

Technology & news for radio decision makers

FUTURE



This is a typhoon, photographed from the International Space Station in 2015. Weather systems like this are a threat to several U.S. territories. Are their EAS systems ready?

Jon Wolfert reflects on the staying power of jingles.

Don't overlook the utility of a pair of
tweezers or a magnifying glass.

A sampling of new products that will be shown at IBC2024 in Amsterdam.

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Piracy in flagrante

Perhaps meatier fines will
entice the DOJ into action



Paul
McLane
Editor in Chief

f Congress is serious about keeping illegal radio
stations off the air, perhaps its members can
push the Justice Department to follow through
on recent FCC forfeiture orders.

You'll recall that in 2020, the Preventing Illegal
Radio Abuse Through Enforcement (PIRATE)

Act became law, giving the FCC additional enforcement
authority, including higher penalties against pirate
broadcasters and any person who permits the
operation of pirate radio. It required the FCC to conduct
periodic enforcement sweeps and gave it authority
to pursue enforcement action against landlords and
property owners in such cases.

The commission has taken various steps since, which you can see listed in
summary form on its Pirate Radio Database at www.fcc.gov/pirate-database.

Notably, in the past nine months the FCC has confirmed forfeitures of
more than \$2.3 million each against two separate radio operations in New
York City. But will this make any difference? Will those operators ever be
obliged to pay, much less turn off their transmitters?

In the first case, finalized last fall, the commission said César Ayora and Luis
Angel Ayora are guilty of the "longstanding illicit operation of an unauthorized
radio station known as Radio Impacto 2" on 105.5 MHz in Queens.

It said enforcement agents found scores of apparent violations between
March and September 2022, including multiple weekly on-air radio
programs. The Ayoras even advertised their pirate radio station for at least
25 weeks, and continued to operate their unauthorized station at last check.

There has been no subsequent news from the commission about
that case in almost a year, and the FCC declined comment when I asked.
Presumably the fine has not been collected.

“My hope is that
the attention from
Congress and the
much larger penalties now
in play will prompt the
Justice Department to come
knocking.”

THIS ISSUE

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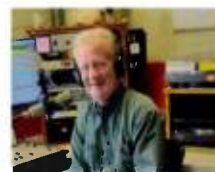
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Sorry Mark!

In some copies of
the Aug. 1 issue, we
published an incorrect
photo at the bottom
of page 14. Here's
the correct photo for
the item "Free Range
Radio," showing
Executive Director
Mark Schoenecker of
KHEN(LP) in Salida, Colo.

In the second, more recent case the FCC issued a penalty against Johnny (or Jhonny) Peralta for allegedly operating "La Mia Radio," a pirate station on 105.7 MHz in the Bronx.

It said the station continually identified itself on the air since at least 2018, and that FCC activity over several years included multiple field strength readings, photos of antenna equipment and a notice of unauthorized operation left at the site. The antenna appears to have moved at least twice.

The large forfeiture is based only on broadcasts between November 2022 and February 2023, when agents did field strength measurements and La Mia Radio was advertising on-air programs on its website. The FCC said Peralta has been identified in multiple newspaper articles and social media accounts as the owner and director.

La Mia Radio appears to remain active, at least based on online activity. The website Al Momento published a story in July reporting that "Dominican radio broadcasting entrepreneur Jhonny Peralta led the relaunch of his radio station 'La Mía Radio 105.7 fm' with a luxurious and modern booth, located in the Bedford Park Blvd. sector of the Bronx." A photo of a nattily outfitted studio appeared on Instagram.

Neither organization involved in these cases responded to Radio World requests for comment. In both cases the FCC gave the operators 30 days to pay. But I'm not holding my breath on that.



Above
La Mia Radio and Radio Impacto 2 are not shy about marketing themselves.

Historically, collection of pirate radio fines has been problematic to say the least. FCC and DOJ officials generally don't talk about that aspect. But they announce consent decrees, so based on the paucity of such news, my uninformed belief is that bureaucracy gets in the way of follow-through or that Justice usually has had bigger things to worry about, given the small financial penalties involved.

My hope is that the attention from Congress and the much larger penalties now in play will prompt the Justice Department to come knocking. Meanwhile there are several more pirate cases that have gone as far as notices of apparent liability, at least three of which involve potential seven-figure penalties. But for these bigger fines to have teeth, pirate operators need to believe that the pain, when inflicted, is going to be real. 🎧

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Writer



Randy J. Stine

The author wrote here recently about pillar-to-pillar infotainment systems in cars.

FCC hopes to fortify EAS in U.S. territories

Northern Mariana Islands and Guam among those that struggled in the most recent nationwide test

The nationwide alert test in 2023 showed that EAS participants in U.S. territories fared worse at retransmitting the message than those in most of the 50 states. The FCC's Public Safety and Homeland Security Bureau is suggesting steps to help improve the results.

Overall, the large majority of EAS participants — which include radio and television stations, cable television systems, direct broadcast satellite, Satellite Digital Audio Radio Service, digital audio broadcasting systems and wireline video systems — reported successful receipt and retransmission of the national test.

There are about 25,300 EAS participants in the United States and its territories. The test message was received by 96.6% of them, up from 89.3% two years prior. The overall retransmission success rate was 93.6%, up from 87.1%.

The bureau in a post-test report called the improvement significant and said it was likely due to initiation of the 2023 test alert via Common Alerting Protocol, which added resiliency, compared to the 2021 test, which was strictly over the air.

"The test demonstrated that the national EAS distribution architecture is largely effective as designed," according to the bureau, though it made several recommendations for further improvement.

The reliability of EAS in U.S. territories was one of its areas of concern.

By the numbers

The bureau said five of the six poorest-performing geographic regions for both receipt and retransmission were territories.

These are the main U.S. populated territories, with about 3.4 million people among them, according to The World Factbook, though almost 90% of those are in Puerto Rico. Guam has the next largest population of the five with around 169,000 people.

Their performance ranged widely. The Northern Mariana Islands recorded the lowest success rate (20% retransmission success). The others were Guam (33.3%), American Samoa (66.7%), the U.S. Virgin Islands (88.9%) and Puerto Rico (89.7%). Wyoming had the lowest retransmission success among the 50 states, at 88.1%.

Above
Javier Castellanos and Leida Rodriguez in front of their house that collapsed into a sinkhole after being flooded with water and mud during Hurricane Fiona in Salinas, Puerto Rico, in 2022.

Emergency Alerting



Above
Joey Cummings
chairs the SECC in
American Samoa.

The Federal Emergency Management Agency hasn't announced a date for the next nationwide EAS test, but the FCC said in its report it expects its staff to engage with EAS participants in U.S. territories and work with local emergency communications committees to help reinvigorate their SECCs, and if necessary pursue enforcement actions.

There may be reasons some territories did worse than the stateside contingent. The FCC noted that territories have been plagued

by multiple tropical storms and typhoons in recent years, including Super Typhoon Mawar affecting Guam and the Northern Mariana Islands in May 2023 and Hurricane Fiona affecting Puerto Rico and the U.S. Virgin Islands in September 2022.

Some failures may be attributable to outdated equipment used by broadcasters, though this problem is not unique to the territories. Per the report, participants reported complications with equipment configuration, performance, audio quality, alerting sources and clock errors.

"Fully up-to-date equipment had the highest performance results, whereas equipment using software that is no longer supported had the lowest performance results," the FCC reported.

