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NewBay Media

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AUGUST 11, 2010 | The News Source for Radio Managers and Engineers | $2.50 | RADIOWORLD.COM

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CE Carter Blows Out Of Windy City

Career Veteran Played a Role in Dawn of Radio's Digital Era

BY RANDY J. STINE

CHICAGO — If longevity and dedication to a single employer are measuring sticks in a career, Gordon Carter is off the yardstick.

Carter, 64, retired as chief engineer after 41 years with WFMT(FM) in Chicago at the end of July.

The veteran broadcast engineer witnessed the technological evolution in radio broadcasting from analog to digital through more than four decades at

NEWSMAKER

WFMT, known in the industry for its excellent audio fidelity.

Carter even played a role in the dawning of the digital media era when Sony chose WFMT, a non-commercial classical music and fine arts station, to be the first radio station in the world to broadcast a compact disc recording in 1982.

Sony released the first CD player, the CDP-101, earlier that year.

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HD Radio Shouldn't Be This Hard

Tom Ray Finds Himself Discouraged Based On His Ford Shopping Experience

BY THOMAS R. RAY III

NEW WINDSOR, N.Y. — Unless we give Joe Consumer a reason to go out and purchase an HD Radio for his car — until he can obtain it easily

FIRSTPERSON

and at a reasonable cost, and a device that works — I fear that HD Radio is going to go the way of FM quad and AM stereo, relegated to the scrap pile of history.

This statement may surprise you, coming from me. I'm the vice president/corporate director of engineering for Buckley Broadcasting/WOR Radio, New York City. As you may be aware from news reports and my own commentaries, I've been a vocal HD Radio supporter; indeed our station WOR was the one of the first AMs on the air with an HD Radio signal.

It's been awhile since I've written anything HD Radio-related. Well, I've had nothing much new to report on recently. Until now.

You see, I needed to purchase a

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World Radio History

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World Radio History

CARTER

(continued from page 1)

"We'd always had a very good relationship with Sony over the years. They told us they had this new format to debut and I think they figured they had better do it on a station that sounded good," Carter said.

"They arrived that day with the player in an attaché case and a disc. We talked about it on the air. It was really an event."

Carter recalled that Sony later used WFMT for the on-air debut for Digital Audio Tape (DAT) in 1987 and the MiniDisc in 1992.

How fussy was Carter and the other WFMT broadcast engineers about FM audio quality? He said at one time he designed and built his own audio routing switchers for the station because nothing on the market was good enough.

"It has always been my view that the secret of good audio is simply good engineering practices. A station can sound good on a shoestring budget if the equipment is properly chosen and maintained."

Carter, who started at WFMT as a staff engineer in 1969, has authored a number of articles about FM audio and processing and given numerous industry presentations on the topics. He'll moderate multiple sessions at the Broadcasters Clinic in Madison, Wis., this fall.

Gordon Carter works on a VCR at WFMT in downtown Chicago about 1985. The station used Beta VCRs with the PCM-F1 Digital Recording Processor to record digital audio on videotape. The device took analog audio inputs, converted it to the EIAJ 14-bit PCM digital format, and then converted it to a video signal.

"Processing is only part of the total audio chain. I always paid attention to all aspects of the audio chain. Remember that your total sound will be no better than your worst piece of equipment in the chain, but good quality does not have to cost a lot."

WFMT, licensed to Window to the World Communications, has studios in northwest Chicago and its HD Radio transmitter and antenna atop the Willis Tower, formerly the Sears Tower, downtown. The radio station has never changed from its classical music format since it signed on in 1951.

Window to the World, formerly known as Chicago Educational Television Association, also is licensee of WTTW(TV) in Chicago.

No replacement for Carter had been named by late July.

Carter was born and raised in Pottstown, Pa., which is approximately a half-hour northwest of Philadelphia. He majored in missionary radio at Moody Bible Institute in Chicago and after graduation spent three months in Aruba helping to erect a new AM tower.

Soon after returning stateside, Carter was hired by Great Scott Broadcasting to do studio and transmitter maintenance at WTTM(AM) in Trenton N.J.

AN AM BEGINNING

"Try doing this today: I walked into the local station in Pottstown and asked to speak to the owner. That was Herb Scott. I asked him for a job and 20 minutes later he hired me for his Trenton radio station."

In 1969, Carter made the move to Chicago and WFMT. He worked under the tutelage of Chief Engineer Alfred Antlitz, who allowed Carter to explore new technologies as part of his job.

Carter was involved in three studio and three transmitter moves through the years, including a transmitter move from the John Hancock Center to the Sears Tower in 2000. He worked as a studio supervisor and telecommunications manager at WFMT before being named chief engineer in 1995, a title that included computer network administration duties, in addition to RF work.

Carter said he has spent much of the past few years sitting at a keyboard, monitoring systems; but it wasn't always that way. WFMT had an engineering staff of three — Antlitz, Frank Teller and himself — when Carter started. Now that staff consists of Carter and a union TV transmitter supervisor, who works on the WFMT HD transmitter under Carter's supervision.

"Since the staff has been pared down we don't have time to design things or fix things. We would build equipment in our back room. That was a lot of fun. Of course along terms of repair, with the advent of surface-mount [technology] and digital, most of what we deal

(continued on page 5)

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World Radio History

They Have a Good Radio Story to Tell

Consumer Electronics Companies See an Opportunity in Promoting 'Radio'

In radio's battle to redo its image from old to new media, an ally often overlooked is the consumer electronics community.

I'm prompted to reflect on this by a supplement published in TWICE, now one of our sister magazines at NewBay Media. The brochure offers a different perspective on radio's place in the market and the evolving perceptions about it in the consumer electronics community.

The publishers sensed a business opportunity to produce this supplement on the theme "Radio in the 21st Century." The supplement is an advertising piece, thus its entire tone is upbeat; the purpose was to sell radio-related devices, so the content is by no means a scientific sampling of thought on the topic. But I was drawn into browsing it.

Unlike articles or supplements you've seen from RW or other broadcast sources, the content was aimed at the professional consumer electronics marketplace; its text and ads are written by or for electronics manufacturers, retailers and other people in CE circles.

So what are those folks saying about radio right now?

Ads like these from iBiquity, Grace and iHome show how manufacturers are promoting the many forms of 'radio' to their retail channels.

TODAY'S RADIOS

"A new generation of listeners are changing the 'good, old radio,'" the introduction states.

"Visit a top online retailer, plug in 'radio' and you'll be surprised at what pops up. Among the top sellers are Apple nanos. Along with the ability to play MP3 files, the popular portables have built-in FM tuners so people can listen to their favorite stations as well as downloaded tracks. The nano adds a special feature to radio listening: live pause. You can even rewind as far back as 15 minutes."

The writers describe the breadth of radio-related devices you can buy: "Classic combination CD clock radios, CD/AM/FM models for the kitchen, iPod docks with built-in FM tuners, even $1,000 A/V receivers that play satellite radio stations." Weather-band portables are in demand. Sirius/XM is strong in the car and recently posted its highest number of subscribers, they note.

Further, HD Radio receiver sales are at 3 million devices to date. CEA head Gary Shapiro is quoted saying the digital radio technology "is advancing in all segments — in traditional devices such as tabletop radios, iPod docks and A/V receivers, and in new segments for AM/FM-like MP3 players, PNDs and cellular handsets." He said digital receiver sales are "growing rapidly" and that HD Radio receivers are "commanding a value premium over analog radios." Shapiro calls HD the "next CE digital wave."

Internet radio meanwhile is making itself felt in retail sales thanks to broadband penetration in U.S. households as well as the spread of Wi-Fi.

Pandora, Slacker, iheart Radio, AOL Radio and Sirius/XM Premium Online are "much better organized and let consumers personalize their playlists." Manufacturers have made it easier to connect to wired and wireless streams. "The problems from the early days of Internet radio are really behind us," analyst Ross Rubin of the NPD Group is quoted saying.

The smartphone revolution too has "changed the face of traditional radio." Users of iPhones, BlackBerrys and Android devices can stream audio. Meanwhile, at home, more televisions have Ethernet and Wi-Fi connections that can enable Internet radio. The authors give an example of a Toshiba Net TV that allows the user to access Pandora Internet Radio accounts using a remote, and compares this to the more passive listening experience of cable audio channels.

INTEGRATION

Supporting the supplement with ads were manufacturers like iHome, which makes Internet radio products compatible with the iPod/iPhone; Grace Digital Audio, offering Internet radios and an accompanying iPhone remote control app; and iBiquity Digital, promoting HD Radio's current or planned "advanced services" like Program Service Data, iTunes tagging, live pause and images of artists.

Also advertising were Sirius/XM,

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FROM THE EDITOR

Paul McLane

World Radio History

THIS ISSUE

AUGUST 11, 2010

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'RADIO'

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hawking its SkyDock, which lets a listener access the service in a car via iPod touch or iPhone; and D&H, a distributor that stated, "The popularity of radio and its complementary products is apparent at D&H: sales of home and portable audio ... have climbed nearly 40 percent year over year," thanks in part to the integration of radio functionality in other media-based devices like MP3 players and cell phones.

I was pleased. Perhaps I've been subjected to too much negativity about radio, but I found this approach — "salesy" though it was — refreshing.

Of course, if you own a radio stick and are not lucky enough to be a big streamer or satellite company, you might read that and grumble, "Some of these services are not even 'radio.'" But the very meaning of "radio" for consumers and retailers is changing. You and I know that; this brochure is a gut reminder.

Like it or not, our industry consists of more than over-the-air signals. If we don't change our thinking along with the market, we limit ourselves; we exclude radio's businesses and our own careers from potentially exciting growth.

The smartest broadcasters have figured this out and are integrating themselves into this sprawling, growing consumer market in every way they can.

The article did include an upbeat note for traditionalists: "The meat and potatoes for retailers are the millions of AM/FM clock radios sold every year. CEA estimates close to 13 million home and clock radios will be purchased in 2010," with sales of about $277 million.

"This doesn't even include the 10 million-plus MP3 speaker docks, many of which now include FM tuners and alarm options. This category remains hot, with CEA projecting an almost 8 percent increase in sales." Home radios with MP3 player docks made the top 10 list of fastest-growing products last year, according to CEA.

The lesson for radio people in this is the theme of *integration*.

Again, the purpose of that ad supplement was to help retailers get fired up about selling product, so I share all this with that understanding. But it's notable to me how TWICE and its advertisers approached the topic. They are not saying that these offerings replace radio; they see radio as improving.

"Clearly radio's shape and technology have changed dramatically over the past few years," the authors concluded. "It's the wise retailer who welcomes this, as it offers unimagined sales opportunities for a new generation of listeners."

It's the wise broadcaster — and pod-, satellite-, stream- and multi-caster — who pays attention.

CARTER

(continued from page 3)

with is not repairable to the component level today. But anymore, we just swap boards," Carter said. "That's very different from the way we used to think."

Transmitters are vastly different, too, Carter said. When he started, it was the sight of all those tubes that excited him about getting into broadcast engineering.

"Now you look into a cabinet and you see a lot of Cat-5 wire. We are still making RF, but it is vastly different. Today, with our solid-state transmitter, I get e-mails from Nautel telling me there is a firmware update I need to download," Carter said. "Now I can monitor every module in the transmitter and what it is doing from my home."

WFMT began transmitting an HD Radio signal in 2009 when it purchased a Nautel NV-40 FM transmitter. Carter, who has high hopes for HD Radio's multicasting capabilities, said he suggested some engineering improvements to the transmitter that Nautel subsequently incorporated into its NV-40.

Carter, who also was responsible for administration of WFMT's Prophet NexGen audio system, said he plans to do a bit of engineering consulting in retirement and spend more time pursuing his interest in trains — both real and model. Of particular interest to him is the history of the Reading Railroad, which ran from Reading, Pa., to Philadelphia and through his hometown of Pottstown.

He has been married to his wife Sharon for 42 years. The couple lives in La Grange, Ill., and has two adult children.

He said he has always had the ability to learn on his own, which has served him well working in a profession that can see technology change quickly.

"Most of what I learned in school has been long forgotten or become obsolete. Pretty much everything I know about broadcast technology today I learned on my own. A person has to be willing to keep learning. I've known people who refused to change and they were left behind by the industry."

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ALL-PRO ALLEGES INTERFERENCE; CBS DISPUTES IT

All-Pro Broadcasting, licensee of KATY(FM) in the California town of Idyllwild, says it's receiving "ongoing and destructive interference" from the IBOC signal of KRTH(FM) in Los Angeles. Idyllwild is in the Temecula Valley and part of the Riverside-San Bernardino market.

On 101.3 MHz, Class A KATY is first-adjacent to KRTH, a super-powered Class B FM owned by CBS Radio and operating on 101.1 MHz.

Elliott Klein, the consulting engineer for KATY, told Radio World he began preparing the measurements needed for the filing in August 2008. He said KATY has been experiencing interference since KRTH turned on its digital power in June 2007.

KATY wants the FCC to make KRTH reduce its digital power level and "cooperate with All-Pro so the parties can promptly resolve the problem." It gave the commission a CD containing recordings it says are clips of audio interference experienced by a factory in-dash radio as the vehicle was driven on roads within KATY's 60 dBu contour.

In a response filed with the FCC, CBS Radio calls the complaint "factually defective" on several points and urges the commission to dismiss the complaint.

CBS also stated that the lack of interference complaints from "disinterested parties" — meaning ordinary KATY listeners — means the commission has no basis to take action beyond dismissing the petition. The "petitioner did not provide a single documented complaint of interference from KATY listeners within KATY's protected 60 dBu service contour," CBS stated.

It noted that the case does not involve a digital power increase; rather, the complaint, it said, "concerns authorized digital facilities that have been in operation for over three years." It said KRTH is in compliance with FCC IBOC requirements.

The company further challenges KATY's technical analysis, calling it "seriously flawed," and that KATY's attempts to "liken the digital radio service to a secondary service and to suggest that co-channel interference rules should apply even though KRTH operates on a first-adjacent channel to KATY are unsupported and baseless."

All-Pro attorney J.J. McVeigh told me the broadcaster was reviewing the CBS response and intended to file a rebuttal.

NEWSROUNDUP

HD RADIO RECEIVER SALES: IBiquity Digital President/CEO Bob Struble says more than 3 million HD Radio receivers have been sold and the sales pace continues to grow. He estimated sales for the first three quarters of this fiscal year at 1.2 million receivers. The car sector is a strong point; iBiquity estimates some 438,000 automotive/OEM units were sold in the first three quarters of this fiscal year, more than the four prior years combined.

NEW OWNER FOR APT: CSR has acquired APT Licensing Ltd. CSR had been using APT audio compression on its wireless audio platforms and says APT's staff will be retained.

PAYOLA PROBE ENDS: Univision, the Department of Justice and the FCC reached a deal to end an investigation over payola allegations. Univision will pay $1 million. At issue were allegations that Univision stations or employees secretly accepted payment from a record label in exchange for giving more frequent airplay to artists. Univision said "former employees of Univision Music Group" were involved and no one else at Univision knew about the actions. Univision reported the payola to the U.S. Attorney's Office; it sold UMG in 2008.

AIRSPACE RULES: The FAA and the DOT have updated federal navigable airspace rules. The changes take effect in January. Left undone is frequency notification requirements for occupants of the FM band; however a resolution is expected soon, the FAA said.

Your Story Is Out There. Grab It LIVE with ACCESS!

In Chile, it was business as usual for the BIO-BIO LA Radio team. They'd been using ACCESS to cover the presidential elections as well as international broadcasts of the Libertadores Cup from Argentina, Brazil and Venezuela. Then tragedy struck in the form of a devastating earthquake. The team was there, with journalist Maria Carrasco reporting live as well as working with the police to help enable communications using a Comrex ACCESS.

Whether it's business usual or providing essential coverage of breaking news, you can always be where the story is. And you don't need a full crew to grab it. Wherever you are, you can be live on the air, creating pinpoint, relevant programming that keeps an ever-growing number of listeners glued to their radios.

