

RADIO WORLD

Your guide to radio technology

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(It's not a dessert topping. But the Tula Mic is pretty cool.)

Distortion detective
"The Case of the Irritating Audio"



Integrating with Bo
Technical Services Group sees a surge in business.

Missed opportunity
Donna Halper on the earliest Black sportscasters.

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At TSG, business is booming

Technical Services Group covers radio, TV and AV sectors



Paul McLane
Editor in chief

Broadcast engineering and commercial AV solutions provider Technical Services Group recently moved into a new facility in Baton Rouge, La.,

that it said is almost six times as big as its previous location.

Bo Hoover is CEO of Technical Services Group. This is one in an occasional series of interviews with industry technology suppliers.



Describe your new facility.

Bo Hoover: This is a major upgrade with 25,000 square feet of warehouse space, and approximately 4,000 square feet of office space. We just completed the renovation of the office area, and installed new technology across the floor place to support our operation.

We have full capacity to tune, repair and refurbish antennas. We have an inventory of rental antennas, temporary coaxial systems and low-power transmitters that help us restore operations for broadcasters within days versus weeks.

We have a 10 Gb fiber backbone and use Crestron technology for various collaboration spaces, which are useful for planning system designs for example. We are also building out a second story with 7,000 square feet. This is where we have a new conditioned space for TOC/NOC fabrication and integration services, along with a dedicated training space.



For radio folks, what services do you offer, and can you give some examples?

Hoover: We can really do everything for the radio broadcaster, and I believe we are unique in these capabilities. Much of what we do is a true turnkey service.

We can begin at the bare ground building out new transmission facilities all the way to FCC site relocation. We design, build and commission systems from the power inside the structure to the top of the tower.

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DIRS, backup power in FCC focus

This year's hurricanes and wildfires have prompted the FCC to examine protocols it uses to gather communications infrastructure information from broadcasters and others following a natural disaster.

In September the FCC opened a notice of proposed rulemaking to take comments. It proposes to require broadcasters to report outages following disasters.

The current Disaster Information Reporting System (DIRS) is voluntary. During times of emergency, DIRS enables broadcasters to report service degradations and request assistance if necessary.

Typically the FCC compiles the data and provides network status information to federal emergency management officials, and it publishes reports of restoration information.

The commission uses the information gathered through DIRS and the Network Outage Reporting System (NORS) to develop situational awareness during outages and analyze outage trends.

The FCC also is considering backup power requirements for DIRS and NORS participants.

"To the extent that the commission were to adopt backup power requirements, providers subject to them, potentially including cable providers, Direct Broadcast Satellite providers, Satellite Digital Audio Radio Service, TV and radio broadcasters, Commercial Mobile Radio Service and other wireless service providers, wireline providers and VoIP providers, could potentially be required to take steps to make their networks more resilient to power outages," it stated.



Marketron recovers from ransomware hack

Marketron said it hired forensic investigators and cybersecurity firms "to stand up an entirely new network environment, a gold standard in recovery from a security



Yuichiro Chino/Getty Images

perspective" after a ransomware attack took its services offline for about a week in September.

The company serves approximately 6,000 media organizations and, according to its website, manages \$5 billion in annual U.S. advertising revenue. Its products include sales and traffic management software tools.

Services that were affected included Marketron Traffic, Visual Traffic Cloud, Exchange and Advertiser Portal.

The company posted a series of recommendations for clients whose service has been restored.

The publication Inside Radio quoted Marketron CEO Jim Howard saying the Russian criminal organization BlackMatter was responsible for the attack.

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Continued from page 3

We will generally subcontract heavy tower work, such as antenna installation, due to the liability and insurance burden. In these instances we often assume a general contractor role, where we manage and supervise the work. We can do light duty tower work, which increasingly covers remote diagnosis and preventative maintenance.

We are also very busy with disaster recovery and emergency maintenance services.

We are working on an N+1 HD Radio conversion project in Fort Myers, Fla., at this time. Long-term, TSG has maintained one of the largest panel antennas in the United States for decades. It is a community site between Cumulus and iHeartMedia. This is a 3x12 broadcast Kathrein antenna that sits atop a 2,000-foot tower and serves the New Orleans and Baton Rouge markets.

Also in Baton Rouge, we integrated and commissioned a large multi-station combiner. It is a high-power ERI system with constant impedance on a SPHX-C high-power antenna with an elevation of 1,700 feet. I maintain and service this system on a regular basis.

We also provide engineering and services for the LSU Sports Radio network.



Above
Bo Hoover

Below
Part of the new
Technical Services
Group facility in
Louisiana.



What trends do you feel are notable?

Hoover: Audio over IP continues to be a big trend, and this will pick up as more systems go digital.

Station and network consolidation continues to create more reliance on outsourcing as ownership minimizes operations and engineer staff. As these systems grow more complex and require more modern technical expertise, ownership now finds themselves trying to do more with fewer people and often limited skillsets. It gets very complicated when they are faced with disaster recovery.

The problem as I see it is that we can't be generalists anymore. It is rare that one person has the expertise required to maintain all of these systems. It is either an IT technician, an RF engineer or a studio specialist.

The IT technician often has higher-paying opportunities, working half the hours, in other sectors. That is the biggest crisis: Finding an engineer who can handle all of these needs and be on call 24/7.

That doesn't really work anymore. So they need to outsource to partners that have the scale and the skillsets, and then they face a supply and demand challenge that can escalate their costs.



How does the trend toward virtualization and centralization affect your business?

Hoover: It's going to be a great opportunity for TSG. We work hard to create scale that can serve the various IP, RF and studio requirements for broadcasters. We have the ability to take on large territories and group-wide responsibilities where we design, deploy, manage and maintain those systems in even the largest environments.




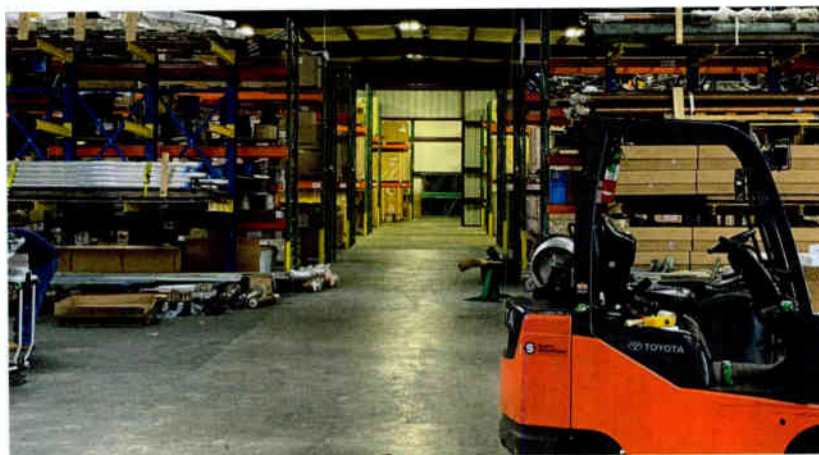
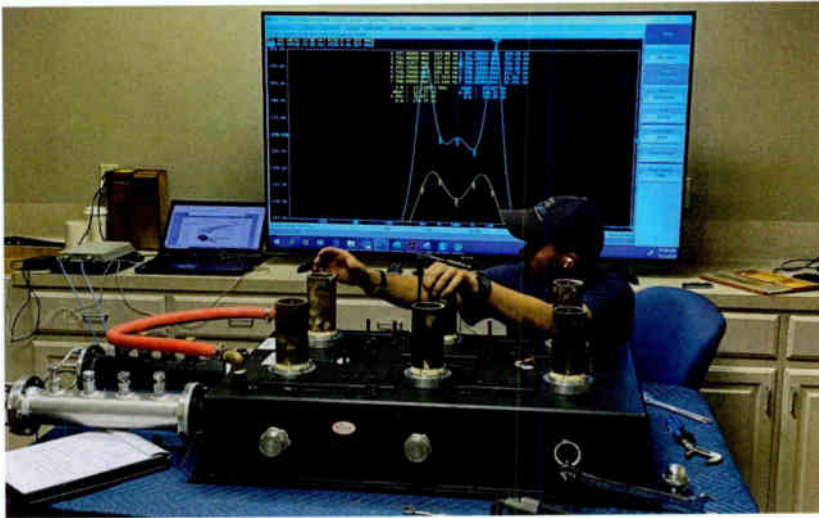
What else should we know?

