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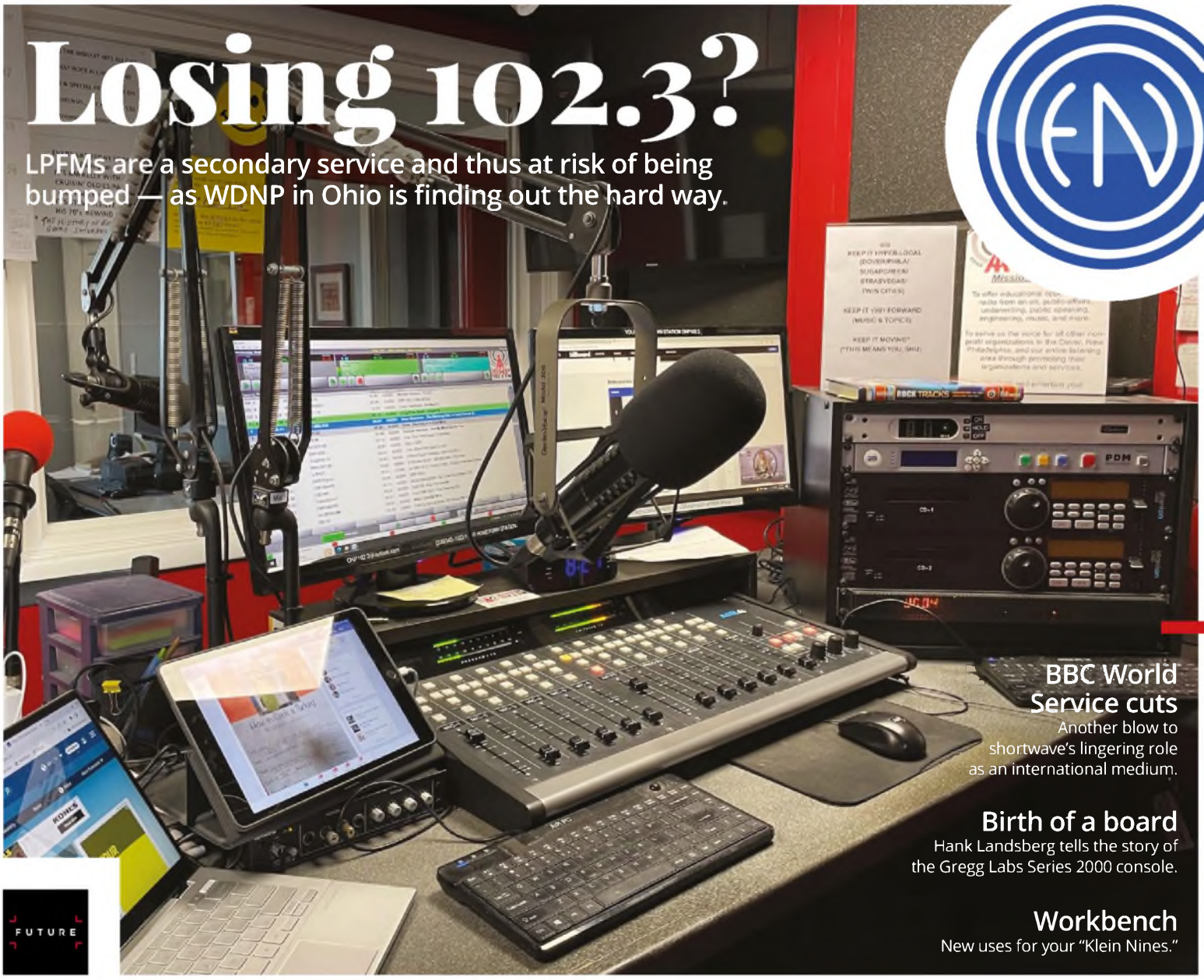

Losing 102.3?

LPFMs are a secondary service and thus at risk of being bumped — as WDNP in Ohio is finding out the hard way.

ENCO.com

BBC World Service cuts

Another blow to shortwave's lingering role as an international medium.

Birth of a board

Hank Landsberg tells the story of the Gregg Labs Series 2000 console.

Workbench

New uses for your "Klein Nines."

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A BBC without broadcast?

"In this world, relevance, like trust, has to be earned"

Paul McLane
Editor in Chief

Will the day come when the British Broadcasting Corporation stops broadcasting?

BBC Director-General Tim Davie said, "A switch-off of broadcast will and should happen over time, and we should be active in planning for it."

As reported on the Radio World website by our contributor Carter Ross, Davie delivered a speech before the Royal Television Society in which he noted that consumers are awash with choices from traditional broadcast and new streaming services.

A TV license fee has traditionally funded the bulk of BBC operations but Davie said a change to its traditional model is necessary. While he was talking only about the BBC, his remarks should prompt thinking by any serious-minded person working in media.

"I sometimes read that the BBC needs to clock that the world has changed. I can assure you that we do not need convincing. The internet has stripped away the historical distribution advantage of having half of the TV channels or FM frequencies. In this world, relevance, like trust, has to be earned," he said.

In Davie's vision, Ross reported, the United Kingdom and the BBC must begin work to prepare for an internet-only future. This will involve ensuring every British household is connected via fixed-line broadband and full national 4G/5G wireless coverage. "A fully connected U.K. has very significant benefits for society and our economy. It would unleash huge opportunities for innovation," he said.

Davie went on to say the BCC needs to avoid creating "derivative or niche content" and instead work to ensure "maximum relevance for our core output."

He said there would be more consolidation of programming and brand identity. "We are working on how an IP BBC could be the best version of the BBC shaped around people's interests and needs. ... Within the BBC this means significant change. We will have fewer brands overall, and consolidate more activity behind a simple, single brand in the U.K.: the BBC."

You can read more about the Davie speech at *radioworld.com*, enter "BBC plans" in the search field.

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NAB Says EAS Cybersecurity Proposal Oversteps

The FCC wants to minimize IP-based threats to the Emergency Alert System and improve operational readiness of participants. But it's getting pushback from broadcasters who worry that a new mandate will create compliance issues and be a burden on short-staffed stations.

A notice of proposed rulemaking in October includes a proposed requirement for broadcasters and cable operators to report incidents of unauthorized access to their EAS equipment within 72 hours. EAS participants would also be required each year to certify that they have a cybersecurity risk management plan.

The commission says EAS devices and supporting systems need be monitored and audit logs regularly reviewed looking for unauthorized access. And it asks that broadcasters check with their EAS equipment manufacturer if they are unsure how to proceed with periodic security updates.

The NAB in December told the FCC that these changes would create compliance issues for broadcasters. The measures "amount to well-intentioned, albeit unjustified, solutions in search of a problem," it said.

NAB agreed with FEMA that the FCC presents scant evidence of EAS failures and new EAS security threats.

"For example, based on a relatively meager number of equipment-related problems that arose during the 2021 Nationwide EAS Test,

Getty Images/teekid

the FCC proposes an entirely new regulatory regime for the repair of malfunctioning EAS equipment, in place of the currently effective one," NAB wrote. "The FCC's approach also introduces new pitfalls, including the potential for new (and unnecessary) enforcement actions against EAS participants for repair delays due to circumstances beyond their control."

The association recommended that the FCC instead amend its rules to allow EAS participants to use virtualized, software-based, solutions in place of certain hardware-based elements of their EAS system. "This voluntary option would also facilitate the rapid resolution of EAS defects, speed the implementation of software patches designed to enhance security, and improve alert monitoring, among other benefits."

Reply comments in PS Docket 22-329 are due on or before Jan. 23.

