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Radio for the Trojans

This high school station thrives even after 50 years

Paul McLane
Editor in Chief

A while back I was invited to visit high school radio station WKHS in Maryland to help celebrate its 50th anniversary. I was impressed with the station, the inspiration it generates among students, the enthusiasm of its professional manager and its practice of involving students with the Society of Broadcast Engineers.

These achievements are all the more notable given the stories we hear constantly about how young people aren't interested in radio anymore and how some high school and college administrations question the value of their broadcast licenses.

So I asked our Nicholas Langan to drive to the Eastern Shore, spend time at the station and tell you about it; his article is featured in this issue. I enjoyed it and think you will too. Are you involved in a school radio station that is connecting with students? Drop me a letter to the editor at *radioworld@futurenet.com*.

(Side note: When I visited WKHS and browsed its small collection of legacy broadcast equipment, I found myself looking at a console that I had sold to the station back in 1987 when I worked for Radio Systems. Here I was looking at the same piece of hardware almost 40 years later as it sat on the "retired" shelf. It was an ... interesting moment.)

In this issue you'll also find a piece from our longtime columnist Mark Persons about applications of Ohm's Law. This was prompted by the strong ongoing interest we've had in a story about that topic that Mark had written five years ago and that remains available on the Radio World website. As I told Mark, there are concepts in radio engineering that will seem very basic to many readers but that we want to explore for the benefit of others who may not be familiar with them.

Left
Students joined station alumni at a WKHS anniversary event in 2024.

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On the cover
Kent County High School senior Alayna Brown sits in the on-air chair of WKHS. See page 13.

News From Washington: FCC to Tweak Broadcast Rules

YayaErnst/Getty Images

The commission wants to update a slew of radio and TV rules; it is asking for your thoughts about it.

We told you last issue that an NPRM was in the works. All five commissioners subsequently voted to open the notice of proposed rulemaking, so the changes we listed earlier are officially are on the table for debate.

One would update the rules for AM station power increases to eliminate a requirement that stations request at least a 20% increase in nominal power.

Another would remove language stating that an initial special temporary authorization to address technical or equipment problems may only be granted for 90 days with a limited number of 90-day extensions, rather than the full 180-day period permitted for STAs for other reasons. The FCC engineering staff has found that technical or equipment malfunctions frequently take more than 90 days to resolve. There are numerous other rule tweaks in the NPRM. Review it and file comments in MB Docket No. 24-626.

Pirate Update

The FCC also announced penalties against three more pirate operators in the Boston area. All three were in Brockton, Mass.

The commission issued a $120,000 forfeiture against Renold David for operating a station on 101.9 MHz known as "Lotnivo FM."

A $40,000 penalty was imposed against Djovany Pierre and Mario Turner for operating a station on 96.5 MHz. The station called itself "Radio Tele Brockton 96.5" and "Brockton Heat." And the FCC fined Joao Vieira $40,000 for operating "Brockton FM" on 102.1 MHz.

Each had received a notice of apparent liability in April. However none replied. Each has 30 days to respond before the forfeitures are confirmed.

The PIRATE Act of 2020 provided the FCC additional enforcement authority, including higher penalties. Since then the commission has proposed more than $14.5 million in fines and imposed $5.5 million, though there is no word of how much, if any, has been collected by the federal government.

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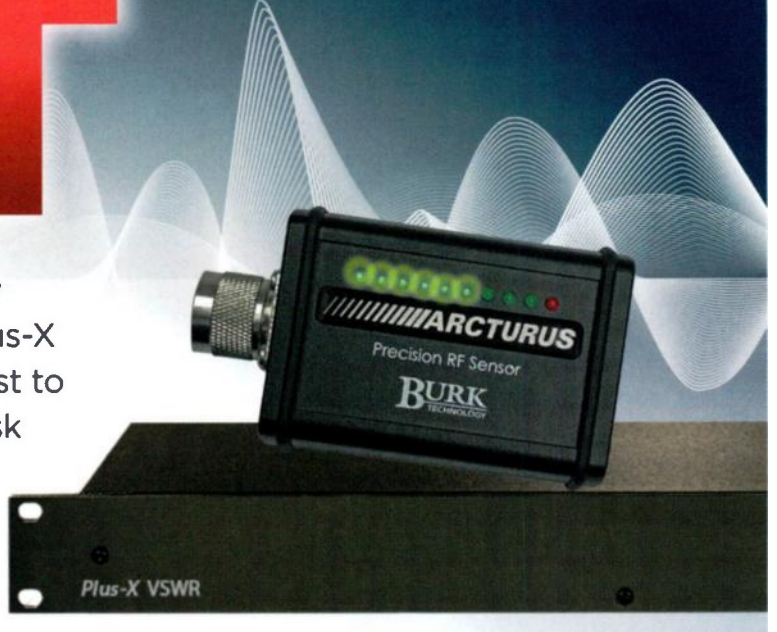

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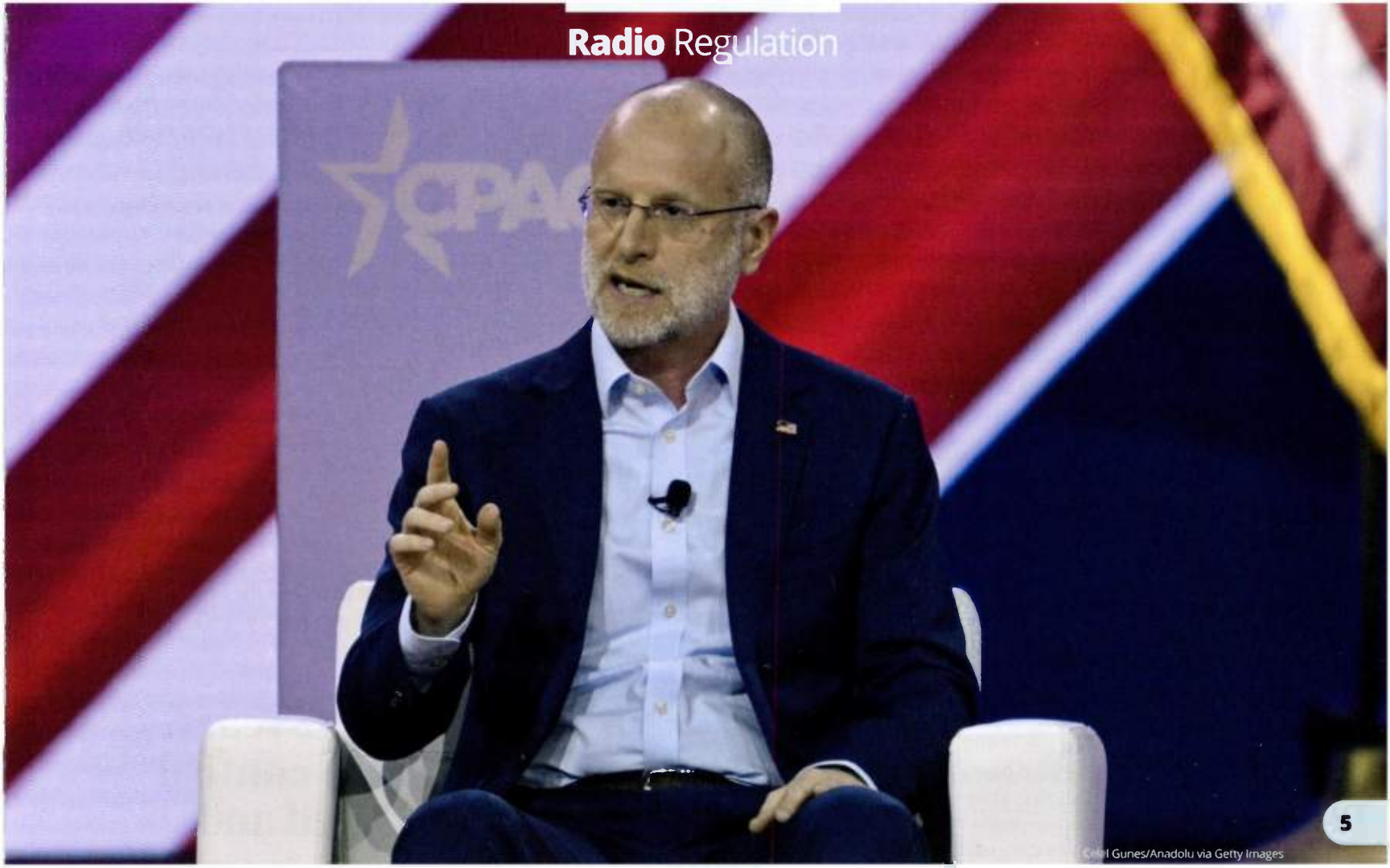

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Writer

Randy J. Stine

Radio World's lead news contributor profiled engineer Jim Dalke in November.

Above
FCC Commissioner Brendan Carr is shown at the Conservative Political Action Conference in National Harbor, Md., last February.

Trump presidency will bring sweeping change to FCC

What's expected to be on the FCC's 2025 docket?

Broadcast regulatory experts expect "fast and furious" changes at the Federal Communications Commission with Donald Trump's return to the Oval Office.

The transition to Republican leadership at the FCC started with the announcement that Brendan Carr will ascend to the chairmanship.

Carr began spelling out his agenda in interviews and social media posts. He has been a vocal critic of social platforms for what he believes is unbalanced limitations on conservative voices. He immediately called out Big Tech, saying "it's time to dismantle the censorship cartel."

He promises to roll back government regulations. "Democrats have been in charge of the Administrative State — the alphabet soup of agencies in D.C. — for at least 12 of the last 16 years," he said. "Over those 12 years, government control has increased and your freedoms have decreased. It is time to flip the script in Washington."

He also plans to shut down the FCC's own diversity, equity and inclusion programs.

"The FCC's most recent budget request said that promoting DEI was the agency's second highest strategic goal," Carr wrote in a post on X days after the president-elect announced his intention to elevate him to the chair. "Starting next year, the FCC will end its promotion of DEI."

Chairwoman Jessica Rosenworcel, the first woman to lead the agency in more than an acting capacity, announced she will depart the FCC on Jan. 20.

