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iHeartMedia Emerges From Chapter 11

The big media company and radio industry employer completes its reorganization

BY RANDY J. STINE

The journey of iHeartMedia through protection from its creditors came with the usual lumps; but now that the company has emerged from the process, financial observers say the big firm will be in a much better financial position.

Bankruptcy experts also say the company's successful reorganization indicates that the radio industry still has financial boosters who believe in the medium.

The company, which will now be controlled by a group of hedge and mutual fund companies, survived reorganization with its top management team intact, observers said. Chairman/CEO Bob Pittman and President/COO/CFO Rich Bressler will

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Jim Peck

2019 NAB Show in Pictures

See the show through our photographer's lens. Connected cars ... young engineers ... cool new products ... and Alan Alda too.

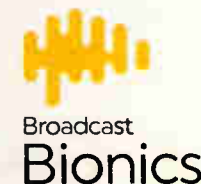
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This issue of Radio World features a photographic sampler of the convention.



Eric Hoppe, Progressive Concepts



Veteran trade journalist Tom Taylor was honored with the NAB Spirit of Broadcasting Award. In covering the business for three decades, he said, he constantly kept in mind the mantra that journalists exist to serve the public. "Successful stations are those that serve their local markets."

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NAB Show photos by Jim Peck unless otherwise noted



Mundschenk is shown with his wife Becky and their sons David and Eric.



Russ Mundschenk is the 15th person to receive the Radio World Excellence in Engineering Award. He's shown (center) with past honorees Jeff Littlejohn, John Lyons, Glynn Walden and Wayne Pecena, all on the left side, and David Layer and Mike Cooney at right. Radio World's Paul McLane stands next to Mundschenk, who is wearing a pin remembering the late Barry Thomas, another recipient.

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In 2017, the Elenos Group acquired Broadcast Electronics as its face in the Americas. Three recent hires are shown at NAB: John Lackness, left, US-West regional sales; Chuck Kelly, second from left, VP of TV market development; and Frank Grundstein, right, US-East regional sales, with "friend of the family" Dan Braverman of Radio Systems. Not shown from BE is Peter Conlon, serving as an advisor to Elenos CEO Leonardo Busi, and new VP of Sales for Latin America Ricardo Jimenez.



The show drew about 91,500 registered attendees, according to NAB's initial estimates. That compares to 93,200 last year and 103,500 the year before.

The spring show will have a different rhythm next year, with the exhibits opening midday Sunday and closing Wednesday afternoon.

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iHEARTMEDIA

(continued from page 1)

stay on. A new board of directors has been appointed, including Pittman and Bressler and the following members: Jay Rasulo, Gary Barber, Brad Gerstner, Sean Mahoney and Kamakshi Sivaramakrishnan, according to a press release on May 1.

"iHeartMedia enters this next phase of growth as a multi-platform audio company with a vastly improved financial profile," Pittman stated in the release.

The company also owns Premiere Networks, Katz Media Group, RCS, Inside Radio, Total Traffic & Weather Network and Critical Mass Media. It spun off Clear Channel Outdoor Holdings Inc. as part of the reorganization; that billboard subsidiary has become its own independent publicly traded company.

At the time of its Chapter 11 filing in March of 2018 the San Antonio-based company listed \$12.3 billion in assets and \$20.3 billion in debt, according to paperwork filed with the Securities and Exchange Commission.

iHeartMedia indicated prior to completing its reorganization it could soon launch an initial public offering or IPO. The broadcaster says it plans to use the cash raised by any IPO to reduce debt and fuel growth, according to SEC paperwork, similar to what Cumulus did when it emerged from bankruptcy in 2018, according to observers.

DIGITAL PLAYS

Benjamin Lambiotte, principal in the Washington office of Garvey Schubert Barer, whose practice includes bankruptcy, said iHeartMedia's SEC filings just prior to leaving bankruptcy indicated the broadcaster will emphasize digital plays, such as podcasting and streaming in the future.

"The strategic vision expressed in the SEC filing is that of a fully-integrated multi-platform audio media company," Lambiotte said.



Benjamin Lambiotte of Garvey Schubert Barer said iHeartMedia's SEC filings indicate it will emphasize digital plays, such as podcasting and streaming.

The company did not disclose the size of the proposed share offering or estimate what the net proceeds from the sale of Class A common stock would be, nor did it set a price range in its filing with the SEC. A spokesperson declined to comment further on iHeartMedia's plans.

Lambiotte, commenting about iHeart's outlook shortly before the announcement, said an IPO would not be "a for-sure thing" since SEC paperwork filed earlier showed iHeartMedia was considering several strategies, including a rare "direct offering," which would offer for sale to the public only existing shares, similar to what Spotify has done.

Another observer familiar with the iHeartMedia IPO plans said in April, "When a company announces intentions to file [an IPO] so quickly after emerging from bankruptcy, it's possible the new debt holders do not have a long-term view of the company and prefer to sell their equity. It's not a common approach to do an IPO so quickly, but Cumulus did the same thing and it was successful."

iHeartMedia has 848 broadcast radio



Debtwire's Josh Friedman said of iHeart: "Clearly they have a number of investors who still believe in iHeartMedia and its long-term success."

stations in 160 U.S. markets and is now the top commercial podcast publisher in the United States, according to recent data from Podtrac, with 148 million monthly downloads and streams.

The company also reports 128 million registered users of its iHeartRadio service and app, which is available on an expansive range of platforms and devices including digital auto dashes, tablets, wearables, smartphones, virtual assistants, televisions and gaming consoles.

"Additionally, we believe we are well-positioned to leverage our iconic brand and enormous reach to benefit from incremental listening growth," it has told the SEC. "As smart speakers are creating an in-home audio hub that enhances radio's reach, developing a leadership position in this category has become a key element of our growth strategy. Smart speaker adoption has seen rapid acceleration, with a 26% penetration rate among U.S. adults in 2018."

EFFICIENT PROCESS

Josh Friedman, global head of restructuring data for Debtwire, a distressed-debt research firm, said in April that

iHeartMedia had executed its reorganization efficiently.

"I figured it would be a more drawn-out and complex process, but in the end all of the work they did in the lead-up to the bankruptcy created a positive outcome for the company to move forward," Friedman said. "Clearly, they have a number of investors who still believe in iHeartMedia and its long-term success."

The company will still have a large chunk of debt, Friedman said, which leads to the question of whether it cut enough. The balance-sheet restructuring allowed the firm to shed almost \$10.4 billion in debt, leaving it with about \$5.75 billion on its books.

"We've seen a lot of companies come back to bankruptcy, but in order for the bankruptcy judge to OK iHeartMedia's reorganization plan, the company had to prove that it had a feasible path going forward," he said.

Friedman, who provides data and analysis on debt markets to clients, said iHeartMedia's return to financial stability is a "positive for the radio industry" and a clear indication "there are lots of people who still believe in the radio industry."

Jeff Tarkenton, an attorney in the bankruptcy and restructuring group at Womble Bond Dickinson (US) LLP, said iHeartMedia's financial struggles can be traced to its leveraged buyout in 2008, when Bain Capital and Thomas H. Lee Partners purchased Clear Channel Communications for \$24 billion.

"That's mostly been washed away with the reorganization. iHeartMedia's best practices now will be focused on how to compete successfully in the market. The proposed IPO suggests that the best way to compete is to further shed debt," Tarkenton said.

The new owners include various mutual and hedge fund companies so "selling stations off" to help reduce debt is another possibility, Tarkenton said.

"Hedge funds, like Franklin Advisors Inc. and Benefit Street Partners, are generally known for emphasizing short-term returns and focusing on extracting short term value from their investments, which may include selling assets and focusing on cost-cutting measures," he said.

Tarkenton said it is significant that iHeartMedia passed through bankruptcy without having to sell off any radio station properties.

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Radio Keeps Dying But Someone Forgot to Tell the Listeners!

