RADIOWORLD

Technology & news for radio decision makers

radioworld.com | October 23 2024 | $5.00

Add color to your rack this fall

Bob Trimble uses alcohol ink to make his LEDs stand out.

Paul Grossmann/Getty Images

Here comes the new MEP code

The FCC expects alerts for missing and endangered people to be used at least twice as often as AMBER Alerts.

Buyer's Guide

Thirteen new or recent products for your remote control, signal monitoring, EAS or test needs.

And another hot tip

In Workbench, check out a new line of nifty soldering tools.

Sticker Shock.

(The good kind).

Meet the Logitek Mix-It radio console. The Livewire AoIP console with every feature you need at a price you can actually afford.

Logitek

logitekaudio.com

World Radio History

IT'S ALL IN WHEATNET-IP THE INTELLIGENT NETWORK

LIFE JUST GOT EASIER

NEW! Now with RIST Connectivity!

BUILD on your Intelligent Network with Blade 4's full AoIP I/O intelligence
EXTEND your network using Blade 4's interoperability with other AES67 devices
SECURE your network with Blade 4's redundant power supplies and dual Ethernet ports
TAKE IT TO THE NEXT LEVEL with Blade 4's built-in CPU (external PC not required)

Our new Blade 4 gives you everything a Blade 3 does PLUS:

- front panel control with wide full color display for detailed visual feedback
- dual Opus codecs can stream audio between station and home studios
- built-in application hosting can run user scripts and apps like ScreenBuilder and IP Meters
- twin clip players can provide unlimited audio storage via external USB port
- AES67 with NMOS discovery enables third party routing control
- now with low latency RIST connectivity

Connect with your Wheatstone sales engineer and upgrade to Blade 4 – life just got easier!
Call (252) 638-7000 or email sales@wheatstone.com
https://wheatstone.com/blade-4-rw24d

Wheatstone
BROADCAST AUDIO PERFECTIONISTS®

www.wheatstone.com | Manufactured, shipped and supported from North Carolina, USA

RADIOWORLD BEST OF SHOW AT IBC 2024 WINNER

World Radio History

RADIOWORLD
Vol. 48 No. 22 | October 23 2024
www.radioworld.com

FOLLOW US
www.twitter.com/radioworld_news
www.facebook.com/RadioWorldMagazine
www.linkedin.com/company/radio-world-future-plc

CONTENT
Managing Director, Content & Editor in Chief Paul J. McLane, paul.mclane@futurenet.com, 845-414-6105
Assistant Editor & SmartBrief Editor Elle Kehres, elle.kehres@futurenet.com
Technical Advisors W.C. "Cris" Alexander, Thomas R. McGinley, Doug Irwin

Contributors: David Bialik, John Bisset, Edwin Bukont, James Careless, Ken Deutsch, Mark Durenberger, Charles Fitch, Donna Halper, Alan Jurison, Paul Kaminski, John Kean, Nick Langan, Larry Langford, Mark Lapidus, Michael LeClair, Frank McCoy, Jim Peck, Mark Persons, Stephen M. Poole, James O'Neal, T. Carter Ross, John Schneider, Gregg Skall, Dan Slentz, Dennis Slowman, Randy Stine, Tom Vernon, Jennifer Waits, Steve Walker, Chris Wygal

Production Manager Nicole Schilling
Senior Design Director Lisa McIntosh
Senior Art Editor Will Shum

ADVERTISING SALES
Senior Business Director & Publisher, Radio World
John Casey, john.casey@futurenet.com, 845-678-3839
Advertising EMEA
Raffaella Calabrese, raffaella.calabrese@futurenet.com, +39-320-891-1938

SUBSCRIBER CUSTOMER SERVICE
To subscribe, change your address, or check on your current account status, go to www.radioworld.com and click on Subscribe, email futureplc@computerfulfillment.com, call 888-266-5828, or write P.O. Box 1051, Lowell, MA 01853.

LICENSING/REPRINTS/PERMISSIONS
Radio World is available for licensing. Contact the Licensing team to discuss partnership opportunities. Head of Print Licensing Rachel Shaw licensing@futurenet.com

MANAGEMENT
SVP, MD, B2B Amanda Darman-Allen
VP, Global Head of Content, B2B Carmel King
MD, Content, Broadcast Tech Paul J. McLane
VP, Head of US Sales, B2B Tom Siken
Managing VP of Sales, B2B Tech Adam Goldstein
VP, Global Head of Strategy & Ops, B2B Allison Markert
VP, Product & Marketing, B2B Andrew Buchholz
Head of Production US & UK Mark Constance
Head of Design, B2B Nicole Cobban

FUTURE US, INC.
Future US LLC, 130 West 42nd Street, 7th Floor, New York, NY 10036

Connectiv ipso Regulated

All contents ©Future US, Inc. or published under licence. All rights reserved. No part of this magazine may be used, stored, transmitted or reproduced in any way without the prior written permission of the publisher. Future Publishing Limited is a company number 02008885 is registered in England and Wales. Registered office: Quay House, The Ambury, Bath BA1 1UA. All information contained in this publication is for information only and is, as far as we are aware, correct at the time of going to press. Future cannot accept any responsibility for errors or inaccuracies in such information. You are advised to contact manufacturers and retailers directly with regard to the price of products/services referred to in this publication. Apps and websites mentioned in this publication are not under our control. We are not responsible for their contents or any other changes or updates to them. This magazine is fully independent and not affiliated in any way with the companies mentioned herein.

If you submit material to us, you warrant that you own the material and/or have the necessary rights/permissions to supply the material and you automatically grant Future and its licensees a licence to publish your submission in whole or in part in any/all issues and/or editions of publications, in any format published worldwide and on associated websites, social media channels and associated products. Any material you submit is sent at your own risk and, although every care is taken, neither Future nor its employees, agents, subcontractors or licensees shall be liable for loss or damage. We assume all unsolicited material is for publication unless otherwise stated, and reserve the right to edit, amend, adapt all submissions.

Radio World (ISSN: 0274-8541) is published bi-weekly by Future US, Inc., 130 West 42nd Street, 7th Floor, New York, NY 10036.
Phone: (978) 667-0352. Periodicals postage rates are paid at New York, NY and additional mailing offices. POSTMASTER: Send address changes to Radio World, PO Box 1051, Lowell, MA 01853.

Recycle Please recycle. We are committed to only using magazine paper which is derived from responsibly managed, certified forestry and chlorine-free manufacture. The paper in this magazine was sourced and produced from sustainable managed forests, conforming to strict environmental and socioeconomic standards. The manufacturing paper mill and printer hold full FSC and PEFC certification and accreditation.

FUTURE
Connectors. Creators. Experience Makers.

Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR)
www.futureplc.com

Chief Executive Officer Jon Steinberg
Non-Executive Chairman Richard Huntingford
Chief Financial Officer Sharjeel Suleman

Tel +44 (0)1225 442 244

Comfort amidst the storm

In Asheville, broadcasts and amateur radio helped save lives

Paul McLane
Editor in Chief

"I just kept telling everybody: It's OK to be scared, it's OK to not be OK."

That was Mark Starling describing being on the air after rain, wind and flooding from Hurricane Helene tore through western North Carolina.

He hosts a morning show on iHeartMedia station WWNC(AM) in Asheville, where he is the news director. Starling spoke with Radio World contributor Nick Langan about the experience. (As I write, the storm was thought to be responsible for at least 230 deaths, and Florida was freshly staggered by Hurricane Milton.)

"All of a sudden we had to be a voice for people who had no way to get information," Starling told Nick.

He described taking a call from a nanny living in the hills who needed help. "She said a tree was about to fall on top of her trailer and the only thing holding it back were other trees." About an hour later, Starling took a call from a listener who said a friend with a chainsaw was on his way from north Georgia to help that woman, and he connected the two of them.

But he also came up against the tragedies. Starling took a call the same day from a family acquaintance, Michael Drye, who was stranded on the second story of his home with his wife and his seven-year-old grandson. "As he was on the phone, he described an 18-wheeler floating down his street," Starling said. He urged Drye to stay in touch. He later learned that all three had lost their lives, swept away by the ravaging floodwaters.

Mark Starling, foreground, and Tank Spencer

THIS ISSUE

NEWS
2 From the Editor
5 "Missing and Endangered" code to be rolled out

FEATURES
10 Get up off the floor
14 Alcohol ink makes your LEDs stand out

BUYER'S GUIDE
18 Inovonics 526 is a Family affair
22 Burk measures power for Cincinnati Public Radio

OPINION
29 DAB+ radio and public safety

World Radio History

Starling praised iHeartMedia's engineers and IT teams for helping to keep WWNC and the other stations in the cluster on the air throughout the storm and its aftermath. But at one point the station lost internet and phone service. Cell service was already unavailable, creating a dilemma for Starling. "We could talk to listeners, but other than looking out our window, we couldn't relay any updates," he said.

Starling's friend Andy Suhren brought two amateur radio handheld transceivers to the studios, navigating and wading around the tree damage. Soon, local hams were providing reports to Starling, which he was able to relay on the air. He characterized the role of hams that day as "literally lifesaving."

Indeed, during the week after the storm, Starling said he directed what amounted to a crowdsourced search and rescue operation on air. He believes that over several days, callers into WWNC may have saved upwards of 30 lives.

"If this doesn't prove to the people in Washington that AM radio needs to stay around, I don't know what else will," he said. Still, "It's going to be a long time before things get even close to things get back to normal around here."