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World Radio History

DISCOURAGED

(continued from page 1)

new vehicle. The venerable Ford Explorer I was driving finally went to that big wrecking facility in the sky after 230,000 hard miles. So I purchased a new Ford Escape. Yes, I'm a Ford guy — Ford products have never steered me wrong, no pun intended.

In April I went to my local dealership in Newburgh, N.Y. and made a deal; then I made "the" statement: I said I wanted to purchase a factory-built in-dash HD Radio and have it installed in the Escape.

Lisa, the sweet sales person, promptly pointed to the Sirius sign and said that the car came with Sirius. Um, no, I told her. I said HD Radio.

She got the head of the parts department. Nope — never heard of it. She got the head of the service department. Nope — never heard of it.

She brought over the owner of the dealership, who went to his office and came back with what amounted to a ream of paper. It contained nothing about HD Radio from Ford.

I took the opportunity to take them out to the dying Explorer and give them the HD Radio demo with the older Kenwood radio I had installed. They were amazed at one of the local Newburgh, N.Y., area stations that's running its AM daytimer on HD2 and an oldies format on their HD3. But that didn't help me. According to the dealer's staff, factory-built, in-dash HD Radio was unavailable from Ford.

I drove off the lot the next day with the factory AM/FM radio that came with the car.

So I went to an online retailer. Being that the Escape is smaller than an Explorer, I was concerned about the available space in the dash being able to accommodate something like the external HD Radio tuner that my Kenwood had.

My other concern was that the Escape has the Microsoft Sync hands-free communications system installed. The only real Sync feature I need is the Bluetooth cell phone connectivity. Since I spend so much time in the car, it's nice to be able to actually hear the phone calls and have people be able to hear me. Sync needed to stay.

COLLECTING ALL THE PARTS

What I found online was a new Kenwood model, the KDC-HD545U. It does not require the external HD Radio tuner, as the HD Radio tuner is built in. Cool. And I also found an adapter device that allows the new Kenwood to be integrated with the Sync system. Very cool.

Now, let's take a look at finances. I have a new vehicle with a radio that is going to have to come out — a radio that probably cost me a good $500 or more. But let's not take that into account. The Kenwood KDC-HD545U

(continued on page 8)

AND IN CAR NUMBER TWO...

Now, we have had another event in our family where my wife's 2002 Ford Focus started acting up. So we bought a 2010 Ford Fusion in mid-July.

First off, my wife does not listen to terrestrial radio. Her opinion is that there is nothing worth listening to in New York's Hudson Valley, 50 miles north of New York City.

She listens exclusively to XM Satellite Radio. She will be driving this vehicle 98 percent of the time and really likes having all of her steering wheel controls working, thank you.

After what I went through putting an HD Radio into the Escape, and since my wife does not listen to terrestrial radio, there will not be an HD Radio installed in this vehicle. The radio in the vehicle is adequate for her needs and will accommodate her XM radio without modifications after the complimentary six-month Sirius subscription expires.

While I was waiting for the paperwork and such at the Ford dealership, I noted numerous 2011 model year vehicles on the lot.

Keep in mind that iBiquity's website recently has been screaming the headline, "Ford Touts Benefits of HD Radio Technology Available in 2011 Edge With New Marketing Campaign." However, HD Radio was nowhere to be found on this dealer lot.

I walked around and perused each and every window sticker on Edge vehicles. This is the same dealership where I purchased the Escape. The owner of the dealership says he has had no information from Ford regarding HD Radio.

As of late July, I went to *www.hdradio.com* and clicked on the FORD section. The website now states HD Radio will be available in 2011 model year Ford Edge vehicles.

— Thomas R. Ray, III

DISCOURAGED

(continued from page 7)

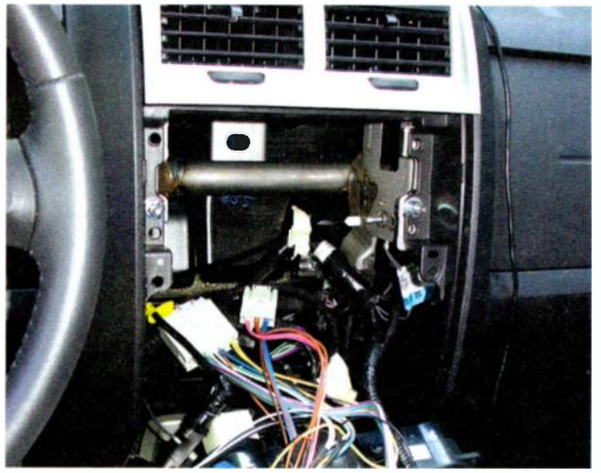
was priced at $169; as far as I'm concerned, that's a great deal, as Kenwood makes top-of-the-line gear and I found this price more than reasonable.

The Sync adapter cost is $100. This now becomes part of a kit that includes the trim plate for the dashboard, and that is included at no charge. So I'm spending $269 plus shipping to outfit my car, and I get to keep the Sync system. Outstanding.

But wait, there's more. The vehicle has steering wheel controls for the radio. Want to keep those? The adapter is $80, making the price now $349. Uh, oh. The car has Sirius Satellite Radio. And I am not impressed with Sirius. But, I *do* have a lifetime XM account.

So I call XM Satellite Radio and ask to transfer my lifetime XM account to Sirius. No can do. It doesn't matter if they're the same company. The answer is no.

Then I discover there's an XM Mini-Tuner made by Audiovox that will work with the Kenwood radio. If the XM Mini-Tuner would work on its own with the radio, it would only add $29 to the overall cost. But, it's not that simple. You need to get the protocol adapter, so now the cost is $129 to add XM to the mix, making the total $478.



The author contemplated the install of his new Kenwood KDC-HD545U, featuring built-in HD Radio ...

... to here.

car "talks" to my phone; that feature is a keeper in my book. And furthermore, the factory installed radio sounds pretty damn good. If I were not trying to listen to my HD Radio stations, I would not even be considering changing out the radio in this car.

Just for fun, I called Ford corporate HQ in Detroit, and talked to many nice people. And these many nice people all told me I was their first HD Radio call, ever. And none of them could answer my question as to the availability of a factory-installed HD Radio that might just fit into the dashboard of my new Escape. And that's not to say they didn't try to help me.

This consumer has had extreme difficulty getting HD Radio for his new vehicle. Is this typical of what Joe Consumer encounters?

Photos by Tom Ray

He successfully installed the new Kenwood HD Radio, the XM Delphi Roady unit and his Yaesu FT-7800R 2 meter/70 cm ham rig.

I decided I didn't need to use the steering wheel controls. I've been reaching over to the dash to adjust the radio for more than 30 years, why quit now? I also decided XM wasn't worth an additional $129 and will stick with the small external unit I have connected through the Aux input.

And if, by not connecting the steering wheel controls, the Sync system does not function correctly — I have been assured it will — the factory radio will be reinstalled in the car and I will not be able to listen to my HD Radio stations.

Frankly, I'm just trying to listen to the HD Radio stations for which I am responsible. I am content to drive around in silence — and do so quite often, listening to the sounds of the car. I no longer am 20 years old; I do not need the whiz-bang latest and greatest abilities to pull audio files off a USB flash drive.

If there were no Aux input jack available, I wouldn't miss it. It's nice that the

JOE CONSUMER?

I was shuttled from department to department, speaking several department managers who shuffled through paperwork in the background. I started with the normal customer service route. These were the people who first told me I was their first HD Radio call, ever. I then called back and asked for the president's office and got a nice woman who told me she was one of the president's assistants who also told me I was the first HD Radio call, ever.

I identified myself as being the VP/CDOE of Buckley/WOR Radio, told her why I was calling and looking. She sent me to the head of audio accessories/entertainment. He couldn't help me. I was then passed around to department managers in Customer Service, Research, PR and Engineering. No one could assist me without pointing me to *www.hdradio.com*.

I informed them that this website is useless. It tells me things I already know, and nothing about radio availability from Ford. I just went in circles.

So I Googled "Ford HD Radio."

Google directed me to several interesting press releases available on the Ford website. One was from Dec. 29, 2009 stating that HD Radio would be available in 2010 model year vehicles. That's interesting. I bought a 2010 Ford Escape. So if HD Radio is supposed to be available in 2010 model year Ford vehicles, why does no one at Ford know anything about it?

I called Jeff Detweiler, director of broadcast business development at iBiquity Digital. He queried Ford and got a response that HD Radio would be available in 2011 model year vehicles, and would be bundled with their navigation package.

Dandy. I have a nice little $150 TomTom GPS unit that works very well. I'm not going to shell out $1,000+ for Ford's navigation system just so I can get the added attraction of HD Radio. I drew

(continued on page 10)

World Radio History

PowerStation: the indestructible console engine from Axia.

Unpack it, install it... forget it.

Just add console •

Meet PowerStation™, the new, **self-contained console engine** that's over-engineered to ensure years of reliable, trouble-free service. Setup couldn't be easier: PowerStation needs just one cable to connect to an Element™ mixer. With over 1,000 already installed, Element is rapidly becoming radio's most popular mixing desk.

Lots of I/O •

Built-in audio connections make setup simple.

- **Two Mic inputs** with selectable Phantom power and studio-performance preamps.
- **Four analog inputs and six outputs** with 24-bit, 256x oversampling A/D converters for connection of CD players, recording devices, headphones and monitors, *et cetera*.
- **Two AES/EBU inputs and outputs** for DATs, satellite feeds and other digital audio devices.
- **Four GPIO ports**, each containing 5 inputs and 5 outputs, for start/stop control of audio sources, on-air lamps and other studio accessories.
- **Livewire™ ports** for single-cable connection to Telos phone systems, Omnia audio processors and other Axia gear — as well as broadcast equipment from partners like DAVID Systems, Netia, WinMedia, Zenon Media and others. See the complete list at **AxiaAudio.com/partners/**.

Simple networking •

Use PowerStation to build a stand-alone studio, or network as many as 4 studios without external switches. There are **16 built-in Ethernet ports**, including 2 Gigabit with SFP ports for networking with fibre. Axia is easily scalable — for larger networks, just add a core switch; Axia networks can handle as many as 10,000 stereo channels.

Fanless operation •

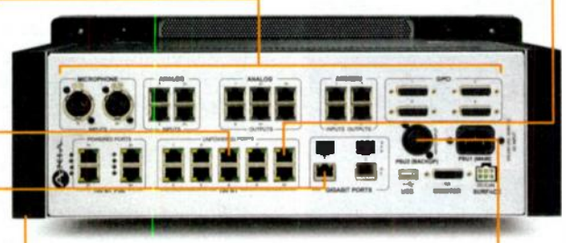
PowerStation is silent and fan-free. These large, extruded heat-sinks ensure cool operation.

Built like a tank •

This is Element. It's **built for heavy use**, with avionics-grade switches, heavy-duty optical encoders, silky-smooth, dirt-resistant conductive-plastic faders, high-impact Lexan module overlays and specially-designed switch guards that prevent accidental operation. All this is housed in a frame made from thick aluminium extrusions designed for rigidity and RF immunity. To read more, visit **AxiaAudio.com/Element/**.

Simply scalable •

Add a **PowerStation Aux** to double your Mic, Analog, AES and GPIO I/O. If that isn't enough, simply plug in Axia Audio Nodes for even more I/O.



Redundant Power •

Do your plans demand a **backup power supply**? No problem. Along with audio I/O, PowerStation: Aux adds redundant power with automatic switchover.

Show Profiles •

Make and save snapshots of talent's **favorite mixer configurations** and recall them instantly, with just the press of a button.

Automatic mix-minus •

Complicated clean feeds are gone; Element **constructs them for you** — one for every fader. Phone callers and remote hosts hear only what they need to hear, with no need for operator intervention.

Voice processing+EQ •

Element **saves the expense** of outboard processors: Omnia™ processing can be applied to every Mic and Codec channel. Headphone processing is also built in, for times when it isn't possible to monitor your broadcast signal directly. 3-band parametric EQ can be applied to every channel, too, via software or drop-in module controls.

Integrated phones •

Operators don't have to take their eyes off the console — Telos multi-line phone systems are **controlled right from the surface.**

More options •

Element mixers are **built to your specifications**, from 2 to 40 faders in single- or split-frame configurations. Over a dozen different module types, with standard or motorized faders, let you create a board tailored to your exact needs.

AXIA
A TELOS COMPANY

AxiaAudio.com

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World Radio History

DISCOURAGED

(continued from page 8)

the line at $269.

WOR has been transmitting an HD Radio signal since October of 2002. That's almost eight years now.

I would like to think that I am somewhat "in the know" about HD Radio. I would like to think that in this respect, I am more than the "average" consumer. But this consumer has had extreme difficulty getting HD Radio for his new vehicle. Is this typical of what Joe Consumer encounters?

And what about the statement from everyone I spoke with at Ford who told me that I was their first HD Radio call? Add to the mix the fact that it appears adding HD Radio to a vehicle is going to be fairly costly and I wonder, why would Joe Consumer even bother?

Let's go one step further. WOR's news director recently purchased a new, high-end, foreign-built vehicle that does come with a factory-installed HD radio. He came up to me the other day and said, "HD Radio sucks!"

He lives in an area of New Jersey where the WOR Radio signal is starting to diminish. But I have driven there many times, and have not had one issue with WOR's HD Radio signal. His integrated HD Radio, which cost several thousand dollars, drops out of HD — continually — driving him out of his mind.

I told him to read the manual and see if there is any way simply to force the radio to tune to the analog signal.

Is this the experience Joe Consumer is having with HD Radio? "Not optimal" is an understatement. And what gets me is that my little, relatively inexpensive Kenwood ran circles around a high-end radio. I am told by iBiquity that all radios are certified and perform the same; this would not be a fault of the radio. Well, how about the vehicle environment the radio is installed in? Once the radios are certified at a certain level, should the vehicle not be certified for RF interference from its computer interfaces, and shouldn't a minimum performance level of the vehicle antenna be specified?

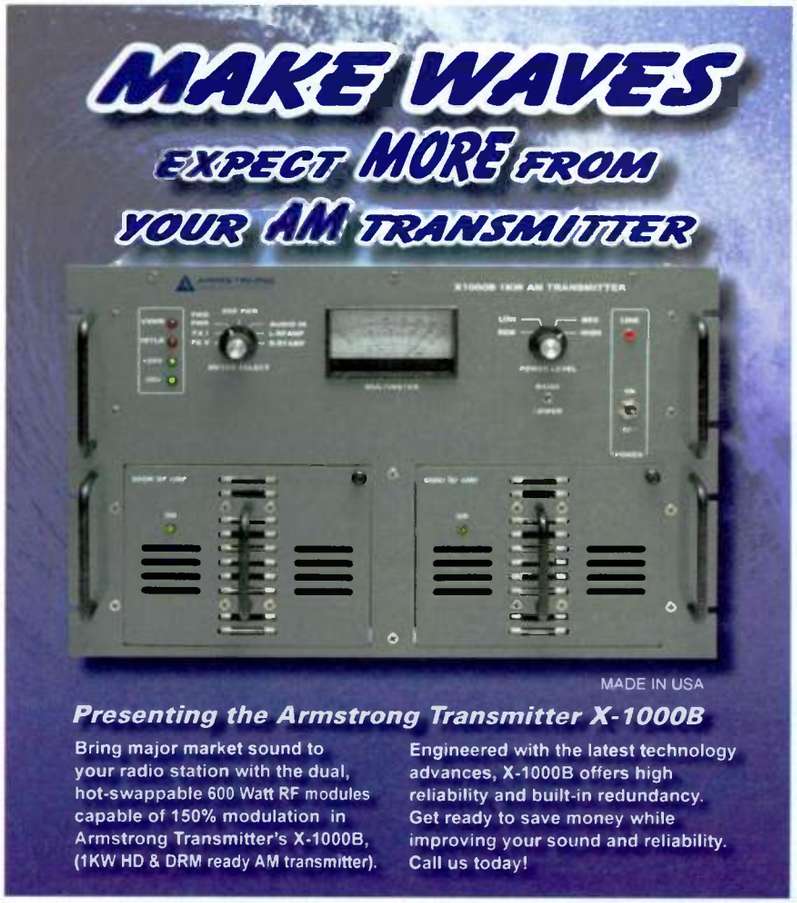
Does anyone see a problem here?