Hoover: We are inundated with work as the result of these industry-wide changes. Our industry is looking for technically qualified people to deploy and manage their end-to-end solutions. We have the resources and skillsets to do it all. The customer tells us what they need us to do, and we deal with the heavy lifting and the detail work. And, we enjoy doing it.

TSG is also active in television and increasingly commercial AV. We are putting a new combined ATSC3.0 TV Channel 6 with FM in the Hancock Building in Chicago. Our AV systems division is working several centralized control room projects within multi-campus stadium facilities at this time.

We currently maintain about 900 visual displays in Tiger Stadium. We design, install and maintain systems for K-12 schools and universities, houses of worship and theatrical venues.

It is all still noise and pictures, covering everything from infotainment to communications. And while it's a different vertical market, it's not all that different from what our broadcasters expect 24 hours a day. 





Writer
Randy J.
Stine

Longtime
RW news
contributor
wrote last
month about
the growing
use of drones
in radio
engineering.

Above
Jessica Rosenworcel,
now acting
chairwoman of the
FCC, is shown at a
Senate committee
hearing in 2018.

More change for radio ownership rules?

Subcaps are debated, while clamor for
more ownership diversity draws attention

As the autumn of 2021 began, the FCC drew closer to concluding its 2018 quadrennial review of media ownership rules.

The commission, now headed by Acting Chairwoman Jessica Rosenworcel, recently collected fresh comments from broadcasters and other interested parties.

Observers are watching to see if the FCC — under a Democratic president, but as of Oct. 1 lacking a full-time chair or Democratic majority — will relax radio's local common ownership rules. They limit how many radio stations a company can own in a given market and how many of those can be in one service (meaning AM or FM, though raising limits on FM is the focus for most companies).

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Broadcasters are not speaking with one voice on this question.

The largest radio broadcast group thinks lifting FM subcaps could devastate the AM band. Numerous other ownership groups say the FCC should ditch all ownership caps altogether except perhaps in the biggest markets.

Meanwhile some members of Congress have been pushing the FCC to do more to encourage minority ownership, a consideration that may influence its decision on ownership limits.

Drop the “fiction”

At the center of debate is a proposal from the National Association of Broadcasters to raise the FM limits and base the system on market size.

In Nielsen markets No. 1 through 75, it suggests that one entity be allowed to own as many as eight commercial FM stations — or 10 if the broadcaster is involved in the FCC’s incubator program to promote new and diverse owner entrants.

In markets 76 and smaller as well as in unrated markets, the NAB continues, there should be no cap on FM ownership at all; so one company could own all the FMs there.

And on the AM band, it says, companies also should have no cap in a given market.

The NAB made these recommendations in 2019 as part of the FCC’s 2018 pending quadrennial review process.

“These outdated media ownership rules, which no longer enable broadcasters to viably operate in a competitive market or effectively serve the public interest, are in more urgent need of reform than ever,” NAB said in its most recent filing.

In assessing competition, the NAB commented, the FCC can no longer maintain the “fiction” that broadcast

stations compete only against other broadcast stations.

“The record compiled in 2019 showed that broadcasters compete against myriad traditional and digital platforms for both audiences and ad revenue,” NAB argues.

It cited data that shows consumers are acquiring more smart devices, from phones to watches to speakers, and that record numbers are



Current radio limits

In a market with 45+ stations, an entity may own eight, no more than five in one service (AM or FM). In a market with 30–44 an entity may own seven, no more than four per service. In a market with 15–29, an entity may own six, no more than four in a service. And in a market with 14 or fewer an entity may own five, no more than three in a service, as long as it does not own more than half of the stations in the market.

streaming audio, paying for subscription music services and listening to podcasts. Those trends continue to fragment what once was a mass audience for AM/FM terrestrial radio.

A group of 10 broadcasters filing jointly, including Townsquare Media, Connoisseur Media and Midwest Communications, believe the decades-old rules hamper local radio broadcasters in competing for audience and advertisers against growing competitive threats from global tech companies. They asked the FCC to do away completely with all caps in all but the largest markets.

“As shown in earlier filings in this proceeding by the Joint Commenters and the NAB, particularly outside the top markets, there simply is no reason to retain ownership caps given the inconsequential share of the media market that these stations enjoy,” they wrote.

The joint filers continued: “To think that a radio company owning a sixth or seventh FM station in a big market, or even all the radio stations in a smaller market, will damage competition or harm the public interest is to ignore reality.”

Regulations adopted in a pre-digital world prior to 1996, they said, are outdated and “make no sense in today’s competitive media environment.” Therefore, “there simply is no reason to retain ownership caps given the inconsequential share of the media market that these stations enjoy.”

“Increased consolidation is not a fix for low minority ownership in broadcast. And adopting the NAB proposal would in essence deregulate the FM band.”

“Moderate” approach

However, industry biggie iHeartMedia is asking for a “targeted, moderate approach” to changing the rules. Notably, it thinks the NAB proposal could cause “potentially catastrophic harm” to owners of AM stations.

iHeartMedia has said on several occasions that relaxing current limits on FM ownership could

lead to further devaluation of AM stations and hurt those owners, including women and minorities, by destroying the financial value of AM assets.

In its most recent comments, iHeartMedia wrote: “The commission should adopt a targeted, moderate approach to reforming the local radio ownership rules by eliminating only the limits on AM stations while retaining the current limits on FM stations. Doing so will avoid the potentially catastrophic harm that could befall AM stations were the commission to adopt the NAB proposal to deregulate substantially the FM band.

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“That’s a powerful clipper!”

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“The record compiled in 2019 showed that broadcasters compete against myriad traditional and digital platforms for both audience and ad revenue.”

“Moreover, by maintaining the current FM subcap limits, the commission will ensure that the financial incentives essential to the success of the Incubator Program remain in place. The commission should be guided by the overarching principle of doing no harm.”

Salem Media Group, which owns and operates approximately 100 stations, has made similar arguments: “If the AM band ceases to be the destination for popular programming, AM traffic will greatly diminish and the value of AM radio will collapse,” it wrote.

The FCC “has spent considerable time and energy to revive AM radio, but doing away with subcaps cannot possibly further that end. Using great care and restraint on subcaps is critical,” Salem told the commission.

Some advocacy groups have been critical of the FCC’s handling of the issue and say arguments for relaxing the limits are not supported by facts.