Above
Heavy rains from Helene caused record flooding and damage in Asheville, N.C.

You can read the full article with Starling's interview at *radioworld.com*, type WWNC in the search bar.

STAY IN CONTROL WITH BURK
AND PUT $1000 BACK IN YOUR POCKET!

Trade in any working broadcast remote control unit regardless of make, model or age and receive a **$1,000** rebate on a new ARC Plus Touch or ARC Solo.

ARC Plus Touch
The industry's most powerful remote control

ARC Solo
Powerful remote control in a simple all-in-one package

Call your favorite Burk dealer for more information.

BURK TECHNOLOGY

www.burk.com | sales@burk.com | 978-486-0086 x700
Extended offer now valid on orders received between August 1, 2024, and December 31, 2024!

MADE IN THE USA

World Radio History

"Missing and Endangered" code to be rolled out

But some observers don't expect MEP to be used often

Writer

Randy J. Stine

The author profiled FEMA's Manny Centeno in the Sept. 25 issue.

State Emergency Communications Committees can now start writing their policies and procedures for disseminating EAS and WEA alerts for missing and endangered people.

Alerts based on the "Missing and Endangered" or MEP event code, which was approved by the FCC in August, will work like the AMBER alerts used by authorities when a child goes missing.

The FCC says originators may use the MEP code for people who do not qualify for an AMBER alert because the person is over 17 or does not meet other criteria for one.

"This will facilitate the delivery of alerts for missing and endangered person, including 'Ashanti Alerts,' 'Silver Alerts' and other state-enacted alerts, such as 'Feather Alerts' [in California], over the EAS and WEA system," the FCC wrote.

It said this also will help authorities better coordinate Ashanti Alert plans, consistent with the Ashanti Alert Act of 2018. Ashanti Billie was a 19-year-old woman abducted in 2017 in Virginia and found dead in North Carolina. Ashanti Alerts are intended to help in recovery of missing persons over 17 who fall outside the scope of AMBER and Silver Alerts, but the FCC said these are transmitted through a patchwork of notification systems under various jurisdictions, which can cause significant delay in dissemination.

Above
FCC Chairwoman Jessica Rosenworcel addressed a conference of Women Empowering Women in Indigenous Nations, or WEWIN, in Minnesota days before the commission adopted MEP.

Sense of urgency

The FCC believes the MEP code will be particularly beneficial to tribal communities. The organization Native Public Media advocated for the change, after conversations with IPAWS officials at an NPM event in spring of 2023, which led to a resolution from the National Council of American Indians being delivered to the FCC and FEMA.

Chairwoman Jessica Rosenworcel said the Bureau of Indian Affairs estimates there are more than 4,000 cases of missing and murdered American Indian and Alaska Natives that are unsolved.

"According to the Federal Bureau of Investigation, the numbers missing are more than two and half times their share of the United States population. While there are new methods to collect data on missing and endangered tribal and native people, the true magnitude of this problem is hard to capture through data alone," she said. "As a result of the action we take today, we will save lives."

World Radio History

Rosenworcel cited the effectiveness of AMBER Alerts. The FCC said that in 2022, 180 out of 181 cases in which an AMBER Alert was issued resulted in recovery, and 16 of those were as a direct result of the alerts.

"But for an AMBER Alert to go out, a missing person has to be 17 years old or younger. And roughly one in three missing persons reports are for adults. We are talking 188,000 people last year who went missing."

The FCC anticipates the number of the MEP Alerts per year will be at least double the number of AMBER Alerts, and it expects at least 15 missing adults per year would be recovered as a result of its order.

Loris Taylor, president and CEO of Native Public Media, called the vote historic. "The new MEP event code symbolizes hope and a commitment to leveraging modern communication tools to protect those most at risk and underscores the importance of community involvement in ensuring public safety for Native Americans."

Implementation

Following a process used when it created the Blue Alert code BLU, the FCC is requiring EAS equipment manufacturers within 12 months to integrate MEP into new equipment and to make software upgrades available to existing users.

Radio stations and other EAS participants will be allowed to implement the code on a voluntary basis, through those software upgrades or waiting for their next new equipment purchase. "The use by EAS participants of these codes is and has always been voluntary, and it would be contrary to the voluntary nature of state and local EAS to mandate upgrades to existing EAS equipment to incorporate new optional event codes," the FCC said, reiterating its policy for the BLU code.

While equipment manufacturers have until next September to make the necessary changes, the commission encouraged stakeholders to adopt the code in swift fashion.

Larry Wilkins, chair of the Alabama SECC, said, "I would assume adding a new code in the device software should be straightforward. However, getting the software installed [at stations] could create a problem, especially for stations using contract engineers or no engineer at all. We still have a good number of stations that have not upgraded to the FCC mandatory software update issued last year," he said.

The commission believes FEMA, which oversees the Integrated Public Alert & Warning System, is committed to doing its part to ensure the event code is operationalized as "swiftly" as possible. But EAS experts say it will take more than FEMA's help to ramp up the use of MEP.

How states deploy the code will be up to the SECCs, they say. SECCs can determine when issuing agencies use the MEP code and under what conditions in their state. Those guidelines help ensure that originators use the code only in the correct circumstances.

Adrienne Abbott, chair of the Nevada SECC, said each state's MEP plans should be similar to its AMBER Alert plans: specifying who can issue an MEP, the criteria for activation, procedures to follow for activation, how to cancel an activation and so forth. "The plans should also include provisions for out-of-state requests," she said.

State-by-state implementation could lead to a variety of interpretations, according to Rob Dale, planner for Ingham County Emergency Management in Michigan.

"Relying on the states to define 'endangered' may result in a lot of variability, not only between states but within states too. One law enforcement agency may consider someone endangered while another could look at those circumstances and consider them a voluntary runaway."

> **Relying on the states to define 'endangered' may result in a lot of variability, not only between the states but within states too.**

Dale said alert originators (AOs) typically are on their own when it comes to deciding which code to use other than AMBER Alerts or weather-related alerts, which have strict criteria. "If an AO feels this meets the MEP criteria, they are free to issue one, unless their state has added additional requirements."

Abbott said it took the U.S. Department of Justice several years to come up with "best practice" guidelines for states to include in AMBER Alert plans. That helped standardize AMBER implementation while allowing states to adjust plans according to their needs, she said.

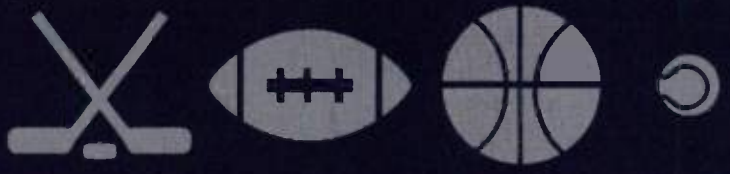
How often the MEP event code is used will likely depend on the success of the recovery process over time, she said.

"In our area of northern Nevada, two or three people are reported missing every day. Not all those cases are likely to meet the criteria for an MEP, so my guess is, it might get used at least once a week. But not every station in the EAS Operational Area would carry the MEP," Abbott said.

World Radio History

Tieline®
The Codec Company

Gear Up for Sports Remotes



Affordable Option: Bridge-IT II and ViA

Gear up for summer and fall sports with Bridge-IT II - the ultimate affordable, high performance stereo IP audio codec and pair it with ViA, the sports remote broadcast dream machine. Both codecs support multiple network interfaces, hitless packet switching using SmartStream PLUS, Fuse-IP network bonding, plus connection backup.

Pro Option: Gateway 4 and ViA

Our pro option for covering sports includes the powerful Gateway 4 codec which supports 2 simultaneous stereo connections, or 4 mono connections. Gateway 4 includes dual NICs and dual AoIP ports, dual internal power supplies, plus multiple layers of redundancy with SmartStream PLUS, Fuse-IP and connection backup.

Features	Bridge-IT II	Gateway 4
Stereo, 2 x Mono	✔	✔
Triple mono, Stereo + Mono IFB, 2 x Stereo, 4 x Mono		✔
AoIP: AES67, SMPTE ST2110-30, Livewire +, Ravenna	✔	✔
AoIP: SMPTE ST2022-7, Ember+, WheatNet-IP, Dante		✔

Scan for more information

Phone: (317) 845-8000 | tieline.com

World Radio History

Not convinced

At least one broadcast observer is skeptical about the use of MEP. Mike Langner, chair of the New Mexico SECC, doubts the new code will gain much traction, especially since the circumstances can be covered by codes such as a Civil Emergency Message (CEM) or Law Enforcement Warning (LEW).

Langner wrote in the New Mexico Broadcasters Association's newsletter: "EAS alerts are only supposed to be issued when there is actionable information about a public emergency. In the past few years, we've seen and heard far too many AMBER Alerts lacking any real information."

There were 185 AMBER Alerts in 2023, Langner wrote. He believes too many contained phrases like: "The license number is unknown. The direction of travel is unknown. The color of the car is unknown." Langner said, "This is not actionable information. This is not helpful."

This, he feels, has led to some broadcasters declining to carry many AMBER Alerts. "Likely most won't carry MEP alerts, unless those alerts somehow constitute a public emergency." (Though broadcasters are required to relay presidential alerts and certain test alerts, stations participate in state and local EAS alerts voluntarily.)

Lowell Kiesow, chief engineer for KNKX(FM) Public Radio in Tacoma, Wash., and vice chair of that state's SECC, said AMBER Alerts have proven effective at saving children, but only when an alert includes timely, actionable information such as a vehicle description and license plate number.