The five-member commission under President Biden has consisted of three Democratic and two Republican members. Carr was named to the FCC by then-President Trump in 2017.

The NAB was complimentary of the chairman-designate in a statement in November:

"Commissioner Carr has been a steadfast leader in holding Big Tech accountable and supporting policies that will allow local broadcast stations to better compete with these behemoths and thrive," the association said in a press release.

However, in several media interviews, Carr also has said that he plans to scrutinize broadcast TV operators to see if they are operating in "the public interest," and said they could lose their licenses if not.

Trump and Carr both were critical before the election of how some major national networks and programs covered presidential candidate Kamala Harris. But according to Business Insider, Carr emphasized that his comments about public interest obligations did not mean the FCC would target licensees he thought were too liberal, just that the FCC would enforce the law.

Beyond Project 2025

In the much-covered "Project 2025" initiative of the conservative Heritage Foundation, Brendan Carr authored a section about the future of the FCC.

He wrote: "The FCC should promote freedom of speech, unleash economic opportunity, ensure that every American has a fair shot at next-generation connectivity, and enable the private sector to create good-paying jobs through pro-growth reforms that support a diversity of viewpoints, ensure secure and competitive communications networks, modernize outdated infrastructure rules, and represent good stewardship of taxpayer dollars."

Carr wrote that the commission's goals should be to "rein in" Big Tech, promote national security, "unleash" economic prosperity and ensure FCC accountability and good governance.

Observers say the political realignment that emerged in November will squarely affect the regulatory framework of the commission and its goals. On subjects of interest to broadcasters, this could affect several rulings and proposals, some of which have drawn court challenges.

Carr and fellow Republican Nathan Simington dissented to the outcome in the FCC's most recent quadrennial rules review as well as the reinstatement of Form 395-B to collect broadcaster employment data, with Carr expressing particular opposition to making that data public.

The FCC decided in June to tighten its foreign program sponsorship disclosure requirements, but the National Association of Broadcasters asked a federal appeals court to set aside those new rules. Also in question is the future of a proposal to require disclosure of the use of AI in political advertising. Carr and Simington both criticized that in the months leading up to the election.

FCC observers expect the commission to revert to its mindset under the first Trump administration, focusing on abolishing broadcast regulations deemed unnecessary. Paperwork obligations for broadcasters and the amount of fines are among non-technical matters that may be on the table.

Most observers expect the second Trump FCC will act swiftly to overturn the commission's order to reinstate net neutrality.

And it's possible that certain nonpartisan issues that have not advanced under Rosenworcel might receive new attention, such as the proposal to create a Class A10 for FM stations.

Carr Bio

Read Brendan Carr's FCC biography at *www.fcc.gov/about/leadership/brendan-carr.*

Beltway perspectives

Republican commissions are seen as more friendly to the industry, said Gregg Skall, an attorney at Telecommunications Law Professionals and a Radio World contributor.

He said the commission is likely to continue work on extending fiber and internet service to the entire country. Broadcasting issues, by comparison, may not be on the forefront, "except look for changes in the quadrennial review, recognizing the digital competition to broadcasters and likely allowing further consolidation," Skall said.

> **"Over those 12 years, government control has increased and your freedoms have decreased. It is time to flip the script in Washington."**

Frank Montero, co-managing partner at Fletcher, Heald & Hildreth, says Carr's agenda will track that of President Trump, which means monitoring Big Tech and freeing up spectrum for wireless as priorities.

He said the commission may focus on reining in perceived foreign control of domestic content, and some of Rosenworcel's broadcast initiatives, like the annual EEO filing obligations, may die.

The 2018 quadrennial review of broadcast ownership rules was not completed under Rosenworcel until she was ordered to by a federal court in late 2023.

Some broadcasters hoped the FCC would allow further local consolidation, but it did not. "The commission's decision was a big disappointment to radio broadcasters who were hoping that the FCC would relax its local ownership caps and especially the subcaps, which limit the number of AMs versus FMs a single broadcaster can have in a market," Montero said.

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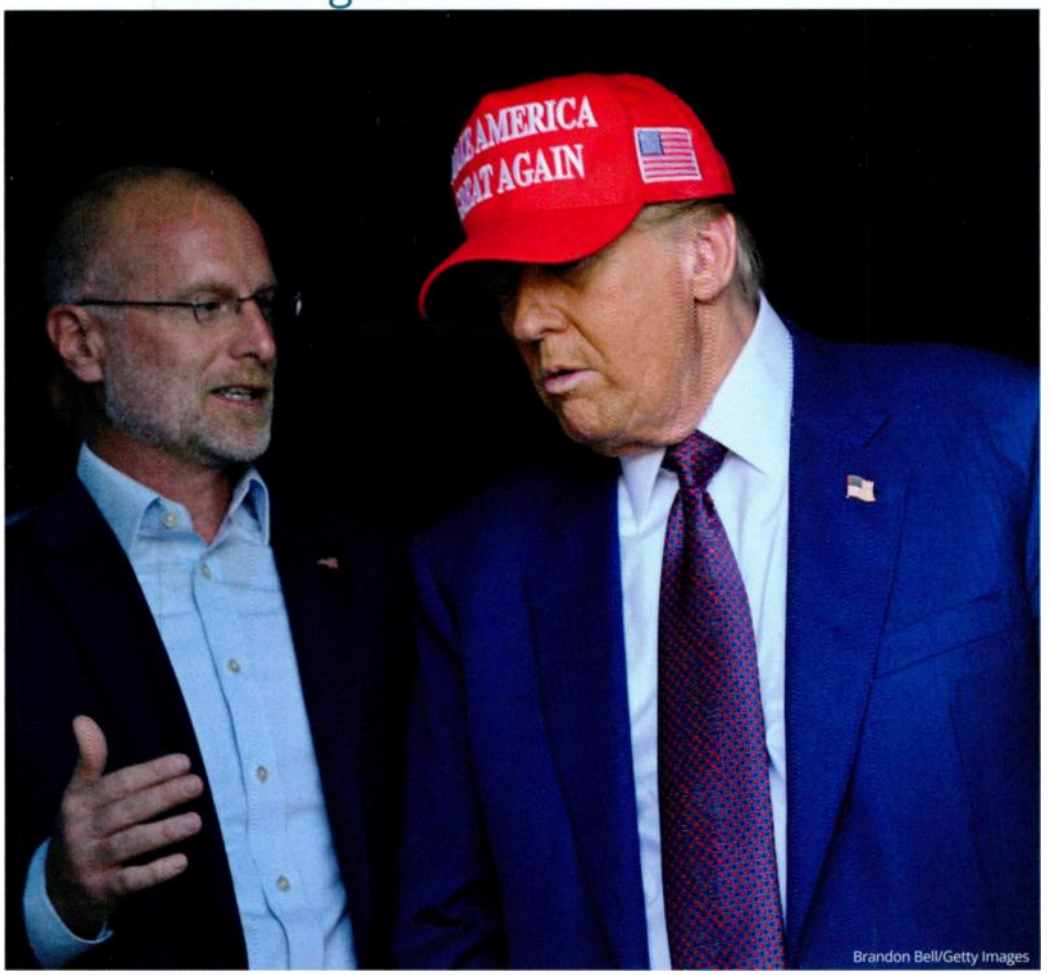

Brandon Bell/Getty Images

Above
Brendan Carr, left, speaks with President-Elect Donald Trump in November at a viewing of a test launch of the SpaceX Starship rocket in Brownsville, Texas.

Criticizing the outcome, Carr wrote at the time: "Despite a record bursting with evidence of a vibrant media marketplace, the commission continues to advance the fiction that broadcast radio and broadcast television stations exist in markets unto themselves." The NAB has been making that exact argument for years.

The 2022 quadrennial has yet to be completed. With a Republican-led FCC, Montero said radio broadcasters again are hoping for relaxation of local radio caps.

Montero is also watching to see whom Trump will nominate as the third Republican commissioner. He thinks Trump may move quickly to fill that seat; and with the GOP holding 53 Senate seats, the confirmation process is expected to be smooth.

"Carr seems far more in the Trump camp than [former Chairman] Ajit Pai was," Montero said, pointing out that Pai was nominated to the commission by Barack Obama, even though Trump made him chairman.

"I could see Carr focused on telecom, broadband and wireless initiatives, with Commissioner Simington perhaps emerging as more of the broadcast commissioner. The selection of the third Republican commissioner could speak volumes."

This FCC might look more favorably upon telecom and media consolidation, according to another communications attorney who asked not to be named.

"It makes it very difficult to put together the transactions that keep the industry healthy, with lenders and others not willing to expend the effort and resources to negotiate and finance a transaction in the complex regulatory world in which broadcasters live, only to find themselves then rolling the dice as to what the FCC will do with that transaction," the attorney said.

The FCC is also expected to reduce the regulatory fees broadcasters pay.

Scott Flick, partner with Pillsbury Winthrop Shaw Pittman LLP, said, "For broadcasters, the hope is that the incoming FCC will not simply be deregulatory, but aggressively so. Broadcasters need all the help they can get in leveling a regulatory playing field that has become powerfully tilted against them, as they compete against an ever-growing number of Silicon Valley giants for viewers, listeners and advertisers."

Within the industry, he said, "Broadcast deregulation is increasingly seen not just as a potential economic boost, but as critical if we are going to continue to have local sources of news and entertainment that employ journalists rather than influencers."

Flick says while there is no doubt that the rhetorical bent of the incoming administration has been "pro-deregulation," he's also seen a great deal of antipathy towards the media.

"There has been threat of retribution against media outlets for negative coverage, so it's hard to know today how those competing forces will shake out over the next four years."

Limited role

The president-elect has railed against many media outlets about negative coverage, even calling for licenses to be revoked in some cases.

But the commission has a very limited role in monitoring broadcast content, said Seth Williams, a communications attorney with Fletcher, Heald & Hildreth. Overstepping its role also would raise serious First Amendment questions.

"The FCC has a limited ability to take enforcement action against news networks, and it should keep in mind that its primary purpose is to manage the nation's spectrum resources, not police First Amendment protected content," he said. "Remember, the FCC does not regulate networks, but it does license network-owned TV stations."