The National Association of Black Owned Broadcasters (NABOB) believes any move by the FCC to relax the limits on local radio ownership would increase consolidation and have a significant negative impact on African Americans and other minority station owners and entrepreneurs.

President Jim Winston said in a statement: “The reasons given for eliminating or radically relaxing the commission’s local radio ownership rule are not adequate to justify increased consolidation of ownership in local radio markets. The AM radio industry would be greatly injured by the proposals that have been put forth.”

The Multicultural Media, Telecom and Internet Council (MMTC) says the FCC should keep the status quo for now and said relaxing the limits “would disadvantage more minority broadcasters” in the United States.

“Increased consolidation is not a fix for low minority ownership in broadcast,” MMTC wrote. “And adopting the NAB proposal would in essence deregulate the FM band.”

The MMTC points to data from the FCC’s latest ownership report, released in September, which shows only 2% of commercial FM radio stations and 3.3% of AM stations are majority black-owned.

“Minority and women-owned broadcast ownership is embarrassingly low,” MMTC commented. “New voices

— not increased consolidation, less new entry and less minority ownership — are the answers to local advertising competition from Facebook and Google.”

Nonpartisan advocacy group Free Press told the FCC the “lack of ownership diversity” is the reason current limits must remain and offered advice to the FCC.

“As it prepares for the next quadrennial review in 2022, the commission should conduct a thorough analysis assessing the policies and market structures that are more likely to foster ownership by women and people of color, and before undertaking any rule changes should first analyze how such decisions will impact broadcast ownership diversity,” Free Press wrote.

In addition, it urges the FCC to close “loopholes” in its rules that allow owners to operate more stations than they’re allowed under dubious operating agreements.

“Consolidation has contributed to an ongoing pattern of big broadcasters transitioning resources away from low-income communities, rural areas and communities of color, and allocating them predominantly to white, wealthy and urban areas,” Free Press stated.

The FCC is facing fresh pressure to investigate how its policies have influenced a shrinking pool of minority media owners. Twenty-five members of Congress signed a letter sent to Acting Chairwoman Jessica Rosenworcel in June requesting that the FCC examine how its decisions and programs have disproportionately harmed African Americans and other minorities.

In September, Rosenworcel, commenting on the ownership report, said: “As has been the case for too long, this data makes clear that women and people of color are underrepresented in license ownership. This requires attention because what we see and hear over the public airwaves says so much about who we are as individuals, as communities, and as a nation. However, changes in the law, technology and court decisions like FCC v. Prometheus Radio Project make addressing this complex.”

(In 2017 the FCC adopted rules to abolish bans on newspaper/broadcast and radio/TV cross ownership and to relax several local TV ownership regulations; but those changes were held up by a legal challenge from Prometheus Radio and other critics. A Supreme Court decision this year reversed a lower court’s ruling and reinstated the 2017 FCC media ownership rules.)

She concluded: “There is much to consider to encourage more diversity in this market, including reinstatement of the Minority Tax Certificate Program.”

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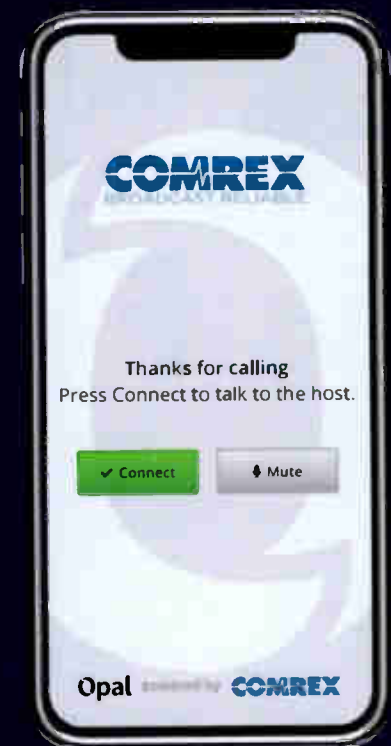
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12



John Bisset

CPBE

With more than five decades in broadcasting, John is in his 31st year of 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.

Time to plan for old man winter

Top off your generator fuel and get yourself an orange vest

For the majority of our readers, winter is approaching. I was privileged recently to deliver a Society of Broadcast Engineers webinar. I heard from a number of engineers afterwards who shared some great tips and comments.

One came from longtime Workbench contributor and New England contract engineer Stephanie Donnell.

She noted my suggestion about posting pictures from your transmitter site adventures in the staff break room. She usually shared them via an all-staff mailing list; these days you could do so on Slack or the station's private social media group.

It's both amusing and sad that so many station colleagues don't have any idea what transmitter sites look like, how we keep them running or what it might take just to get there at all.

(Do you have photos of your own transmitter sites that would serve as good examples of images suitable for educating your co-workers? Pix that show what it's like

at the site, and why it can be challenging or fun? Share them with us!)

Keeping an eye on things

As the cost of IP-based security cameras have dropped dramatically, Stephanie offered thoughts about the usefulness of these cameras at sites.

First, consider spending the money for cameras that have remote control of pan/tilt/zoom. These features provide a much wider range of viewing. If the model has a built-in a microphone, that's even better.

One incredibly useful application is monitoring the weekly generator tests. In the office, Stephanie would bring up the camera on the PC and be able to not only see but also hear the generator as it did its initial cranking to start and while it ran.

You may want to rethink being alerted for motion detection, depending on the amount of wildlife around your site. Instead, Stephanie set the camera to store

Above
It's cold up there. Plan now to be safe later.



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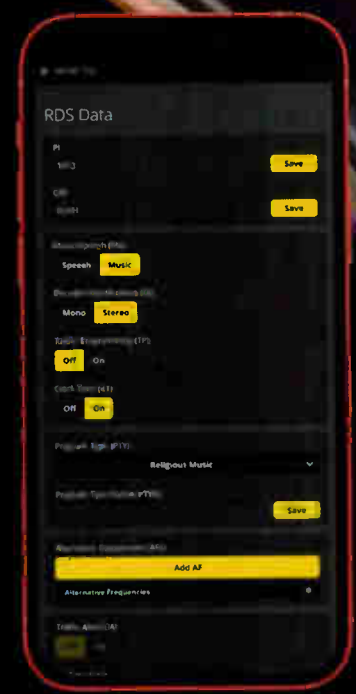
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Left
Seal any open conduits as part of your winter prep.

Right
Stero Manufacturing Co.'s Sealing Putty, also known as Dum Dum, forms reusable plugs for sealing conduit. It is available from Amazon.



captured images. It has captured lots of deer, a bear and many hikers and hunters. The point is, you'll have the images if a problem occurs but you're not getting pinged every time an animal walks by.

On the subject of cameras, Stephanie encourages engineers to purchase a dashboard camera for the company vehicle. This can be a great personal protection tool as you drive to remote sites.

Winter tips

My SBE presentations have included preparing an RF site for winter as well as how to keep a generator in good health. These topics overlap.

Besides conducting annual preventive generator maintenance before the cold arrives, Stephanie added a simple but important tip: Be sure to top off your fuel.

Depending on where you are located, getting refills after a certain point in the fall may not be an option; and in certain parts of the country, spring fuel delivery may not be possible until the mud dries up.

You'll also want to keep a quart or more of extra oil around, in case that needs to be topped off following an extended power outage.