To repeat what I wrote at the start: Unless we give Joe Consumer a reason to go out and purchase an HD Radio for his car ... until he can obtain it easily and at a reasonable cost, a device that works ... HD Radio could go the way of FM quad and AM stereo.

My HD Radio gear at WOR is going on five years old. Seeing as this is all computer equipment, it won't be long until I need to replace the HD Radio gear. Thus far, there has been no return on investment, meaning that if an exciter cooks tomorrow, it simply may not be replaced.

Yes, I understand that moving a new technology out takes awhile. But then, someone please explain the fast sales rate of the iPad to me. That rate proves the iPad either has fantastic marketing to make people believe they *must* have one, or that there is a niche for this device and it sells itself.

Now is the time to ramp up the marketing and get these radios out there. Or I'm afraid it will be time to simply move on. That would be sad for the industry.



FORD DOING SEVERAL THINGS AT ONCE, LIKE FACTORY HD RADIO INTRODUCTION

Ford has been an active and early supporter of HD Radio, first offering HD Radio as a dealer-installed option on some new Ford, Lincoln and Mercury vehicles in calendar 2008. However, it has taken the company longer than it expected to offer a factory-installed HD Radio receiver due to the challenges of introducing a new feature in the middle of a production cycle.

In January 2008, Ford said that factory-installed HD Radio receivers would be available as an option in some 2009 calendar year models. Ford Technology Communications Manager Alan Hall tells Radio World that this timetable slipped into calendar 2010. He said factory-installed HD Radio receivers launched on the 2010 Ford Flex crossover beginning in January and will be migrated across other products throughout the year.

"We rolled it into the production cycle for the middle of the 2010 model year. The 2010 Ford Flex launched with the navigation system that includes HD Radio as an option."

Hall said Ford is trying to integrate HD Radio receivers as quickly as possible, but that's also happening in the middle of a production cycle, which is challenging. Autos are built at various assembly plants on different timelines. For example, the 2011 F-150 doesn't start production until fall, while the 2011 Mustang is being built and on sale.

Usually a significant new feature like HD Radio is introduced at the beginning of a model year "because during production, plants can't suddenly introduce something new," said Hall, who said the company has a quality assurance process and other ways to ensure new features are tested and ready to be introduced into the manufacturing process.

Ford made the decision to integrate HD Radio receivers into its voice-activated navigation system and is in the middle of that migration. "The updated navigation system may look the same, but we've added HD Radio," he said.

The Ford optional voice-activated navigation system is integrated with the Sync communications system.

By the end of calendar 2010, Hall said, an HD Radio receiver would be available in the majority of Ford products as a factory-installed option as part of its voice-activated navigation system. Ford also is launching what it says is the industry-first application of HD Radio with iTunes song tagging ability as part of the Sony Audio edition of the new MyFord Touch interface, first available on the 2011 Ford Edge (and 2011 Lincoln MKX with the THX-certified audio system).

Asked why a shopper could have the experience like the one described in Tom Ray's article, Hall said the first introductions of factory-installed HD Radio receivers from January through about April were "at the early stages" of the product showing up on lots. "There was probably a little bit of a knowledge gap there before we trained all of the dealers. It sounds like this an unfortunate instance where this dealer didn't have the information this customer wanted."

In the past six months the company has done "a tremendous job" of providing dealers with information and materials on HD Radio and hands-on training so they can demo the feature to customers.

"We are putting an effort into training dealers in HD because we think it's a strong selling point," said Hall, noting that customers get excited when they learn they can control their iPod by voice using Sync. Ford thinks HD Radio can generate that same excitement.

— *Leslie Stimson*

World Radio History

SMART : CHOICES:

JetStream MINI IP Audio Networking System

TV TECHNOLOGY STAR 2009

COOL STUFF AWARD Radio World 2009

Logitek Jetstream IP audio networking is smart and our lineup of surfaces gives you more choices. JetStream MINI covers all your console and routing options whether it's for a large standalone console, a smaller desktop control surface or a space-saving virtual controller. You decide what's best for your operation. With JetStream IP audio networking, it's all about smart choices.

Next generation 'smart' IP audio. JetStream supports the latest IP and Ethernet protocols for affordable, easy and ultra-fast audio networking.

More I/O choices for all sources and destinations. Just one JetStream MINI handles 64 digital or analog inputs/outputs of your choice and up to four Logitek control surfaces or vScreen virtual controllers of your choice. **Choose what you need.** Everything you need is in one user-configurable, 64-channel node. Your JetStream can have mic inputs, line-level and digital I/O, built-in EQ, dynamics and mic processing, profanity delay, GPI/O, Internet codecs, WAN support, automation interface, battery power and a whole lot more.

No computer science degree needed. JetStream IP audio networking is super easy to set up with built-in memory and automatic configuration. Just plug in and let JetStream do the rest.

Affordable and flexible. Regardless of studio size, Logitek's smart architecture allows you to get more done for less. Complete systems start at under $6000.

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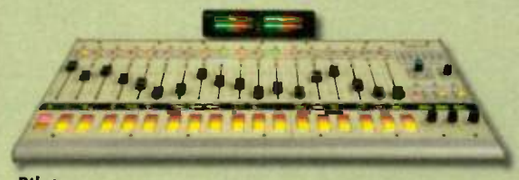

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World Radio History

Develop a Plan for Improved Grounding

Adding Additional Ground Rods Takes Time But You'll Be Impressed With the Payoff

WORKBENCH
by John Bisset
Read more Workbench articles online at radioworld.com

The end of summer is a great time to wrap up outdoor projects.

Over the last few months I've gotten more than a few inquiries about improving station ground systems. John Huntley, engineering manager for the Cumulus stations in Rockford, Ill., took advantage of the warm weather to update his; he snapped pictures and shares them here.

Ground rods — or, more properly, "grounding terminals" — provide an electrical earthing (connection to earth) terminal for towers, building electrical feeds and studio ground references. There is a minimum standard for a building electrical grounding point, which can be found in the National Electric Code. Supplemental electrodes are allowed and nearly always helpful.

Often, effectiveness is stated simply by the resistance of the connection to ground; the closer the resistance to zero ohms, the better.

Grounding rods are the most common terminal and come in various sizes and types. Common lengths include 8- and 10-foot; common diameters are 1/2-, 5/8- and 3/4-inch.

Rods are available in brass (costly), stainless steel (also expensive), copper-clad steel and tinned steel. You can find the latter two at many hardware stores. Copper-clad steel is most common, seen in Fig. 1; the steel is for strength, the copper for corrosion prevention.

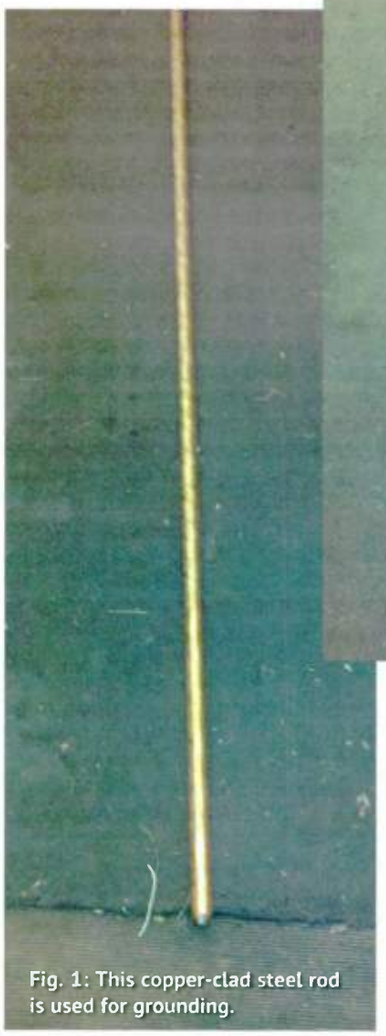

Fig. 1: This copper-clad steel rod is used for grounding.

A number of companies make these rods. Two are Erico and Harger. Many broadcast equipment vendors sell Harger products. John buys his rods — usually copper-clad 5/8-inch by 8 feet — from Grainger or local hardware stores.

GRAB YOUR DRIVER

Longer rods screw together or use compression fittings. Where John works in the Midwest, he was able to get down an impressive 24 feet, in order to hit the water table.

Driving the rods by hand will give you quite a workout. If your site is new construction and a backhoe is available, set the rod and let the backhoe cowboy gently drive it with the power equipment. Otherwise, use a fence post driver, as seen in Fig. 2. These are readily available at local and big-box hardware

(continued on page 14)

Fig. 2: Insert the rods with a fence post driver, like this one.

Fig. 3: With a hand sledge, drive the last foot or two into the earth.

Model 730
Inovonics' Flagship RDS/RBDS Encoder
Supports RT+ Song Tagging

Featuring a front-panel LCD screen and jog wheel for instant on-site setup, the 730 may also be programmed easily through any of its data ports using the included Windows® software. USB, TCP(x2), UDP and serial ports can accept both ASCII and UECP command sets.

The 730 connects direcly to, or can be networked with virtually any playout sytem and offers full support for RT+ 'tagging,' TMC traffic updates and other advanced applications. An Internet connection will assure accurate Clock Time and Date (CT) timekeeping.

Internal data diagnostics and transmission safeguards guarantee foolproof installation and operation, and field-upgradable firmware ensures compatibility with any forthcoming RDS/RBDS applications.

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World Radio History

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World Radio History

GROUNDING

(continued from page 12)

stores. They are heavy enough to drive the rod quickly. The fence post driver has an open end; the opposite end is capped. It is slipped over the ground rod and the two handles are grasped with a downward motion. The weight of the driver, combined with the force exerted, drives the rod into the ground.

When the post driver is against the ground, John changes over to a hand sledge (Fig. 3). Be cautious here because of the risk of "mushrooming." Although he has never damaged the end of a rod using a post driver, he has mushroomed many using a hand sledge. Buy a drive cap that slips over the end of the rod to prevent damage (Fig. 4). Buy several and use them. When you're done setting the rod, your drive cap will be mushroomed but the end of the rod will not.

You can also find driver bits that will fit larger rotary hammer tools. Use 'em if you got 'em.

If you've forgotten drive caps, make sure that you have a good rough file to abrade the mushrooming of the end of the rod. If you are using a ring clamp to connect a wire to the ground rod, you will need to file the rod end close to the original diameter. The same is true if you are cad welding to the end of the rod, which we will describe shortly.

John sets the rods 8 to 10 feet from the base of the tower. Three rods in a triangle is a start. We are talking about providing a path for lightning current into the ground. A rule of thumb is that they should be no closer than twice their length. One reason for the triangular pattern is to keep the tower base pier or slab from being the only path to ground for a lightning strike.

Also install grounding leads from your guy wires at the anchor points. This added ground will divert any discharge to the ground rod rather than through the anchor pier itself.

John selects a flat copper strap to connect to the ground rod; he recommends 1-1/2 inches width at minimum. A strap has a large ratio of surface area to volume; the greater the surface area, the better. If not a strap, select #4 or #6 bare copper stranded (seven-strand) wire (Fig. 6).

John specifies copper for a simple reason: Aluminum quickly develops a copper oxide outer layer, and the effective resistance rapidly increases. Save yourself the headache and use copper for grounding leads.

As for making the connection, never use soft (lead) solder. Not only will it rot within 15 years, it may melt away even sooner (tomorrow?) in a lightning strike. Once the connection has melted, it may not be nearly as effective as it was. The next strike will go through your equipment rather than the now-damaged soft solder ground connection. Acid core will fail even sooner! Plus it will begin to eat away the copper.

Fig.4: A drive cap prevents the end of the ground rod from mushrooming.

MAKE THE CONNECTION

Before you start silver soldering or cad welding, you must have a fire extinguisher or a full bucket of water on hand. This is particularly important when working outside in summer or fall. Dry grass burns quickly. If you can't stomp it out immediately, use the extinguisher.

Remember to clear a space around the area before you start work.

Two points to remember when soldering to copper: First, copper is a great conductor and carries heat very well. Second, it will remain *hot* longer than you think.

An alternative to silver soldering is cad welding. This exothermic welding provides a controlled burn that generates a white-hot heat to weld the metal pieces together. A cad weld ready to fire is seen in Fig. 7.

Keep in mind three things when firing a cad weld: First, it will produce sparks and a plume of smoke, so step away. Second, don't look at the charge; it will be very bright. Third, it will remain *hot* much longer than you think.

John has, at times, silver soldered a copper strap directly to the driven rod. It will take time. The rod must be hot enough for the silver solder to wick to it.

You do not want to solder in wind. The wind will pull just enough heat from the rod or strap to make a good connection difficult.

John recommends using a turbo-torch with MAPP gas, which burns hotter. The silver solder itself is $70 for a one-pound tube of sticks. Expensive, but not a point to scrimp.

Other tools include a set of welding leather gloves and multiple needle-nose vise grips and/or C-clamps. Tight connections require less silver solder.