But the push to enact political AI disclosure rules may fall by the wayside, Williams says.

"Commissioner Carr has opposed the FCC's rulemaking efforts around AI advertising over concerns about the commission's jurisdiction and because other federal agencies have initiated steps to address the issue for political advertising," he said.

"I would expect a Republican FCC to be more hands-off on AI advertising issues. A Republican Congress also may not put a high priority on AI advertising, so states may be the most likely to take up the issue in 2025."

Another person familiar with the workings of Washington questioned whether downsizing at the FCC might soon be in play.

"The available resources question becomes even more important if the Trump administration follows through on its proposals to target federal employees in the name of shrinking the administrative state," this person told Radio World.

David Oxenford, who practices in legal and regulatory affairs at Wilkinson Barker Knauer, says reversing the FM duplication rule could also be on the docket in 2025.

The agency has gone back and forth on that. It recently reinstated a rule that prohibits commonly owned or operated commercial FM stations with overlapping contours from duplicating 25% of their programming. During the first Trump term, the Pai FCC eliminated that rule.

> **"For broadcasters, the hope is that the incoming FCC will not simply be deregulatory, but aggressively so."**

"Commissioner Carr dissented from the most recent reversal," Oxenford said during a webinar about the results and implications of the election.

"He was one of the original people behind the abolition of the rule that prohibited that duplication of programming. He said the marketplace should decide. There is also a petition for reconsideration on file and I would expect that to be looked at very quickly by the new chairman."

Bierhorst Hails Progress of DAB+

DAB+ is making significant progress worldwide. That was the message from WorldDAB President Jacqueline Bierhorst at its annual summit in Croatia in November.

WorldDAB is an industry group spearheading deployment of the DAB+ digital radio standard. Bierhorst applauded successful German testing of the WorldDAB/Digitalradio Deutschland Automatic Safety Alert system, which is designed to deliver safety alerts to the public without requiring an internet connection.

"This will save lives," she said. "With the recent terrible floods in Spain and elsewhere, we have seen how urgent and necessary this development is. It is forward-looking — the biggest update to DAB standards for many years."

Next, she gave a rundown on DAB+'s rollout status. She cited "new markets such as Spain, where DAB+ is now on air in 13 Spanish cities," and "rapidly growing markets such as France, with now over 60% coverage of the mainland."

In established markets such as the UK, "the latest audience research shows DAB now taking nearly two-thirds of in-car listening, and the biggest commercial networks are launching many new digital brand extensions, alongside the rollout of dozens of new smaller multiplexes."

In Africa, Ghana is moving from trials to advertise a license for its first permanent DAB+ multiplex. Senegal recently launched a DAB+ pilot, she said, and there's a pilot project in Uganda. She cited encouraging developments in southern Africa and the Middle East.

"Across Asia Pacific, we were recently in Indonesia where DAB+ has been officially adopted. We're delighted that the regulator in Thailand, NBTC, published a report on the successful DAB+ trial, and is now consulting on a frequency plan and specifications for transmitters and receivers. And in Australia, the market is well-established."

Looking ahead, "We'll see ASA receivers reaching the market," Bierhorst said. "In Switzerland, the public service broadcaster SRG SSR will switch off its FM transmitters [at the end of 2024] to save money on transmission. In the German state of Schleswig-Holstein private and public radio stations have agreed with the state government and the state media authority to gradually switch to digital by 2031."

Courtesy WorldDAB

Get a grip to avoid slips and falls

Reels may be gone, but here is one tape that still has a use at your station

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*.

Radio World's Workbench column was featured recently on Kirk Harnack's "This Week In Radio Tech." In discussing useful tips, Kirk shared a sheet of skateboard griptape.

These sheets, available at skateboard stores and via online retailers, can be custom-cut to place on tools, computers, even cellphones, all in an effort to reduce slipping and improve your grip. Choose a plain color, or pick out a really gnarly pattern and give your device a really sick look, dude.

Along the same lines, I found a roll of Skid Guard tape at Ace Hardware. I cut pieces to line the sides and edges of my laptop, as well as a few screwdrivers. Skid Guard tape can also be used to line the edges of steps or hazardous walkways. Prices are reasonable, $5 to $20, depending on the quantity.

You can also buy tape in bulk. Shown is a photo of a 60-foot roll of Jessup Griptape that is 9 inches wide. A box of four rolls costs around $300 on the website *http://safewaytraction.com*. Safe Way Traction is a family-owned, U.S.-based national distributor of interesting solutions for preventing slips and falls.

Top
Skateboard griptape has many uses. This image shows a 60-foot roll of Jessup Griptape as sold on the website *http://safewaytraction.com*.

Right
Local codes may require that you keep space in front of electrical panels clear.

Local electrical codes

Rudy Rivas is the iHeartMedia market engineer in Miami. He makes an important point for stations that may be reconfiguring, downsizing or moving facilities to accommodate the changing broadcasting landscape: Check your local codes!

For example, how many rack rooms or transmitter sites have you seen where racks or equipment are placed close to electric disconnects, or where the electrical room is also used as a storeroom?

Local codes change frequently. In Miami, Rudy points out, you must provide a 36-inch setback as shown in the accompanying photos.

So assume nothing. Times they are a'changin'.

Car radio history

You have probably been following the effort to require carmakers to include AM radio in their vehicles.

Retired broadcast engineer Ken Lundgren spent 15 years working at Motorola. During that time, he said, it was commonly understood that Motorola made and sold the first car radio, developed by Paul Galvin. But Ken remembers reading that the first car radio had been developed by Bill Lear of Lear Jet and 8-track tape fame.

It turns out that Lear was work working for Paul Galvin at the time. Motorola apparently made sure that Galvin got the credit.

He says back then, manufacturers thought that a car radio was not feasible because high-Q coils couldn't be made small enough. All they had at the time were air-core coils. But Bill Lear didn't know it wasn't possible, so he did it. Maybe that was when they discovered ferrite cores.

They used B batteries at first, to power the radios. Ken is not sure when the vibrator power supply was invented, but

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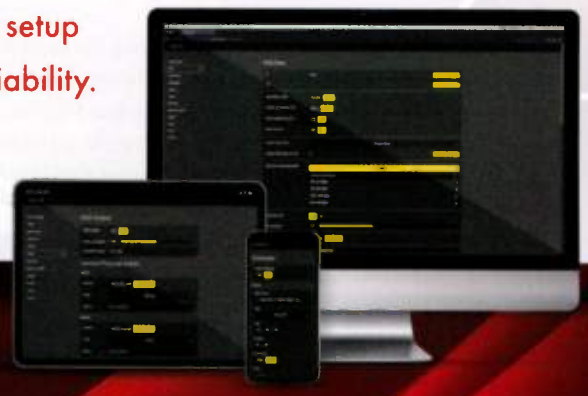

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Right
Mark the floor with tape to discourage inappropriate storage.

Far right
A selection of plugs on the website *http://stayonline.com*.

the technology kept moving forward. Ken reminds readers the first police radios were receive-only.

You can read a story by Buc Fitch about the early days of car radio in the Radio World archives at *https://tinyurl.com/rw-fitch-cars*. Meanwhile Ken shared a link to a five-minute video that chronicles Motorola's amazing history and includes some great archival photos. At *https://video.motorolasolutions.com/* enter "Motorola Solutions Heritage Story" in the search field.

RF shielding fabric

Newman-Kees Engineering principal Frank Hertel shares a resource that may come in handy for broadcast engineers.

It's a woven fabric made of copper or copper/nickel. This "Faraday fabric" promises to provide EMF protection as well as RFID radiation signal shielding. It is the type of fabric used to make sleeves to protect credit cards from signals (a neat side-hustle if you like to sew).

The fabric is easy to cut and could be used to line a studio. We saw it on Ebay, search "EMF Protection Fabric-Blocking RFID Radiation."

But Radio World's Paul McLane found the website of the manufacturer at *http://amradield.com*. It states: "Amradield is your source for all top-quality personal and commercial products for Wi-Fi and cellphone radiation protection, electromagnetic radiation protection, RF and smart meter shielding and EMF mitigation products. Our products are designed to shield and protect the human body from common EMF sources found in offices, apartments, homes and commercial facilities."

The website shows photos of products made with the company's protection fabrics, from curtains and yoga mats to baseball caps and women's dresses.

If you try the fabric, drop me an email with a description of your application and a photo. Email *johnpbisset@gmail.com*.

They've got your cable

Dan Slentz, our official unofficial internet researcher, discovered a company called StayOnline, which describes itself as "The Power Cord Company."

StayOnline stocks a variety of power cords, sold with no minimum quantities. In fact, the website states that the company has the largest in-stock selection of power cords and plug adapters in the world, "including IEC 60320, IEC 60309, NEMA Straight Blade, NEMA Twist Lock, Non NEMA 50 amp and international standards. Whether for your data center or an industrial application, we have your cord." It also carries plugs, connectors, wall plates and other wiring devices and rack accessories.

Have fun browsing the collection at *www.stayonline.com*.

Right
An example of woven RFID shielding fabric.

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Writer

Nick Langan

The author wrote here recently about the SBE's priorities for the coming year.

Above
Hosting a live pledge drive are (clockwise, from left) juniors Andrew Buckel, Aidan Maxey, Trent Johnson and Peter Sine, with Station Manager Chris Singleton looking on.

This high school takes radio seriously

Students take the mic at Kent County's 90.5 WKHS(FM)

It's a tranquil Wednesday in mid-November at Kent County High School on the eastern shore of Maryland. Thanksgiving and the holidays are still a couple weeks away and the rhythm of the school year is in full swing. But inside the school's broadcasting wing, there's a buzz in the air.

Two representatives from the Kent County Family YMCA are set to be interviewed on-air by students, as part of 90.5 WKHS(FM)'s twice annual pledge drive.

Station Manager Chris Singleton mentions several times during Radio World's visit to the station that having community members come in and see what goes on is intentional. "We don't go door to door," he says.

Two students are being specially called for the interview. "They want Olivia and Danika," Ken Collins, WKHS' sponsorship manager, explains.

