

# RADIO**WORLD**



## SOURCE & BOOK DIRECTORY 2016

Annual Reference Guide and Supplement to Radio World

ON THE AIR

# SANITIZED FOR YOUR PROTECTION

SOME WORDS SHOULD BE OBSCENE AND NOT HEARD



Eventide Broadcast Delays are designed to keep profanity off your air, and angry listeners, embarrassed advertisers, and the FCC off your back. We invented the obscenity delay and have a solution for stations large and small that provides up to 80 seconds of the highest quality revenue and license-protecting delay.

Our new HD compatible BD600, 24-bit delay, comes standard with AES/EBU, and provides up to 80 seconds of memory — twice as much as other delays. There are fully adjustable Delay and Dump functions, and a Sneeze function which "edits" audio entering the delay, allowing the host to sneeze, cough, or make a short comment without being heard on air.

The BD600 offers two different methods of delay buildup and

reduction: Eventide's catch-up and catch-down system, and an exclusive fast-entry-and-exit feature which allows starting a broadcast with the delay already built up to a safe amount and ending it with a rapid reduction of delay.

For HD, the BD600 offers MicroPrecision Delay™ mode which allows up to 10 seconds of delay to be adjusted in real time in 100 nanosecond increments. This is useful for synchronizing analog and digital signals while on-air, without audible artifacts, to maintain a seamless user experience.

Whatever your size, whatever your format, you can't expect to protect the integrity of your air and the foundation of your business without an Eventide Broadcast Delay in your rack.

# Eventide®

HD COMPATIBLE

One Alsan Way, Little Ferry, NJ 07643 tel.201.641.1200 [www.eventide.com](http://www.eventide.com)  
Eventide is a registered trademark and MicroPrecision Delay is a trademark of Eventide Inc. ©2005 Eventide Inc.

World Radio History

# New Technology at Your Doorstep

The turn of the new year brings a familiar bonus to accompany your latest Radio World: Your annual copy of our free Source Book & Directory.

Radio World's Source Book & Directory has enduring appeal. We invite every relevant company known to us to submit their contact info and brief descriptions of what they do to support the U.S. radio broadcast industry. Find them alphabetically in the Vendor & Product Directory section starting on page 20.

Companies also indicate the type of gear or service they offer; they are listed by category in the Supplier Cross Index starting on page 12.

On pages 4–10, suppliers highlight key products in the Profiles in Excellence Section. Starting on page 37 are sponsored product stories that originally appeared in Radio World over the past year or so.

Thank you to the companies who responded to our invitation, and especially those who support this Source Book with their advertising.

Suppliers, if we missed you or you didn't reply to our invitation, email me at [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com) for next year.

*Paul McLane*  
Editor in Chief

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Vendor & Product  
Directory

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Product Stories





**COMREX**

# PROFILES IN EXCELLENCE

## Creating Content with ACCESS 2USB and CrossLock



when one network is flagging, and one USB data modem won't cut it. By bonding another 4G LTE USB data modem from a different provider, CrossLock will immediately take a look at the newly added data connection to find out how much bandwidth is available, while also factoring in latency and jitter information, and combine the two connections to take advantage of the bandwidth of both.

This can be an incredibly valuable tool for combining bandwidth from any IP data network, including Wi-Fi connections and 3G networks.

### Content matters.

This is not a new idea. There have been countless seminars on the importance of creating content over the course of 2015, at conferences all over the country. An increasingly important question becomes, however: is technology supporting the content you want to create?

### ACCESS 2USB

IP codecs, like Comrex ACCESS, have been on the market for years. While the ACCESS in particular is lightweight, easy to use, and industry leading in audio quality, many broadcasters remain concerned about network reliability. Will a codec stay online when connected to a 4G network? Is it, ultimately, trustworthy enough to be used in any context?

When broadcasting from crowded environments, there are often a variety of networks available. However, these networks are often overworked and crowded with thousands of users. Sometimes, there isn't as much bandwidth on an individual network as is necessary to support a high quality broadcast.

CrossLock is a tool that gives users the ability to manage multiple data connections and bond them together. This is particularly useful in scenarios



### CrossLock™ VPN

CrossLock works as a virtual private network (VPN); in essence, a private network configured within the larger public network of the Internet. This VPN creates a data "tunnel" between ACCESS codecs to keep data flowing along a certain channel. To make this VPN work, several complex data profiles are routed and directed to a single, simple port on the receiving codec. It's an elegant way to manage a lot of complicated data.

More than simply combining networks, CrossLock can also monitor each data connection individually and collectively, and, when necessary, apply the appropriate error correction, recovery, or concealment techniques to ensure that the audio and video data gets to its intended destination in the best shape possible. Because networks are unpredictable, having monitoring and maintenance tools in place is vital to ensure that instability is undetectable in a live broadcast. Additionally, a redundancy mode is also available, for situations in which redundancy is preferable to bonding.

A tool like CrossLock provides sufficient reliability standards to ensure that even riskier broadcasts can be carried off. So go ahead: do that crazy thing you know your listeners will love. We're right behind you.

**COMREX**  
BROADCAST RELIABLE**Comrex Corp.**19 Pine Rd.  
Devens, MA 01434-5068Phone: 978-784-1776  
Email: [info@comrex.com](mailto:info@comrex.com)  
Website: [www.comrex.com](http://www.comrex.com)

WHERE COULD YOU GO...

...IF YOU HAD  
ACCESS?

NEED ACCESS?  
CONTACT US:

1 800 237 1776  
info@comrex.com

NOW, YOU CAN GO TO EVEN MORE PLACES

ACCESS codecs now feature CrossLock™ VPN Technology for superior reliability from even more remote locations. With the ability to use multiple data networks simultaneously, CrossLock gives you not just a **redundancy mode** but also a breakthrough cellular **bonding mode** with the industry's most advanced Adaptive Management Engine...plus a whole new suite of improved BRUTE (BRIC UDP Transmission Enhancement) tools.



CrossLock™ VPN

Learn more at [www.comrex.com](http://www.comrex.com)

◁ ACCESS ▷  
2USB

WIRELESS CODEC FOR AUDIO OVER IP

COMREX  
BROADCAST RELIABLE

[www.comrex.com](http://www.comrex.com)



## The Ultimate Choice for Essential Radio Broadcast Signal Monitoring, Processing, and RDS Encoding AM / FM / HD / Internet Radio / RDS



- **INOMini 300 AES Distribution Amp Plus!**

A compact, DSP-based 1x3 DA specifically designed for AES digital audio. It reads and displays digital-signal metadata and features independent metering and audio level control on all outputs. A front-panel headphone jack lets you monitor the digital audio, and flashing alarms warn of level and phase problems; channels and phase can be swapped to correct for source errors. The INOMini 300 accepts any input sampling rate and can convert the output to the usual rates between 32 kHz and 192 kHz.

- **531N FM Modulation Analyzer with Network Interface**

Incorporating all the necessary features for station setup, regulatory compliance, and remote monitoring, Inovonics' 531N is the ultimate choice for essential FM signal monitoring. The 531N adds new monitoring and control features accessible remotely via the Web interface.

- **INOMini 635 FM/RDS SiteStreamer**

A Web-enabled FM receiver for remote signal monitoring. Installed at a transmitter/translocator site, it streams off-air audio or a wired audio feed back to any computer, tablet or mobile device. The browser interface enables remote tuning, displays audio levels and RDS data, and logs signal parameters. E-mail, SMS messaging and SNMP protocols are fully supported.

- **INOMini 636 NOAA Weather Receiver**

The INOMini 636 is a professional-use receiver specifically for broadcasts from the United States National Weather Service (NWS).

- **INOMini 632 FM/HD Radio Confidence Monitor/Receiver With Data Logging**

New added features to the popular INOMini 632, now incorporates a USB computer interface that lets you log Artist/Title information for archiving and playlist analysis.

For over 40 years Inovonics has maintained its position as a market leader of cost-effective and innovative radio broadcast products. Inovonics specializes in high-quality audio processors, RDS encoders, AM/FM modulation monitors, and off-air monitoring equipment for AM/FM/HD/RDS/Internet Radio.

Inovonics is located in Felton, California amidst the coastal redwoods in the Santa Cruz mountains (near Silicon Valley). All Inovonics' products are designed, manufactured, and assembled locally to insure quality from start to finish.

### PATH OF INNOVATION

In 2015 Inovonics added six new products to its growing product catalog including the Award-Winning JUSTIN 808 HD Radio Alignment Processor.

- **JUSTIN 808 FM/HD1 Time Alignment Processor**

A unique single-box processor that solves the problem of FM and HD1 time alignment. The JUSTIN 808 automates this process by maintaining time alignment between the analog FM and HD1 channels to within 23 microseconds or +/- 1 sample.

### NEW FOR 2016

Inovonics has an aggressive plan to launch no less than nine new products this year. New product announcements will be made in the first quarter of 2016 and will be showcased at the NAB show in Las Vegas in April. We look forward to greeting broadcasters once again at the NAB to share experiences and show our new product solutions.



Inovonics

5805 Hwy 9  
Felton, CA 95018

Tel: 831-458-0552  
Email:  
sales@inovonicsbroadcast.com  
Website:  
www.inovonicsbroadcast.com

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AVAILABLE!

# Like Clockwork



## ANALOG FM & HD1 PERFECTLY IN SYNC

Inovonics' new JUSTIN 808 maintains time alignment between analog FM and HD1 channels to within 23 microseconds ( $\pm 1$  sample)! No more lost words, stuttering, echoes, or level shifts. The entire sync process is 100% automatic. Using your actual off-air signal and powerful autocorrelation algorithms, the JUSTIN 808 keeps analog and digital modes faultlessly in step, hour after hour, day after day. Nothing to do but sit back and watch in awe as it does its thing.

- Precise time alignment between analog FM and HD1
- Automatic phase correction and RMS gain leveling
- Insert in either the FM or HD Radio AES digital feed
- Full Web interface for remote control, metering, etc.
- SMS/email alarms for loss of signal and loss of audio
- Extensive data logging with graphic display
- Auto failover with relay bypass

### What are users saying about the JUSTIN 808?

"I found it (JUSTIN 808) to be very easy to set up and install, but most importantly, it gets the job of time and amplitude alignment done perfectly, so the blend is virtually undetectable."

– Paul Shulins, *Greater Media Boston.*

### PLACE YOUR ORDER TODAY!



[inovonicsbroadcast.com/model/808](http://inovonicsbroadcast.com/model/808)  
[sales@inovonicsbroadcast.com](mailto:sales@inovonicsbroadcast.com)  
phone: 800-733-0552

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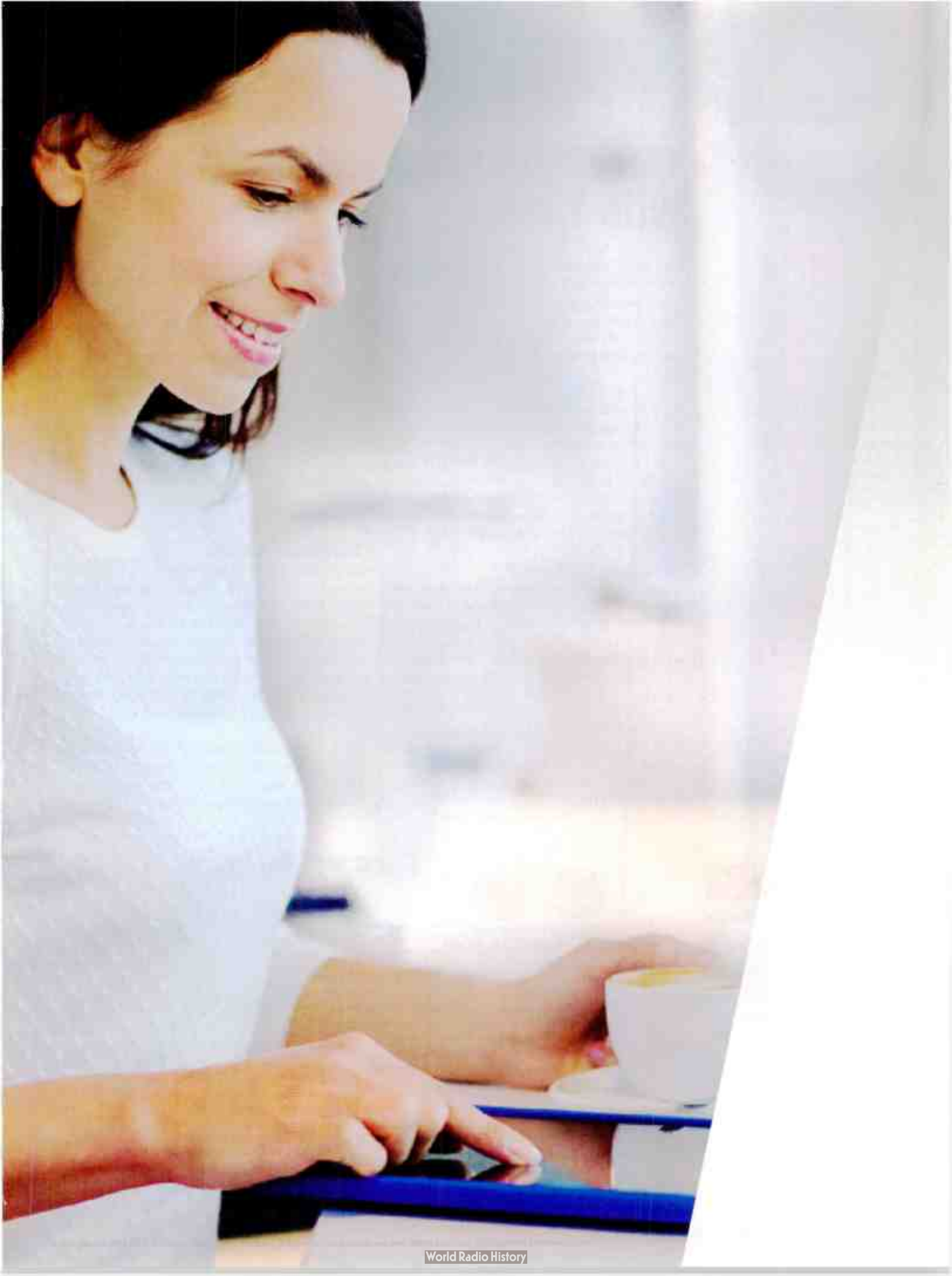
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# Transition From ISDN to IP With Tieline

As a radio engineer there's a pretty good chance you've encountered issues associated with ISDN line availability as Telcos worldwide phase out these networks. What's not as well-known is how to seamlessly transition from existing ISDN network infrastructure to an IP network environment.