I've mentioned using Bonide's "Mouse Magic" packages, which emit a peppermint odor that mice detest; mothballs are also an inexpensive way to keep mice away from generators and transmitter buildings.

If you use a C-Band dish as an STL, be sure to check the dish heater. Use an AC current clamp to make sure all legs of the heater are drawing adequate current.

One of the strangest things that Stephanie saw to cause a heater to fail wasn't a mouse, it was tiny black ants. They like to keep warm and dry, just like mice and bees.

Inside the heater control box she found an ant colony. Some of the ants had been

“ Enough dead ants had built up on the relay contacts so that it wouldn't fully engage to power the heater. ”

crushed on the contacts of the heavy duty relay that supplied power to the heaters. Enough dead ants had built up on the relay contacts so that it wouldn't fully engage to power the heater.

In another instance, a heater controller showed a GFI fault, most likely from a nearby lightning strike during the summer. Stephanie reset the fault and the heater functioned as needed. But if it had not been checked, it would not have activated when it started to snow.

Also routinely check the dish for signs of cracks, both on the front and rear.

Stephanie once found what appeared to be a .22 bullet hole in a dish. Fall is hunting season, so wear orange when you're at a site. LL Bean sells a warm orange fleece vest. It can also come in handy if you break down on the side of the road.

But you can avoid those breakdowns by ensuring your vehicle has been serviced before winter arrives.

To find webinars from the Society of Broadcast Engineers visit <http://sbe.org/education/webinars-by-sbe/>. Also check out info about its valuable Technical Professional Training Program at <http://sbe.org/tpt/>.



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Distortion detective: The Case of the Irritating Audio

Both the AM and its FM translator were exhibiting this annoying problem

A young chief engineer who knew a lot more about computers than transmitters and analog audio systems recently asked me for help in tracking down on-air distortion that had affected his mom-and-pop station for some time.

The station did have on-air distortion. It was not terrible, just bad enough to notice, though the longer you listened, the more it irritated — a real turnoff for Time Spent Listening.

It sounded to me a bit like the audio was going through an amp with bad power supply filters, and it had a raspy edge on voice. But identifying the source of the problem by ear was difficult.

This was an AM station that had an FM translator mounted on the hot tower, a situation that can present its own set of challenges. The distortion was evident on the FM. But a critical listen revealed that it was present on AM as well!

This pretty much ruled out my thought that high RF at the tower was being rectified on the audio input to the translator and showing up as audio distortion. So it was time to take a look at the audio chain.

Clamp!

Pretty straightforward: Program was being delivered from the studio miles away, with digital uncompressed audio sent over fiber. It sounded good going in, and it sounded good coming out. Yet the on-air product definitely was distorted.

The audio was fed to the FM via a buried 1,000-foot cable to the tower. That line was driven by a pair of old super-quality Western Electric 111C repeat coils set up

for 600 ohms in and 600 ohm line out with center tap grounded — the perfect way to send audio in an RF field. This arrangement no doubt had been set up by a previous chief who knew the magic of repeat coils for long lines.

Audio from the codec was connected to a Broadcast Tools switcher, then to the program line that fed the AM processors and the FM line to the tower.

I grabbed a handheld oscilloscope — something the young chief had never seen — and pulled the output connector from the switcher. I gave it a look on the scope with a 600-ohm load, and it showed nice clean peaks at about +8 dBm — looked good, sounded good.

I plugged it back in and bridged the line with the scope. Aha! The scope showed clipping with the peak levels closer to +3 dBm and a definite ceiling.

There was trouble here, but why?

Audio level on the coils was well under the +30 dBm (1 watt) design limit for the rugged four-pound 111Cs.

Still searching for the problem, I spotted a couple of black boxes where the cable leaves the building. These were Grommes-Precision TLS lightning suppressors.

When I looked up their data sheet, things started to make sense.

The TLS contains multiple stages of lightning protection. This unit is designed for protection of audio paging circuits with an RMS audio level of 1 volt. On a 600-ohm line, 0 dBm (1 milliwatt) is .774 volts, so with a level of +8 dBm (1.94 volts) the line level was crossing the clamp point for the TLS.

While the spec sheet shows a switching to ground level of 25 volts, the unit starts clamping just over one volt.

Us old guys

While finding this problem was a bit of a challenge, fixing it was a snap. With the drive to the line reduced to -3 dBm (.5 volts) on the PPM meter, things sounded great.

Another solution would have been replacing the TLS units with LLS models that have a pass rating of 6 volts (17 dBm), which is better suited for broadcast levels. But we work with what we have.

Now you might ask, why did the AM sound bad if the problem was on the FM stereo pair?

The Broadcast Tools switcher derives its mono output (used by the AM) by passive combining of L+R internally from the stereo output. So if the stereo line gets clamped, so does the mono line!

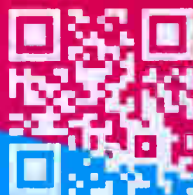
“The scope showed clipping with the peak levels closer to +3 dBm and a definite ceiling. There was definite trouble here, but why?”

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I suggested and installed a set of 1000-ohm buildout resistors on the output of the switcher, the better to isolate the FM feed, just as a precaution. With the 111C coils set up for center tap ground, the TLS might not have been needed at all; but better too much protection than not enough.

With the elimination of the distortion, the station was able to process a bit harder, increasing the loudness while improving the sound quality — a win-win for sure.

While I was there I couldn't resist teaching my young friend to reduce the AM modulation peaks from 130 percent positive (yikes!) 100 percent negative, to about 90 percent

symmetrical. He heard the difference and agreed to keep it that way.

The takeaway here is simple: Read spec sheets, and know how adding devices will affect your overall sound.

My assist call also underlined a growing problem in broadcasting. "Us old guys" know analog audio and issues peculiar to AM. The new "engineers" are not getting that knowledge, learning only about digital and computer networks. I hate to say it, but institutional knowledge is dying as more of us become silent keys.

Solution? Us old guys need to take every opportunity to reach one, teach one. 📻

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TLS / LLS
Tel-Page Line / Line Level Lightning Suppressor

Induced lightning strikes to electronic equipment is caused through induction with a lightning strike that does not strike the antenna line or electronic equipment directly, rather it induces large voltages of electronic energy into the system. Long telephone lines and the electronic equipment connected to them are particularly susceptible to damage from induction.

Therefore, Grommes~Precision designed the TLS/LLS to prevent surges on the Tel-Page line from burning the electronic equipment connected to it. Though few things can withstand a raw surge, since the TLS/LLS can help ground

FEATURES

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Compare the Grommes~Precision TLS/LLS			
TLS LLS	Metal Oxide Varistor	Gas Discharge Tubes	Transient Voltage Suppressor

Above
A Grommes~
Precision TLS spec
sheet.

APPROVE REJECT

1

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Cortado
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2

FIND LOCATION

Review is complete!

Let's change this button to say "Find YOUR location"

Marketplace PromoSuite Introduces Digital Workflow Product

PromoSuite announced a product called PromoSuite Digital that it says enables stations to manage their digital creative process with customizable workflows.

CTO Chris Bungo said it gives clients the ability to create custom order forms and workflows for each of their digital channels including websites, social media pages and YouTube channels. It's a collaboration platform that connects members of a team who are involved in selling, producing, approving and placing digital assets. The image above shows a sample user screen with markup and approval icons.