The EAS community in many territories is small. While Puerto Rico has 146 EAS participants, the Northern Mariana Islands has only five, American Samoa and the U.S. Virgin Islands each has nine, and Guam has 12. By comparison California has more than 1,200 participants, and even tiny Delaware has 45.

The commission is working to help establish a State Emergency Communications Committee for the Northern Mariana Islands, according to an FCC spokesperson. Meanwhile, there has been turnover in SECC leadership on Guam and in the U.S. Virgin Islands, according to the spokesperson.

PEP issue

Joey Cummings, SECC chair in American Samoa, said part of the reason for a lower success rate there was due to an equipment issue at WVUV(FM), the Primary Entry Point station in the territory.

"WVUV did not relay the October 2023 test because its satellite equipment was inoperable at the time. Earlier this year, equipment was sent to replace the broken system, which has been testing well ever since. We couldn't ask for more or better support from

our partners in FEMA's National Public Warning System program," Cummings said.

Cummings is vice president and general manager of WVUV. He expects significant improvement for the territory whenever the next nationwide EAS test is conducted.

"We have an incredibly tight broadcast community here, with under a dozen radio stations a part of EAS. We'll pull together and make the needed improvements," he said.

Meanwhile, Puerto Rico has begun the process of reviewing its plan with guidance from the FCC, said Osvaldo Torres, SECC chair in the territory.

"A lot is going on in Puerto Rico with the EAS plan, many changes are taking place," Torres said. "There are details in the FCC data that the SECC is reviewing and needs to analyze and understand to make improvements.

"Most of our time at this point in the process is dedicated to finishing our plan for FCC approval," Torres said in an email.

Prompted by Congress, the commission in 2021 implemented some changes in alerting policies, one of which requires State Emergency Communications Committees to meet at least once a year and to submit an updated EAS plan annually.

State EAS plans govern EAS operations and activation procedures, according to the FCC, and contain unique methods of EAS message distribution. State EAS Plans must include a monitoring assignment matrix, clearly showing monitoring assignments and the specific primary and backup path for the National Emergency Message.

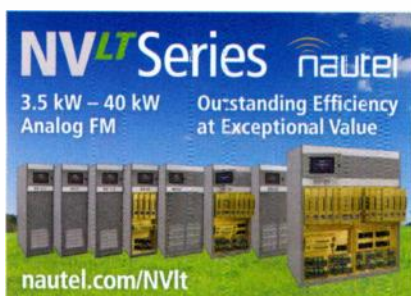
Of the U.S. territories mentioned in the report, only American Samoa has an FCC-approved EAS plan, according to the commission website. Its plan was approved in September, just a month prior to the national EAS test.

More to come

The FCC bureau says it will continue to take measures to improve EAS, according to the report. It is recommending that the commission adopt rules to improve the operational readiness of EAS participants, as well as ensure that participants are installing software updates in a timely manner and have plans for replacing equipment that is no longer supported by the manufacturer.

An FCC spokesperson says the commission is engaged with the territories to help improve EAS performance, including by working with EAS stakeholders and providing guidance to SECC members as they create and submit their plans.

"We review all submitted EAS plans to ensure they are consistent with our rules, which are designed to promote effective alerting. It's vital that the Emergency Alert System works effectively in all communities," the spokesperson wrote in an email. 🌐



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AoIP: SMPTE ST2022-7, Ember+, WheatNet-IP, Dante		✓



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information

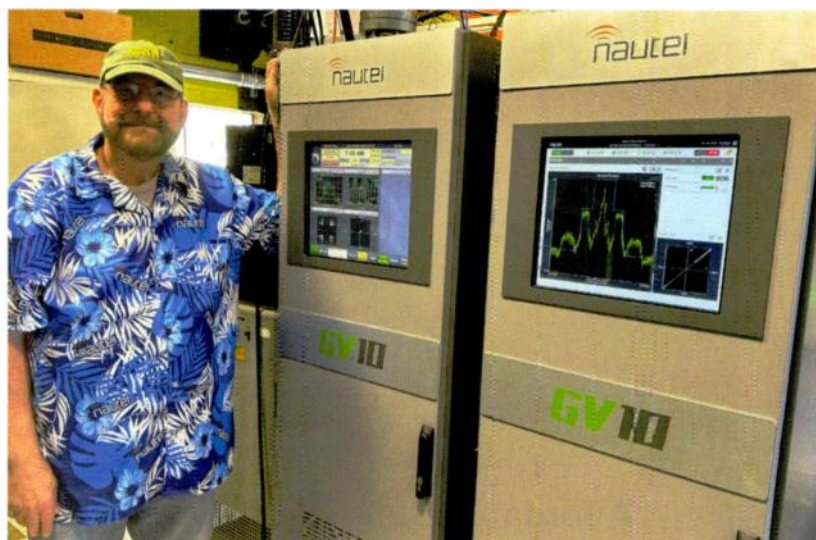
KCRW powers up new transmitters

KCRW(FM) is NPR's flagship member station in southern California and a service of Santa Monica College. Its programming is carried by 14 signals around the region, including six full-powered FMs and eight translators.

KCRW itself is a Class B FM station licensed for 6.9 kW on 89.9 MHz. It broadcasts from the Briarcrest transmitter site above Beverly Hills, managed by Vertical Bridge and formerly known as the KJOI site.

The station needed to replace two 20-year-old analog FM transmitters as well as its audio processing, equipment racks and electrical service. It would install state-of-the-air Nautel GV10 HD Radio/FM transmitters, Omnia.11 processors and associated equipment including a Tunwall dual RF transfer switch controller, Honeywell energy meter, Eaton UPS and Middle Atlantic racks.

As described in the new Radio World ebook "Awesome RF Buildouts," the station had a special challenge: Replace the existing electrical service, which was more than 70 years old, as well as the building's flooring, equipment racks and transmitters in the same space while keeping KCRW on the air without downtime.



Above
Barry Victor
with the newly
installed Nautel
transmitters.

Barry Victor, KCRW's senior RF engineer and CEO of the Victor Group, led the project and told us about it in the ebook. Learn about the work and see more photos at <http://radioworld.com/ebooks>.

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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.



Consider these small items for your “go box”

Sooner or later you'll need a pair of tweezers or a magnifying glass

Ron Fitch, WQ6X, has been enjoying the suggestions we've shared from Workbench readers about items to keep in your “go box.” He says the ideas are useful for radio amateurs too, and he put together a WQ6X Contest Blog on the topic. Suggestions include a rugged LED flashlight, tweezers, a pen, a hemostat, a soft-bristle brush, miniature straight- and Phillips-blade screwdrivers, a measuring tape or ruler, and — especially for those of us over 50 — that all-important magnifying glass. Great ideas, all!

See Ron's post at <https://wq6x.blogspot.com>.

Speaking of useful tools

Knipex Tools — “the company behind the pliers” — offers a compact tool that combines two useful functions, called the Knipex Pliers Wrench XS.

It is only 4 inches long and has a jaw capacity of 3/4-inch. Its smooth jaws make the tool suitable for gripping, pressing or bending, without marring surfaces. You can adjust the tool with one hand, and the size permits easy



access to confined areas. Texturized handles provide a solid grip.

Watch a 90-second video showing the Pliers Wrench XS in action at <https://bit.ly/3tg2kYh>. They manage to make pliers seem sexy.

Above
Small, but necessary tools for the engineer or amateur radio enthusiast.

Right
Looking for a turntable belt or stylus? LP Gear may be able to help.