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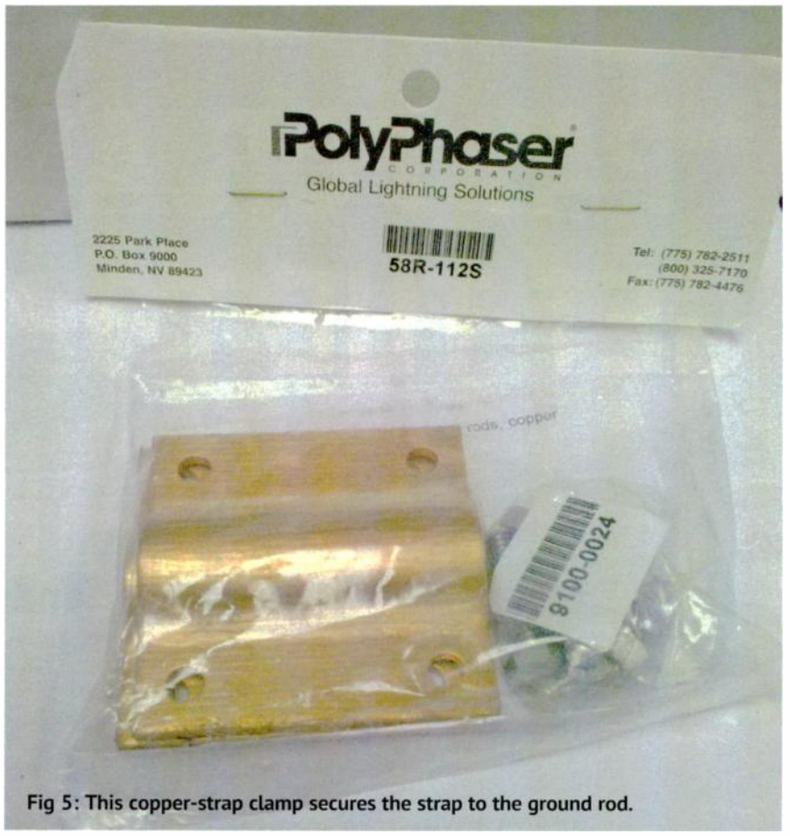
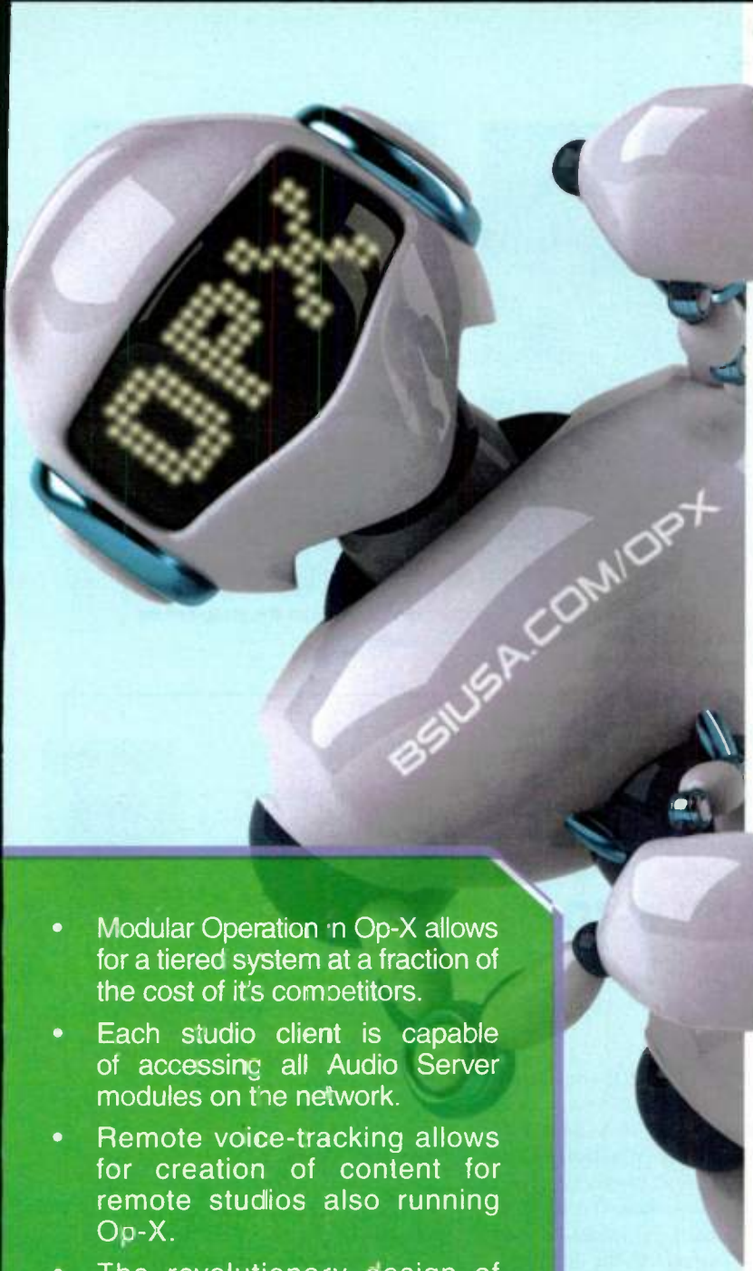
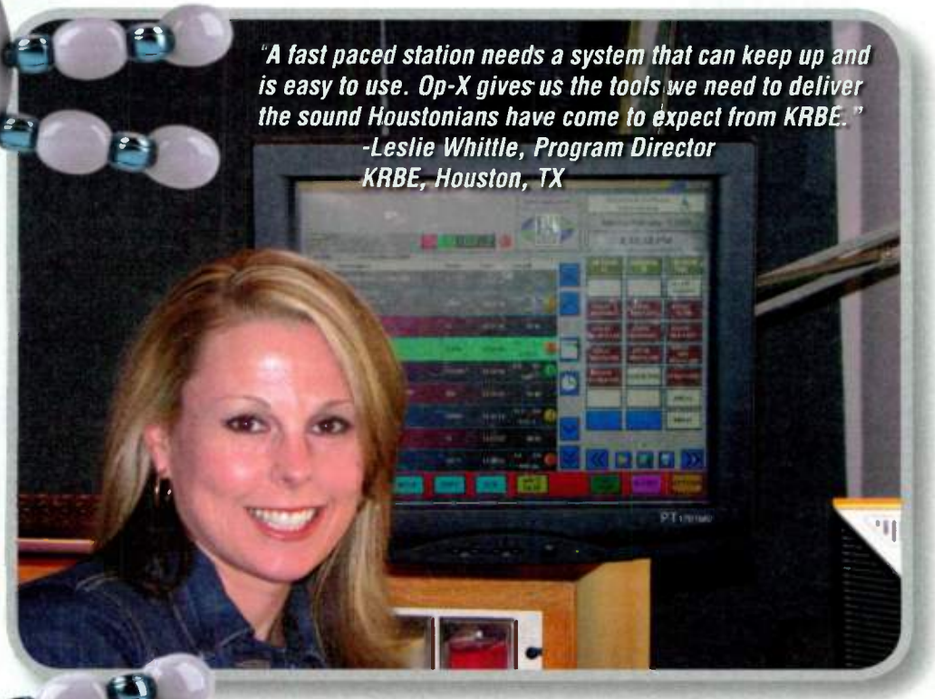


Fig 5: This copper-strap clamp secures the strap to the ground rod.

Fig. 6: Seven-strand copper wire can be used as a pigtail.

World Radio History





"A fast paced station needs a system that can keep up and is easy to use. Op-X gives us the tools we need to deliver the sound Houstonians have come to expect from KRBE."
-Leslie Whittle, Program Director
KRBE, Houston, TX

- Modular Operation in Op-X allows for a tiered system at a fraction of the cost of it's competitors.
- Each studio client is capable of accessing all Audio Server modules on the network.
- Remote voice-tracking allows for creation of content for remote studios also running Op-X.
- The revolutionary design of Op-X's clock builder turns the previous task of scheduling satellite programming into a few simple clicks.
- Share serial devices from any machine using the Op-X Serial Server.
- Importing logs now gets its own module that takes confusion out of the process.
- Engineers will enjoy Op-X because it's easy to install, maintain, and has automatic backup features.

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Not since Axia audio-over-IP *was introduced to the broadcast industry have we at BGS been so excited! It is with great enthusiasm we'd like to invite you to take a look at the new Op-X Radio Automation delivery system for any single or multi-station cluster. Op-X's versatility allows it to operate seamlessly with either Axia IP-Audio networks or legacy audio consoles.*

Broadcasters General Store
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www.bgs.cc

World Radio History

GROUNDING

(continued from page 14)

A clean surface is important. John uses a battery-powered drill and a stainless steel wire wheel (Fig. 8) to clean the area of the strap or straps.

(Although a *stainless* steel wire wheel is harder to find, they are available at Grainger. When you use a *regular* steel wire wheel to clean the copper, tiny fragments of steel are left embedded in the soft copper strap; these make it harder for the silver solder to bond to the copper. Also the steel may rust later, making the connection less effective.)

For further reference, John suggests the websites of Erico/Caddy (*www.erico.com*), Harger Lightning and Grounding (*www.harger.com*) and AM Ground Systems (*www.amgroundsystems.com*).

Adding additional ground rods takes time, but you'll be impressed with the payoff.

John Huntley can be reached at *jchuntley@earthlink.net*.

John Bisset marked his 40th year in radio in broadcasting recently. Reach him at johnpbisset@gmail.com. *Faxed submissions can be sent to (603) 472-4944.*

Fig. 7: This cad weld is ready to fire.

Fig. 8: Use a stainless steel wire wheel to clean the strap before soldering.

What is the only thing smaller than the 14 Mayah C11 Audio Codecs?

C11 Audio Codec

The answer is simple: The price. However, it can perform like a giant. Although four times smaller than the competition, each of the 14 different C11 audio codecs offers many more features.

The ½ 19" 1 RU compact C11 codec units are not only easy to operate, they offer compatibility following the EBU/NACIP standard via IP by utilizing the MAYAH FlashCast technology for ISDN and IP. The unit can automatically recognize any remote location giving your radio station the competitive edge. There is no need for a fan and with a consumption rate of only 8W, it is ideally suited for rack installation. Moreover, there is a unit which contains a redundant power supply unit with two Hot Swap PSUs in 19" supporting up to 8 C11 devices. Technical adaptability is a key highlight: whether a G.711/22, Layer 2/3, Eapt-X or an AAC HE and ELD, even linear and AES/EBU transparent, all these formats are available. Besides Ethernet, there is 4 BRI ISDN, ASI, 2nd Ethernet, UMTS/3G and POTS/PSTN, depending on the model. All advanced versions offer storage capability on an SD card or USB stick, e.g. for logging, warning signals or regionalization.

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MAYAH COMMUNICATIONS

STU BUCK: TRENDS IN RDS

"Supply Side" is a series of Q&As with industry manufacturers and suppliers about their businesses and trends that affect equipment users.

SUPPLYSIDE

This is with Stu Buck, president of broadcast software company Arctic Palm Technology.

***RW:** What trends in RDS consumption are you seeing?*

Buck: Over the last 18 to 24 months, we have seen two significant trends in RDS. The first is the number of devices that now show the RDS text and the second is the increased usage of content external to the automation system.

When we think of RDS, we think of the artist and song title showing on a car radio. While this is the most common practice, RDS FM receivers are now showing up on everything from MP3 players like the RT+ enabled iPod and Zune to a wide variety of cell phones. There has also been an increased demand to put this same Radio Text on Web pages and streaming players. We are now getting as many requests for streaming and commercial substitution applications as we are for RDS encoders.

Today when we talk about our RDS application, we are really talking about delivering text to a wide variety of devices and applications.

Now that RDS text is available on so many devices, there is more interest in the content; network satellite programming is high on the list. Several networks are now including the artist and title information along with the audio feed. In most cases, the metadata is delivered on the satellite receiver's serial port while others provide a Web link or a playlist with the "now playing" information.

In addition to music, we are seeing other content used in non-music segments. Weather, traffic and sports are common, but more and more we are asked about the potential for revenue through sponsor messages.

As expected, there are a number of opinions on if, and how, sponsorship messages should be used. Some stations use our "sponsored by" option as a value-added feature showing all advertisers as their commercials are played. Others will sell "triggered" messages that are used to send the message based on an event in the automation system or at a specified time. Others will simply schedule sponsor messages to rotate into non-music periods.

Our Center Stage Live started life as a copy scheduling package and is a natural for this kind of processing. The ability to switch between satellite and local programming, and capture content from a variety of sources along with our advanced scheduling processes have contributed to our success. ...

Our relationships with great companies — like Inovonics, who will soon be including the Center Stage Live Trial CD along with their encoders' OMT's iMediaTouch developers' streaming companies like Stream The World; and more recently Audemat and Axel Technologies — allow us to create products for today and the future. What an exciting time to be in radio.

World Radio History

MARKETPLACE

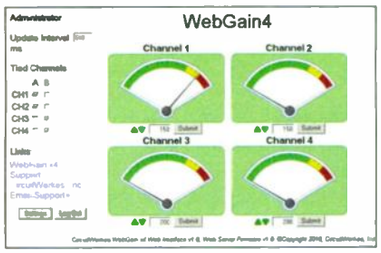
AAC OPTION: Tieline Technology recently added AAC-LC, HE-AAC v1 and HE-AAC v2 codecs as optional for the Bridge-IT IP codec. International Marketing Manager Darren Levy

said, "AAC's high quality, high error resilience and comparatively low latency over IP has become so popular amongst broadcasters that it is now one of the optional algorithms recommended by the UBU for implementation into N/ACIP-compatible IP codecs."

Ittiam Systems of India provided the algorithms.

Info: www.tieline.com.

WEBGAIN: CircuitWerkes debuted WebGain4, a four-channel (four mono or two stereo) Web-enabled audio switcher with integrated mixed outputs.



Featuring balanced in/out audio connections, the WebGain4 contains a Web server allowing remote control of any audio channel. The mixed outputs let you use the device as a remote two-input stereo mixer or a four-channel mono mixer. The hardware occupies a half-rack width; shown is a screen shot of the user interface.

Info: www.circuitwerkes.com.

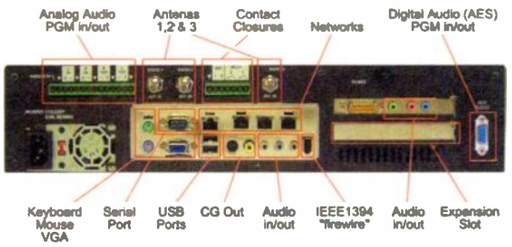
WEGENER VERIFIES: Wegener addresses spot ad verification with the iPump 6420, a satellite receiver and file-based audio server. Local or

regional ads may be placed on it for playback alongside live broadcasts by a network time schedule or trigger. Groups of ads may be bundled for insertion as a single avail slot.

The iPump 6420 logs every ad insertion that occurs over the live format; logs may be returned over the Internet for reconciliation and billing purposes. Logs specify start/end time of each file to verify correct length of the ad. The Off-Air Recording feature consists of two software-tunable AM/FM receivers with circuitry to allow off-air recording of current audio and comparison to that of the satellite receiver; this provides verification that the aired ad was what had been scheduled. The stored MP3 audio can be retrieved via Internet.

Info: www.wegener.com.

DAS CAP: Digital Alert Systems said it will provide a free firmware upgrade



to support Common Alerting Protocol compliance in its DASDEC units (rear panel shown). "This upgrade, which will now be included as a standard part of each new DASDEC system, is available at no charge to existing customers, allowing them to fulfill the anticipated EAS CAP requirements easily — all in a single box, and without the need to purchase any additional equipment," the company stated.

The update is via downloadable firmware and will be available to DASDEC-I and DASDEC-II users as soon as final FEMA/FCC CAP requirements are announced.

Info: www.digitalalertsystems.com.

World Radio History

Wireless Networking: Danger Ahead

Nine Simple Tips to Protect Your Station and Yourself

BY BRIAN CUNNINGHAM

The cost in time and materials in setting up a wired network, especially in large or multiple-station complexes, undoubtedly will exceed the cost of installing a wireless infrastructure.

RADIO IT MANAGEMENT

But there is danger ahead in wireless networking. If you do not have it locked down from outside intrusion, every computer on the wireless network is vulnerable to attack.

Anytime you connect to an unsecured wireless network, you have no way of knowing who else is logged on. Other users may be able to browse your shared folders; this would equate to leaving your filing cabinets wide open — under a sign saying "Take whatever you want."

Cyberthieves love wide-open, unsecured wireless networks. Any information stored on computers attached to the network, as well as any information transmitted, is there for the taking.

Once a cyberthief has detected your wide-open network, he or she could:

- Use your Internet connection for free, downloading who-knows-what and slowing the network to a crawl.
- Download from pornographic websites, potentially including child porn, which conceivably could get you arrested if traced back to your network and found stored on your system in an obscure file created by the hacker.
- Set your network up to spam to hundreds of thousands of people — spam that appears to come from you;
- Download or distribute music illegally.
- Take complete control of your network, locking out you and other users. (Consumer wireless routers have a button that resets everything to the default settings of the installed firmware; but until the lockout is detected and rectified, the hacker has control over your network and access to private or financial information stored on your system.)
- Install a backdoor into your company's file server(s) and create a virtual private network that would allow access to company financials and personal info about all employees. (While many companies are using separate third-party financial, payroll and HR software that is encrypted or protected and runs outside the local LAN, some broadcast facilities cannot afford the cost of off-site services; they house the data on their local servers. While encryption methods seem secure, cyber thieves have been able to break encryption codes to obtain the valuable information they are after.)
- Use the information collected about you or your business to commit identity theft, which could cost you or your station thousands of dollars in lost credit and time. Even worse, if clients' confidential information should get out, they could sue you.

One need not be a computer genius to gain unauthorized access to wireless networks. All an intruder needs is a laptop and software that can be downloaded from the Internet for free. Any computer with a wireless card within the vicinity of the wireless transmitter can latch on to a network.

People who jump in their cars with their wireless laptops and drive around looking for networks are called "wardrivers." Not long ago, a story made the news in which wardrivers hung around outside malls, obtaining credit card and purchase information from transactions made at one of the nation's largest electronics retailers. This could have been avoided if the store had secured the wireless network.

An intruder might not even have to drive around looking for an unprotected network. He or she might simply latch onto a neighbor's wireless connection.