Most broadcasters now clearly recognize that IP networks are more flexible, cheaper to upgrade and extremely reliable when configured correctly. As a result, broadcasters are using IP audio codecs to design and operate more adaptable broadcast networks with streamlined work flows, reduced operating costs and the ability to remote control them from anywhere in the world.

### Integrating ISDN and IP

Unless you are starting a new station or network, the transition to IP is likely to occur gradually over time. Expensive network equipment isn't usually replaced entirely, which means you require flexible solutions, which offer connectivity over IP, as well as ISDN, for the foreseeable future.

The Tieline Genie and Merlin families of codecs deliver maximum flexibility by allowing you to connect over IP, SIP, ISDN and POTS networks as required. This means you can upgrade your network over time.

Simply purchase optional "U" or "S/T" ISDN G5 modules, or POTS G5 modules, insert them in the codec, and you are ready to connect over ISDN, POTS, IP or SIP on demand.

### Rock-Solid Tieline IP Solutions

Thousands of Tieline codec owners have been using IP successfully over the public internet for over a decade! In fact, way back in 2004 Tieline was the first codec manufacturer to offer IP, ISDN and POTS solutions from a single codec. Today, Tieline's SmartStream PLUS dual redundant streaming software has set the benchmark for IP streaming reliability over the public internet.

### Save Money with IP

Like many other engineers, you will probably discover that the cost of upgrading your equipment to IP will actually save you money. How can that be? Well, by using an affordable broadband IP link, you can save yourself the cost of expensive ISDN, satellite and MPLS network access. This can save you hundreds or even thousands of dollars every month! At that rate it won't take long to pay for a couple of codecs.

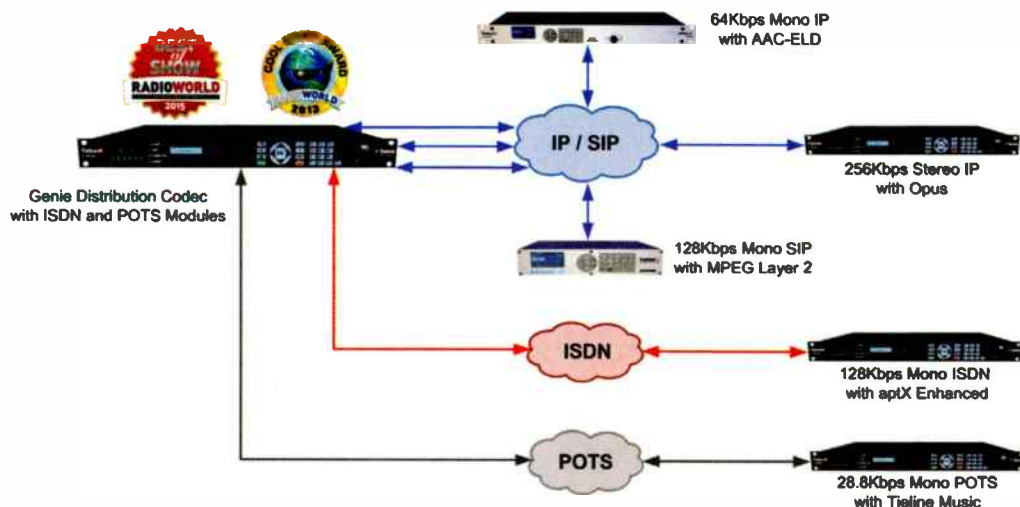
Click [www.tieline.com/ISDN-IP](http://www.tieline.com/ISDN-IP) to download Tieline's free "Transitioning from ISDN to IP" eBook and learn more about how you can save money and transition seamlessly from ISDN to IP.

**Tieline**  
The Codec Company

Tieline USA

7202 East 87th Street  
Suite #116  
Indianapolis, IN 46256

Phone: 317-845-8000  
Email: [sales@tieline.com](mailto:sales@tieline.com)  
Website: [www.tieline.com](http://www.tieline.com)



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broadcasters will be using  
Tieline in**

**RIO**

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**Manage 6 Simultaneous Remotes with Merlin PLUS**



**Merlin**  
**PLUS**

Rapidly expand your remote capability with the multi-award winning Merlin PLUS. Manage up to 6 bidirectional mono connections with IP, ISDN or POTS codecs, or smartphones using Report-IT, saving money on codec hardware costs and reducing studio rack space requirements.

**Contact your Dealer Today**

[www.tieline.com](http://www.tieline.com)

317-845-8000

**Tieline**   
The Codec Company



# SUPPLIER CROSS INDEX

This section helps you locate suppliers of types of equipment and service. Find contact information for these companies in the Vendor & Product Directory section. This list is based on information provided by the companies; suppliers are listed only if they checked a given category.

## Acoustic and Building Materials

Acoustics First  
BSW  
Michael Patton & Associates  
On-Air Lights  
RAM Systems  
RealTraps Acoustics  
WhisperRoom Inc.

## Antennas, Feedline and Wavegrid

Aldena Telecomunicazioni SRL  
AM Ground Systems  
Bext  
Broadcast Partners  
BSW  
Christian Community Broadcasters  
Coaxial Dynamics  
Dielectric LLC  
Electronics Research Inc. (ERI)  
Elenos SRL  
Jampro Antennas Inc.  
Kintronic Labs Inc.  
LBA Technology Inc.

Michael Patton & Associates  
Myat Inc.  
Nott Ltd.  
Nova Electronics  
OMB America  
Orbital Media Networks Inc.  
Progressive Concepts  
Propagation Systems Inc. - PSI  
R.V.R. USA  
Shively Labs  
Transcom Corporation  
Transradio SenderSysteme Berlin AG  
Tunwall Radio  
V-Soft Communications

## Associations and Organizations

Christian Community Broadcasters  
leobroadcast services group

## Audio Accessories

AEQ Broadcast International Inc.  
Broadcast Devices Inc.

Broadcast Partners  
Broadcast Tools Inc.  
Broadcast Warehouse Ltd.  
BSW  
DEVA Broadcast LLC  
Heil Sound Ltd.  
Henry Engineering  
JK Audio Inc.  
Klotz Communications America  
KRK Broadcast Monitors  
Logitek Electronic Systems  
Michael Patton & Associates  
O.C. White Co.  
On-Air Lights  
PreSonus Audio Electronics  
Progressive Concepts  
Radio Systems  
RAM Systems  
Redding Audio LLC  
RTW GmbH & Co. KG  
SAS Sierra Automated Systems & Engineering  
Sonifex Ltd.  
Titus Technological Laboratories

Wheatstone Corp.  
Yellowtec USA

## Audio Delays - Profanity and Diversity

25-Seven Systems  
Bay Country Broadcast Equipment Inc.  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW  
DaySequerra  
GlenSound  
Independent Audio  
Logitek Electronic Systems  
Michael Patton & Associates  
Progressive Concepts  
Sonifex Ltd.

## Audio Distribution, Between Locations

AEQ Broadcast International Inc.  
Arrakis Systems  
AVT Audio Video Technologies GmbH  
Axel Technology  
Bay Country Broadcast Equipment Inc.  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW  
BW Broadcast  
DaySequerra  
DEVA Broadcast LLC  
Digigram  
Elenos SRL  
Inovonics  
Jünger Audio USA  
Klotz Communications America  
Logitek Electronic Systems  
Michael Patton & Associates  
Netia  
Omnia Audio, a Telos Alliance Co.  
Orban  
Orbital Media Networks Inc.  
Progressive Concepts  
SAS Sierra Automated Systems & Engineering  
Sonifex Ltd.  
Telos Systems, a Telos Alliance Company  
Tieline USA  
TransMedia Radio Networks  
Wheatstone Corp.  
WinMedia  
WorldCast Systems

## Audio Loggers

Arrakis Systems  
Axel Technology  
Axia Audio, a Telos Alliance Co.  
Broadcast Electronics / Commotion  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW  
Independent Audio  
Netia  
OMT Technologies  
Prism Media Products Inc.  
Pristine Systems Corp.  
Sonifex Ltd.  
Stirlitz Media

## Audio Processing, On-Air

AEQ Broadcast International Inc.  
Arrakis Systems  
AudioScience Inc.  
AVT Audio Video Technologies GmbH  
Axel Technology  
Bay Country Broadcast Equipment Inc.  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW  
BW Broadcast  
DaySequerra  
DEVA Broadcast LLC  
Digigram  
Elenos SRL  
Inovonics  
Jünger Audio USA  
Klotz Communications America  
Logitek Electronic Systems  
Michael Patton & Associates  
Netia  
Omnia Audio, a Telos Alliance Co.  
OMT Technologies  
Orban  
PreSonus Audio Electronics  
Progressive Concepts  
Smarts Broadcast Systems  
Wheatstone Corp.  
Yellowtec USA

## Audio Processing, Production

Arrakis Systems  
AudioScience Inc.  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW

## Low Power or Full Power the easiest path to EAS/CAP compliance



### the DASDEC-II from Digital Alert Systems

If you're looking to expand or streamline operations and EAS/CAP compliance seems to be an issue, you need the product and the people that know how to make it easier, and there's no better partner than Digital Alert Systems.

With multiple award winning products, a flexible platform, direct network integration with the top automation companies, no other company can match the power and experience of Digital Alert Systems.

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Digigram  
Elenos SRL  
Eventide  
Fraunhofer IIS  
Independent Audio  
Jünger Audio USA  
Klotz Communications  
America  
Lawo Group USA  
Logitek Electronic Systems  
Michael Patton & Associates  
Netia  
OMT Technologies  
Orban  
PreSonus Audio Electronics  
Prism Media Products Inc.  
Redding Audio LLC  
Smarts Broadcast Systems  
Wheatstone Corp.  
WorldCast Systems  
Yellowtec USA

**Audio Routing and Distribution Within a Facility**  
AEQ Broadcast International Inc.  
Arrakis Systems  
AudioScience Inc.  
Axia Audio, a Telos Alliance Co.  
Barix Technology  
Broadcast Devices Inc.  
Broadcast Partners  
Broadcast Tools Inc.  
Broadcast Warehouse Ltd.  
BSW  
ESE  
Glensound  
Henry Engineering  
Independent Audio  
Klotz Communications America  
Lawo Group USA  
Lectrosonics Inc.

Logitek Electronic Systems  
Michael Patton & Associates  
Paravel Systems  
SAS Sierra Automated Systems & Engineering  
Sonifex Ltd.  
Tieline USA  
Wheatstone Corp.

## Automation, Storage and Logging

AEQ Broadcast International Inc.  
Arctic Palm Technology Inc.  
Arrakis Systems  
Axel Technology  
Broadcast Electronics / Commotion  
Broadcast Partners  
Broadcast Software International  
Broadcast Tools Inc.

Broadcast Warehouse Ltd.  
BSW  
Burli Software  
Digital Jukebox  
ENCO Systems Inc.  
Michael Patton & Associates  
Myers  
Netia  
OMT Technologies  
Paravel Systems  
Pristine Systems Corp.  
RCS  
SAS Sierra Automated Systems & Engineering  
SF Corp.  
Smarts Broadcast Systems  
Stirlitz Media  
UnattendedWeather.com  
WideOrbit  
WinMedia  
Yellowtec USA

## Consoles, Mixers, Control Surfaces

AEQ Broadcast International Inc.  
Arrakis Systems  
Axel Technology  
Axia Audio, a Telos Alliance Co.  
Bay Country Broadcast Equipment Inc.  
Broadcast Partners  
Broadcast Tools Inc.  
Broadcast Warehouse Ltd.  
BSW  
GatesAir  
Glensound  
Henry Engineering  
JK Audio Inc.  
Klotz Communications America  
Lawo Group USA  
Logitek Electronic Systems  
Michael Patton & Associates  
PreSonus Audio Electronics  
Progressive Concepts  
Radio Systems  
RAM Systems  
SAS Sierra Automated Systems & Engineering  
Sandies  
SF Corp.  
Sonifex Ltd.  
Tascam  
Wheatstone Corp.  
Yellowtec USA

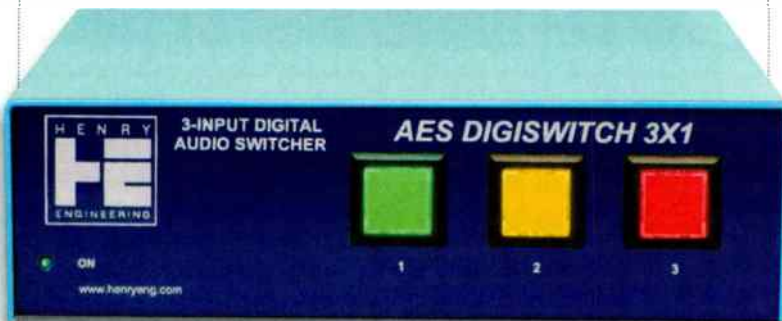
## Codecs, Hardware and Software

AEQ Broadcast International Inc.  
AVT Audio Video Technologies GmbH  
Barix  
Bay Country Broadcast Equipment Inc.  
Broadcast Partners  
Broadcast Tools Inc.  
Broadcast Warehouse Ltd.  
BSW  
BW Broadcast  
CircuitWerkes Inc.  
Comrex Corp.  
DEVA Broadcast LLC  
Digigram  
Fraunhofer IIS  
GatesAir  
Glensound  
Henry Engineering  
JK Audio Inc.  
Jünger Audio USA  
LineQ  
Moseley Associates Inc.  
Orban  
Orbital Media Networks Inc.  
Prism Media Products Inc.  
Progressive Concepts  
SAS Sierra Automated Systems & Engineering  
Sonifex Ltd.  
Telos Systems, a Telos Alliance Company  
Tieline USA  
WorldCast Systems

## Consultants and Contract Engineers

AEQ Broadcast International Inc.  
AM Ground Systems  
Broadcast Partners  
Christian Community Broadcasters  
Communications Technologies Inc.  
Doug Vernier, Telecommunications Consultants  
Evans Engineering Solutions  
Graham Brock Inc.  
Hammett & Edison Inc., Consulting Engineers  
JHBC Broadcast Consulting GmbH  
LBA Technology Inc.  
Michael Patton & Associates  
Mueller Broadcast Design  
Nova Electronics  
Owl Engineering

NEW FOR 2016



## SWITCH IT UP!

Henry's new AES DigiSwitch 3X1 lets you switch between three AES digital audio sources.

