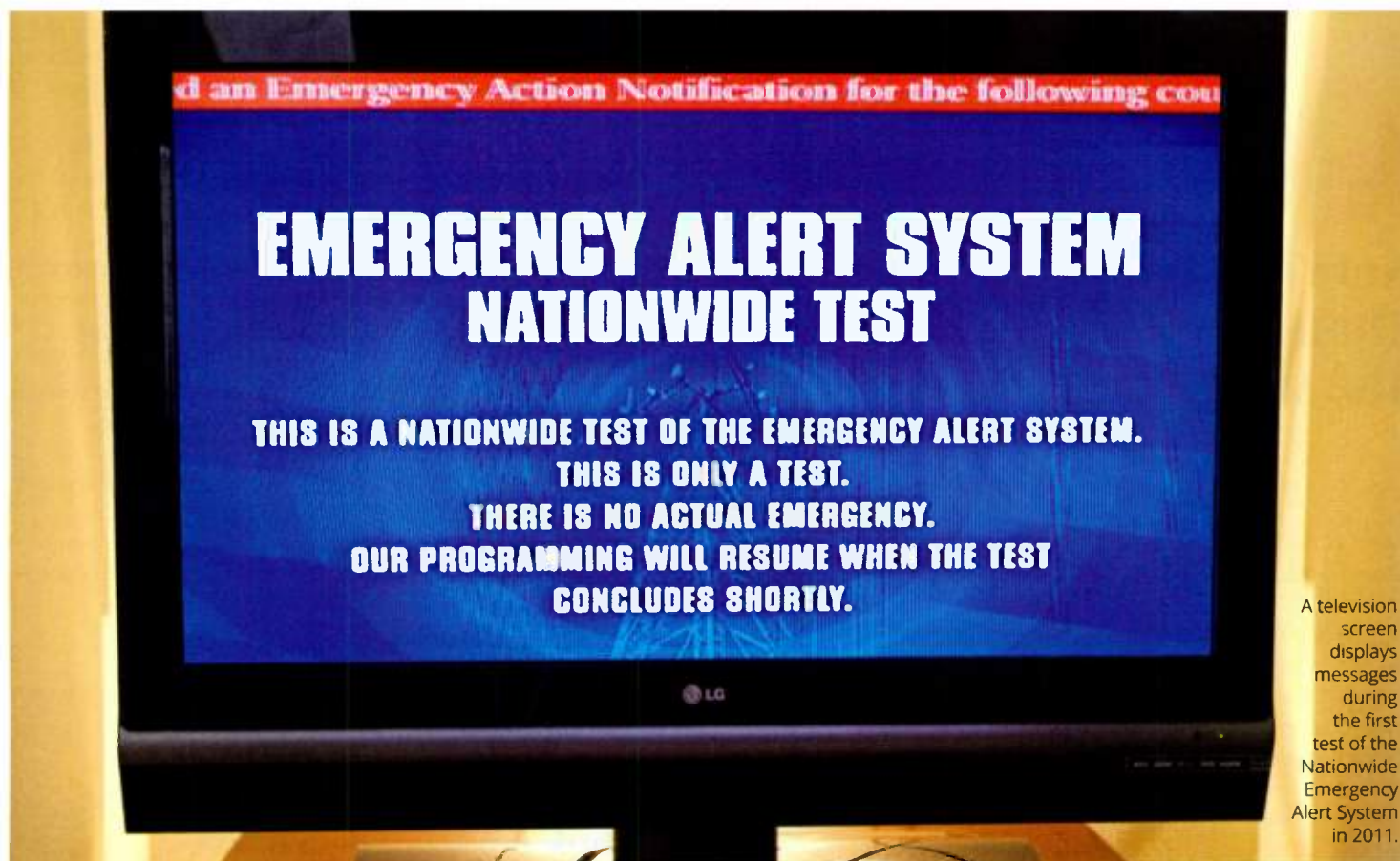
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Kim Kulsh/Corbis via Getty Images

When stations do their part, the EAS system works

Until a better alternative is in place, we need to support the one we've got

There has been a lot of criticism over the last few years concerning the Emergency Alert System. I don't pay much attention to comments on social media, most of which are misguided. But I have seen remarks about how ineffective and outdated the system is, the cost of installing and maintaining the system for broadcasters, and even comments that suggest broadcasters don't need an alerting system since most people are using other sources for information instead of over-the-air broadcast.