A look back at 10 years of radio on the anniversary of Radiodays Europe

COMMENTARY

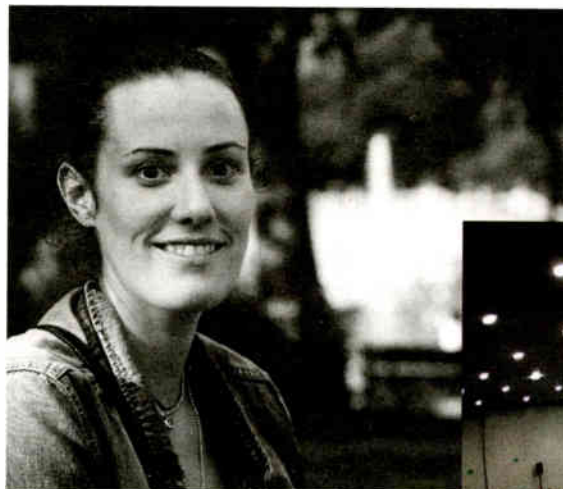
BY ROSIE SMITH

The author is communications manager and executive committee member of Radiodays Europe, an annual conference for radio professionals that turned 10 this year.

LAUSANNE, SWITZERLAND — Over the past 10 years, radio has been killed off so often that it's starting to look like we work in an industry that is part of a modern day murder mystery or true crime drama. TV, social media, the internet, aging listeners and video etc. — the list of suspects is long, with more added year on year.

How many conferences have you been to where someone stands up and says "Radio Is Dead"? Radio has problems, but so do all traditional media; and even more recent entrants to the market such as Facebook are now facing problems. When will Facebook be proclaimed dead? Fashion is fickle, and the next big thing is always on the horizon. But radio has proven it isn't a fashion, it's a mainstay.

That's not to say radio doesn't have its problems. Young people, the must-haves for all stations, are elusive, too busy play-



Rosie Smith

ing Fortnite to be tuning to the top 40 these days. No magic pill has been found for young people, but initiatives undertaken by the BBC, Radio France and Danish Radio, to name a few, are taking on this challenge — with podcasts and podcasters helping and giving a voice to the young in a different way.

LISTENING PLATFORMS

And how do people listen? Via DAB or FM or AM or IP? For some countries the debate rumbles on or, like Norway, just go digital because the listener shouldn't be choosing the technology

platform — they should be listening to radio.

In Europe, the European Commission feels the same, and has stepped in with the EEC Directive mandating digital radio into all new

recent times. Radio is not Twitter. It has had longer to come to terms with its power, and it's regulated. The radio industry has had to put stronger controls in place and make more of an effort to police content. It's not right all of the time, but radio is still one of the most trusted media.

No article on 10 years of radio can gloss over the rise of the podcast; who's listening and for how long after download still seems to be one of the dark arts of measurement. Searchability and the iron grip of certain aggregators are still to be solved but podcasting has produced some remarkable content, stars and is



A session at Radiodays Europe, viewed through a fisheye lens.

cars by 2020, a bold move which may change the debate about platforms, as one of the key places to listen will now also have a digital option as standard.

At Christmas, smart speakers were popular. "Smart Speakers increase 78% year over year," according to the Smart Audio Report by NPR and Edison Research at CES 2019 — apparently, out goes the kitchen radio!

But radio broadcasters are doing some fantastic work to ensure smart speakers can search for radio stations in a clever and comprehensive way; see the work of Commercial Radio Australia. And at the end of the day these smart speakers are all about audio, the beating heart of radio.

Fake news of fluff (boring meaningless fluff churned out by the 24/7 news channels) has also caused problems in

a breath of fresh air for new, different, alternative formats and so much more. It has given access to many who would never have been given a voice on traditional stations, and it has allowed these same traditional broadcasters to release long-forgotten content in new ways. There are too many podcasts to mention but they offer a new world of radio.

Audiences still come back to radio. You could say radio is evolving, whether it wants to or not. At Radiodays Europe 10 years on from when the curtain came up, we have seen the evolution of radio, its death, resurrection, death, revival and more.

We've tried to predict the future, had the next big thing, the megastars and the newest talent on the stage giving their views on radio and even some predictions of the death of radio. This year looked at why "Sound Matters" because radio is all about sound in the home and in the car.

After 10 years of being the "meeting point for the world of radio and audio," the one thing we do know is that radio isn't taking its last gasp and it's not dead.

Radiodays Europe took place this year in Lausanne, Switzerland. In 2020 it will be held in Lisbon, Portugal, in March.

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Bill Eisenhamer, Chief Engineer (Left) with JR Rogers, Technical Director

The Tieline ViA has been the backbone of the San Diego Padres road play-by-play live broadcasts.

"The ViA comes with an SD card slot for recording, so no more worries trying to keep someone at the station focused on recording. The crew on the road takes care of that and records interviews for playback during their live show. Being self-contained makes the device more flexible for the real world."

The ViA is a winner for The Fan, and Entercom San Diego.

Bill Eisenhamer
Chief Engineer, Entercom San Diego



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Tips for Speedy Soldering of XLRs

Also, build your own pocket-sized white noise generator

WORKBENCH

by John Bisset

Email Workbench tips to johnpbisset@gmail.com

There are a lot of instances in which large bulky XLR connectors just won't do — when working in tight spaces or trying to minimize the “footprint” of the connector, especially in our age of video in the studio.

Switchcraft has designed a series of low-profile male and female XLR connectors, part numbers AAA3F-BLP for the female and AAA3M-BLP for male connectors.

Broadcast supplier Pro Audio, formerly Crouse-Kimzey, has been featuring these connectors and has them in stock. Shown in Figs. 1, 2 and 3, the connectors sell for \$5.99 each.

If you're not on the ProAudio email list, learn about new products like this by calling them at (800) 979-3311 or visit www.proaudio.com.

Now, with your new low-profile XLRs in hand, you can get ready to solder them up.

At my Workbench presentations, I've shown pictures of a “third hand” using a spring-clip office clipboard. You use the spring clip to secure the connector body. The clip holds the connector secure as you solder the wires.



Fig. 1: The new low-profile Switchcraft XLR male



Fig. 2: Female XLR connector



Fig. 3: The low-profile connectors are sold bagged, keeping the parts together until you need to assemble.

I'm quick to remind you not to forget to put the wires through the outer shell before soldering. None of us has ever done that before (yeah, right).

Some of my best soldering jobs were completed with the connector shell lying on the workbench. Talk about frustrating.

Tommy Holmes is market chief engineer for Cumulus Media in Columbia/Jefferson City, Mo. He writes with a suggestion he calls the “backwoods engineer's third hand.”



Fig. 4: The backwoods engineer's third hand



Fig. 5: Freshly-soldered connectors using the “third hand”

He says his former co-worker Lloyd Collins, CPBE, now retired, came up with the gadget pictured in Fig. 4 about 15 years ago. The block of scrap wood holds the connector ends of a male and female XLR. Cost: about 25 cents — not including the connector cores.

Drill a couple of holes, add some epoxy to hold the connectors in place and simply slip the connector to be soldered onto the appropriate plug as shown in Fig. 5. It's not very pretty, but it works like a charm.

Frank Hertel, principal engineer with Newman-Kees RF Measurements and Engineering, comes up with some amazing finds. His most recent tip is a case in point.

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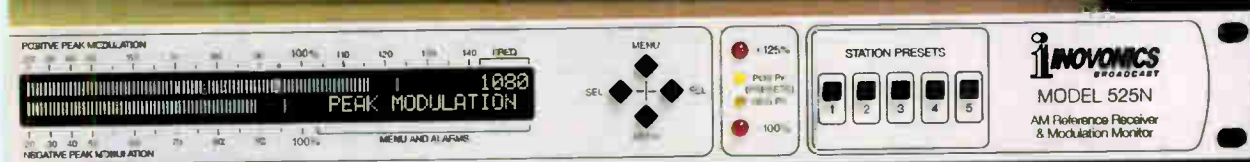
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World Radio History



Inside the “Best Community College Station”

A chat with Shawn Novatt, director of WHPC(FM) in Garden City, N.Y.

COLLEGE RADIO

Shawn Novatt is director of WHPC(FM) “The Voice of Nassau Community College” in New York. In 2019, it was nominated for 12 awards from the Intercollegiate Broadcasting System (IBSradio.org). We asked Novatt to tell us about this community college non-commercial educational station.

Radio World: What should we know about the station?

