



# RADIOWORLD

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Matt Armstrong considers the future of the BBG's international broadcasts. — Page 28

## Stuart Graham Now Flies Solo

Co-founder of Graham Brock is leading firm into its third engineering decade



Stuart Graham works as his desk in St. Simons Island, Ga.

## NEWSMAKER

BY RANDY J. STINE

**ST. SIMONS ISLAND, GA.** — Stuart Graham has overcome the unexpected death of a business partner and the near-unraveling of a great business plan.

Graham, president of Graham Brock Inc., co-founded the broadcast technical consulting firm in 1994 with Jeff Brock. The men were business partners until 2012 when the 51-year-old Brock died from cancer.

"It was like losing half of your life.

It was very difficult. I tried to pick up the slack, and you just can't do all of the work," Graham said. "Together we could get a lot more work done than we could as two individuals. It was a huge loss not having him in the office to bounce things off."

Graham, 66, credits fellow broadcast engineers and industry attorneys with getting him through the transition period following Brock's death.

"I'm still not over missing [Jeff] and probably never will be," Graham said. "But we did have to adjust the business practice a bit. Jeff did most of the TV work, so as a result we no longer do TV and auxiliary services work, such as STLs."

Graham became sole owner of the *(continued on page 6)*

## Snap! Crackle! Zap!

The industry's best tech tips appear in *Workbench* every issue.



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# Brazilian Radio Stations Score Big

## Broadcasters offered extensive national coverage of the 2014 FIFA World Cup

BY ÉRIKA CARVALHOSA

**RIO DE JANEIRO** — After 64 years, the 2014 FIFA World Cup returned to Brazil this summer. The soccer games, played from June 12 to July 13, comprised the 20th FIFA World Cup, the tournament for the association's football world championship, held at several venues in the country.

FIFA is the Fédération Internationale de Football Association, the sport's governing body. The World Cup had last been held in Brazil in 1950.

As the country with the most World Cup titles, Brazil's radio coverage of the event was assured a rabid following. A total of 21 Brazilian stations aired matches.

For approximately \$850,000 each in transmission fees, Brazilian radio stations acquired permission to broadcast from rights-owner GloboSat. The figure is about three times the amount paid by the country's stations during the prior World Cup in South Africa in 2010, according to FIFA and ABERT, the Brazilian Association of Radio and TV Stations.

#### STAFF COVERAGE

In Porto Alegre in the lower southeast portion of the country, close to neighboring Uruguay, Rádio Gaúcha is the main radio station in the region. It began preparing for the event in 2011. Management decided to place at least one professional staff member in each of the 12 host cities.

Rádio Gaúcha implemented a series of measures necessary for successful coverage. "The Confederations Cup, in 2013,



**FIFA WORLD CUP  
Brasil**



Described by designer Christopher Lee as "the most perfect stadium in South America," the Estádio das Dunas in Natal, in the Brazilian state of Rio Grande do Norte, was built to host a number of World Cup matches.

served as a kind of lab for what we wanted this year. "[We used] our entire budget for this commercial project," said Rafael Cechin, the station's sports coordinator.

Since the station was broadcasting from all the 2014 World Cup venues, it was able to broadcast all 64 games and corresponding information. The station also had a strong presence at the International Broadcast Centre in Rio de Janeiro. The IBC was FIFA's broadcast headquarters during the tournament.

Rádio Gaúcha had reserved its space,

which served as a studio and newsroom for the team of six staff members who stayed in Rio during the games; the station shared the space with officials from FIFA and Host Broadcast Services.

The station had 31 accredited staff members, of which 20 were traveling during the Cup. "The newsroom in Porto Alegre had an additional 15 staff members who were directly involved with the coverage. And all our employees, including the areas of journalism, administrative, transportation, technical and commercial departments, were mobilized for the World Cup in Brazil," said Cechin.

Rádio Gaúcha had studios equipped with digital circuits and equipment in all the World Cup venues — ISDN connections at the stadiums, studios and the IBC, with IP connection as a backup. Wherever the Brazilian team went, the station's staff members travelled with them. The IBC in Rio de Janeiro and Porto Alegre also made special preparations. Reporters for Rádio Gaúcha had mobile connectivity using Comrex Access stereo BRIC IP audio codecs, which are portable and use 4G modems or WiFi for audio transmission; the reporters went on air directly from the stadiums and team training fields. For backup, Rádio Gaúcha used Access codecs but also bought 4G iPhones and touchscreen notebooks for the broadcast team's use.

#### SIX-FIGURE OUTLAY

Rádio Tupi, a well-known station in the capitol city of Rio de Janeiro, had nearly 150 staff members involved in

(continued on page 5)



ESPN

# HD Radio on LPFM: Could It Be?

Ohio station WDPE is thinking outside the box with digital plans

## COMMENTARY

BY DAN SLENTZ

With the pending launch of more than 1,000 new FM radio stations, there's been some discussion about whether any holders of these LPFM construction permits may attempt to go on the air as digital HD Radio stations.

There are 814 LPFMs on the air from the first round of LPFM licensing more than a decade ago, according to FCC data. According to Rick Greenhut of HD Radio developer iBiquity, there are no HD LPFMs currently in existence.

This is neither surprising nor difficult to understand given the lack of radios (though this is changing); the cost of gear and licensing (though these are dropping); and the fact that 10 percent of an enterprise resource planning of 100 watts could barely "light a night light" (though a lot of power isn't always needed to cover your audience).

Nonetheless, after lengthy excited discussions, the board of WDPE in Dover/New Philadelphia, Ohio, to which I am an advisor and consultant, has decided that the station should launch as what might be the first LPFM HD Radio station in the nation.

### MULTICAST NIGHT LIGHT?

We've spent an extensive amount of time communicating with iBiquity, equipment manufacturers and even the FCC to get a handle of what can and cannot be done. The idea that this little station could explore uncharted territory is interesting and exciting. But to launch it as an HD LPFM with potentially four multicast channels will easily double our cost. Those additional expenditures include the digital licensing, computers and studio gear for the extra three stations/streams, the HD Radio gear (exporter, importer, etc.) and additional music licensing and typical operating expenses. And that's certainly not a comprehensive list.

Dover-New Philadelphia Educational

Broadcasting owns WDPE, and part of our mission statement is to give our students (whose ages can range from 7 to 70+) an experience in a studio environment similar to any "real radio studio."

Ideally, this exposure might push the students into broadcasting, bringing with them a great education. If future radio is made up of multiple streams (no matter the transmission method), the



station should afford students a chance to learn, program and understand how to make all this happen.

It also presents unique possibilities for revenue generation and expanded coverage and programming.

### POSSIBILITIES

• Though the LPFM station is and must be noncommercial by current FCC rules, an LPFM with HD Radio capabilities *can* be commercial on the HD2, -3 and -4 multicast sub channels! This came as a huge surprise; but current rules do *not* prohibit this, according to Deputy Chief, Engineering, James Bradshaw of the FCC. He emphasized that this doesn't mean the commission couldn't change the rules later; but at this time there is nothing prohibiting this.

• Commercial sub-channels could be leased out. You might lease one to, say, an AM station to rebroadcast its signal locally in HD quality! An AM might seek an FM translator; but what if there were no frequencies available? Unlike an FM translator, the AM station could actually use their leased HD (*your* sub-channel) to broadcast a second local high school sporting event or any secondary program (no need to simulcast 100 percent, or at all). In this scenario, you have the great benefit of a likely long-time broadcaster promoting HD FM on their AM station, which naturally helps your FM and your other HD LPFM channels.

• Lease an HD LPFM channel to a local religious organization or another for-profit or nonprofit for their use. Maybe a church wants a station or a group of "old, retired commercial broadcast

guys" want a station. These sub-channel tenants are going to help you to support your nonprofit *and* to build the audience of your HD channels, as well as HD Radio technology.

• Maybe you decide to program all three of your HD LPFM "extra channels" yourself. With your additional channels, you certainly can fill many programming voids in your community. Maybe you have a large Hispanic population or a large group of recent immigrants from another country who aren't speaking English or are still learning? You can use one of your channels for programming to help them learn through programming in their native language. Or maybe you

**Though your LPFM station must be non-commercial by FCC rules, an LPFM with HD Radio capabilities can be commercial on the sub-channels.**

— Dan Slentz

use a channel in some other way that is primarily educational. There are so many possibilities.

• What if you used *all* your channels to complement each other for a special event? For instance, in Dover-New Philadelphia there is an old and fierce rivalry between local high schools at the end of the football season, in which the Tornadoes take on the Quakers; it is a *big* event! If you had four stations and this sort of event on the calendar, why not put your play-by-play coverage on your analog and HD1 signal and supplement it with the same play-by-play on the HD2 but with a rock n' roll soundtrack laid down right under the announcers? (Who has even done a sportscast with a rock n' roll soundtrack?)

But hey, that's not all! What about using your HD3 signal to throw someone in the Dover stands and go along the Dover sideline through the entire game and get reactions and talk to people? And go ahead and do the same with your HD4 signal on the New Philadelphia side of the stands? If you have the ability to cover something from all angles simultaneously, why not

## FROM THE EDITOR



My guest writer today is RW contributor Dan Slentz, an engineer and LPFM veteran. This commentary is part of Radio World's coverage of the pending large-scale expansion of the low-power FM service.

— Paul McLane

really do something unique? This could be an interesting "quadcast" in HD. Just imagine how distinctive, fun and interesting it could be.

These are just some of the ideas the board at WDPE has been discussing. The station has a long way to go to get on the air — and a lot of money still left to raise — but the group certainly is thinking outside the box. And one of the great things about working with

so many people who aren't "traditional broadcasters" is the fact that they aren't afraid to explore new territory.

An important note in using HD secondary channels for commercial broadcasting is the great concern about keeping your nonprofit out of the "for-profit" world. Be sure to consult your station's attorneys and tax consultants so you keep everything well-defined and legal. Keep in mind that you only have this LPFM CP (or license) *because* you are a nonprofit organization.

WDPE 102.3 has a CP and a nice location to call "home." We're fortunate enough to have our future transmitter co-located with our studio, an excited and energetic board, a community excited about getting a new FM station and a lot of pretty big dreams and goals. The prospect of launching an LPFM station in HD is unique, even if some may say it's a little crazy.

Comment on this or any story. Email radioworld@nbmedia.com with "Letter to the Editor" in the subject line.

For more on the topic of low-power FM, also read Radio World's eBook "LPFM 2014," available for free at [www.radioworld.com/ebooks](http://www.radioworld.com/ebooks).

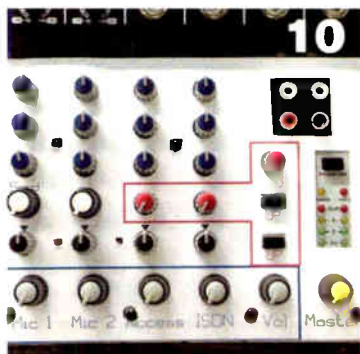


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# WORLD CUP

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covering the World Cup, including technicians, journalists, sports announcers and producers.

"If we take into account the purchase of broadcast rights, equipment purchases, airplane tickets, accommodations and 'per diem' costs," said Thiago Carneiro, the station technical manager, its total financial outlay was about \$1.36 million.

The station used IP codecs, V.35 or ISDN lines for audio transport, depending on the feasibility and needs for each broadcast. Rádio Tupi used Tieline Commander G3 and AEQ Eagle codecs.

Rádio Tupi aired 40 out of 64 games live. For this, the station invested heavily in Wheatstone AoIP technology for internal audio transport.

"We were able to work on multiple games simultaneously, thus making the operation incredibly simple," said Carneiro.

The Grupo Bandeirantes stations form the "Rede Verde-Amarela," or Green-Yellow Network. The network consists of several station groups: BandNews FM, Rádio Bandeirantes, Bradesco Esportes FM, Band FM, Nativa FM and its affiliates. To air the World Cup, these groups chose to form a broadcast chain consisting of more than 130 stations spanning the country.



**Rádio Gaúcha's Sports Coordinator Rafael Cechin**

portions of the other eight games taking place at the same time in the final round, the station used ISDN lines in the stadiums, and Tieline Commander G3 codecs for live broadcasts.