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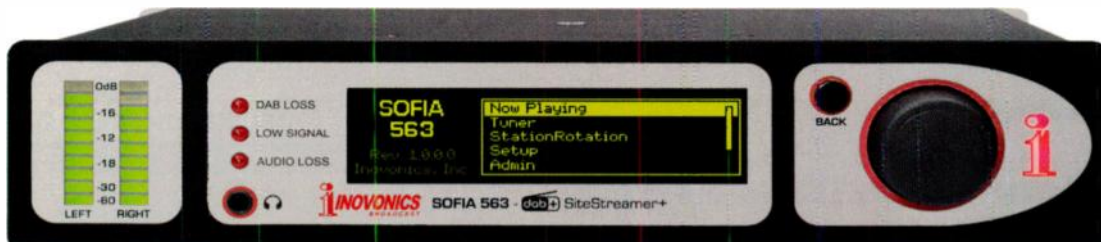
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Above left

An example of ferrule use in a high-density application.

Above right

AliExpress sells larger-barrel ferrules, designed to hold two wires.

Right

A useful dB conversion chart to keep in your billfold

Dan's turntable source site

With vinyl making a return at many stations, frequent contributor and fellow engineer Dan Slentz discovered LP Gear, a useful source for engineers who need to maintain turntables in their facilities. It is <http://www.lpgear.com>.

The site offers styli, cartridges, belts, even turntables, tonearms and preamps. The company is in Las Vegas, not far from the Strip, so maybe add it to your next NAB venture.

Ferrules rule!

BBN's Roy Becker, whom we mentioned in July, isn't the only engineer who is a fan of using wire ferrules.

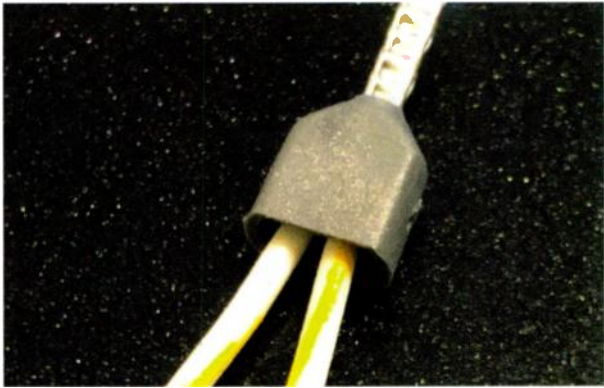
Rolf Taylor has been using these for some time and loves them. (He tells us that the British call them bootlace terminals.)

For less than \$20 Rolf bought a set that included an assortment of terminal sizes as well as a crimper. No more shorted adjacent terminals on high-density terminal strips.

Rolf also suggests you get some ferrules that are designed to hold two wires. These can be a bit harder to locate than the standard version. Rolf got his from www.aliexpress.us. Search: PinkCloud Store.

Cheat the dB system

Frank and Dave Hertel are principals in the consulting firm Newman-Kees RF Measurement & Engineering in Evansville, Ind.




Frank writes that he tends to remember the basic numbers and pattern of the voltage and power steps when it comes to calculating decibels. So when he's working in the field, he's able to come up with approximate dB answers without a calculator.

However, when you need a more accurate answer and you don't have a calculator, you can pull this Decibel Cheater Chart from your billfold and calculate the answer quickly.

The key to resolving the answer in your head is to become familiar with the repeating sequence of numbers in the chart. Notice the repeating steps and remember the sequence.

Even if you cannot recall the entire sequence, remember the following and you will derive an approximate answer:

Every time you double the power (or cut the power in half), that is equal to a 3 dB change in power.

Every time you double the voltage (or cut the voltage in half), that is equal to a 6 dB change in voltage. 

DECIBEL CHEATER CHART

Power Ratio	DB	Voltage Ratio
1	0	1
1.25	1	1.2
2	3	1.4
4	6	2
10	10	3.16
100	20	10
1,000	30	31.6
10,000	40	100

Look closely and notice the pattern of the numbers and how they repeat in steps, which is particularly noticeable with Power Ratios

FORMULAS:

DB Change in Voltage Ratios: Voltage 1 divided by Voltage 2 --- then take the LOG of that answer and multiply it by 20

DB Change in Power Ratios: Power 1 divided by Power 2 --- then take the LOG of that answer and multiply it by 10

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Writer



Ken Deutsch

The author wrote about the career of Lowell Homburger in a recent issue.

Jon Wolfert on 50 years of JAM jingles

Melodies from seven-voice vocal groups remain a staple

In 1974 a young man named Jon Wolfert and his wife Mary Lyn started their own jingle company in the second bedroom of their Dallas apartment.

The Wolferts were in their 20s, but Jon had several years of experience under his belt at PAMS, an established firm that would now be one of his competitors.

Within a couple of years, JAM Creative Productions — named for Jon and Mary Lyn — would be producing jingles for powerhouse radio outlets like WABC(AM) New York, WLS(AM) Chicago and the BBC in the United Kingdom.

It was a little jingle company that could, growing to reach 50 years in business under the same owners, and still making jingles today.

“Purely functional”

I’ve known Jon Wolfert for more than 50 years. I asked him on behalf of Radio World to talk about the changes he has seen in jingles over that half-century.

“Tell Radio World it’s none of their damn business!” said Wolfert with a laugh.

“Listen, it’s still radio stations listening to what is out there, making a creative choice about what would fit their

sound, their format or their slogan and then buying the jingles. But many other things have changed.

“In the 1960s, ’70s and ’80s, jingles were allowed to be entertaining in and of themselves. More recently jingles have become purely functional, just a station slogan and name.”

He said most of the ideas that used to be covered by jingle singers are now handled by a station’s voice-over talent, allowing the program director to make changes at will.

“If you have a jingle where a slogan line is sung, that’s all that jingle ever does. But if you have a musical ramp that can be talked over, it can be used for years, just by changing the voice-over. This has resulted in many stations buying fewer jingles at a time and using them much longer. That said, we still work with many broadcast and online clients who prefer to use jingles the traditional way.”

Wolfert also noted changes in the recording process.

“At JAM, jingles are still hand-made the old-fashioned way,” he said. “We are one of the few places, if not the only one, that still offer jingles with a seven-voice vocal group. We use other configurations as well, but a lot of our classic packages were done with seven singers and we get orders to re-sing those all the time, constantly.”

Above
Mary Lyn and Jon Wolfert are shown in their studio in 2023.



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World Radio History

WHAT'S MISSING FROM THIS STUDIO?

Without a CE onsite, Lotus Seattle leaned heavily on AoIP intelligent networking by Wheatstone, project management by SCMS, and system integration by RadioDNA to build out new studios in a few months.