The seniors, Olivia Johnson and Danika McAdory, have handled interviews on-air before with aplomb. This spot lives up to their standards. "Without asking, I plugged their Facebook and web address, and they were so delighted," Johnson says.

She is a third-generation WKHS student. Her grandmother aligned with Singleton's time at the station in the early 1980s. Johnson's enthusiasm is infectious. She's embraced the program and anticipates attending Morgan State University next year to begin college, enrolling in their Broadcast Journalism program. She originally wanted to be a scientist but fell in love with the school's radio program. "Above all, it's the only class I can't get in trouble for talking," she explains.

While juniors prepare for the annual on-air Christmas parody, the station balances fun with professionalism. Senior Jonah Elburn manages the programming log during the pledge drive's extended interviews. "I've got UB40 in after the underwriter and I did not drop anything in the hour," he tells Singleton, who gives his nod of approval.

Elburn was anchoring the 8 a.m. hour during the station's special coverage for the pledge drive. It marked his first day playing from one of the main studio's two Audio-Technica record turntables. When the time came to spin "Heroes" from David Bowie, the vinyl kept skipping.

"If you need proof we're playing straight off vinyl, here you go," he said confidently on the air. A music lover at his core, Elburn has a record collection at home and enjoys everything from the Talking Heads to Deltron 3030. He sees broadcasting as a large part of his future, with an eye on pursuing communications at a Philadelphia college thanks to WKHS' 32-year relationship with the University of Pennsylvania's 88.5 WXPN(FM).

Senior Alayna Brown takes the reins during the 10 a.m. hour, skilfully interviewing the newly minted class of sophomores on-air. She's been accepted to Belmont University in Nashville as part of its Audio Engineering program.

She wants to be involved in the live music and recording industry. "I came to WKHS as a junior and I was kind of shy," she recalls. "But other classmates were really vocal and that brought out a different side of me." She had the opportunity to run live sound at WKHS' 50th anniversary TuneFest event in May and now is taking advantage of the station's live sound setup from a Behringer X32. She'll be running the board for the school jazz band next week.

"I'm grateful to have these opportunities, the way it's preparing me for everything," Brown says.

By now it's time for the junior class to put their own spin on things. Aidan Maxey, described as the resident music guru, explains to the group that he's going to close the segment by front-selling Lynyrd Skynyrd. Andrew Buckel and Peter Sine then describe on-air how they were able to navigate to the payment area on WKHS' website in 28 seconds to donate. "The power of suggestion," Singleton observes.

"This doesn't even feel like I'm in school," junior Trent Johnson says. "For me, it's helped me so much with my speech and putting together thoughts on the fly." He wants to become an actor.

The FM Broadcasting Program of study is one of nine Career Technology Education offerings at the school, along with vocations such as automotive, agriculture, carpentry and computer science. The enrollment at the school is 531, according to U.S. News and World Report; it's the only high school in the county.

Of Maryland's 24 counties, Singleton says Kent County ranks dead last in terms of budget. Yet, this is the state's only high school with a radio station.

"We've had to seek community-based funding through businesses and direct donations," he says. While nationwide there are more than 200 stations licensed to high schools, only about half are student-operated, like WKHS.

> **It's the only class I can't get in trouble for talking.**

Above
Seniors Jonah Elburn, left, and Olivia Johnson have known each other since first grade. They pose under the TuneFest banner, celebrating the station's 50th anniversary.

Professional-grade facility

The facilities are impressive. Upon entering the front-office area, there are multiple production rooms and a secondary studio where a table leaf drops down; Singleton says the room could even support a small band. It's typically used for newscasts, but in a pinch, the station can go live there, including when the station performed its annual War of the Worlds play in October.

The main studio, part of a complete renovation in 2018, is in the rear. The drywall took longer than anticipated to install that summer, so Singleton had to rewire everything in three weeks. The finished product features a desk with five Electro-Voice RE20 microphones mounted on suspension shocks, feeding into a Wheatstone IP-16 console.

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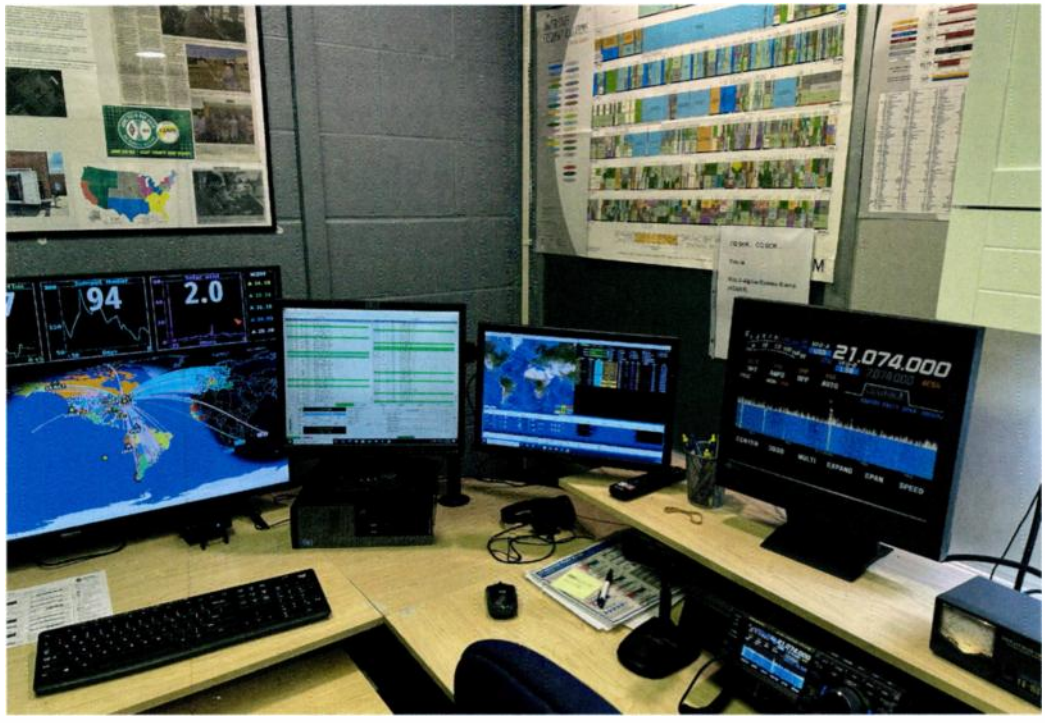
When the school day is over, the broadcast schedule is populated by specialty shows hosted by community members. When they're not on the air, programming from WXPN is delivered directly from a Comrex BRIC-Link. This partnership has been fruitful for WKHS, resulting in yearly field trips 90 minutes northward to WXPN's studios and the World Café Live headquarters in Philadelphia. For WXPN, it's a way to extend its coverage southwest. WKHS enjoys a formidable 17.5 kW ERP signal. Licensed as a Class B1 since its 1974 sign-on, it easily traverses across the Chesapeake Bay into Baltimore and is audible in a car as far northeast as Salem County, N.J.

Singleton installed a GatesAir Flexiva 7.5 kW FM transmitter in 2022. His next long-term project is replacing the station's 198-foot tower, a 1973 original located a few hundred yards from the campus. An Optimod 5500 is used for audio processing.

"Fred Willard always tells me, don't touch it, you sound great," Singleton says. Engineer Willard, based in Washington, D.C., is a WKHS alum.

The station's WideOrbit automation accesses a library holding 12,000 songs. Original station manager and present-day broadcast automation expert Jim Hammond sold it to Singleton while Hammond worked at WideOrbit. Genres ranging from bluegrass, jazz, Americana and popular music from the last 60 years are on its playlist. But the station is not just a jukebox. It uses MusicMaster for scheduling, and each hour is a blend, with student preferences involved.



Above
WKHS and the Kent County Amateur Radio Society formed a ham radio station at the school.

Below
On a November afternoon, the WKHS logo is displayed on signage in front of Kent County High School, with its antenna tower in the background.

"You can't ignore the pop music of today, because a lot of our DJs are passionate about it," Singleton says.

Career work

"I've spent a lot of years doing other things in broadcasting," Singleton, 58, said, "but at the same time, this is always my side."

He's proof of what's possible in the program. A 1984 graduate of the school, Singleton had been enrolled in its electronics program. The broadcast manager at the time, Keith Hill, recognized his skillset and worked out a deal to split his time between the two programs.

Singleton spent many years as a broadcast engineer in Washington, D.C., and on the Delmarva peninsula, as well as in jobs for Intraplex and Harris Corp. All the while, he had become the default engineering resource for WKHS, still living in his native Kent County.

His last commercial role was in sales for high-speed internet and cable. Seeking less travel, Singleton jumped at the opportunity to take on the manager role at WKHS when it opened in 2008. His experience led him to implement innovations like using an SCA carrier for monitoring the station's live feed at remote broadcasts. WKHS broadcasts many school home football and basketball games.

Left
Chris Singleton installed the GatesAir Flexiva 7.5 kW FM transmitter in 2022.

It has not been without its challenges.

In 2009, Singleton recalls, district officials didn't see the value in the radio program. "I went in with the thought, this is not going to die on my watch, but a lot of other educational stations have battled this, and when administrators have their minds made up, it's tough," he said.

What he didn't expect was the outpouring of support on the Eastern Shore. "It was like a mosh pit," Singleton described. "The community just kind of raised me up."

Not only did WKHS stay on the air, it was able to raise enough money to replace its antenna with a new Shively 6810 six-bay.

Still, for a broadcast station at a high school or college, good relations with the administration are critical. "We had a great 11-year run with our last superintendent," Singleton says, speaking of Karen Couch. The new superintendent, Mary Boswell-McComas, came to Kent County in July, and Singleton is optimistic. The station, he says, "is free promotion for the school, and it pays for itself."

SBE's CRO

Students enrolled in the broadcast track begin as sophomores, typically a class size of about 10. He guides them through eight units, including marketing concepts, broadcast copywriting and his personal favorite, sound and radio wave technology.

He takes an audio generator and an oscilloscope display to demonstrate an audio waveform and show the corresponding AM envelope on 2 MHz with an SDR. It's the students' first-time seeing anything like it. "I don't think there is as much of a math and science foundation as there used to be," he said, "and I think that's why we're having such a hard time finding ham operators and engineers."