— Randy J. Stine

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Writer

Randy J. Stine

Radio World's lead news contributor interviewed NAB President/ CEO Curtis LeGeyt in the Dec. 21 issue.

Above
The control room at WDNP(LP).

Ohio LPFM faces uncertain future

Station could be pushed off its frequency by incoming full-service applicant

A low-power FM station in northeastern Ohio is at risk of being displaced by a proposed new full-service station in the area.

Western Radio Group has filed a petition for rulemaking with the FCC requesting an amendment to the Table of Allotments to make 102.3 MHz available for auction for the purpose of signing on a 6,000-watt nondirectional FM primary station to serve Dennison, Ohio, a community of 2,709 in Tuscarawas County.

WDNP(LP), a low-power FM station licensed to Dover, Ohio, and operating on 102.3 MHz would be displaced by the full-power allotment, according to the group's technical exhibit filed with the FCC.

To stay on the air, the LP100 station would have to move up or down the dial if the application for a Class A FM on Channel 272A is approved by the FCC. Several options appear to exist for the LPFM to change frequencies.

Unusual case

LPFM stations are a secondary service and therefore face the possibility of being uprooted at any time if the spectrum is needed to grow or otherwise modify primary full-service stations, according to the FCC.

If the commission adds 102.3 MHz to the Table of Allotments for the community, the frequency will be included in a future auction. The winning bidder would then be allowed to apply for a construction permit that complies with the allotment to build, according to the FCC.

REC Networks, an LPFM advocate, told Radio World that instances of a proposed allotment bumping an LPFM station are rare, "as most of the recent allotments have been clear of the 2,000 LPFMs that exist."

The expense of changing frequencies for an LPFM broadcaster can be significant, likely in the thousands of dollars.

In the case of WDNP, an engineering report paid for by Western Radio Group gives the LP100 station several options to move elsewhere along the dial if the plan goes forward.

Secondary stations such as WDNP have the option of submitting a displacement application asking for any other FM frequency that meets the necessary technical criteria, according to Western Radio Group's filing.

"In the case of WDNP(LP), there are two other frequencies available at the same exact location that WDNP can relocate to: FM Channel 245 (96.9 MHz) or Channel 290 (105.9 MHz)," according to an engineering report from the applicant that was prepared by Goldman Engineering Management.

Western Radio Group stated that WDNP can even use an allocation study it prepared to apply for displacement at no cost.

"All this could easily be done by WDNP [with] no or minimal interruptions in their broadcast signal should they choose to continue operating as an FCC-licensed LPFM noncommercial station," it wrote. "If the Western Radio Group is able to obtain the 102.3 FM full-power frequency from the FCC, we would be willing to work with WDNP in announcing their move to a new frequency when it officially goes live."

Western Radio Group has gone so far as to create new logos for WDNP that include the two available frequencies, according to Brian Walker, one of its owners.

"We want to see WDNP continue its mission and see them prosper. This is why we've done the engineering study needed to allow the filing for displacement with the FCC," said Walker, a partner in Western Radio Group with Leonard Dugger and Kevin Willoughby. The three are also part of the ownership of an AM station and FM translator in nearby Uhrichsville, Ohio.

Walker says it would be "unfortunate to see WDNP not be around in the future, as we have two of the students who learned radio there now working for us. And we would need additional personnel to hire if we were able to get the new frequency."

LPFM FAQs

Information about the low-power FM service and relevant FCC rules can be found at *www.fcc.gov/media/radio/lpfm#RULES*.

> **"WDNP provides a valuable community asset that fosters communication, broadcasting and other services that greatly enhance the city of Dover and its citizens."**

"Death blow"

However, a representative of WDNP told the FCC that the low-power station would not survive a frequency change, considering the expense involved.

Steven Shumaker, the LPFM's program director, wrote: "While asking for a displacement relocation would not cost us anything with the FCC, other factors would deliver the death blow. Being a non-profit, the costs in making the change would include a repair/change to our antenna, tower, legal fees, engineering costs, incidentals and the repairs we already have earmarked for the little money we have, would be too great for us to afford."

Shumaker, who is a sixth-grade social studies teacher at Dover Middle School, told the FCC of fundraisers and community events WDNP has sponsored since it signed on in 2015 with a volunteer staff.

"WDNP had a two-part mission: to serve the other non-profits in the area by helping them get their message out to the masses; and to serve as an educational station, teaching other citizens of the Dover/New Philadelphia in the art of radio. Both of these missions were done at no charge to the public."

Tod Carper, the LPFM's chairman, wrote to the FCC: "I implore you to not offer up our frequency for another station to purchase. We love serving the community and want to continue to do so. WDNP and its volunteers have worked hard to make the station great, and we deserve to continue to grow. Please deny the auctioning of the 102.3 FM frequency."

Supporters of WDNP filed comments describing the LPFM's benefits to the community and local schools.

"It is difficult for me to imagine, in this day and age, that a group of dedicated, hardworking and community-minded people can have their entire effort stolen. I won't pretend to understand the details of this transaction other than to say it's unethical," wrote Jennifer Immel, who has spent time as a disc jockey on the station spinning the "80s Tunes at Noon."

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Shane Gunnoe, the interim mayor of Dover, Ohio, went to bat for the non-profit LPFM, writing: "WDNP provides a valuable community asset that fosters communication, broadcasting and other services that greatly enhance the city of Dover and its citizens."

The city of Dover adopted a resolution urging the FCC to support WDNP, saying it enhances the welfare of the citizens of Dover. In addition, the station has received dozens of letters of support from listeners.

Consequences

Western Radio Group's Walker acknowledges that the frequency tussle has led to hard feelings.

> **We feel it's in the best interest of the county to have additional local programming that can be accessed outside of the limited WDNP coverage area.**

"It is extremely unfortunate that the personal attacks and lies have percolated from those involved with WDNP radio on many fronts, but not all of them involved with the radio station itself," Walker said.

He said some letters sent to the FCC have exaggerated or incorrectly described the situation, and he denied that Western is bullying WDNP.

"It is as if these people don't care about the other 70,000+ people in our county having other access and alternatives to local radio just to protect their LPFM, when the solution provided by the FCC is they can file for displacement and allow for them to continue operations, and the entirety of Tuscarawas County can have another locally owned and operated radio station," Walker said.

For its part, he said Western Radio Group wants to restore "alternative local radio" to an area that has limited local radio options right now.

"We feel that this pursuit of a full-power FM is extremely important in an ever-growing consolidation of national non-locally owned radio stations ... We do not have a specific format yet in mind, but we would definitely [air] local news, weather, sports and related community service announcements, providing the frequency goes to auction and we win," Walker said.

Above
Brian Walker with the 1963 RCA vacuum tube AM transmitter that was used when WBTC(AM) in Uhrichsville, Ohio, went on the air. It is still operational and used as a backup.

"We feel it's in the best interest of the county to have additional local programming that can be accessed outside of the limited WDNP coverage area."

WDNP's Tod Carper responded to a Radio World email seeking comments on Walker's allegations that the station or its supporters were spreading misleading information.

"As to the allegations of attacks and lies, there has been no examples given of such behavior, and I have seen no evidence to support this statement. To me, it seems to be an emotionally charged, defensive reaction to being called out on their bad behavior."

Carper said the LPFM will continue to focus on community outreach, grant-writing and recruiting volunteer staff in 2023.

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"If we lose our 102.3 frequency, we do have options, but we have not yet measured all of the ramifications of each of those options. That we are able, or willing, for that matter, to carry on, remains to be discussed and determined. In the coming year, we will refocus on the things that brought us this far, while keeping a watchful eye on opportunities on our horizon," Carper said.