THE TECHNOLOGY

Many engineers might disdain a wireless network for these reasons. But a network has advantages if installed and configured properly. People need to move around in a broadcast facility; often it is simpler to pick up a wireless computer and move it. Simple and effective, wireless is the way to go for many users.

But as the saying goes, with privilege comes responsibility. Protecting your company's assets must be the top priority; and you must implement a schedule of regular maintenance and thorough checking for any changes in system parameters.

There are two basic types of wireless Internet connections. The first is a Wi-Fi connection, essentially using a radio transmitter connected to the Internet via a cable or DSL modem which broadcasts and receives information from the World Wide Web.

The second is a cell phone network, which enables you to browse the Web and send that information to your smartphone and other PDA device such as an iPhone or BlackBerry.

Today let's talk about how you can protect your home or office Wi-Fi network. Security for cell phone networks is a different ballgame; we will discuss that in the future.

ENGINEER, PROTECT THYSELF

Here are nine steps to protect your wireless network. No system is foolproof; but these tips should deter hackers, who generally prefer easier targets.

1 *Immediately change the default password in your wireless device.*

Photo by Jem Stone. Used under a Creative Commons license.

If you choose to use the default administrator password, any wireless network sniffer program can determine the manufacturer of your device. All the cyberthief must do is go to the manufacturer's website and download the user manual. It will give them your default information, including the administrative password and default IP address. Then the intruder can change the device settings and lock you out of access to the admin interface.

2 *Change the SSID.* The service set identifier is simply the name of the wireless network. This name must be known to connect to the network. Change the SSID to something other than the obvious. Changing your network's SSID to "WXYZ Internet" is too easy. Use a combination of letters, numbers and special characters to name your network. The harder you make it for an intruder to figure out your network's name, the quicker he will move on to easier pickings.

3 *Change the default subnet.* If you fail to change the manufacturer's subnet default setting (found in the user's manual), the intruder can assign himself a static IP address and TCP/IP config information based on the default subnet.

Most use the common default subnet 192.168.0.0 with a subnet mask of 255.255.255.0. Change this to a nonroutable IP address range reserved for use in private networks. These ranges are as follows: 10.0.0.0–10.255.255.255; 172.16.0.0–172.31.255.255; and 192.168.0.0–192.168.255.255

4 *Disable the SSID.* The default setting in most devices enables SSID. Disable it. Remember, if the hacker has access to the admin password and IP address, he can obtain the default SSID from the user manual.

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World Radio History

5 *Enable encryption.* Wireless devices support encryption via the Wired Equivalent Privacy (WEP) or Wi-Fi Protected Access (WPA/WPA2) protocols. Each uses a pre-shared key, essentially a password, to gate access to the system. They also support various bit lengths of encryption; a simple rule of thumb is the longer the bit length the harder the encryption key will be to crack.

An encryption key is set up on the wireless gateway as well as the computer that has a wireless network card. Information transferred between the devices then will be encrypted; if the key doesn't match, the wireless gateway will not connect.

Because WPA and WPA2 are newer protocols, they have incorporated developments that make them harder to hack; however, some older pieces of equipment may not support the newer protocols and you may have to opt to the less-strong encryption method.

6 *Disable DHCP.* Almost all wireless gateway devices have Dynamic Host Configuration Protocol enabled as the default setting. DHCP automatically assigns an IP address and TCP/IP config information to any device requesting connection to the wireless gateway.

If this function is disabled, the hacker does not know which IP address and TCP/IP properties to assign his or her computer, making it impossible to connect to your wireless network.

(This won't be practical for wireless LANs that need to support more than a few wireless devices. You would have to assign each computer connected to the LAN its own IP address. Way too much work for larger facilities with a great number of computers. Some stations employ local Wi-Fi hotspots connected to a secondary ISP, separate from their corporate LAN/WAN, to accommodate local clients, customers and visitors who need Internet service on their own wireless device while in the station.)

7 *Use MAC address filtering.* Each network adaptor has a unique hardware address, also called a MAC address, for Media Access Control. Most wireless gateway devices support MAC address filtering; by entering all of the MAC addresses of authorized users, you can deny access to any computer that tries to connect without the proper or "authorized" address.

Each network adaptor (card) has an identifier that names the manufacturer of the device; the second portion of the MAC address is a unique address for that card. If the computer trying to connect to the wireless device is polled for its MAC address and doesn't match an address on the list, it is denied access.

However, this has the same downside as disabling DHCP. The MAC address filtering list will need to be updated every time a new device is added to the network.

8 *Follow common-sense computing practices.* Make sure firewalls are installed and running on all computers connected to the wireless network. Install antivirus software on all computers and keep it up to date. Password-protect network connections, and require a user login for all computers. Disable guest accounts, no matter how few rights are assigned to that account. Power down the network when not in use.

9 *Go two ways.* Depending on what you need in the facility, you might set up two networks: one that's secured and accessible only by company-approved computers, and a second that is more open — with perhaps a non-broadcast SSID, and WEP/WPA/WPA2 password-protected — to give Internet access for such uses as visitors and staff smartphones.

All wireless networks should be secured. For peace of mind and the safety of your data, take these steps to keep the bad guys out.

Brian Cunningham, CBRE, is chief engineer for Crawford Broadcasting's western New York region, based in Buffalo. He wrote earlier this year about protecting a computer network from viruses.

Editorial Director T. Carter Ross contributed to this article.

For past articles, click on the Radio IT Management tab under "Business" at radioworld.com.

World Radio History

Smartphones, Problem Solvers and Solutions

Wherein the Warrior Is Introduced to the Secrets of Intelligent Phones

BY PAUL KAMINSKI

Here are some tools that might make our collective job as road warriors simpler and more productive — helping us add value to our news product, whether

RADIO ROAD WARRIOR

Columns are archived at radioworld.com

that be in the form of better sound quality on quick voice reports from the field on a smartphone; quicker turnarounds on reports using editing software for those smartphones; better sound thanks to devices that improve feeds from improperly installed (but-that's-all-the-sound-you'll-get) mult boxes; and more options for Bluetooth-equipped cell phones.

I found many of these by prowling the spring NAB Show. Let me know your own ideas.

SEEKING THE DROIDS

Comrex's free Android codec app was one of Radio World's "Cool Stuff" Award winners. Simply, it allows a phone that runs Android software from Google to connect with a Comrex Access studio-based codec and deliver high-grade voice-quality audio (to 7.5 kHz) in real time.

The software uses the data plan on the Android phone (whether 3G or even 4G, where available) or a public or private wireless network (802.11 b/g/n) to transmit bidirectional audio. The days of cell phone garble passing for a remote or ROSer (Reporter on Scene) report will, once more 3G coverage rolls out, begin to be numbered.

An iPhone with a VeriCorder Mini Mic attached.

Tieline Report-IT

Sescom IL-19

JK Audio BlueDriver F3 and M3

There are similar options for the iPhone and iPad. Tieline showed the Report-IT Live app for the iPhone; it emulates an IP-based Tieline codec from the field. One acquires Internet access through the 3G network or an available wireless network. Users can broadcast live, and also record and forward submissions via FTP.

I asked a company spokesman if there were any plans to roll out such an app for Android-based phones. He said apps for iPhone are vetted by Apple before they go to the Apple store and are approved for use on an iPhone/iPad. "Because of that and the stability of the iPhone platform, we decided to stay with the iPhone for the time being." A lite version is free while the main app is $30 and an unlimited usage version is $280.

VeriCorder's VC Audio Pro software (starting at $180 per subscription) and hardware also works on iPhones, allowing reporters to record sound and edit it (much like what is done now via laptop) and transmit it back to the studio via FTP on either the 3G network or an available public or private Wi-Fi network.

The company also makes a video editing package called 1st Video (a service that starts around $300), ideal for reporters who must also feed video content to websites. VeriCorder markets a microphone, the VeriCorder Mini Mic, for about $20 that plugs into the headset jack of a smartphone.

Those who carry the BlackBerry may be asking the question, "What about us?"

VeriCorder Vice President of Strategic Alliances Kieran Foster told me that the BlackBerry is a good phone for what it does, but the VeriCorder applications require touchscreen smartphones with a lot of processing power. (Disclosure: Kieran and I served together in the same Army unit during Operations Desert Shield and Desert Storm.)

IT'S EASY BEING BLUE

So, what do we do with our BlackBerry or other Bluetooth-equipped non-smartphone if we are in a live news situation or a revenue-producing remote broadcast situation, and that phone is the only way to get audio back to the studio?

Joe Klinger and JK Audio come to the rescue with a pair of Bluetooth dongles called the BlueDriver ($249 each), allowing the connection of a microphone-level signal output to the phone (F3) or the connection of the phone to a microphone-level XLR input on a mixer, etc. (M3) In a fluid situation it is much better than holding a cell phone up to a speaker to get sound.

The M3 can be used by a reporter in the field to get audio from a Bluetooth phone into a mixer or recorder. The reporter would monitor the call by listening through the headphone output of the device to which the M3 was connected.

This means that reporters can work the phones in the field and record that sound for future reports — more efficient than coming back to the studio after each interview or news opportunity. The F3 allows a reporter to substitute a broadcast mic for the onboard mic on the phone. A 3.5 mm output has both sides of the conversation available for recording. One would monitor it through the recording device headphone output. And the charger for the BlackBerry (usually a mini USB) will also top up the battery-powered BlueDriver units; JK Audio provides one with the BlueDriver. The onboard lithium-ion battery is rated for 10 hours of use before a recharge.

NOT HUMMING ALONG

Sound technicians and smart reporters have always carried devices that would get rid of hum from audio feeds that would be distracting if listened to for a prolonged time.

(continued on page 22)

World Radio History

Can't get in through the front door?

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World Radio History

Product Parade Benefits Broadcasters

A Tasty Menu of New and Recent Studio Gear to Make Your Job Easier

BY ALAN R. PETERSON

With summer coming toward its end, stations everywhere are booking those last few beach parties, night club remotes and summer concerts. Before long, it will be time to sweep the sand out of the station van and head back into the studio.

It is also going to be a good time to freshen up around the facility and beef up some studio gear.

You already have put in that mega-digital infrastructure, so the hard work is done. Now, let's think about products that will hike productivity, improve audio quality and bring the rest of the facility up to spec. So much good stuff is out there right now and so much of it is really quite affordable. And lots of new products — especially microphones — just look flat-out cool!

Much of this list was gathered along the way in recent travels. The Audio Engineering Society (AES) convention last October in New York also was a goldmine for new equipment. Many products included here are crossovers from other industries — music production, television, film and multimedia — but are plenty relevant to radio production and on-air performance. Digital editors, signal processing, field recorders and microphones are standouts for the radio pro.

RECORDING AND EDITING

That copy of Steinberg "Avalon" for the Atari computer never really cut it as a proper DAW, so let's lose that first.

In terms of standalone editors, three major commercial players in the production room have been Pro Tools, Adobe Audition (and its earlier incarnation Cool Edit) and SAW Studio. This does not include stock editors bundled with whatever automation/audio management systems are in use at the station level. There are greater choices to be had for handling radio production, many of which include some of the hottest effects and sonic tricks available today.

Let me atone for picking on Steinberg, by starting with the high-powered Nuendo 4 environment, suitable for studio and live recording. Nuendo includes 38 VST3 audio plug-ins and the high-speed MediaBay, a fast clip browser capable of auditioning audio, video and MIDI files. Nuendo syncs to hardware controllers and is cross-platform on both Mac OS X V10.4 and Windows XP/Vista. (*Since Al wrote, Nuendo 5 has begun shipping. One highlight is Windows 7-compatibility — Ed.*)

More affordable and still feature-packed, Cubase 5 from Steinberg allows loop mash-ups, on-th- fly pitch correction and unlimited simultaneous audio track playback. Again designed more for musicians than broadcasters, Cubase nevertheless has features that place radio production on par with contemporary music formats. Imaging and creative work is not intrusive.

Audio-Technica has the bidirectional AT4080 and the slender AT4081.

Also from Europe come Samplitude and Sequoia, both from Magix of Germany. While engineered more for MIDI music and multimedia production than strictly for radio, these software suites contain features and versatility well suited on both the station and production house levels.

Samplitude includes effects in demand like pitch correction, cleaning and restoration tools, full dynamics and EQ, and spectral cleaning — the ability to examine audio as a spectral image and selectively "lasso" coughs and dropouts for precise editing.

The Receptor 2 Pro from Muse Research is a host device that lets you mount your favorite software effects and sound generators in a standalone unit.

Sequoia uses the same Hybrid Audio Engine but adds to the feature set with up to 12 surround channels and radio content management system (CMS) integration. A project created in Sequoia is exported in the proper format and to the proper database without conversion to a Windows file format first.

WARRIOR

(continued from page 20)

Sescom transformers have been carried by many of those techs and saved many a broadcast. Enter the redesigned Sescom IL-19.

The IL-19 ($49.95) is intended to remove ground loop hum (caused when a mult box and a mixer are not connected to the same electrical power circuit), mode noise and differentially induced hum. It's now contained in a high-impact ABS thermoplastic enclosure. Sescom also makes a two-line stereo version, IL-19-2 ($89.95) and a rackmountable six-channel box, IL-19-6RM ($299.95).

Ever wish that you could chuck all the extra batteries you carry and still get the DC power you need?

For those road warriors who patrol the sunny climes, Patriot Solar Group showed off a suitcase-sized solar power box, starting at $800, that would run a small mixer and charge a smartphone or audio recorder, with the proper connections.

They also make solar chargers for BlackBerry/iPhone-style phones as well as solar backpacks and laptop bags, and solar powered flashlights.

This may have another application: if your station bills itself as a green facility, perhaps the solar power box could power enough equipment for a remote broadcast, without plugging into the client's power outlets and at the same time make a tangible positioning statement about green broadcasting. Talk about self-contained!

Patriot Solar Power Box

HOUSEKEEPING

Sometimes items get cut from columns for space. One item that did not make our microphone column in the Jan. 1 issue was Marshall Electronics' MicMate Pro.

This device allows the user to connect a condenser or other microphone and a set of headphones with a 3.5 mm plug to a USB port on a laptop or desktop. The unit provides plenty of variable gain and 48 V of phantom power for those microphones that need it. It also has a gain control for headphones. It works well with shotgun condensers and studio mics alike. I used one to produce voice tracks for "Race-Talk" from the field.

Marshall showed a line of USB interfaces for line inputs and dynamic mics at the NAB Show, along with their condenser microphones, shotgun mics and accessories.

If you have a question, comment or suggestion for a future column, e-mail *radioworld@nbmedia.com* or me at *motorsportsradio@msrpk.com*.

Paul Kaminski is the news director for the Motor Sports Radio Network and a regular contributor to CBS News, Radio.

World Radio History

Cakewalk and Roland produced Sonar 8.5 Producer.

Magix software suites have features and versatility suitable to radio uses.

Cakewalk and Roland teamed up for Sonar 8.5 Producer, which brings along multi-effect processors, a couple of virtual synthesizers and a Hollywood Edge Sound FX library. For highly detailed mixes, Sonar can handle sample rates up to 384 kHz.

Reporters for all-sports or all-news stations need portable handheld recorders, as do crazy stunt interns capturing those magic moments at station events. Sony offers up the PCM-M10 Liner PCM Recorder, a handheld binaural recorder with built-in mics, 4 GB internal flash memory and Sound Forge software for editing on a host computer. The payoff here is that the PCM-M10 is slightly smaller than an iPhone.

Got an old PDA doing nothing in the junk drawer back home? Core Sound has picked up the PDAudio recording system, which revives your old Pocket PC as a portable binaural field recorder. The product records up to 24-bit audio at up to 192 kHz sample rate, and puts a viable piece of equipment back on the streets and out of the landfill.

SIGNAL PROCESSING

Muse Research proved for a second time that you don't need a computer to use your favorite software plug-in effects. The Receptor 2 Pro — successor to the original Receptor — is a host device that lets you mount your favorite software effects and sound generators in a standalone unit. This takes the load off of a host computer, and also allows you to take your favorite production room effects with you.