> **"If we have at least an industry recognized credential, that's a beautiful outcome from this program."**

That's where the Certified Radio Operator certification from the Society of Broadcast Engineers comes in.

"If we have at least an industry recognized credential, that's a beautiful outcome from this program," Singleton says. Students Brown and Elburn are CRO certified after taking the exam last spring, along with two other seniors who graduated in 2024. He expects the rest of the senior class to do so next semester.

Community ham station

Singleton's experience at WKHS led to him originally getting his amateur radio license as KE3MC. He has been a member of the Kent County Amateur Radio Society for 30 years.

Hoping to help more students "catch the bug," the station this year unveiled a full-fledged community ham station. Singleton sees this as a pathway for 911 emergency dispatch training.

On the Oct. 21 ARRL school club roundup day, the K3ARS Kent Amateur Radio Society call sign made contacts with 34 countries. Brown made a contact with a Russian station. "Now, Alayna, Jonah and Aidan are all interested in getting their ham tickets," he says.

Connecting the Eastern Shore

A community flavor is evident on WKHS. Student-produced marine forecasts and a local sports minute, supported by underwriting, reflect its connection to the eastern shore. The station's 50-year anniversary was marked by a unique decoration inspired by Elton John's "Rocket Man," the first song that played on WKHS when it launched.

Ken Collins, 73, the fund manager, is the only other paid employee part of the operation. He is former general manager of 1530 WCTR(AM) in the county seat of Chestertown. Semi-retired now, he works a part-time schedule and loves it. "It means so much more here," Collins says.

The station runs a pledge drive around its anniversary in March. Separate underwriting support from local businesses is steady. "We have a core group, and while one or two might drop out per year, we usually pick up a couple of new businesses," Collins says.

Above
A Kent County metal crafter donated artwork to celebrate the station's 50 years of service.

Right
The station tower is visible from the back door of the high school.

> **"For me, it's helped me so much with my speech and putting together thoughts on the fly."**

At 2:25 p.m., the bell rings, and Alayna Brown pots up the WXPN feed on the Wheatstone. The school day is over. Jonah Elburn takes home some records to play at home to evaluate for the early shift tomorrow. He's not even taking the class in the fall semester. "I'm here just to be here," he says. "I care that much about this."

Singleton takes pride in what has happened at WKHS since he became full-time. "I'm hearing feedback that when they start communications courses in college, the professor is starting a unit they've already covered," he said. "That tells me we're teaching the same way."

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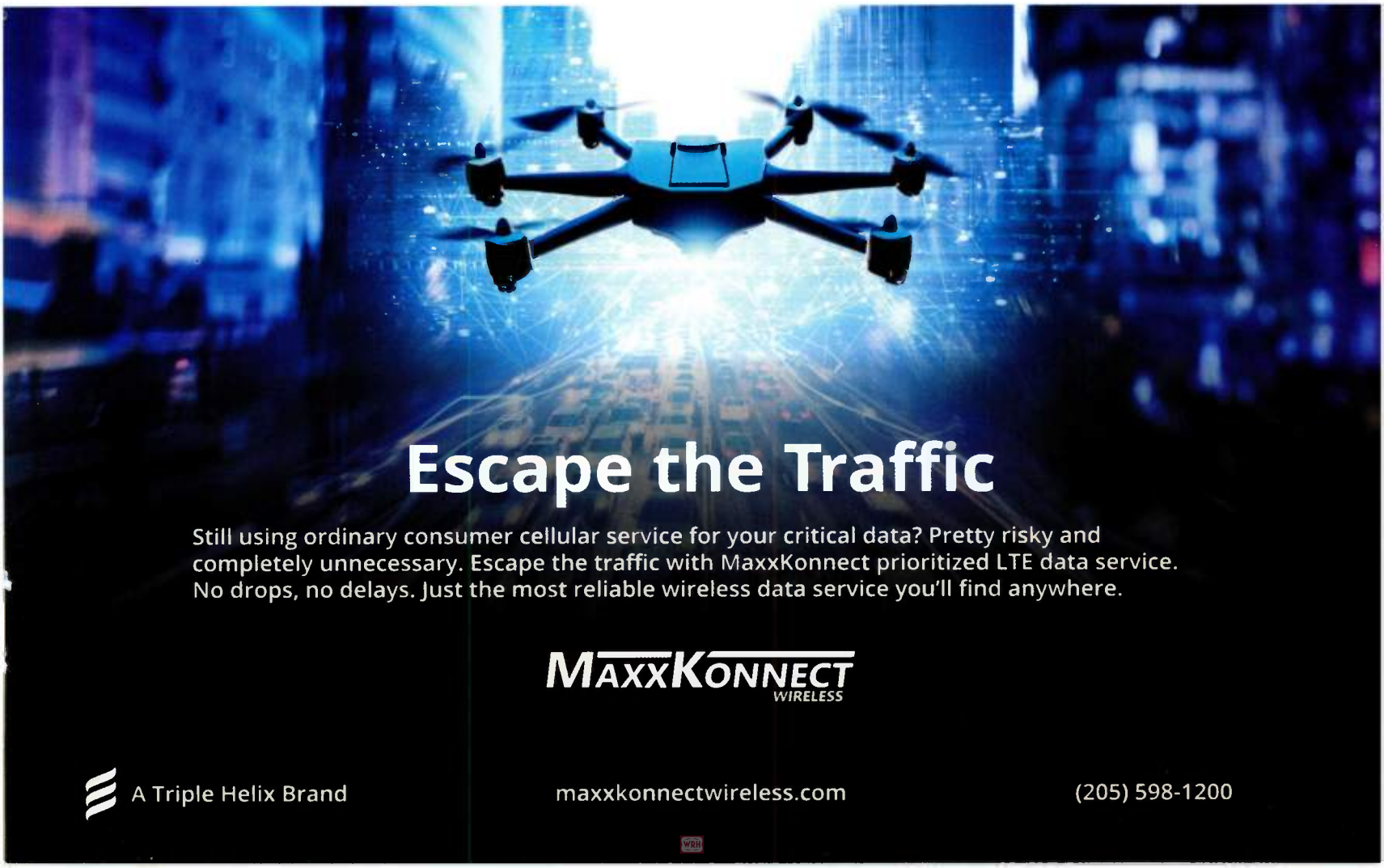

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"All I wanna do is play the hits!"

Shotgun Tom Kelly's memoir

Writer

Paul Kaminski

CBT, CBNT

The author wrote in November about how radio station metadata displays on the screens of new Genesis and Toyota cars.

Tom Irwin's journey to broadcast stardom as Shotgun Tom Kelly, one of America's most popular air personalities, took more than a few turns, some quite unexpected.

His memoir "All I Wanna Do Is Play the Hits," cowritten with voice talent Neil Ross, starts near San Diego with an encounter in parochial school with one Sister Mario, from which the title evolves.

Tom was fascinated by the voices he heard on the radio as he grew up near America's Finest City, especially KOGO(AM) and Frank Thompson. He hung around local stations, finally getting his first radio air shift on Sunday mornings at KPRI(FM) playing middle-of-the-road music, which he described as "not my cup of tea."

While studying for his FCC First Class license — necessary in markets where the jock might also be responsible for keeping an eye on a transmitter and directional array — Tom struggled a bit and was almost ready to abandon the quest for the ticket. Some pep talks from graduates of the Ogden Radio Operational Engineering School in beautiful downtown Burbank, Calif., gave him the motivation to continue studying and pass the FCC test.

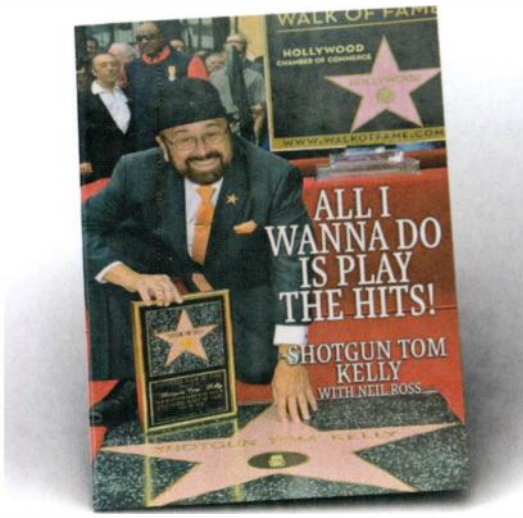
Just out of high school, Kelly says the experience taught him perseverance, a trait he would find necessary on his radio and life journey.

There followed a long road that led to the Hollywood Walk of Fame. It included stints in Merced, Fresno, Ventura and Bakersfield, where the Shotgun persona was born.

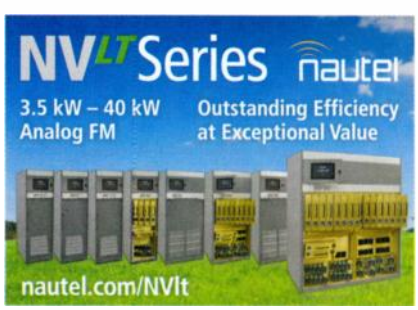
Tom wanted to use his real name but the general manager of KAFY(AM) decided on Kelly for its sound in station jingles. Program Director Dave Conley suggested that Irwin retain the moniker Shotgun that he had used in an earlier job, and from there Tom built a legendary persona that also featured an omnipresent ranger hat.