Employees of the three stations interviewed for this article were unanimous when asked about their biggest challenge: Anyone who believed that the broadcasts would be easier to produce and transmit because the World Cup was in Brazil were mistaken.



The entire Green-Yellow Network participated in the coverage of the matches, while five main announcers along with another 35 commentators and reporters presented the broadcasts.

For the network, broadcasting the World Cup in Brazil was a high-cost endeavor. "The acquisition of broadcasting rights made up at least 50 percent of the cost of total coverage operation," said Rádio BandNews Managing Editor Sheila Magalhães.

To broadcast 56 live games, with

All the stations expressed a desire to provide their best coverage, and that played out in different ways. The Rede Verde-Amarela aimed to offer the most extensive coverage for radio listeners with reporters spread across the country. Rádio Tupi strived to inform and guide its audience with the best possible quality and had numerous preparatory staff meetings in the first half of the year.

Thanks to hard work and early preparation, the 21 stations say they met their broadcasting goals in offering a unique World Cup experience to its audience.

*Érika Carvalhosa contributes to Radio World from Rio de Janeiro, Brazil.*



## NEWS ROUNDUP

**NOTABLE SALE:** Radio Disney plans to sell all but one of its 24 owned radio stations and focus more on digital distribution and away from broadcast. Some reports indicate close to 200 jobs could be affected by the intended



sales, though Disney hasn't publicly disclosed numbers other than to say some jobs will be eliminated, other positions will change and various new jobs will be added. Radio Disney GM Phil Guerini told colleagues that changing consumer media consumption habits "compel us to evaluate and evolve our business." Radio Disney will increase its involvement in digital distribution and music-centric programming. All but one of the stations to be sold are AMs, as is the signal it will retain in Los Angeles.

# GRAHAM

(continued from page 1)

consulting business following Brock's death and the retirement in 2013 of another part-owner, Mary Matheny, the former office manager and treasurer. Graham now runs the business and has one employee, Cathy McKay, receptionist and secretary.

The firm works with AM and FM broadcasters on channel allocations and applications for the FCC — "anything you want to get to the FCC and approved, including LPFM, translators, Method of Moments proofs and traditional proofs of AM directional antenna arrays," he said.

Graham's broadcast engineering career path has kept him working mostly in the southeastern United States. He got his first radio chief engineer job in 1979 before becoming a contract engineer in Georgia and Florida in 1983.

## AM DA EXPERTISE

One expertise he has developed over the years has been in tuning AM directional antennas, Graham said. "It can seem overwhelming to a lot of people, but I find that it all seems to fall into place."

Graham, according to the company's website, is accomplished in tuning and operating directional antenna systems, including working with detuning re-



The late Jeff Brock, left, is shown with Stuart Graham and the girls' softball team they coached in 2003.

## Stuart Graham has overcome the unexpected death of a business partner and the near-unraveling of a great business plan.

Graham graduated from Auburn University with a Bachelor of Science degree and a major in aviation in 1971. He began his broadcast career after graduation aboard an aircraft carrier in the Navy as an announcer working in public affairs. After his military service concluded, Graham worked in commercial radio as an announcer, but chose the path to broadcast engineering when he realized he enjoyed fixing things more than being on air.

radiating structures or considering those structures in the design of a directional AM station.

Right now, broadcasters are very interested in consolidating AM and FM sites, according to Graham; and most have a keen interest in translators and boosters. Broadcasters "in many cases are looking to sell their AMs, unless they have an FM translator for it already. Or they're sometimes deleting AM directional operations for non-

directional operations, which is less expensive and easier to maintain."

Translator power levels may not be high — maximum effective radiated power for any FM translator is 250 watts, according to the FCC — but they can provide AMs with access to valuable FM spectrum and enhanced nighttime presence, he said.

Graham uses V-Soft Communications Software, an RF software and engineer consulting company owned by Doug Vernier, to search, identify and implement AM, FM and FM translator operations. "I have worked with Doug Vernier since the time of the Radio Shack Model 3 computers," he said.

"Of course, new translator opportunities can only be requested within an FCC filing window, but existing translators that are underutilized can often be found."

## WORKING WITH THE FCC

Graham predicts the FCC will go forward with its proposed rulemaking to, among other things, allow AM stations to apply for new FM translators to

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## JEFF BROCK, A "BRILLIANT ENGINEER"

Jeff Brock was a respected broadcast technical consultant who was vice president of Graham Brock Inc. for 18 years. Brock was only 51 when he passed away from cancer in October 2012.

According to the firm's website, "Brock possessed an uncanny ability to recall call letters, transmitter information, class, etc., for nearly every station he dealt with." He specialized in FM, LPFM, TV, DTV and broadcast microwave.

Brock had been partners in the firm with Stuart Graham since its founding in 1994. He had been active in youth sports and was an avid cyclist.

After Brock's passing, colleagues at the law firm of Fletcher, Heald & Hildreth wrote on their blog: "Jeff was a warm, humble and sincere gentleman, with a wry sense of humor and a passionate love for the Atlanta Braves. A brilliant engineer, Jeff had a deft writing touch and an amazingly active, creative and encyclopedic mind."

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**NEWSROUNDUP**

**DISTRIBUTION:** ABC Radio News will have a new distribution partner come Jan. 1, Skyview Networks. Its 35-month distribution deal with Cumulus Media is slated to end in December. Cumulus recently cut a deal with CNN to provide news content for its Westwood One affiliates that the stations can brand themselves. ABC says its new arrangement will allow the broadcaster to expand its radio operations to invest in new programming and distribute and market its own content to 2,000 affiliates as well as digital services like iHeartRadio and Slacker Radio.

**DISTRIBUTION II:** An order has been placed for hundreds of satellite receivers so 1,600 ABC Radio News stations plus its other affiliates (see above) can receive content from the broadcaster's new distribution partner Skyview Networks. Skyview will also be handling affiliate programming sales. Skyview President Ken Thiele tells Radio World the satellite receivers on order are Pico Digital XDS-Pro4s.

Each device has four ports, allowing the unit to decode four live incoming program channels simultaneously; the receiver also allows for content storage and time-shifting. Content is managed through the New York production facility and will be fed to Skyview Networks' uplink facilities in Scottsdale, Ariz., using a redundant, diversely routed fiber connection. Skyview will then uplink to the satellite for distribution.

**AM:** Much of the industry supports certain rule changes to help revitalize AM like opening a special application window for AM owners to obtain FM translators, and eliminating the Ratchet Rule. Now FCC Commissioner Ajit Pai reiterated his call for the FCC to act by Halloween on these. Such action could mean a special FM translator application window could open for AM owners next year, he said. Speaking to the Ohio Association of Broadcasters in Columbus in August, Pai said he's thinking about skywave protection, all-digital AM and synchronous transmission on AM. He hasn't made up his mind on skywave protection but would like to hear more. He suggests the industry nail down how much nighttime skywave listening takes place now and resolve the debate. Pai asks if it's time for AMs to go all-digital on a voluntary basis and also invites more input on whether synchronous transmission systems can improve AM reception.

**TOWERS:** The FCC commissioners voted to streamline and eliminate outdated portions of the agency's Part 17 rules governing tower construction, marking and lighting. Though their goal was easier deployment of wireless towers, the changes affect broadcast tower owners and licensees as well. The August order will improve lighting outage notification requirements, standardize repair timelines and harmonize FCC requirements to maintain painting with FAA guidelines. Perhaps the biggest change for

broadcasters: Tower owners with "robust, continuous" remote monitoring systems connected to a Network Operations Center, staffed 24/7, can apply for a waiver of quarterly physical inspections of tower marking and lighting systems.



**PUBLIC FILE:** The FCC may be a step closer to requiring radio stations to post their public and political files online. TV stations in large markets began meeting this obligation in 2012; as of July, all TV stations have had to post their public file documents to the FCC-maintained online

database. Public interest groups Campaign Legal Center, Common Cause and the Sunlight Foundation petitioned the commission to expand the obligation to include satellite and cable providers. The agency is going further, by asking for comment on whether radio should be included. We've reported the FCC had hoped eventually to apply the rules to radio but that its internal IT software/hardware limitations were making that difficult. Comments are due (MB Docket 14-127) by Aug. 28 and replies by Sept. 8.

**LPFM GEAR:** Global Spice LLC out of Edgar, Neb., is now manufacturing Nexus-branded equipment such as transmitters and stereo generators. Nexus Broadcast owner Leo Ashcraft closed his 30-year engineering consultancy and equipment manufacturing business in August, citing declining health. Dustin Williams, who owns Global Spice

with his wife Stevie, is an electronics engineer who worked with Ashcraft for several years. Global Spice acquired the Nexus Broadcast name, online store, phone number and manufacturing division. The Nexus website ([www.nexusbroadcast.com](http://www.nexusbroadcast.com)) has been updated to reflect the change; the phone number remains the same. Nexus and REC Networks had a marketing arrangement for LPFM equipment, though those companies remained separate. LPFM licensees, permittees or applicants needing new engineering services may contact REC networks via email at [lpfm@recnet.com](mailto:lpfm@recnet.com).

**CONNECTED CARS:** Some 42 percent of vehicle owners polled by Harris Interactive have heard of connected cars but don't really know what the term means. Harris polled 14,000 vehicle owners of models 2009 and newer who are looking to purchase their next car. Luxury car owners showed the most interest in connectivity: BMW (40 percent), Acura (37 percent) and Audi (34 percent.) Overall, respondents indicated only 15 percent of car owners are "extremely or very" interested in owning a connected vehicle, with another 31 percent having no interest. Nielsen EVP Global Automotive Ian Beavis calls the results "surprising," given that 10 million connected vehicles were sold in the U.S. last year, representing more than half of all new cars. He calls the findings "a sobering report card" on how much more groundwork automakers need to do to catch up to the engineering development and market the services so automakers can monetize in-car connectivity.

**GRAHAM**

(continued from page 6)

rebroadcast their signals, possibly as soon as this year. He also supports a proposal to transition the AM band to TV analog Channels 5 and 6 spectrum.

He's a firm believer that HD Radio technology on FM will succeed. Many of Graham's clients are seeking FM translators to use as outlets for their multicast HD2 and HD3 signals. "The demand for translators is very high, but the supply is virtually nonexistent in large urban areas. If someone wants one in a more rural area, we usually can find either an existing translator for sale or one that we could possibly move in," Graham said.

Graham said his consulting firm has been at the forefront of the push for FM translators. He performs a lot of work for Cumulus, which is "very interested" in translators. "I think [Cumulus] sees it as a means to get additional signals on the air and expand their advertising base."

Graham works closely with the FCC and typically makes it to Washington several times a year to visit the agency and the communications attorneys he frequently uses.

"Working with the FCC is very relationship-driven. The FCC is easy to work with, for the most part, if you have a relationship with them. They are willing to help if they can. That really hasn't changed much through the



**Stuart Graham in 2003**

years," he said.

Graham works mostly from his office on St. Simons Island, the largest of the Golden Isles set along Georgia's southern Atlantic coast. It may seem an unlikely spot for a broadcast technical consulting firm, nestled alongside the countless condos and B&Bs; but Graham describes the location as "paradise" and a reason why he goes on the road these days only about a week out of the year. He lives with his wife Debbie; she works for the University of Georgia as a business consultant. The couple has a grown daughter, Lindsay.

According to the company's website, Graham spends his free time tinkering with his "toys"

like a Jeep, jet skis and a Harley. Graham remains an accomplished pilot and owns a 1957 Beechcraft Bonanza V-tail; at one time he flew himself to visit clients up and down the East Coast. "Having my own plane was a very big advantage at one point," he said.

Graham has adhered to one business philosophy through the years. "I believe you should treat people fair and don't discount their ideas because sometimes they are a lot smarter than you are. Treating people fair and respecting their opinions is how I operate my business and build relationships."