Bit-accurate, zero latency, remotely controllable.

Cool!



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**[towerinfo@sabreindustries.com](mailto:towerinfo@sabreindustries.com)**

World Radio History

# SUPPLIER CROSS INDEX

Oratory Consulting  
V-Soft Communications  
Yellowtec USA

## Content Syndication and Formats

Orbital Media Networks Inc.  
Pulse Beam Radio  
TransMedia Radio Networks  
UnattendedWeather.com

## Dealers and Distributors

305 Broadcast  
Antenna ID Products-  
Tower Signs  
Bohn Broadcast  
Broadcast Bionics  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW  
Christian Community  
Broadcasters  
Independent Audio  
LBA Technology Inc.  
Lightner Electronics Inc.  
LineQ  
Nova Electronics

Orbital Media Networks Inc.  
Progressive Concepts  
Redding Audio LLC  
Yellowtec USA

## Digital Audio Editing and Production

Broadcast Partners  
BSW  
Digigram  
ENCO Systems Inc.  
FINE Productions  
Independent Audio  
Netia  
PreSonus Audio Electronics  
Prism Media Products Inc.  
Pristine Systems Corp.  
Smarts Broadcast Systems  
Tascam  
Wheatstone Corp.  
WinMedia  
Yellowtec USA

## Documentation Tools/Software

Arctic Palm Technology Inc.  
Axia Audio, a Telos Alliance Co.  
BSW

NeoGroupe  
V-Soft Communications

## Electronic and Electric Components

BSW  
Goodrich Enterprises  
Information Station Specialists  
KRK Broadcast Monitors  
LBA Technology Inc.  
Pro-Comm Inc.  
Progressive Concepts  
SF Corp.

## Emergency Signaling and Alerting, EAS

Alert FM  
AVT Audio Video  
Technologies GmbH  
Broadcast Partners  
BSW  
Christian Community  
Broadcasters  
Crown Broadcast IREC  
Digital Alert Systems  
Gorman Redlich Mfg. Co.  
Michael Patton & Associates  
Progressive Concepts

Sage Alerting Systems  
Sonifex Ltd.

## Equipment Rental and Leasing

Broadcast Partners  
Elenos SRL  
Glensound  
Michael Patton & Associates

## Facility Design and Architecture

AM Ground Systems  
BSW  
Communications  
Technologies Inc.  
Graham Studios  
Michael Patton & Associates  
Nott Ltd.  
Nova Electronics  
Yellowtec USA

## Microphones and Mic Accessories

Audio-Technica  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW

DPA Microphones Inc.  
Electro-Voice  
Heil Sound Ltd.  
Henry Engineering  
Independent Audio  
Lectrosionics Inc.  
Michael Patton & Associates  
O.C. White Co.  
Progressive Concepts  
Redding Audio LLC  
Yellowtec USA

## Microwave, STL and RPU Equipment

AEQ Broadcast  
International Inc.  
Bay Country Broadcast  
Equipment Inc.  
Bext  
Bohn Broadcast  
Broadcast Partners  
Broadcast Warehouse Ltd.  
BSW  
BW Broadcast  
Davicom, a division of  
Comlab Inc.  
GatesAir  
LineQ



"I enjoy knowing the people that run Smarts, because it makes me feel confident that they will address my concerns. They are problem solvers. They help my radio station."

- Laurie Prax, KVAK AM & FM/Valdez, AK

"I can't say enough good things about Smarts Broadcast. They have saved my company lots of money over the years, and they've also made it a lot easier to operate a radio station. I can't remember the last time we had a problem. It runs that seamlessly."

- Mark Jensen, MWB Broadcasting/York, NE



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# SUPPLIER CROSS INDEX

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OMB America  
Pro-Comm Inc.  
Progressive Concepts  
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Commotion  
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Digital Jukebox  
Elenos SRL  
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Alliance Company  
Teline USA  
WideOrbit  
WinMedia

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Michael Patton & Associates

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Broadcast Partners  
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 BSW  
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 FM Services  
 Ice Crackers Inc.  
 Jampro Antennas Inc.  
 Kintronic Labs Inc.  
 LBA Technology Inc.  
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 Nott Ltd.  
 Nova Electronics  
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 Sabre Industries Inc.

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AM Ground Systems  
 Armstrong Transmitter Corp.  
 Broadcast Electronics / Commotion  
 Broadcast Partners  
 Broadcast Warehouse Ltd.  
 BSW  
 BW Broadcast

Christian Community Broadcasters  
 Coaxial Dynamics  
 Continental Electronics Inc.  
 Crown Broadcast IREC  
 Davicom, a division of Comlab Inc.  
 DEVA Broadcast LLC  
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# VENDOR & PRODUCT DIRECTORY

This section is an alphabetical listing of industry suppliers for the U.S. radio broadcasting community. To find suppliers by product category, see the Supplier Cross Index section. Suppliers, did we miss you? Email [radioworld@nbmedia.com](mailto:radioworld@nbmedia.com) so we can send you the data form next year.

## 25-SEVEN SYSTEMS, A TELOS ALLIANCE CO.

1241 Superior Ave.  
Cleveland, OH 44114  
Angi Roberson, Director of Marketing  
216-241-7225  
Email: [inquiry@telosalliance.com](mailto:inquiry@telosalliance.com)  
Website: [www.telosalliance.com](http://www.telosalliance.com)

**Products/Services:** 25-Seven Systems, a part of The Telos Alliance, specializes in audio technologies and products that address unique problems facing radio broadcasters, networks and content providers. Our broadcast delays, time management and watermark monitoring and processing products result in more efficient and profitable radio operations.



## 305 BROADCAST

2561 NW 74th Ave., #16  
Miami, FL 33122  
Anthony Gervasi, Sales Manager  
855-305-3058  
Email: [info@305broadcast.com](mailto:info@305broadcast.com)  
Website: [www.305broadcast.com](http://www.305broadcast.com)

**Products/Services:** Miami headquartered, 305 Broadcast is a well-known international distributor of broadcasting equipment. Our strategic location allows us to facilitate the delivery of our products and services to any customer across the globe. We are an authorized dealer for the most respected and recognized brands in the broadcast industry.

## ACOUSTICS FIRST

2247 Tomlyn St.  
Richmond, VA 23230  
804-342-2900; 888-765-2900  
Email: [info@acousticsfirst.com](mailto:info@acousticsfirst.com)  
Website: [www.acousticsfirst.com](http://www.acousticsfirst.com)

**Products/Services:** Acoustic treatments products and services.

## AEQ BROADCAST INTERNATIONAL INC.

4121 SW 47 Ave., Suite 1303  
Fort Lauderdale, FL 33314  
Peter Howarth, Management,  
Business Coordination  
800-728-0536  
Email: [sales@aeqbroadcast.com](mailto:sales@aeqbroadcast.com)  
Website: [www.aeqbroadcast.com](http://www.aeqbroadcast.com)

**Products/Services:** Communications equipment,

audio mixers, routing systems and other solutions for the broadcasting industry for more than 30 years. AEQ is a well-known equipment and service provider at international sport events. AEQ has worldwide presence through its distributor network and holds offices in USA, Portugal and Spain.

## ALDENA TELECOMUNICAZIONI SRL

Via per Vighignolo 6/8  
Settimo Milanese (MI) 20019 ITALY  
Carlo Perotta, Sales  
+39-02-9039-0461  
Email: [aldena@aldena.it](mailto:aldena@aldena.it)  
Website: [www.aldena.it](http://www.aldena.it)

**Products/Services:** Radio and television antenna systems, tower spines & mechanical structures, patch panels, filters & combiners, cables connectors & accessories, RF design EMLAB software. Services: Antenna design, network planning, on-site support, commissioning, in-factory tests and training.

## ALERT FM

600 Jefferson St., Suite 1102  
Lafayette, LA 70501  
Matt Straeb, Exec Vice President  
601-709-4240 ext. 704  
Email: [mstraeb@gssnet.us](mailto:mstraeb@gssnet.us)  
Website: [www.alertfm.com](http://www.alertfm.com)

**Products/Services:** Alert FM/Alert Studio are text/voice-based emergency notification systems used by state/local governments. Alert Studio can originate CAP-based messages through media broadcasting, FM data subcarriers, SMS, email, smart phone applications and social media. Alert FM uses FM radio stations to provide redundant emergency notification capability.

## ALTRONIC RESEARCH INC.

P.O. Box 249, 621 Hwy. 202 W  
Yellville, AR 72687  
Doug Starkey, Sales  
870-449-4093  
Email: [dstarkey@altronic.com](mailto:dstarkey@altronic.com)  
Website: [www.altronic.com](http://www.altronic.com)

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Lawrenceburg, TN 38464  
Kevin Kidd, Owner  
866-227-2346  
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Website: [www.amgroundsystems.com](http://www.amgroundsystems.com)

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Tom Moyer, Sales/Owner  
610-458-8418  
Email: [antennaid@msn.com](mailto:antennaid@msn.com)  
Website: [www.antennaid.com](http://www.antennaid.com)

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## ARCTIC PALM TECHNOLOGY INC.

11 Camelot Cres.  
London, ON N5V 3L4 CANADA  
Stu Buck, President  
519-452-0002; 877-752-0002  
Email: [sales@arcticpalm.com](mailto:sales@arcticpalm.com)  
Website: [www.arcticpalm.com](http://www.arcticpalm.com)

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Marcellus, NY 13108  
315-673-1269  
Kevin Smith, Sales Technician  
Email: [kevin@armstrongtx.com](mailto:kevin@armstrongtx.com)  
Website: [www.armstrongtx.com](http://www.armstrongtx.com)

**Products/Services:** AM & FM broadcast exciters and transmitters, STL transmitters and receivers. Manufactures NWS transmitters for the National Weather Service.

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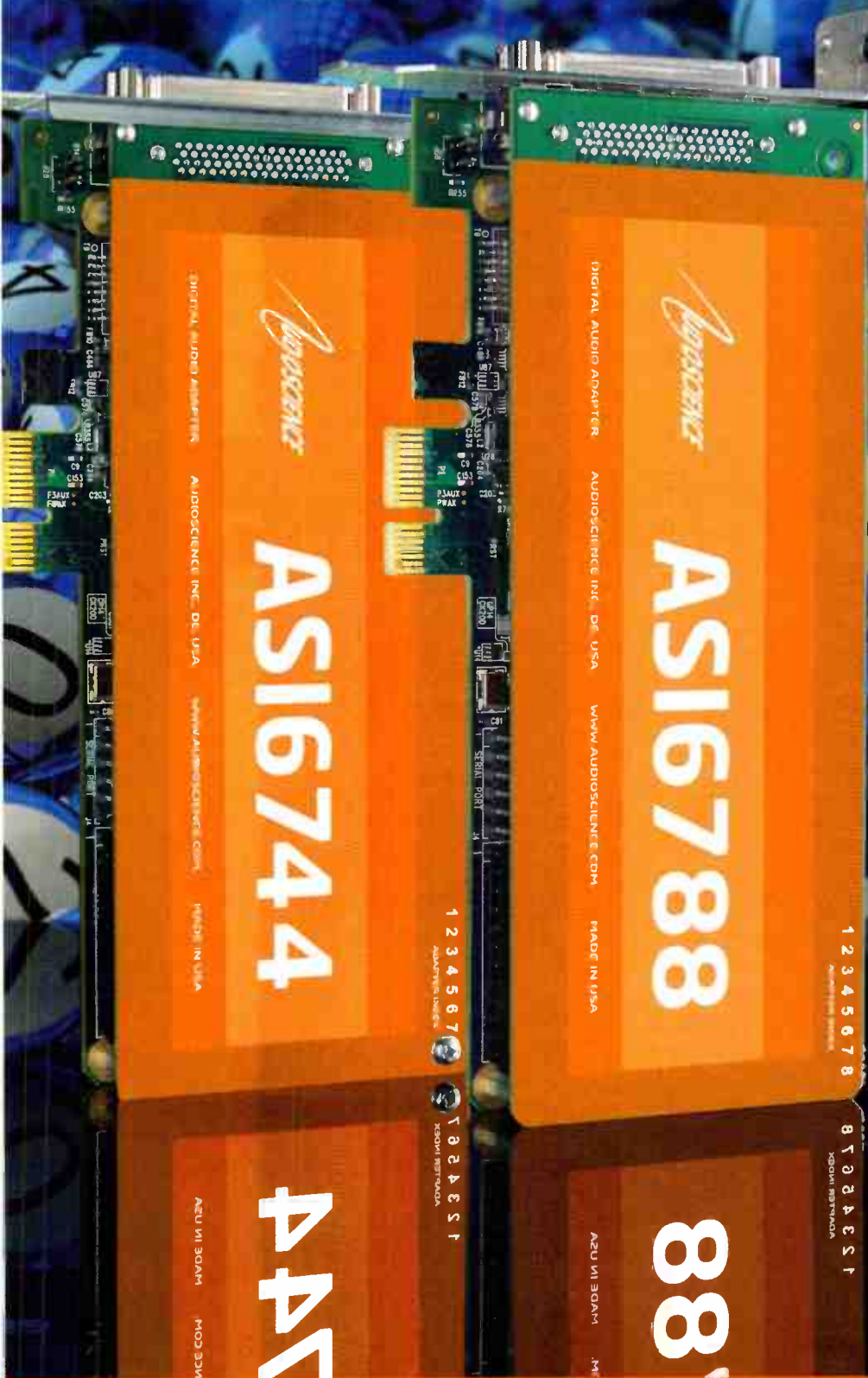
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Loveland, CO 80538  
Ben Palmer, Sales Manager  
970-461-0730  
*Email:* sales@arrakis-systems.com  
*Website:* www.arrakis-systems.com