REC Networks told the FCC that the comments from the community demonstrate that dropping primary allotments on well-established secondary services can have substantial consequences.

"LPFM stations like WDNP(LP) ... have definitely been woven into the fabric of the community, and to suddenly rip out the stitches can have some substantial impacts on that local community," it wrote.

"Despite that, LPFM stations, by design, are required to give way, despite the many years the station has invested in the community and even more importantly, the many years the community has invested in the station through their trust, loyalty, involvement and support. This proceeding is a testament to the public interest these little 100-watt stations do provide to their communities."

Western Radio Group's original petition for rulemaking included an engineering report that said a second LPFM, WNPA(LP) licensed to Canton, Ohio, on 102.5 MHz, would also be displaced. However, further evaluation indicated that WNPA would be able to continue operations.

"WNPA will, on paper, receive new interference from the new allotment, but given the fact that it's first-adjacent and there's intervening terrain, it's doubtful that it will cause any problems," said Bert Goldman, president of Goldman Engineering Management, which prepared Western Radio Group's technical report.

A message seeking comment was left for WNPA.

The comment period for the proposed change to the FCC's FM Table of Allotments has closed. Comments can be reviewed under proceeding 22-337 in the commission's online system.

Can voice solutions restore radio's relevance?

Roger Lanctot, left, thinks it's time for radio to take better advantage of Alexa, Google Voice and Siri.

Lanctot is director, automotive connected mobility for Strategy Analytics; he writes about trends in automotive areas including infotainment systems.

In a commentary on the Radio World website, he picked up on a discussion begun by consultant Fred Jacobs. Lanctot noted that consumer interest in Alexa smart speakers seems to have flattened, beyond their use for utility tasks like accessing the streaming feeds of radio stations.

"What Google and Alexa ultimately achieved with their smart speakers was a separation of the search function from the essential advertising monetization," Lanctot wrote.

"Initial consumer enthusiasm for smart speakers reflected the enticing value proposition of search without the ads. This is precisely the kind of value proposition that makes Alexa (and Google Voice and Siri) so attractive for auto makers. Voice-based search without the advertising. Perfect for a non-distracting in-vehicle tool for locating charging stations, reserving a parking space or ordering tickets or a coffee."

LeshkaSmok/Getty Images

Lanctot says that lacking sponsored content, Google, Siri and Alexa in the car are valuable tools. "The car itself is a browser, and speech is the logical search solution — while radio provides the distraction-free advertising element. That's right. The brilliance of radio in the car is its ability to deliver location-relevant content (traffic, news, and weather) with music and talk without distracting the driver."

Lanctot thinks that with new digital tools — as well as enhanced location relevance if FM geotargeting is approved — radio has the potential to deliver much higher returns.

"With some broadcasters near bankruptcy or deeply in debt, the industry has strangely gotten the reputation of a stagnant, no-growth, no-innovation space. The reality ... is that radio is more vibrant and valuable than ever, especially as sources of information from Facebook to Twitter become increasingly suspect. Radio is real and relevant and, now, digital and therefore searchable."

He concludes that "It's time to recognize once and for all that radio owns the in-vehicle advertising and marketing experience" — and that Alexa, Google and Siri can play a crucial part.

You can read his commentary at *www.radioworld.com/author/rogerlanctot*.

John Bisset
CPBE
The author has spent over 50 years in broadcasting and is in his 32nd year 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.

Above
The Bell System safety motto. Copy and post in your office and transmitter sites, or create and print your own.

Right
Hard-slam the tip of your Klein 9s to dislodge knockouts.

Don't Forget to Tip
Workbench submissions qualify for SBE recertification credit and can be emailed to *johnpbisset@gmail.com*.

New uses for your handy "Klein Nines"

That gap between the handles and below the hinge is there for a purpose

In a September Workbench column, we talked about those big and beefy Klein 9-inch Journeyman's Pliers and named them a "must-have" for electrical work (not to mention occasional self-defense).

Wayne Eckert of Rural Communications Cooperative in Florida uses "9s" and sent in a couple of tips.

First, when removing knockouts from an electrical or panel box, most people use a screwdriver, hammer and a pair of 9s. But there is a simpler way to do the job. Take the 9s and, from the back of the box, hard-slam the tip of the pliers on the knockout (KO), opposite of where it is attached to the box. This will bend the KO into the box. Then on the inside of the box, grab the KO and twist it loose.

But where the 9s really come in handy is when you're pulling conductors or cable.

Anyone who has pulled a fish or mule tape will tell you that, even if you're wearing gloves, the job can be a real pain in the hands. It isn't easier when the tape is covered in wire-pulling lubricant (aka snake snot).

Well, try grabbing the fish tape using the gap between the handles of the 9s, just below the hinge. That space was designed to clamp a standard 1/8-inch fish tape. Now both hands can be used to pull the tape, with no chance of it slipping or hurting one's hands.

Working with a mule tape? Simply bring the tape through the same gap and wrap it around the 9s a few times, then pull. Again the procedure makes it a lot easier to pull and prevents injury to one's hands.

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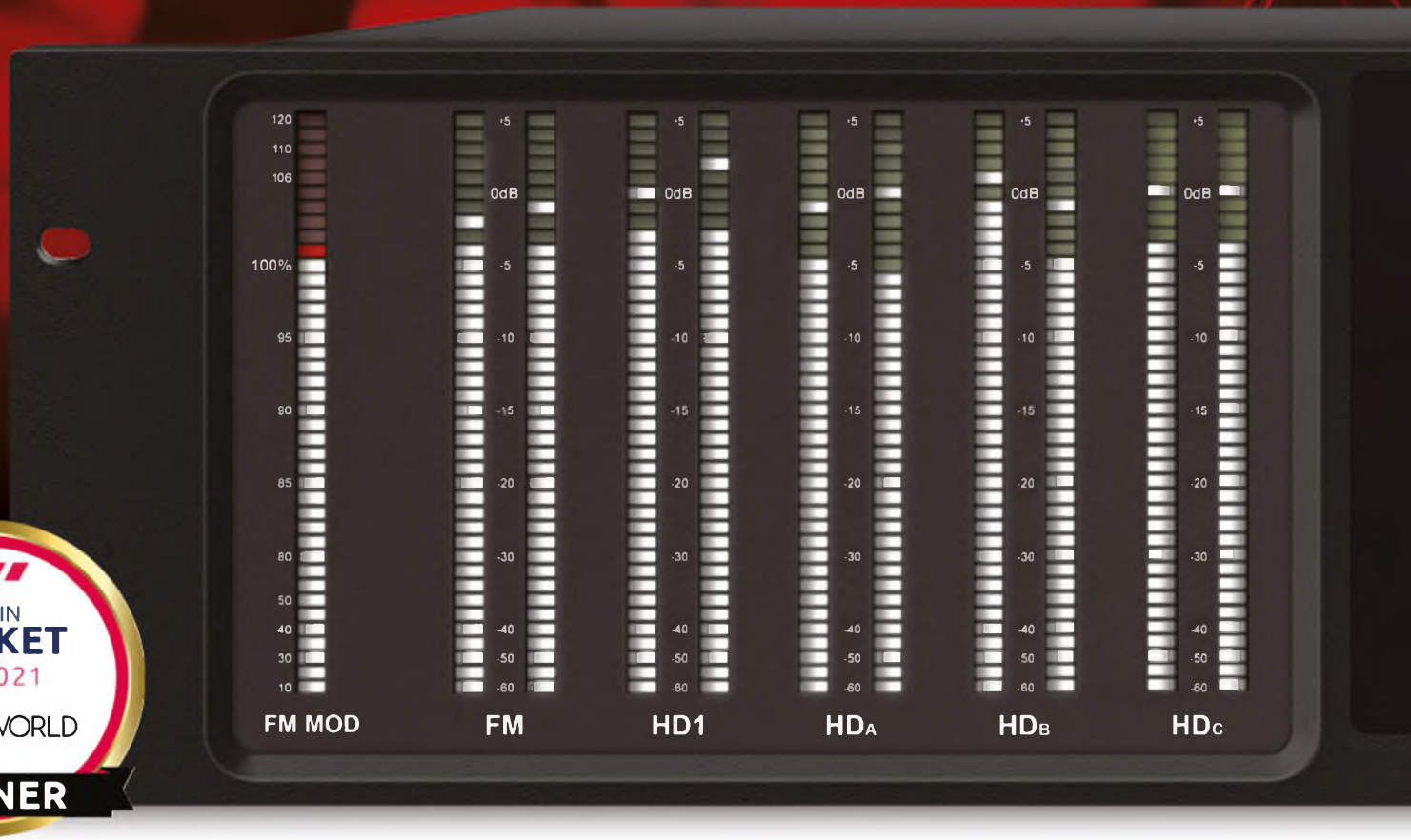