AT A GLANCE

Challenges

- Engineering Shortage
- Tight Deadline
- Turnkey Studios for Four Major Market Stations

Benefits

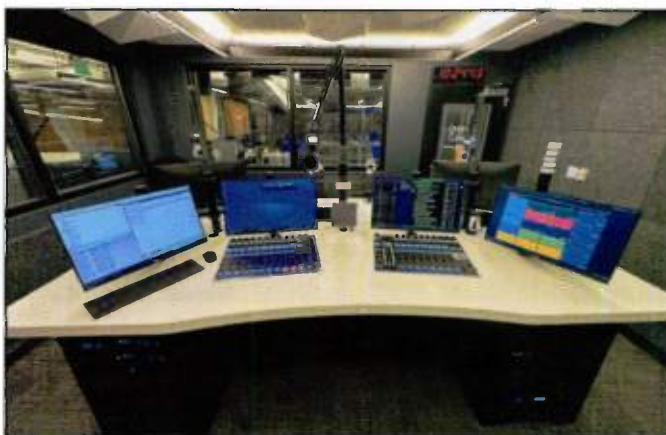
- **Easy Implementation in one AoIP environment:** Four on-air control rooms, two production rooms, a voicetrack studio, and a news desk with three editor positions easily share elements and workflows.
- **Smart Use of Virtualization:** Touchscreens replaced hardware. Combining Blade utility mixers, I/O and WheatNet IP scripting created powerful new workflows.
- **Remote-in Engineering:** The WheatNet IP studios are accessible remotely for regular maintenance and occasional troubleshooting by RadioDNA or other Lotus engineers.

“ Every single bit of this is first class. It's the best and most advanced studios we have in the company. —Jason Houts, Lotus DOE

Lotus is a privately owned group with 48 radio stations in 10 major U.S. markets, with several using WheatNet IP for audio networking.



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Photos provided by RadioDNA



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"Some of the other jingle producers use two or three voices heavily autotuned, and they will just record them on a lot of tracks. If we're producing jingles that are written for a five-voice group, we produce them with five people, all singing at the same time."

He says this produces a fuller, more glorious sound.

"There's really very little incentive for us to change the way we do things because we don't want to do what the competition does and they really can't do what we do, so we just kind of coexist and there seems to be enough work for everybody."

Gobble gobble

The Telecommunications Act of 1996 changed many aspects of radio, and in a ripple effect, the nature of jingles as well.

"That 107-page document mostly had to do with regulating phone and cable companies and other services," Wolfert said.

"But on one page there was a little section about lifting ownership limits so you could own many radio stations in the same market. Overnight this whole corporate Pac-Man effect kicked in because everyone started gobbling everybody else up. No one wanted to be the one with the fewest stations."

Companies ended up overpaying for stations just to say they had them; and it seemed radio became about the stock price and how cheaply companies could run their stations.

"And OK, some of that makes sense, but for a long time owners didn't want to spend a nickel more than they had to on programming, because those stations that used to compete with each other were now owned by the same entity, and as long as somebody was listening to one of those stations, they didn't care which one it was," Wolfert said.

"Jingles became less of a necessity. But in time management realized that they had to give people something entertaining or no one would listen, and the trend slowly reversed."

He's no fan of artificial intelligence for this application, describing the examples he's heard of AI-generated jingles as "universally awful."

"Perhaps it's a way for people who don't have access to a studio or actual human talent to create a cheap product, or have fun experimenting with technology. Since JAM does have studios and can use real musicians and singers, we have no need or desire to pursue AI. Trying to imitate or synthesize real voices is hardly ever as natural, or clear, or enjoyable as hearing the real thing."

A hobby extension

Wolfert doesn't completely understand how he came to run the company successfully for so long.

"If you compare what we started with to the studios and building we have now, it does seem amazing. But you have to realize it took years to get here.



Above

A seven-voice group in 1986: Brian Beck, Bruce Upchurch, Jim Clancy, Kay H. Sharpe, Chris Kershaw, Judy Parma and Abby Holmes.

Right

Mary Lyn and Jon in 1974.



"Basically, you get up every day and you go in and you do your stuff, and you just keep doing that day after day, and apparently after a while the years add up and turn into decades, and you don't actually think anything has changed, but the calendar says different."

He recalls that Mary Lyn and he felt very young compared to the people around them when they started JAM.

"It gets a little sobering when I think about some of the people we have worked with who are no longer alive. During that time we've heard our work on many great stations, met lots of terrific clients and worked with some amazingly talented people. It's been a joy."

No dilettante, Wolfert is in the trenches every day, not a CEO who comes in twice a week to look over the financials.

"I'm still writing, recording and mixing the stuff. I either do it because I'm crazy, or it's just what I like to do. Maybe both. I also know it's rare and unusual for someone to spend his entire working life doing a job that he likes. This job is merely an extension of my hobbies: radio and jingles."

Over many years I have visited Wolfert in Dallas several times. At one point I was watching him mix a jingle package at 2 a.m. as I lay on a cot in the studio. Jon had been working on a Moog line that is heard for approximately four seconds in the final jingle. After he had been working on it for about 15 minutes I said, "Jon no one will know if that little line isn't perfect." And he said "Yeah, but I'll know."

Ken Deutsch is a former radio personality and we use that term loosely. 🎧



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BUYER'S GUIDE

IBC Show Preview

About Buyer's Guide

In this issue we provide a sampling of products that will be featured at the IBC show in Amsterdam in September.

Tech Update

Tieline's Bridge-IT II Is for Remotes, STLs and More

At the IBC show Tieline will highlight the Bridge-IT II codec, now shipping. It offers a full-featured front panel with an OLED screen, keypad and menu navigation buttons.

"Unlike other low-cost alternatives," Tieline says, "it also has professional XLR I/O connectors, and a vast suite of encoding options as standard. It is also an affordable edge network device that acts as a flexible media converter."

It accepts analog, AES3 or AoIP audio sources and can convert these to AES67/ST2110-30, Livewire and Ravenna-compliant audio streams.

"By natively supporting these AoIP protocols, the codecs seamlessly integrate into AoIP infrastructure at the broadcast plant. This delivers simple discovery and routing of AoIP audio sources and destinations and facilitates ingesting or transmitting SIP trunks for communications and/or IFB feeds."

IBC Booth: 8.F65



The codec supports multi-unicasting and multicasting; Tieline says a single codec could replace thousands of dollars of additional codec equipment, reducing costs and a network's carbon footprint.

For affordable STLs, the Bridge-IT II includes enhanced backup options to support failing over to one of three options: an alternative LAN connection or attached cellular modem; pre-recorded audio files on SD card; or an HTTP Icecast or Shoutcast stream.

Reliability is bolstered by advanced packet loss strategies like hitless packet switching, data aggregation of multiple IP interfaces and Forward Error Correction.

A 1 RU Bridge-IT Xtra II version with dual internal power supplies, dual AoIP ports and dual Ethernet ports is pending.

Info: www.tieline.com/Bridge-IT-II

Tech Update



IBC Booth: 8.C74

GatesAir Introduces 2 kW Flexiva GX

New for IBC, GatesAir is adding the Flexiva GX2K, supporting 2 kW of analog FM in a compact chassis that occupies two rack units.

GatesAir will also show the 50-watt GX50, the 1 kW GX1K and the 3 kW GX3K, the latter of which begins shipping just prior to the convention.

New to IBC audiences, GatesAir has enhanced the GUI for all six GX models, including integrated audio playback and a supporting playlist manager.

Options include GPS receivers for SFN support, and GatesAir's Intraplex IP Link 100e module. It integrates within Flexiva GX transmitters, enabling IP connectivity of FM audio and data from the studio. This reduces rack space requirements inside RF facilities with limited open real estate.

Info: www.gatesair.com/

Tech Update

OMB Expands Transmitter Offerings

New from OMB is the latest member of the EM 1000 family of transmitters.

The EM 1000 HPPS Compact offers AC efficiency of more than 73% and typical RF efficiency of 84%, the company said.

Features include redundant amplifier modules, advanced protection against load mismatches and internal single-phase transient suppressor.

The transmitter also provides automatic power reduction at night and redundant, hot-pluggable power supplies.