Shawn Novatt: Well, the biggest news of all is that WHPC just won five IBS 2019 Awards at the 79th Annual Intercollegiate Broadcasting System Conference on March 2 in New York City.

The awards were for Best Public Affairs Program (for “Your Family’s Health”), Best On-Air Schedule (for the second year in a row), Best Celebrity/Artist Interview (Herb Alpert, interviewed by Michael Anthony), Best Morning Show (“The Nassau Morning Madhouse”) and, drum roll please ... Best Community College Radio Station in the Nation!

I could not be more proud of the work my staff, students and community volunteers have done in the past 12 months — and this industry recognition makes all of the work worth it.

This is WHPC’s 47th year on the air, and this summer marks the start of my fourth year as the station’s director. Over the past three years, we have worked very hard to create and follow a new station mission: providing professional broadcast training to qualified Nassau Community College students.

Three years ago, the station had about three students volunteering and over 60 community volunteers. In the years since, we have worked diligently to raise brand recognition in the community, including participating at new student orientations, club fairs, welcome back parties, spring BBQs and other on-campus events. As a result of these efforts, our team roster boasts about 70 students and 55 community volunteers.



WHPC’s Director Shawn Novatt (blue shirt on right) is surrounded by NCC President Dr. W Hubert Keen, Dr. Janet Caruso, AVP Workforce Development and Lifelong Learning, Dr. Valerie Collins, VP Academic Affairs, and WHPC’s student and volunteer personnel, celebrating its 2018 Intercollegiate Broadcasting System award wins.

The peer interactions between students and the community volunteers fosters a collegial and learning community all within the radio station itself, truly enriching our students’ experiences.

Even while the station has grown, we have maintained, if not improved, the overall sound of the station. We have updated the programming by replacing most of our “oldies” programs with 40 hours weekly of “The Nassau Mix.” This particular program plays “The ’90s, 2K and Today” with the goal to play new hit songs before the “big guys” like Z100 and KTU play them.

However, we still have long-running fan-favorite programs including “American Hit Radio,” a documentary show that discusses the biggest albums of the past 50 years; “Beatlesongs,” where we play anything written or performed by The Beatles or any of their members solo, and ethnic shows like “Profumi D’Italia,” our Italian show that has been with us for 23 years.

We also have about 60 other types of programming — you can find our complete schedule at [NCCradio.org](#); thus we appeal to a wide variety of musical tastes and interests.

RW: How did the station come to be?

Novatt: When the station started in 1972, Nassau Community College and Adelphi University shared the 90.3 FM frequency. When Adelphi decided to no longer offer radio at their school in 1995, Nassau Community College purchased the signal and began 24-hour programming; since then, we never looked back.

RW: What is its licensing situation, management structure and programming philosophy?

Novatt: The station is licensed to 90.3 FM at 500 watts from Garden City, N.Y. We are also the only college station on Long Island to broadcast in HD Radio.

I am the only full-time employee, and I have six part-time staff members who assist in the radio station operations, mostly on the nights and weekends.

The station is not student-run; however, student learning and development are our priorities. Every decision is made with student needs in mind. A live,

student-produced show will always take precedence over any other program.

While final programming decisions are made by me, all personnel are able to suggest new programs. Over the past three years, we have created many new student-hosted and student-produced shows, including “Electric Air,” our EDM show; “Ritmo Latino,” a Hispanic mix show; and “The Rock Binge,” a show that plays rock and alternative music from 2000 to today — binge on! There are many more examples, too many to mention.

We want to make sure we are preparing students for working in the radio/media industry, and that’s where our morning show, “The Nassau Morning Madhouse,” and “The Nassau Mix” come in. But at the same time, we want to make sure we are offering programming you simply cannot find anywhere else on the dial in Market #20 Nassau-Suffolk, N.Y. That’s where shows like “Revelations,” our rock-rarities show; “FM Punk,” our punk-rock and heavy metal show; and ethnic shows like “The German Hit Parade,” come in. Our programming is quite eclectic and unique, for sure.

For about seven hours each night, we are in automation. However, we do not voice-track any of our shows — they are recorded live-to-tape, affording our newer students the chance to experience being “on the air” as they record. Voice tracking is a skill that should be taught to students, and our future plans include potentially broadcasting a portion of voice tracked programming in the overnight hours so as to educate our students in emerging industry practices.

(continued on page 14)

WORKBENCH

(continued from page 10)

Frank subscribes to the free Analog Devices Analog Dialog newsletter, which has been published monthly since 1967, the second year after the founding of the company. It exists as a forum for exchanging ideas on real-world circuit design.

In the June 2018 issue (www.analog.com/en/analog-dialogue/raqs/raq-issue-154.html), Frank writes that readers will find details on building a pocket-sized “white noise” generator, used for checking equipment frequency response.

Aaron Shultz is an applications engineering manager with Analog Devices; he co-authored the article with independent instrumentation consultant Peter Haak. In addition to the generator project, the article covers a number of “why” questions regarding white noise in audio circuit measurement.

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Contribute to Workbench. You’ll help fellow engineers and qualify for SBE recertification credit. Send Workbench tips and high-resolution photos to johnpbisset@gmail.com.

Author John Bisset has spent over 50 years in the broadcasting industry and is still learning. He handles Western U.S. Radio Sales for the Telos Alliance. He is SBE certified and is a past recipient of the SBE’s Educator of the Year Award.

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World Radio History

WHPC

(continued from page 12)

RW: Is career preparation for broadcasting part of the mission? What do current students think about radio as a career path and why?

Novatt: I like to tell the students that, while my job description says that I direct the radio station, I believe that my true calling is to educate our students and prepare them for careers in the broadcast and media industries.

Having worked in the New York City and Long Island markets, I have cultivated many contacts who assist our students in securing positions in the broadcast industry upon graduation from NCC. Through those contacts, our students can see up close and personally, the largest and most state-of-the-art radio stations in the country, and make contacts of their own with those radio stations. In addition, it allows them to compare favorably our college radio equipment with those of commercial broadcasters.

Our mission is to provide professional broadcast training, and tuning in to our programming will prove that WHPC is not your typical college radio station: our students are expected to perform as professionals, thereby preparing them for smooth transitions to the commercial broadcasting world.

Recent graduates and current students are interning and working at stations owned by Cox Media Group, JVC Broadcasting, Connoisseur Media, iHeartMedia, Cumulus, Entercom and more. WHPC has alumni working at radio stations; we pride ourselves on being the first step in our students' career paths. As a community college station, my hope is those who participate at the station in hopes of establishing a



WHPC students Nick Ohrnberger and Sarah Albertson work together on a live broadcast from a local supermarket.

career in the radio/media industry, take what they have learned at WHPC and apply that knowledge to their next college station and beyond.

RW: What platform(s) is the station heard on, if any, in addition to over the air?

Novatt: We have increased our worldwide footprint over the past three years. Besides being available on our school website (www.NCCradio.org), we have partnered with the iHeartRadio app, as well as the TuneIn Radio app — just search for WHPC. We are also heard on smart speakers simply by asking them to “Play WHPC.”

We know that smart speakers are now readily available in about 25% of homes in our area (and growing), so we are reminding our listeners that we are available on those devices by advertising running imaging promoting it, and reminding our jocks to mention it in their mic breaks. The best thing that could happen to our industry was the smart speaker ... now we just need

to be smart about making sure people know that the speakers can do more than tell you the time and the weather, but it can bring local radio from the car back inside the home where it began. Go ahead — try it. “Alexa, play WHPC!”

RW: What are the biggest challenges facing most college radio stations? How has WHPC navigated them?

Novatt: The biggest problem college stations face, especially two-year colleges like ours, is turnover. As soon as someone gets really good at their job, they graduate.

I have to constantly train new staff members in order to maintain the quantity of shows — and more importantly, the quality of the programming — and due to the two-year limit in most cases, I have to do it fast. The average student is ready to go on the air after six lessons/weeks of training.

But the training does not stop once a student is cleared to go on the air — we are constantly listening to air checks

and finding ways to improve the programming of the station.

RW: Describe the station facilities.

Novatt: Our station includes two large studios, one for on-air use, and the other for pre-recording programs as well as training.