He returned to San Diego and weathered the inevitable format changes and station changes, until a

Right
Shotgun Tom Kelly at NAB Show 2024



> **For about 15 years Kelly smoked marijuana, drank and snorted cocaine. ... As of late 2024 he was preparing to celebrate 40 years of sobriety.**



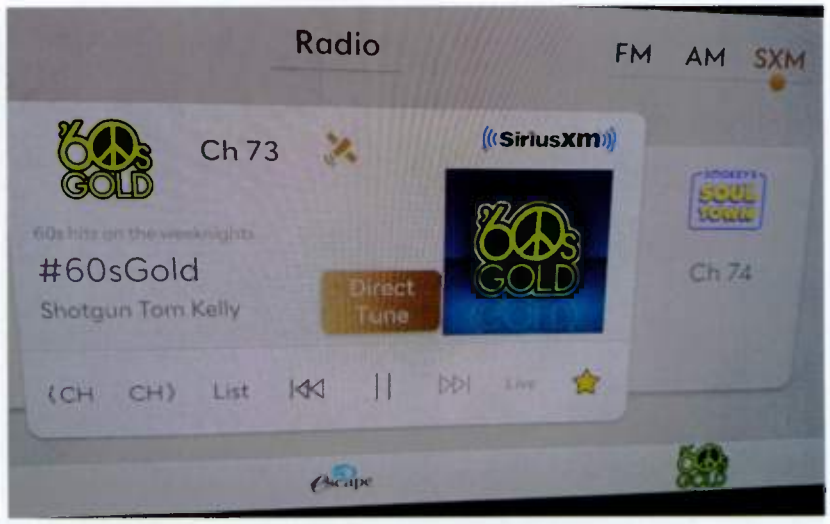
call came from KRTH in Los Angeles, after the death of air personality "The Real" Don Steele. Kelly would occupy that air chair in afternoon drive until 2017.

Over the years he also has appeared on several television stations. "In 1970, Tom would take a weekend job at television station KERO, Bakersfield to host a Saturday morning television kids show as NEMO the Clown," his website states. "In 1972, Tom was asked to host 'Words-A'Poppin,' a game show for kids. The show aired in San Diego on KGTV Channel 10, and was also syndicated in several other cities. Tom went on to win two Emmy Awards as host for the show."

In 2020, Shotgun found his way to SiriusXM's '60s Gold Channel (73), where he can be heard on Monday, Tuesday, Thursday and Friday from 7 p.m. to midnight Eastern Time.

His road could have been derailed with substance abuse. For about 15 years Kelly smoked marijuana, drank and snorted cocaine. But he eventually found his way into a 12-step program. On Christmas Eve 1984, Kelly became clean and sober. He felt strongly enough about telling that story to devote a full chapter and as of late 2024 was preparing to celebrate 40 years of sobriety.

Kelly and Ross take their readers along the road to the Walk of Fame with an engaging narrative. The text is bolstered with QR codes that will lead you to audio and video snippets from Kelly's career.



Above
This is where you'll find the radio legend on SiriusXM's 60s Gold Channel.

"All I Wanna Do Is Play the Hits" is available in hardcover and paperback from JCH Media Publishing and sold via outlets including Amazon. And you can view a gallery of photos of Kelly throughout his career at *https://shotguntomkelly.com.*

Paul Kaminski, CBT CBNT, has been a contributor to Radio World since 1997 and hosts the msrpk.com program "Radio-Road-Test." Find him on X at msrpk_com; Facebook, PKaminski2468.

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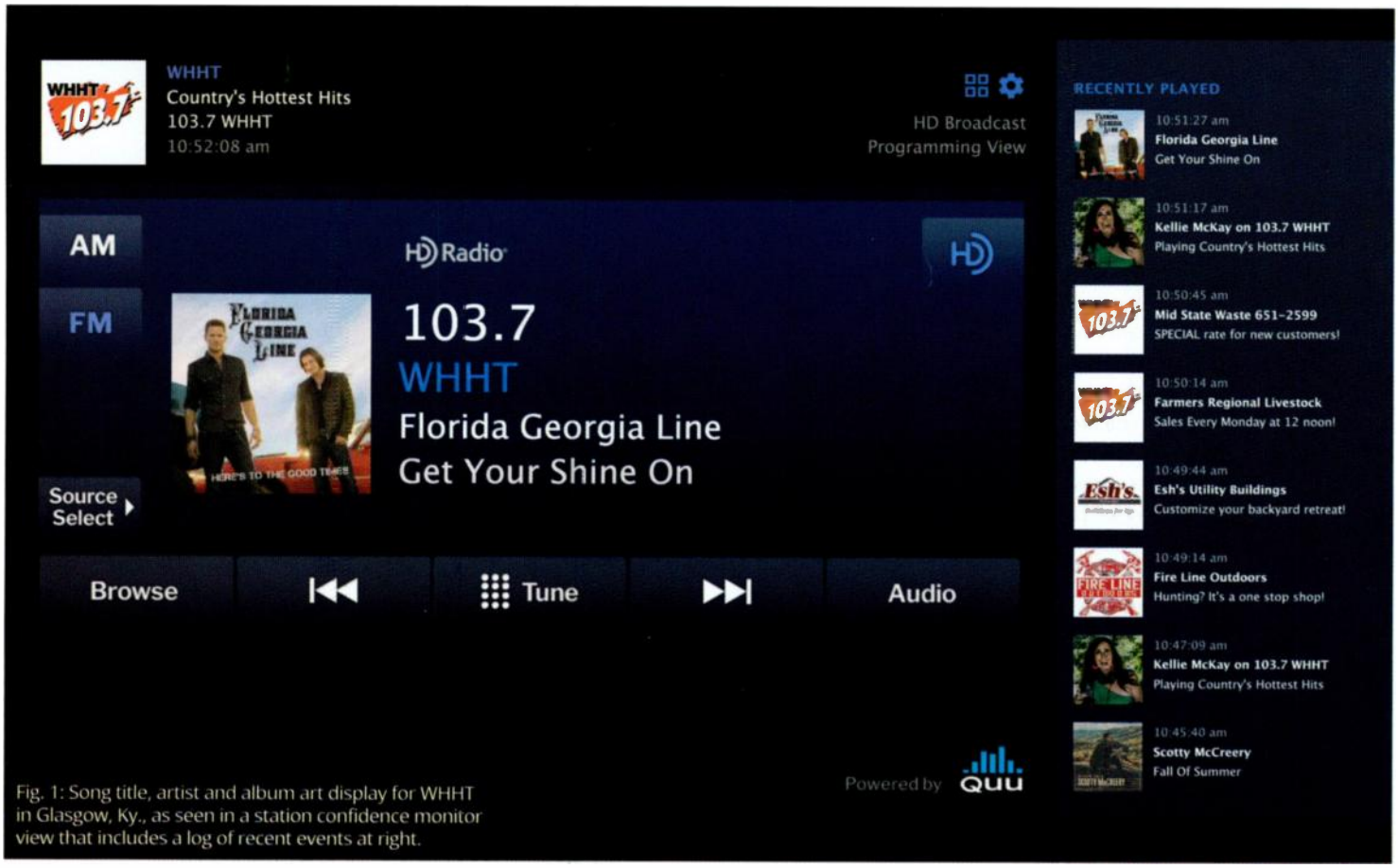

Fig. 1: Song title, artist and album art display for WHHT in Glasgow, Ky., as seen in a station confidence monitor view that includes a log of recent events at right.

Quu refines its visual message offerings

Content Partnership extends the benefits of sponsored metadata

Quu provides software and services that allow stations to publish dynamic visual programming and sales messages on car dashboards. Ad content can be synched to appear as a client's audio ad plays. Quu also now offers a Content Partnership program in which advertisers' visual messages appear for 30 seconds while songs or other content plays, without interrupting that audio.

This is an excerpt of an interview with CEO Steve Newberry in the ebook "Recipes for Visual Display" at *http://radioworld.com/ebooks*.

Steve Newberry

RW For someone not yet familiar with it, how does Quu fit into radio's metadata ecosystem?

Steve Newberry: A station's automation system generally provides metadata in a basic, manageable form — you put in the name of the song and artist, and perhaps the name of the commercial, and for many years that simply went to your RDS encoder, and its job was to convert that to display in the dashboard of the car.

Today RDS and the more advanced HD Radio platform are the delivery mechanisms. But what Quu does is add content management. The content goes to the cloud, where we say, "Okay, this ad coming out of the automation system is for McDonald's Mid Atlantic Co-op. The ISCI code for the co-op is 83-12-428." But you don't want that showing up on the dashboard of the car, so we give the station an easy way to replace that with the message "McDonald's Big Macs are back, $1.99" or "Buy one, get

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For more information about Oxygen 3000 Plus visit our website

Above
In Fig. 2 (top), a 30-second visual ad displays for one of station's two premium sponsors. In Fig. 3 (bottom), the Content Partnership program runs on Audacy's WYCD in Detroit.

one free sausage biscuit." And we send that to your RDS encoder or HD system.

With our AdSync product, a station can add messages to a specific spot. So when they're in a commercial break, if they've sold a commercial through AdSync, you would see a message pop up. But if a commercial is playing and the client didn't buy the visual, Quu just shows the station brand.

But more than replacing the data, we're allowing you to manage it. Which message plays when? Do you want a message about your morning show to appear for 30 seconds? Do you want it to rotate with a message about your studio sponsor? Rotate it with a message about news coming up, or with the station's branding? Maybe you want to change it for middays instead of what you display in the mornings. Or you want to put up a tornado warning or a ball score for the big team.

One of our sports talk clients is the flagship station for Ohio State Buckeyes football. When the team announced the starting quarterback for this year, the station put that on the dashboard of the car. These tools give you the ability to provide a visual dimension to your audio relationship with the listeners.

I've said it before, but our industry doesn't have a metadata problem; nobody wakes up every day saying "Oh my gosh, my metadata is terrible." We have a listener experience challenge. Metadata provides a solution to that, but you have to manage it.

What does the Quu display look like?

Newberry: Let me call up a monitor to show you one of my stations in Glasgow, Ky. [Fig. 1].

We provide this back-channel confidence monitor view to clients. It's the equivalent of a program feed at a radio station, so they can have a real-time view of what's happening on their digital displays. At my own stations I put these screens up in our studios so the air talent can see it.

Now I want to tell you about our Content Partnership program. In the past, if stations sold a visual ad to an advertiser, because of a lack of ability to manage content they just ran it over the top of the entire commercial break. A listener would be hearing ads for McDonald's, Lowe's, Kohl's and Newberry Chevrolet, but they'd see an ad for a law firm the entire time.

Jacobs Media did research on this and found that listeners thought the station had made a mistake, or they realized this was intentional but they hated it; they felt it was pushy.