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Founding Partner & VP Engineering USADR/iBiquity

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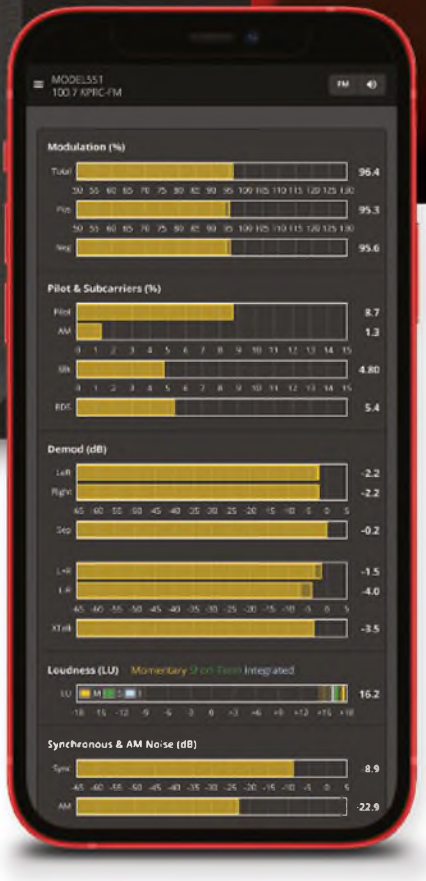

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Above from left to right
Once the knockout is bent into the box, you can remote it easily using the pliers.

The notch near the hinge is designed to grab a 1/8-inch fish tape safely.

That notch can also be used to hold cloth "mule" tapes in the same manner.

Wayne adds that your 9s can also be used with a screwdriver to tighten conduit connector lock nuts. This is indeed a versatile tool.

You'll notice in Wayne's pictures that he's wearing gloves. Working safe and smart assures that you'll go home uninjured — the best part of the workday. Wayne also included a photo of the old Bell System safety motto. Be safe, readers!

IEC what you mean

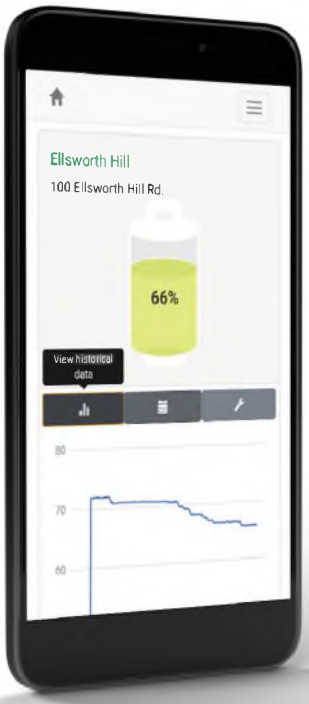
Lou Schneider, who was "the transmitter guy" at Santa Monica College's KCRW(FM) before retiring, saw our recent discussions about using one-foot extension power cords to solve wall-wart crowding.

He points out that some of these cords are terminated in an IEC connector rather than a standard three-prong extension cord plug. You can't plug a wall-wart into an IEC connector, so be sure to search for "three-prong 1-foot extension cords" in the Amazon search block.

What's the emoji for "full tank"?

Aaron Shultz is the IT director and assistant engineer at The Joy FM and its parent the Radio Training Network in Sarasota, Fla.

In a recent SBE webinar and a subsequent Radio World article about hurricane preparedness, Aaron was quoted saying he uses a product called Tank Utility to monitor propane generator fuel consumption and fuel on hand at all of his tower sites. The app updates periodically to a centralized web manager. You can find out more at *https://tankutility.com*.



Right
A screen shot of the Tank Utility app for your phone.

Reminder

Have you thought about those three "Must Check" items when you visit a transmitter site? We're accepting suggestions and will be awarding some useful prizes for the best entries. Email your suggestions to *johnpbisset@gmail.com*.

Have mercy!

We can depend on consultant Frank Hertel, principal engineer with Newman-Kees RF Measurement & Engineering, to come up with memorable website links. For a lot of readers, his next one will take you back in time.

Frank didn't have a transistor radio until he was in the 8th grade. Prior to that, he used a crystal radio set. In fact he built many of them.

His final version drove a 4-inch speaker slightly more than a whisper. At night, Frank could connect a crystal headphone in place of the speaker, and tune to the high end of the AM band to hear — very faintly — XERF, the 250 kW flamethrower transmitting from Mexico across the Texas border.

Perhaps you started your own broadcasting journey with a crystal radio set? If so, you will enjoy an article at the website Nuts and Volts called "Remembering the Crystal Radio." Find it at *tinyurl.com/rw-crystal*. And if you remember XERF, Frank shares a link to a YouTube remembrance video of XERF resurrected. It's *https://youtu.be/XuasKDRNb8c* or at YouTube search "XERF: A Blast From The Past." RW

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Mike Kemp/Getty Images

Writer

James Careless

The longtime Radio World contributor wrote about the surprising resilience of shortwave radio in the Sept. 1 issue.

Debating the impact of BBC World Service cuts

It's another major blow to shortwave's lingering role as an international medium

In September the BBC World Service (BBCWS) announced significant service cuts and "around 382 post closures," or job losses, as the once-powerful global shortwave radio broadcaster copes with its latest round of budget cuts.

"High inflation, soaring costs and a cash-flat License Fee settlement have led to tough choices across the BBC, and the BBC's international services need to make a saving of £28.5 million, as part of the wider £500 million of annual savings and reinvestment to make the BBC digital-led," the organization wrote in a news release.

"Digital-led" in this case translates to cutting shortwave services in favor of online content, which doesn't require the hefty expense of power-hungry SW transmitters and expansive antenna farms. The BBCWS' Arabic, Persian, Kyrgyz, Uzbek, Hindi, Bengali, Chinese, Indonesian, Tamil and Urdu radio broadcasts were cancelled.

Although shortwave broadcasts from BBC News services will continue in Afaan Oromoo, Amharic, Burmese, Dari, French, Hausa, Korean, Pashto, Somali, Tigrinya, Kinyarwanda and Kirundi, the service cuts are another major blow to shortwave's reputation as a source for reliable global news and information accessible by cheap, hard-to-block radio receivers.

The cuts are the latest in a long-running move away from global airwaves. In 2011 about 650 BBCWS jobs were lost due to budget cuts. "Radio broadcasts in China, Russia, Ukraine and Turkey will be axed, and shortwave broadcasts will cease in Hindi," the Guardian news website reported at the time. BBCWS had cancelled direct English-language SW broadcasts to North America in 2001.