PromoSuite Digital, PromoSuite Production and PromoSuite Promotions are built on the company's PromoSuitePlus platform.

Info: <https://promosuite.com>

Marketplace Inovonics Releases SiteStreamer Updates

Inovonics recently released two firmware updates, one each for the INOmini 635 FM SiteStreamer and INOmini 638 HD Radio SiteStreamer.

According to the company the updates add RDS Radio Text Alarm features and modify LED Header displays to the web interface.

The company has provided instructions to aid in the download and installation of the updated firmware. The updates for the 635, Rev. 2.2.0.0, and 638, Rev. 1.3.0.0, are available at www.inovonicsbroadcast.com/support/downloads.



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Writer



Donna Halper

Associate professor of communication and media studies at Lesley University, former broadcaster and radio consultant. She also writes for the Society for American Baseball Research.



Tidbit

Aug. 7, 2022 will mark the 80th anniversary of the first Negro League baseball broadcast on radio.

Missed opportunity: radio and black baseball

Not until 1942 did the first broadcasts of Negro Leagues games take place

In radio's formative years, most stations were only on the air for several hours in the evening, and the majority of what they broadcast was music. There were a few stations that provided news headlines and sports scores, but listeners did not expect breaking news coverage, nor live play-by-play broadcasts of their favorite teams.

Throughout the early 1920s, as the programming day gradually expanded, so did what was on the air. By the mid-1920s, radio was covering important news events, and many stations began broadcasting major league baseball games, much to the delight of the fans.

But there was one group of fans whose favorite teams never got on the air. If you followed the Chicago American Giants, the Kansas City Monarchs, the Indianapolis ABCs or the other teams in the Negro Leagues, radio ignored you.

In fact, the only way to find out how your team did was to either go to the game or read about it in the Black press. Because America was segregated, it was mainly sportswriters at Black newspapers like the Chicago Defender, Pittsburgh Courier, and Baltimore Afro-American who offered extensive coverage of Negro Leagues teams.

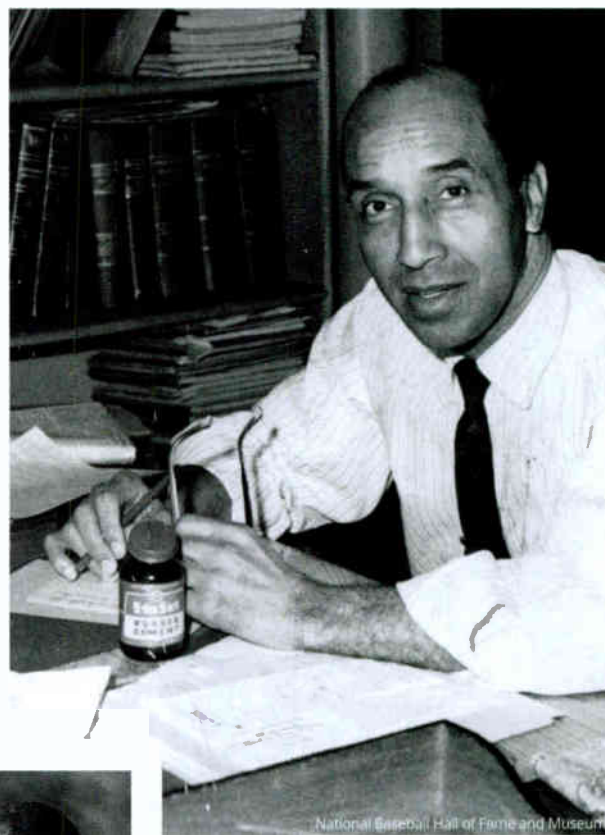
Jocko

No matter how well-attended Negro Leagues games were or how much talent the players displayed, radio stations weren't interested.

Perhaps that wasn't surprising: In the 1920s, all station owners were white, and they seemed convinced that white listeners wouldn't care about Negro Leagues baseball — even though newspaper accounts noted that many white people went to the games.

It wasn't until late 1929 or early 1930 (the exact date is uncertain) when the first Black sportscaster went on the air: Sherman "Jocko" Maxwell was a former semipro baseball player and manager from Newark, N.J. He debuted a five-minute radio show on WNJ (later WNJR) in Newark.

At first, he mainly read sports headlines, but his show went over well with local fans and by 1932, Maxwell was hosting a 15-minute program. By 1933, he was on the air in New York City at WRNY, and then at WHOM, where he



hosted his increasingly popular sports show several nights a week.

By 1937, Maxwell was on the air at WWRL, where he was named the station's sports director in 1942 — the only Black sports director in radio at that time.

Maxwell had an audience of both Black and white listeners, and he had so much credibility that Major League players would often stop by his show for a chat.

He was also a correspondent for the Sporting News, and during the 1930s, he covered some of the Newark Eagles' Negro Leagues games. This gave him an opportunity to discuss the games on his radio shows, where he sometimes compared certain Black players to their major league counterparts, something most other sports commentators were not doing.

Meanwhile, in Washington, D.C., another Black sportscaster went on the air in the mid-1930s.

Top
Sportswriter and broadcaster Sam Lacy in an undated photo.

Above
Sherman "Jocko" Maxwell debuted a five-minute radio show on WNJ in Newark by early 1930.

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┌ FUTURE ┐

Sam Lacy was already a sportswriter for the Washington Tribune who would go on to have a long career with the Baltimore Afro-American.

In the autumn of 1935, he began doing a sports show for WOL. Like Jocko Maxwell, Lacy was a big fan of the Negro Leagues, and both men had served as public address announcers at their team's ballparks.

After Lacy returned to his sportswriting job, he mentored a young man named Harold Jackson, later better known as Hal Jackson and a major force in Black radio.

Jackson wanted to be a sportscaster, but no station owner in the D.C. area would hire him. He finally got on the air in 1939 at WINX, hosting a music and interview program, and thanks to Lacy, he also was hired as the public address announcer for the Homestead Grays games at Washington's Griffith Stadium.

Grays vs. Elite Giants

But it wasn't until Aug. 9, 1942, 22 years after the Negro Leagues had been founded, that the first play-by-play broadcasts of Negro Leagues games finally occurred, with Jackson as one of the announcers.

Sponsored by the Baltimore Afro-American, Washington station WWDC broadcast the series featuring the Homestead Grays and the Baltimore Elite Giants. WWDC also agreed to broadcast several other Homestead Grays games, including one against the Kansas City Monarchs in September.

No Negro Leagues games seem to have been broadcast during the next several years. Meanwhile, Sam Lacy and Harold Jackson collaborated on a once-weekly sports show on WINX in 1944, during which they interviewed Negro Leagues players and recapped the games from that week.

Contrary to some internet claims, there is little evidence of any regular play-by-play broadcasts until 1948, when the Cleveland Buckeyes got on the air at station WSRS; the station's sportscaster Danny Landau did the play-by-play, assisted by sportswriter A.S. "Doc" Young, who covered the Negro Leagues for the Cleveland Call and Post.

But an effort to broadcast the Atlanta Black Crackers games over WEAS in Decatur, Georgia in mid-May 1948 was not as well-received: After one game between the Black Crackers and the Nashville Cubs got on the air, a subsequent broadcast had to be canceled after complaints from what one Black newspaper referred to as "Southern bigots."