*Comment on this or any story. Email [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com) with "Letter to the Editor" in the subject field.*



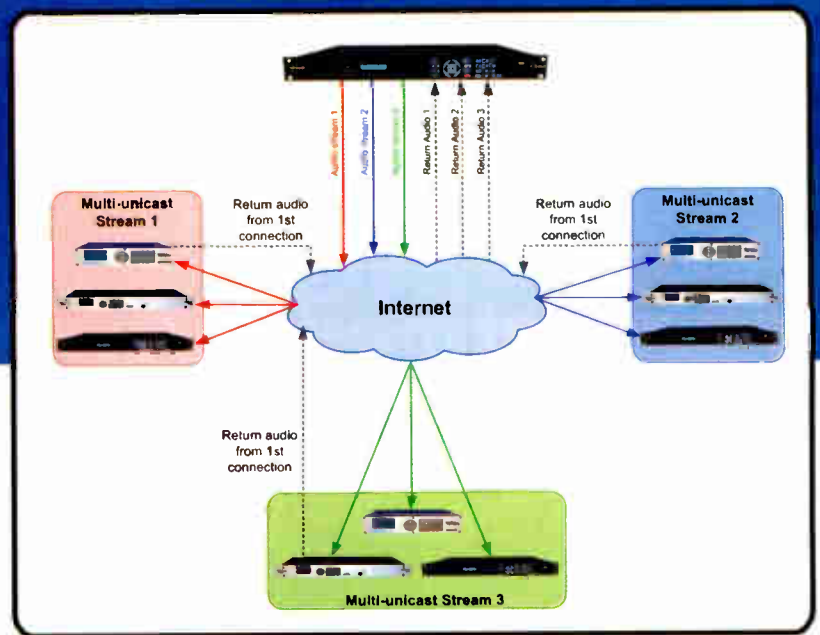
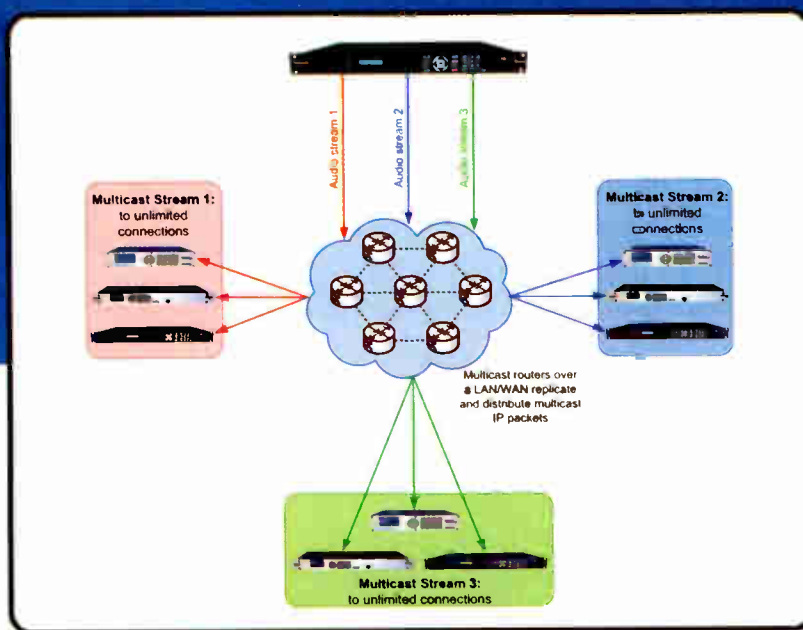
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World Radio History

# Simplify Remotes With Labels and Colors

## Visualize your digital audio, troubleshoot electrolytic capacitors and more

### WORKBENCH

by John Bisset

Read more Workbench articles online at radioworld.com

At the Radio America Network in Arlington, Va., Director of Engineering Fred Gleason and Production Director Alan Peterson often must troubleshoot remote host mixer issues from afar.

Small mixers are populated with aux sends, tape-to-mix functions and other controls that can be confusing to a layperson. Thus a host may mistakenly hit a button or raise a fader and kill the

backhaul or send themselves into a runaway echo over the air.

Recently, a New York-based show host began to use a Comrex BRIC, which doesn't have a built-in mixer in its interface. Therefore, a separate mixer was required, but Gleason and Peterson were intent on keeping things simple for the non-technical host. They then determined what basic functions were needed, bought an inexpensive Behringer two-mic mixer and created a mask to cover the mixer faceplate. This isolated only those controls necessary to get the job done at the host end.

Peterson diagrammed a simplified control scheme for the host and went trolling for colored knobs in the parts bin. Meanwhile, Gleason measured the placement of the controls and jacks and created a printed overlay in a Linux CAD program.

The "no-touch" controls are in a red-outlined box and have red knobs. The mics are on a pair of nice, safe beige knobs. All sources feeding the headphones have gray knobs and are outlined in a blue box. There is one great big yellow MASTER level control rounding out the front panel, as seen in Fig. 1.

The overlay also includes arrow pointers, showing where critical controls such as pan or aux send should be set to work properly. Any knob not necessary for the task is unlabeled and

can be ignored, or in the case of the EQ controls, set up by the host and "spiked" using a Sharpie-brand marker.

Most of the jack field is also ignored, with only the essential ones plainly labeled. Cables are similarly labeled — for example, "Aux Out" on one end and "BRIC L In" at the other.

Everything was packaged, along with IKEA-like instructions, and sent to New York. Now when there's a problem, the board operator simply asks the host whether power is on and whether a certain colored knob is turned up or down.

Thanks, Alan and Fred, for sharing your method of simplifying remote

broadcasts.

Alan is willing to send readers a sample copy of the instruction sheet, along with photos. Correspond with him at [apeterson@radioamerica.com](mailto:apeterson@radioamerica.com).

Univision's San Francisco Chief Raul Velez found a used Tektronix 764 Digital Audio Monitor, shown in Fig. 2, for around \$300. It's a real bargain, considering this instrument sold for more than \$5,000 new.

Raul uses his 764 to monitor his stations' digital audio quality. The instrument can monitor four channels, but if you're only monitoring two, the third and fourth channels can display the sum and difference of the first two.

This is really helpful when you connect the monitor's VGA output to a

*(continued on page 12)*



Fig. 1: Highlight and color-code essential controls to simplify operation.



Fig. 2: A surplus Tektronix Digital Audio Monitor ...

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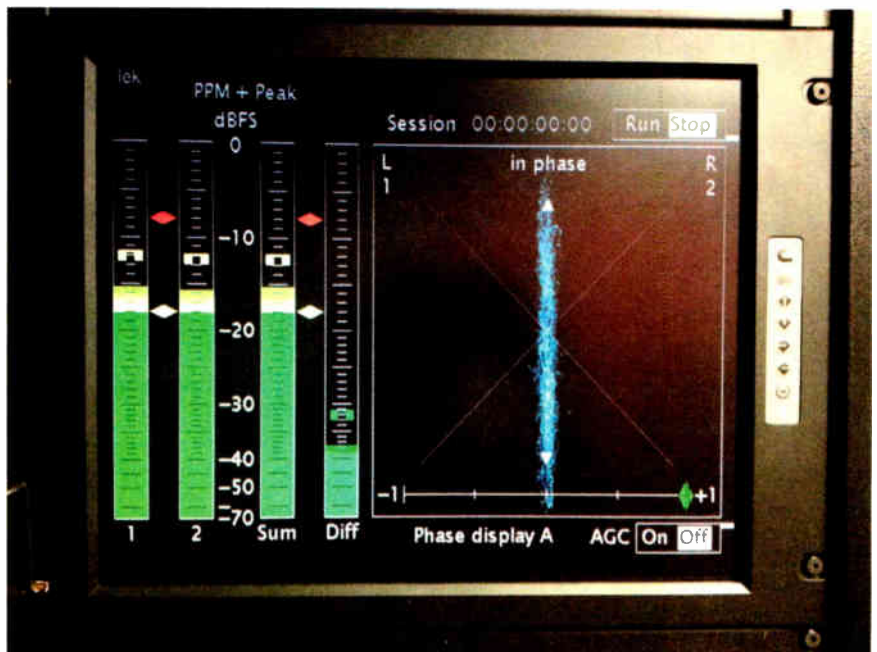



Fig. 3: ... feeds a video monitor for color display of your audio.

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## WORKBENCH

(continued from page 10)

video monitor, as seen in Fig. 3. The result is a full-color display of what your audio is doing. There's even a head-phone jack and volume control.

Raul Velez can be reached at [rvelez@univisionradio.com](mailto:rvelez@univisionradio.com).

**G**iven the comments I've received about the Franklin Lightning Detector, featured in the Aug. 1 *Workbench*, I thought I'd include a couple of new photos from Ron Gnadinger.

Fig. 4 gives you a perspective of size of the instrument. That's Ron's wife

Penny Marie posing with the detector. In Fig. 5, you can see the modification that Ron made to accommodate two "D" cell batteries.

Reach Ron Gnadinger at [rong@up.net](mailto:rong@up.net).

**I**t goes without saying, but we'll say it anyway: Electrolytic capacitors will start to go bad after about seven years.

In audio equipment, the result is usually noticeable hum. In this day of microprocessors, however, AC ripple on the DC supply lines can cause all kinds of wacky problems.

So if you have an operational issue, take a scope to the supply rails and look

for ripple as your first troubleshooting step.

Motor start capacitors, found in large air conditioning compressors and air handlers, also can fail with time. Look for a bulging insulator that surrounds the capacitor contacts.

*Reading Workbench is like taking a college course in hands-on radio problem-solving! Contribute your ideas, help*

*your fellow engineers and qualify for SBE recertification credit. Send tips to [johnpbisset@gmail.com](mailto:johnpbisset@gmail.com).*

*John Bisset has spent 44 years in the broadcasting industry. He handles West Coast sales for the Telos Alliance. He is SBE certified and is a past recipient of the SBE's Educator of the Year Award.*

## CORRECTION TO WORKBENCH

Hi Paul and John,

I am reading the Aug. 13, 2014 edition of Radio World magazine that just got delivered. I usually pay particular attention to John's *Workbench* submissions.

There's a problem on page 10. The photos and their captions do not match.

The upper photo has the DC fan blowing over a heat-sinked module. This should have the caption shown for Fig. 2. The lower left photo has the zener diode in the air stream of the fan. This should have the caption shown for Fig. 3. The lower right photo has the original white-bladed AC fan blowing over a heat-sinked module. This should have the caption shown for Fig. 1. Fig. 4 has the correct caption.

*Bob Meister / WA1MIK  
Hamden, Conn*

John Bisset responds:

I've gotten comments from readers who loved Buc's tip. But Bob Meister is Mr. Eagle Eye!

For our visual learners, RW has reprinted the original photos with the correct captions, below.



Fig. 4: A compact lightning detector is mounted in a clear case.



Fig. 5: The detector was modified to operate with "D" cells.



Fig. 1: The Marti STL-8 with its AC cooling fan.

Fig. 2: Buc cheated on the zener rating by mounting it in the fan's air flow.

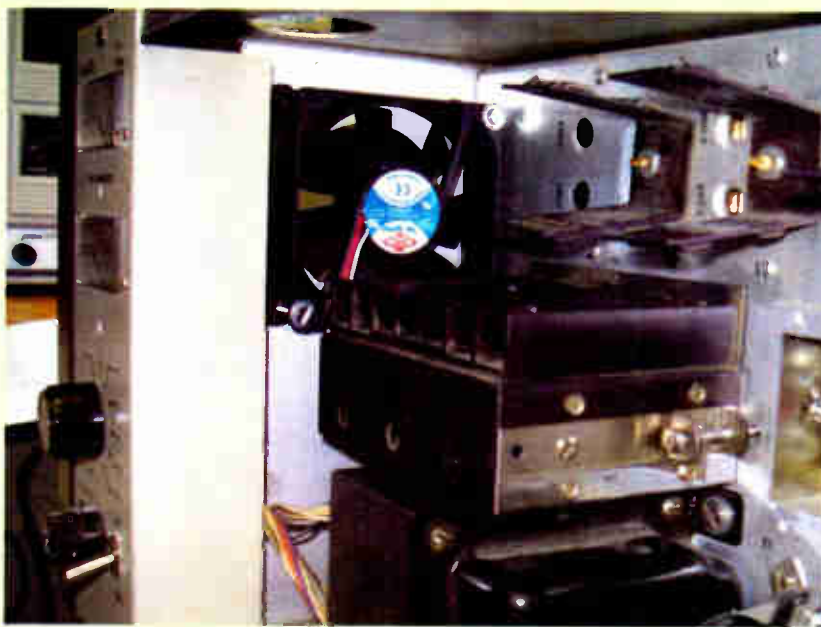


Fig. 3: Buc's DC fan replacement.