Over the past three years, we have added and renovated two edit rooms, equipped with computers that have the latest version of Adobe Audition on them, as well as mixers and mics so students can create liners, promos and other pre-produced materials. We subscribe to a production music and sound effects library, allowing all of our imaging to sound super professional.

The two large studios use Wheatstone digital consoles, and in the last 18 months, we upgraded our automation software to BE AudioVault Flex. We keep most of our music in the “vault” along with all imaging and other production elements, as well as pre-produced shows. Each studio still has three updated Denon CD players, and Technic turntables for our classic-based programming to use (although they are getting less used every day).

Each studio has four to five microphones, and our production room has a second “announce booth” for talk show hosts and their guests to use while the person producing the show can sit at the console without worrying about making additional noise. Finally, both studios also have access to a computer with Adobe Audition installed to be able to record shows and playback or edit additional audio if needed.

RW: Who is the chief engineer or person in charge of the technical aspects of the facilities?

Novatt: We work with Bud Williamson

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FEATURES

casts, and we have partnered with Lee Harris and Harris Media by utilizing their QGoLive system. This allows us to broadcast live from anywhere WIFI or a strong cell signal is available, which provides the in-studio sound. We have used this program to broadcast Nassau Lions Football and Basketball, broadcast live from local restaurants like Miller's Ale House, supermarkets like Stew Leonard's, and more. We were actually featured in a blog post by QGoLive (<http://qgolive.com/whpc-goes-minimalist-still-sounds-great-qgolive/>) about how awesome our live

broadcast from the IBS conference this month sounded — using only an iPhone!

I regularly bring my connections in the industry to the Nassau Community College campus to hold "Meet the DJ" sessions for my students. I welcome anyone interested in joining us to contact me at Shawn.novatt@ncc.edu.

We have hosted a few virtual sessions via Skype already, and I'd love to offer more. I know how important strong connections are to landing that first job — I believe that my industry connections and contacts will assist our students to

maintain an edge over other job seekers, by exposing them to the industry insiders with whom I have worked.

Finally, we would not be where we are today without our fantastic listeners. We hold fundraising marathons annually for most of our shows, and the financial support they have provided, along with a handful of underwriting sponsors, have helped the station grow in many ways. We hope the support never ends.

Radio World wants to know about your college radio operation. Email us at radioworld@futurenet.com and we may feature you in an upcoming article.

Station personnel interviewed former New York Giants player Rodney Hampton live at a local restaurant.

and Digital Radio Engineering. I also want to give a shout-out to our colleague Andy Gladding, who works at neighbor Hofstra University's radio station. Andy Gladding also works with DRE, and has been awesome to work with. Together, they have helped us grow our radio station by assisting us in upgrading our RDS software and our new Telos VoIP phone system, among other updates.

RW: Any major initiatives we should know about?

Novatt: We are always looking for new ways to promote the station and have introduced station swag, including pens, phone wallets, bumper stickers and more. Our staff helps brand the station by wearing coordinating radio T-shirts and sweatshirts at the many outreach events we now participate in, and even continue the radio promotion by wearing the clothing proudly in their everyday lives.

We recently created social media accounts (90.3 WHPC on Facebook, @903whpc on Twitter and Instagram), and we have students helping to create content.

We work with local chambers of commerce to have a table and presence at major fairs and festivals across Nassau County to promote our station.

We work with amazing local radio stations like WBLI and WBAB to partner with them on major events they produce in our area. We aggressively find and take advantage of every chance to promote the station, at little to no cost.

We hope to expand our physical footprint on campus so that broadcasting opportunities increase for both our NCC students and community members, which in turn will expand the breadth of programming available to our listeners.

RW: What else should we know?

Novatt: We love to do remote broad-

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NAB Show photos by Jim Peck unless otherwise noted



Their work is important and usually unheralded. Local-market frequency coordinators met with colleagues and SBE officials and heard from the society's national Frequency Coordination Committee. From left: Unidentified, Chris Imlay, Bill Ruck, Jerry Massey, Dan Wilson, Gibson Pritchard, Wayne Pecena, RJ Russell, Scott Hewitt, Lynna McGrath (foreground), Mike Tosch (rear), Gary Stigall, Mark Bishop (rear), Johnny Stigler (foreground), Jim Henkel, Buddy Brown, Ted Hand, John Poray, Shahzad Bashier, Craig Strom, Ralph Beaver, Ryan Stotts, Roger Bishop, Joseph Kamenick

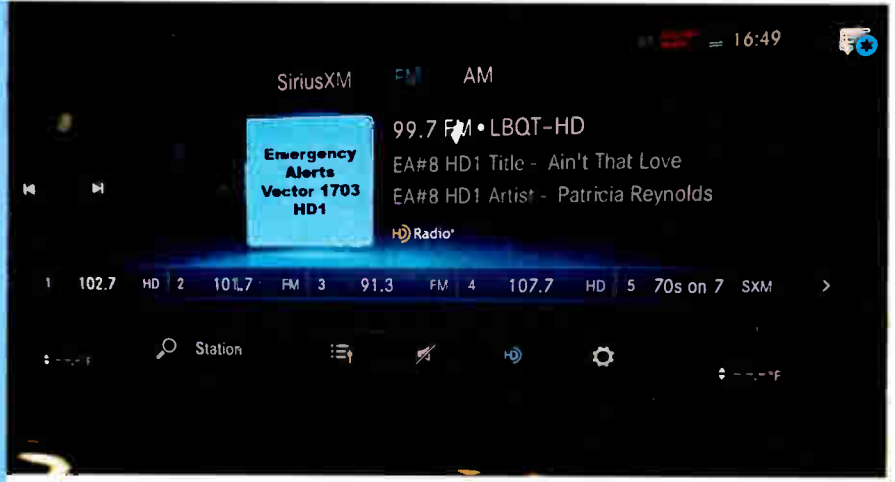
Mike Uhl wore his trademark Hawaiian shirt to draw attention to products from Angry Audio, a new manufacturer recently founded by Mike Dosch to make "gadgets and gizmos that solve difficult studio problems for broadcasters and podcasters."

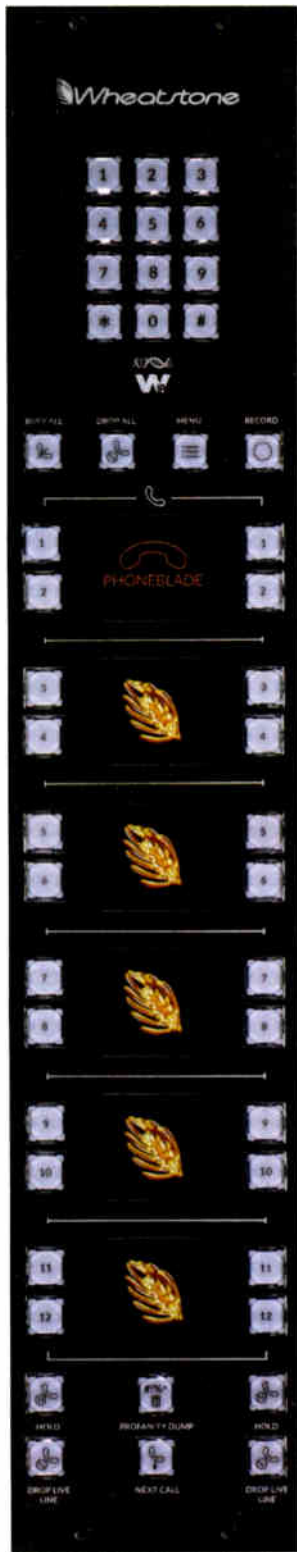


NAB Store marketing gets self-referential.