Info: <https://omb.com/electronic-system/radio/fm-transmitters>

IBC Booth: 8.F29



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World Radio History

Tech Update

Angry Audio Ships Its New Console

The Rave! console from Angry Audio is now shipping.

The first four of its eight faders can select between microphone or stereo line inputs, providing extra flexibility. Operation is facilitated with two program output mix buses, two mix-minus outputs with talkback, flexible monitoring for the board operator, and a monitor feed to studio guests with talkback. The board also features automatic monitor muting and warning light tally outputs when the mics are open.

Installation is simple thanks to the StudioHub+ RJ45 connectors for line inputs and outputs, XLR inputs for microphones, and an external rack mount power supply. The console includes mic and line remote logic, and preview (cue) on every channel. The board provides smooth faders and avionics-style switches with LED illumination, encased in a sleek, low-profile desktop design.

Also new from Angry Audio are specialized mic processors designed to work with the unique characteristics of popular professional mics. The SMOOTH is for use with the Shure SM7, while the REBEL is for Electro-Voice RW30, RE27 and RE320 mics.

"SMOOTH's microphone preamp stage offers ultra-high gain and low noise, providing the clean gain necessary for the insensitive SM7 mic. Unlike other solutions that use inline boosters, SMOOTH's mic preamp

circuitry delivers 70 dB of gain with a noise figure only 1.5 dB above the theoretical minimum, ensuring plenty of pure sound without the hiss. This makes the SM7 sound clearer and more precise than ever before."

Similarly, the REBEL was designed to enhance the unique qualities of those EV models. "The adjustment bands were created so you can subtly fine tune the sound, making setup a breeze."

At IBC, Angry products can be found in the booths of distributors including Broadcast Bionics, Danmon Group, ip studio, Netorium, PHF Com, Thimeo, Votex and WinMedia.

Info: <https://angryaudio.com>



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Tech Update

AxelTech at IBC

At IBC 2024, AxelTech will unveil new features of Tiger E3/E5, an MPX stereo generator with advanced signal processing capabilities. Upgrades include an extended XAudio streaming feature to enhance functionality.

Also featured will be the Oxygen 3000 Plus console, shown, which comes in three formats with flexible configurations: eight, 12 and 16 faders with one or two audio I/O boards and 16+16 or 32+32 Dante I/O.

IBC Booth: 8.C72



"The latest update introduces a web interface, allowing full remote control access via IP," AxelTech said. "Visitors can also look forward to discovering the enhanced capabilities of the Mr Light, now compatible with a Wi-Fi connection. Additionally, a sneak peek of the talk show feature will be available for preview."

AxelTech also will highlight its partnership with Digigram, its radio product distributor in Asia, and AxelTech will show Digigram's Iqoya-X/Link-ST, ALP-Dante sound card and Auvitrans Toolbox.

Info: www.axeltechnology.com

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Tech Update

Gagl Offers a Hotline

Hotline is an addition to Comrex Gagl, the cloud-based remote audio contribution service.

It will enable a single user to connect to a Comrex codec with high-quality audio by calling a phone number, with no special equipment required. "Gagl enables users to send and receive audio through common web browsers to Comrex hardware IP audio codecs (Access or BRIC-Link)," it said.

With a computer or smartphone plus a headset, high-quality audio can be transmitted bidirectionally from up to five remote participants with minimal latency, providing a simple way to get anyone on the air. Gagl is available for \$35/month.

Hotline will allow one of the five participants within a Gagl session to connect by dialing a phone number while dramatically improving the quality of the cell phone audio for on-air use.

Gagl + Hotline provides a 10-digit phone number with each subscription. A guest or reporter can call the number using an AT&T, T-Mobile or Verizon cell phone. Callers don't need to install an application or use special equipment, they just dial the phone number.



"Hotline circumvents traditional telephone networks, so audio isn't compressed to G.711 to meet PSTN standards. As a result, the caller's audio is delivered in full-fidelity, HD Voice quality."

Gagl + Hotline can be set up to join an existing Gagl conference session or to answer phone calls and transfer them to a Comrex codec using an optional security PIN. Thus a single contributor's mobile phone can provide studio quality by dialing a number without requiring a browser or app.

Gagl + Hotline is available for U.S. subscribers. Gagl + Hotline and Gagl Solo, a new free tier for single connections, will be available this year.

Info: www.comrex.com/products/gagl

BC
Booth:
7.P12

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Tech Update

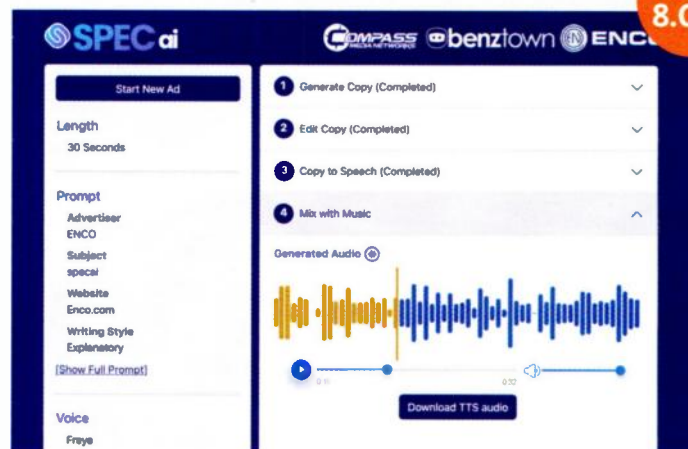
ENCO Adds Voice Cloning to SPECai

ENCO will show its SPECai to IBC audiences for the first time.

"SPECai is a game-changing ad creation platform that allows radio broadcast sales teams to create compelling, localized spec ads on demand within seconds in front of clients," it says. "Leveraging the power of generative AI models, SPECai is the first AI production solution focused on creating scripts for commercials, with subsequent conversion of the spec ad text to human-sounding speech."

Its workflow delivers multiple script options for each spot and provides account managers with creative tools to build professional-sounding spec ads, including various male and female voice options, voice tones and a music bed library.

New for IBC, ENCO has added a voice cloning feature that gives SPECai users more customization, diversity and choice. It



IBC Booth: 8.C76

replicates the voice of the client, air talent or other presenter upon analyzing an audio sample; users can then customize it suit the tone or emotion.

Info: www.enco.com/products/specai

Tech Update

Nautel VX Series: Compact, Efficient & Affordable

Nautel says its VX FM transmitter series, in power levels from 150 W to 6 kW, has received "exceptional" positive response from customers, with shipments approaching 1,000 units since its launch last year.

Nautel has announced plans to incorporate audio player and playlist functionality, with which users will be able to upload content locally or remotely via an IP connection to make a playlist. No USB, addition cards or site visits are necessary.

The built-in audio player can use the file playlist as an audio source, for instance for backup in case of audio loss. This capability will be available by year's end.

"Many FM transmitters in the 150 W to 6 kW class use an inexpensive analog exciter that may even be an external unit," Nautel notes.

"For the VX Series not only did Nautel engineers integrate the exciter, but they also implemented a true direct-to-channel digital exciter to achieve class-leading performance. That means crystal clear audio and outstanding value."

VX Series FM Transmitters have built-in RDS generator, GPS input, presets and -90 dB SNR. "They are also ideal for implementation as AM translators," Nautel said. Two VX models are type-certified for low-power FM in the United States.