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The Russian invasion of Ukraine did motivate the BBCWS to resume four hours daily of English service, though not in Ukrainian or Russian, to Eastern Europe in 2022.

Anticipated loss

Resigned acceptance was the uniform reaction among observers of the international radio scene.

"Unfortunately, I am not greatly surprised," said Jeff White, co-founder and general manager of WRMI in Okeechobee, Fla., the largest privately-owned shortwave station in the western hemisphere. "This is a continuation of cuts by the BBCWS and many other 'government' shortwave stations around the world in recent years who think that they can save money by eliminating shortwave and replacing it with only an internet service."

Gilles Letourneau, influencer on the OfficialSWLchannel on YouTube and co-host of the weekly International Radio Report program, said, "With the license fees going away, it is obvious they needed to find money somewhere."

"This was predictable given the license fee losses," said Dan Robinson, former Voice of America White House and foreign correspondent.

"Honestly, no reaction," said former international broadcaster Keith Perron. "Except it was about time."

"VPNs get around this"

As readers well know, the value of SW broadcasting has been a topic of debate for years, revived recently with the deployment of some service into Russia and Ukraine by state broadcasters as well as publicly funded groups using pay-for-airtime transmission facilities such as those offered by WRMI.

Supporters of shortwave's use in the 21st century generally will point out that it is the only medium that can cut through censorship imposed by China, Russia and other countries that tightly control domestic internet, radio and TV traffic.

> **"High inflation, soaring costs and a cash-flat License Fee settlement have led to tough choices across the BBC."**

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Above
A page of the BBC World Service website.

More commonly expressed, though, is the opinion that shortwave's use is limited to a small group of hobbyists while pretty much everybody has moved to the internet. State censorship, they say, can be outwitted using Virtual Private Networks and the Dark Web; they see no reason to spend big money to maintain the medium.

However, "A digital-only world is great if it goes through," said Letourneau. "The problem is that many countries have little access to the internet, and China blocks the BBC online. Without shortwave radio, the Chinese population will be left in the dark."

"The cuts will be severe," said Sheldon Harvey, president of the Canadian International DX Club, a SW listening hobbyists' association. "Many Arabic and Chinese language speakers access BBC, both in their languages and in English, via radio, and they may not have access to digital services."

But Robinson and Keith, both of whom have deep roots in SW radio and an undeniable love of the medium, see the matter differently.

"At first glance, BBC's halt in radio output in 10 languages, including Chinese, Hindi, Arabic as well as Persian, might appear draconian," said Robinson. "But one has to question the extent to which the BBC, or the U.S.-funded U.S. Agency for Global Media [which operates the VOA], actually had large numbers of listeners in these target areas."

"I can't speak for the Arabic world," Perron said. "But for the Chinese world, it won't make much of a difference, as people in China want news from sources other than CCTV, CNR or print. The Chinese do block certain foreign news websites, but it is futile. VPNs get around this. And then you have other apps where BBC News content is available, such as the BBC Chinese TikTok channel, Telegram and YouTube, as well as many more."

Yet John Figliozi, editor of the Worldwide Listening Guide, said that while he appreciates the point about VPNs, "That is risky in places like China that are always doubling down on restricting access to 'unapproved' media sources. Shortwave's most important attribute today beyond its free availability is its ability to punch through interdiction efforts anonymously."

Soft power

One of the values of the BBCWS during the Cold War — along with vanished SW broadcasters such as Radio Canada International, Radio Netherlands Worldwide and Radio Moscow — was its ability to serve as a form of extension of influence of its government.

> **Compared to others, the BBC has been very slow in this regard, and they are finally catching up.**

"Every time they make more of these cuts, it diminishes the diplomatic soft power of the BBC," said White. "This panoply of cuts will diminish it greatly."

"The BBCWS likes to call themselves the World's Radio Station," Letourneau said. "Unfortunately, by cutting service to a big part of the world population, it is less true."

But governments have been cutting international SW broadcasting as far back as the 1990s, when the Cold War was believed to have been "won." Compared to the 1980s, today's airwaves offer far fewer program choices save for diehards such as Radio Havana Cuba, Radio Romania International and Radio New Zealand Pacific, along with private stations such as WRMI and a host of religious broadcasters.

The steep drop in choice has motivated many former listeners to move to TV and the web. Critics say the trend also has stunted the use of the Digital Radio Mondiale transmission standard on shortwave, which remedies the static, signal fading and poor audio quality of analog SW broadcasts.

Because of the lack of audience, Perron — whose SW broadcast credits include Radio Canada International, Radio Havana Cuba, Radio Netherlands, Deutsche Welle Africa Service, China Radio International and the BBC World Service in three languages — thinks the notion of soft power is of little consequence.

"If you had asked me about this in 2010, I would have said that this is the wrong time," Perron told Radio World, but now, "It's a very good decision. If the BBCWS wants to continue to be relevant, this needs to be done. Compared to others, the BBC has been very slow in this regard, and they are finally catching up."

Yet longtime SW devotee Sheldon Harvey counters that despite the spread of the web and mobile phones, "millions of people on the planet still rely on radio for news, information, entertainment and education. More and more each day, people are losing access to this important medium."

Meanwhile, a subsequent development in December would seem to suggest that hoping for an expansion of BBC OTA services in any form is probably forlorn.

As noted on page 3 of this issue, BBC Director-General Tim Davie gave a speech before the Royal Television Society in which he said the United Kingdom and the BBC must begin work today to prepare for an internet-only future.

"For the BBC, internet-only distribution is an opportunity to connect more deeply with our audiences and to provide them with better services and choice than broadcast allows. It provides a significant editorial opportunities. A switch-off of broadcast will and should happen over time, and we should be active in planning for it."

When Hank and Greg built a broadcast console

How the Gregg Laboratories Series 2000 board came to be

Writer

Hank Landsberg

Owner, Henry Engineering

From 1974 to 1988, I was director of engineering at Drake-Chenault Enterprises, a California-based radio programming producer. We distributed music format tapes for automated radio stations, as well as producing "feature shows" such as the acclaimed "The History of Rock and Roll" and 'The Golden Years of Country."

In 1977 we rebuilt our studios. The rooms required the capabilities of both a radio board and a recording-studio board, so I decided to design and build custom audio consoles.

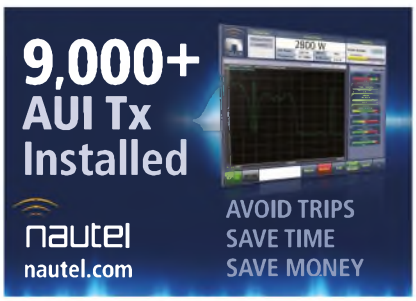
These consoles also had to be exceptionally reliable. Many of the broadcast consoles of that era were built using what I called "transistor radio parts," not the rugged components used in past decades.

Our D-C boards utilized "only the good stuff": Penny & Giles faders, MicroSwitch and Grayhill switches, Bourns rotary pots, API VU meters, etc. The design paid off, as the consoles proved to be precise in operation and exceptionally reliable. There were no component failures even after 10+ years of very heavy use.

In 1981, I decided to design a more traditional broadcast console based on my experience with the DC boards. It would include some features that simply weren't available on a typical radio station board.

There were three stereo mix busses, and the ability to assign a channel to more than one bus at a time. Each Line channel had a Left/Right/Stereo/Mono mode switch, a

Above
Gregg board in use at KNAC Los Angeles



very useful feature especially when doing production or dubbing tasks.