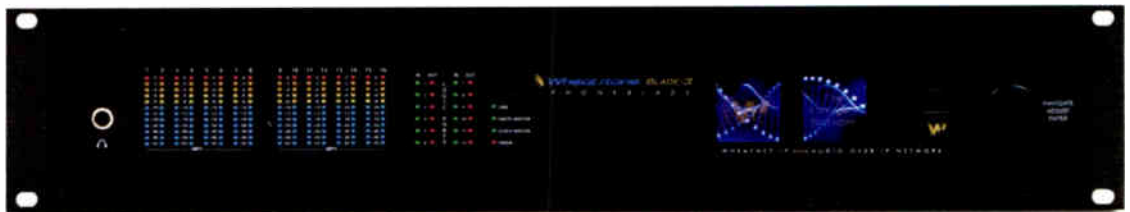
A receiver at the In-Vehicle Experience pavilion highlights alerting via HD Radio. The promise of what could lie ahead for connected cars was on tantalizing display. Several manufacturers showcased existing and possible UI configurations. Model offerings ranged from the Audi eTron and Revero KARMA sport hybrid to Buick and Mercedes. The latter has a "keep warm" function, whereby emergency alerts sent while the car is "off" can be stored and displayed; this could give you guidance to avoiding storm damage, locating shelters or deciding what is likely to happen in your area.





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NAB Show photos by Jim Peck unless otherwise noted



Drones, all the rage a couple of years ago, are no longer omnipresent on the show floor, which doesn't mean they're not being used for serious work. SixArms from Australia makes an eight-rotor drone, precision GPS guided RF

inspection package with antennas for multiple bands that can execute complex RF sample paths. The \$70K package comes with a spectrum analyzer and on-site training, but not your drone pilot certification. Yep, you need a driver's license.



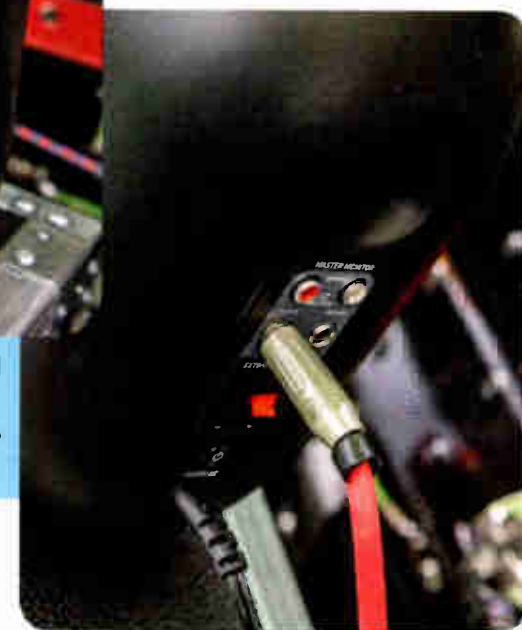
Actor Alan Alda received a standing ovation as he was presented with the NAB Distinguished Service Award. Alda told the audience that listening to comedian Steve Allen on the radio at the age of 10 "changed my life."



No trip to Las Vegas is complete for any tech geek without a visit to the promised land of electronics and even components like pots, resistors and capacitors, Fry's Electronics. It has more space taken up by parts alone than a typical Radio Shack had in the entire store.

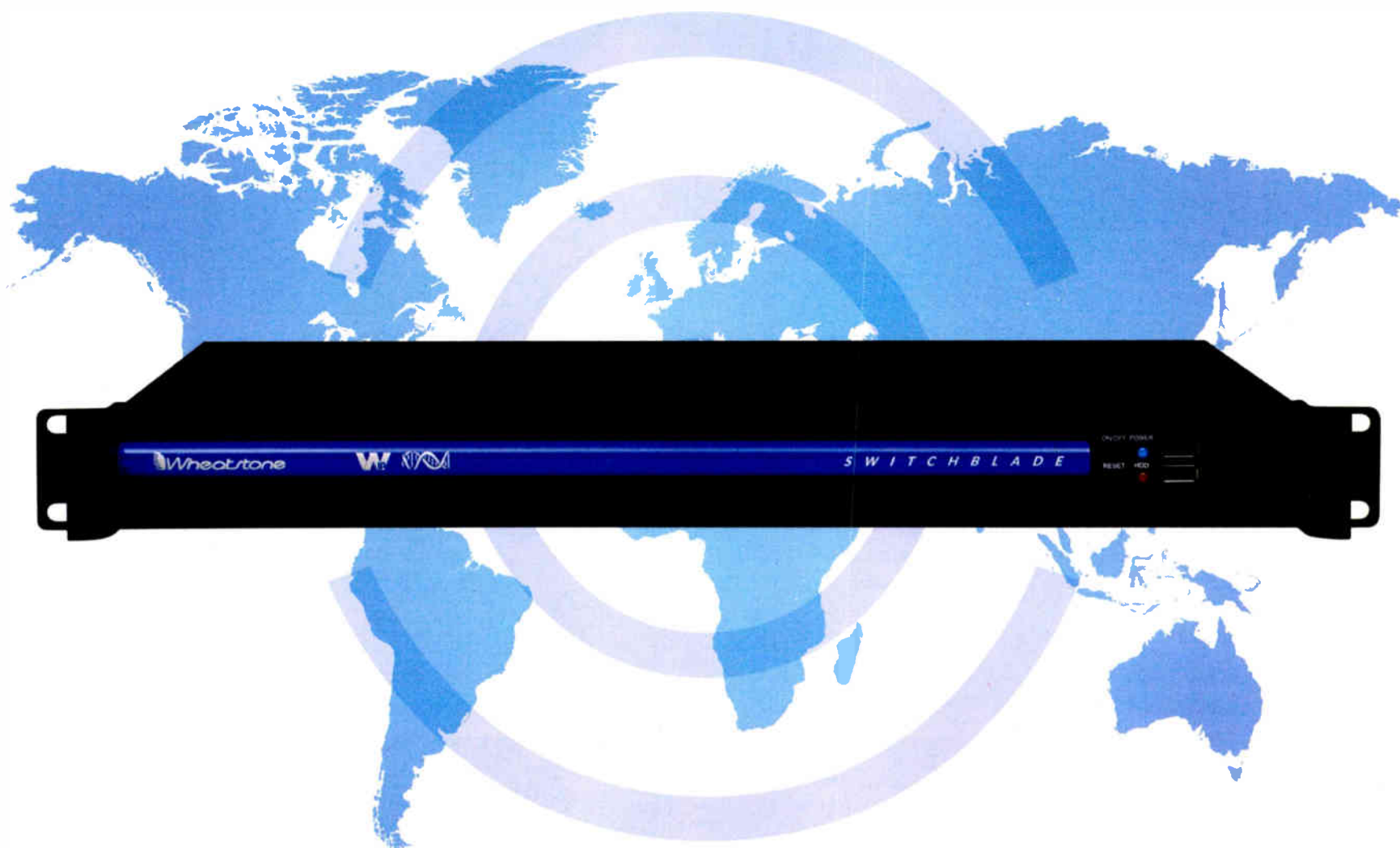


JBL Professional highlighted its new One Series 104 compact powered reference monitor.



© NAB

Winners of the Crystal Radio Awards for community service are honored. Stations saluted were KBHP(FM) Bemidji, Minn.; KNDE(FM) College Station, Texas; WMBX(FM) West Palm Beach, Fla.; WRLT(FM) Nashville, Tenn.; WWPR(FM) New York; KCVN(FM) Cedar Falls, Iowa; KWBG(AM) Boone, Iowa; WMGK(FM), Philadelphia; WTAM(AM) Cleveland; and WYCT(FM) Pensacola, Fla.



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Gary Cavell, accepts the NAB Radio Engineering Achievement Award from the association's Gordon Smith and Sam Matheny. Cavell challenged the audience consciously to make a difference in the lives of others. "Be more of a deliberate mentor in your world. It doesn't matter what your place is in life, your education, your background, your job function — every one of us can teach, influence and support others.... Because no one does it alone."



Garrison Cavell listens intently as Cindy Hutter Cavell receives the NAB Television Engineering Achievement Award. He called her "my longtime buddy, friend and bride Cindy, whose unwavering faith, simple honesty, and quiet confidence, reminded me that that anything is possible, if you just believe in yourself." Son Andrew is in the background.



Cindy Hutter Cavell is the first woman to receive the NAB Engineering Achievement Award; she was honored for her work in television. "There are far more women in broadcast technology today," she said, "than there were in 1971 when I did my first board shift at a radio station." She also noted the obstacles facing the community "to find, attract and keep bright new talent in this age of vast technical opportunity."