Ironically, by the time more games were about to be broadcast, the Negro Leagues were in decline. Major League Baseball had finally begun to integrate in 1947 with the arrival of Jackie Robinson, and soon, there were questions about whether the Negro Leagues would survive.

The Negro National League disbanded in 1948; the Negro American League struggled on, in weakened form, through the 1950s.

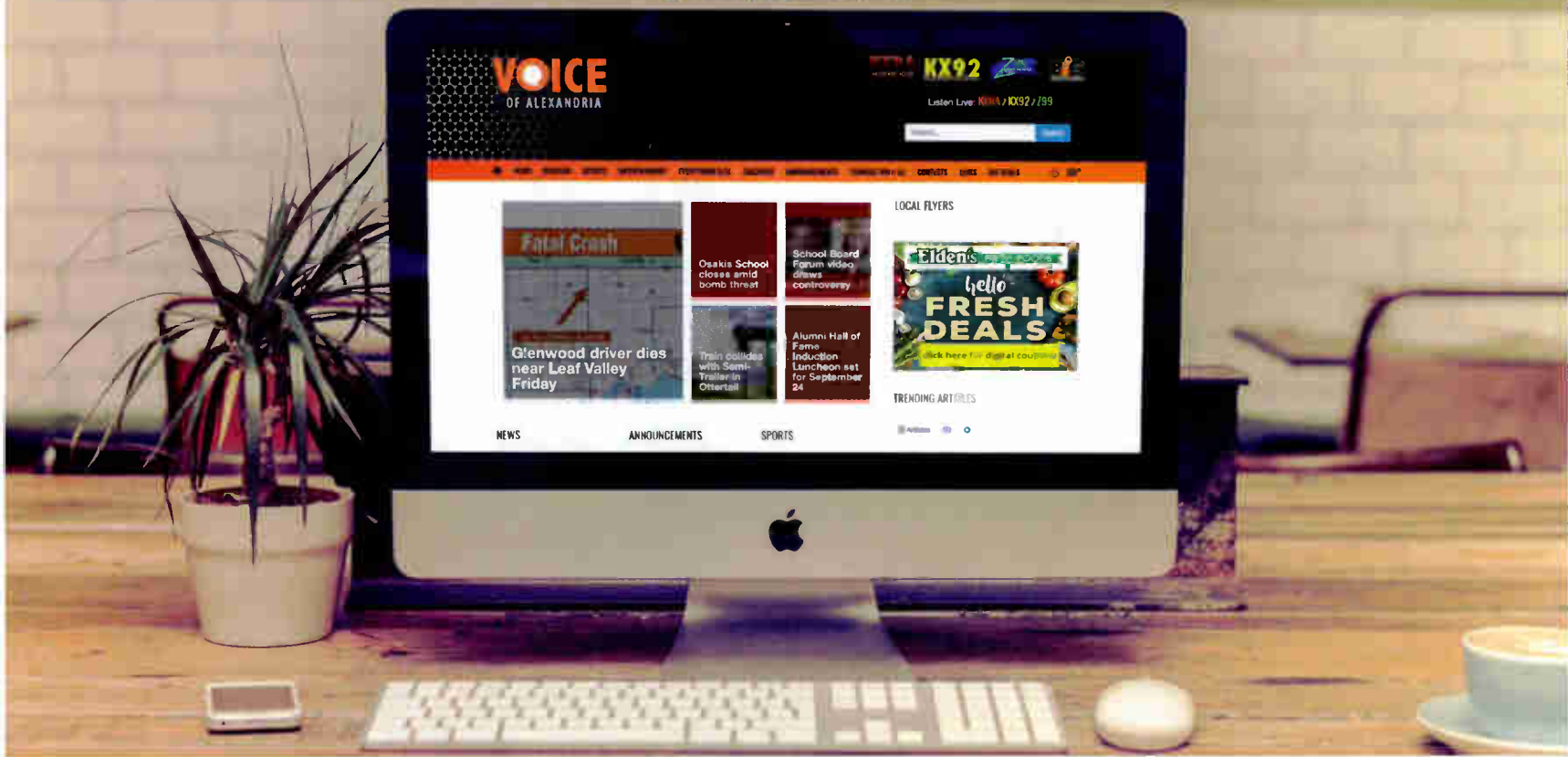


“ It wasn't until 22 years after the Negro Leagues had been founded that the first play-by-play broadcasts of its games finally occurred. ”

Above
Hal Jackson, shown in a 1970s photo, was mentored by Sam Lacy.

As a media historian and a baseball fan, I am saddened that most radio stations ignored the Negro Leagues when they were at their best. Because so few stations broadcast any of their games — and not until the 1940s — baseball fans were deprived of the chance to follow the exploits of talented (and record-breaking) 1930s players like slugger Josh Gibson and speedster "Cool Papa" Bell or hear about how pitcher Satchel Paige's legendary career developed.

It was a loss for the fans. But it was a missed opportunity for radio. ❁



Bring back local news

I'm once again banging the drum for localization

24



Mark Lapidus

The author is a longtime multi-platform media, content and marketing executive and RW contributor.

Above Voice of Alexandria in Minnesota was developed in 2013 in order to "provide a much broader voice for all that is happening in the Alexandria Lakes Area." It is associated with three Leighton Broadcasting radio stations in West Central Minnesota.

Not long ago, the term "survival" was a distant thought. Now it's difficult not to think about it several times daily. We must continually consider how we survive this terrible pandemic both physically and financially. We must plan carefully now for the future.

Being local is no longer an option for terrestrial radio. The choice is to be local or to risk irrelevance. As listening habits continue to shift toward more time spent with Spotify, Apple Music, Pandora, podcasts and other choices, being a radio station without localization is a long-term losing proposition.

Where's the local opportunity?

The most obvious is in news, talk and information. It may be difficult for programmers under 40 years old to remember local news on anything other than an actual full-time local news station, since consolidation has unsparingly wiped out local news on music stations.

For the most part, these had been inexpensive news operations; often the "news department" was one dedicated staff member and a few part-timers.

When they were eliminated, local newspapers initially filled the void. But then so many newspapers folded that it left hundreds of towns — especially those without TV stations — with little to no local news.

However, some local news websites, often based on formerly printed publications, survived; and we have seen radio stations partner with or buy these local news websites and then promote and sell advertising in combo.

This is a great plan if you're able to replicate it.

There is an opportunity in many cities to bring local news back to radio, especially during drivetimes. There is no reason why your :60- to :90-second local newscasts can't be recorded slightly in advance of use to maximize your sole reporter's time.

Another strong option continues to be the talk/news hybrid with local hosts. If you don't think the talent is out there, I refer you once again to the relatively new "Clubhouse" app, where thousands of hosts are honing much of the same skill set required for local talk radio.

When a radio station pursues a news, talk or information agenda, it is a gathering place for community. This leads to loyalty, which is any station's key to success. Another understated benefit is that when people listen to spoken-word programming — even when it is part of a music station — it is not usually heard as mere background; rather, it engages actively, a huge benefit to local advertisers who are counting on people to hear their messaging.

Who is consistently the top-billing radio station in America? It's WTOP, the all-news station in our nation's




Left
What makes WTOP so profitable? The answer is at the top of its homepage: News. Traffic. Weather.



Right
Super-serving New Jersey with relevant news is part of the ethos at New Jersey 101.5.

capital. Other success stories include Trenton's New Jersey 101.5 in the talk/news format since 1990, when Walt Sabo not only innovated localization, but also convinced ownership that it belonged on FM.