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18121-C E. Hampden Ave., #216  
Aurora, CO 80013  
Cris Alexander, Managing Partner  
303-489-3454  
*Email:* info@aucont.com  
*Website:* www.aucont.com

**Products/Services:** Au Contraire Software Ltd. strives to provide engineers and others in the broadcast, wireless and land mobile industry with the information and tools they need for accurate allocation, design and construction.

## AUDIO-TECHNICA U.S. INC.

1221 Commerce Dr.  
Stow, OH 44224  
David Marsh, Director of Sales,  
Professional Markets  
330-686-2600  
*Email:* mediaproduction@atus.com  
*Website:* www.audio-technica.com

**Products/Services:** Audio-Technica, established in 1962, is a leading innovator in transducer technology. Renowned for the design and manufacture of high-quality audio products, the company offers a range of wired and wireless microphones, headphones and accessories for every broadcast, live-sound, recording and installed-sound need.

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42 Reads Way  
New Castle, DE 19720  
Richard Gross, President  
302-324-5333  
*Email:* rgross@audioscience.com  
*Website:* www.audioscience.com

**Products/Services:** AudioScience designs and manufactures advanced DSP-based digital audio peripherals for the OEM, broadcast, installed sound and entertainment markets. We support industry standards such as PCI Express, MPEG audio compression, CobraNet, Livewire and AVnu AVB audio networking, and the Windows and Linux operating systems.

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7510 Airport Rd.  
Mississauga, ON L4T 2H5 CANADA

Patrick Warr, President  
905-405-1144  
*Email:* sales@austin-insulators.com  
*Website:* www.austin-insulators.com

**Products/Services:** Austin Insulators designs and manufactures base insulators for guyed/self-supporting towers, safety core/failsafe guy insulators, static drain devices, bushing insulators, tower lighting transformers and red LED lighting systems for medium-wave (MF), long-wave (LF) and very low-frequency (VLF) antennas. Users worldwide include radio, naval, navigation and timing broadcasters.

## AVT AUDIO VIDEO TECHNOLOGIES GMBH

Nordostpark 12  
Nuernberg, 90411 GERMANY  
Ulrike Lauterbach, Sales Manager  
+49-91-5271-0  
*Email:* info@avt-nbg.de  
*Website:* www.avt-nbg.de

**Products/Services:** High-quality IP, ISDN and E1 audio codecs as well as telephone hybrids/talk-show systems and DAB/DAB+ equipment. Magic Telephone Hybrids are available for POTS, ISDN and VoIP for 1-16 caller lines with screening function, HD Voice (G.722), Voice Disguise and Pretalk Streaming (audio over LAN).

## AXEL TECHNOLOGY

via caduti di Sabbiano 6/F  
Anzola Emilia, Bologna 40011 ITALY  
+39-051-736-555  
*Email:* sales@axeltechnology.com  
*Website:* www.axeltechnology.com

**Products/Services:** Italian broadcasting manufacturer of professional radio and television solutions since 1996. Innovation, research and development drive our competitive presence in the worldwide market. Axel Technology's equipment and solutions are in more than 120 countries thanks to our broad sales network.

## AXIA AUDIO, A TELOS ALLIANCE CO.

1241 Superior Ave. E.  
Cleveland, OH 44114  
216-241-7225  
*Website:* www.axiaaudio.com

**Products/Services:** Axia Audio, part of The Telos Alliance, builds networked, AES67-compliant AoIP products for broadcast audio applications. Products include Fusion, Element, iQ, Radius, DESQ and RAQ AoIP consoles for on-air, mobile production and personal studios, as well as intercoms, digital audio routers, DSP mixers and routing software for networked audio systems.

## BARIX TECHNOLOGY

553 Hayward Ave N, Suite 240  
Oakdale, MN 55128  
866-815-0866  
*Email:* info@barix.com  
*Website:* www.barix.com

## BAY COUNTRY BROADCAST EQUIPMENT INC.

7117 Olivia Rd.

Baltimore, MD 21220  
Steve Scarborough, Owner  
877-722-1031  
*Email:* sales@baycountry.com  
*Website:* www.baycountry.com

**Products/Services:** Sales of quality used radio broadcast equipment.

## BELAR ELECTRONICS

1140 McDermott Dr., Suite 105  
West Chester, PA 19380  
Mark Grant, CEO  
610-687-5550  
*Email:* sales@belar.com  
*Website:* www.belar.com

**Products/Services:** Founded in 1964, Belar Electronics Laboratory Inc. is the world's leading manufacturer of modulation monitors. Used by radio and TV stations globally to monitor broadcast signals, Belar products are world-renowned for accuracy and reliability.

## BEXT INC.

1045 10th Ave.  
San Diego, CA 92101  
619-239-8462  
*Email:* bext@bext.com  
*Website:* www.bext.com

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## BOHN BROADCAST

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Chelsea, AL 35043  
844-549-BOHN (2646); 205-637-9600  
*Email:* info@bohnbroadcast.com  
*Website:* www.bohnbroadcast.com

**Products/Services:** Bohn Broadcast Services is a full-service radio engineering and broadcast equipment sales and repair organization specializing in Marti STLs, RPU's and exciter's.

## BROADCAST BIONICS

The Barn, Hurstwood Grange Hurstwood Lane  
Haywards Heath, West Sussex RH17 7QX  
UNITED KINGDOM  
Kirsten Smith  
+44-1444-473999  
*Email:* sales@phonebox.com  
*Website:* www.phonebox.com

**Products/Services:** Broadcast Bionics is the creator of talkshow software PhoneBox, PhoneBoxVX and PhoneBox Solo. As specialist broadcast software developers, bespoke projects are also undertaken. Distributors of Telos, Axia, Omnia, Lawo, WideOrbit Automation for Radio, Music Master, Sterlitz, 25-Seven and NewsBoss for the U.K., providing quality solutions and superb customer service.

## BROADCAST DEVICES INC.

3199 Albany Post Rd., Suite 122  
Buchanan, NY 10511  
Bob Tarsio, President

# VENDOR & PRODUCT DIRECTORY

914-737-5032

*Email:* bob@broadcast-devices.com

*Website:* www.broadcast-devices.com

**Products/Services:** BDI offers RF power measurement, RF switch controllers, antenna protection systems, remote monitoring systems in addition to a variety of digital and analog audio switching and distribution equipment. BDI also offers RF support equipment such as RF precision RF directional couplers.



## BROADCAST ELECTRONICS / COMMOTION

4100 North 24th St.

Quincy, IL 62305

Tom Beck, President/CEO

217-224-9600

*Email:* bdcast@bdcast.com

*Website:* www.bdcast.com

**Products/Services:** Broadcast Electronics offers studio automation and complete RF systems for radio. BE manufactures AM, FM and HD Radio

transmitters and studio systems for managing audio programming and automating radio text as well as Web interactive tools for social networks and mobile devices. BE has been a global company since 1959.

## BROADCAST PARTNERS

Axelsestraat 58

Terneuzen, 4537AL NETHERLANDS

Chris Pladdet

+31-115-683555

*Email:* christiaan@broadcastpartners.com

*Website:* www.broadcastpartners.nl/website/

**Products/Services:** For more than 25 years Broadcast Partners has provided state-of-the-art broadcast technology and solutions to broadcasters. Our main product is construction and maintenance of transmission networks for public and commercial radio stations. Beside network operation, we supply transmitters, studio design, our in-house developed radio automation "Aeron-Studio" and turnkey broadcast projects worldwide.

## BROADCAST TOOLS INC.

131 State St.

Sedro Woolley, WA 98284

Donald Winget, President

360-854-9559

*Email:* support@broadcasttools.com

*Website:* www.broadcasttools.com

**Products/Services:** Design and manufacture of affordable and innovative problem-solving tools for the radio and television broadcast industries. Our products include analog and AES audio switchers/routers, Web-based and telephone-coupled remote control systems, studio audio accessories, satellite receiver interface adapters, DTMF encoder/decoders and logic interfaces.

## BROADCAST WAREHOUSE LTD.

Unit 27, IO Centre 57 Croydon Rd.

Croydon, Surrey CR0 4WQ UNITED KINGDOM

Brendan Lofty, Sales

888-866-1671

*Email:* info@broadcastwarehouse.com

*Website:* www.broadcastwarehouse.com

**Products/Services:** The world's premier FM radio and studio supplier, Broadcast Warehouse is your solution for industry-leading brands and products. Whether it is LPFM, a national broadcaster or a tailor-made custom solution, Broadcast Warehouse can design and supply everything for you at a great price.

## BROADCASTERS GENERAL STORE

2480 SE 52nd St.

Ocala, FL 34480

Jonathan Shute, Sales

352-622-7700

*Email:* jon@bgs.cc



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El Segundo, CA 90245  
(310) 322-2136

[www.es-web.com](http://www.es-web.com)



# VENDOR & PRODUCT DIRECTORY

*Website:* www.bgs.cc

**Products/Services:** Since 1979, BGS has supplied equipment to the broadcast industry ranging from legendary stations to the smallest facilities. Whether it's a complete studio rebuild or just connectors BGS takes care of everything. With more than 500 manufacturers' product lines represented, we are your one-stop shop. Family owned and operated.

## BROADCAST SOFTWARE INTERNATIONAL

909 International Way  
Springfield, OR 97477  
888-274-8721

Marie Summers, Sales Mgr.

*Email:* sales@bsiusa.com

*Website:* www.bsiusa.com

**Products/Services:** Radio automation software, playout and multichannel logging/skimming solutions. Developed and supported in the United States by a dedicated team of broadcast professionals, our software has helped BSI become one of the leading suppliers of radio automation with distributors in every continent.

## BSW

2237 South 19th St.  
Tacoma, WA 98405  
Shannon Nichols, Sales Manager  
800-426-8434

*Email:* sales@bswusa.com

*Website:* www.bswusa.com

**Products/Services:** As one of the world's premiere broadcast equipment suppliers, BSW (Broadcast Supply Worldwide) is uniquely qualified to offer thousands of products at very competitive prices. For over 42 years, broadcast and audio professionals around the globe have trusted BSW for all their equipment needs. Radio, podcast, video, lighting and much more.

## BURK TECHNOLOGY

7 Beaver Brook Rd.  
Littleton, MA 01460  
Matt Leland  
978-486-0086

*Email:* sales@burk.com

*Website:* www.burk.com

**Products/Services:** Burk Technology is the industry leader in broadcast facility and transmitter control systems. The ARC Plus Touch Remote Control offers Jet Active Flowcharts, Roll-up Alarms and access via smartphone, tablet, PC or telephone. A simple, cost-effective adapter makes it easy to upgrade from legacy remote controls. Details at [www.burk.com/upgrade](http://www.burk.com/upgrade).

## BURLI SOFTWARE INC.

4664 Lougheed Highway, Suite 264  
Burnaby, BC V5C 5T5  
CANADA  
604-684-3140

*Email:* sales@burli.com

*Website:* www.burli.com

## BW BROADCAST

Unit 27, IO Centre 57 Croydon Rd.  
Croydon, Surrey CR0 4WQ UNITED KINGDOM  
Brendan Lofty  
888-866-1612

*Email:* info@bwbroadcast.com

*Website:* www.bwbroadcast.com

**Products/Services:** Multi-award-winning products, packed with innovation that will set your station apart from others. BW Broadcast manufactures FM transmitters, audio processors, FM receivers, FM amplifiers, RDS encoders. The latest Encore range of advanced FM broadcasting products also features the Plan B Silence Detector.

## CHRISTIAN COMMUNITY BROADCASTERS

284 Louie La.  
Canton, GA 30115  
John Broomall, Senior Consultant  
770-720-1037

*Email:* johnbroomall@yahoo.com

*Website:* www.ccbroadcasters.com

**Products/Services:** CCB has provided turnkey solutions for the low-power FM market since 2000, encompassing consulting, FCC filings of all types, LPFM automation, Internet STL, transmitters, coaxial cable, antennas and EAS equipment; tower site and construction planning, and operational programming and underwriting advice. CCB personnel have operated WPCG(LP) since 2004.