Maverick and Lola get a little attention outside the LVCC.



"Where will the next generation of engineers and tech managers come from?" Perhaps from among this group of participants in the NAB Leadership Foundation's Technology Apprenticeship Program or PILOT's Technology Internship Grant program. Front, from left: Himanshu Patel, Virginia Western Community College; Rachel Haggerty, Seton Hall University; Rachael Stapholz, Arizona State University; Zachary Neace, Western Kentucky University; Grace Singletary, American University/Prince George's Community College. Rear: William Staffan, Ohio University; Markel Hawkins, American University; Connor Crookshank, Bates Technical College. Not shown: Dylan Stewart, Old Dominion University.

It's a Neumann, but you don't talk into it. The company released its first headphones, the NDH 20 closed-back model with memory foam earpads, retailing for \$499.95. Trying them out is Charles Henson, creative services director for SHSU Online at Sam Houston State University.



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World Radio History

NAB Show photos by Jim Peck unless otherwise noted



In the ENCO booth, Emmy award winner and Hollywood Walk of Fame star recipient "Shotgun Tom" Kelly holds forth with guest Mark Gleason, host of "Mark's Groovy Trip," a '70s music show.

Hallie Jackson of NBC and Yamiche Alcindor of "PBS NewsHour" were among four broadcast correspondents who discussed covering the White House in 2019.



© NAB



Esports made itself felt with a big, loud and visually interesting pavilion on the North Hall floor. Beasley Media Group is among the companies intrigued by the possibilities; it recently launched Beasley XP to reflect its increasing interest in "experiential" businesses like professional competitive gaming, drone racing, AR/VR experiences and video game music concert series.



Tag Borland takes a stab at celebrating Logitek's 40th as John Davis observes proceedings.

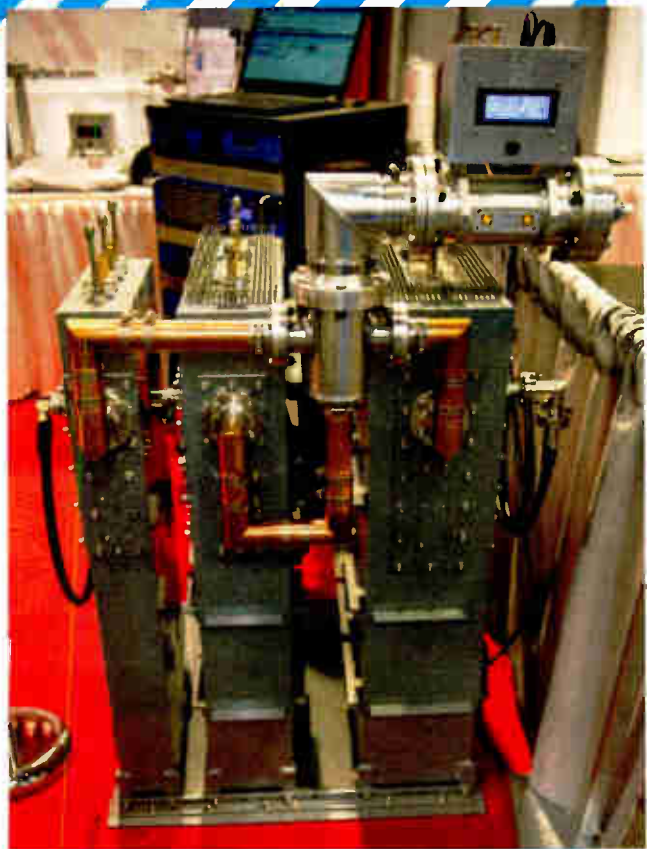
BSW gets visual on the show floor.



A promo for Audinate's Dante digital media networking technology. "Interoperability is not a dream of the future, but a reality today," the company proclaims on its website.



NAB SHOW IN PICTURES



The American Amplifier Technologies product line includes transmitters, amplifiers, RF power meters and FM combiners, like the one shown.

FCC Chairman Ajit Pai talks with NAB President/CEO Gordon Smith. Pai said the commission would vote in May on ways to resolve the increasing number of interference complaints apparently caused by FM translators.



NAB Show photos by Jim Peck unless otherwise noted



Calvin Standifer and Lisa Hargrove learn about MultiCAM Systems gear from Sherman Del Sol and Stanislas Walbert. MultiCAM makes automated video systems for applications including radio station environments.

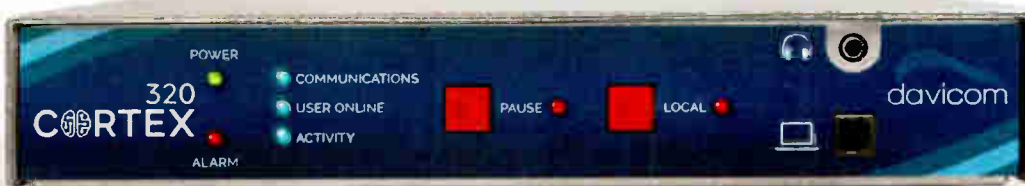


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USERREPORT

BY THOM HARTMANN

Host
“The Thom Hartmann Program”

WASHINGTON — “The Thom Hartmann Program” began over 15 years ago and is ranked by Talkers Magazine as the #1 progressive talk show in America. The show is aired on commercial stations coast to coast and on the SiriusXM Radio Network. We also produce a nonprofit version for Pacifica stations across the United States and in Europe and Africa. Our commercial feed is carried on American Forces Radio to every U.S. military base in the world. Our audience is estimated by Talkers to be 6.5 million.

We have a television simulcast that's carried on Free Speech TV, a news and opinion network carried by Dish, DirecTV and cable systems across the country. We produce “The Thom Hartmann Program” and the simulcast Monday through Friday from 12–3 p.m. (EST), so I need to be able to set up and host



the show every weekday, no matter where I am.

We have used Comrex audio equipment since we started the show 15 years ago. When we began video streaming the show, we purchased a Comrex LiveShot. I've now used it to broadcast the show from Denmark, Iceland, all over the United States — not to mention from my home studio.

On a regular basis, my experience with LiveShot is simple. I plug my portable unit into a Cat-5 Ethernet connec-

tion wherever I am, press the “connect” button and transmit to the rackmount unit back in our Washington, D.C., studio. All of the connection details for the LiveShots, like IP addresses and connection protocols, have been set and saved ahead of time with Switchboard TS, so I don't have to enter any information. A connection is established, the video is mixed in real time by our studio team with a NewTek TriCaster, and the program is both fed to our satellite uplinks for Free Speech TV and streamed live on YouTube and Facebook.

I've found LiveShot extraordinarily easy to use. It's lightweight — I can even take it on an airplane in a small

carry-on bag. I also use the LiveShot Connect smartphone app, which allows me to check bandwidth and latency statistics from my phone. It's all the functionality of a TV studio in a single box.

LiveShot provides me the freedom to do my show from anywhere with an internet connection.

Comrex equipment has helped our show be successful over the years — we've used it to make reliable field connections all over the world. If you need to take your show on the road, Comrex LiveShot is the best product out there.

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Visual Radio

TECHUPDATES

BIONIC DIRECTOR CAPTURES THE RADIO MOMENT

Broadcast Bionics says its Bionic Director radio visualization system is "built by radio people, for radio people."

Bionic Director is designed to assist radio broadcasters in producing shareable content for Facebook and Twitter, live video streams or YouTube highlights, and, according to the firm, lets users "easily create shareable visual content automatically."

The system uses artificial intelligence algorithms to combine camera switching with automated graphics generation and face recognition to instantly identify talent or guests. In addition, advanced transcription enables text-based search, video editing and captioning.

"Intelligent" switching begins even before presenters begin speaking to ensure coverage of reaction shots, and edits can be produced in Adobe Premiere or Final Cut Pro. It is possible to stream and share directly to Facebook, YouTube, Twitter and Periscope, all from within the interface. What's more, Bionic Director forms part of the Bionic Studio suite of products.

For information, contact Broadcast Bionics in England at +44-1444-473999 or visit www.bionic.radio.



MULTICAM ENHANCES VISUAL RADIO SOLUTION

MultiCAM has introduced new modules for its MultiCAM Radio visual radio system.