"AMBER alerts should not be sent with vague information, or when there isn't reason to believe the child is in danger. Similar guidelines must be applied to MEP for alerts to be effective and to prevent overuse by law enforcement," he said in an email to Radio World.

"My guess is very few missing endangered persons cases will fit criteria for an EAS and WEA alert."

Kiesow said broadcasters want to serve the public with EAS and be the "go-to source for information," but they don't want alerts to become intrusive to listeners or become background noise. "Broadcasters will have to weigh whether increasing the potential for more alerts is a good idea for their station," he said.

(The FCC wrote in its order, "We find that the code we adopt today strikes a proper balance between the need to avoid the deleterious effects of alerting misuse or overuse through appropriate geo-location while ensuring sufficient scope to aid location and recovery of missing and endangered persons.")

Another observer told Radio World they were surprised by the rapidity the new event code was adopted by the commission. The rulemaking was launched in March.

"Although anything we can do to help save lives is positive, I was surprised how fast the approval process moved through the commission. I don't know if the commission did much homework to poll state officials on how they felt about how often it would be used," this observer said.

Newswatch: Commission Defends Return of Form 395-B

The FCC laid out its legal basis for resuming the collection of workforce data from U.S. broadcasters in a 112-page court filing. It was responding to legal challenges from the National Religious Broadcasters and the Texas Association of Broadcasters.

anthonyturducken/Getty Images

The commission said collecting employment statistics and publishing the findings does not violate the rights of broadcasters and that the Communications Act provides the necessary authority. It argues that there is no constitutional problem with its order under the equal protection guarantee of the Fifth Amendment or the protection of free speech in the First Amendment.

"The mere fact that a regulation takes account of race or sex does not make it suspect," its lawyers argued.

Its new Form 395-B includes additional racial categories and a "non-binary" gender classification. Some religious broadcasters say inclusion of a non-binary category infringes on their First Amendment rights by forcing them to recognize genders beyond traditional male and female.

Public release of the employment data has also been a point of contention. When the FCC issued its order last winter, Brendan Carr, the senior Republican, voted against it. He said the vote meant "the FCC will now post a race and gender scorecard for each and every TV and radio broadcast station in the country." He objected specifically to the plan to publish data on a station-by-station basis.

But the FCC lawyers told the court that workforce data has been publicly available since 1970. "Adhering to the historical practice of making this data public is likely to result in more reliable and useful data," it says, "and transparency outweighs the potential risks."

The FCC rejected the argument that third parties would misuse the data to pressure stations to engage in preferential hiring practices, calling this speculative.

"The benefits of making Form 395-B data publicly available — as it has been since the data collection originated in 1970 — would outweigh any harm to broadcasters," it wrote.

— Randy J. Stine

World Radio History

Telos®

POTS is dead. Long Live Telos VX® Duo.

It's no secret: POTS is on life support. With service costs rising and availability dropping, there's never been a better time to move to economical, high-quality broadcast VoIP from Telos®. And there's no better choice than our affordable new multi-line VoIP system, VX Duo.

It's Expandable. VX Duo can grow from 2 hybrids to 4, 6, or 8 to match your needs. **Compact, too.** VX Duo's fanless base station takes almost no space. Put it on your countertop - or rack 3 in just 1RU. **Op-Ex friendly.** Switching to VoIP can easily cut your phone bills by 50% or more. **Stunning sound.** Crystal-clear quality for interviews and call-in segments that shine. **Easy to use.** Intuitive XScreen software and Telos VSet phones make operations a breeze. **Expert help.** New to VoIP? No worries - we invented VoIP talkshow systems. Our support team is dedicated to your success.

Economical, flexible, expandable. VX Duo, from Telos - the leader in broadcast VoIP.

Telos Alliance®

BROADCAST WITHOUT LIMITS

TelosAlliance.com/VXDuo

©2024 Telos Alliance. All Rights Reserved. C24176B

World Radio History

Get up off the floor

Why not give yourself a seat at the rack?

John Bisset
CPBE
The author is in his 34th year of writing Workbench. He handles western U.S. radio sales for the Telos Alliance and is a past recipient of the SBE's Educator of the Year Award.

Send your tips
Workbench submissions are encouraged and qualify for SBE recertification credit. Email *johnpbisset@gmail.com*.

Okay, readers, I get it! Some of us would rather not crawl around on the floor even when we have a foam cushion or some bubble wrap on which to sit or kneel.

David Brown is chief engineer for the Hubbard stations in West Palm Beach, Fla. Dave writes that his knees seriously object to his getting on the floor, and from readers' comments, he's not alone!

Dave found the mechanic's stool shown here on Amazon for less than $40. It has a padded, comfortable seat that raises and lowers. The shelf on the bottom is a great place to keep screwdrivers, small parts or rack screws so you don't have to keep getting up and down while working on something in the bottom of the rack.

The wheels let you scoot around from rack to rack. In fact, that's where Dave uses his: primarily in the rack room. But this mechanic's stool is just at home in the transmitter building.

Top
Save your knees with a shop stool.

Paul and Harold discuss soldering

Paul Sagi in Malaysia brings an interesting product to my attention. He and Harold Hallikainen were discussing iFixit, a company that advocates for a culture of repair and maintenance over throwing stuff away. Kyle Wiens and Luke Soules launched iFixit in 2003 when they needed to repair an iBook G3, and it has posted hundreds of tutorials to assist people in repairing consumer products. (The website bears the slogan "Never Take Broken for an Answer.")

iFixit now has launched its own soldering iron tools, aimed at making soldering more convenient and portable. It offers several items under the new FixHub brand.

The Smart Soldering Iron can generate up to 100 watts of heat and is powered via USB-C, meaning it is compatible with many modern phone chargers. These aren't cheap; the iron alone is about $80. But it has a nifty feature set. Safety

Right
The FixHub Power Series Portable Soldering Station costs around $250 and promises eight hours of soldering time without being tethered to a wall outlet. Or just buy the iron, which uses USB-C power, for about $80.

World Radio History

BEST OF SHOW 2024
RADIOWORLD
WINNER

INTRODUCING THE 677

EAS TRIPLE TUNER

AM | FM | NOAA

Powerful features in a compact half-rack design.

EAS Emergency Alert System

Inovonics' 677 Triple Tuner incorporates the latest DSP-based technology for a fresh new design in EAS Receiver Monitors. Fully tested and ready to go after an exhaustive Beta testing program in the field with respected Radio Engineers in the industry.

The all-digital 677 has three discrete and independent receivers for any combination of AM, FM, or NOAA reception and monitoring. Each receiver has off-air antenna inputs and balanced monaural XLR outputs.

677 FEATURE HIGHLIGHTS

- Easy front panel set-up via jog wheel with LED readout and metering.
- User-friendly management via Web interface from any Web enabled device.
- Selectable remote listening by Web Stream.
- Alarms & notifications by email or SMS and full SNMP support.
- Six rear-panel GPOs may be user-assigned to alarm functions.

REAR PANEL I/O

www.inovonicsbroadcast.com | sales@inovonicsbroadcast.com | 831-458-0552

WHY INOVONICS?

- Quality Solutions. Competitive Prices.
- Three-year Factory Warranty.
- Quick to install. Easy to Program.
- Quality after sales service.

INOVONICS BROADCAST

World Radio History

aspects include sleep mode, a temperature indicator ring light and fall protection.

A heat-resistant magnetic cap covers the tip, even when it's hot. This is a great idea, especially helpful for contract engineers who must visit multiple sites and may not have time to wait for a soldering iron to cool.

The company also offers a Portable Soldering Station kit that adds a dual-port battery power supply, allowing users to power two irons at once or charge a phone while working. iFixit says the portable supply will support at least eight hours of continuous soldering on a single charge. Included is a 100-watt USB-C power source. This kit costs around $250.

And there's a top-end version of the above, with 13 tools including a cloth roll, wire strippers, flush cutters, solder, safety glasses, tweezers and other accessories; it goes for around $299.

The company's website is *www.ifixit.com*.

Above
Well, yes, sometimes we do.

Below
The removable, replaceable cable make these cans from BSW easy to maintain.

Clinic musings

On a related note, I thought you'd enjoy the T-shirt shown above right, which was spotted at the Midwest Regional Broadcasters Clinic. Yes, we engineers may void warranties; but as iFixit says, we never take broken for an answer.

BSW's John Lynch was at the show.

If you're on the phone with BSW, ask them about their five-pack of BSW Aircans for under $150. These are closed-back professional dynamic headphones, with a unique detachable, replaceable headphone cable. You can tell 'em you read about it in Radio World. John also was featuring the new VX Duo two hybrid/channel VoIP hybrid from Telos Alliance.

Technoguy reminisces

Broadcast engineer Michael Baldauf, aka Technoguy, remembers that every year around this time, Radio Shack would release its annual catalog, offering a glossy splashy look at their latest offerings. It featured everything from huge stereo receivers to CB radios, telephone answering machines to walkie-talkies, and so much more. This was the ultimate "wish book" for the electronics geeks of the era.

Now we can revisit those halcyon days by perusing those catalogs at *www.radioshackcatalogs.com*. It's set up for turning the pages, just like the originals; it features catalogs from 1939 to 2011, as well as some other ads including sales fliers sent to customers who were, um, coerced into having their addresses handwritten onto receipts by Radio Shack employees whose jobs depended on collecting that information.

The site is not associated with Radio Shack Corp. but was authorized to display historical records. Even browsing the covers is a time-travelling pleasure. Bookmark the site and visit for a bit of escapism now and then.