Waves has been on the forefront of digital effect processing for years with its legacy Renaissance and Native Power Pack suites. The company has bundled the Broadcast and Production plug-in collection which includes multiband compression, noise reduction tools and the standard reverb and EQ tools needed for broadcast production.

Izotope captured the attention of radio production types a few years ago with its free Vinyl plug-in, which simulates old records and record players. Now Izotope has collected six of its best tools into the Alloy collection. The suite includes an EQ, exciter and a multimode transient shaper among its tools.

MICROPHONES

Checking out today's mics, you would be pleased and amused to see retro styling and ribbons making quite the comeback. Likewise, eye-catching designs and new technologies — both in standard analog form and digital USB — are making today's mics worth a look for modern studios. Clearly the ubiquitous E-V RE20 isn't the only automatic choice for radio studio microphones anymore.

In the last year, several manufacturers rolled out ribbon units exhibiting styles that echo classic RCA mics of a bygone era. Among them, the Cascade C77 and Victor ribbon mics; the Marshall MXL R77 with a respectable 18 kHz top-end response; and of course the entire AEA line, which pretty much kept the ribbon

(continued on page 26)

Digital I/O (Without the side effects)

At Lynx Studio Technology, we make it a habit to be uneffected. That is, our line our PCI and PCI Express audio cards have no Digital Signal Processing (DSP) effects added to them. No EQ, no limiting or compression, no time-scrunching, no loudness processing - nothing. So the sound you put into them is the sound you get out of them.

Why is this important to you? First, most of the audio applications that power your radio stations now have extensive DSP built into the app or available as plug-ins. These software tools give you more control, customization and recallability than comparable hardware tools. Plus they are easily updatable.

Second, how would we know what DSP would be ideal for you? AM, FM, online, digital, analog, talk programming, type of music genre? You have all those answers, we don't.

Third, why should you pay for the cost of DSP that you probably don't need and won't use? At least that's what they think at companies like Dalet, Harris Broadcast, Sirius/XM Radio, National Public Radio, HBO, CBC (Canada), TSA Telefonica (Spain) and many, many others. Lynx audio cards' sound quality, driver stability and rock-solid reliability are the crucial elements for these discriminating customers.

The AES16 and AES16e digital audio cards offer 16 channels of pristine AES/EBU digital input and output at sample rates from 44.1 to 192 kHz. Sixteen channels of reliable, clear digital audio. Optional sample rate conversion and AES50 connectivity starting at $695 US suggested retail price.

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"On the Edge" is a look at recent product introductions in a specific area of broadcast engineering. Here: ***Field Recorders.***

YELLOWTEC OFFERS IXM MICROPHONE/RECORDER

The Yellowtec iXm combines microphone and recorder in one unit. It presents itself as an integrated product balancing microphone and recorder performance at a high level.

The recording section has just two buttons and three indicators. The positions of the record and stop buttons enable thumb-only operation. Markers can be set almost noiselessly during an interview by pressing the record button again. Status information for recording and playback, remaining power and free memory are visualized by three indicators.

Yellowtec says the dual power layout is unique among field recorders: iXm sources power from a built-in rechargeable Li-Ion battery or three AA batteries. The iXm's memory and power layout overcomes the bottleneck of limited operating time.

Yellowtec offers six interchangeable microphone heads differing in manufacturer and polar pattern. Some of the optional capsules are made by German mic specialist beyerdynamic; these microphone heads have been optimized for speech intelligibility and low handling noise sensitivity. Capsules branded Yellowtec are dynamic, offering good quality and a lower price.

Omnidirectional, cardioid and supercardioid pickup patterns are available for both lines. Audio files are mono and stored on exchangeable SDHC memory cards as WAV, BWF or MP3.

The iXm comes with a headphone output for quick monitoring. Track IDs will be announced by an integrated voice messaging system. The balanced line input can be used at press conferences when the modulation is obtained from a mic splitter. The mini USB port is used for accessing audio files from a PC, to recharge the built-in Li-Ion accumulator battery and to configure the iXm.

For information, contact Yellowtec in Germany at 011-49-2173-967-315 or visit **www.yellowtec.com**.

TASCAM DELIVERS PERFORMANCE IN SMALL PACKAGES

TASCAM says its compact DR-08 portable digital recorder packs professional audio quality into a handheld dynamo that fits in your pocket.

It captures audiophile-quality 96 kHz/24-bit WAV files, or Web-friendly MP3 files, to robust microSD media. The built-in microphones have a unique mechanism to change the width and angle of the elements, allowing you to tailor the pattern for the perfect recording.

A pair of AAA batteries allows the DR-08 to record for hours to the included 2 GB card. Transfer recordings to your computer using high-speed USB 2.0. An optional windscreen is available for remote recordings.

The TASCAM DR-680 records up to six microphones, each with phantom power available for condenser mics. Each input has a selectable low-cut filter and analog limiter for optimal sound. Inputs can be monitored using a built-in mixer with level and pan controls for each input. The stereo mix-down can even be recorded along with the six mics for quick stereo playback of the event. There is a built-in speaker to check recordings without headphones. The DR-680 slings over your shoulder with the included shoulder strap (and optional case) for professional recording anywhere.

For information, contact TASCAM in California at (323) 726-0303 or visit **www.tascam.com**.

YAMAHA ADDS TWO PORTABLES

At 2 ounces, the Pocketrak C24 is the lightest and smallest pocket recorder on the market, according to Yamaha. The model features a nondirectional mic, so there's no need to point the device at the sound source (and it's suitable for picking up large ensembles like choirs and brass bands).

In MP3 mode, the C24 can record for 26 hours. With 2 GB internal memory, it holds plenty of data. The C24 features a built-in connection to a USB port for transferring recordings to a computer, eliminating the need for separate cables.

The larger Pocketrak W24 features X-Y mics that offer wide stereo coverage. Weighing 3.2 ounces, it includes 2 GB of flash memory, a peak limiter for optimal recording of loud sound sources and a high-pass filter to eliminate wind and low-end rumble.

The included wireless remote control offers convenience and the five-band EQ provides pinpoint sound-shaping possibilities. The W24 records for up to 56 hours in MP3 mode.

Both models come with onboard speakers and 24-bit/96 kHz sound quality (better than CD). They include Cubase AI5, a 48-track editing and production program for Windows and Macs that derives many features from the award-winning Cubase 5 digital audio workstation by Steinberg and lets users transfer recordings to CD or MP3 files.

For information, contact Yamaha in California at (714) 522-9011 or visit **www.yamahasynth.com/products/recorders**.

SOUND DEVICES 722 IS HIGH-END FOR HIGH-ROAD RECORDING

Sound Devices' 722 is a compact, file-based two-channel portable digital audio recorder that records and plays back audio to an internal 160 GB hard drive, CompactFlash cards or external FireWire drives.

It records and plays uncompressed PCM audio at 16 or 24 bits with sample rates between 32 kHz and 192 kHz. It also supports compressed (MP3) audio recording and lossless FLAC recording.

The 722's audio path includes Sound Devices' next-generation microphone preamplifiers. The manufacturer says they were designed for high-bandwidth and high-bit-rate digital recording, and highlights frequency response linearity, low-distortion performance and low noise.

In addition, the 722's learning curve is short . While it is a capable recorder, it excels when used in conjunction with an outboard audio mixer, such as Sound Devices' 302, according to the company.

Its two internal drives (hard drive and CompactFlash) are reliable and obtained easily. The removable, rechargeable battery is a standard Sony-compatible Li-ion camcorder cell. The 722 interconnects with Windows and Mac OS computers for convenient data transfer and backup.

The 722 is designed to withstand the physical and environmental extremes of field production. Its chassis panels are made from anodized aluminum for superior durability.

For information, contact Sound Devices in Wisconsin at (800) 505-0625 or visit **www.sounddevices.com**.

World Radio History

VERICORDER'S PALM-SIZED BROADCAST STUDIO

VeriCorder's 1st Video Net (available by subscription) is a software audio and video editing studio for the iPhone.

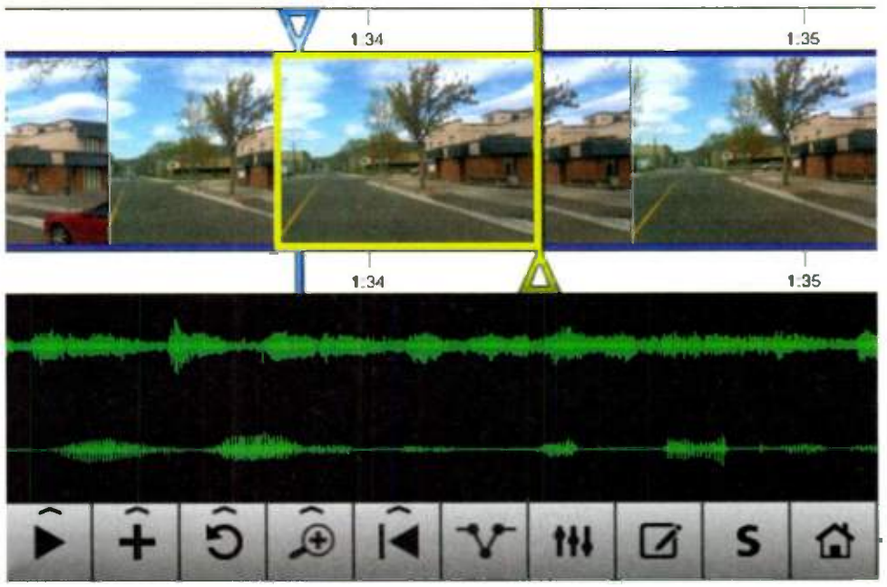
Editing features include three-track audio editing, drag-and-drop interface, volume curve, volume tools, multitrack mixing tools and automatic crossfades. Video resolution is up to 720p. Using the MIMS deployment system VeriCorder allows companies to configure remotely and integrate the company's editing apps to reporters anywhere.

For news organizations, 1st Video Net is VeriCorder's media convergence tool. It allows the journalist in the field to record, edit and send broadcast and podcast ready audio and video from an iPhone 3GS or iPhone 4.

The Net versions go beyond editing on a mobile phone; they are integrated into newsroom networks, podcasting servers, programs such as Apple's Podcast Producer, newsroom control systems such as DAVID Systems, ENPS, Burli Software and Octopus.

Vericorder's mobile software combined with back-end integration allows users to produce news stories and multimedia podcasts and distribute content automatically to websites, YouTube, RSS feeds, iTunes, Web-mounted IPTV, iTunes U other destinations.

For information, contact VeriCorder in British Columbia at (250) 448-4954 or visit **www.vericorder.com**.



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World Radio History

STUDIO GEAR

(continued from page 23)

mic legacy alive for many, lonely years.

Cloud Microphones can claim a historical link to the original RCA mic line. Designer Stephen Sank is the son of Jon Sank, the engineer who designed the RCA BK-11. Cloud ribbon mics are fabricated and hand-built in Tucson, Ariz., and carry the claim, "We make 'em like they used to."

More modern in appearance while still boasting a ribbon on the inside are the Shure KSM353 and KSM313 side-address microphones. Each uses a ribbon made from Roswellite, a proprietary material that replaces the traditional fragile aluminum foil ribbon in use for over half a century.

Audio-Technica can boast two ribbon contributions of its own: the bidirectional AT4080 and the slender AT4081. Both are driven by active electronics and use the MicroLinear ribbon imprint, offering improved durability over traditional ribbon mics.

The compact LSM (Little Square Mic) from Studio Projects is a palm-sized condenser mic for in-studio or travel use. Besides its XLR and USB outputs, the LSM is cute and hard to miss, as it comes in colors reminiscent of 1960s-era transistor radios.

AKG has added features to its classic C414 microphone. The body includes LEDs that read out the mic's redesigned pickup patterns, and a red peak hold light indicates an overload. The company's contribution to the digital age is the Perception 120 USB, a cardioid capsule mic with a 24-bit/44.1 and 48 kHz A/D converter, taking power directly from the host USB port.

From Miktek of Nashville Tenn., comes a trio of mics hand-assembled in the U.S.: the CV4 large diaphragm tube condenser, made with original Telefunken high-voltage tubes; the C7 FET condenser and the C5 small-diaphragm pencil cardioid.

STUDIO TECH

The equipment isn't the only thing that has improved in recent times. Innovations in studio products are making recordings and live broadcasts better, quieter and more dependable.

From Portugal's Jocavi Group comes the Acoustic Treatment Pack, a pick-and-choose assortment of flame-retardant acoustic treatment panels, with design and décor that breaks away from the classic wedge and egg-carton products widely available.

Acoustical Solutions of Richmond, Va., always has a variety of proven products, including Alphasorb panels, AlphaPyramid and Wedge foam panels. The company now handles Green Glue, an adhesive compound used between sheetrock walls during construction that dampens sound transmissions.

The designer of Cloud Microphones is the son of the engineer who designed the RCA BK-11.

Sound iso booths can be quickly assembled, disassembled and transported with the Klick-It system from Taytrix. Configurations are interchangeable and new booth designs can be created with the addition of a few panels and an Allen wrench.

Vocal booths from WhisperRoom Inc. make things easier on physically challenged talent with the addition of a wide-access door and wheelchair ramp. Booths include ventilation ducting, acoustic foam, fluorescent lighting and a door window.

If a little extra studio wiring is needed, pop open that plenum and string up some Belden Wire and Cable 1304A and 1305A: bonded-pair Cat-5e cable with stranded wires jacketed in heavy flexible PVC. The cable can be flexed and transported in the field with little concern for breakage, and the wire pairs follow the standard color code for Cat-5 cabling.

Enjoy the last weeks of summer, have a great fall, and get busy.

Alan Peterson, CBT CEA, is the assistant chief engineer for the Radio America Network in Washington and a 21-year contributor to RW. Reach him at apeterson@radioamerica.org.

World Radio History

Are You Speaking in a Local Voice?

"The best way to get an accurate feeling for your radio station is to lock yourself in your home for a half day — or even a full day — and do nothing but listen."

I received this piece of advice from one of my mentors.

PROMO POWER

Mark Lapidus

"Sure, you can record the station and fast-forward through music and commercials so you just hear the talent and promos; but that's not how real people listen to radio. Listeners don't have the option of fast-forwarding through things, but they can push the button and change stations easily," he continued.

"The single most important item in this exercise is to listen for localism. Is the radio station a reflection of the community in which you live and is it truly speaking to the target demo?"

Bill Sherard told me this more than 20 years ago. Recently I was stuck at home for a long day of forced listening; it hit me hard that several program directors in my town would do well to take his advice.

As you begin your own listening exercise, consider this list of things to listen for.

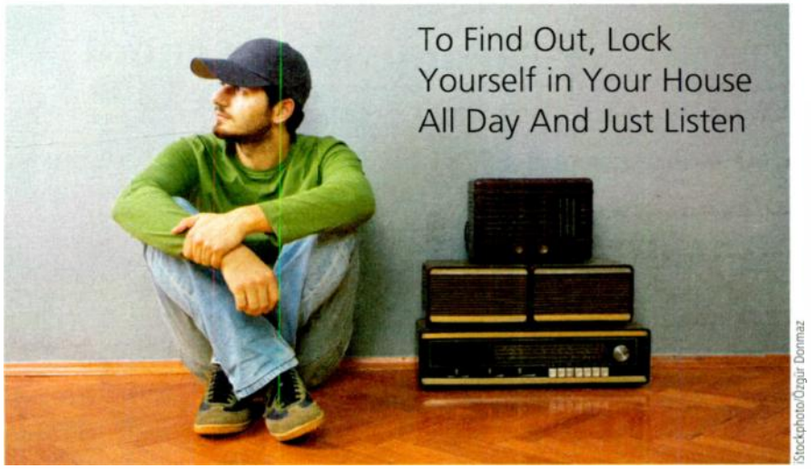
Where is your radio station? If you listen for an hour and you come to the conclusion that your radio station could be in Any City, USA, you've got a significant problem.