MultiCAM Assist allows users to easily control the system remotely and benefit from the MultiCAM API. The GUI will remain consistent across platforms and devices.

MultiCAM says this is particularly useful with its automated systems such as Conf (video conferencing), Radio and Tracking because it lets station staff remotely start or stop the recording or streaming. Operators can also take quick control of the system in semi-auto or manual mode.



In addition, the new Social Media Management module is designed to let operators connect Facebook and Twitter accounts to MultiCAM Radio and receive messages in real time. The Social Media Management module also filters received messages by keywords, users and hashtags and lets the host moderate messages according to the interest and select the messages he or she wants to display on the live program.

For information, contact MultiCAM in New York at 1-646-907-8802 or visit www.multicam-systems.com.

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TECHUPDATES**ENCO UNIFIES VISUAL RADIO**

ENCO's Visual Radio solutions leverage the power of DAD's radio automation and management interface to deliver a complete multimedia experience to web and mobile

audiences. Interoperability with leading production systems assures that radio broadcasters can support everything from content acquisition through to scheduling and delivery from a single unified platform, including targeted advertising support to help monetize online programming.

Visual Radio's operational flexibility is especially important for radio broadcasters familiarizing themselves with video production workflows. ENCO's Visual Radio solution delivers music videos, program audio and interstitials (targeted ads, promos). ENCO's familiar management interface eliminates the need to learn new software and manage multiple content libraries. Instead, customers benefit from an intuitive live-assist application to suit each operator's preferred balance of manual and automated control.

ENCO's solution offers built-in intelligence that eliminates some of the more complex tasks traditionally associated with high-end, studio-based video production. For example, voice-controlled camera application will switch between hosts and guests during live radio programming, triggered through recognition of "hot" microphones. Operators can additionally create custom rules to display all camera feeds at once, and assign dedicated graphical overlays to frame each shot. Tighter integration with graphics software further simplifies the user experience, including the management and integration of live social media feeds, visual effects and transitions.

For information, contact ENCO in Michigan at 1-248-827-4440 or visit www.enco.com.

THE TELOS ALLIANCE AND BROADCAST BIONICS, A COMPLEMENTARY PAIR

The Telos Alliance says it has good news for Axia console users looking to get involved with visual radio. The company has a long standing, close relationship with visual radio products and services developer Broadcast Bionics.

That relationship, the company says, provides easy access to the power of intelligent live feeds and instantly shareable, short-form video content as a way to enhance broadcast offerings and increase a show's social media traffic in today's media landscape.

According to the Telos Alliance, Broadcast Bionics has set out to make visual radio useful and accessible to broadcasters everywhere with its Bionic Director software. Bionic Director combines intelligent camera switching with automated graphics generation based on social media, RSS feeds, images, album art and videos.

For Axia's part, the company's Livewire Pure IP network environment is the only system that fully unlocks the capability of this software. It can pull microphone-level information and fader positions from an Axia console, allowing Bionic Director software to intelligently track and capture relevant video in real time during broadcasts. That content can then be used both for live streaming and as shareable assets. From there, trimming, branding and publishing from within the Bionic Studio makes it easy to push to the world.



For those who don't have an Axia console, integrating existing hardware can be done by using Telos Alliance xNodes to pull information into the Bionics workflow and get users up and running with Bionic Director.

For information, contact The Telos Alliance in Ohio at 1-216-241-7225 or visit www.telsoalliance.com.

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I'm selling between 150 and 200 cassette tapes that con-

sist of old-time radio shows, sports shows, some local New York radio talk shows, etc... Must take entire collection and the price is negotiable. Please call me for details and, my phone number is 925-284-5428.

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

WYBG 1050, Messina, NY, now off the air is selling: 250' tower w/building on 4 acres; 12' satellite dish on concrete base; prices drastically slashed or make offer. 315-287-1753 or 315-528-6040

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Collector wants to buy: old vintage pro gears, compressor/limiter, microphone, mixing consoles, amplifiers, mic preamps, speakers, turntables, EQ working or not, working transformers (UTC Western Electric), Fairchild, Western Electric,

Langevin, RCA, Gates, Urei, Altec, Pultec, Collins. Cash - pick up 773-339-9035 or ilg821@aol.com.

2" plastic "spot" reels 6.5 or 8" diameter, as used for quad video. Wayne, Audio Village, 760-320-0728 or audiovlg@gte.net.

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which aired on January 8, 1978. I'd be willing to pay for a digital copy. Ron, 925-284-5428.

I'm looking for the Ed Brady radio show in which he did a tribute to Duke Ellington, the station was KNBR, I'd be willing to pay for a digital copy. Ron, 925-284-5428.

I'm looking for KTIM, AM,FM radio shows from 1971-1988. The stations were located in San Rafael, Ca. Ron, 925-284-5428.

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, KSFX, KOBY, 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.

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.

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.

Looking for KSFX radio shows, Disco 104 FM, 1975-1978. R Tamm, 925-284-5428.

Looking for KTIM FM radio shows from 1981-1984 if possible unscoped. R Tamm, 925-284-5428 or ronwtamm@yahoo.com.

RECEIVERS/ TRANSCIEVERS

WANT TO SELL

Johnson Electronic SCA880 module, 67/92 Khz, 417-881-1846.

WANT TO BUY

AM Stereo radio. Call 417-881-1846.

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1960s-vintage MacKenzie Repeater machines, magazines, spare parts and manuals, complete or "parts" machines considered, James, 870-777-4653.

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Standard Short-tune series. Bill Cook, 719-684-6010.

(2) LPFM radio stations for sale, located in the NW part of central Florida on the gulf coast, covers the county, get out of the cold weather, come to Florida, call or write for particulars, 352-613-2289 or email boceey@hotmail.com or Bob, PO Box 1121, Crystal River, FL 34423.

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The Association of Public Radio Engineers says it is committed to furthering the education of engineers and to bringing new ones into the community. This year its scholarship committee selected five first-time conference attendees to join in the Public Radio Engineering Conference. Alfred Russo is a studio and broadcast engineer at WBUR in Boston; Duncan Fowler is an engineer at Blue Ridge Public Radio in North Carolina; Paul Cox is a broadcast engineer at Boise State Public Radio; Ben Overbaugh is an engineer at KJZZ and KBAQ in Arizona; Eliot Sweere is a student engineer at KUWS in Superior, Wisc. See more up-and-coming technologists on the bottom of page 20.

Alfred Russo



Eliot Sweere



Duncan Fowler



Paul Cox



Ben Overbaugh



The APRE named Jeff Welton as recipient of its Engineering Achievement Award.



At the PREC, Melodie Virtue of Garvey Schubert Barer discussed legal issues including the current FCC effort to reorganize the C Band. She recommended that engineers be prepared to confirm the accuracy of their earth station registrations in the commission's IBFS online database. The deadline to do so is May 28.

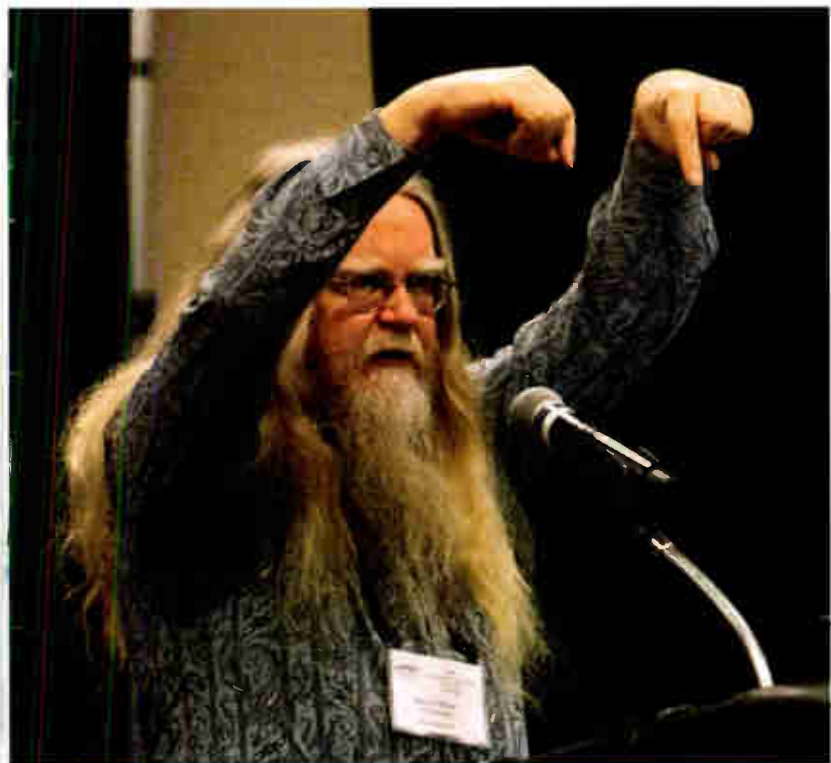


From left: Jeff Welton, Jeff Welton, Jeff Welton... Just kidding! Will the real Jeff Welton please stand up? Despite their name tags, shown are (rear row) Alex Hartman, Aaron Read, Shane Toven, Michael Jamnick and (front row) Scott Fybus, Britny Williams, Jim Gray and the man himself, the only one not labeled Jeff Welton.