"iFixit now has launched its own soldering iron tools, aimed at making soldering more convenient and portable. It offers several items under the FixHub brand."

World Radio History

COMREX

Make this... ...sound like this

It's time a cellphone sounds **great** on the air.

Gagl + HOTLINE

With **Gagl + Hotline**, your on-air contributors can connect to your Comrex codec and sound like they're in the studio - **just by dialing a phone number**.

2024 Election Special

Sign up with code "ELECTION" before **November 5th** and get **one free month** of **Gagl + Hotline** *($50 value)*

**Available for US clients only*

info@comrex.com | 1 (978) 784-1776 | www.comrex.com

World Radio History

Writer
Bob Trimble
Broadcast Sales Engineer, RF Specialties Group

Alcohol ink makes your LEDs stand out

It can also make bottles of pills or parts easier to identify

OK, so another column on safety, but not the usual technical electron stuff.

Every engineer knows you should be able to tell the state of an electronic device by looking at its LEDs and their color. Yet I have devices where all the LEDs are red, even the "power on."

This was common on some older transmitters, switching panels, phasors and remote controls. Not real helpful. Badly labeled or unlabeled color indicators can cause confusion and possibly mask an unsafe condition.

Sure, you can swap in a basic faint red, green or yellow LED to improve the situation. But why not install a bright, custom-colored LED instead — to help you better distinguish the status, detect the presence of a problem or help a manager who is trying to describe a problem to you over the phone from hundreds of miles away?

My artsy wife told me about alcohol inks, which she obtained at one of those big-brand arts stores and which you can find online from crafting sources. There are dozens of colors available to help you create unmistakable LEDs.

I thought alcohol ink might be one of those flavored drink drops for water. They are not. Alcohol ink tastes awful and colors your tongue for days. It is also toxic and very flammable. But it is useful.

I did try using colored laundry pens and transparent nail polish on clear or white LEDs. They tended to fade after a while, likely because an LED seems to emit a small amount of fading UV light. Why not give alcohol ink a try?

Want it less bright and more vivid? Just put more drops on and let it dry between drops. If you hold the LED while it's drying so the bulb is pointed downwards, more colored ink will accumulate on the front of the LED.

Right
Ranger brand alcohol inks on display at a Craft Warehouse store.

> **There are dozens of colors available to help you create unmistakable LEDs.**

World Radio History

Don't Shop Angry. Shop Smart.

Some 'new' consoles are coming out with the same ol' technology we've had for decades. Instead of settling for old technology, choose a truly new board that can be controlled remotely via software. Our analog consoles have been setting the standard for decades, and we've done it again with our H Series boards.

SOFTWARE CONTROLLABLE - REMOTE CONTROL - BLUETOOTH - USB - LED / ANALOG METERS - USER PRESETS

H10 & H15
Hybrid Consoles

The H Series comes in two sizes to meet your needs. The H10 features two mic channels, balanced and unbalanced stereo line inputs, USB, Bluetooth, and a Mix-Minus bus. The H15 is larger, with up to five mic channels and two Mix-Minus busses.

ARRAKIS SYSTEMS
arrakis-systems.com

World Radio History

Even alcohol ink tends to fade a bit after a few years, but no problem — a quick drop of color on the LED tip will restore the coloring.

A flashing LED with a custom color will give the most information you can possibly get out of an LED panel.

Rx safety

With alcohol ink you can color just about anything, such as cables meters or fuses — you might even stain some glass for your church. One little bottle will go a long way.

A particularly helpful use is for drug safety. Everybody's taking drugs at our age, right? Diabetes, heart or the <ahem> little blue pills the wife keeps.

I have several bottles of the same size and color on my dresser. I take some pills rarely but others daily. I once took a couple of wrong medications because I'd picked up the wrong little white pill and had a problem that led to an ambulance trip to the ER.

Yet at 3 a.m. I can barely bring the itty bitty prescription printing or pill imprint into focus. I found that I can put drops of alcohol ink and a big letter or two on the top of each bottle to make sure I grab the right one. Every top is unique. This is also helpful when I'm trying to fish the right medicine bottle out of the bottom of a transmitter tool bag.

You know the UV flashlight you use to look inside a transmitter for splatters, drips or other issues not normally visible? That light also is useful for finding little white pills that have spilled into the bottom of your tool bag or onto the floor at home. (Most pill coatings will change color or glow under UV light. Go check for yourself. If you break a pill in half, the inside often will be yet another color, helping you match it to the pills in the pharmacy bottle.)

Above
Clear LEDs take on jewel tones with alcohol ink.

Plan
Design
Build
Launch
Scale

Your radio facility.
Your way.

Services to balance the strengths of your systems, people, and spaces

ZTRANSFORM
Your formula for Success

info@ztransform.com ztransform.com +1 206-829-8170

World Radio History

Left
The ink can be used to label the caps of bottles of pills.

> **A flashing LED with a custom color will give the most information you can possibly get out of an LED panel.**

You can kill yourself almost as fast with the wrong pill as by discharging an HV cap with your fingers and wet shoes. Hopefully this tip will help you be safe and not just with electrons. There's not a lot of room for a safety mistake once you lock the gate and start along a wooded forest road that runs several miles up to the transmitter site. (I used to work on an ambulance and 911 would not help us down a forest or gated road — ambulances usually have street tires, not 4WD. Often we had to ask the caller to come open the entry gate or crawl/drive to the gate where we could work on the patient.)

Take the right pills, double discharge all the transmitter caps, use your voltage sensor and sponge shoes and get to a main road so an ambulance can get to you and your problem if you need one. Don't volunteer to thin the engineering herd. It is already getting too small.

Be safe!

Bob Trimble, N7IYI, says he still had braces on his teeth when he started at public school station KBPS in Portland, Ore. He welcomes emails to rfswa@btis.us.

World Radio History

About Buyer's Guide
This section appears in every other issue, focusing on a particular category of equipment and services. It is intended to help buyers know what's on the market and gain insight into how their peers are using such products.

Inovonics 526 is a Family affair

A new AM modulation monitor supports KECR in San Diego

"A good modulation monitor," says Jeff Zimmer, southwest regional engineer for Family Stations Inc., "is invaluable in establishing the best processor settings and remote monitoring of signal quality."

Family Radio is Christian-based teaching and music, with approximately 70 AM, FM and translator signals across the country.

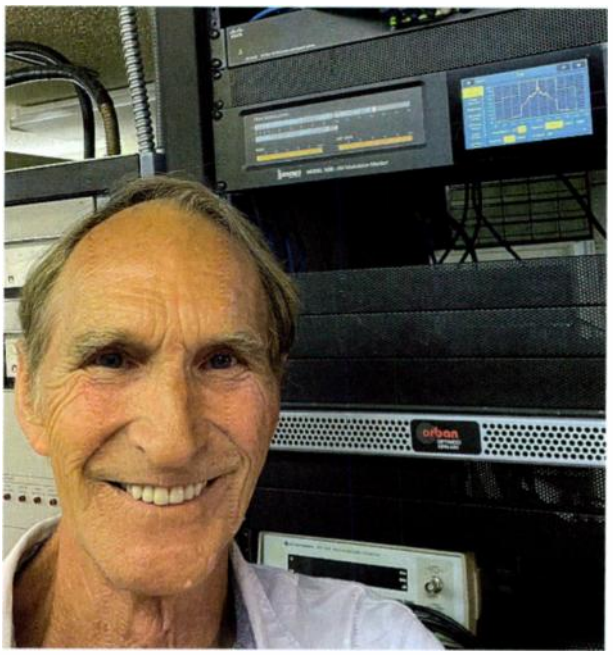
Zimmer's region encompasses southern California, Utah and Arizona. He recently deployed an Inovonics 526 AM Modulation Monitor at KECR(AM) in the San Diego market. His existing mod monitor was getting old, and he was given the opportunity to beta test the 526 before it became generally available last spring. He purchased it based on his testing.

"The most useful feature to me is the modulation history graph, with a time span extending from one minute to the last 24 hours. Graphs for Positive, Positive Peak, Negative and Negative Peak can be toggled on and off."

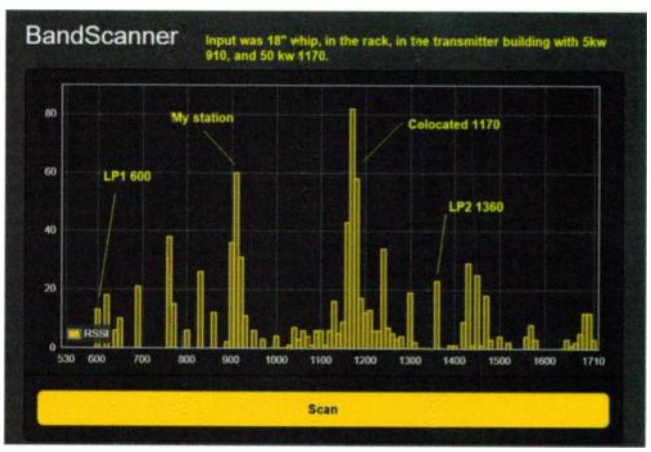
He installed a new on-air processor shortly thereafter, and he found the graphing function in the 526 invaluable for monitoring and adjusting the processor for various program types, music and speech, and normalizing the Day/Night levels. The history meter will also track RSSI, SNR, MDCL, Audio, and Loudness levels.

Zimmer said the receiver section of the 526 is both selective and sensitive.