Info: www.nautel.com/products/fm-transmitters/vx-series/



Tech Update

WorldCast Previews More FM AiO Models

"The new additions extend the AiO Series' portfolio up to 2 kW, meeting the medium power needs of broadcasters with 1 kW HR (high redundancy) and 2 kW transmitters in a compact 3U form factor," the company said.

The new models have dual hot-swappable power supply units, two fans and two RF pallets, intended to ensure maximum on-air time even in the event of component failures.

Worldcast is also releasing software V3.3.0 for the full AiO Series family.

"With this version, WorldCast Systems has focused on SFN applications with the integration of a built-in GPS receiver for internal clock references but also 10 MHz and 1 PPS outputs for peripheral equipment."

The APT IP Decoder has been updated to integrate APT SynchroStream technology, for audio content synchronization over the network. The APT IP decoder a new Hot Standby Mode for automatic stream switching in case of connection loss.

And the AiO Series now supports the latest SNMP v3 revision, which enhances security and management capabilities.

Info: www.worldcastsystems.com

IBC Booth: 8.C61



Tech Update

Radio.Cloud Unveils "Assistant AI"

IBC Booth: 8.F35

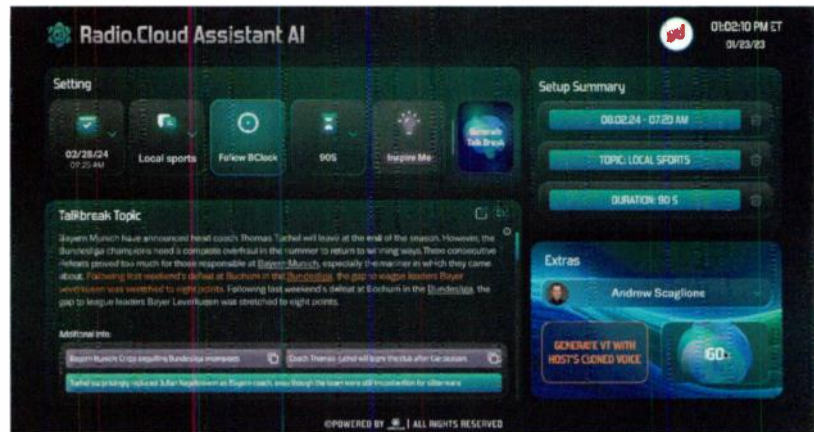
Radio.Cloud says Assistant AI takes the manual work out of show prep. It gives hosts a research assistant to help with inspiration for live talk breaks and voice tracks.

Assistant AI is integrated into Radio.Cloud's playlist. It allows hosts to choose the specific talk break, the content to prep for and how much content to provide. "Examples include local news, local weather, station promos, relevant information about the next artist and song, and more."

Assistant AI generates a block of text and some additional bite-size pieces of key information. Hosts can use part or all the content on-air; the company says most choose to use the text as inspiration for their live break or voice track.

"This removes the manual research step which saves hosts enormous time over a four-hour shift, especially while working on-air at multiple stations."

The next step in development is giving hosts the ability to choose an AI voice or a cloned voice to use as a co-host for certain talk



breaks. "By highlighting part of the generated content, hosts can pick a voice and create a co-host for nimble back and forth in a live or voice tracked setting."

Radio.Cloud calls the tool a middle ground between a traditional prep service and a fully AI voice tracked station. "Hosts increase efficiency and productivity thanks to AI doing research, but with the product built into Radio.Cloud the specific content generated is way more tailored to your stations than previously possible."

Info: www.radio.cloud

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Tech Update

Blade 4 Builds on Intelligent AoIP

Wheatstone's fourth-generation WheatNet IP I/O unit builds on the intelligent network to combine studio facilities, control audio from any device and eliminate unnecessary studio hardware.

"Unique to Blade 4 is its complete AoIP toolset of audio processing, codecs, mixing, routing, control and operating system in one rack unit," the company says.

The Blade 4 has updated CPU with GPU graphics acceleration for running customized scripts, apps and virtual interfaces on the Blade 4 itself instead of a separate PC. Also included are dual Opus codecs for streaming audio between studio facilities, home studios or transmitter sites.

It now comes with Reliable Internet Stream Transport (RIST), an open-source transport protocol for reliable transmission of video and audio in real time. The unit has enhanced network security and



IBC
Booth:
8.D91

reliability and is AES67-compliant for interoperability with a range of devices. It supports SMPTE ST 2110, including NMOS discovery.

"Blade 4 puts I/O, control and audio tools in one AoIP unit for everything from streaming audio, mixing sounds and processing feeds, to turning mics on or off, controlling consoles and triggering mix-minus presets by show, location or talent."

Blades are the I/O units for the WheatNet IP audio network, which includes hundreds of interconnected elements.

Info: <http://wheatstone.com>

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Tech Update

Orban Highlights Broad Processing Lineup

The Optimod Trio will be featured at the Orban booth at IBC.

"Compact in its design but big in functionality, Optimod Trio can be configured as AM audio processor, as FM audio processor or alternatively as HD Radio/DAB+/streaming audio processor," the company says.

For FM, the Trio provides four processing structures: five-band, low-latency; five-band, ultra-low-latency; five-band and two-band. It can be also used as a standalone stereo encoder with latency as low as 2 msec and full overshoot limiting in both the left/right and composite baseband domains. It has an onboard RDS/RBDS generator that

supports dynamic PS scrolling and IP access.

The AM mode is suitable for AM shortwave, medium-wave and long-wave broadcast sound. In HD mode you can choose between the five-

band processing structure for a spectrally consistent sound with good loudness control and the two-band structure for a transparent sound that preserves the frequency balance of the original program material while controlling subjective loudness.

Also featured will be the Optimod 5750 for FM and HD processing; it replaces the model 5700i and provides FM as well as HD processing for DAB+, HD Radio and streaming.

Orban's Optimod 5750 HD is for cost-effective independent processing for HD2 channels, FM analog, DAB+ and streaming.

The company also highlights the Optimod 5950 for FM and DAB+/HD Radio broadcasts as well as the Optimod XPN-Enterprise for companies that want to move operations to centralized — and ideally virtualized — environments. It is a Linux-based, customizable processing platform for multiple broadcast stations or streaming services with centralized control.

Info: www.orban.com



IBC
Booth:
8.D93

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Tech Update

Telos Expands Axia Line

IBC Booth: 8.D37

New to the Axia AoIP product lineup from Telos Alliance are StudioCore and StudioEdge.

StudioCore is a new console engine for Axia iQ, Radius, RAQ and DESQ surfaces and is the successor to the QOR.32 engine.

It maintains the 24-channel mixing engine as well as an internal power supply and five-port Ethernet switch, but it adds an eight-channel monitor matrix system and offers a Livewire+ AES67 stream capacity of 32 inputs and 32 outputs. The front and rear panels are shown.

Meanwhile, StudioEdge is a high-density I/O device that can be used as an all-in-one I/O solution in control rooms of any size, or as an ingest station or routing and monitoring solution in TOCs and machine rooms.



The two products are built on a 2 RU fanless hardware platform that includes a five-port Ethernet switch with PoE, and a 5-inch color IPS LCD touchscreen display for local control of routing, I/O and audio levels.

I/O includes four selectable mic/line inputs, eight dedicated line inputs and outputs, and three digital inputs and outputs that are user-configurable as AES/EBU, S/PDIF and USB Audio, which Telos said eliminates the need for an IP driver for stereo applications.