I am sure no one would disagree with that statement that everything can be improved. Our great creator gave us a wonderful universe and placed us on a planet with all the raw resources to develop everything we need to live a peaceful and productive life.

Sometimes we do it right and sometimes we don't.

Writer



Larry Wilkins
Chairman,
Alabama State
Emergency
Communications
Committee

Winston Churchill once said, "Success is not final, failure is not fatal: It is the courage to continue that counts."

Distribution revolution

President Harry S. Truman established CONELRAD in 1951. It was a system that could alert the public of any type of disaster that would affect life and property. In the beginning it was to be used by the president to alert citizens of an invasion from a foreign country.

Over the years the system and its successors were expanded to cover state or local alerts such as weather, Amber Alerts and many others. EAS has continued to create updates to ensure the system meets the requirements and needs for national and state emergency agencies.

Just recently a new EAS code was created. Missing Endangered Persons or MEP is intended to help find missing persons outside the age covered by Amber

“In Alabama the committee has a special monitor service that monitors more than 180 EAS units around the state.”

Alert. While MEP is a valuable service, time will tell how effective state agencies, and the broadcasters will use this code.

In addition, FEMA and other agencies continue to upgrade security issues in the creation and distribution of alerts.

How these alerts are distributed has changed as well. What started with just over-the-air broadcast operations has now expanded to include streaming services, personal wireless systems and more.

Research on creating an EAS system that can operate entirely in the IP world and even maybe in the cloud is underway. Developers need to be very careful in the design to ensure that they create a fully redundant system, using hard line creation and distribution to back up highly vulnerable IP networks. They should give careful attention to addressing any weak links in the system. As the old saying goes, don't put all our eggs in one basket.

All that being said, the present EAS is what we have, and until some great thinkers come up with something better, as Marconi and Farnsworth did many years ago, we need to support and follow the present guidelines of its use.

I'm the chairman of the Alabama SECC. We work daily to aid stations in complying with the technical status and rules of the present EAS system. Our goal is to do what we can with the system we have to help protect the public from harm.

In Alabama the committee has a special monitor service that monitors more than 180 EAS units around the state. This is offered at no charge to stations and is used to aid the SECC in keeping a watch on the health of the state distribution system.

Our key role

A particular area of concern is the lack of interest some broadcasters seem to have in the EAS system.

While alerting is not a revenue-generating source for the station, it's a highly important service to their listeners and viewers.

Even in our state there are several stations that still use outdated software in their EAS devices. By FCC rules, these units are not in compliance and could result in notice of violations, which can lead to monetary fines.

To further beef up the state EAS system, we also have installed SiriusXM radios at all local primary stations as well as additional units in major markets. They serve as a redundant PEP source for national alerts.

Alabama also has a dedicated satellite-fed network of 45 stations around the state. This satellite system, furnished by Global Security Systems, act as a CAP origination site for state agencies and as well as redundant distribution source. The cost of these services have been covered by the Alabama Broadcasters Association and state grants.

We encourage stations to take seriously their obligations to serve their audiences. This includes issuing warnings that help protect life and property. If stations will follow the guidelines set forth by the commission and their state SECC, the present EAS system works! 📻

EAS and “Color Alerts”

Mike Langner's letter in the Oct. 9 issue about the Missing and Endangered Persons code (“EAS Has a New Code. So What?”) was spot on.

EAS was designed to warn of imminent and actionable danger. It simply doesn't support the growing number of less-immediate, limited-action “color alerts” in any meaningful way.

Platforms that do support such alerts include Wireless Emergency Alerts on cellphones; numerous apps; and of course the much-touted but undelivered NextGen Advanced Emergency Alerting and Informing (AEA&I).