I told you about AdSync and how it displays messages just during the client's spot. But with the Content Partnership program, a station can sell two premium sponsorships that will display ads outside the commercial break, during songs or other content. When a given song comes on, the screen first will show song information and album art for 90 seconds. Then a message from one of those two premium sponsors will display. In this example The Peoples Bank is a content partner [Fig. 2].

The visual ad runs for 30 seconds and then goes away.

You've seen a station in Glasgow in Kentucky. Now here's Audacy's WYCD in Detroit, Michigan. The technology works great and just the same regardless of market size [Fig. 3].

During songs, after 90 seconds of song title and artist, the listener will see 30 seconds of an ad from one of their two content partners, which are National Coney Island and Sam Bernstein, Attorney at Law.

There are only two premium sponsors because we can't inundate listeners. I don't want your radio station looking like the outfield fence at a little league ballpark.

We're also beta-testing a feature that will display "Next Up" information as the end of a song approaches. Programmers have asked for that.

Look what you can do with Ohm's Law

It can help engineers clear up technical problems and create solutions

Writer

Mark Persons

CPBE, CBNT, AMD

The author is retired after more than 60 years in radio broadcast engineering. He is a Life Member of the Society of Broadcast Engineers and recipient of its John H. Battison Award for Lifetime Achievement.

My career in radio broadcast engineering has been aided tremendously by an understanding of Ohm's Law, the brick and mortar of electronic engineering. This easy-to-understand knowledge tells the story of how things work and helps immensely in diagnosing a problem. The mystery of "how does it work or what went wrong" often goes away when Ohm's Law is applied.

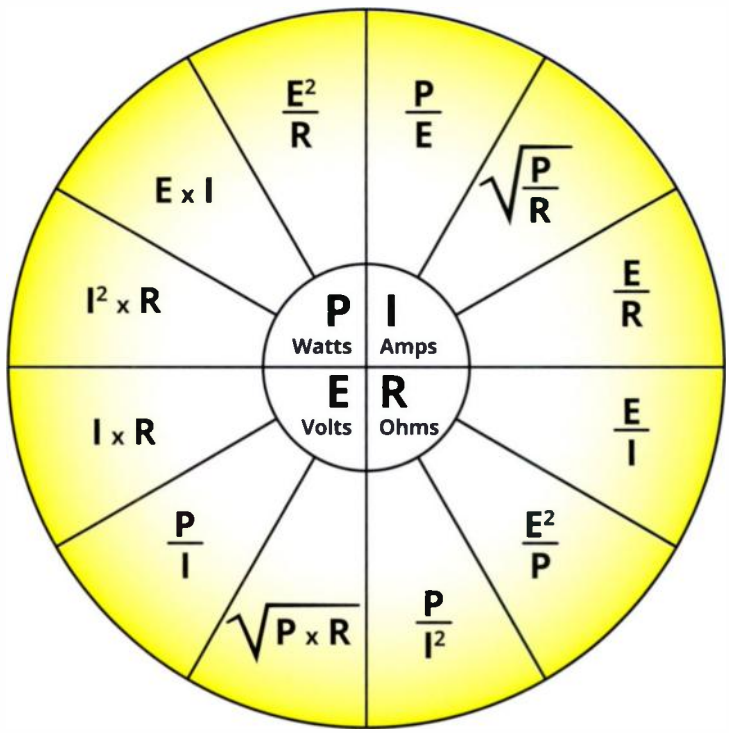


Fig. 1: Ohm's Law chart

Pie chart

The answer is in front of you on the chart in Fig. 1. Solve for voltage (E) in volts, current (I) in amperes, resistance (R) in ohms or power (P) in watts when you know two of the values. You might use this knowledge on a transmitter where meters show volts and current. These aren't just numbers, they mean something. On a tube transmitter it could be 8000 volts. When multiplied by 3 amperes of current, it equals 24,000 watts input power. Then there might be a 75% power amplifier efficiency to give a power output of 18,000 watts. Look at the original transmitter test sheet to find the factory measured efficiency. Simplify the math by using a calculator or smartphone app.

LED indicators

There are many occasions when a small lamp is needed to indicate status (Fig. 2). It might be a green power light on a piece of equipment or a red light in an off-air alarm. LED pilot lamps have been around for over 50 years, and many in use back then are still functional. Try that with an incandescent lamp!

The most common size is T-1 3/4 or 5 mm, as shown in the photo. They come in red, green, yellow and even blue. You can buy them with dropping resistors for specific voltages, but the most common way of designing a circuit is with a basic LED that has a forward voltage drop of 2 to 3.5 volts DC. Voltage varies depending on size, brightness and color. The schematic symbol of an LED has one or two arrows pointing away, indicating that it produces light.

Think of an LED as a current specific component rather than voltage. By voltage, I mean something like a 120 VAC room light, which is built to consume 40 watts or 100 watts, but still runs on 120 volts. LED indicator lamps make light based on current passing through them. More current means more light output. The voltage across the LED will vary only a bit with brightness.

What size series resistor is required for a 2.2-volt LED in a 24-volt DC circuit when we want the lamp to run at a typical 10 m.a. (.01 ampere) of current (Fig. 3)? The resistor must drop 21.8 volts (24 source volts minus 2.2 LED volts). Using Ohm's Law, we divide the 21.8 volts by the .01 ampere, and we get 2180 ohms. The nearest standard resistor value is 2200 ohms. Close enough. And as indicated on the schematic, you can sample voltage across the LED as a status input on a remote control. This assumes the remote metering input impedance is 10K ohms or more so as not to seriously upset the circuit voltage and resistance w we just discussed.

Use Fig. 4 if you need 4.4 volts for status, use two LED lamps in series and adjust the voltage dropping resistor accordingly. In the case of 24 VDC power supply, subtract 4.4 volts from 24 to get 19.6 volts, then divide by the LED

Right
Fig. 1: Use the chart to complete the equation when you know two of the variables.

current of .01 ampere to get the resistor size of 1960 ohms, although 2000 ohms is close enough.

Heat

A resistor will get warm in doing its job. Using Ohms's law, voltage times the current will tell us watts. In this case, 21.8 volts times .01 amperes = 0.218 watts. Resistors are rated at the number of watts of heat they can safely dissipate before failure. Of course, you don't ask a resistor to dissipate its maximum rated power. I like to double the resistor wattage size to allow it to run cooler and have a long service life.

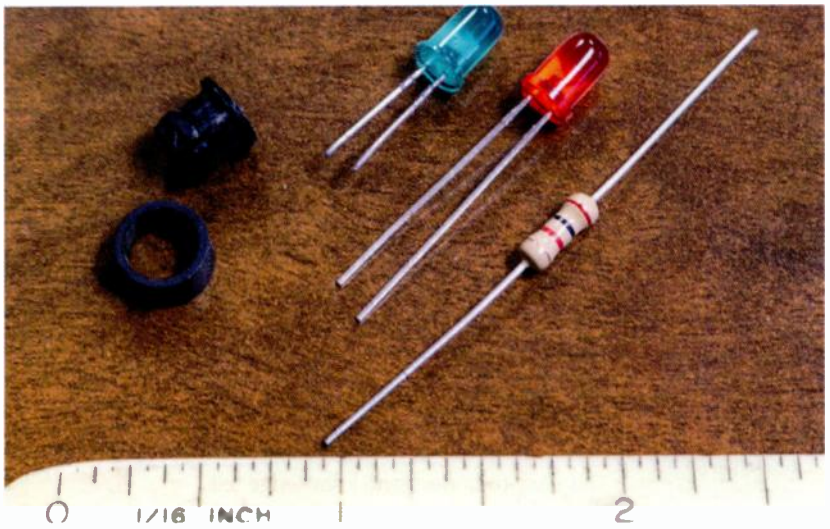
Resistors need ventilation. The heat needs to go somewhere. Give them breathing room. Run the circuit for a while, then shut off the power and feel how warm the resistor is. If it is too hot to touch, then the resistor is not the right size for the circuit.

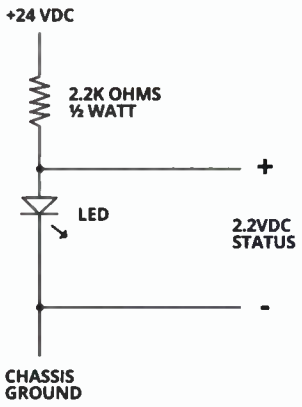
There are blinking LEDs too where all the electronics to make them go on and off is inside the lamp. Those are handy eye-catchers for situations where human intervention is required. You can run LED indicator lamps on alternating current if you don't exceed the maximum allowed reverse voltage, as specified by the lamp manufacturer.

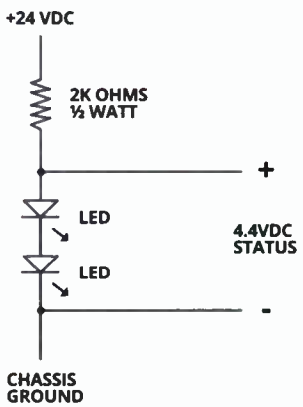
120-volt power

There you are, out on remote with a 1500-watt electric space heater. Using Ohm's Law, 1500 watts divided by 120 volts gives us 12.5 amperes of current. The heater's resistance is 120 volts divided by 12.5 amperes for 9.6 ohms. But then you add an extension cord to the mix. It might be made of 16-gauge wire and probably came with a tag indicating it is capable of 13 amperes. All should be good, but let's do further analysis. Looking it up, that #16 copper wire has a resistance of 13.2 ohms per thousand feet. The inexpensive 50-foot extension cord has 100 feet of #16 when you consider the power goes to and from the heater. That is 1.32 ohms of wire loss.

Adding the 9.6-ohm heater to the 1.32-ohm extension cord, we come up a 10.92-ohm circuit. Solving for current, Ohm's Law tells us there will be 120 volts divided by 10.92 ohms for 10.99 amperes when we were expecting 12.5. That is extension cord loss. The voltage at the heater will be lower. Using Ohm's Law, 10.99 amperes times 9.6 ohms







Top
Fig. 2: Two LED lamps with panel mount and half-watt resistor.

Above left
Fig. 3: LED light on 24 VDC.