"While it was in the rack in the transmitter room with both 5 kW and 50 kW co-located stations, I put a simple whip on the antenna input. I picked up all the stations in the market. It would be useful for a central monitoring location for several stations in a market. I imagine with an external antenna and without adjacent transmitters, it would be even better."



Other useful features of the 526 are audio and RF spectrum analyzers, the latter including the NRSC mask, which was also helpful in setting up the processor. It also includes an O-scope showing IF and audio signals. There's a scheduler for Day/Night, time-settings to normalize the mode-change power levels.



Top
Jeff Zimmer

Right
The mod history screen.

Far Right
The BandScanner display.

World Radio History

WORLDCAST SYSTEMS

+60 YEARS OF FM RADIO expertise

Game-Changing FM Transmitters

Ecreso FM AiO Series

Are you looking for a FM transmitter that will meet your needs for cost-efficiency, rock-solid transmission, and superior sound quality that your listeners will love?

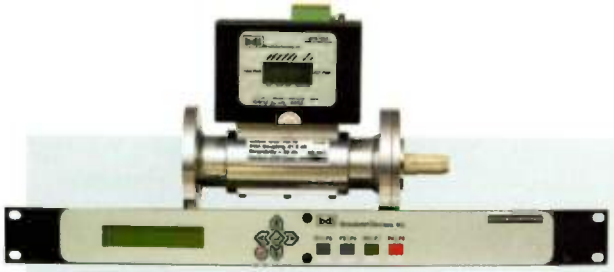
Ecreso FM AiO Series is an advanced digital FM transmitter range that exceeds all expectations for new-gen FM radio broadcast. Available in 100W to 2kW, it hosts top-tier software features including a full RDS encoder, audio/MPX over IP input, 5-band sound processor, web streaming, and SmartFM. With its user-centric design, it simplifies radio operations and makes your life easier - less peripheral equipment, high repairability, and advanced control. You also protect your investment with FCC certification for 100W and 300W LPFM broadcasting, and for the entire range benefit from an optional warranty of up to 10 years.

Designed for commercial, non-commercial, community, religious, and educational FM radio broadcasters, Ecreso AiO Series is a game-changing low power FM transmitter that offers the market's lowest Total Cost of Ownership (TCO).

Intuitive GUI for full control

Learn more

World Radio History



Tech Update

Compact Power Monitoring From **BDI**

The DPS-100D Series RF Power Monitor from Broadcast Devices is a compact solution for accurate power measurement, VSWR protection and temperature and pressure monitoring for transmission sites.

They're compatible with all digital radio and television formats, now including AM digital, as well as analog FM broadcast. They can be ordered in N, DIN and EIA flange sizes including 7/8, 1-5/8, 3-1/8, 4-1/16, 6-1/8 and 9 inches.

The DPS-100D is SNMP-capable to interface with modern remote controls systems. These meters can interface to SWP-200 RF switch controllers and SWP-300 remote control products. Available accessories include the RMD-100 Remote Meter Display, shown, a rack-mounted 1 RU display; TMP-100 Temperature Sensor; and PSW-100 Transmission Line Sensor.

Also from BDI, the SWP-300 Remote Control with integrated motorized switch controller is "a complete remote control solution at about half the cost of other systems." And the GPM-300 Audio Matrix switcher family is designed for a range of audio routing applications including EAS audio, accepting RS-232 commands from Sage, Digital Alert Systems and Gorman-Redlich systems.

Info: *www.broadcast-devices.com*

Tech Update

Sage Preps for MEP Code

Sage said it plans to make a free software update available by the end of 2024 that implements the Missing and Endangered Persons (MEP) event code.

The new code was created by the FCC in a report and order released in August and with an effective date of next Sept. 8. Relay of the alert by EAS participants is voluntary. The order permits EAS participants to update their software on a voluntary basis. "Sage users are advised to check their state plans for news from their State Emergency Communications Committee in the coming months for updates on the use of the MEP alert in their state," the company wrote.

The FCC is also considering an action based on its 2022 discussion of EAS security. "It is not clear yet if that action will require a software update,"

Sage said. In its February 2024 Rev96 release, the company extended its logging to include the types of events that the FCC is considering requiring users to report.

Finally, Sage noted that the National Weather Service is increasing its use of county subdivisions in some areas of the United States. "This is to reduce one type of over-alerting prevalent in large counties. Sage products have supported this feature since the 1990s; while you might need to update your settings, you won't need a software update. You will also hear from NOAA or your SECC if sub-county alerts will be used by NOAA Weather Radio in your area."

Info: *www.sagealertingsystems.com*

KINTRONIC LABORATORIES
www.kintronic.com
1.423.878.3141
ktl@kintronic.com
FM Combiners
LAB4.50K Dehydrator
110-220VAC
Motorized Coaxial Switches
Co-Location on AM Towers
Custom Solutions for FM, LPTV, 4G & 5G
AM Multiplexers
Directional or Non-Directional
As low as 50kHz apart

World Radio History

Tech Update

Reliable Performance for EAS From ASI

The AudioScience ASI2816 is a modular solution in a single rack space, designed to enhance Emergency Alert System workflows in broadcast environments.

"With the ability to monitor up to 16 AM/FM, HD Radio and Weather Band channels simultaneously, the ASI2816 ensures that broadcasters never miss a critical alert," the company tells us.

Its real-time SNMP alert system notifies operators of signal loss or silence, providing immediate insight into any issues that could affect EAS reliability.

The ASI2816 integrates with existing EAS setups, featuring balanced analog outputs that feed EAS receivers. "This reliable signal feed, combined with the unit's capacity for streaming audio to remote locations, makes it an invaluable tool for ensuring consistent and uninterrupted emergency communications."

The modular design allows for scalability, enabling broadcasters to expand monitoring capabilities as needed.

Each module includes an individual antenna connector, with the flexibility to chain antennas across multiple modules. ASI says this ensures optimal signal capture and enhances the unit's versatility.

The ASI2816 offers simultaneous audio monitoring of all tuners via RJ-45 StudioHub analog outputs, providing real-time feedback. Configuration is via a friendly HTML-based web interface, while the front display provides access to tuner status and audio metering information.

It comes with a built-in universal AC power supply and offers redundant capability using an external DC supply.

The product page on the company website contains a data sheet, firmware downloads and release notes. It also provides a dropdown menu to allow you to create the correct part number for the desirable ASI2816 configuration. Click on Products, then Tuner Products.

Info: *www.audioscience.com*

RAVE!
Radio Mixing Console
ANGRYAUDIO.COM

INTRODUCING THE 677
EAS TRIPLE TUNER
AM | FM | 2 AA
Powerful features in a compact half-rack design.
EAS
INOVONICS
BROADCAST

YELLOWTEC
mika
The system to success.
www.yellowtec.com

Axia StudioCore
Our newest integrated engine for iQ, Radius, RAQ, and DESQ AoIP consoles.
TelosAlliance.com/StudioCore
Telos Alliance
BROADCAST WITHOUT LIMITS
Broadcasters General Store

BGS
Broadcasters General Store
Family Owned & Operated Since 1979
Your source for broadcast equipment and services.
Contact us for a quote today!
352-622-7700 www.BGS.cc

World Radio History

Burk measures power for Cincinnati Public Radio

Staffan deploys PRF-1 Precision RF Sensors

More Info
www.burk.com/products/-/Precision-RF-Sensor-142

Cincinnati Public Radio is using the Burk PRF-1 Precision RF Sensor in six locations at its transmitter site where FM stations WGUC and WVXU are combined to measure forward and reflected power.

"They were picked because of their small size, price and ease of integration into our existing systems," said Chief Engineer Will Staffan.

The modules provide a 0-5 volt output that can be read by virtually all remote control equipment with analog inputs, including CPR's Burk ARC Plus Touch.

"They're calibrated through 10 LEDs at the top of each unit and by twisting a rotary switch to set the attenuation," Staffan said.

"Power and the signal are carried through a twisted pair connection, so it was simple to make our own extensions that are longer than the provided cables and to use our own switching power supply to save outlet space."

The PRF-1 modules fit easily onto the sample section for each transmitter, and at the output of the combiner.

"The only thing that would have made them an absolute smash-hit is the addition of some mounting tabs," he continued.

"We made our own mounting brackets that slip under the transmission line bolts and provide a flat area to zip-tie the PRF-1 neatly. A combination of BNC and N-type adapters were needed to connect to our existing sample section."

Right
Will Staffan, with two sensors mounted at right.

Staffan said the stations experienced no off-air time while setting up the equipment and are satisfied with the simplicity of the installation.

"We've also saved about 10 units of rack space that three RF power meters necessitated. Now our power metering is accomplished through the Burk ARC Plus Touch and the AutoPilot interface."

Tech Update

Gorman-Redlich Adds EAS Features

Gorman-Redlich has added a number of features to its CAP-DEC equipment line.

"The latest CAP-DEC software ensures that users properly process and filter over-the-air alerts by enabling automatic synchronization of the date and time to connected Gorman-Redlich EAS1 units using the internet-synced CAP-DEC1 clock," it said.

"Additionally, users can now configure automated Required Weekly Test of the EAS1 triggered from the connected CAP-DEC1."

Available onboard GRLogger logging software captures digital copies of your EAS logs and can send individual, daily, weekly or monthly log files by email in addition to storing them locally and/or uploading them to a webserver using SFTP.