Thirty years ago, AM stations had staffs and local formats that could follow up an EAS alert with information. We all knew those spots on the dial.

Now NAB argues that the government should mandate AM radios in cars. I suggest this is political misinformation in support of its membership's efforts to squeeze every last cent out of AM radio.

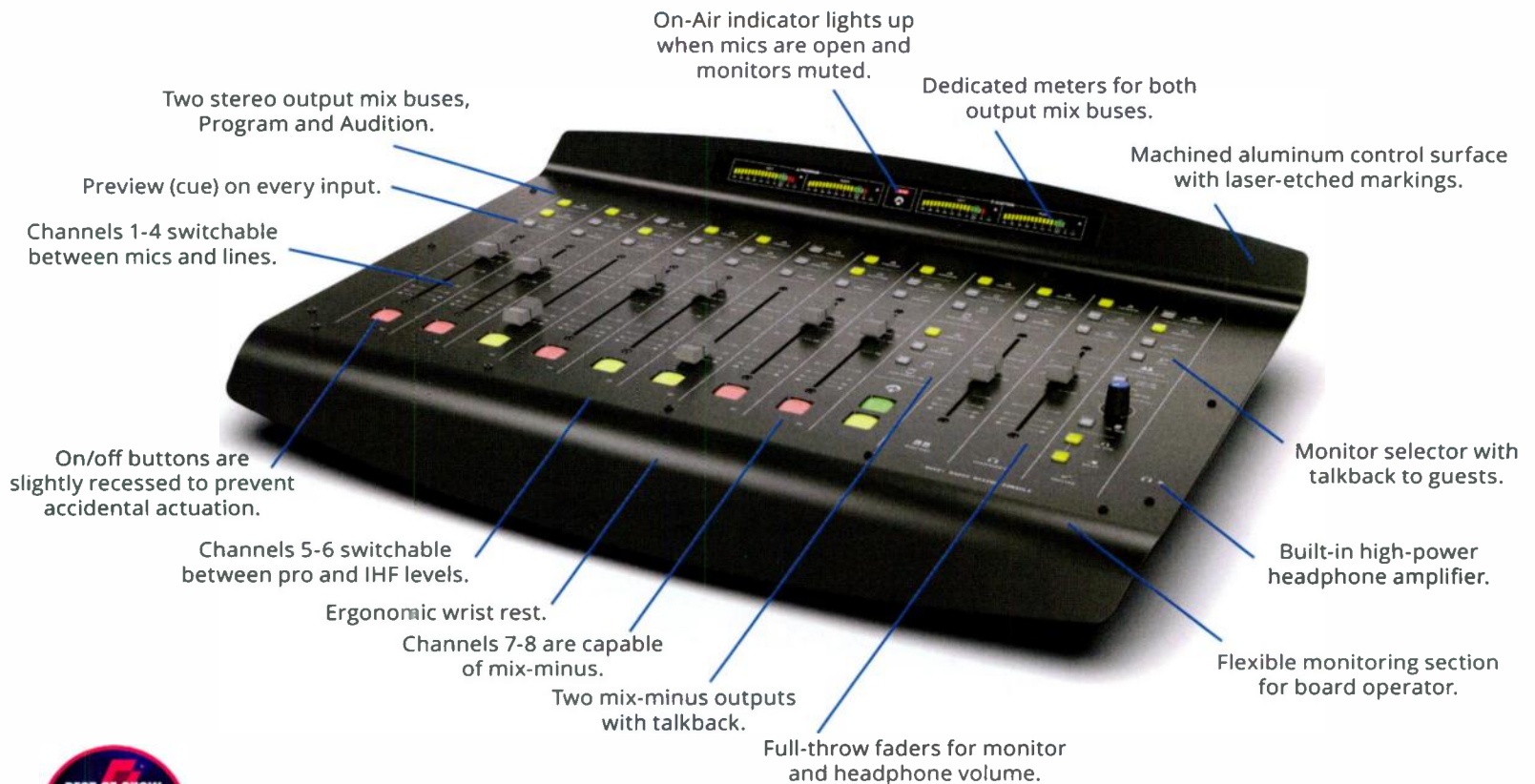
AM is not making radio stronger. Yes, the rural station putting phone calls on the air for days after a storm is incredibly laudable. But there is nothing uniquely “AM” nor “EAS” about it.