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World Radio History

# Radio's Star-Spangled Controversy

How radio has shaped the conversation around America's national anthem

## ROOTS OF RADIO

BY MARC FERRIS

*The author's new book "Star-Spangled Banner: The Unlikely Story of America's National Anthem" is published by Johns Hopkins University Press.*

"The Star-Spangled Banner" turns 200 this month, and throughout the song's modern history, radio has helped spread the tune around the country. It also served as a conduit for controversy.

When Francis Scott Key wrote the song in 1814, it became instantly popular, outlasting all rivals over the years, yet it took 117 years for Congress to ratify the song as the national anthem.

At first, word of mouth — aided by the printing press — spread the tune throughout Baltimore, after the city's defenders fended off a massive British land and sea attack during the War of 1812. Then newspapers, sheet music, magazines and books spread the lyrics across the country. After the Civil War, improvements in brass instruments and the craze to own pianos further disseminated the future anthem throughout the young nation.

By the 1890s, the armed forces singled out "The Star-Spangled Banner"

as their song of choice, but confusion reigned over whether Key's creation, "Hail, Columbia" or "America" ("My Country 'Tis of Thee") served as the people's anthem.



Marc Ferris

President Woodrow Wilson made Key's creation the official song of the armed forces in 1916; but confusion continued to cloud the larger debate.

### ACCEPTANCE

The advent of radio in the 1920s played a pivotal role in the development of rituals surrounding the song and helped to reinforce it as the preeminent patriotic ode. Along with patriots in Maryland, the Veterans of Foreign Wars (founded in 1899) and the American Legion (which dates to 1919) lobbied Congress on behalf of the tune in the 1920s, despite the rise of a new rival, "America, the Beautiful."

A century after the battle that inspired Key's song, Fort McHenry, site of the stand against England in 1814 and the place where Key saw the flag "still there," lost its strategic military role. The federal government decommissioned the fort and turned it into a park. On Flag Day, June 14, 1922, the government dedicated a statue to honor Key and his tune. President Warren Harding lauded the song in a speech,

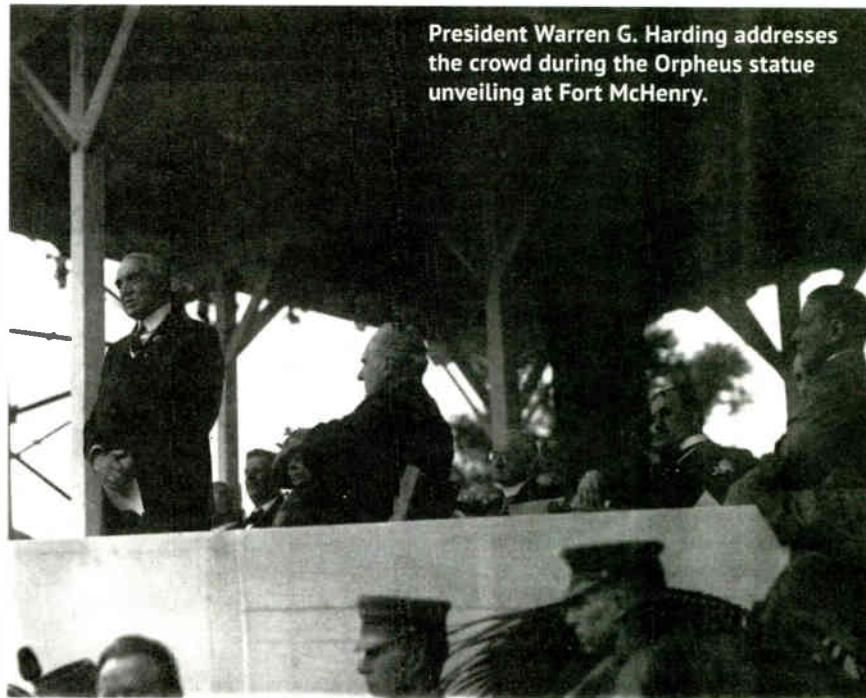
and this was the first time an American president addressed the public over the airwaves.

In the 1920s, patriotic Americans attempted to institute rituals to honor the flag and the anthem. These were summarized in the U.S. Flag Code of 1923. Some patriots attempted to

1931, debate continued over its suitability. In 1936, the NBC Radio Network bolstered the anthem's standing when top brass decided to play it several times a day, in part to mimic the practice in England of singing "God Save the Queen" and also to "let the world know that Uncle Sam has a national anthem" (New York Times, April 19, 1936).

### TRUE PATRIOTISM

Shedding light on the prominence of radio in everyday American life during



President Warren G. Harding addresses the crowd during the Orpheus statue unveiling at Fort McHenry.

Courtesy: Fort McHenry National Monument and Historic Shrine, National Park Service

require Americans to stand and remove their hats wherever they happened to be when the song aired on the radio.

Even after Congress designated the song as the official national anthem in

this time period, Queens, N.Y., housewife Elizabeth Faff wrote to then-Mayor Fiorello LaGuardia of New York City in 1938, inquiring about the proper protocol for standing when the anthem played on the radio. "Having a patriotic husband who thinks that everyone should stand during the anthem, I found myself out of bed" when it came over the radio, she wrote. "It is rather upsetting to have to make two attempts to get out of bed — one at 10 p.m. and the other at 7 a.m."

Washington Post columnist H. I. Phillips claimed that Faff "caused quite a controversy all over the country by a simple little question" and created "great uneasiness among millions of Americans who listen to the radio after they go to bed." He joked that "the whole problem can be disposed of by the simple business of turning the radio off after climbing into the hay."

In the same year, as World War II loomed, the anthem faced a challenge when "God Bless America" rose to popularity through Kate Smith's radio presence. Smith's counterbalance came from Lucy Monroe, the "Star-Spangled Soprano." She became the nation's preeminent anthem singer. Monroe's voice boomed from radios and she was featured during a "Star-Spangled Banner Day" celebration at Fort McHenry,

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## STAR-SPANGLED BANNER



THE UNLIKELY STORY OF  
AMERICA'S NATIONAL ANTHEM



MARC FERRIS

**The advent** of radio in the 1920s played a pivotal role in the development of rituals surrounding the song and helped to reinforce it as the preeminent patriotic ode.

broadcast nationwide in 1942.

The establishment of Voice of America and the Armed Forces Network in Berlin in 1942, along with Radio Free Europe in 1949, beamed "The Star-Spangled Banner" into homes and public squares abroad.

In 1948, chemical engineer Louis Schweitzer bought WBAI, an FM station in New York City. When he began playing the anthem during sign-off time, he discovered that only low-fidelity shellac discs existed and that a recording by the Eastman Symphonic Wind Ensemble was the only one by an American band that he could locate. Schweitzer established a grant, administered by the American Heritage Foundation, to produce high-fidelity versions of the song on 78 RPM discs recorded by various orchestras, including the San Francisco, Chicago and Boston symphony orchestras, which he distributed gratis to 3,775 radio and television stations.

Jimi Hendrix's version of the song at Woodstock in 1969 created a tempest

after its popularization via the concert film and its soundtrack. But blind singer and guitarist Jose Feliciano had caused the first real-time uproar over an individualistic take of the tune at the 1968 World Series, carried live on both radio and television.

During the 1970s, radio broadcasts played "The Star-Spangled Banner" before every ballgame; but over time, as commerce triumphed over patriotism, producers began to cut to commercials in favor of the anthem.

Another anthem controversy occurred in 1990, when Irish pop singer Sinéad

O'Connor refused to go onstage if the Garden State Arts Center in Holmdel, N.J., adhered to its policy of playing the anthem prior to every show. When officials caved in to the singer's wishes, radio programmers across the country moved to ban her songs from the airwaves, trumpeting their actions as "Sinéad-free radio."

In 1996, after Denver Nuggets point guard Mahmoud Abdul-Rauf refused to stand for the anthem before games, two jocks at KBPI(FM) in Denver Aurora, Co., donned mock turbans and walked around a local mosque playing "The

Star-Spangled Banner" on a trumpet and a bugle, generating a backlash that almost got them fired.

Radio represented a pivotal medium for reinforcing "The Star-Spangled Banner's" exalted status after Congress designated it as the national anthem in 1931. Nonetheless, the medium has also reflected the controversies surrounding this symbolic and emotionally stirring composition.

*Marc Ferris is account manager at Giles Communications and represents the Yamaha Corporation of America, among other clients.*

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All BLADE-3s use Gigabit Ethernet. This makes all the difference in network capacity, near-zero latency, throughput, reliability – in short, everything.



### • Virtually All Audio Formats

BLADEs are built to handle and convert native analog, microphone, AES/EBU, SPDIF, AOIP, MADI, SDI and AES67.



### • Two 8x2 Utility Mixers

Each BLADE has two 8x2 utility mixers that can be configured in many different formats. Two 8x2, four 4x1, etc. These internal mixers are full featured and include panning, channel ON/OFF, fader levels, and access to any source signal in the system. They also include a full ACI (Automation Control Interface) allowing remote control, ducking, auto fade, channel on/off, levels, source assign, etc.

### • Audio & Control Routing Matrix

### • Source & Destination Control

Each BLADE has the ability to route any system source to the destinations on that BLADE.

### • Front Panel Logic Indicators\*

### • 12 Universal GPI/O Ports

### • 128 Software Logic Ports\*

Used to interface with software switches, indicators, and control functions throughout the system.

### • Built-in Audio Clip Player\*

### • Silence Detection

### • Dual OLED Displays\*

### • LIO/SLIO Logging\*

### • Aliases\*

Allows the same source to be identified by different names. Multiple aliases can be used so different operators can share logic functions, source feeds, routing, etc.

### • Auto Mono Summing

### • Signal Splitting

### • Gain Control on Every Input & Output

### • Balance Control

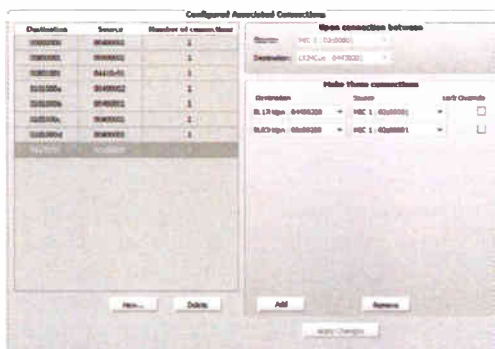


### • Stereo Audio Processor\*

Each BLADE-3 has a stereo multiband processor with the following: 4-band parametric equalizer, 3-way crossovers, 3 compressors, 3 limiters, and a final lookahead limiter. This is a "routable processor," meaning it is not limited to the local I/O on the BLADE – it can be considered a network resource.

### • Onboard Intelligent OS

Each BLADE has its own intelligence/operating system that allows it to be a powerful standalone router part of a larger system or control the entire routing system.



### • Associated Connections\*

This is a great feature in BLADEs for callers, codecs, networks, remote broadcast & live talk shows that require a mix-minus. You can create a predetermined back haul, IFB feed or mix-minus for each device based on its location in the system or on a fader. If you have a shared resource connected to your system, such as a codec, the software will "automagically" give the proper return feed to the codec based on its destination. When a base connection is made, up to ten additional connections can be made. This significantly helps streamline studio routing, phone and codec selection.

### • 44.1 or 48K Sampling Rates

### • Flexible Signal Configuration

Signal can be defined as up to 16 mono, 8 stereo or any combination of mono and stereo totaling 16 channels.

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Ability to support AES67 compliant devices. Allows WheatNet-IP system to synchronize to IEEE1588 from a PTP grandmaster clock and ingest /stream AES67 compliant packets.