Included are two headphone outputs with independent DACs and built-in amplifiers, a built-in audio file player via USB data port, and four GPI/O ports. A second internal power supply is available optionally.

The company calls StudioCore an all-in-one platform for a broadcast studio, with an audio I/O endpoint, an AoIP switch and a console mixing engine in a 2RU fanless chassis. "Just add a control surface and playout computer, and you have a complete studio solution."

Info: telosalliance.com

Tech Update

IBC Booth: 8.D74



RCS AudioDisplay Supports Interactivity on the Dash

RCS says AudioDisplay can help stations develop revenue streams through more granular management of their text and image advertising content, delivered in sync with their audio.

"RDS and HD Radio advertising campaigns run whenever an ad break is on air," the company says.

"With each campaign supporting technology-specific content, use a short punchy message for RDS receivers and something a little more detailed for HD Radio, and include an image."

AudioDisplay is part of RCS's RCS Cloud App portal, allowing users to access various cloud applications from any browser or operating system.

"Use your local single sign-on and corresponding password to access AudioDisplay from any device, anywhere," RCS states.

Info: <https://audiodisplay.com>

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Writer



Rima Dael

CEO, National Federation of Community Broadcasters

Ensuring a more inclusive account of country music history

Early music recording and radio were marred by racial gatekeeping

The National Federation of Community Broadcasters values Radio World as an essential resource, vital for serving the diverse communities our member stations represent. NFCB's members primarily operate music format stations, showcasing an eclectic array of genres, including classical, jazz, Americana, folk, country, bluegrass, reggae, hip hop and world music.

Community radio has always embraced voices and music from the margins, offering a platform often overlooked by mainstream media. Our membership is deeply passionate about the music we share and the rich histories embedded within these genres.

With this background, we write in response to Radio World's article "Radio and the Roots of Country Music," published in May. While the article provides a historical overview of radio's role in popularizing country music, there are several critical issues that NFCB wishes to address.

In its original publication, the article used the terms "hillbilly" music and "race" music. These terms are not only outdated, but also carry offensive, bigoted connotations. Such terminology undermines the rich cultural heritage and contributions of the artists involved. Modern discussions of music history require more respectful and accurate language. "Hillbilly" music is now referred to as Appalachian, Americana or roots music.

The term "race music" was a derogatory label used in the 1920s and 1930s to describe African American music, including blues and jazz. It is essential to refer to these genres appropriately and avoid perpetuating harmful stereotypes.

Secondly, the article presents an incomplete and somewhat inaccurate history by neglecting the significant contributions of BIPOC communities, particularly Black communities, to the origins of country music.

Early music recording and radio were marred by racial gatekeeping, where white musicians often covered

Above
Beyoncé accepts the Innovator Award from Stevie Wonder onstage during the 2024 iHeartRadio Music Awards in Los Angeles.

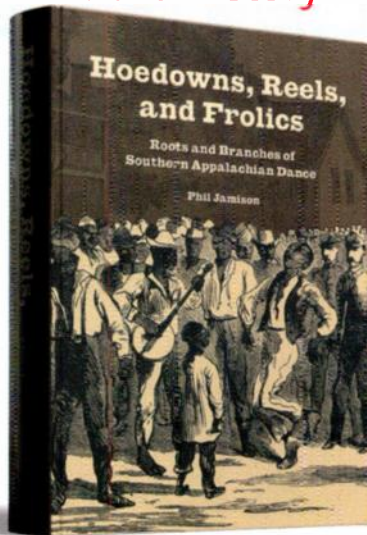
African American songs to market them to white audiences. This segregation continued into the early days of television, effectively whitewashing the roots of country music. This oversight in the May article perpetuates a narrow and biased understanding of country music's history.

The timing of the article seemed particularly insensitive, given the current and on-going discussions around gatekeeping in the country and western genres.

The release of Beyoncé's album and Rhiannon Giddens' work in reclaiming the Black roots of country music are pivotal moments that should be recognized and discussed. These contemporary issues underscore the need for a more inclusive and accurate portrayal of country music's history.

One of NFCB's member stations, Radio Bristol, affiliated with the Birthplace of Country Music Museum, exemplifies the commitment to celebrating the roots of American music through original programming.

Kris Truelsen, program director at Radio Bristol, recommended several resources for understanding the influences of BIPOC communities on country music: "African Banjo Echoes in Appalachia: A Study of Folk Traditions" by Cici Conway and "Love & Theft: Blackface Minstrelsy and the American Working Class" by Eric Lott. Rhiannon Giddens' remarks on defending the Black roots of country music are highly insightful.



Phil Jamison/Univ. of Illinois Press

Above

In "Hoedowns, Reels, and Frolics," Phil Jamison tells the story behind the square dances, step dances, reels and other forms of dance practiced in southern Appalachia.

Ken Burns' documentary on country music provides a comprehensive view of the genre's 100-year history, highlighting the contributions of Black, Latinx and Indigenous communities and documenting the gatekeeping that sought to exclude artists of color.

Personally, I am most familiar with Phil Jamison's book "Hoedowns, Reels and Frolics: Roots and Branches of Southern Appalachian Dance," which offers a thorough examination of the multicultural roots of Appalachian dance, music and song and its influences to American dance and music.

Other notable resources include the exploration of Mexican-American contributions to country music by UCLA and the Black Opry, a platform for Black

artists in country, Americana, blues, folk and roots music. Additionally, KRCL in Salt Lake City, Utah, provides a list of contemporary indigenous artists in Americana, roots and country music.

This article is not a *call-out* to Radio World but a *call-in* to enrich the narrative of country music's history and address outdated language rooted in a prejudiced past.

NFCB aims to contribute constructively to the conversation about country music's history, framing it within a broader cultural context. A more nuanced and inclusive approach is necessary to truly honor the diverse origins and ongoing evolution of country music as part of our collective American history.

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Readers' Forum

Remembering Larry Cervon

Thank you for the feature story about Larry Cervon in the July 17 issue. Editor in Chief Paul McLane was kind enough to accept my suggestion for that story, and contributor Tom Vernon did a lovely job with it.

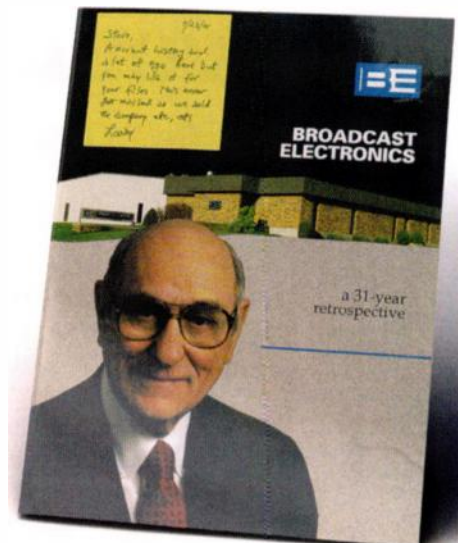
Larry helped so many people over the years. I remember him writing one of the letters that I solicited in support of the nomination of Arno Meyer for the NAB Radio Engineering Achievement Award (Geoff Mendenhall and Bob Orban also wrote letters).

Larry hand-wrote his letter while lying in the hospital — that alone says something about his character. The letter brings tears to my eyes every time that I look at it.

Many people don't know much about Larry's legacy, including his role as successor to Parker Gates as head of the Gates Division of Harris Intertype Corp. and president and owner of Broadcast Electronics.