I find it curious that NAB is demanding AM in cars in the name of EAS while not supporting development of NextGen AEA&I — or any NextGen Broadcast for that matter. For decades, NAB has lobbied to reduce the burden of EAS on owners. It was the SBE that published the manuals on EAS. And if a given state has a functional EAS plan, it's thanks to broadcast engineers and a few old-school small broadcasters in rural areas who maintain good connections to their community, largely on their own time and dime.

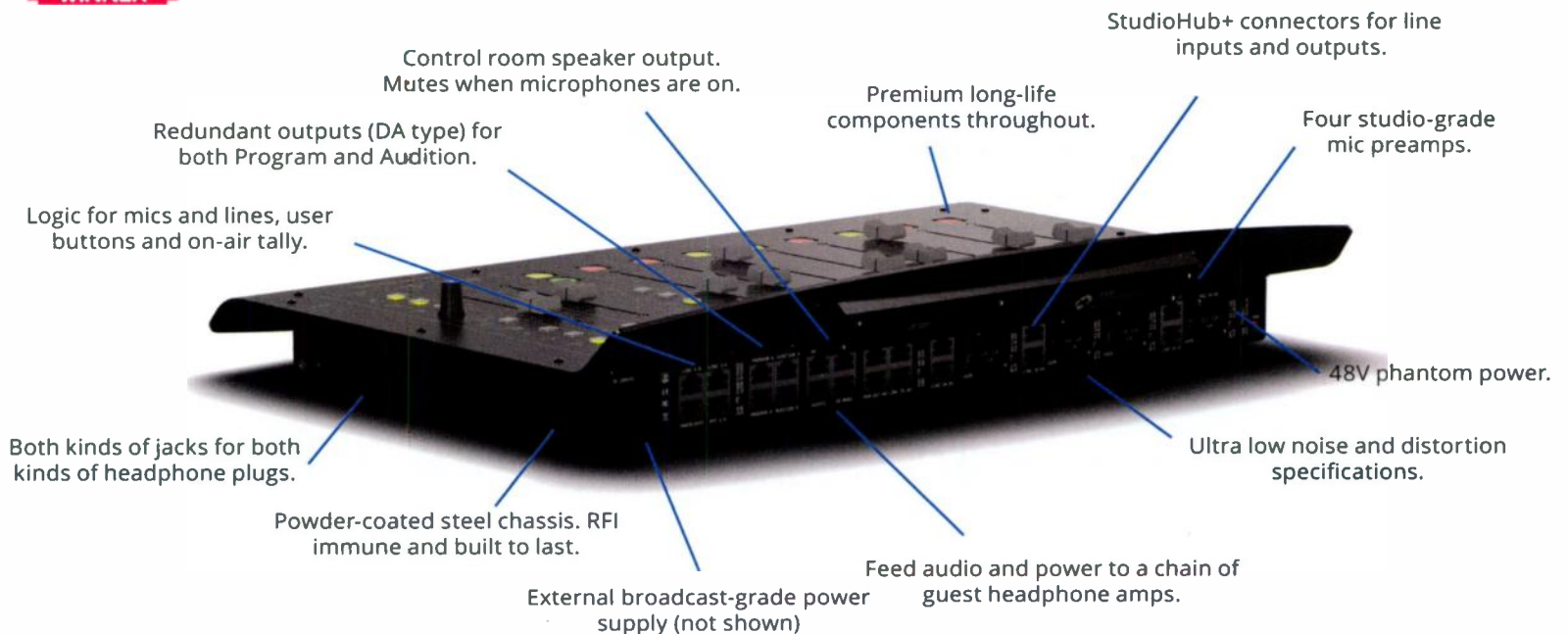
Fred Baumgartner
Elizabeth, Colo.