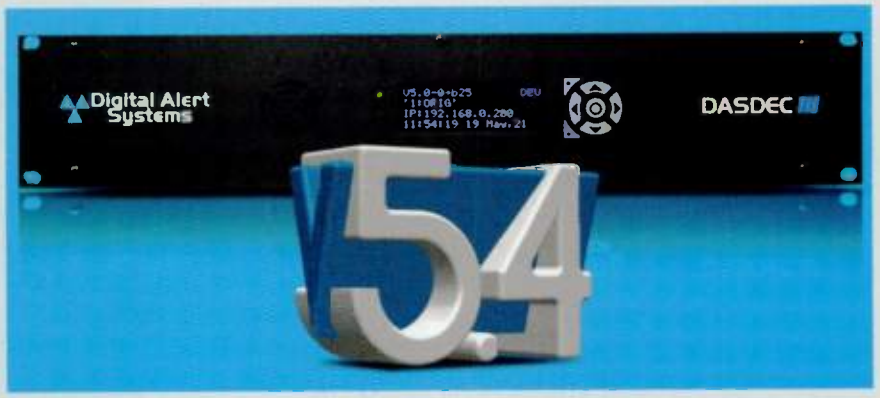
The company said work is underway to add the new MEP event code specified by the commission.

Info: *www.gorman-redlich.com*

World Radio History

Tech Update

Digital Alert Systems Issues V5.4 Software



Digital Alert Systems has released Version 5.4 software for all 64-bit-compatible DASDEC and One-Net emergency alerting and messaging systems.

"This is the fifth release in the Version 5 series, with several substantial and subtle changes for current customers and for those looking to incorporate complete IP workflows," the company said.

The update includes an option for an AoIP interface with AES67 and the Livewire routing protocol. This interface is part of Digital Alert Systems' "EAS at the Edge" collaboration with Telos and Nautel, showcasing hybrid virtualization that can modernize a station by integrating the DASDEC into a full AoIP airchain, eliminating multiple up-/down-conversions and streamlining EAS/CAP compliance.

"When a Nautel GV² transmitter is coupled with EAS-Net, the combined solution provides synchronous alerts over all HD outputs, including RDS and Visually Integrated Display Symbology (VIDS) graphical displays," the company said. This concept earned a Radio World "Best of Show" Award this spring and the SBE Technology Award at the society's national meeting.

On the security side, Version 5.4 software expands support for single sign-on with the addition of OpenID Connect, a system that large corporations and enterprises use to manage access to systems more easily through separately authenticated accounts.

The update includes the new Missing and Endangered Persons (MEP) event code.

The update is free to customers who have any iteration of Version 5 software, who are enrolled in the company's Software Assurance Plan, who have purchased a new DASDEC unit or who have taken advantage of its UpTrade program since April 2022.

Info: *www.digitalalertsystems.com*

EAS Monitoring - Maximize Your Value with the ASI2816

The ASI2816 seamlessly monitors up to 16 AM/FM/HD Radio and Weather Band channels, ensuring you receive every critical EAS broadcast. It enhances your existing EAS setup by providing real-time SNMP alerts for signal loss or silence, streaming audio from remote locations, and directly feeding an EAS receiver via its balanced analog outputs. Its modular design makes scaling your system both easy and cost-effective.

Contact AudioScience Today:
www.audioscience.com
salesasi@audioscience.com

World Radio History

Tech Update

RFmondial Gives RF DAB Receiver a Major Update

RFmondial's RF-DAB measurement and monitoring receiver has received a major update. The company says it adds valuable functionality.

"Data services features like service following (FIG006/021/024) analysis and transparent data channel (TDC) monitoring, as well as seven days of storage of dynamic labels, have been implemented. The latter is quite helpful if irregularities have been reported by the listeners."

Also, the company's DAB Logging System RFarchiver has been integrated into the platform, which will be helpful for instance to perform mandated logging of broadcasting content digitally. The complete EDI is stored in a database for a selectable duration (e.g. 90 days), and can be remotely accessed at any time, played back decoding all audio and data services, live in your HTML5 browser.

Further, the platform supports streaming and export of EDI as well as download of audio. EDI streams can be stored directly off-air using the integrated RF frontend, or the system can be installed in a virtual environment and receive EDI from external sources. Until now, this task had been offered in a separate product, the RFarchiver, but now everything has been streamlined into one platform.

The system is modular to adapt to customer needs and supports the broadcasting standards FM, AM and DRM.

Info: *www.rfmondial.com/products/dab/monitoring-receiver*

Tech Update

PowerTracker Monitors Transmitter Site Voltage

"One of the most important conditions to monitor at a remote transmitter site is the incoming AC line voltage," says Sine Control Technology.

"Because most sites are at the end of a very long run of utility wiring, the power supplied is susceptible to voltage variations. These can be long-term voltage sags or rises, as well as short-term dips and surges caused by other users on the electrical grid."

Variations in supply voltage will have an effect on transmitter performance and should be monitored so that station personnel are alerted if the AC supply voltage goes outside of normal limits.

"PowerTracker allows transmitter site AC voltage to be monitored remotely using virtually any transmitter remote control/telemetry system," it says.

PowerTracker connects to the AC mains as close to the utility entry point as practical. It generates a low-voltage DC output that is proportional to the AC input voltage.

"This DC sample is fed to a telemetry input channel on the transmitter site's remote control system. Once the system is calibrated, the DC sample can be monitored remotely to indicate the site's AC supply voltage. The remote control system's HI and LO limits can be set to trigger an alarm if the DC sample goes out of tolerance."

PowerTracker can monitor single-phase as well as three-phase Wye and three-phase Delta service. Any line voltage can be monitored: 120, 208, 240, 277 or 480 volts. Only one PowerTracker unit is needed to monitor all three phases. "Once installed, PowerTracker needs no adjustment or maintenance." List price is $495.

Info: *www.henryeng.com*

World Radio History

Tech Update

MPB Offers CSA Spectrum Analyzer

The MPB CSA is real-time spectrum analyzer designed for field work. The manufacturer highlights its light weight, simple user interface, fast startup and user-replaceable batteries.

"At the same time, the MPB CSA provides excellent RF performances and the most important RF analysis functions that assist the work of RF service technicians, networking operation engineers, installation and maintenance teams as well as RF system designers."

MPB says it can be used for maintaining or installing transmitters; identifying signals that cause artifacts; checking cables, amplifiers and antennas; assessing design issues and signal quality in radio, TV and multimedia; measuring electric field strength in an environment or in lab applications; and other applications.

With a frequency range of 10 Hz to 4 GHz, the analyzer presents readings on a 7-inch color touch screen. "A toolset of useful signal measurements are available, such as channel power, occupied bandwidth, adjacent-channel power, spectrum emission mask, AM/FM/PM, frequency counting and spurious measurements. In addition to spectrum analysis, spectrograms display both frequency and amplitude changes over time."

Time-correlated measurement views can be selected to facilitate signal analysis that includes frequency hopping, pulse characteristics, modulation switching, settling time, bandwidth changes and intermittent signals. The MPB CSA can sweep over its entire frequency range in less than 350 ms, enabling the capture of broadband short, persistent signals.

Info: *www.mpbelectronic.com/compact-spectrum-analyzer-csa*

RJ45 Audio Made Easy

Audio Sentinel®+ Web/RJ

Web-based Analog Silence Detector

The Audio Sentinel + Web/RJ is a next-generation web-enabled two channel stereo silence and phase monitor with an integrated, transparent, 2×1 switcher. Designed to monitor two analog audio sources, one primary, the other back-up. When silence is detected on the primary input it can automatically switch to the back-up input via mechanical latching relays. It includes a browser-based HTML5 web interface and supports SSL/TLS email (Gmail, etc.), SMS-email notification, as well as SNMP. Its audio I/O features pluggable screw terminal-blocks and standard RJ45 audio jacks wired in parallel for ease of wiring.

2x16 DA/RJ G2

RJ45 Analog Distribution Amplifier

The 2×16 DA/RJ G2 analog stereo distribution amplifier is configurable for stereo (2×8) or monaural (1×16) output via internal jumpers. It is equipped with a stereo line level high-Z input, which accepts either a balanced RJ45 (+4 dBu) or unbalanced RCA (-10 dBV) source with eight active balanced low-Z stereo output amplifiers. Signal bypass relays are built-in with the balanced RJ45 input passively routing to RJ45 output one in the event of power loss.

Broadcast Tools is a Veteran Owned Business
Designed, Assembled and Supported
in WA State, USA.
www.broadcasttools.com

BROADCAST tools
PROBLEM SOLVED

World Radio History

Tech Update

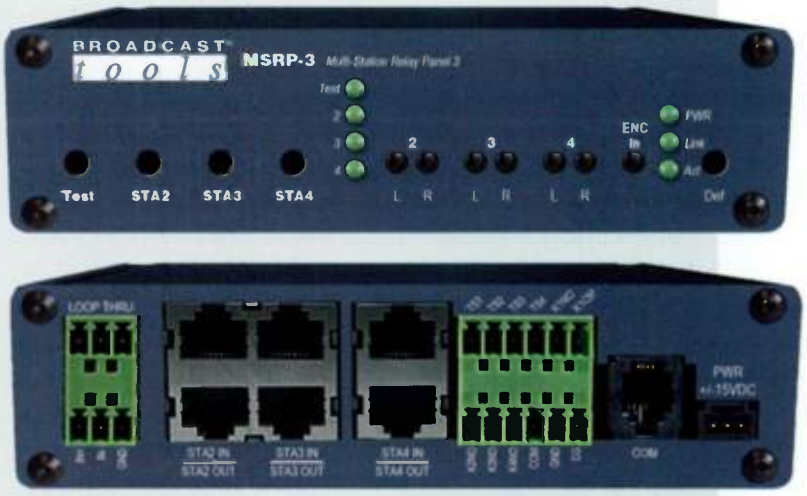
Broadcast Tools Ships New EAS Switcher

The MSRP-3 is a three-station analog stereo EAS relay/switcher, following in the footsteps of the original Multi-Station Relay Panel (MSRP) designed by Broadcast Tools for the Sage ENDEC in 1996.