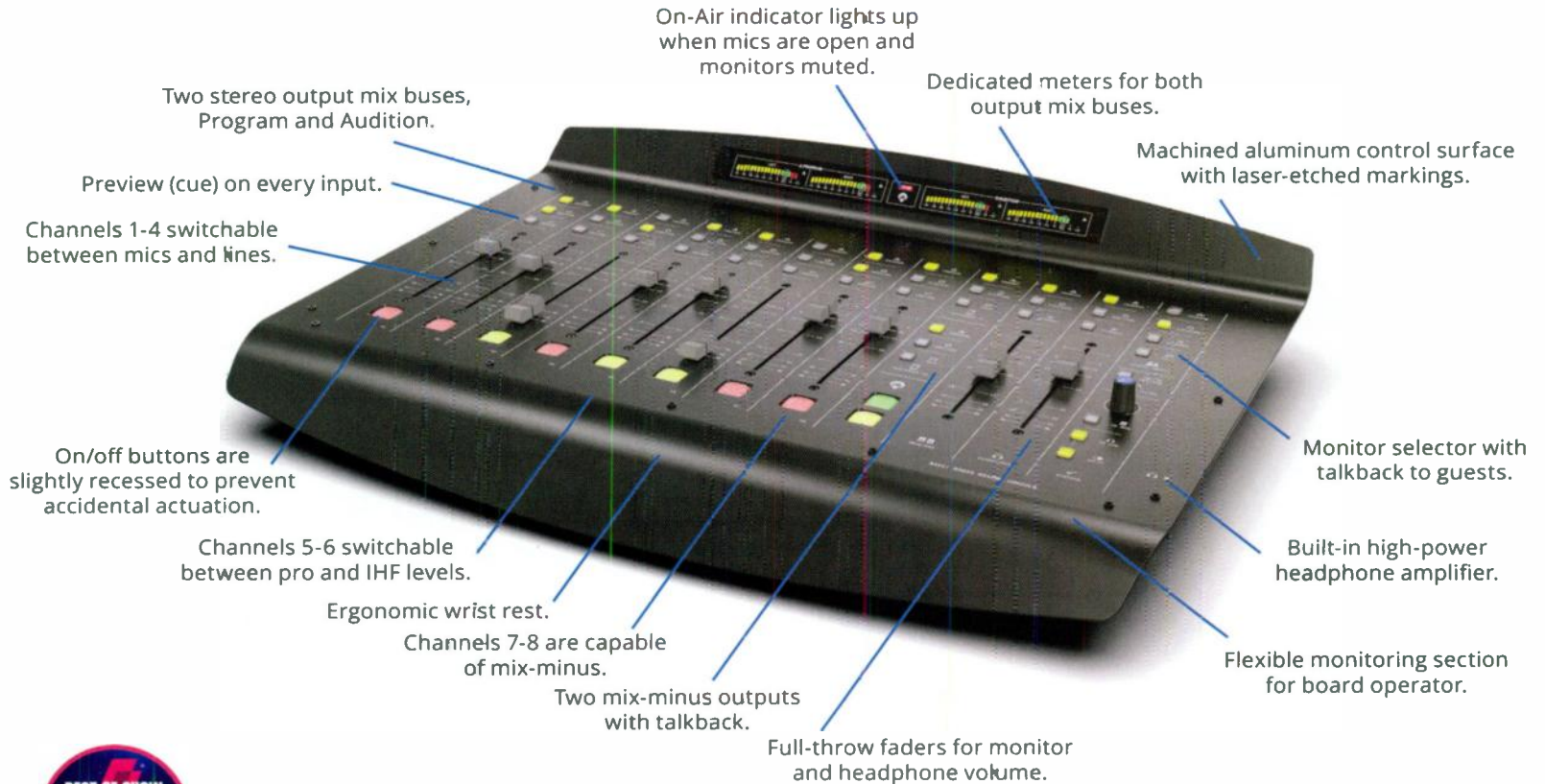
In 2001 Larry sent me a copy of a brochure about the history of BE. It had never been published because Larry sold the company shortly after it was printed. He mentions this in a hand-written Post-it note that you can see in the accompanying photo.

Larry himself received the NAB Radio Engineering Achievement Award in 1991. He was an authority on international radio broadcasting, a caring and thoughtful guy, a real gentleman, one of the broadcast industry's great leaders.

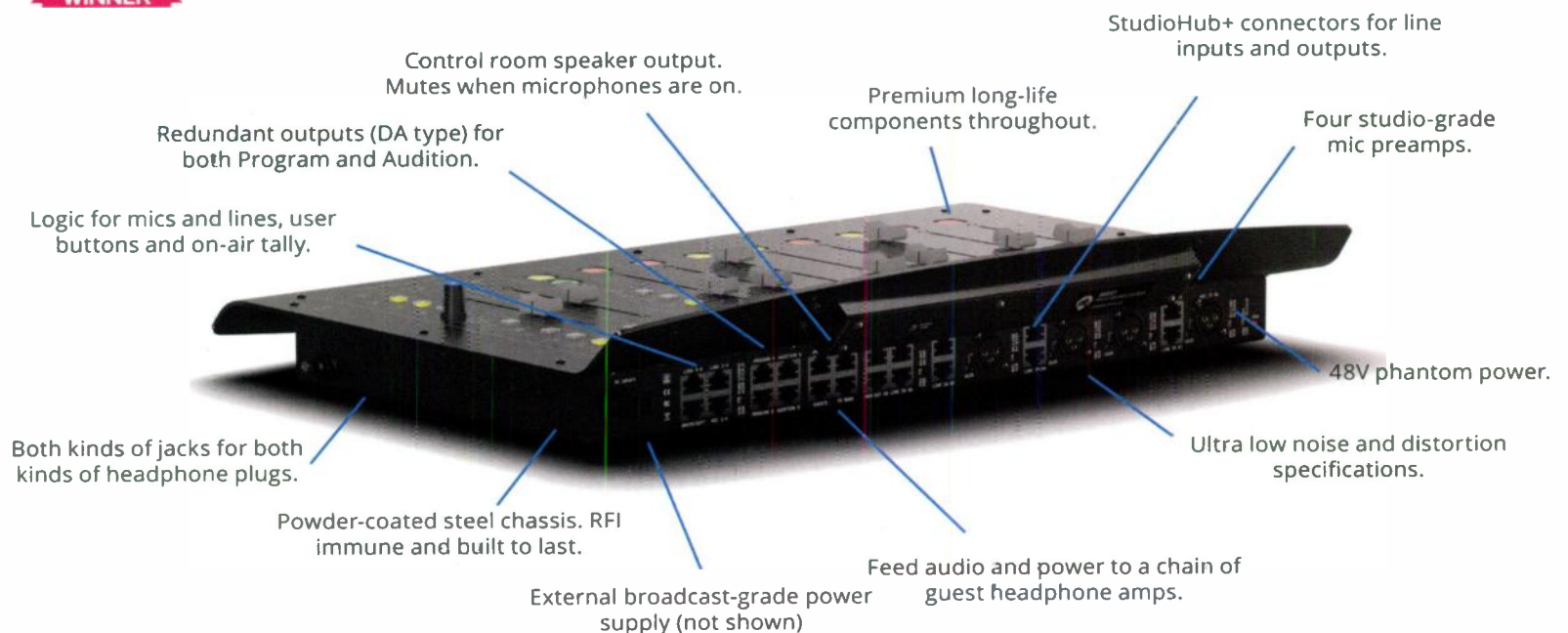


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