### • 44.1, 48K, External Sync or AES67 Operation\*

### • Clock/Sync and Alarm Indicators\*

### • Automation Control Interface

This is a "tool box" that every BLADE has that allows full control of the BLADE's functions such as routing, ducking, panning, full logic control, mixing and silence detection. Each BLADE supports up to 20 ACI connections which can be used with devices like Talent Stations, GP panels, SideBoards, etc. It also allows control of our partners'/third party equipment.

### • Front Panel Headphone Jack and Source Selection

### • Salvos/Macros

### • Studio Bypass

### • Front Panel Input and Output Metering

There is metering for every input and output on the system – 12-segment, multi color LEDs that can be used for metering inputs and outputs as 8 pairs or 16 mono signals.



### • SNMP

SNMP gives you centralized monitoring over large distributed systems. You can configure alarms and set thresholds to get notified if and when a problem occurs. The instant alarms and notifications help you take quick corrective actions through e mail, SMS, and executing custom scripts.

### • Connection Choices

Has both DB25 to make transitional wiring easy for existing BRIDGE TDM customers and RJ45 – Studio Hub compatible RJ connectors for input and output.

### • Full Info Screen

Each signal has a new info screen allowing the user to add text to signals such as wire numbers, termination locations, etc.

### • LIO Test

### • Automatic Backup

### • Alarm Notification

### • NTP

### • Front Panel Locking

### • Version Checker

### • Crosspoint Save

### • Debugging Tools

### • No Cooling Fans Needed



\* indicates features available only in BLADE-3s

# Pottsville Duo Bucks the Trends

Broadcasting company has been on the air for 68 years and counting

## LOCAL RADIO

BY KEN DEUTSCH

Consolidation changed the ownership landscape of broadcast properties forever — except, apparently, in Pottsville, Pa., population 14,324.

WPPA(AM) signed on May 9, 1946; its sister-station WAVT(FM) signed on about two years later. The original owner was Pottsville Broadcasting Company, and the owner today is *still* Pottsville Broadcasting Company. How many stations in your market have been owned by the same folks for 68 years?

"The AM calls stand for 'Pottsville, Pennsylvania,' and the FM calls are my father's initials," said Argie D. Tidmore, son of the founder.

"Dad learned radio in the navy, and in fact, helped set up FDR's fireside chats when he later worked for CBS radio. He settled here with a little money and an FCC license to start us off. Being an engineer type, he used to get up there and climb the towers himself. One day, Dad noticed a female disc jockey, a girl named Georgine A. Yanavage. He asked for a date, soon proposed to, and eventually, married her. That was my mom, who used to write speeches for Dad, handle license renewals and who eventually became general manager here."

Tidmore the younger grew up around his family's radio stations and, after stints in the Navy and then college at Penn State University, started working at the company full-time.

"I started out painting the fire escapes when I was in high school, and finally, my father let me inside," he said. "After that I worked on setting up remotes, watched the DJs and the sales staff, and sometimes did on-air interviews. I was never a jock myself, but I started full time here in 1992. The only instructions I got from my parents were, 'See what needs to be done and do it. If you need help, ask us.' I've been here ever since."

After Argie was working full-time for two weeks, his parents took off to Florida for vacation, so he began to pose a lot of questions to the employees, and



Argie Tidmore is shown. The mics (from left) are three RCAs of various type and size, an Electro-Voice Mercury Model 611 and an EV Model 664.

he kept his eyes open.

"Eventually, I improved, changed or left things alone," he said. "I gave myself the title of assistant general manager, but was officially made GM in the fall of 1993."

Patriarch A.V. Tidmore died in 1994.

"I managed here long enough to hear my dad tell me he was happy with what I was doing with his company," said Argie. "That meant a lot to me."

### NO SALE

Later, his mother gave him her shares in the stations and in 2006 suggested that it might be a good time to sell the properties.

"I knew dollar-wise it was a great time to sell, but I was only 38 and didn't want to do anything other than radio," he said.

The AM/FM combo now has a staff of 13 full-time people and 15 part-timers. Many of these are involved with local sports broadcasts that air every week. Four staffers are in sales.

Bucking another trend in smaller markets, the AM is "live and local" until noon each day. The FM is live from 6 a.m. until 6 p.m. weekdays. If more than two sports events are to be broadcast

simultaneously, the company will use its AM, FM and Internet sites. The stations are not digital.

"My dad told me that our job was to cover what is of interest to the community," said Tidmore. "He said that if we took care of the people, they would take care of us."

Again contrary to the practice at many businesses, Pottsville Broadcasting has no debt. It owns its studios, property and towers.

"That got us through the recession," said Tidmore. "We didn't have to get rid of people when times got tough. We didn't even cut salaries. If someone left, we may not have been in a hurry to replace him, but we didn't go through the place with a hatchet. A lot of owners today paid so much for their stations that they have no choice but to cut out the lifeblood of their radio station: the talent."

### TALK ABOUT LOCAL STUFF

The stations are located near Reading and Allentown, but Pottsville is considered part of the Wilkes-Barre market, which itself has only 41,000 residents. Owning a two-station cluster in one of the smallest markets in the country has



A.V. Tidmore



Georgine (Yanavage) Tidmore

its challenges over the years.

"If we want to give away tickets to a concert, we have to buy them," said Tidmore. "We are billing about 15 percent below our peak in 2007. We used to get national commercials from dMarc/Google, but that has dried up. Another thing we deal with in small-market radio is getting good people who understand the industry and want to work. You advertise for a sales position and people think it means answering phones. Because we are a stepping stone to larger markets, we're lucky to hold onto people for a few years, although my core staff has been with the company a long time."

However, the station's close connection to its populace allows WPPA/WAVT to do things that larger-market stations wouldn't consider.

"Our DJs talk about local stuff," said Tidmore. "If there is road construction going on, they talk about it. Everyone



comes to us to promote their event. We cover the American Cancer Society Relay for Life, the blood drives, charity auctions for families whose homes got burned and much more. We are always happy to talk about an Amber Alert, and we really cover the big weather stories. For the bigger events, we send our people out there. We do well financially only if our area does well, and that's why we are so intertwined with our community."



**Robert Carl Jr.**

Robert Carl Jr. is executive director of the Schuylkill Chamber of Commerce, which includes Pottsville. Schuylkill County is home to 155,000

"They run this show on WPPA called 'Step Up to the Mic,' and the chamber has actively used that to talk about timely topics for our members and the general community," Carl said. "The stations really work with the non-profit groups, and we have about 670 of those in this county. The radio stations have been great partners for us because they understand community service. For example, we had a major transportation bill that passed the Pennsylvania House and Senate, so we went on the air to talk about that recently. The stations have always given us an invitation to come on the air, and I would say they do more than their share of benevolent work."

"When you walk out the door you are face to face with your listeners and advertisers," said Tidmore. "If they don't like something you do on the air, you have to answer for it."

Pottsville broadcasting has two websites, [www.T102radio.com](http://www.T102radio.com) for the FM and [www.wpparadio.com](http://www.wpparadio.com) for AM. Both stations are streamed when commercial contracts allow.

Ken Deutsch says he grew up in a small market — so small that the main road ran through a carwash. For more of his stories in *Radio World*, go to [radioworld.com](http://radioworld.com) and search "Deutsch."

## WHO'S BUYING WHAT

**Praise Network** recently replaced two older transmitters with **GatesAir** Flexiva solid-state models. The broadcaster placed a FAX30 30 kW unit at KPRD(FM) in Hays, Kan., and a FAX20 20 kW transmitter at KGCR(FM) in Brewster, Kan.

**Clip Interactive** and **Entercom Communications** have partnered to create interactive mobile apps for the broadcaster's Portland cluster. With the partnership, Entercom is now expanding its mobile strategy to include the over-the-air broadcast. The new Entercom apps initiate more engagement from radio listeners by offering the ability to interact with what they hear on the radio — including downloading music, entering

contests, accessing special offers, taking polls and responding to relevant advertiser messaging, according to the companies. Interactive mobile apps are available for these Entercom Portland radio stations: KGON(FM), KRSK(FM), KWJJ(FM), KYCH(FM), KNRK(FM), KFX(X)AM and KM'TT(AM).

The new distribution partner for **ABC Radio News** will be **Skyview Networks**, beginning January 2015. ABC Radio has ordered hundreds of Pico Digital XDS-Pro4 units, so the 1,600 ABC Radio News stations and its other affiliates can receive their content (more, page 8).

**CBC/Radio-Canada** has chosen the **Avid MediaCentral** Platform to power production and storage of its media content. The new system, Avid Interplay 1 MAM, will replace more than 20 legacy archive collections.

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# Arrakis Rolls Out Furniture for WVUA

Student-run U. of Alabama station gets the ergonomics it was looking for



**USERREPORT**

**BY TERRY SIGGERS**  
Coordinator  
WVUA(FM)  
University of Alabama

**TUSCALOOSA, ALA.** — WVUA(FM) 90.7 is the student-operated radio station serving The University of Alabama and the greater Tuscaloosa County, Ala., area. This summer we were faced with relocating our studios across the campus to a new facility. Our old console furniture would not fit our needs in the new space, so I began the process of evaluating options.

Since our student on-air staff are the end users of the product, I started throwing out questions about likes and dislikes regarding the old facilities during various conversations. What I learned was that many of the students found there was a lack of counter space in our old station. Even though the console furniture was L-shaped, the board operator felt cramped and claustrophobic because most of our equipment was housed in tabletop equipment pods. At the same time, students that hosted shows in pairs felt a lack of synergy because co-hosts were confined to the news booth. Being separated by a glass window hindered communication between the hosts in many cases.

On the technical side, I knew that we

needed a unit that would accommodate up to half a dozen additional pieces of equipment in our new area; we'd be adding a delay system and connectivity to a multipurpose production/performance studio. I also needed to make sure I chose furniture that was rugged enough to hold up against our more

rowdy students. At the same time, the furniture needed to be stylish enough to make student staffers excited about the new location.

After evaluating several options, we decided on the Arrakis Balanced U model of the Accent furniture collection. Although the unit's colors can be

customized, the standard design fit perfectly into our color scheme. Ordering the unit was quick and easy, and the time between ordering and delivery of the product was more than reasonable.

The unit came packaged together in one large wooden crate, which I did not expect. It took some time to work out the logistics of where to place the package while we unpacked, organized and assembled the furniture. Once the pieces were unboxed, it was relatively easy to get organized, since the various panels, posts and hardware were clearly labeled.

Once we studied the instructions and started assembly, we found that some of the instructions were ambiguous. Several times while assembling the first side of the U-shaped unit, we had to unbolt and reattach posts after figuring out that we had placed it in the wrong spot. It would have been useful to have a few blowout diagrams in the instructions. It would have saved us a bit of time and frustration during assembly. We also discovered some of the aluminum edges of the posts were sharp and caused some minor cuts to the engineer while running cables. Other than those hiccups, the installation went smoothly.

After assembly, we were left with a sturdy piece of furniture that looks great and holds all of our additional equipment with room to spare without using any tabletop equipment pods. The students are happy with the new space and functionality, and the studio looks great.

For information, contact Ben Palmer at Arrakis Systems in Colorado at (970) 461-0730 or visit [www.arrakis-systems.com](http://www.arrakis-systems.com).

## TECHUPDATE

### MIDDLE ATLANTIC PROTECTS POWER

Middle Atlantic Products describes its Series Protection Power Distribution as the fastest-responding series type surge protection technology available. The technology provides instantaneous protection of broadcast audio and video systems from damaging surges and is available in a newly introduced family of power distribution units.

According to the company Series Protection models offer robust non-sacrificial circuitry that ensures system reliability. It helps ensure noise-free AV systems by protecting connected equipment without contaminating the system ground. Each model automatically disconnects devices from sustained overvoltage and undervoltage events. All units perform automatic recovery after these events, minimizing system downtime.

MAP says that the Series Protection power line includes a hardwired model as well as half-width models that require less space. Full-width rackmount models for 19-inch enclosures are available.

In addition, the company's RackLink Power Management System includes models incorporating Series Protection technology.