There was also a Talkback system, Cue bus, Remote Line Selectors and electronic audio switching. These functions were unheard of on moderately priced "radio boards," which were simplistic in those days.

I built three prototype units and sold them to KTNQ(AM) and KIKF(FM) in Los Angeles and KMFO(FM) in Capitola.

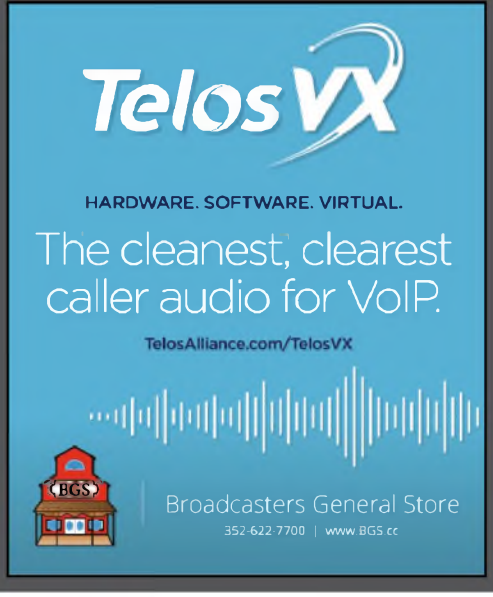
Audiophile quality

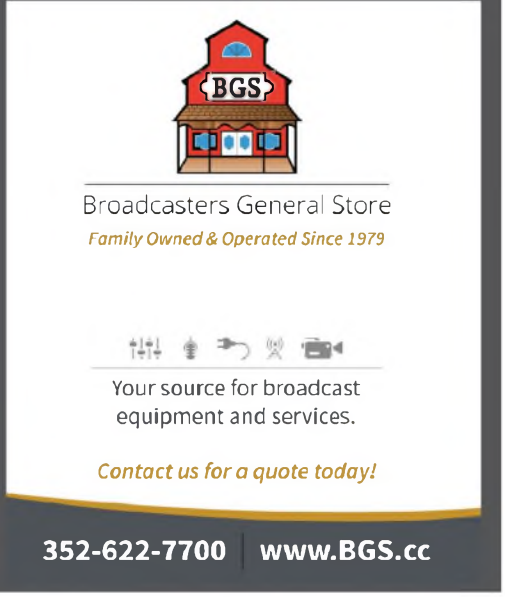
About this time, my good friend Greg Ogonowski was ramping up his company Gregg Laboratories.

He saw one of my consoles and suggested that it might be good for both of us to market the board as a Gregg Labs product. I agreed, and soon we were working together.

We took my original design and made a few enhancements. The third "Send" mix bus changed from being

Above
Gregg board at KIQQ in L.A.



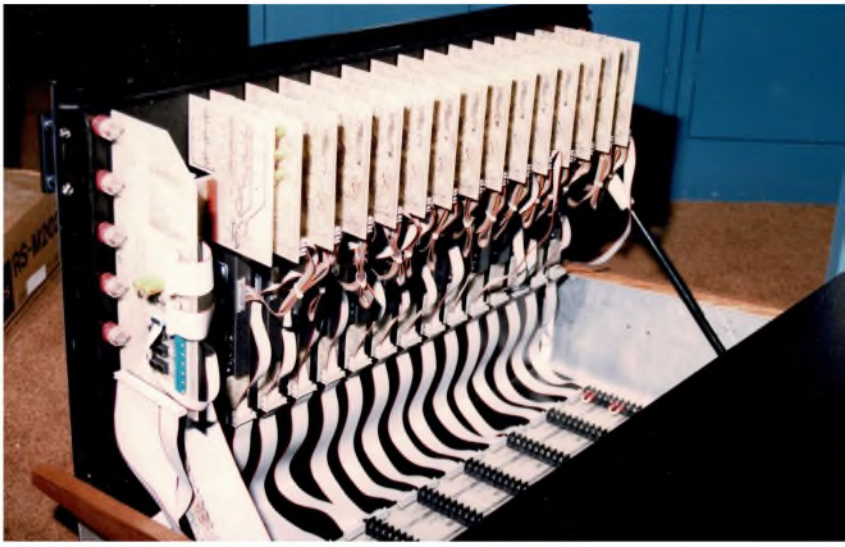


switch-assigned to being a separate mix, controlled with pots. I added a Cue position to the Line channel Mode selector, so a channel could go to the Cue bus without having to move the fader (again, useful during complicated production tasks). The opto-isolators that I had used for audio switching were replaced with active circuitry, and we used servo-coupled Line, Mic and Output amps to eliminate coupling capacitors in the audio path. The console's topology was fully balanced but transformerless, another departure from the traditional "old school" design of broadcast equipment.

Greg's expertise helped me refine the audio circuitry of the product, which bested the typical radio board by an at least order of magnitude. It spec'd and sounded more like high-end "audiophile" gear than typical broadcast equipment, with rock-solid bass and crystal-clear transparent highs.

Even in the days of vinyl, the superb transient response of the Gregg consoles was clearly audible. Greg agreed with my choices of high-grade components and the overall layout and design of the console, so little was changed there. Our internal modular design allowed any mix of Line and Mic channels, but the top panel was solid 3/16-inch aluminum, so that dirt and coffee spills couldn't get inside and degrade any components or compromise reliability.

In 1983, we began production and sold them quickly. KIQQ(FM) and KNAC(FM) in Los Angeles were among the first customers. The list price for a Model 2040 with 14 channels providing 24 input sources was $12,500.



Above
Interior view

A few of the Gregg Labs boards have surfaced recently and are being restored. The mil-spec pots and switches are still reliable and working well. I've joked with their new owners that the Gregg Labs boards included a 40-year warranty, so it's no surprise that they work and sound just like new!

BUYER'S GUIDE

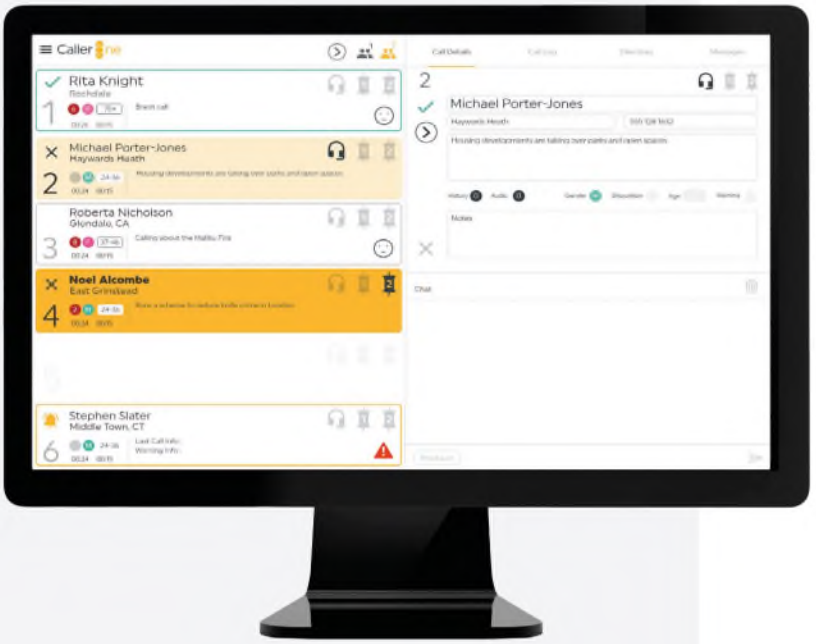
Phone & Talkshow Management Systems

About Buyer's Guide

The Buyer's Guide section appears in every other issue, focusing on a particular category of equipment and services. It is intended to help buyers know what's on the market and gain insight into how their peers are using such products.