"The MSRP-3 provides additional alert audio distribution and transparent audio interrupt switching for the Sage ENDEC and other EAS encoders," the company says.

"Together with the single balanced stereo switched audio interrupt relay built into the ENDEC, an ENDEC and MSRP-3 will provide interrupt switching for four stereo audio paths. Each alert insertion can occur simultaneously on one or more station outputs, but alerts cannot be overlapped."

Standard-pinout RJ-45 station audio input and output jacks allows for plug-and-play installation with Cat-5 or Cat-6 patch cables. The encoder audio input is a balanced monaural 3.81 mm pluggable terminal block, with pass-through. Control is via RS-232 serial port or optional TCP/UDP Ethernet port, and contact closure inputs. SPST test and station relay outputs are included to provide status.



A surge-protected universal switching desktop power supply with an IEC AC inlet is included. Three units may be mounted on the optional Broadcast Tools RA-1, a 1 RU rack shelf.

The company also offers several products for remote control applications including the Site Sentinel line and WVRC-4 Plus and WVRC-8 Plus systems.

Info: *www.broadcasttools.com*

SWITCH TO DIGITAL
And keep the rest
Add USB, Bluetooth, and solid state to your studio
12 or 8 channels
Ultra-slim 1-inch thin
AES3 RJ45 inputs
4 mic channels*
USB/Bluetooth direct-to-fader inputs*
Split presenter/caller output to VoxPro
Optional WheatNet-IP audio output app
DML-12 LYRIC
*Bluetooth available in DML-12 Lyric only
DML-8 VERSE
Replace your old console with a sleek new DML!
Call +1-252-638-7000 or email sales@wheatstone.com
AUDIOARTS ENGINEERING
https://wheatstone.com/dml-rw2024d
Wheatstone
Manufactured in North Carolina USA

World Radio History

Tech Update

WorldCast Introduces Ecreso FM Receiver

WorldCast Systems has launched the Ecreso RXR2 FM receiver, an addition to its transmitter family intended to simplify FM broadcasting.

"Designed for FM re-broadcasting applications and on-site modulation monitoring, the Ecreso RXR2 delivers exceptional performance and versatility, making it suitable for a wide range of broadcasting scenarios."

It offers multiple audio and MPX outputs, ensuring compatibility with existing infrastructures and facilitating integration with various systems and equipment.

The company said the RXR2 was designed for redundancy and reliability. Its web-based platform enables remote configuration and monitoring; this allows users to manage and optimize performance without the need for a physical presence on-site.

It comes with two independent FM tuners. The system automatically switches between them upon RF loss, guaranteeing continuous broadcasting. And the company said it is built on a platform that supports future enhancements, in analog and digital radio.

Info: *www.worldcastsystems.com*

Tech Update

MNC, SuiteLife Look to Leeward

MNC Software and SuiteLife Systems, companies that provide network monitoring, control and asset management systems, recently merged and now do business as Leeward Software. They called this "a natural succession to a longstanding partnership."

SuiteLife, in Signal Hill, Calif., was owned by Nigel Brownett, who launched it in 2012. MNC, based in San Diego, was owned and operated by David Allen and James Bloomfield, who founded MNC in 2008.

Leeward is owned and managed by all three and based in Signal Hill. Its systems are used to monitor and control networks, infrastructure, buildings and systems. Product lines include Axess, Mosaic and Tessera software and GPX Pro hardware.

Shown is a control screen for WHPT(FM), a Cox station in Sarasota, Fla., and its GatesAir transmitter.

Info: *www.mncsoftware.com/main*

BROADCAST EQUIPMENT EXCHANGE

TUNWALL RADIO

AM DIRECTIONAL CONTROL SYSTEMS

Now with SNMP v2c and web server

330-995-9642 www.tunwallradio.com

New high power, high gain antenna from Bext

Performance, Customer Service and Sturdiness is what customers like about Bext antennas

TFLHOP
Horizontally Polarized
Up to 60 kW power handling

bext.com 888 239 8462 BEXT

World Radio History

BROADCAST EQUIPMENT EXCHANGE

Rebuilt Power Tubes
1/2 the cost of New!

Se Habla Español

ECONCO

Se Habla Español

Tel: 800-532-6626 Web: www.econco.com
Intl +1-530-662-7553 Fax: +1-530-666-7760

Keeping you on the air since 1934

ISO 9001 Certified

NEW POWER TUBES

Triodes
Tetrodes
Pentodes

NEW SOCKETS & REPLACEMENT PARTS

Worldwide Availability

Made in the U.S.A.

Call (800) 414-8823
Int'l (650) 846-2800
Fax (650) 856-0705

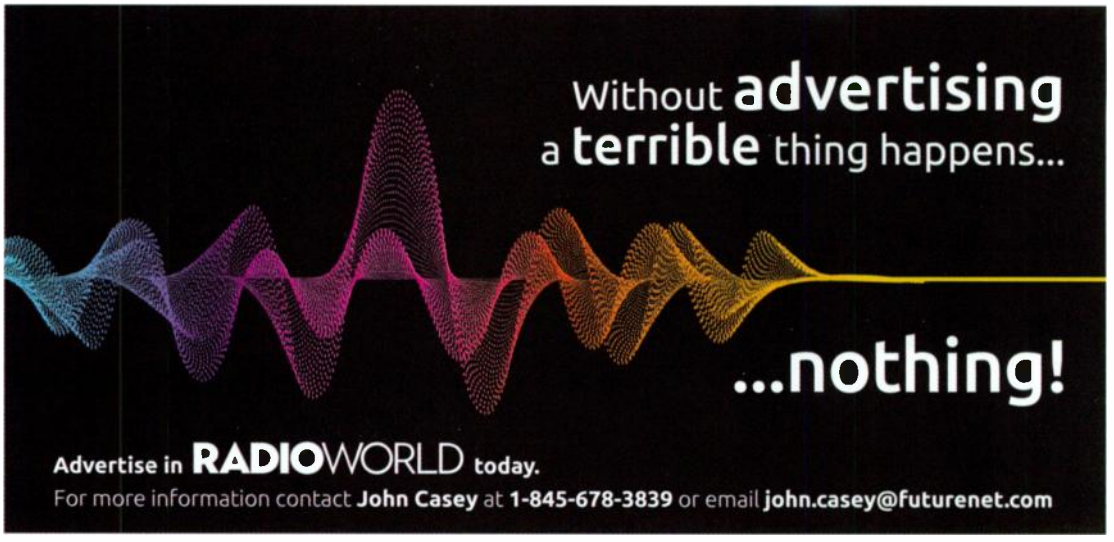
Visit our Website at
www.cpii.com/eimac

CPI
Communications & Power Industries

Oldies Music for Radio
RadioMusic.com
1-844-RADIO-MUsic
A Scott Studios Company

RF Specialties®
Your best source for all RF projects and beyond
rfspecialties.com

CORNELL-DUBILIER MICA CAPACITORS
FROM STOCK
VACUUM CAPACITORS
FROM STOCK
HIGH ENERGY CERAMIC CAPACITORS
SURCOM ASSOCIATES
5674 El Camino Real, Suite K
Carlsbad, California 92008
(760) 438-4420 e-mail: info@surcom.com
WWW.SURCOM.COM



World Radio History

DAB+ radio and public safety

How the Automatic Safety Alert will save lives

Writer

Carsten Zorger

Member of WorldDAB's Steering Board and director of the German DAB+ marketing body Digitalradio Büro Deutschland

In a world where natural disasters and emergencies are becoming increasingly common, the need for a reliable and efficient public safety communication system has never been more pressing.

In July 2021, the Ahr Valley, a picturesque region in Western Germany, was hit by unprecedented flooding. Torrential rainstorms overwhelmed the riverbanks. Despite weather warnings, many residents did not receive timely alerts, which could have provided them with the necessary time to evacuate or seek safety. The failure was not due to a lack of will or effort but a deficiency in the communication systems that were in place. Conventional methods, such as sirens and SMS alerts, proved inadequate in reaching everyone in a timely and effective manner. With 135 people dead, this event served as a catalyst for the development of a pioneering security system using DAB+ radio, designed to save lives and improve public safety worldwide.

Above
Plans for the Automatic Safety Alert system were announced in Berlin in June.

DAB+ comes to the rescue

DAB+ provides clearer sound quality, greater bandwidth for more stations, and the ability to broadcast additional data such as text and images. Unlike internet-based services, DAB+ does not rely on data networks or mobile phone towers, making it more resilient during natural disasters when other communication infrastructures may fail.

DAB+ radio is widely adopted in countries across Europe, Asia and parts of Africa, making it an ideal medium for a global emergency alert system. In Germany, DAB+ coverage is extensive, reaching almost the entire population, which made it an obvious choice for the foundation of a new emergency alert system following the Ahr Valley floods.

Introducing the ASA

The Automatic Safety Alert system represents a significant advancement in public safety communication.