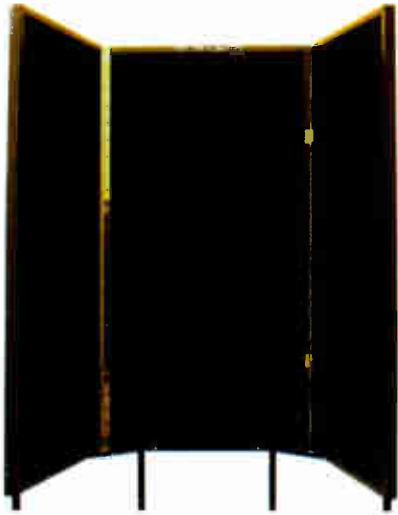
For information, contact Middle Atlantic Products in New Jersey at (973) 839-1011 or visit [www.middleatlantic.com](http://www.middleatlantic.com).



**TECHUPDATES**

**REALTRAPS OFFERS PORTABLE QUIET**

The RealTraps Quiet Zone is a portable recording booth that's large enough to create a quiet and acoustically dead recording environment for many recording applications. The company says that it's suitable for singers and voiceover artists, as well as brass players.



Based on three RealTraps MicroTrap panels, each 2 by 4 feet, the RealTraps Quiet Zone weighs 32 pounds and assembles with a screwdriver, and at 6 feet 7 inches even very tall people can be accommodated. The QuietZone needs about 40 inches (width) by 26 inches (depth) of floorspace.

The Quiet Zone features a much larger, free-standing setup that offers three times the absorbing surface area of the RealTraps Portable Vocal Booth, and double the surface area of the RealTraps Carrel.

RealTraps also offers a Cell Phone Privacy Station model for use in airports, restaurants or other noisy locations where patrons appreciate a quiet and private area to use their cellphones. The basic design is the same as the Quiet Zone, but with large lettering on the rear of the center panel to make its presence and purpose obvious to passersby.

For information, contact RealTraps in Connecticut at (866) 732-5872 or visit [www.realtraps.com](http://www.realtraps.com).

**COMING UP IN BUYER'S GUIDE |**

Media Asset Management: Automation, Traffic/Billing  
**September 24**

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Sizes available are 23.75 inches x 23.75 inches (square) or 23.75 inches x 47.75 inches (rectangular) in one- or two-inch thicknesses.

For information, contact Acoustics First in Virginia at (804) 342-2900 or visit [www.acousticsfirst.com](http://www.acousticsfirst.com).



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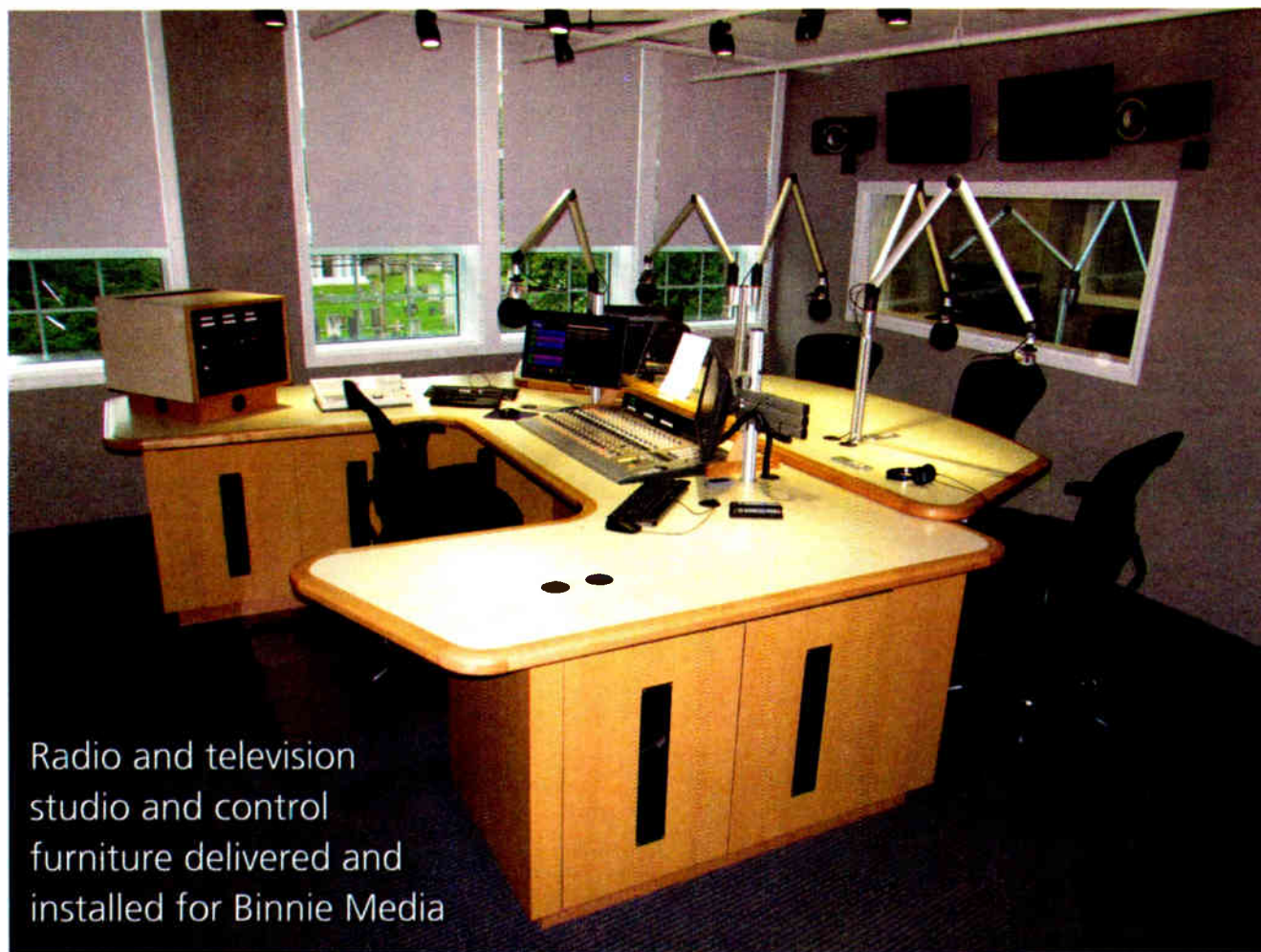
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# Studio Technology's "School Project"



Radio and television studio and control furniture delivered and installed for Binnie Media

## USERREPORT

BY DIRK NADON  
Vice President, Engineering  
Binnie Media

**CONCORD, N.H.** — As the vice president of engineering for Binnie Media in New Hampshire, I am responsible for the engineering health of multiple radio stations as well as the NH1 News Network. When Binnie Media purchased the Walker School, a historic 100-year-old elementary school in Concord, N.H., in an effort to expand our local capabilities, the fun began.

We wanted to renovate the school and to install a modern broadcast facility while honoring the historic nature and architecture of the building. Prior to the school, the site held the meeting-house in which New Hampshire ratified the U.S. Constitution; so we had a long list of federal and state historical entities to keep happy.

When it came time to plan the studio space and furniture, we called on Studio Technology Studio Furniture. Studio Technology's Vince Fiola made several trips to New Hampshire early in the process to listen to our plans and help with the furniture design. His expertise

and experience was invaluable as we proceeded to the construction phase.

Bill Binnie, owner of Binnie Media, was intimately involved in every aspect of this project. At one construction meeting, Mr. Binnie and Vince more or less crawled around on the floor of our future newsroom, designing custom furniture on the fly. Within a week, we had a drawing to review and approve.

That furniture is now installed in the NH1 Media Center newsroom.

In all, we had Studio Technology build furniture for four on-air studios and four production studios for the radio side. We also involved Studio Technology in other aspects of the facility. As well as the newsroom mentioned earlier, our plan required an on-site television control and audio stu-

dio. Vince worked with WBIN(TV) Chief Engineer Rick Zach to design the TV-specific furniture. We even had Studio Technology build us a 5-foot by 18-foot custom conference room table.

The furniture is well-built, not made of modular components that are "customized." The furniture was designed to fit each studio space and equipment as well as the ergonomic needs of the people who work there. The pricing was fair and competitive and in line with our furniture budget. As we went through the process, Vince made us aware of how our design discussions could affect the cost and made suggestions in instances when there was a concern about cost.

An important aspect of this project for me was scheduling. Even though we had an excellent construction company working with us, inevitably there were things beyond our control that made the completion date a moving target. Studio Technology was able to work around our schedule changes without a problem. The furniture was delivered and installed in several phases as various parts of the facility were completed.

Studio Technology was there to do the furniture installation when we needed them and when they said they would be. This attention to detail and customer service enabled me to proceed with my planning and get the studios online in an efficient way.

This was a satisfying, challenging project for all of us at Binnie Media. We know we have succeeded in building a world-class broadcast facility in Concord, N.H. Studio Technology Studio Furniture was an integral part of that success. I won't hesitate to call them for our next project and recommend their studio furniture and services.

**For information, contact Vince Fiola at Studio Technology Studio Furniture in Pennsylvania or visit [www.studiotechnology.com](http://www.studiotechnology.com).**

## TECHUPDATE

### ESE HAS THE TIME

Clock and accessories manufacturer ESE is always bringing out new models and improving older ones.

The ES-971 (shown) is a four-digit display featuring 7-inch red LED displays in a wall-mount enclosure. It accepts ESE, SMPTE LTC, EBU or RS-232C ASCII timecode. The ES-971 automatically determines which code is received. If receiving ESE Time Code from a timer, the unit will display minutes and seconds. The ES-971/NTP-C offers the unit the ability to read NTP and/or receive Power over Ethernet (PoE). Both units also offer optional blue or green LEDs.

The ES-289E timecode-based NTP server provides a practical method of putting accurate time information onto a network by reading ESE or SMPTE/EBU timecodes. The NTP



output is provided on a 10/100 baseT Ethernet connector. A voltage-controlled temperature-compensated crystal oscillator is used to maintain the accuracy of the timecode outputs when lock is lost. The ES-289E is IPV4/IPV6-compatible. NTP clients can authenticate the NTP server with

MD5 or SHA1 Symmetric Key Authentication.

The HD-491/SD is an HD and SD SDI timecode decoder/generator. The HD-491/SD accepts an SDI signal, decodes the RP-188 or D-VITC and produces either a SMPTE or EBU LTC output. Simultaneously, the unit produces an ESE timecode output that can be used to drive new or existing clock systems. The HD-491/SD can also be used as a translator/timecode converter (for shuttle speed applications) or can be jammed and used as a generator (real-time applications).

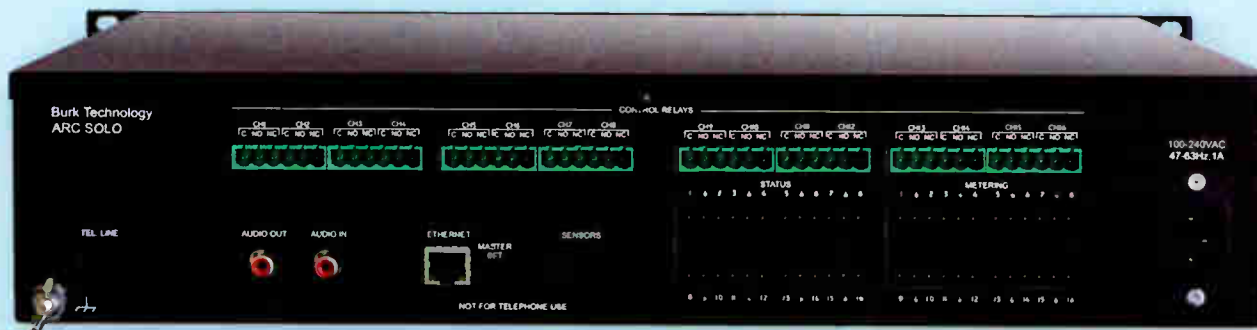
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# Omnirax Aids Seacrest Studios Builds

Company takes on multiple tasks in the nationwide multi-studio project

## USERREPORT

BY BRIAN CLARK  
Director of Engineering  
Ryan Seacrest Foundation

**AURORA, Colo.** — The Ryan Seacrest Foundation is the vehicle for Ryan's lofty goal of "inspiring today's youth through entertainment and education focused initiatives."