The author is a retired broadcast engineer who has been involved with advancing radio and television throughout his career, including for Qualcomm/MediaFLO, Harris, Nautel and ONEMedia LLC/Sinclair.

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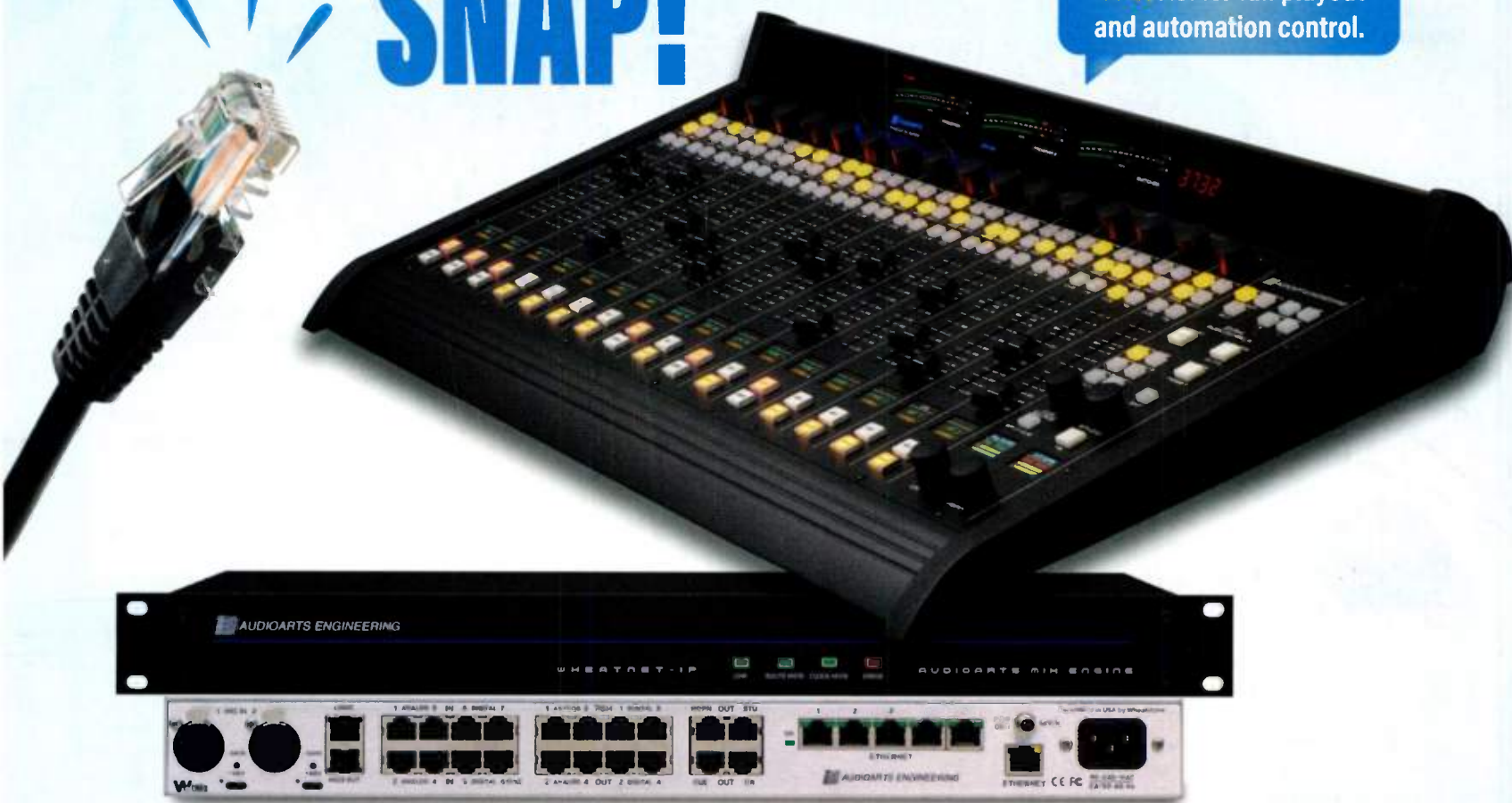


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