Above right
Fig. 4: Two LED lights for 4.4 volt status

equals 105.5 volts at the heater. That means 14.5 volts were lost in the cord. If we take 14.5 volts and multiply it by 10.99 amperes, we get an astounding 159 watts lost in the extension cord. Check the cord, it is probably getting warm! That is 3.18 watts of heat per foot. Not unexpected, but it could be a serious problem if the cord is coiled in a non-ventilated area.

The cord is plugged into a 20-ampere outlet. Let's say the electric heater is rated at 2400 watts and is on the #16 power extension cord. As per the math before, the heater resistance is 6 ohms. Added to the cord's 1.32 ohms, and that is 7.32 ohms in the 120-volt circuit. The current will be 120 volts divided by 7.32 ohms for 16.39 amperes in the 13-amp cord. Solving for power lost in the cord, multiply the 16.39 amperes by itself and then multiply by the 1.32-ohm resistance to get 345.6 watts. Now we are talking 7.09 watts of heat per foot in the cord. That is too much! It will work until the cord starts smoking and maybe catches fire.

Of course, there are connector losses too. Some 120 VAC plugs and receptacles are rated for 15 amperes and others are for 20 amperes. Choose wisely.

12-volt power

This is where wire size becomes more important. Amateur radio operators know it well with much of their equipment powered by batteries. It takes 10 times the current in amperes to deliver 100 watts at 12 volts than it does at 120 volts. That 100 watts might be for a remote broadcast transmitter and an inverter to power a computer and lights etc. Yes, there are still some Marti remote broadcast transmitters in use today. Solving for current in amperes by using Ohm's Law, take 100 watts and divide by a typical 12.6 battery voltage and you get 7.94 amperes. The resistance of the equipment is 12.6 volts divided by 7.94 amperes for 1.59 ohms.

The previously mentioned 16-gauge wire is rated at 13 amperes, but how will it work in this situation? The 13.2 ohms per thousand feet is 0.66 ohms over a 25-foot cable when you figure the two conductors total 50 feet in length. With that in mind, how much voltage will be available for the equipment? Add the 1.59 ohms of equipment to 0.66 ohms of battery cable and you get 2.25 ohms.

OK, but what does that mean? Solving for current, it is 12.6 volts divided by 2.25 ohms for 5.6 amperes. What happened to the other 2.34 amperes? The power cable ate it. Ouch! The equipment gets only 8.9 volts when you multiply the 5.6 amperes by the load resistance of 1.59 ohms. The cord gets 3.7 volts times 5.6 amperes resulting in 20.72 watts of heat.

A better choice is #12 wire where its resistance is .08 ohms over 50 feet. Add that to the equipment load resistance of 1.59 ohms and you get a total circuit resistance of 1.67 ohms. At that point, the total circuit current will be 12.6 volts divided by 1.67 ohms for 7.54 amperes. Solve for voltage at the equipment by multiplying the 7.54 amperes by the equipment resistance of 1.59 to get 11.99 volts. That works.

You will notice the equipment got 0.61 volts less than desired, but that is reality in battery powered situations. Worse yet, the 12.6-volt battery will settle down to 12 volts after a while of operation, making it more difficult to keep equipment running. That is all the more reason to use larger gauge cable to keep cable loss to a minimum.

As you know, stranded cable is easier to handle in remote broadcast situations. It has the same amount of copper for a given wire gauge number, but flexibility makes stranded the best choice for everyday use and long-term reliability.

To conclude: Ohm's Law helps engineers understand engineering problems and create solutions. Be prepared to think through electronic engineering problems. A working knowledge of Ohm's Law is a good basic starting point. Without it, you might miss the answer to the problem presented.

Comment on this or any article. Write to radioworld@futurenet.com.

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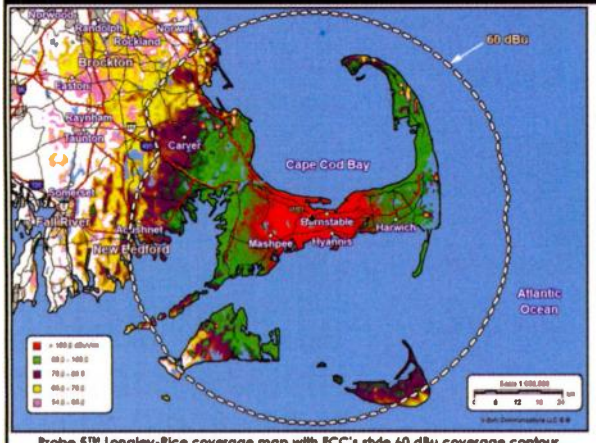

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Disrupting the airwaves: What's ahead with Carr's FCC

He could usher in an era of deregulation, modernization and rethinking of longstanding policies

If you listen closely, you can hear the whir of change churning through the static of the airwaves. With Brendan Carr likely to take over as chairman of the Federal Communications Commission — he has been unanimously confirmed three times as an FCC commissioner — significant shifts in policy and regulation are on the horizon for broadcasters, telecom companies, and beyond.

Known for his strong advocacy of deregulation, Carr's confirmation as chairman is expected to redefine the FCC's approach to broadcast radio, media ownership, emergency alerting and cybersecurity. As one of the leading voices in the push for greater flexibility in local broadcast regulations, Carr and his agenda could bring both opportunities and challenges for stakeholders across the industry. From efforts to revitalize AM radio to revisiting the rules around media ownership and broadcast content, his leadership will undoubtedly leave a lasting impact.

Above
FCC Commissioner Brendan Carr is shown in an appearance at the 2024 Conservative Political Action Conference.

"Business-friendly"

Carr's leadership at the FCC, especially in the area of broadcast radio, is expected to result in a shift toward deregulation and modernization, benefiting AM and FM stations.

He has appeared sensitive to the competitiveness of local broadcasters, particularly as they face increasing competition from digital media (streaming services, podcasts and tech giants). Under Carr, the FCC is likely to prioritize easing ownership restrictions and ensuring that broadcast regulations align with the rapidly evolving media landscape.

For AM stations, which have struggled with declining audiences and revenue, Carr has indicated strong support for initiatives like the AM Radio for Every Vehicle Act. Carr's leadership could potentially lead to policies that ease market consolidation, which might allow companies to own more stations in local markets, potentially helping AM stations survive by sharing resources with other facilities.

In contrast, Carr's impact on FM radio may be less transformative in terms of regulation. However, his focus on deregulation could open the door for FM stations to consolidate or explore new business models.

Carr's policies could also have implications for the Emergency Alert System. One area where he could exert influence is in multilingual alerts, improving accessibility for non-English-speaking communities, though potentially with a different approach than that currently suggested by the FCC.

Carr has supported policies that enhance broadcast public service roles, and this would likely include making emergency alerts more inclusive. The FCC could still push forward with rules mandating multilingual alerting, addressing issues of inclusivity in critical public information, but perhaps with a greater emphasis on approaches that are technologically feasible and less burdensome for broadcasters.

He has been vocal in reminding spectrum holders of their public interest obligations, and that approach toward emergency alerting is likely to exist in tandem with his otherwise more deregulatory approaches.

Regarding cybersecurity, Carr's approach might be more business-friendly compared to the current administration. The National Association of Broadcasters has raised concerns that the FCC's proposed cybersecurity reporting requirements are too burdensome for broadcasters. With Carr at the helm, there could be a reevaluation of these proposals, potentially scaling back the requirements to ensure they don't impose undue operational strain on broadcasters.

Carr 2025

To read Brendan Carr's chapter in the Project 2025 report, visit *https://tinyurl.com/rw-carr-25.*

Project 2025 touches on the broader theme of reducing "partisan" regulation at the FCC. This aligns with the push for reducing perceived bias in media coverage, which could lead to a shift in how broadcast regulations are enforced. For instance, the FCC might take a more lenient approach toward content moderation and expand opportunities for broadcasters to air more diverse viewpoints, potentially shifting the regulatory climate for radio and television stations.

Additionally, Project 2025 calls for expanding the FCC's role in securing national interests, particularly in safeguarding against foreign influence. While not specifically targeting broadcasting, this expansion could influence how foreign ownership of U.S. media outlets is managed, especially given the increasing concerns over Chinese influence in American communications.

If the proposals in Project 2025 are realized, the FCC's approach to broadcasting could become more industry-friendly, with fewer regulations on ownership and content, while also ramping up scrutiny of foreign ties to media outlets. These shifts could reshape the future of both AM and FM radio stations — especially smaller, locally focused ones — and impact the broader media ecosystem.

"His approach to broadcast radio, media ownership, cybersecurity and public interest services like EAS is likely to reshape the regulatory landscape, presenting both opportunities and challenges for stakeholders."

The FCC and Project 2025

There has been scrutiny and critique of the "Project 2025" document. While Carr has contributed a section on FCC regulation, it is unclear whether all his thoughts in that document will translate into an agenda at the commission.

Project 2025, which outlines a comprehensive plan for the U.S. government under the Trump administration, suggests a number of changes that could significantly impact the FCC and its regulation of broadcasting.

One of the most notable broadcast-related aspects is its emphasis on deregulating media ownership. It advocates for reducing the restrictions that currently limit consolidation within the media industry, particularly in the context of broadcast stations. This could make it easier for large companies to own more radio and television outlets across the country, potentially leading to a more concentrated media landscape. Such changes could potentially favor larger corporations over smaller, independent broadcasters, though one might expect balance in an FCC approach.

Charting the future

Brendan Carr's leadership promises to usher in a new era for the FCC, characterized by deregulation, modernization and a rethinking of longstanding policies.

His approach to broadcast radio, media ownership, cybersecurity and public interest services like EAS is likely to reshape the regulatory landscape, presenting both opportunities and challenges for stakeholders. While Carr's push for deregulation could help local broadcasters and AM stations adapt to a rapidly evolving media environment, it also has raised concerns among some regarding the possible effect on consolidation and reduced diversity in ownership. As the FCC charts its course under his guidance, the direction it takes will have lasting implications for the media ecosystem and its role in serving the public interest. The specifics remain to be seen, but it is clear that Carr's influence will be felt for years to come.

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