Tech Update

An Affordable **SIP** Talk Show System



Caller One from Broadcast Bionics is a software talk show system available in three, six or 12 lines.

"All you need to run it is an internet connection and a PC, laptop, Mac, iPad and either Livewire driver or any WDM soundcard," the company says.

"It's WebRTC-based so you can harness the power of amazing Opus audio quality and use the system from anywhere — studio, home or out on your OB. You can run up as many simultaneous users as you like as there are no restrictions, which means that you can work collaboratively with your colleagues, anytime."

Bionics has updated the user interface, making it visually more appealing and easier to use. It added features such as call recording, ability to send DTMF, support for VClock GPIO, and improvements to the call log, making it easier to search for callers and see who has been on air.

Notably it also is now compatible with the Grandstream GVX3380 IP video phone. "Bionics has given thought about the Grandstream's large touchscreen and has adapted Caller One to work as seamlessly on this handset as it does on a traditional screen." It says these handsets, which are available from local electronics providers, are inexpensive compared with traditional "broadcast" hardware.

Caller One is a self-download product; no installation services or specialist hardware are needed. In the U.S. it is available from Broadcasters General Store, and internationally via Broadcast Bionics' distributor network. Systems start at $995.

Info: www.bionic.radio

Tech Update

Light Up With the **Yellowtec litt**

The litt Signaling Device by Yellowtec provides powerful 360-degree LED light signals.

Using a technology called CleanVision, litt is characterized by brilliant, perceptive lighting characteristics, the company says. "There is almost no reflection. Despite extreme brightness and maximum signalling effect, the light is never dazzling or penetrating."

You can combine one litt Base Controller or Base Controller Wall-Mount with up to five litt Color Segments. There are five light colors — red, yellow, green, white, blue — and two heights available, with several flash patterns for each segment individually. You can also add a litt Sound Segment if you wish to add acoustic signals to accompany and intensify the LED signals.

Litt itself is available in a black or aluminum color.

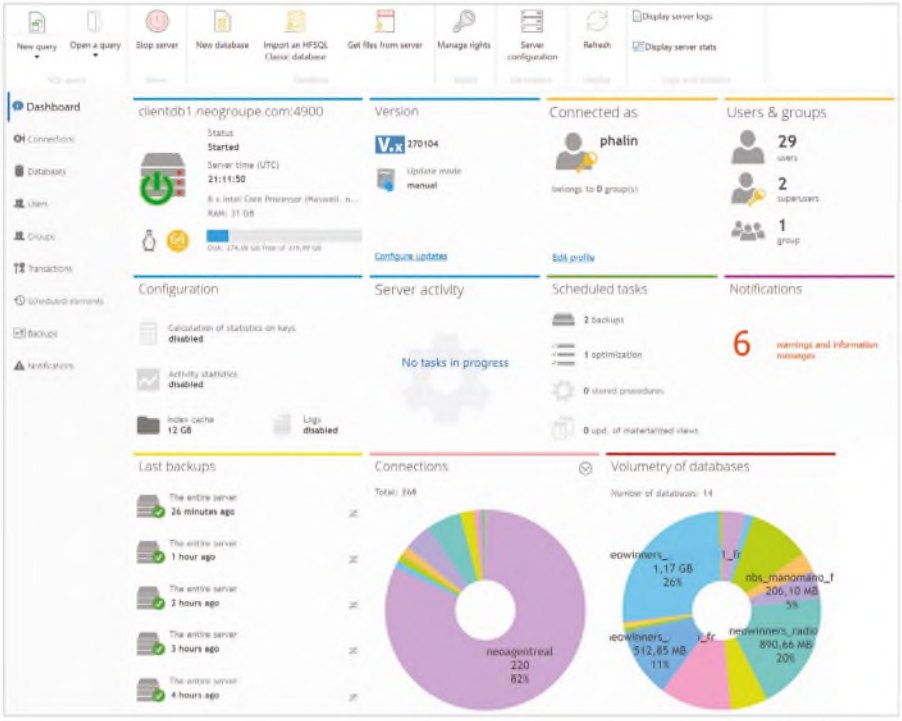
It's a suitable way to add professional signaling to the company's m!ka Mounting System. "For example, litt can be mounted on top of a m!ka System Pole, as its diameter is identical to that of the pole."

The Base Controller Wall Mount is now available in black as well as aluminum. It can be mounted to any wall, for example next to a door to indicate whether you are on air or if anyone can enter the room.

Info: www.yellowtec.com/litt/

Tech Update

Neogroupe Offers Cloud Services for NeoScreener



Citing market demand, NeoGroupe has started offering cloud database hosting services.

"With servers across all continents, the company is now able to service clients with databases physically located close from their operations," it says. To mitigate risk, they operate from self-owned sites as well as a mix of cloud data services.

"For stations, this removes the hassle of managing an internal server, with upgrades, updates, monitoring, reindexing, backups, HDD issues, electricity, obsolescence, exposure, and opening an incoming TCP port."

Security measures include hourly data replication in five physical locations, hardened servers, monitoring and multiple levels of security. The products are GDPR-compliant, including strong encryption between clients and database servers.

Multi-station databases for the NeoScreener talk show call screening system and NeoWinners promotion and giveaways management system, or ad-interfaced databases for the NeoGroupe Business System, are now managed by NeoGroupe, so any application can access the data from anywhere.

The company said the security provided by this approach has convinced major customers to move existing NeoGroupe product databases off-premises or to launch new ones in the cloud.

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

Tech Update

Glensound Introduces New Mobile Hybrid

The Nomad is the latest mobile phone hybrid from Glensound, building on its GS-MPI004(HD).

The company says it uses the latest phone module, allowing greater worldwide compatibility and full HD voice over LTE, in a compact package dedicated for broadcast.

An XLR input is available for dynamic or 48V phantom mics, or it can be set to line level. A 1/4-inch jack provides connection for headphones. You can set an auto answer mode, and there is a selectable background noise suppressor.

Using the same network provider (where HD Voice is available) on either end of the call allows 7 kHz audio links to be made for excellent speech performance.

The OLED screen now allows simple configuration and monitoring of call functions such as signal strength and caller ID, and the input now has a configurable on/off or cough button.

"The line output can now be set for a true balancing unit with just the isolated remote end audio, or it can be mixed with the input for a complete program feed available locally."

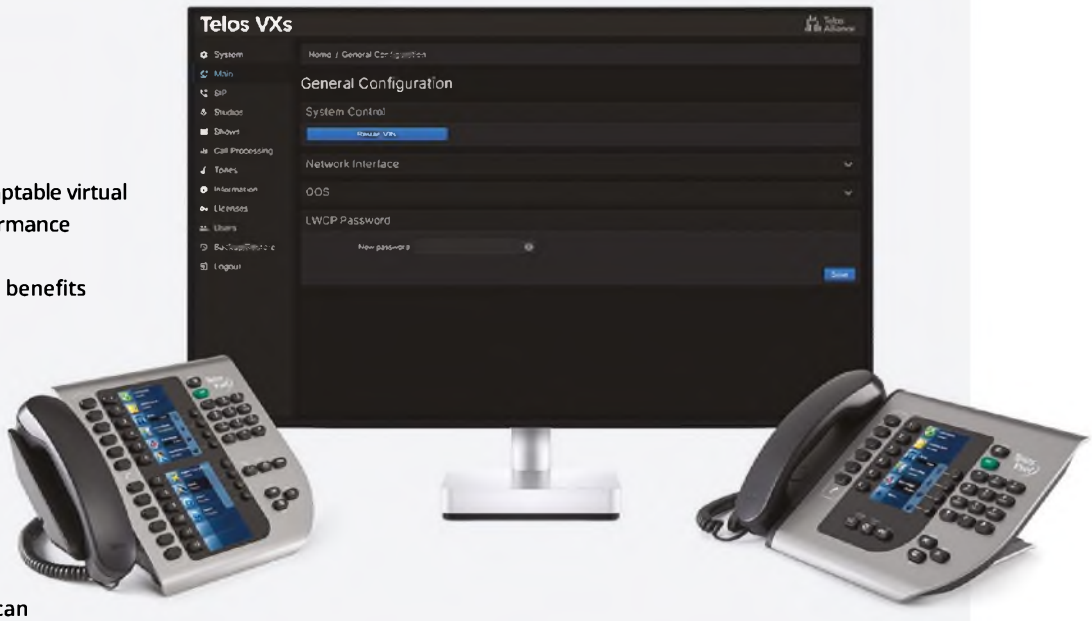
Powering options have been enhanced. Six AA batteries now give 5-1/2 hours connected run time. As well as the standard DC input, a USB C power input has been added to allow powering from USB power banks.