Even if your station is being voice-tracked from elsewhere, there is no excuse not to have local information in the form of weather, traffic, local entertainment options, news, etc. The info doesn't have to be long or detailed, but does have to be localized to your broadcast area.

Another common issue is confusing a studio location with a broadcast area. Listeners don't think your studio location is the center of the universe, but your talent might.

When offering area temperatures, spread the temps out over many towns in your contour. Don't make those burgs sound as if they're distant or disconnected from your studio.

While listeners probably won't care that it's raining where your DJs are, they will care to know where that heavy rain is coming next throughout your listening area.



iStockphoto/Ozgur Donmaz

Can everyone on your staff properly pronounce the name of your local towns in the vernacular used by the population? Recently one of my local public radio stations has been adding state names to the end of every city they mention, as if we locals have no idea where that city is located without a state designation. Just today, I heard that it's 95 degrees in "Springfield, Virginia" and 96 in "Rockville, Maryland." Springfield has over 140,000 people in it and I'm pretty sure they know that they're part of the Commonwealth.

Another issue involves simulcasts on other frequencies to extend coverage. Don't those listeners deserve to be treated as locals too? Likely they don't all live in your alternate city of license, so if that's the only city you ever refer to, you're not going to build much of a bond. You'll be known as that station that comes in from out of town and doesn't care that their town of residence exists.

Are your commercials any good? If you want listeners to hang through commercial breaks, you've got to be careful about the number of consecutive units; and be certain a large percentage of your spots entertain and inform.

If your staff is too small to perform this function, outsource the work. There have never been as many reasonably priced production houses who do excellent work (mainly 'cause they're now solo shops out of anywhere from apartments to McMansions).

Are you talking about local events? It would be nice if your station personalities appeared at a lot of places. However, if your staff is too small or voiced from out of town, you can still promote the fun stuff that's happening this weekend. Take ownership and do it with frequency, so listeners will be aware that you care.

Do you acknowledge local history? Every city has legends, myths and facts. How often is the station plugging into this gold mine of shared emotional experiences? People love to reminisce about teams that won, amazing parades, local heroes and even weird crimes.

Do you recognize locals? The smaller the town, the more effective the mention. Even in large cities, referring to people by name and home city adds juice to your brand.

No doubt you can come up with five more things to focus on during your listening experience. Write and tell me about them.

By the way, this isn't a one-time project. As hard as it may be to get out of the office, you should go through this exercise four times a year.

Remember the mantra: To be a great program director, you've got to be a great listener.

The author is president of Lapidus Media. Contact: marklapidus@verizon.net.

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World Radio History

High School FM Covers 'Relay for Life'

Station Delivers a 26-Hour Stereo Remote Via Internet Link

BY LARRY KRATKA

The author is student advisor to WTBR(FM).

There is a little 380 watt noncommercial radio station in Pittsfield, Mass., that won't take no for an answer.

FIRSTPERSON

In June, 89.7 WTBR(FM), owned by the Pittsfield school system, became the first station in western Massachusetts to not only take part in the American Cancer Society's "Relay for Life" in Berkshire County Central/South, but to move its studios to the site and broadcast the entire event in stereo. They did, in a remote that lasted 26 hours.

The Relay for Life event celebrates the lives of people who have battled cancer. It helps them remember loved ones and fight back against the disease. Teams camp and take turns walking or running around a track or path; each is asked to have a representative on the track at all times. Relays continue overnight, "because cancer never sleeps."

WTBR is my passion. The Taconic High School station allows us to teach students about the real world of radio; they can operate a station with a classic rock/new rock format and even do voice tracking.

The idea for the broadcast came from students; they asked me if they could do a remote from "Relay." Not so simple, considering that the station did not own RPU equipment and operates on a shoestring budget. To make matters more difficult, the Relay for Life is held at a local lake in an area from which even RPU units find it difficult to deliver signal.

Engineer Tom Harrison had been working on an inexpensive way to broadcast music remotes via the Internet; he and I said we would consider the challenge.

WIRED UP

Fast forward two years. On Tom's recommendation the station had purchased Barix Instreamer 100 and Exstreamer 100 boxes, allowing us to connect to the public Internet with MP3 compressed audio links at a varying bit rate that depends on the speed of the Internet link.

We conducted several "experimental" stereo remotes to test the system using DSL, cable and even WiFi. Our first broadcast was from a local volunteer fire department fundraiser.

Now everything was in place except for one important element: high-speed Internet at the site. Verizon agreed to donate and install a special business-class DSL line in a bathhouse near where our broadcast tent would be set up. Tom and several other volunteers began building the studio in a 12x12 canopy tent at 9 a.m. on the morning of Relay; by 1 p.m. they were sending a signal to the studio via the DSL line.

Student PD Billy Madewell, left, works the tent with engineer Tom Harrison.

Not yet a high school sophomore, DJ Jen Norton participated in the Relay broadcast. 'These are kids who knew only their iPods until they got into radio,' says advisor Larry Kratka. 'Now they're listening to their own station and are proud of it.'

"We set the Barix boxes initially for 160 kbps joint stereo," Tom Harrison explained, "but actually increased the bit rate to 224 kbps joint stereo due to a good connection.

"This is one-way audio, just a stream inbound to the station. With additional

WCCC Features $10/Month 'Members Club'

Beethoven Radio/WCCC(AM) 1290 in Hartford, Conn. is leveraging its popular *www.beethoven.com* streaming audio site to earn extra money via the "Beethoven Members Club."

NEWMEDIA

For $10 a month, club members get access to a commercial-free 128k audio stream; rather than the 26k stream (with commercials) offered online for free. They also get access to a banner ad-free *www.beethoven.com*, regular gifts such as CDs, T-shirts and baseball caps, and "Front of the Line" priority for classical music requests.

"Members have a special e-mail account they use to send in their requests," said Nicole M. Godburn-Schiller, Beethoven Radio's program director. "Since we are an all request station, we bump all other requests and put members first."

But will Internet surfers actually pay to hear higher-quality audio? Most won't, Godburn-Schiller admits. But enough do to make a difference:

Over time, "We have found that we have retained a core group of 150 members; this is our baseline," she says. Even if these people subscribe for the yearly discount rate of $110, that's an extra $16,500 added to Beethoven Radio's annual revenues.

"On top of our core group we average an additional 200 to 250 members each month," she said. "Some people try one month and do not stay. Some sign up for an entire year after testing a month."

Nicole Godburn-Schiller and morning host Scott Birmingham work the station tent.

The recession initially cut the Beethoven Members Club's enrollment by 30 percent, but "we have noticed the numbers are coming back," Godburn-Schiller said. "We see more people with disposable income again and $10 a month is reasonable.

"We do have a percentage of listeners that are die-hard classical music fans and demand high-quality audio," she concluded. "To serve that population we developed the Members Club, and found a nice additional source of income in the process."

— *James Careless*

World Radio History

equipment we'd be able to send audio outbound to the tent, but did not have the need due to good coverage from our main transmitter for off-air monitoring. Our signal is delayed to the air by approximately 7 seconds at these bit rates; we do not find that objectionable."

Tom recommends this Barix system to others looking for a "plug-and-play" stereo remote solution, where all functions of the station are brought to the remote site.

"Our Exstreamer box is wired through our automation system, where we can log into the automation remotely, push a few buttons, and the Exstreamer is on the air with no human presence required at the studios," he explained.

"If the boxes get disconnected, they automatically try to reconnect. We also had a return command put into the log about 20 minutes after the remote was scheduled to end, so the automation would take control back if we had any difficulty with the connection."

Equipment for the remote consisted of a Behringer 1622 mixer, FBT powered mixer, three Sennheiser MD 421 mics, an EV wireless mic, two Sennheiser HMD 280 Pro headsets, Rolls headphone amp, a Behringer PA system, the 12x12 canopy, the Barix codecs and five laptop computers (three for music, liners and underwriting announcements, two for tech support and control of the studio computer) ... and many fans, to help us cope with the heat.

Students get silly with SpongeBob at the Relay for Life.

STUDENTS WHO COULD

Eleven students who have shows signed up for two-hour shifts between 2 and 10 p.m. Friday and again from 8 a.m. to 4 p.m. Saturday; and many others actually showed up. Adult volunteers took the overnight hours. All were helped by Tom Harrison, adult volunteer broadcast coordinator Brad Lorenz and Relay for Life student PD Billy Madewell IV.

The Relay for Life organizers urged their teams to bring along boom boxes and portable FM receivers because WTBR planned on carrying all special Relay announcements plus the opening ceremony, the Survivor Lap ceremony and the Luminary ceremony "live" from the entertainment tent.

WTBR raised money for the American Cancer Society by asking people at the site to drop money in a coffee can for requests or shout-outs. By Saturday afternoon, the can was brimming. Listeners heard everything that went on at the Relay; many made the trip to donate or take part.

I found it remarkable that students who'd just gotten out of school for the summer still wanted to take part in what was, for us, a massive broadcast. Other commercial stations in Pittsfield — including our "Partner in Education," Vox Communications' WUPE(AM/FM) and WBEC(FM), as well as cross-town WBRK(AM) — sent air personalities to cover Relay with special reports.

Readers may remember when AM stations used to pack up the Collins turntable and mixer, take it to a remote site and plug it into a phone line or Marti.

Several of us involved in this project wondered how much the remote would have cost in today's salaries if this had been a commercial station project. Probably way too much in this day and age — but it sure makes an impression on listeners.

The local newspaper dubbed WTBR "The Little Station That Could." They certainly *did*. Broadcasting's future is with these kids. From what I can see, I think we'll be OK.

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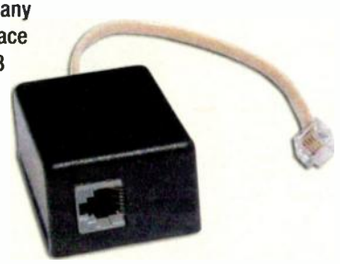

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Looking for a broadcast excerpt of a SanFrancisco Giant's taped off of KSFO radio from 1959, interviews with Willie Mays, Dusty Rhodes & some play by play excerpts, also features a homerun by Willie Mays and Felipe Alou stealing second base, running 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.

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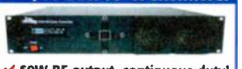

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World Radio History

READER'SFORUM

AUDIMAX & VOLUMAX

Regarding "Audimax Memories" in the April 21 issue *Reader's Forum* section:

Radio World has in its 1970s archives an article I wrote about improvements to these venerable units.

Besides improving the upper end, a bit dubious considering the lack of info above 14 kHz, and the necessary roll-off for the stereo signal, the low end could be improved significantly with high-value coupling caps and better power supply filtering (I used a 2N3055 as the pass transistor clamped with a zener diode) got noise to –80 dB or better.

Likewise I caught heat for suggesting a larger filter cap for the Belar monitor that got the AM hum down. The A/V combo after mod would give the Optimod stations fits.

Henry Ruhwiedel
aka "Radio Doctor"
Chicago

Ed. Note: When we contacted the author for permission to publish the above letter, he described himself as an "older than dirt engineer." He then sent the following postscript, which we felt compelled to include:

"There's several of us here who are older than dirt. We recall rubbing two stones together to make dirt for our coherer detectors and clay leyden jar condensors, and using lemons and olive oil to make batteries with palm reeds and gold/silver/tin foil. Some of these were found in ancient Egypt, but our initials had already worn off.

"With enough clay batteries we could make simple sparks and, using carbon rods made from charcoal compressed into bamboo stems, a simple arc lamp for night work. It was a smaller carbon footprint than burning wood and closer to the correct color temperature.

"This led to the arc modulator, where we were able to use a papyrus cone to concentrate the sound of our voices into the arc path. Winding a coil around the outside of the condensor pots, with an attachment to a long wire a few turns above Earth, allowed the arc to oscillate and create long-distance magnetism that was then detected on the other side of the palace, with the coherer and battery set to provide the Pharaoh with music in any room of the palace.

"Because of the heat created in the arc, this became known as a hot air emitter. The odor of the burning of the reed holding the carbon rod was likened to that of bull dung."

Radio World has our history experts checking into the veracity of this account.

TIME TO GO SNORKELING

Please do a followup to your excellent article "Are More Stations Going Silent" by Randy Stine, published in March 2009. As far as Hawaii AM goes, two of the three listed as silent were back on the air as of May 1 of this year.

I worked for American Broadcasting Co. from 1963 to 1990 in California (O&O AM/FMs) and in 1990 received the first "buyout" as management was interested in going "non-union." This was great because California had lost its appeal to me, with massive illegal immigration supported by mayors/police chiefs and horrible taxes.

So by 1996 I had a license for a 1 kW AM in Maui. It took four years to get the tower/ground system installed. I also sprang for a new Nautel 1 kW to take the load off the Collins 20V2 I shipped from California, along with lots of "working obsolete" equipment.

The FCC's new rules that allow them to set a minimum bid price for an almost worthless AM frequency have made it easy for millionaires/large group owners, along with tax-exempt religious groups and public radio, to control everything.

The old system was better. You could apply for a frequency and, if nobody objected, you just paid for the real estate, equipment, lawyers, engineers — and staff — not some unrealistic FCC minimum bid (assuming they ever open an AM window to apply). Plus, in this economy? Selling AM radio spots to starving small business owners? Good luck! Social Security and welfare make more sense.

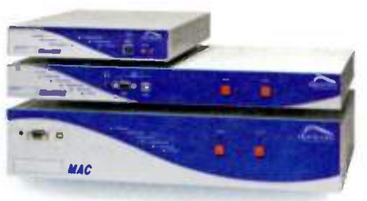
Time to go snorkeling!

Richard Miller
Maui, Hawaii

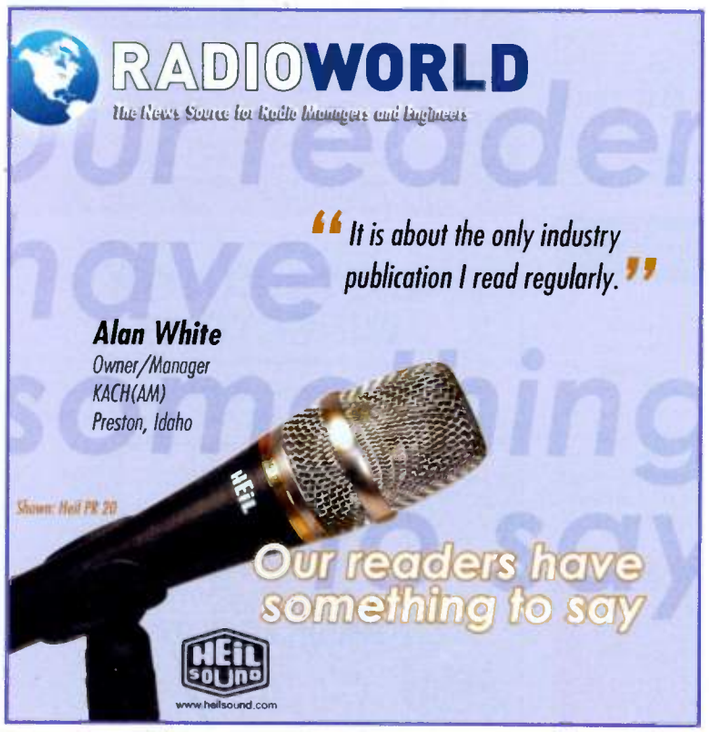
CORRECTION

OOPS! DAVICOM CORRECTION

A product report system in the June 16 issue (page 18) titled "Davicom Adds Features to MACs" was accompanied by the wrong photo. Shown here is the correct product image.



Also, the current version of MacNet multisite alarm management software is Version 5.40. The e-mail address for more information is **gfournier@davicom.com**, and the company website is **www.davicom.com**.