And for those who think this can't work in a small-to medium-size town, check out KXRA in Alexandria, Minn., with a county population of 36,529. The "Voice of Alexandria" has local news and sports, a daily updated event calendar, an on-air "Swap Shop" and a strong, locally focused website. And it's all supported by enthusiastic hometown advertisers.

To be clear, this is not about positioning statements. If you say "we're local radio" but don't actually deliver the goods, you will not win fans. This proposition is for courageous programmers and owners who realize that it's past time for radio to return to its roots in localization. 

“ There is no reason why your :60- to :90-second local newscasts can't be recorded slightly in advance of use to maximize your sole reporter's time. ”



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Writer



Chris Wygal

Owner of production firm Audio Concepts and a Radio World contributor.

Tula Mic: Old school and new school

A stylish combo USB mic and handheld recorder for remote content creators

As children, we are told to not judge a book by its cover. So as adults, when something arrives in the mail packaged in a cool little box with a trendy logo, we are conditioned to pass it off as nothing more than a slick marketing technique.

There are a few occasions, however, when a cool little box with a trendy logo contains an awfully nifty item.

The item in this case is the Tula Mic, from Tula Microphones, a combination microphone and handheld digital recorder.

It fortunately arrived when mobile/remote voice recording hit an all-time peak recently. Radio professionals and podcasters alike find themselves in places nobody ever assumed would become recording studios.

The Tula Mic boasts a throwback design that is, simply, fun to look at and use.

"Tula" is Sanskrit for "balance," which speaks to the technological advances that are shrouded in its nostalgic

design. Specifically, Tula uses Burr-Brown op-amp circuitry and noise reduction technology from Swedish software designer Klevgrand.

Klevgrand's "Brusfri" noise reduction plug-in is built into Tula for learning and eliminating environmental noise characteristics.

From a basic design interest, Tula's lithium ion battery charges via USB. The internal battery charge lasts about 12 hours.

A classy, foldable desk stand allows Tula to sit comfortably on a desk. The desk stand removes easily, and a mic stand adapter can be snapped on for more detailed and critical mic placement.

Tula is equipped with cardioid and omnidirectional capsules. The two polar patterns accommodate a single voice session or use with several voices in a group or interview setting.

Via its USB-C cable, Tula can be used as a USB mic for real-time miking and will work properly with any DAW running on Mac or Windows.

Familiar transport, control and volume buttons are situated on the sides of the mic along with a 3.5 mm TRRS jack that doubles as a headphone output or input for another source, such as a lapel mic.

Inside

Functionally, Tula is hardly a complicated tool, but it packs a punch under the hood.

Above
It's both a USB microphone and a mobile recorder with multiple polar patterns.

LOW PROFILE MIC BOOMS: No Springs Attached (Microphone/Shockmount Optional)

AMB22-4MOT	AMB16-4 MINI MOT	HMB14-4MOT	HMB8-4-MINI-MOT
AMB-22-4	AMB16-4 MINI	HMB-14-4	HMB8-4-MINI-MOT
AMB-22-4E	AMB16-4E MINI	HMB-14-4E	HMB8-4E

STUDIO ITEMS INC. www.studioitems.com (847)-487-7575

Product Evaluation

Pressing record does what you'd expect. Plug in headphones and adjust the volume to monitor real-time recording or file playback.

Two LEDs on the front indicate input gain levels and record mode. Use the USB connection to move Tula's files to a computer or use Tula as an audio I/O device. Pretty simple!

The ultimate Tula "cool" factor is found in its noise reduction function.

When in NC (noise cancellation) mode, Tula records two simultaneous versions of the audio file. One version is raw, with no noise reduction. The other version is recorded with the Klevgrand Brusfri noise reduction plug-in applied.

Brusfri reduces constant noises like HVAC system noise and functions quite well. I found the room noise had completely disappeared and the voice content was kept pristine with no additional artifacts or degradation. The Brusfri noise reduction even eliminated the drone of an airplane that was audible in the studio.

The NC feature works in real time when Tula is used as an I/O device as well.

Tula's Art-Deco-ish form factor is fashionable and unique, and it travels well. Given that it serves as a portable recorder and a USB microphone, Tula should feel at home with anyone who is on the go and needs to grab audio on the fly or is in the studio and needs to record a quick VO. It records standard 16-bit/48 kHz WAV files.

There was some noticeable handling noise sensitivities, and I detected some "not-quite-large-diaphragm" coloration



Left
The mic is available in cream, red, black and seafoam.



Product Tula Mic



- Cool design
- Built-in digital recorder
- Built-in noise reduction processing
- Interfaces with computer DAWs
- Solid construction



- Susceptible to handling noise
- Not compatible with standard microphone windscreens

Price
\$229



More info

Tula
Microphones
at www.tulamics.com.

on vocal reproduction. But Tula offers a clean and bright overall vocal response.

A windscreen or "dead cat" might be needed, as Tula is sensitive to plosives and wind. Tula explains that windscreens that fit a Blue Yeti will also fit the square Tula.

The steel construction is robust and prepared for the bustle and abuse of field reporting or comfortable studio work. Eight GB of internal memory and the lithium ion battery guarantee 12 hours of continuous recording.

Tula is a stylish little device that until you use it for yourself, you didn't know you wanted.

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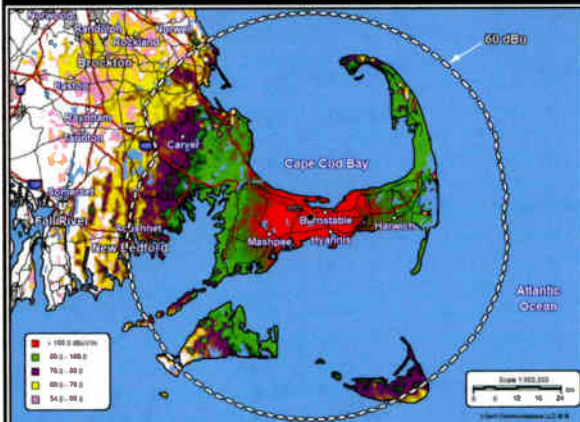
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Seven initiatives for racial justice in media

MMTC says it's time for the FCC to show it cares about inclusion

The Multicultural Media, Telecom and Internet Council recently wrote to the acting chairwoman of the Federal Communications Commission about "seven compelling initiatives" that it said the FCC could take to advance diversity and inclusion in mass media.

It noted that the FCC was the first federal agency to require its licensees to practice employment nondiscrimination, but continued: "At no time since 1968 has it been more important that the FCC immediately affirm that it cares about issues of racial justice ... The FCC's long and malodorous history of minority exclusion should both haunt and motivate all of us. ... It is not uncommon for the agency to take 10 or 20 years, or more, to act on a proposal to advance opportunities for multicultural communities and consumers."

This text is excerpted:

1 Access to more competitive technical facilities. Broadcasting has been the heritage technology for minority media entrepreneurs, and minority broadcasters have been the voices and conscience of their communities. Yet minority broadcasters generally must compete while using inferior technical facilities, such as AM daytimers, lower-powered outlets and stations unable to cover the full market due to the transmitter's location in a distant suburb or exurb.