List price is $1,450.

Info: www.glensound.co.uk/product-details/nomad/

Tech Update

Telos VXs Virtual VoIP System



Telos describes its Telos VXs as a powerful and adaptable virtual voice over IP system for broadcast with high-performance audio quality.

"Telos Alliance introduced broadcasters to the benefits of VoIP a decade ago with VX, the world's first VoIP talkshow system, in a hardware appliance," it says.

The company says the VXs helps broadcasters reap the benefits of virtualization as they adapt to changing workflows, while making it easier for teams to produce their content.

The system is suitable for call management in radio, TV and pro AV applications. The software can be deployed on a server in the rack room, in the data center or in the cloud; and the system is scalable from a single-line system to a facility-wide system or a multi-facility system.

Features include plug-and-play connectivity to Axia Livewire or other AES67 or compatible SMPTE-2110 networks; native support of the G.722 HD Voice codec; and caller audio from fifth-generation Telos Adaptive Telephony technology including Digital Dynamic EQ, AGC, adjustable caller ducking and audio dynamics processing by Omnia.

The VXs connects with all modern VoIP PBXs and UCaaS providers supplying SIP endpoints (extensions). And it connects to legacy traditional POTS and PRI/BRIISDN circuits telephone lines via Telos-configured Asterisk servers. It supports dial-up IFBs, remote engineering coordination and on-air and straight-to-tape contribution.

Info: http://telosalliance.com

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Writer

Brad Price

Senior Product Marketing Manager, Audinate

Ignatiev/Getty Images

Add livestream capabilities to your radio show

Improve audience engagement and retention as listening preferences evolve

An ongoing challenge for stations is maintaining and growing market share. People are consuming content in a variety of formats that best suit their viewing and listening preferences. From traditional AM/FM to satellite to podcast recordings of morning shows, listeners want more options to stay engaged with their favorite stations and on-air talent.

Many stations have added audio livestreaming to their content offering, and more are adopting video livestreaming as a way to expand promotional opportunities for their station and talent. It doesn't have to be just the top-end stations with the biggest budgets. Livestreaming is more achievable than ever, as high-quality production equipment is becoming increasingly affordable and easier to integrate.

One of the greatest benefits is the ability to reach a larger audience. FM and satellite broadcasts are limited by transmission distance, geography, atmospheric conditions and more. Livestreaming can reach listeners thousands of miles away; all they need is a stable internet connection.

With increased audience, the station's marketing team has more opportunity to secure larger advertisers and increase revenue. They can promote on-air talent, helping increase listener loyalty. Video clips of interviews or other memorable moments can be posted to social platforms to increase brand awareness and retention. The new livestreaming capabilities can also benefit multiple shows and stations if they share studio space.

Here's what it takes to add a video livestream capability to a radio studio setup and some technical issues to consider.

Infrastructure needs

If the radio station has deployed an audio-over-IP solution in the studio, adding a video element to the livestream is straightforward. The key is to keep the audio and video synchronized at all times. If the audio-over-IP solution offers native video synchronization, such as Dante AV, adding video livestreaming simply comes down to adding necessary hardware.

If the studio doesn't have an AV-over-IP solution in place or uses older point-to-point connectivity, the station has a blank-slate opportunity to add an IP-based solution for maximum flexibility. In fact, existing cabling can be used because there are lots of hardware options available to convert from one format to another, saving money.

A computer will be needed in the booth to transcode the AV signal in real time into a format suitable for the livestreaming service. For multi-camera operations, a video switcher is required to allow someone to choose which camera is active at a given time or to display multiple cameras simultaneously, such as with a split screen. There are many switcher options available; the selection should be based partly on compatibility with the chosen AV-over-IP solution and the number of endpoints involved.

Cameras and lighting

The biggest determining factor for choosing video equipment is the space available in the studio, for lights as well as cameras.

Camera placement and focal length are related, and you must account for on-air talent moving around. Granted, movement will be limited by having to stay close to the microphone, but they may move around or lean back when not speaking.

"Livestreaming is more achievable than ever, as high-quality production equipment is becoming increasingly affordable and easier to integrate."

Cameras can range from hundreds to thousands of dollars depending on the application, with a variety in form factor. LED lights are available in a multitude of form factors; the most flexible can switch between "color temperatures" or Kelvin values. Trial and error can determine the best placement and color temperature for each studio.

Most livestream services will either transcode to 1080p automatically to save on bandwidth, or the video compression on a 4K signal may be severe enough to make a higher-end camera not worth the investment. Multiple cameras can increase production value and viewer interest and may be required for shows with multiple hosts or occasional in-studio guests, so make sure to factor that into budget considerations.

More options = audience retention

If the cameras are fixed-angle, the show's producer should be able to handle the video needs for the livestream. Presets could be set up in the system so that if audio is detected on a specific microphone, the video feed automatically switches to the camera that's focused on the person speaking into that particular microphone. If more than one mic is active, the feed could switch to a wider-angle fixed camera covering multiple people.

If there's space in the studio for camera operators, and if the budget can support it, one or two additional team members could be used to operate the cameras. Video switching between multiple cameras can still be straightforward as long as the audio and video feeds are synchronized.

Giving listeners more ways to listen to a station and connect with on-air talent is a great way to keep the audience engaged. The greater the engagement, the greater the promotional and advertising opportunities available to the radio station. The increased revenue and market share retention will quickly surpass the cost of adding a few pieces of AV equipment. RW

Readers' Forum

More on FM mono vs. stereo

I just want to add my own experience on this subject.

This goes back 40 years, so I understand the relevance may be problematic due to the differences in today's receivers.

Around 1980 I was chief engineer at WDHA(FM) in Dover, N.J. The audio went up to the transmitter on 15 kc phone lines, and we had an Orban 8000 stereo generator.

Whenever we needed to do something that required us to go mono, usually involving the phone lines, I would put the stereo generator in the mono left or right mode, depending on what we were working on, thus turning the pilot off (and turning the stereo light off on receivers). The board would also be put in mono.

We would always get a few calls asking why we were not in stereo, which would upset the general manager. So I started paralleling whichever side we were not working on into the stereo generator, therefore transmitting in mono while the stereo light on receivers stayed on. Never got a call when doing this.

I'm not trying to take one side or the other, just reporting my real-world experience and letting the reader draw their own conclusions. Mine was that listeners depended much more on the stereo light to determine whether they were listening in stereo than anything else.

Alan Parnau

How to submit

Send letters to the editor to *radioworld@futurenet.com.*

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