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World Radio History

READER'SFORUM

A LOVE AFFAIR WITH RADIO

Regarding your recent article "For AM DXers, the Romance Lives On" (April 21):

I too was one of those early hobbyists who as a young boy became fascinated by the "theater of the mind" created when listening to distant fading signals in front of my grandmother's floor model Philco.

Was WLS in a big tall skyscraper? Were there producers, directors, musicians, singers all gathered in a huge studio around the studio microphone waiting to sing "Double You El Ess" on cue from the tuxedoed man with the baton? Was Dick Biondi really fired for playing too many Elvis Presley records? I had to know.

Fifty years ago this month, I began my own journey into broadcasting. After being fascinated by the business for years, in the summer of 1960, I was hired at WNIA in Cheektowaga, N.Y., for 90 cents an hour to become "Mac McGuire — The Live Wire." (I lied about my age; I was 14).

It's been a journey I have never regretted. I've met rock stars (I interviewed John Lennon) and I have met three presidents, all because of radio. When the clock radio clicks on in the morning I still can't wait to get to work. I think there is a reason that New York, the No. 1 city in America, is called "Radio City," and that the No. 2 city is called "Television City."

It's easy to fall in love with this business. Like all love affairs, it must be nurtured to grow.

– Jim Davis

I was particularly moved by the 1961 "QSL" letter you printed (June 16, page 4) from Joseph H. Rohrer, owner, president, manager, chief engineer, announcer and "janitor" of WLCX, concerning the distant reception in New Zealand of his 250 watt, 1490 AM station in La Crosse, Wis.

The letter appeared to be written on a well-worn manual typewriter (complete with a few typos). I imagine Mr. Rohrer to be a very special man who embraced the passion, drive and enthusiasm for his very local radio station in this small Wisconsin city bordering the Mississippi River that once prided itself on making great beer.

He also appeared to possess that magical "care quotient" that drove a busy man to write a lengthy letter of appreciation to a man a distant continent away.

Radio is one of the last of the great apprenticeships. It is our duty to take what we have learned, and pass it on. Although Mr. Rohrer is a "silent key" and the stations have passed through several owners, it appears that his successors have kept the flame alive.

WLCX is now WLFN and is part of a four-station, locally and family-owned cluster. On a trip several years ago, while visiting family in Wisconsin, I knocked on the door of the radio station building and was greeted by Ed and Sally Sullivan, who were broadcasting live at the time.

Since 1988, the Sullivans have done a live show on WLFN called the "Blarney Party." After introductions were complete, Ed and Sally invited me to join them behind the microphone for what became one of my most enjoyable broadcasting memories in years. It was clear that the Sullivans were very comfortable behind the mike, with their local show featuring great music, fun, humor and public service.

Radio was doing what it has always done best: connecting people in the "interest, convenience and necessity" of the public (Communications Act of 1934).

It's easy to fall in love with this business. Like all love affairs, it must be nurtured to grow.

To a broadcaster that means: Always tell the truth; be there for your partner (listener/clients); be loyal; radiate positive feelings; don't say things you will regret; and learn to communicate. (Oh, and don't let there be silence). The "caretakers" of the WLCX legacy seem to have learned that lesson well.

Paul, thanks to Radio World for helping us rekindle the flame that is radio. PS: Just last week, I sent out a QSL letter to a Michigan DXer who heard one of our Florida stations.

Jim Davis
Vice President/General Manager
Vero Beach Broadcasters
Vero Beach, Fla.

TAKE A MOMENT

I enjoyed the article on AM DXing immensely.

As a broadcast engineer, I also have a lot of nighttime travelling and do both AM and FM band DXing. It's fun to catch the distant FM stations as well. Fog, atmospherics or tropospheric bending can make this very interesting.

Only a few summers ago, I listened solidly to an FM from Connecticut for 20 minutes while driving down the road here in the Upper Peninsula of Michigan. A small, narrow, fast-moving band of severe thunderstorms was credited for that catch. I also turned on my 2 meter ham rig when this was found and listened to repeaters from Pennsylvania.

The only disappointment was the FM broadcast station not acknowledging my e-mail with a simple response.

Like many in my age group with a love of radio, I grew up listening to the AM clear channels and their quality programming.

Sadly, manmade noise, AM IBOC and the lack of selectivity and sensitivity in today's radios make AM listening at any time of the day a challenge. Often, when a listener to one of my group's two AMs complains of signal reception or noise, I find it's the poor-quality radio they have in their vehicle or at home.

The next time one of those crazy Swedes or Finns sends you a QSL request from the ice plains, take a moment to respond. As busy as I am, I always give them an acknowledgement. It does bother me a little though that they often list receiving equipment valued at more than the car I drive!

Allan A. Augustyn
Director of Network Engineering
Radio Results Network
Escanaba, Mich.

GREAT LISTENING

In the 40+ years that I've been in the radio business, I think it safe to say I've answered about a thousand reception reports from various stations I've worked at or did contract engineering for.

My listening started back in the early '60s, when Monday mornings were the prime time to DX. I remember getting up at a.m. to start listening on a Hudson car radio (later moving up to a Hammerlund HQ180), sitting in the bedroom when I lived just outside of Philadelphia near Chester and listening to frequencies such as 1460 and 1370 being completely clear of any signals — nothing!

You might get lucky and hear a station running an equipment test, and hear that it was in California or Washington state. There were mornings when WKBW would be off at 3 a.m. and you could listen to Radio Caroline sign on at 3 a.m. clear as a bell.

I also ran many "DX tests" from stations, making the state of Delaware a very easy catch for many people. I'm still trying to figure out who has the most verifications I've signed from the various stations for which I did the tests.

It's gone full circle, I've come back to many of the stations I heard 25 years earlier to do engineering service, and say to myself, "How did I ever hear this?"

I still tune over the AM dial from time to time, keeping my Stewart-Warner R390A operational; things have changed so much with the granting of the low power at night for the daytime stations; no one signs off anymore, and now the horrible interference from HD.

But it's still interesting and amazing with what you can hear and read about in the various DX and radio publications. I've been a member of the National Radio Club since 1964 and held many editor positions with them since the mid-'70s.

AM radio will always be a great source for listening, near and far!

Dave Schmidt
New Freedom, Pa.

LISTENING FOR 'FUN'

I enjoyed the article regarding AM DXing and the followup letters in the June 16 issue.

We used to receive numerous letters from DXers from Scandinavia but also throughout Canada, especially in the north.

At that time CJVR was on 1420 kHz (10,000 watts) with half-wave towers so the sky wave was pretty good, especially during the winter. We also had reports from Vancouver Island, where our signal would come down in the skip zone (the area where the ground wave disappeared but for the sky wave came down) for Vancouver's CFUN on 1410 kHz. When we signed off at midnight, CFUN in return would be strong enough to be picked up by our off-air monitor and played through the station.

On a different note but in the same vein, in the summer of 2008 we had reception reports of our FM stations via sporadic E layer skip in Ohio and western New York. The reception report letter also included a screenshot of our RBDS data from the DXer's RBDS monitor, and an MP3 audio clip. You can't get more serious than that in a hobby!

Thanks for the great magazine and keep up the good work.

Bayne Opseth
Chief Engineer
Fabmar Communications
CJVR(FM)/CKJH(AM) Melfort, Saskatchewan
CIXM(FM), Whitecourt, Alberta
CHWK(FM), Chilliwack, British Columbia

World Radio History

Just Say No to Government-Funded Journalism

People Who Believe in a Truly Free Press Have to Believe in the Free Market

iStockphoto/Bart Sadowski

COMMENTARY

BY DAVE WILSON

I could hardly believe my eyes as I read the commentary by Candace Clement of Free Press, "Why We Need a New Public Media" (July 1, p. 34).

In a nutshell, she asserts that for-profit journalism is rapidly dying, and that therefore the government should implement billions of dollars in new taxes to fund public media.

To the contrary, journalism is thriving and the number of journalists is growing rapidly. Traditional media outlets should be arguing for less government involvement in media, not more.

BETTER SERVED?

The article claims that the federal government allocates $1.43 per person each year to public broadcasting. It says many other countries spend a lot more, and that we should too.

Spending more money on something does not equate to better service.

For example, I have experience working with software vendors who develop custom online registration sites that collect information and payments from customers, and then provide the collected information to me in the form of a spreadsheet.

Based on this experience I am quite confident that it would be easy to set up a site to collect broadcast station ownership information for about $6,000. This includes payment to the contractor to set up the site, a small amount of my time to work with the contractor, and credit card processing fees.

There are more than 12,600 commercial broadcasters in the United States. Spreading the $6,000 cost of this site out amongst us would mean a cost of about $0.48 per station. The FCC's processing fee for this service is $60, or 125 times that.

Are we better served because the FCC spends over $756,000 each time it collects ownership data from us? No.

You cannot measure success by how much money you spend, period.

'PUBLIC' MEDIA

Money aside, the assertion that commercial journalism is dying is simply not true.

Yes, it is changing, but for the better. Services like Google's YouTube now let people with a particular passion for a subject report to the entire world themselves. This is a very effective way to keep the public informed.

While I have great respect for professional journalists, and in fact was drawn toward media myself because of its journalism component, I have experienced firsthand how professional journalists do not always convey all aspects of a story. They usually report accurate facts, but it's what they don't report that can leave the reader, viewer or listener with the wrong impression.

For example, a while back a developer and two citizens groups with different positions were vociferously arguing their positions on a local zoning issue before my local county board. An article appeared in the local paper that presented the story as a developer vs. an anti-development neighborhood, when in fact more people in the neighborhood supported the developer than not.

It was obvious from the article that the professional reporter covering the county board for the local paper had not even attended the hearings. Instead she spoke to one of the citizens groups and presented that view as that of the neighborhood.

If this had happened today all of us could have gone directly to the Internet with our own stories, unedited. In fact, on WHDX(FM) right now I'm running a nearly three-hour special about some very contentious government restrictions on beach access, and about 90 percent of the content in this special is audio from YouTube clips of local citizens providing their perspectives.

There's no question that journalism is changing, but it's changing for the better, better for the public anyway. I know it may not be better for those of us who miss the days when there were a select few people who were the "official" sources of news in a particular area, on a particular subject. But those days are fading into the past. The government should not be taxing us just so a few people can cling to them for a little while longer.

Traditional media outlets should be arguing for less government involvement in media, not more.

Ironically, the term "public media," traditionally meaning publicly funded professional media, seems to also fit services like YouTube, where the public creates its own reports. It's also ironic that an organization that calls itself "Free Press" wants to force us to pay for "the kind of local, national and international journalism" that it deems appropriate. Where's the "free" in that?

People who believe in a truly free press have to believe in the free market. Reporters whose livelihoods do not depend on what they say have more freedom in their speech than those whose livelihoods depend on their words.

The free speech that has been unleashed by the Internet is awesome. Efforts to improve the future of journalism should be focused on harnessing it, not on creating government funded bureaucracies to compete with it.

The author is the owner of WHDX(FM) and WHDZ(FM) on Hatteras Island, N.C.; his commentaries appear regularly in Radio World. He is also senior director, technology & standards at the Consumer Electronics Association. His views are his own and do not necessarily represent the views of RW, CEA or its member companies.

RADIOWORLD

Vol. 34, No. 20 August 11, 2010

Next Issue of RADIO WORLD September 1, 2010
Next Issue of ENGINEERING EXTRA August 18, 2010

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Radio World Founded by Stevan B. Dana

Radio World (ISSN: 0274-8541) is published bi-weekly with additional issues in February, April, June, August, October and December by NewBay Media, LLC, 810 Seventh Avenue, 27th Floor, New York, NY 10019. Phone: (703) 852-4600, Fax: (703) 852-4582. Periodicals postage rates are paid at New York, NY 10079 and additional mailing offices. POSTMASTER: Send address changes to Radio World, P.O. Box 282, Lowell, MA 01853.

REPRINTS: Call or write Caroline Freeland, 5285 Shawnee Rd., Ste. 100, Alexandria, VA 22312-2334; (703) 852-4600; Fax: (703) 852-4583

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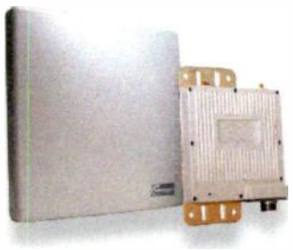

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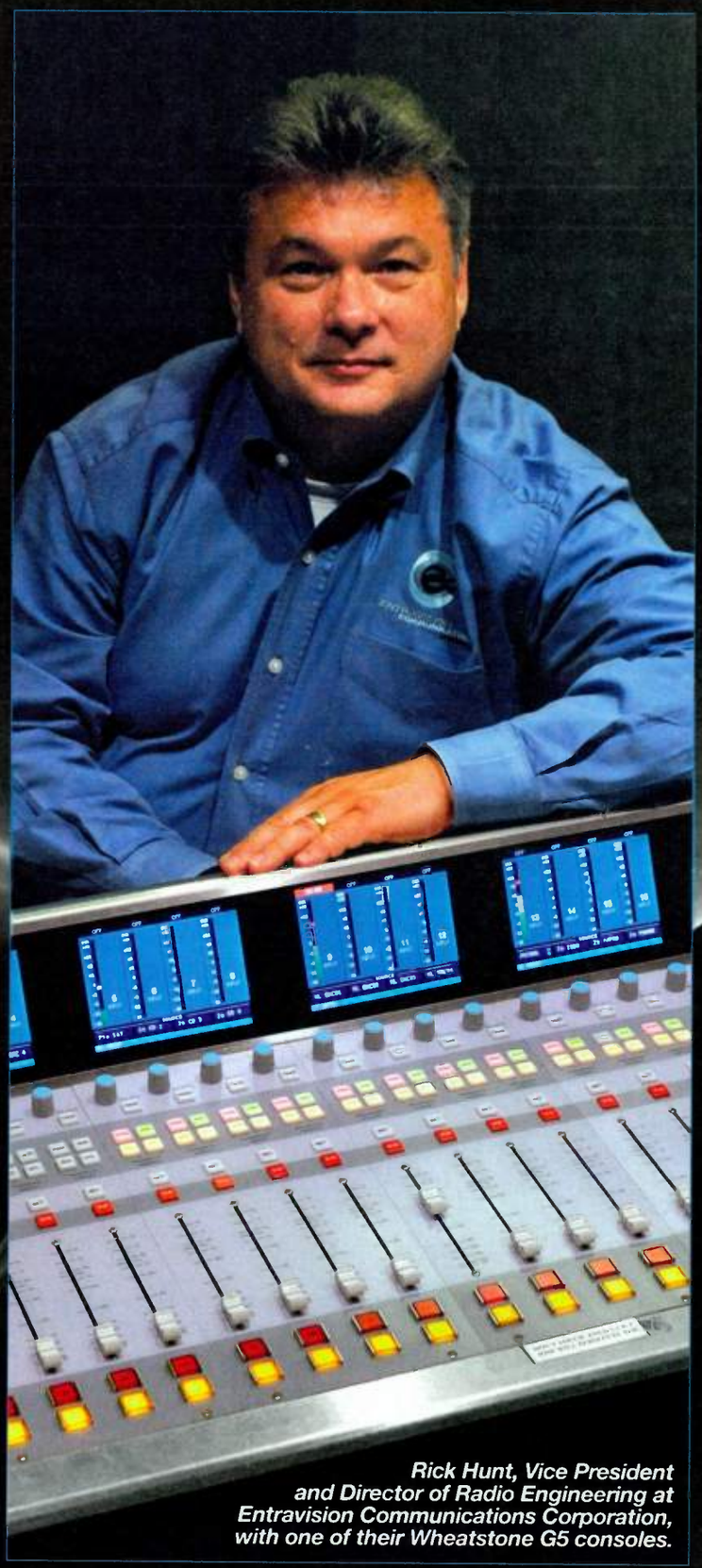

Rick Hunt, Vice President and Director of Radio Engineering at Entravision Communications Corporation, with one of their Wheatstone G5 consoles.

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