## CIRCUITWERKES INC.

2805 NW 6th St.  
Gainesville, FL 32609  
Kyle Magrill, Pres  
352-335-6555

*Email:* info@circuitwerkes.com

*Website:* www.circuitwerkes.com

**Products/Services:** Manufacturers of problem-solving devices like tone encoders/decoder, award-winning Internet and dial-up remote controls, streaming audio encoders/decoders, telephone couplers/interfaces, relay boxes, silence sensors and custom made products designed to the user's specs.

## COAXIAL DYNAMICS

6800 Lake Abram Dr.  
Middleburg Heights, OH 44130  
Sharon Gigliotti, Sales  
440-243-1100

*Email:* sales@coaxial.com

*Website:* www.coaxial.com

**Products/Services:** Manufacturer of precision equipment for the measurement and termination of RF power since 1969. Products include RF loads, filters, wattmeters, line sections and plug-in elements for analog and digital applications.

## COMMUNICATIONS TECHNOLOGIES INC.

P. O. Box 1130  
Marlton, NJ 08053  
Laura Mizrahi, Vice President  
856-985-0077

*Email:* lmizrahi@commtechrf.com

*Website:* www.commtechrf.com

**Products/Services:** Broadcast engineering consultants specializing in AM, FM and TV RF systems design. Also: FCC application preparation, site selection expertise to optimize facility coverage and signal level predictions using contour and Longley-Rice methodologies.

# COMREX

BROADCAST RELIABLE

## COMREX CORP.

19 Pine Rd.  
Devens, MA 01434  
Chris Crump, Director of Sales  
978-784-1776

*Email:* info@comrex.com

*Website:* www.comrex.com

**Products/Services:** Comrex designs and manufactures technology to provide simple solutions to universal broadcast needs. An industry leader in the development of IP audio codecs, Comrex is also a pioneer in state-of-the-art video over IP and IP-based call management solutions.

**See our Profile in Excellence, page 4 and story, page 41**

## CONTINENTAL ELECTRONICS CORP.

4212 South Buckner Blvd.  
Dallas, TX 75227  
214-275-2319

*Website:* www.contelec.com

## CPI/EIMAC OPERATIONS

607 Hansen Way  
Palo Alto, CA 94304  
Linda Di Lorenzo, Exhibits Manager  
650-846-2900

*Email:* powergrid@cpil.com

*Website:* www.cpii.com

**Products/Services:** CPI/Eimac Operations is the leader in the design and manufacture of power grid tubes for broadcast, communications, radar, industrial heating, semiconductor processing, science and medical applications.

## CROWN BROADCAST IREC

25166 Leer Dr.  
Elkhart, IN 46514  
Laurie Thompson  
866-262-8972

*Email:* lthompson@irec1.com

*Website:* www.crownbroadcast.com

**Products/Services:** Robust, reliable and high-performance FM transmitters from 30 watts up to 10 kW. Units available with optional built-in audio processor or digital AM/FM receiver for translator use. The RFBA-1 AM/FM/WR triple-tuner available for EAS, monitoring and translator use. New for 2016 are Crown E-10K 10 kW FM transmitters powered by Egreso.

## DAVICOM, A DIVISION OF COMLAB INC.

2300, Leon-Harmel, Suite 220

# VENDOR & PRODUCT DIRECTORY

Quebec, QC G1N 4L2 CANADA  
Guy Fournier, Sales Manager  
418-682-3380

Email: [dvsales@davicom.com](mailto:dvsales@davicom.com)  
Website: [www.davicom.com](http://www.davicom.com)

**Products/Services:** Leading broadcasters and telecom operators around the world rely on Davicom solutions to remotely monitor and control their transmitter sites and unattended studios, via SNMP, modbus and GPIO for example, thus allowing them to reduce their operating costs and downtime. Davicom units provide automation and access to real-time site information.

## DAWNCO

3340 S. Lapeer Rd.  
Orion, MI 48359  
248-391-9200

Email: [salesdawnco.com](mailto:salesdawnco.com)  
Website: [www.dawnco.com](http://www.dawnco.com)

**Products/Services:** Provider of commercial satellite and fiber optic communication products.

## DAYSEQUERRA

154 Cooper Road, Bldg. 902  
West Berlin, NJ 08091  
856-719-9900

Email: [info@daysequerra.com](mailto:info@daysequerra.com)  
Website: [www.daysequerra.com](http://www.daysequerra.com)

**Products/Services:** High-performance audio solutions for radio, TV and Internet broadcasters. Technology applications include measuring and solving

loudness issues in stereo, surround DTV and radio broadcasts using exclusive DTS Neural algorithms; transmitting multichannel surround audio over stereo infrastructure; and digital radio and Internet stream audio processing and monitoring.

## DEVA BROADCAST LLC

7782 NW 46th St.  
Miami, FL 33166  
305-767-1207

Todor Ivanov, President  
Email: [sales@devabroadcast.com](mailto:sales@devabroadcast.com)  
Website: [www.devabroadcast.com](http://www.devabroadcast.com)

**Products/Services:** DEVA Broadcast is an international communications and high-technology company that serves broadcast and corporate markets worldwide. RDS/RBDS encoders and decoders, modulation monitors, remote controls, off-air monitoring receivers and other systems for the broadcast industry.

## DIELECTRIC LLC

22 Tower Road  
Raymond, ME 04071  
800-341-9678

Cory Edwards, Global Sales  
Email: [cory.edwards@dielectric.com](mailto:cory.edwards@dielectric.com)  
Website: [www.dielectric.com](http://www.dielectric.com)

**Products/Services:** Dielectric is an innovative, customer-centric organization with a long history of engineering excellence in designing and manufacturing high-quality broadcast solutions.

## DIGIGRAM

PointSource Audio  
1300 Grant Ave., #202  
Novato, CA 94945  
James Lamb, Distributor  
415-226-1122

Email: [jlamb@point-sourceaudio.com](mailto:jlamb@point-sourceaudio.com)  
Website: [www.digigram.com](http://www.digigram.com)

**Products/Services:** Sound cards, IP audio and video codecs and AV networking technologies. We offer building blocks for the avant-garde of broadcast and professional AV/IT systems.

## DIGITAL ALERT SYSTEMS

100 Housel Ave.  
Lyndonville, NY 14098  
Bill Robertson, V.P. Business Development  
585-765-1155

Email: [sales@digitalalertsystems.com](mailto:sales@digitalalertsystems.com)  
Website: [www.digitalalertsystems.com](http://www.digitalalertsystems.com)

**Products/Services:** Digital Alert Systems provides the ultimate single-box EAS/CAP solutions for broadcasters with FCC/FEMA-compliant DASDEC family. A flexible IP-based architecture supporting a variety of third-party switching, graphics and automation systems streamlining connectivity and operations. Optional integrated AM/FM/WX receivers save valuable rack space and wiring clutter.

## DIGITAL JUKEBOX

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# VENDOR & PRODUCT DIRECTORY

702-487-3336 ext. 1

Ron Paley, Pres. & Sales Mgr.

Email: sales@djbradio.com

Website: www.djbradio.com

**Products/Services:** Since 1995, Digital JukeBox has developed, installed and supported radio automation software solutions with more than 1,300 users worldwide. Our software solutions are designed to make radio station programming and operations very efficient.

## DIGITAL RADIO MONDIALE (DRM)

c/o BBC Global News

3rd Floor Brock House 19 Langham Street

London W1A 1AA UNITED KINGDOM

DRM Project Office

+44-20-36142310

Email: projectoffice@drm.org

Website: www.drm.org

**Products/Services:** Digital Radio Mondiale is the global, open, green, cost-efficient, digital radio standard for all frequencies (AM and VHF). The DRM system covers large geographic areas, rural and local markets and when listeners are on the move. With DRM you get emergency warning functionality, traffic and multimedia.

## DOUBLERADIUS INC.

2022 Van Buren Ave.

Indian Trail, NC 28079

Jeff Holdenrid, Sales Engineer

704-927-6085

Email: jeffh@doubleradius.com

Website: www.doubleradius.com

**Products/Services:** Global value-added distributor of wireless networking equipment.

## DOUG VERNIER, TELECOMMUNICATIONS CONSULTANTS

401 Main St., Suite 213

Cedar Falls, IA 50613

Doug Vernier, Senior Engineer, President

319-266-8402

Email: consulting@v-soft.com

Website: www.v-soft.com/web/services.html

**Products/Services:** Broadcast engineering consulting, AM, FM and TV station upgrading as well as the preparation of AM, FM, TV and STL FCC applications, systems design, microwave analysis and PCN coordination.

## DPA MICROPHONES INC.

1500 Kansas Ave., Suite 3A

Longmont, CO 80501

Shan Siebert, General Manager

303-485-1025

Email: infousa@dpamicrophones.com

Website: www.dpamicrophones.com

**Products/Services:** DPA Microphones is the leading Danish professional audio manufacturer of high-quality condenser microphone solutions for professional applications. DPA's goal is to provide its customers with the finest possible microphone solutions for the professional audio markets, and is globally praised for their exceptional clarity, unpar-

alleled specifications and pure, uncolored sound.

## ECONCO

1318 Commerce Ave.

Woodland, CA 95776

Debbie Storz, Sales

800-532-6626

Email: debbie.storz@cpii.com

Website: www.econco.com

**Products/Services:** Rebuilt transmitter tubes.

## EDX WIRELESS

1400 Executive Pkwy, Suite 430

Eugene, OR 97401

Bob Akins, Marketing Manager

541-345-0019

Email: sales@edx.com

Website: www.edx.com

**Products/Services:** EDX SignalPro family of products is the industry's tool of choice for designing accurate, reliable and scalable RF networks. Our advanced radio network planning software helps engineers plan, deploy and optimize virtually any wireless network from public safety, transportation, cellular and broadband to smart grid and beyond.

## ELECTRO-VOICE

Bosch Security Systems Inc.

12000 Portland Ave S

Burnsville, MN 55337

800-289-0096

Email: buv.orders@us.bosch.com

Website: www.electrovoice.com

**Products/Services:** An industry pioneer since the earliest days of radio and television, Electro-Voice microphones continue to be among the most trusted tools of broadcast professionals everywhere. The RE20 is used by around 80 percent of on-air talent in the U.S., and sets the standard for the sound of the FM radio voice.

## ELECTRONICS RESEARCH INC. (ERI)

7777 Gardner Rd.

Chandler, IN 47610

Joe Meleski, Director of Sales

812-925-6000

Email: sales@eriinc.com

Website: www.eriinc.com

**Products/Services:** ERI delivers high-quality, innovative, integrated solutions for radio and television broadcasters including the best antennas, transmission line, filters and towers. In addition to manufacturing components and accessories, ERI offers a suite of engineering and field services to plan, install, optimize and maintain your broadcast facility.

## ELENOS SRL

Via G. Amendola 9

Poggio Renatico, Ferrara 44028 ITALY

Gianluca Busi, Marketing Manager

+39-0532-829965

Email: marketing@elenos.com

Website: www.elenos.com

**Products/Services:** With 40,000 FM transmitters installed in more than 100 countries, Elenos

is known for its reliable equipment. Exceptional efficiency not only saves electric costs, but also means lower cooling, reduced maintenance and longer operational service. Planar technology and compact design make Elenos transmitters scalable and rack-mountable, with power levels up to 40 kW.

## ENCO SYSTEMS INC.

29444 Northwestern Hwy.

Southfield, MI 48034

Ken Frommert, GM

248-827-4440

Email: sales@enco.com

Website: www.enco.com

**Products/Services:** ENCO is the premier global provider of audio payout and automation solutions. The world renowned and award-winning DAD is the most flexible, powerful and reliable radio automation system on the planet. Thousands of radio stations rely on ENCO every day for their automation, payout, scheduling and distribution needs.

See story, page 44

## ERI

See Electronics Research Inc.

## ESE

142 Sierra St.

El Segundo, CA 90245

Bill Rajaniemi, Sales

310-322-2136

Email: ese@ese-web.com

Website: www.ese-web.com

**Products/Services:** Master clock systems, digital and analog displays. GPS, NTP, WWV, modem, crystal or line frequency-based units. Standalone clocks and timers. Audio level interfaces and indicators.

## EVANS ENGINEERING SOLUTIONS

P. O. Box 225

Mequon, WI 53092

262-518-0178

Email: ben@evansengsolutions.com

Website: www.evansengsolutions.com

**Products/Services:** Evans Engineering Solutions is a consulting engineering company that delivers high-quality service over a broad spectrum of over-the-air communications applications.

## EVENTIDE

1 Alsan Way

Little Ferry, NJ 07643

201-641-1200

Email: www.eventideaudio.com/contact-us

Website: www.eventide.com

**Products/Services:** Since 1971, Eventide has developed and manufactured digital audio processing products for recording, broadcast and live performance.

## FINE PRODUCTIONS

P.O. Box 661959

# VENDOR & PRODUCT DIRECTORY

Los Angeles, CA 90066  
Stephen Knight, Owner  
310-283-7959  
*Email:* stephenknightvo@gmail.com  
*Website:* <https://voiceoversstephenknight.wordpress.com>

**Products/Services:** FINE Productions can in whole or in part create copy, voice and edit voice over commercials, radio imaging, narration, animation, video games, corporate and e-learning projects. We also voice ADR looping in post. Most important to us is serving our client's needs. Call, write or email for your free consultation.

## FM SERVICES

Wilkesboro, NC  
335-667-7091  
*Website:* [www.towermonitor.com](http://www.towermonitor.com)

**Products/Services:** TLM-1 Tower Monitor Light is a microprocessor-based system designed to monitor the status of FAA Type A incandescent tower lights.