The ASA system works by sending out safety alerts via the DAB+ radio network. These alerts can be transmitted in real time, ensuring that the public is informed of imminent dangers such as natural disasters, industrial accidents or terrorist threats. The European Telecommunications Standards Institute has played a crucial role in standardizing the ASA system, ensuring that it meets stringent technical specifications and can be adopted by countries worldwide.

World Radio History

The development and successful testing of the Automatic Safety Alert system is the result of a collaborative effort between WorldDAB and the Digitalradio Deutschland Association. The organizations worked closely together. WorldDAB provided the technical framework and standardization support necessary for ASA's integration into the existing DAB+ infrastructure, while the Digitalradio Deutschland Association focused on the practical implementation and public engagement aspects within Germany. This partnership ensured that ASA is not only technically sound but also aligned with the needs and expectations of both broadcasters and the public.

The DAB+ ASA system offers numerous advantages over traditional emergency alert mechanisms or FM radio:

1. Reliability: DAB+ broadcasts are less susceptible to interruptions, making ASA a reliable method for disseminating emergency alerts. Even during severe weather events, when mobile networks and internet services may fail, DAB+ signals can continue to reach the public.
2. Accessibility: ASA alerts can reach all DAB+ enabled devices, from radios in cars and homes to portable DAB+ receivers. This ensures that alerts can reach people in urban centers and remote areas, reducing the risk of anyone being left uninformed during a crisis.
3. Speed: The ASA system allows for the rapid transmission of alerts, providing real-time information that can be crucial in emergencies. The system's ability to inform the public quickly can save lives by giving people more time to evacuate or take protective measures.
4. Ease of Implementation: ASA leverages existing DAB+ infrastructure, making it easier and more cost-effective to implement compared to building new communication networks. Countries with established DAB+ systems can adopt ASA with minimal additional investment.
5. Global Reach: As DAB+ is already in use across many countries, the ASA system has the potential for worldwide implementation. By adopting a standardized approach, countries can ensure that their emergency alert systems are compatible.

Road to adoption

During the recent IFA (Internationale Funkausstellung) in Berlin and the German Warning Day on Sept. 12, the ASA system underwent testing to demonstrate its functionality and reliability in real-world scenarios. These events provided a critical platform to validate ASA's capabilities, showcasing how the system can broadcast emergency alerts effectively across DAB+ enabled devices. Similarly, on German Warning Day, ASA was tested alongside other national warning systems to ensure seamless integration and coordination.

The successful trials at both events bolster confidence that the ASA system will perform reliably in future emergencies, providing a vital layer of safety and communication for communities across Germany and beyond.

Above
A mockup shows how the ASA logo, near upper left, would be displayed on receiver packaging.

Certified for safety messages

To ensure the success of the ASA system, efforts are underway to standardize its implementation globally. This includes collaborations between countries, regulatory bodies and industry leaders to establish best practices and guidelines for the system's use. Certification programs for manufacturers have been introduced to ensure that devices meet the required standards for receiving ASA alerts, guaranteeing consistency and reliability.

A significant aspect of the ASA system's rollout is the development of a dedicated logo and branding, which will be used to identify devices and services that support ASA. This branding will help build public trust and recognition, making it easier for people to know which devices are capable of receiving emergency alerts, thus enhancing overall preparedness.

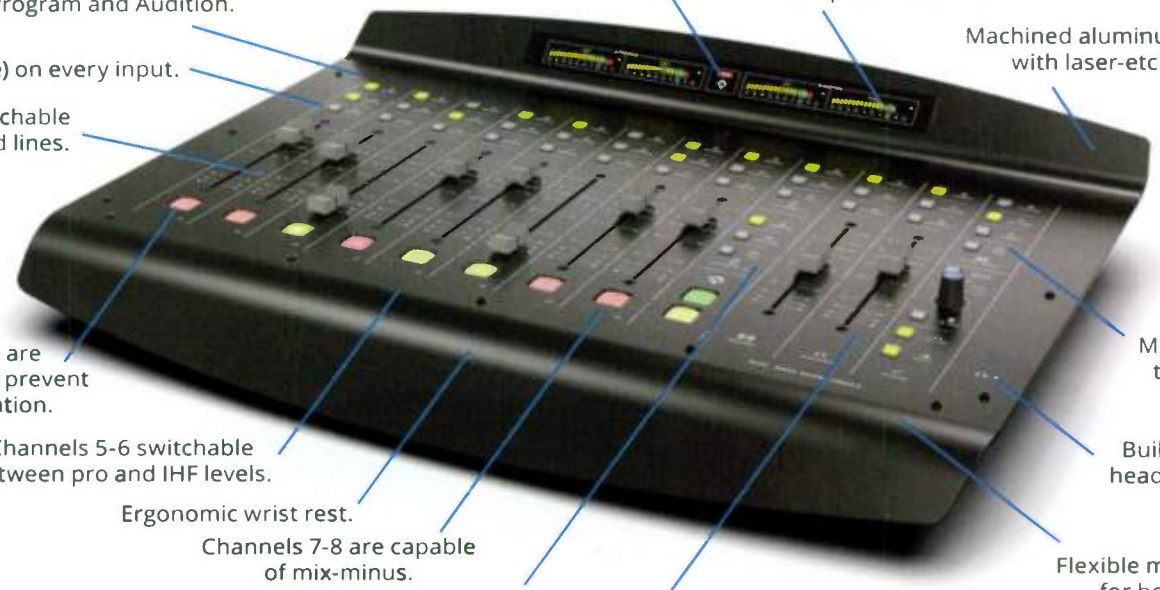
There is potential for ASA to be integrated with other technologies to create a comprehensive emergency alert ecosystem. This could include integration with mobile networks, internet-based platforms and even smart home systems, ensuring that alerts are delivered through multiple channels to maximize their reach and effectiveness.

As we move towards a future where ASA is widely adopted, the vision of a safer world, where everyone has access to timely and reliable emergency alerts, becomes a reality. Countries with DAB+ infrastructure are encouraged to implement ASA, ensuring that their citizens are better protected against the uncertainties of natural and man-made disasters.

More Info
www.worlddab.org/dab/asa-emergency-warnings.

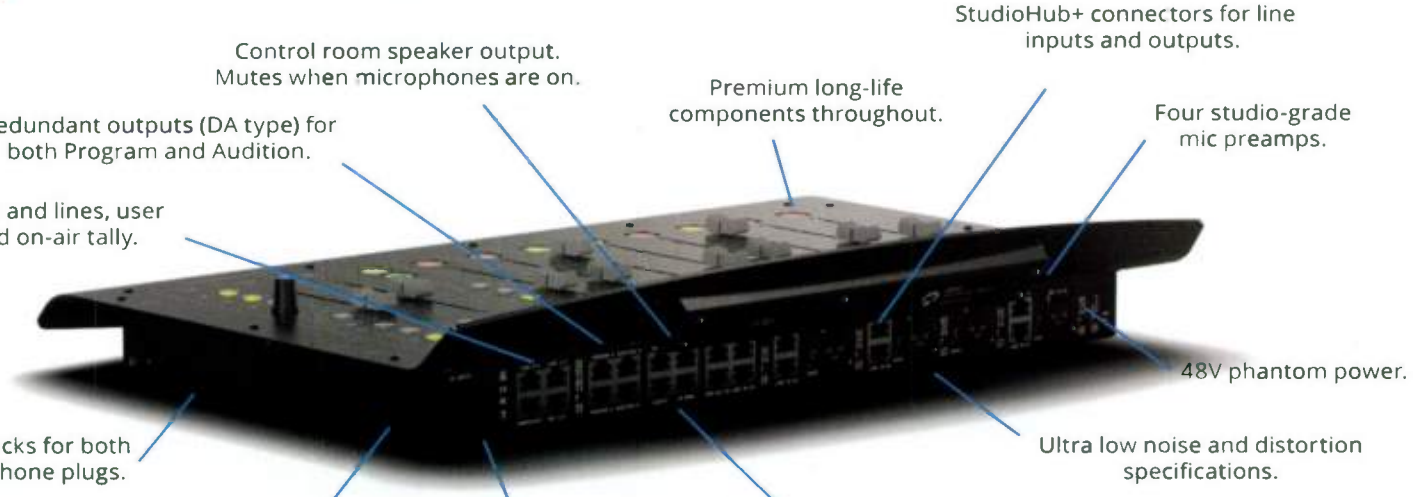
World Radio History

Double your bang.
For half the bucks.



BEST OF SHOW 2024 RADIOWORLD WINNER

RAVE! Radio mixing console.
$2,199 MSRP. Yes way.



© 2024 Angry Audio LLC

www.angryaudio.com/rave

World Radio History

DMX

GO FROM ANALOG TO AOIP IN A SNAP!

NEW! ACI for full playout and automation control.

RADIOWORLD BEST OF SHOW AT IBC 2024 WINNER

▲ YOUR MIX ENGINE

▲ YOUR ENTIRE STUDIO I/O

▲ YOUR ETHERNET SWITCH INSIDE
Expanded I/O, network studios, and more. WheatNet IP compatible.

IP audio networking, local I/O and mixing console in one.
Available in 8 or 16 channel frames. Ethernet switch included.
Plug in and ready for air. Just add CAT6 cable (actually, we include that too).

Engineered, manufactured and supported by Wheatstone. Call +1-252-638-7000 or email sales@wheatstone.com.

https://wheatstone.com/DMX-RW24d

AUDIOARTS ENGINEERING

Wheatstone

www.wheatstone.com | Manufactured, shipped, and supported 24/7 from North Carolina, USA

World Radio History