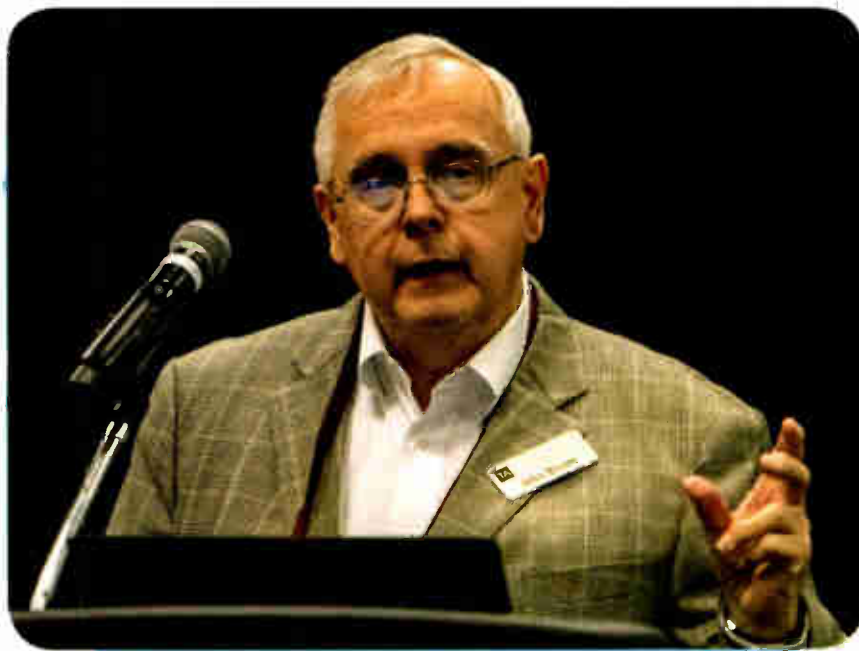
NAB Show photos by Jim Peck unless otherwise noted



Shown talking tech at the Public Radio Engineering Conference are Melodie Virtue of Garvey Shubert Barer; Britney Williams of Wisconsin Public Radio; Association of Public Radio Engineers President Victoria St. John of Vermont Public Radio; and Kira Parker, also of VPR.



At the PREC, Steve Dove of Wheatstone delivered what he called "a good-natured rant and harangue at lazy and paradigmatic microphone choices, what factors really matter and the importance of treating a mic and its mic processor as a system."



John Bisset of the Telos Alliance talked about tips and solutions to improve the efficiency of an engineering department at PREC, based in part on his long-running Radio World column "Workbench."



Bill Dahlstrom and Victoria St. John notice the Radio World photographer sneaking up on them.

READER'S FORUM

ELECTRICAL SAFETY

Mark Persons' article on electrical safety in the Feb. 13 issue ("Power Your Equipment Safely") is worthwhile reading.

He mentions the electrocution by a user of an electric drill. Keep in mind that only 10 mA of current is enough to make it difficult, or impossible, to "let go" of an electrically "hot" item. And only 100 mA of current can cause cardiac arrest if it flows through your trunk. Given the right conditions, it doesn't take very much voltage to get to those current levels.

Mark is correct that a GFCI could have saved a life. But I would like to warn folks that no such protection exists with cordless tools. While they are not referenced to ground, they still have some potential for shock, particularly as the battery voltages get ever higher. Cordless tool batteries are capable of very high currents, so short circuits should be avoided as well.

Another point: When encountering devices with only two-prong cords, be aware that the cords are usually polarized and therefore can be plugged

Power Your Equipment Safely

You can never have too much power protection

TECHTIPS

BY MARK PERSONS

CHEATING
A short-circuited power cord does not get as hot from a wall outlet as it does from a wall outlet. That could put a full 120 VAC on the metal case. That's not good.

CIRCUIT PROTECTION
I will never of equipment should be protected from electrical

UPS BATTERIES
It may not be ideal in all facilities, but like to have a UPS battery backup

UPS POWER DISTRIBUTION
The output rating of the UPS line is a standard 15-amp 120V AC

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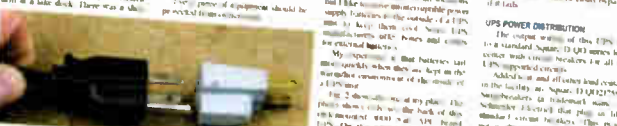


Fig. 1 Don't use a cheater adapter



Fig. 2 UPS outlets kept outside the UPS

the battery was installed along with the original wiring.

As the UPS line is in the facility, it runs over computers, a server rack, and a phone system. The UPS has a 10-amp line to the 10 outlets created for a server rack. After power generation, the UPS is down the power safe before reaching back during a power outage. It is a good and realistic option.

The UPS line is in the right place. It is in the right place and is in the right place. It is in the right place and is in the right place.

The output rating of the UPS line is a standard 15-amp 120V AC. It is a standard 15-amp 120V AC. It is a standard 15-amp 120V AC.

The output rating of the UPS line is a standard 15-amp 120V AC. It is a standard 15-amp 120V AC. It is a standard 15-amp 120V AC.

in only one way. Mark's advice to add a three-conductor cable is good, but if you cannot do so, make sure not to defeat this feature. It makes sure that the hot conductor (which is better insulated internally) is connected to the correct side of the line. It only works correctly if the outlet is wired correctly.

Simple plug-in testers, with three indicator lights, are cheap and readily available. In addition to telling you if hot and neutral are reversed, these testers will alert you if no ground is present. Test your outlets after they are wired or replaced to make sure they were installed correctly. Mistakes happen; it's best to catch them before calamity occurs.

Rolf Taylor
Rocket Engineering and Consulting
Alexandria, Va.

Write to RW
Email radioworld@futurenet.com with "Letter to the Editor" in the subject field. Please include issue date and story headline.

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CAN AM BE FIXED?

I love the idea of digital AM radio.

I wasn't crazy about the bandwidth limiting of receivers in 1972. All that did was make FM tuners sound better. The advent of hybrid digital made it worse.

The article ("All Digital AM, Breaking New Ground," March ebook) states that HD penetration is 25%. Is a radio company willing to give up 75% of its audience? I don't think so.

Can AM radio be fixed? With the amazing adoption of flea-powered FM translators, it doesn't look that way. Remember how long it took for FM to catch on? UHF TV?

In 2019, see if you can find a radio for sale in the big box store near you. See if you can find a digital radio for sale in your local CVS (yes they still sell analog radios). You're hoping that the consumer will even care about broadcast radio when they have thousands of streaming channels to choose from.

Will that digital AM station make its way to a smartphone? Not in the "radio" sense — but in a streaming online sense.

I started in radio on AM 53 years ago. Moves made by the commission, the receiver manufacturers and broadcasters, combined with ignorance of FCC Part 15, have rendered the AM band virtually unusable except in the case of one or two high-powered stations per market.

It seems "what's next" is AM stations migrating to FM — as soon as possible.

Read this ebook at radioworld.com/ebooks.

Dave Mason
San Diego, Calif.

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