Having gotten his start in Atlanta, Seacrest wished to give back to the community that treated him so well. The stroke of genius was to combine his wish to provide an opportunity for dedicated young people to follow in his footsteps while at the same time, contribute positively to the healing process for children and their families in the hospital community.

In 2010, as the foundation's director of engineering, I approached Omnirax to participate in the project. We had worked together several times and collaborated closely on Ryan's personal broadcast studios.

Designing and building these studios presented several unique challenges. Ryan wanted the studios to be fully functional and state-of-the-art, yet adaptable enough so that they could be used as a teaching platform for rotating interns. In addition, because they are situated in the middle of the busy hospitals' lobbies, they had to be able to accommodate a crowd (whenever Ryan or other high-profile guests dropped in), and the children in wheelchairs and gurneys as both audience and guests.

Omnirax designed and built the initial studio in Atlanta — the first step in realizing Ryan's vision of a

nationwide network.

This was just the start. Success in Atlanta was proof of concept; other hospitals around the nation took note, sponsors came on board and the foundation began to grow. Omnirax has participated in full or partial capac-



Shown is the latest Seacrest Studio in Aurora, Colo.

ity on all seven of the completed projects: Atlanta; Philadelphia; Dallas; Orange, Calif.; Charlotte, N.C.; Cincinnati; and Aurora, Colo. It is now working with the folks at Boston Children's Hospital, with an opening scheduled for fall 2014.

As the project has grown more complex, beginning with Dallas, Omnirax has acted as the design liaison

between the foundation and its architectural consultants — first Elkin Aguilar, now Mezio Zangirolami of FKP Architects. Omnirax collaborates with the architects to ensure that their vision translates into a viable, functional state-of-the-art piece of radio broadcast furniture.

Each one a jewel, these striking furniture pieces are part of the innovative Omnirax "Shape's Line" —

curved laminated forms in geometric shapes. We opted to include most of the electronics in a large cylindrical bay. Power and data enter the system through the floor of the cylinder and are distributed through a curved cable raceway that supports the main console working position. At the other end of the raceway is a generous guest wing, with positions for five guests. Combined, they create viewing angles for an audience as well as clear sightlines for conversation. "Under the hood" can be easily reached via access doors, removable ports and lift off tops.

Eye-catching, easy to integrate and simple to maintain.

Through Omnirax' efforts, there is an ongoing and synergistic effort to continually refine the furniture to meet the particular needs of each facility and the breadth of Ryan's original vision.

For information, contact David Holland at Omnirax in California at (800) 332-3393 or visit [www.omnirax.com](http://www.omnirax.com).

Learn more about the Seacrest project; see Radio World's 2011 supplement "The Voice" at [www.radioworld.com/supplements](http://www.radioworld.com/supplements).

## ABOUT BUYER'S GUIDE

Radio World publishes User Reports on products in various equipment classes throughout the year to help potential buyers understand why colleagues chose the equipment they did. A User Report is an unpaid testimonial by a user who has already purchased the gear. A Radio World Product Evaluation, by contrast, is a freelance article by a paid reviewer who typically receives a demo loaner. Do you have a story to tell? Write to [bmoss@nbmedia.com](mailto:bmoss@nbmedia.com).

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# Smoothline Works for Seacrest Cincinnati

Children's hospital studios get broadcast treatment with GatesAir furniture

## USERREPORT

BY BRIAN CLARK  
Director of Engineering  
Ryan Seacrest Foundation

**CINCINNATI** — When the Ryan Seacrest Foundation announced plans for its sixth Seacrest Studios pediatric location, the Cincinnati Children's Hospital Medical Center seemed an ideal choice. The foundation strives to present its studios in centralized locations where visitors, patients and staff often gather or pass through. The Cincinnati Children's Hospital Medical Center had 970 square feet of unused space in the midst of its central atrium, serving as a perfect location to build a professional broadcast studio from scratch.

The Cincinnati Seacrest Studios location opened in November 2013, leveraging labor and equipment donations from broadcasters and industry vendors. The fully professional space accommodates an array of professional and amateur broadcasters, with patients, hospital staff, local broadcasters and national personalities all contributing to the on-air entertainment.

### OUT OF THE ORDINARY

Studio comfort is a top priority for the young patients that are here for treatment yet able to come down and participate in the broadcasts. GatesAir modified an existing design for studio and cabinetry, building all studio furniture and cabinetry to ensure with com-



ably contribute to the on-air program. The guest wing is raised to an elevation that accommodates wheelchairs and gurneys in addition to adjustable chair heights, which ensures that many patients can participate with ease. All together, the furniture layout creates an atmosphere where hosts and guests can interact with comfort.

The GatesAir design team ensured that the furniture designs were geometrically unique as well as bright and visible. The Smoothline trim is adorned with appealing, out-of-the-ordinary colors that pop when viewed from the central atrium area. Oval-shaped cabinetry was added to the top of the surface to the right of the host

town, and the World Feed Panel accommodates any associated live performances. The 3RU audio signal connection

system features an interface panel with support for common connector types, including RCA, XLR, 1/8-inch/3.5 mm, 1/4-inch TRS balanced and unbalanced connections. An active USB interface supports temporary connection of instruments, laptops, DJ coffins and other live performance gear to the house system.

Finally, the well-planned furniture design addresses the traditional design and integration requirements for neat and simple wiring and cable runs, with strategically placed punch-holes and tresses to accommodate a clean and professional installation. Electrical outlets were incorporated to simplify power connections across the integral on-air and production devices.

Collectively, the spirited and inviting feel of the studio atmosphere represents the essence of the project, which encourages a creative and interactive experience for patients working through the healing process.

For information, contact Keith Adams at GatesAir in Ohio at (513) 459-3447 or visit [www.gatesair.com](http://www.gatesair.com).

**The Smoothline trim** is adorned with appealing, out-of-the-ordinary colors that pop when viewed from the central atrium area.

fort and visual appeal was achieved in equal measure. Clear Channel Communications joined forces with GatesAir and other vendors, playing an instrumental role in systems integration.

The on-air and production environment brings all the tools of a modern digital radio studio together, as well as cameras and a green screen for video production purposes. The centerpiece of the studio design is a one-host, five-guest custom design from the GatesAir Smoothline range of furniture. Built-in headphone controls and adjustable Yellowtec Mika! arms with Electro-Voice mics simplify the way that talent with varied levels of experience can comfort-

position, adding more visual appeal while providing storage for CD players and other source equipment.

Meanwhile, the sturdy and spacious desktop surface accommodates an array of on-air and production equipment for the 24/7 operation, including two automation systems, a 12-channel GatesAir NetWave console, audio processing gear, telephone codecs and various production accessories.

The furniture design accommodates a GatesAir Flexiva World Feed Panel, side-mounted to the desktop cabinetry. The Ryan Seacrest Foundation occasionally brings artists and celebrities into the studios as they pass through

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### AUTOMATION EQUIPMENT

### WANT TO SELL

It's free and it has been expanded. The only cost is to keep us informed as to how the system is performing and let us know how you are using it. DIY-DJ, is a Linux based radio automation system and now sports a record scheduler (DIY-DJ-RECORDER) which allows you to schedule

the recording of a network or any other program for replay later as well as a basic logging system. Beside these additions the system schedules music, does voice tracking (ALWAYS hit the vocal), create a shell, live assist, exact time events, join satellite feeds, automated temperature announce, do unattended remote events and more. Call (406) 679-0527 or email [krws@digitaldevelopment.net](mailto:krws@digitaldevelopment.net) for a copy today.

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1934 RCA 77A double ribbon microphone, originally used by Arthur Godfrey at WFBR Baltimore. 100% perfect condition. Contact Bill Cook, 719-684-6010.

### WANT TO BUY

RCA 77-DX's & 44-BX's, any other RCA ribbon mics, on-air lights, call after 3PM CST, 214 738-7873 or [sixtiesradio@yahoo.com](mailto:sixtiesradio@yahoo.com).

### MISCELLANEOUS

### WANT TO SELL

Radio broadcasts of Major League Baseball, NFL, and some college football games that are on cassette tapes, approx 100 to 125 games, time period of entire collection os from the 1950's - 1970's, BO. Must purchase entire collection. Contact Ron, 925-284-5428 or [ronwtamm@yahoo.com](mailto:ronwtamm@yahoo.com)

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I'm looking for San Francisco radio recordings from the 1920's through the 1980's. For example newscast, talk shows, music shows, live band remotes, etc. Stations like KGO, KFRC, KSFO, KTAB, KDIA, KWBR, KSF, KOB, KCBS, KQW, KRE, KTIM, KYA, etc, I will pay for copies... Feel free to call me at 925-284-5428 or you can email me at [ronwtamm@yahoo.com](mailto:ronwtamm@yahoo.com).

Looking for a broadcast excerpt of a San Francisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by Willie Mays and Felipe Alou stealing second base, running time is 18:02, also looking for SF Giants games and/or highlights from 1958-1978 also taped off KSFO Radio. Ron, 925-284-5428 or [ronwtamm@yahoo.com](mailto:ronwtamm@yahoo.com).

Looking for KFRC signoff radio broadcast from 1930 Andy Potter, running time is 0:22 & also the KLX kitchen the program guest is Susanne Caygill, a discussion of women's affairs with a long promotion for Caygill's appearance at a local store. Anne Truax, Susanne Caygill, running time is 13:44. Ron, 925-284-5428 or email [ronwtamm@yahoo.com](mailto:ronwtamm@yahoo.com).

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# The BBG Must Be Where the Audience Is Listening

Shortwave's role is changing, but remains important in some regions

## COMMENTARY

BY MATTHEW ARMSTRONG

In October 2013, the Broadcasting Board of Governors began a comprehensive review of the efficacy of shortwave radio as a means of reaching and empowering our audiences.

Historically, shortwave has been a valuable tool to deliver unbiased news and information to those suffering under censorship, or who lack access to reliable news or are subjected to propaganda. Nevertheless, like any international media organization with limited resources, the BBG, the State Department and Congress must make strategic choices about which audiences to reach and how best to reach them.

As Radio World readers know better than most, the media environment has dramatically evolved during the past decade. Increased availability and affordability of television, mobile devices and Internet access have led to many audiences migrating from shortwave. As such, this review of the medium's use is timely and part of responsible stewardship of the U.S. taxpayer funds.

### AUDIENCE FIRST

As chair of the special committee charged with this review, I implemented an audience-first approach to this analysis.

We examined the listening experience of users in our target markets, including the BBG networks' relative success in reaching their target audiences through this medium. Rather than looking at broad global use trends, we looked at how our target audiences use shortwave and any other media platforms.

This work leveraged input from the BBG's five networks: the Voice of America, Radio Free Europe/Radio Liberty, Radio and TV Martí, Radio Free Asia and the Middle East Broadcasting Network. These organiza-



tions know their audiences and ultimately make the choices on the media to use.

We asked communication experts for their opinions and to critique our research. Dozens of industry experts, scholars, shortwave listeners, former employees and other stakeholders responded to our request for public comments. The Department of State, via our embassies and posts around the world, provided substantial information on the importance and impact of shortwave from their frontline perspective.

The result of this inquiry, arguably the most in-depth and comprehensive to date, is a series of recommendations to "right-size" BBG shortwave broadcasting to be more focused and effective.

This effort demonstrated that there is still a critical need for shortwave in key markets where other options for unbiased news and information are out of reach, but in most countries, shortwave is increasingly a medium of minimal use, and thus has marginal impact. It is clear that once other platforms become available — whether television, FM, mobile technologies or the Internet — audiences quickly abandon shortwave and don't look back.