Within the administration's first year, the commission should act on a host of pending proposals that would advance minority broadcast ownership, including granting an FM booster rule change that would authorize FM radio geo-targeting; creating a new station class ("C4") that would double the power of hundreds of small FM stations; and repealing the "Rural Radio Policy" that needlessly deprives small broadcasters of the opportunity to improve their signal coverage.

2 Correct the deficiency in the Radio Incubator Program. In June 2021, the commission established the Radio Incubator program. However, the program has one deficiency: Incubation of a station in a geographically vast but sparsely populated market with 45 stations would entitle the incubating company to a local ownership cap or subcap waiver in very large markets.

The commission should [allow] ... incubation waivers only in similar-sized markets.



Photo: Getty Images

3 Ubiquitous Equal Procurement Opportunity. In 1992, Congress directed the FCC to create the Cable Procurement Rule to ensure that businesses owned by women and minorities would have a fair chance at winning major contracts. The regulation yielded solid results and drew no opposition. ...

The commission should issue an NPRM in a fast-track new general docket, encompassing the industries regulated by the Wireline, Wireless and Media bureaus, and propose equal procurement opportunity across all FCC-regulated industries that is modeled after the Cable Procurement Rule.

4 Tax Certificate and Tax Credit. There is widespread recognition that the 1978–1995 Tax Certificate Policy was by far the most effective vehicle for advancing minority

“The FCC’s long and malodorous history of minority exclusion should both haunt and motivate all of us.”



More info

Read the full letter in PDF form at <https://tinyurl.com/rw-mmtc-now>.

broadcast ownership. In its 17 years of operation, the policy quintupled minority broadcast ownership. Another desirable tax initiative, tailored for small businesses, would provide that a company donating a station to a training institution (e.g., an HBCU or HSI) would receive a tax credit equal to the station's value.

The commission should request that Congress restore and improve the Tax Certificate Policy and create a tax credit for donating a station to a training institution.

5 Include Diversity, Equity and Inclusion Impact Statements in all rulemakings of general applicability. ...

What gets measured gets done. The commission should seek comment looking toward adoption of a universal policy where every rulemaking of general applicability will contain a Diversity, Equity and Inclusion Impact Statement.

6 Ubiquitous Equal Employment Opportunity. In the first decade of FCC EEO jurisprudence, and under the leadership of Chairman Richard E. Wiley and Commissioner Benjamin L. Hooks, 14 cases were designated for Section 309(e) evidentiary hearings over evidence of employment

discrimination. Yet despite the continuing prevalence of low minority representation in influential broadcasting jobs, the commission has not brought a single discrimination prosecution since 1994.

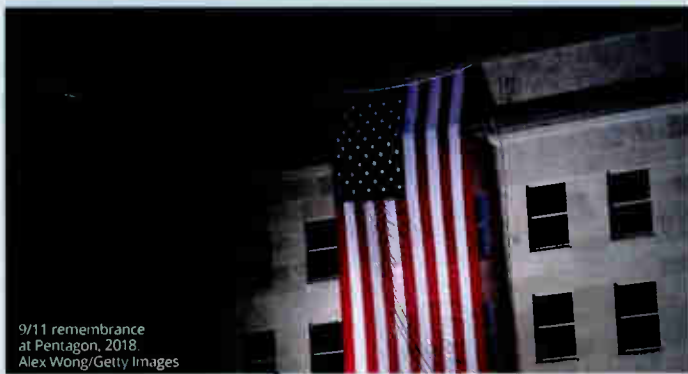
The commission should conclude its 23-year-old broadcast EEO proceeding and start to prosecute licensees that recruit new employees primarily by word of mouth to the friends and family members of their homogeneous staffs ... Further, the commission should consider several additional broadcast EEO regulatory reforms that are fully pled and endorsed by 44 national organizations, and ready for adoption. ...

7 Universal Access to Multilingual Emergency Information.

Since Hurricane Katrina in 2005, MMTC and the League of United Latin American Citizens ... have repeatedly asked the commission to ensure that basic, lifesaving information in widely spoken languages such as Spanish will be available in the wake of a Category 4 or 5 hurricane that could take down the electric and wireless grids. ... It is simply unconscionable that a person's lack of English fluency can become a matter of life or death in an emergency situation. ...



Readers Forum



9/11 remembrance at Pentagon, 2018. Alex Wong/Getty Images

Sept. 11, 20 years ago

Paul, excellent editorial about 9/11 (*radioworld.com*, "Memories of 9/11 Haunt Me Still"). Thanks for telling your story of that fateful day when 2,996 innocent people died.

We all remember where we were that morning. I heard a news bulletin come over one of our local radio stations. Then to a television to see the horrific event unfold.

It shook me to the core thinking of how our country could be attacked. It is a sad commentary that others would try to gain by destroying so many lives.

This kind of treachery cannot stand. My thanks to our nation's all-volunteer military for taking up the challenge of avenging 9/11. Many service members died in the process. Ceremonies are held each year in my hometown honoring

all Americans involved. It is a sobering reminder that the War on Terror is not over.

*Mark Persons
Brainerd, Minn.
www.brainerdvfw.org*

No place for mandates

This is regarding the letter "AM Digital — What Is the End " (*radioworld.com*, search "Daniel Brown"), which was a response to an earlier commentary by Michelle Bradley.

The author wrote: "Michi made the point that, The automotive and radio receiver industry needs to make HD Radio, standard equipment, not a 'luxury option' like with some manufacturers.' So, when is the FCC going to step in and mandate HD Radio in all cars? It's the only way this will happen."

Well, I have to call BS. Why do you think every vehicle comes with SiriusXM? Because they did what they had to do to get them there. I'm sure there were financial inducements.

Money talks. But as far as I can tell, there was never a broadcaster initiative to get the radios in the cars. I don't know what discussions iBiquity had with the auto manufacturers, but it was spectacularly ineffective. Relying on big ol' Uncle Sam to mandate HD Radios in all cars seems like such a copout.

*John Terhar
Largo, Fla.*



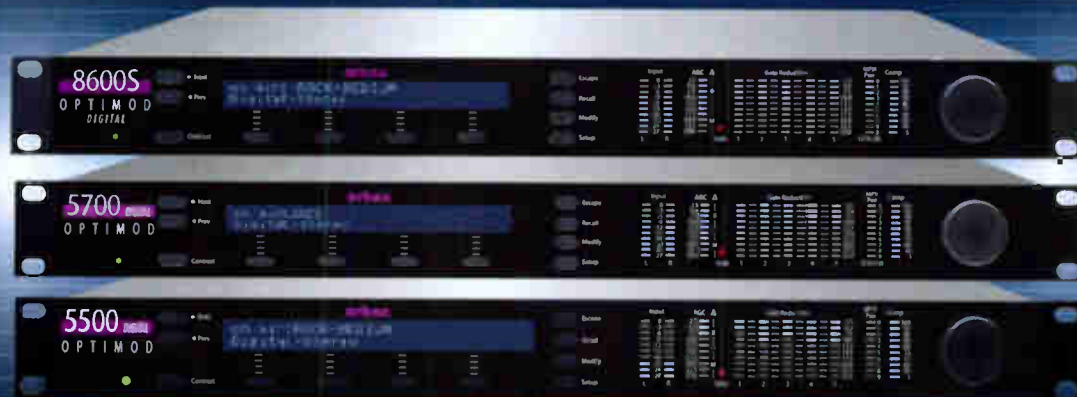
How to submit

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