## FM SYSTEMS INC.

3877 South Main St.  
Santa Ana, CA 92707  
714-979-3355; 800-235-6960  
*Email:* [fmsystemsinc@sbcglobal.net](mailto:fmsystemsinc@sbcglobal.net)

*Website:* [www.fmsystems-inc.com](http://www.fmsystems-inc.com)  
**Products/Services:** FM Systems Inc. was formed in 1978 by Frank McClatchie to design and manufacture superior program audio subcarrier and single Channel Per Carrier (SCPC) modulators and demodulators for microwave and satellite transmission facilities. Due to an active new product development program the company has expanded its product line to include audio and video test equipment, data transmission equipment, closed circuit television equipment and operating equipment for the broadcasting industry.

## FRAUNHOFER IIS

Am Wolfsmantel 33  
Erlangen, 91058 GERMANY  
Matthias Rose, Marcom  
+49-9131-776-0  
*Email:* [amm-info@iis.fraunhofer.de](mailto:amm-info@iis.fraunhofer.de)  
*Website:* [www.iis.fraunhofer.de/audio](http://www.iis.fraunhofer.de/audio)

**Products/Services:** Fraunhofer IIS has been working in digital audio technology for more than 25 years and remains a leading innovator of technologies for cutting-edge multimedia systems. Fraunhofer IIS is universally credited with the development of MP3 and co-development of AAC, and has licensed its software to at least 1,000 companies worldwide.

## FRONT PANEL EXPRESS

5959 Corson Avenue So, Suite 1  
Seattle, WA 98108  
206-768-0602  
Diane Haensel, Scott Hoveland  
*Email:* [info@frontpanelexpress.com](mailto:info@frontpanelexpress.com)  
*Website:* [www.frontpanelexpress.com](http://www.frontpanelexpress.com)

**Products/Services:** Offering front panels and enclosures that are manufactured using modern CNC technology. No minimum requirements and optional same-day delivery. Design and order using our free CAD software, Front Panel Designer. Instant pricing, standard discounts and a variety of materials and finishes from which to choose.

## FULL COMPASS SYSTEMS LTD.

9770 Silicon Prairie Pkwy.  
Madison, WI 53593  
Customer Service  
800-356-5844  
*Email:* [customerservice@fullcompass.com](mailto:customerservice@fullcompass.com)  
*Website:* [www.fullcompass.com](http://www.fullcompass.com)

**Products/Services:** Professional audio, video, lighting and musical instrument sales. Our goal is to provide the best value with exceptional customer service and we offer more than 700 brands. Full Compass is an authorized service center and parts distributor for most major manufacturers we carry.



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Canada's new rules mandating its CAP-based National Public Alerting System took effect in 2015. The Sage ENDEC supports CAP-CP with English and French Canadian text to speech, and is the top selling unit for Canadian broadcasters.

**SAGE** ALERTING SYSTEMS

Sage Alerting Systems, Inc  
800 Westchester Avenue, Suite 641N, Rye Brook, NY 10573  
Phone 914 872 4069 [info@sagealertingsystems.com](mailto:info@sagealertingsystems.com)  
[www.sagealertingsystems.com](http://www.sagealertingsystems.com)



# VENDOR & PRODUCT DIRECTORY

## GATESAIR

5300 Kings Island Drive, Suite 101  
Mason, OH 45040  
513-459-3552  
Catherine Poulsen, Global Mktng. Leader  
*Email:* americas@gatesair.com  
*Website:* www.gatesair.com

**Products/Services:** Solutions for over-the-air radio and television broadcasting, leveraging wireless spectrum to maximize performance for multi-channel, mission-critical services. Powering over-the-air networks worldwide with unparalleled reliability for nearly 100 years, GatesAir leads the industry in innovation and design breakthroughs, improving efficiency and reducing total cost of ownership.

## GLENSOUND

6 Brooks Place  
Maidstone, Kent ME14 1HE UNITED KINGDOM  
Marc Wilson, Sales & Marketing Manager  
+44-1622-753662  
*Email:* sales@glen-sound.co.uk  
*Website:* www.glen-sound.co.uk

**Products/Services:** UK designer of broadcast products including USB audio interfaces for iPhones and PCs, commentary/announcer systems, Dante network audio, broadcasters' mobile phones, telephone hybrids, four-wire systems, audio mixers, codecs, digital converters, digital snake, audio monitoring, and headphone and microphone amplifiers. Specialists in custom product and system design.

## GOODRICH ENTERPRISES INC.

11435 Manderson St.  
Omaha, NE 68164  
402-493-1886  
*Email:* charlesgoodrich44@gmail.com  
*Website:* www.goodrichenterprises.com

**Products/Services:** High-power tubes for broadcast and industry; sockets and parts; AM and FM McMartin transmitters; Rotron blowers; modulation monitors; AM and FM sales and recalibration; new and rebuilt plate blocking caps.

## GORMAN REDLICH MFG. CO.

257 W. Union St.  
Athens, OH 45701  
James Gorman  
740-593-3150  
*Email:* jimg@gorman-redlich.com  
*Website:* www.gorman-redlich.com

**Products/Services:** EAS encoder-decoders for radio and TV. The CAP-DEC1 decoder unit will translate received CAP V1.2 alerts into EAS headers for both the U.S. and Canada. Also: NOAA weather receivers with SAME decoding and digital antenna monitors (Model CMR) for directional AM antenna arrays.

## GRACE BROADCAST SALES

225 SW Skyline Drive  
Pullman, WA 99163  
Rod Schwartz, Owner  
509-332-8423

*Email:* ros@gracebroadcast.com  
*Website:* www.gracebroadcast.com  
**Products/Services:** Home of sound ideas for building business, and host of Radio Sales Café, a free networking site for radio advertising sales professionals worldwide.

## GRAHAM BROCK INC.

5971 New Jesup Hwy., Suite B  
Brunswick, GA 31523  
Stu Graham, President  
912-638-8028  
*Email:* rsg@grahambrock.com  
*Website:* www.grahambrock.com  
**Products/Services:** Technical consultant for radio

## GRAHAM STUDIOS

1805 E Lincoln Ave.  
Ft. Collins, CO 80524  
970-225-1956  
Rod Graham, Founder  
*Email:* rod@graham-studios.com  
*Website:* www.graham-studios.com  
**Products/Services:** Graham Studios designs and manufactures two lines of high-quality broadcast studio furniture as well as custom applications. We've got national as well as international experience, garnered from three decades of service to the broadcast industry. Our products are offered by the nation's top dealers and integrators. Join us.

## HAMMETT & EDISON INC. CONSULTING ENGINEERS

470 Third Street West  
Sonoma, CA 95476-6509  
William Hammett, President  
707-996-5200  
*Email:* mail@h-e.com  
*Website:* www.h-e.com  
**Products/Services:** Founded in 1952, Hammett & Edison is a recognized leader for engineering services to the broadcasting industry. H&E's focus is on station coverage — predicting, measuring and improving signal coverage — and we have developed a number of fields of expertise, including frequency allocation, site selection, antenna design and environmental compliance.

## HD RADIO

6711 Columbia Gateway Dr., Ste 500  
Columbia, MD 21046  
Jeff Detweiler, Exec. Dir., Broadcast Engineering  
443-539-4334  
*Email:* Jeff.Detweiler@dts.com  
*Website:* www.hdradio.com

## HEIL SOUND LTD.

5800 N. Illinois St.  
Fairview Heights, IL 62208  
Sarah Heil, President  
618-257-3000  
*Email:* info@heilsound.com  
*Website:* www.heilsound.com  
**Products/Services:** Heil Sound is a manufacturer of high-performance dynamic microphones. Heil

Sound products fit a range of applications including broadcast, live sound and recorded sound. Founder Bob Heil is an innovator in concert and broadcast sound reproduction. He hosts a podcast on the Twit Network.

## HENRY ENGINEERING

P.O. Box 3796  
Seal Beach, CA 90740  
Hank Landsberg, CEO  
562-493-3589  
*Email:* info@henryeng.com  
*Website:* www.henryeng.com  
**Products/Services:** We build solutions. Products for digital and analog audio interface, USB audio, distribution, mixing, headphones and mic control, tally light and logic control. The new zero-delay AES Digital DA 2x4 and AES DigiSwitch 3x1 provide solutions for AES digital audio distribution and switching.

## ICE KRACKERS INC.

273 Circle Drive  
Springfield, IL 62703  
800-747-8921  
*Email:* icecrackers@springnet1.com  
*Website:* www.icecrackers.com  
**Products/Services:** The Ice Cracker is used on towers to protect the anchoring hardware and dampeners from damage due to ice slides coming down the guy wires. The Ice Cracker is galvanized and comes with mounting hardware. The Ice Crackers are installed just three feet above hardware being protected.

## INDEPENDENT AUDIO

43 Deerfield Rd.  
Portland, ME 04101  
Fraser Jones, President  
207-773-2424  
*Email:* info@independentaudio.com  
*Website:* www.independentaudio.com  
**Products/Services:** Independent Audio was founded by Brit Fraser Jones, who saw an opportunity to launch cutting-edge European-manufactured professional audio products that had no exposure in the U.S. marketplace. Jones established a network of premier pro audio dealers throughout the USA, and introduced them to some very fine audio products.

## INFORMATION STATION SPECIALISTS

3368 88th Ave., P.O. Box 51  
Zeeland, MI 49464-0051  
Bill Baker, President  
616-772-2300  
*Email:* iss@theradiosource.com  
*Website:* www.theradiosource.com  
**Products/Services:** Founded in 1983, Information Station Specialists is the nation's best-known source for Travelers Information Stations and Highway Advisory Radio Stations, roadsigns and the specialized services required to transmit spoken messages to citizens — the only such source providing products entirely made in America.

# VENDOR & PRODUCT DIRECTORY

## INOVONICS

5805 Hwy. 9  
Felton, CA 95018  
831-458-0552

Gary Luhrman, Sales & Mktng. Mgr.  
*Email:* sales@inovonicsbroadcast.com  
*Website:* www.inovonicsbroadcast.com

**Products/Services:** High-quality products for the broadcast professional. From our exceptionally successful range of audio processing products and RDS/RBDS encoders to test/monitoring equipment, Inovonics continues to explore the latest developments in broadcast technology and practices, and is dedicated to building products that are smart, powerful and intuitive to use.

See our Profile in Excellence, page 6

## JAMPRO ANTENNAS INC.

6340 Sky Creek Dr.  
Sacramento, CA 95828  
Sonia Del Castillo,  
Sales/Marketing Administrator  
916-383-1177

*Email:* sonia@jampro.com  
*Website:* www.jampro.com

**Products/Services:** Oldest broadcast antenna company in North America with more than 50 years of experience in providing broadcast antennas and RF systems worldwide. Products include FM, UHF and VHF antennas, combiners, filters, patch panels, towers and rigid transmission line and components.

## JHBC BROADCAST CONSULTING GMBH

Kleine Homeyerstrasse 11  
13156 Berlin, GERMANY  
Jochen Huber, president  
+49-170-5247265

*Email:* info@jhbc-berlin.de

**Products/Services:** Broadcast solutions for all requirements, tender drafting, studies, buyers' guide and sales distribution, repair and restoration of historic radio and transmission equipment.

## JK AUDIO INC.

1311 E 6th St.  
Sandwich, IL 60548  
815-786-2929

*Email:* info@jkaudio.com

*Website:* www.jkaudio.com

**Products/Services:** JK Audio provides award-winning audio interfaces for broadcast professionals. Analog and digital hybrids for interviews and talk shows, RemoteMix series field mixers for remote broadcasts and interviews, and interface tools to get the job done.

## JUMP2GO

1752 NW Market St., #902  
Seattle, WA 98107  
425-641-9043

Allen Hartle

*Email:* allen@jump2go.com

*Website:* www.jump2go.com

**Products/Services:** RDS, Web, Artist Experience metadata information systems and interfaces.

## JÜNGER AUDIO USA

2100 Walsh Ave.  
Santa Clara, CA 95050  
Anthony Wilkins, Sales Manager  
408-330-9215

*Email:* anthony.wilkins@junger-audio.com

*Website:* junger-audio.com

**Products/Services:** Since 1990, Berlin, Germany-based Jünger Audio has been designing and manufacturing high-quality audio dynamic processors. We offer a unique range of audio processing solutions (in two, four and eight channels or modular frame versions) used by the world's top radio and TV broadcasters, recording studios and post production facilities.

## KINTRONIC LABS INC.

P.O. Box 845  
Bristol, TN 37621-0845  
Tom King, President  
423-878-3141

*Email:* ktl@kintronic.com

*Website:* www.kintronic.com

**Products/Services:** A world leader in the design, fabrication, installation and commissioning of AM/medium-wave HD or DRM terrestrial radio broadcast transmission systems. Also: innovative RF solutions for telecommunications, industrial and other applications.

## KLOTZ COMMUNICATIONS AMERICA

146 Western Ave.  
Brattleboro, VT 05301  
Tim Cuthbertson, Sales  
802-254-4664

*Email:* tim.cuthbertson@klotzcommunications.com  
*Website:* www.klotzcommunications.com

**Products/Services:** Klotz Communications manufactures systems and applications that are chosen for their reliability and ease of use in production, news and on-air studios. From standalone on-air consoles up to complex network solutions, Klotz equipment is used today by the world's top broadcasters, studios and media service providers.

## KRK BROADCAST MONITORS

309 Plus Park Blvd.  
Nashville, TN 37217  
Evan MacKenzie, Marketing/Communications  
615-871-4500

*Email:* evan.mackenzie@gibson.com

*Website:* www.krksys.com

**Products/Services:** KRK Systems Inc., a division of Gibson Brands, is the global leader in the design, manufacture and distribution of broadcast and recording monitors plus headphones for the home and professional broadcast audio markets. KRK products are distributed throughout the world via a network of distributors and dealers.