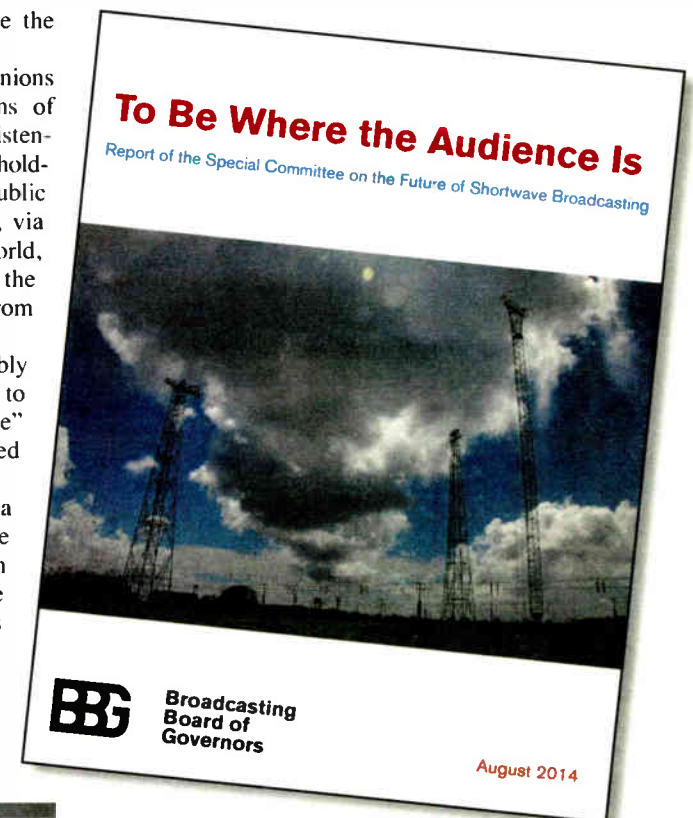
**We will carefully track trends in media consumption and optimize our distribution mix to ensure we reach our target audiences in their preferred platforms.**

Evidence suggests that availability of high-quality content on these preferred and increasingly convenient platforms, along with the ability to interact with the online community at large, bear heavy responsibility for the declining use of shortwave.

### WHAT NEXT?

We also found no evidence that users return to shortwave during crises. Audiences continue to use their "new" platforms, seek out our firewall circumvention tools, many of which have self-erase options that wipe out every trace of their existence, and use offline media, including BBG content distributed by hand. As seen in Egypt, Syria and Libya, by virtue of economic pressure, most high-profile shutdowns of Internet and mobile access are quickly and quietly reversed.

The findings, which were published Aug. 1, state that shortwave continues to be an important medium in key markets such as Nigeria, Burma, North Korea, Afghanistan, Somalia, Zimbabwe and other places where we believe it continues to



**To Be Where the Audience Is**  
Report of the Special Committee on the Future of Shortwave Broadcasting

**BBG** Broadcasting Board of Governors

August 2014

empower strategic audiences. At the same time, we must reduce or eliminate shortwave broadcasts where there is either minimal audience or that audience is not a U.S. foreign policy priority.

We will continue shortwave broadcasts in 35 of our 61 broadcast languages.

In Nigeria, which is plagued by the violent extremism of Boko Haram, and where one-third of Hausa speakers state they have listened to shortwave in the last week, our broadcasts will continue on multiple frequencies.

In Vietnam, where less than 1 percent of adults use the waveband but three in four own a mobile phone, 26 percent use the Internet weekly and our anti-censorship tools generate almost 600 million hits per day, we trimmed two hours of transmissions while not reducing our content production.

The BBG is committed to maintaining its shortwave broadcasting to regions where a critical need for the medium continues.

As stalwart defenders of our broadcasters' mission to provide accurate, balanced and reliable news and information — as well as responsible stewards of public funds — we will carefully track trends in media consumption and optimize our distribution mix to ensure we reach our target audiences in their preferred platforms.

Read the report at [www.bbg.gov/about-the-agency/research-reports/board/](http://www.bbg.gov/about-the-agency/research-reports/board/).

Matthew Armstrong was confirmed to the Broadcasting Board of Governors in August 2013. He is former executive director of the U.S. Advisory Commission on Public Diplomacy, former adjunct professor of public diplomacy at the Annenberg School of Journalism and Communication at the University of Southern California and founder of the MountainRunner Institute.

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## READER'S FORUM

### TESTING, 1, 2

Sounds like a sound testing plan to lead up to a nationwide test ("FEMA IPAWS Targets 2015 for Next National EAS Test," *radioworld.com*, July 28). Many things went on behind the scenes after the last test to make future tests, and actual EAN usage, work as they are supposed to. It doesn't look like anyone is rushing into anything here so there should be few if any surprises.

Rod Zeigler  
Director of Engineering  
Nebraska Rural Radio Association  
Lexington, Neb.

*Zeigler is a past board member of the Primary Entry Point Advisory Council.*

### SHORTWAVE CUTS

An informative piece ("VOA/RFA/RFL Make Shortwave Cuts," *radioworld.com*, July 1). I wonder if shortwave was ever a popular mass medium to begin with, except during major wars?

The problem with this BBG analysis is that it overlooks the fact that the medium has always catered to a type of person who wants to be in the know, even of the words of their foes, and friends uncensored by their own local or national government — the minority.

Listening to Radio Peking in 1975, for example, in the U.S. or U.S.S.R. would not be exactly the type of thing you would announce to the local FBI or KGB. Today, there is still some of the old intrigue out there picking up some of those pirate broadcasters and more.

Additionally, shortwave's modern appeal is its mix of old relatively simple old technology with modern-day improvements, such as the SDR and mini radios.

Robert Berger  
New Jersey

### SAVING AM MW RADIO

I know I'm late to the party, but all the AM stations I know are still on the air ("Is This the Year for AM Relief," July 2 issue). As someone in broadcasting, radio and television since 11 years old (that's another story) and now retired in New Mexico, I have a few suggestions for saving the MW AM band.

Number One: Content! Air what listeners want to hear; and that's not just right-wing low-information bigmouths.

A small number of AM stations have very clean audio to the modulator; others are using new solid-state transmitters with better quality audio. With less compression, all music formats can sound fine, even on low-quality radios.

Number Two: Stay on the air! Half the MW stations here [in my local listening area] broadcast dead air in midday. Dump that old automation, buy a new PC and buy new automation software.

Number Three: Force or tell the FCC you want to double your ERP and you want to stay full power at night too. These low-power rules protect no one, except maybe the FCC and their cranks. The FCC doesn't give a damn for the radio listener by enforcing Part 15 for RFI, in-band noise generators. It should stop the sale of these "noise transmitters." The FCC needs to allow the broadcaster to increase their power.

As an old radio collector (both old and old radios), some with wideband capability, I can tell you AM MW can sound just as good as FM as long as the in-band RFI noise generators are shut off. I use a wideband low-power transmitter, and even low-cost All American Five AM radios can sound very good.

Richard Majestic  
Las Cruces, N.M.

### PRICING PLANS

Responding to "Ericsson 5G Reaches 5 Gbps," *radioworld.com*, July 18:

So one could use up one's entire monthly data allowance (several GB) in about ten seconds. And then continue to rack up \$157,000 in overage fees in about eight more minutes.

The mobile data industry might need to look at the pricing plans. Otherwise such technology is impractical.

Jeffrey Harvey  
Military Communications  
Halifax, Canada

### NO MORE JOKING

Responding to "Commentary: Nothing Less Than 100 Watts Please," July 2 issue:

I live within 2 miles of a station that goes down to 20 watts. It comes in quite well on most radios here, but I totally agree that the power should be upped. This is the best idea I've heard in years.

However, it will stop my jokes about the station using old series-string radio tubes in the final. I mean, how often can you joke about a 50C5?

Duke Evans  
Duke & Banner Oldies Show  
KBBF(FM)  
Santa Rosa, Calif.

### STATE SYSTEM IS A BACKUP

The Inland Northwest EAS Operational Area of the Washington State Emergency Management division usually only does statewide alerts like Amber ("Residents Also Ask About EAS in Washington State," *radioworld.com*, July 25).

Each local area normally does their own activation, using the state as a backup. Speaking for the Inland Northwest area, if emergency management knows the procedure, it doesn't take that long to do an activation.

Washington State has one of the best EAS systems in the nation. It's tested and works. The only failure is to not use it. The state has a system set up with a company called "Alertsense" providing a CAP server and a completely operational analog radio system as a backup.

Marlin Jackson, CSTE  
Assistant Chief Engineer, RF Systems  
The KXLY Broadcast Group  
Spokane, Wash.

*Jackson is chair of the Inland NW Local Emergency Communications Committee in Spokane.*



### MAGIC MOMENTS

I enjoyed the comment in the story about "working in and loving radio engineering," concerning the dark suit ("Engineering Offers Moments of Magic," July 2 issue).

John Toler, W0PKP, ex-W9PKP, was an engineer at KMOX(AM) in St. Louis. He said working there was like the guy following the circus parade with a wheeled trash can and broom saying, "WHAT? Quit show business?"

David R. DeSpain, P.E.  
W0BCG  
Fort Worth, Texas

## READER'S FORUM

### JUKEBOX MODE

When Sirius and XM began their separate services, the hope was that they would bring back the atmosphere and entertainment value that characterized radio ... a value not easily available on terrestrial stations. They each individually began to do that, with personalities giving life and human interest to the various broadcast styles.

Now Sirius XM has in many cases become a jukebox in a similar mode to Pandora, etc. Sirius recently terminated many of its "live" hosts — the very broadcasters who gave the service some personality to help it to rise above the hundreds of other music sources available online and on the air, hosts who gave the broadcasts knowledge, taste and listener anticipation.

Therein lie the fates of not only Sirius but terrestrial broadcasters as well; for broadcasting of all kinds is now controlled not by programming people but by sales and legal folk who strive for instant profit without regard to the product.


For these front-office folk, the product has become less important as they automate the operation to save money. Some stations (and much of Sirius) are operated without live people, often unattended. As I view it, this is no longer radio but an electronically controlled playlist-based series of programs devoid of human warmth, creativity, information and entertainment factors.

Sirius will, in my estimation, eventually strangle itself when listeners discover they offer an increasingly sterile product available on so many other platforms. I fear for its stockholders for, in the snail-like ways of business, even they will eventually discover the paucity of not only Sirius' content but broadcasting's failure overall.

It may be part of the general impersonalization of America. A broadcaster not afraid to reinstate human personality into programming, to bring back the entertainment factor, will perhaps begin to change the radio landscape.

*Don Kennedy  
President  
Crawford Houston Group Inc.  
Atlanta*







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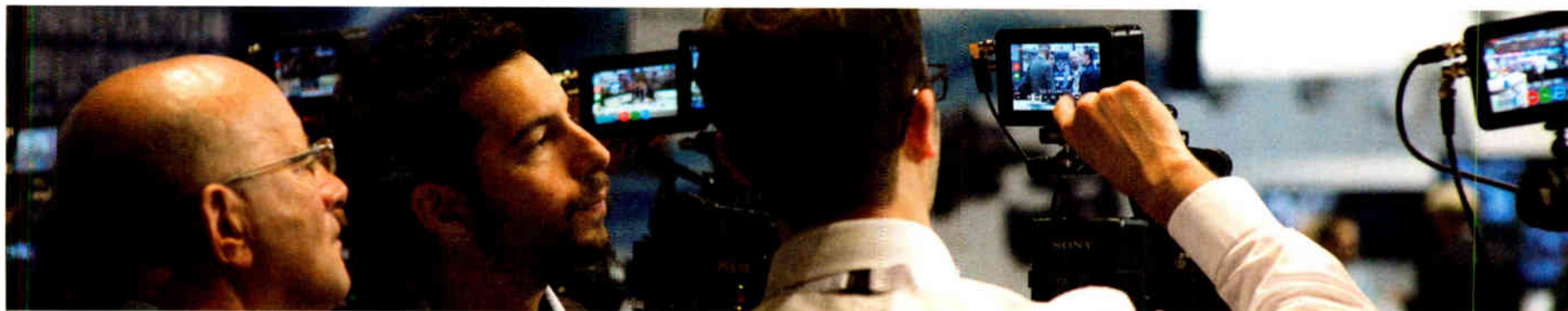
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-60 -56 -52 -48 -44 -40 -36 -32 -28

DBFS