## K-Y FILTER CO.

3010 Grinnel Place  
Davis, CA 95616  
530-757-6873

*Email:* ki6ky@comcast.net

*Website:* www.ky-filters.com

**Products/Services:** Modem/telephone super filters for HF and AM radio interference.

## LAWO GROUP USA

12520 Magnolia Blvd., Suite 308  
Los Angeles, CA 91607  
Don Bird, VP Business Development  
888-810-4468

*Email:* sales-us@lawo.com

*Website:* www.lawo.com

**Products/Services:** Audio and video technology for TV and radio broadcast-production, post-

Check out our curves!



www.omnirax.com

800.332.3393 • 415.332.3392

If imitation is the sincerest form of flattery, Omnirax is always ahead of the curve.

**Omnirax**  
FURNITURE COMPANY  
BROADCAST • OFFICE • TECHNICAL

*The Engineer's Choice*



# VENDOR & PRODUCT DIRECTORY

production, live-performance and theater-applications. Products include digital audio consoles, routers, video processing tools, IP-based video and audio transport solutions. Products are developed and manufactured according to highest quality standards at our headquarters in Germany.

## **LBA GROUP INC. & LBA TECHNOLOGY INC.**

3400 Tupper Dr.  
Greenville, NC 27834  
252-757-0279

*Email:* lbagr@lbagroup.com

*Website:* www.lbagroup.com

**Products/Services:** RF asset solutions and RF risk management solutions since 1963; radio broadcasting equipment for AM and DRM medium-wave stations worldwide.

## **LECTROSONICS INC.**

581 Laser Rd. NE  
Rio Rancho, NM 87124  
Karl Winkler, VP of Sales  
505-892-4501

*Email:* sales@lectrosonics.com

*Website:* www.lectrosonics.com

**Products/Services:** Lectrosonics is a U.S. manufacturer making wireless microphone systems and audio processing solutions for professional use. Applications include ENG, filmmaking, conferencing, theater, sound reinforcement and research.

## **LEOBROADCAST SERVICES GROUP**

P.O. Box 39  
Auburn, WV 26325-0039  
Charles Gordon, President/Founder  
615-200-6397

*Email:* leobroadcast@gmail.com

**Products/Services:** We provide radio support for creative services departments and support recording artists to receive airplay. We work hand in hand with record labels to ensure artist receive airplay. Also support community and civic organizations and other broadcast entities.

## **LIGHTNER ELECTRONICS INC.**

1771 Beaver Dam Rd.  
Claysburg, PA 16625  
Matthew Lightner, President  
814-239-8323

*Email:* sales@lightnerelectronics.com

*Website:* www.lightnerelectronics.com

**Products/Services:** Full-service broadcast engineering, audio/visual integration and equipment supply firm providing design, repair, fabrication, sales and installation. We offer professional bench repair of all types of broadcast equipment. We also offer an online store that specializes in refurbished broadcast equipment.

## **LINEQ**

1324 Helmo Ave North  
Oakdale, MN 55128  
866-815-0866  
Brenda Stadheim, VP

*Email:* brenda@lineq.com

*Website:* www.lineq.com

**Products/Services:** IP audio and control specialist Barix recently appointed LineQ as their distribution partner in the United States. Barix supplies simple and reliable solutions and components to systems integrators and end users worldwide. We move high-quality audio across IP networks, adding value to customer solutions for more than a decade with hundreds of thousands of devices installed worldwide.

## **LOGITEK ELECTRONIC SYSTEMS**

5622 Edgemoor Dr.  
Houston, TX 77081  
Frank Grundstein, Director of Sales  
713-664-4470

*Email:* info@logitekaudio.com

*Website:* www.logitekaudio.com

**Products/Services:** For more than 35 years, Logitek has designed and manufactured audio consoles for on-air, production and news. Products include the Jetstream and Jetstream Plus AoIP audio networking platforms and a variety of control surfaces and accessory products.

## **LS TELCOM**

Im Gewerbegebiet 31-33  
Lichtenau, 77839 GERMANY  
+49-7227-9535-600

*Email:* info@lstelcom.com

*Website:* www.lstelcom.com

**Products/Services:** LS telcom is the leading supplier of frequency planning, coordination and optimization solutions for digital and analog broadcast networks. Its portfolio includes network planning software, consulting, engineering and measurement services. Training on technologies, standards and regulations as well as transmitter container installations complete its area of expertise.

## **MAGER CONCEPTS**

Phoenix, AZ  
602-791-0045

*Email:* mager@magerconcepts.com

*Website:* www.magerconcepts.com

**Products/Services:** Manufacturing high-quality award-winning custom studio furniture for the broadcast industry for over 35 years, accommodating every budget from economy to showplace with onsite installation.

## **MARKETRON**

101 Empty Saddle Trail  
Hailey, ID 83333  
800-476-7226

*Website:* www.marketron.com

**Products/Services:** Business software solutions and services.

## **MATRIX SOLUTIONS**

901 Pennsylvania Ave  
Pittsburgh, PA 15233  
412-697-3000

Brenda Hetrick, VP Sales & Mktng.

*Email:* sales@matrixformedia.com

*Website:* www.matrixformedia.com

**Products/Services:** Matrix Solutions provides a media-specific CRM and sales intelligence software platform that streamlines sales management processes and maximizes advertising dollars efficiently. The system provides users with valuable insight across multiple platforms enterprise-wide. Proactive notifications alert users to both areas that need attention and are sales opportunities.

## **MEDUCI**

P.O. Box 781330  
Orlando, FL 32878-1330  
Jeff Deck, Sales Engineer

*Email:* amstereo@meduci.com

*Website:* www.meduci.com

**Products/Services:** Manufacturer and direct sales for AM stereo tuners and decoders. An entrepreneurial and innovative organization that specializes in custom freelance engineering, research, design and production of electronic products in prototype quantities up to large-scale manufacturing.

## **MICHAEL PATTON & ASSOCIATES**

12231 Industriplex, Suite C  
Baton Rouge, LA 70809  
Michael Patton, Owner

225-752-4189

*Email:* mike@michaelpatton.com

*Website:* www.michaelpatton.com

**Products/Services:** Radio broadcasting systems integrator and equipment repair firm, providing in-shop equipment repair, on-site transmitter rebuilding, AM & FM facility design and construction, and AM DA equipment and site design, construction/maintenance services to AM and FM stations in America and abroad.

## **MODULATION INDEX**

1249 S. Diamond Bar Blvd., #314  
Diamond Bar, CA 91765

John F. Schaab, Marketing Director  
909-860-6760

*Email:* john@streamindex.com

*Website:* www.streamindex.com

**Products/Services:** StreamS Hi-Fi streaming encoders, PAD::bridge PAD distribution, IODigi2 AES-USB interface. Offering streaming solutions and partnerships to provide everything from Play-out thru to the player.

## **MOSELEY ASSOCIATES INC.**

82 Coromar Dr.  
Santa Barbara, CA 93117  
Bill Gould, Broadcast Sales Manager  
805-968-9621

*Email:* sales@moseleysb.com

*Website:* www.moseleysb.com.com

**Products/Services:** Pioneer and world's leading manufacturer of digital aural microwave links. The first to bring a totally transparent studio-to-transmitter link to the crowded, hostile RF environment, Moseley Broadcast now has more than 15,000 microwave systems in service around the world.

# VENDOR & PRODUCT DIRECTORY

## MUELLER BROADCAST DESIGN

613 S La Grange Rd.  
La Grange, IL 60525  
Mark Mueller, Owner  
708-352-2166

*Email:* rw@muellerbroadcastdesign.com

*Website:* www.muellerbroadcastdesign.com

**Products/Services:** Broadcast technical consultant with over 30 years' experience in AM directional antennas and diplexing, troubleshooting, rebuilds and in-place upgrades. We can also help with technical compliance, system planning and disaster recovery.

## MYAT INC.

360 Franklin Turnpike  
Mahwah, NJ 07430

Dennis Heymans, RF System/Filter Product Sales  
201-684-0100

*Email:* dheymans@myat.com

*Website:* www.myat.com

**Products/Services:** High-quality broadcast products since 1951. Myat's FM products include RF bandpass filters, multi-station combiners, coax switches, N+1 switching matrices, switchless and switching combiners, rigid and flex coax transmission line systems, components adapters, patch panels and related items.

## MYERS

19R Hawley St.  
Northampton, MA 01060

Nancy Carter, Director,  
New Business Development  
413-585-9820

*Email:* sales@matrixformedia.com

*Website:* www.myersinfosys.com

**Products/Services:** Myers' ProTrack is a comprehensive broadcast management solution for media facilities that produce, acquire, monetize and distribute content. As the core software platform for independent multimedia organizations, ProTrack integrates with systems up and down the broadcast chain to drive more efficient workflows across departments.

## NAUTEL

10089 Peggy's Cove Rd.  
Hackett's Cove, NS B3Z 3J4 CANADA  
902-823-5131

*Email:* sales@nautel.com

*Website:* www.nautel.com

**Products/Services:** Nautel offers the broadest portfolio of digital/analog solid-state transmitters including 1-2000 kW AM/MW and 300 W-88 kW FM radio transmitters and low-power UHF TV transmitters. Nautel transmitters offer comprehensive monitoring and control instrumentation via touch screen or Web, outstanding reliability, compact footprints, high efficiency, easy maintenance and 24/7 support.

See story, page 38

## NEOGROUPE

14 rue des selliers

Marolles-en-Brie, FR 94440 FRANCE

Philippe Halin, CEO  
210-757-4700

*Email:* philippe.halin@neogroupe.com

*Website:* www.neogroupe.com

**Products/Services:** Software solutions for radio and television broadcasters. Applications include call screening, promotions management, budgets/purchases and asset inventory solutions dedicated to customers ranging from high-profile talk shows to major public organizations worldwide.

See story, page 37

## NETIA

377 Chemin de Farjou  
Claret, 34270 FRANCE

Joey Martin, North American Operations Manager  
888-207-2480

*Email:* contact@netia.com

*Website:* www.netia.com

**Products/Services:** Software solutions that enable efficient management and delivery of audiovisual content to today's array of media platforms. Relied on by more 20,000 users in 200 installations around the world, Netia radio automation and broadcast software allows radio stations to manage content from ingest to delivery.



## NEWBAY MEDIA

5285 Shawnee Rd., Suite 100  
Alexandria, VA 22312

Paul McLane, Editorial Director, Broadcast/Video  
703-852-4628

*Email:* radioworld@nbmedia.com

*Website:* www.nbmedia.com

**Products/Services:** Parent of Radio World. Our mission is to connect audiences to authoritative, informative and compelling content in print, digitally and in person, and to offer unsurpassed value and innovation to our advertisers, sponsors and business partners. Brands also include TV Technology, Radio magazine, Government Video, Broadcasting & Cable, TWICE and many other leading professional titles.

## NEXTRADIO

40 Monument Circle, Suite 500  
Indianapolis, IN 46204

Libby Hiple, Sales Manager  
317-684-2952

*Email:* support@nextradioapp.com

*Website:* www.nextradioapp.com

**Products/Services:** NextRadio is a free smartphone app that utilizes the activated FM receiver in your smartphone, allowing you to see and hear local radio. NextRadio is a radio industry initiative supported by the National Association of Broadcasters, Radio Advertising Bureau and most of the radio industry's major owners and operators.

## NOTT LTD.

3801 La Plata Hwy.  
Farmington, NM 87401  
505-327-5646

*Email:* info@nottltd.com

*Website:* www.nottltd.com

**Products/Services:** Detuning, AM unipole systems, elevated radial systems, dissipators.

## NOVA ELECTRONICS

Box 740482  
Dallas, TX 75374  
214-725-5621

Mike Vanhooser, President

*Email:* sales@novaelectronics.net

*Website:* www.novaelectronics.net

**Products/Services:** Broadcast engineering and construction, buildouts/upgrades/repairs of AM, FM, TV and SW stations, AM directionals, LPFM/translators, towers and AM ground systems. New and used transmitter sales, STL systems and field measurements.

## NPR SATELLITE SERVICES

635 Massachusetts Ave. NW  
Washington, DC 20001  
202-513-2608

*Email:* dholmes@npr.org

*Website:* www.nprss.org

**Products/Services:** Satellite distribution with a human touch. Reliable, nationwide solutions for audio, video, and data content delivery.

## NTI AMERICAS INC.

P.O. Box 231027  
Portland, OR 97281

Tom Mintner  
503-684-7050

*Email:* ntisales@ntiam.com

*Website:* www.nti-audio.com

**Products/Services:** XL and Minstruments handheld audio test tools and Flexus modular engineering and lab audio analyzers. Our XL line includes the XL2 audio/acoustics analyzer, and the DR2 digital audio generator and the DL1 digital audio analyzer; MR2 and MR-PRO analog generators.

## O.C. WHITE CO.

4226 Church St.  
Thorndike, MA 01079  
Richard May Jr, Industrial Sales Manager  
413-289-1751

*Email:* info@ocwhite.com

*Website:* www.ocwhite.com

**Products/Services:** The standard bearer in mic booms since the 1960s. We are pleased to announce our newest Ultima line of ultra-low-profile mic booms. This series won Best of Show from Radio Magazine at the 2015 NAB Show. See for yourself why O.C. White has no equal worldwide.

## OMB AMERICA

3100 NW 72 Ave., Unit 112  
Miami, FL 33122

Rafael Arreaza, Sales Manager



# VENDOR & PRODUCT DIRECTORY

305-477-0973

Email: arreaza@omb.com

Website: www.omb.com

**Products/Services:** Manufacturer of FM and TV transmitters, STL links, antennas. Sales and service in the USA and Europe (Spain).

## OMNIA AUDIO, A TELOS ALLIANCE CO.

1241 Superior Ave. E.

Cleveland, OH 44114

216-241-7225

Website: www.telosalliance.com/omnia

**Products/Services:** Omnia products represent the state-of-the-art in audio processing. The recipient of over 20 major industry awards for innovation and design, Omnia processing solutions are recognized worldwide as the technological leader in the development and refinement of the art and science of audio processing.

## OMNIRAX FURNITURE CO.

P.O. Box 1792

Sausalito, CA 94966

Philip Zittell, President

800-332-3393

Email: info@omnirax.com

Website: www.omnirax.com

**Products/Services:** Collaborative ergonomics for the 21st century. Expert custom and production furniture solutions, made in the USA since 1985.

See story, page 43

## OMT TECHNOLOGIES

Unit 1-1717 Dublin Ave.

Winnipeg, MB R3H 0H2 CANADA

Gary Kristiansen, Sales Manager

888-665-0501

Email: sales@imediatoch.com

Website: www.imediatoch.com

**Products/Services:** Solutions provider to the broadcast and media industries. OMT's suite of content management and digital audio software includes iMediaTouch broadcast automation and



**omt**  
technologies

**iMediaTouch**  
**iMediaLogger**

OMT Technologies is a leading provider of advanced radio automation and content management solutions employed by large radio groups, mid-market broadcasters and LPFMs. Our product suite offers robust, proven and feature rich solutions, including customizable user screens and web portal capabilities.

Contact OMT for further product information or a free online demo of iMediaTouch or iMediaLogger.

1-888-665-0501

www.imediatoch.com

radio's #1 selling digital logger, iMediaLogger. OMT's technology is heard daily by millions of people worldwide through television, radio, satellite and Internet broadcasts.

## ON-AIR LIGHTS

12585 Kirkham Ct.

Poway, CA 92064

Mike Buchanan, Sales Manager

858-536-2927

Email: info@cbt-net.com

Website: www.cbt-net.com/onair

**Products/Services:** On-Air Lights is a manufacturer of high-quality, architectural studio warning lights in many styles to fit the professional broadcast, recording and live production décor. The bright, polished, retro, Classic light fixture, like all of our fixtures, is available in red, blue, or black lenses with standard or custom text.

## OPTELATOR-STORMIN PROTECTION PRODUCTS INC.

243 21st Ave. N.

St. Petersburg, FL 33704

John Pecore, President

727-823-6100

Email: jpecore@earthlink.net

Website: www.opticshield.com

**Products/Services:** We are a power-quality engineering company, noted for the Optelator fiber-optic remote modem isolation used with Gentner, Burk or other remote monitoring. We also offer rackmount ATS and line interactive AVR UPS 2200VA rackmount and floor models that can handle the output of backup generators with unstable frequency control, as well as industrial 100BaseT surge suppression and low-voltage protection devices.

## ORATORY CONSULTING

15530 Southeast Belmore Heights

Portland, OR 97236

Steve Moffitt, Consultant

503-704-2914

Email: contact@oratoryconsulting.com

Website: www.oratoryconsulting.com

**Products/Services:** Catholic radio funding and management consulting.

## ORBAN

8350 E. Evans Rd., Suite C-4

Scottsdale, AZ 85260

David Rusch, Sales and Marketing Manager

480-403-8300

Email: info@orban.com

Website: www.orban.com

**Products/Services:** Orban's Optimod series audio processors pull in larger audience shares with a louder, cleaner and more attractive signal. Whether your signal is AM, FM, HF/shortwave, conventional television, DTV, DAB or Webcasting, Optimod processing will shape your sound for maximum reach, appeal and long-term listenability.

## ORBITAL MEDIA NETWORKS INC.

76 Inverness Dr. E, Suite C

Englewood, CO 80112

Jonathon Hagans, Sales

303-925-1708

Email: sales@orbitalmedianetworks.com

Website: www.orbitalmedianetworks.com

**Products/Services:** Industry leader in content distribution, hosting, disaster recovery and satellite space segment. Ask us about our new original content and OMNiShield, a satellite based disaster recovery solution for radio markets of every size.

## OWL ENGINEERING INC.

5844 Hamline Avenue North

Shoreview, MN 55126

651-784-7445

Email: info@owleng.com

Website: www.owleng.com

**Products/Services:** Owl Engineering is a communications consulting engineering firm specializing in radio applications/licensing, intermodulation studies, radio coverage predictions, radio field measurements, antenna tower engineering, pre-purchase inspections and EMC test facility.



## PARAVEL SYSTEMS

41 W. Lee Hwy., Ste. 59 #124

Warrenton, VA 20186

Fred Gleason, President

877-447-2728

Email: sales@paravelsystems.com

Website: www.paravelsystems.com

**Products/Services:** Paravel Systems is a leading provider of hardware and software solutions for the broadcasting industry. Makers of innovative broadcast solutions like the open source Rivedell Radio Automation System and iRoute Axia Livewire Monitor/Selector.

## POTOMAC INSTRUMENTS

7309 Grove Rd., Unit D

Frederick, MD 21704

Guy Berry, Manager

301-696-5550

Email: sales@pi-usa.com

Website: www.pi-usa.com

**Products/Services:** Potomac Instruments manufactures and services medium-wave antenna monitoring systems, field strength meters and related test equipment used in the broadcast market.

## POWERGOLD MUSIC SCHEDULING SOFTWARE

415 N. McKinley Street, Suite 790

Little Rock, AR 72205

Brenda Burt, Sales Manager

501-821-1123; 800-870-0033

Email: sales@powergold.com

Website: www.powergold.com

**Products/Services:** Powergold is a leader in music

# VENDOR & PRODUCT DIRECTORY

scheduling software. Powergold 12 continues a trend of innovation by providing an updated collection of tools designed to meet the ever-changing needs of the broadcast industry. Priority-based rules make scheduling easier. Call to schedule an appointment for a firsthand look at Powergold.

## PRESONUS AUDIO ELECTRONICS

18011 Grand Bay Ct.  
Baton Rouge, LA 70809  
Steve Oppenheimer, Public Relations Manager  
225-216-7887

*Email:* soppenheimer@presonus.com  
*Website:* www.presonus.com

**Products/Services:** Designer and manufacturer of audio-recording and live-sound software, hardware and related accessories. PreSonus's software, microphone preamps, signal processors, digital audio interfaces, digital mixers, control surfaces, loudspeakers and other products are used worldwide for recording, sound reinforcement, broadcast, sound design and Internet audio.

## PRISM MEDIA PRODUCTS INC.

45 Pine St., Suite #1  
Rockaway, NJ 07866  
973-983-9577

*Email:* sales@prismsound.com  
*Website:* www.prismsound.com

**Products/Services:** Prism Sound has been supplying premium quality analog and digital audio technology and products for 28 years. Originally an R&D consultancy, Prism Sound now develops and manufactures products for professional audio, high fidelity music listening and industrial audio test and measurement.

## PRISTINE SYSTEMS CORP.

P.O. Box 6489  
San Pedro, CA 90734  
Kevin Loper, CEO  
310-831-2234

*Email:* sales@pristinesys.com  
*Website:* www.pristinesys.com

**Products/Services:** Established in 1983, Pristine Systems Corp. offers live assist, satellite automation and music-on-hard-drive solutions. Each designed to be user friendly yet powerful enough to handle the most demanding tasks. Advanced metadata capabilities, easy operation, cutting-edge features, unsurpassed tech support and affordable pricing.

## PRO-COMM INC.

1105 Industrial Pkwy.  
Erick, NJ 08724  
Frank Visone, Production Manager  
732-206-0660

*Email:* procomm222@aol.com  
*Website:* www.procomm222.com

**Products/Services:** Design high-power RF microwave devices. RF amplifiers, triode cavity oscillators, sources, transmitters, test equipment for cellular, military, medical, sterilization, university and private labs, etc. Operating frequencies 600 MHz to 3000 MHz with powers from 500 W peak to

50 kW peak nominal. Also design, manufacture and service RF drivers.

## PROGRESSIVE CONCEPTS

305 South Bartlett Rd.  
Streamwood, IL 60107  
Eric Hoppe, Owner  
630-736-9822

*Email:* sales@progressive-concepts.com  
*Website:* www.progressive-concepts.com

**Products/Services:** FM radio broadcast and LPFM radio broadcast transmitters, coaxial cables, antennas, towers, microphones, mixing consoles, audio processors, accessories and more.

## PROPAGATION SYSTEMS INC. - PSI

719 Pensacola Rd., P.O. Box 113  
Ebensburg, PA 15931  
Doug Ross, President  
814-472-5540

*Email:* sales@psibroadcast.com  
*Website:* www.psibroadcast.com

**Products/Services:** Designs and manufactures high-quality solutions for FM and TV broadcasting: FM and TV broadcast antennas, combiners, filters, and transmission lines. Antenna designs available for all power levels, directional or non-directional, pattern optimization, customization and multi-station requirements. Also FM and TV turnkey transmission systems.

## PTEK

888-889-2958; 408-448-3342

*Website:* www.ptekpower.com

**Products/Services:** Manufacturer of FM transmitters and translators.

## PULSE BEAM RADIO

P.O. Box A  
White Springs, FL 32096  
813-562-5790

*Website:* www.pulsebeamradio.com

**Products/Services:** Producer and distributor of Chuck Harder's "For the People" radio show.

## R.V.R. USA

7782 NW 46 St.  
Miami, FL 33166  
Juan Carlos Sampedro  
305-471-9091

*Email:* juancarlo@rvrusa.com  
*Website:* www.rvrusa.com

**Products/Services:** R.V.R. Elettronica was founded in 1979 and over 36 years has formed an established group of companies consolidating its leadership position in the FM and TV worldwide market. R.V.R. can supply analog and digital, air- or liquid-cooled FM and TV transmitters, antennas, filters, combiners and accessories.

## RADIOTRAFFIC.COM

307 Brown  
Waxahachie, TX 75165  
866-500-0500

Dave Scott, CEO

*Email:* dave@radiotraffic.com  
*Website:* www.radiotraffic.com

**Products/Services:** Traffic and billing software for order entry, log generation, invoice generation, receiving bank deposits, reports, projections, copy and production entry, maintenance and billing affidavits. Affordable yet fully featured. Barter available with 500+ AQH.

## RADIO SYSTEMS

601 Heron Dr.  
Logan Township, NJ 08085  
Daniel Braverman, President  
856-467-8000

*Email:* sales@radiosystems.com  
*Website:* www.radiosystems.com

**Products/Services:** Manufacturer of analog and digital consoles, distribution amplifiers, clocks and timers and StudioHub+, the Cat-5 wiring standard of shielded cables, adapters and connectors, made to plug-and-play your studio. Add powered panels, matchjacks, tie-lines, patch panels and switchers to expand connectivity and functionality.

## RADIO WORLD

5285 Shawnee Rd., Suite 100  
Alexandria, VA 22312-2334  
703-852-4600

*Email:* radioworld@nbmedia.com  
*Website:* www.radioworld.com

**Products/Services:** Radio World is the leading news source for radio managers and engineers, published in multiple international editions serving the global broadcast and new media marketplace. Digital media, streaming, IP audio, new transmission standards, tech tips, newsmaker profiles and more. Part of the NewBay Media family of publications, parent of TV Technology, Radio magazine, Broadcasting & Cable and much more.

## RAM SYSTEMS

27992 West Route 120, Suite 138  
Lakemoor, IL 60051  
Ron Mitchell, President  
815-679-6574

*Email:* sales@ram68.com  
*Website:* www.ram68.com

**Products/Services:** Manufacturer of mic booms, clock and timer systems, news room mixers, on-air lights and other broadcast studio equipment.

## RCS

445 Hamilton Ave.  
White Plains, NY 10601  
Philippe Generali, President/CEO  
914-428-4600

*Email:* sales@rcsworks.com  
*Website:* www.rcsworks.com

**Products/Services:** We are a technology company that has been inventing solutions for the broadcasting industry for 30 years. Our products and services are used at 10,500 radio stations, TV music channels, cable companies, satellite radio networks and Internet stations.



# VENDOR & PRODUCT DIRECTORY

## REALTRAPS ACOUSTICS

34 Cedar Vale Dr.  
New Milford, CT 06776  
James Lindenschmidt, General Manager  
860-210-1870

*Email:* [JWL@realtraps.com](mailto:JWL@realtraps.com)  
*Website:* [www.realtraps.com](http://www.realtraps.com)

**Products/Services:** Manufacturer of professional acoustic treatments and portable recording and voiceover solutions available in all price ranges, making the world sound better, one room at a time, since 2001.

## REDDING AUDIO LLC

101 N Plains Industrial Rd., #4  
Wallingford, CT 06492

Scott Boland, CEO/President  
*Email:* [sales@reddingaudio.com](mailto:sales@reddingaudio.com)  
*Website:* [www.reddingaudio.com](http://www.reddingaudio.com)

**Products/Services:** Redding Audio LLC, USA and Canada exclusive wholesale distribution of premium professional audio products. Distributed brands include Schoeps Microphones, Rycote, Voice Technologies, Ambient Recording, Audio Ltd. Wireless, Cable Techniques and Peter Engh Pro Audio.

## RELEVANT RADIO

P.O. Box 10707  
Green Bay, WI 54307-0707  
Nancy Jensen, Chief Marketing Officer  
920-406-7338

*Email:* [info@relevantradio.com](mailto:info@relevantradio.com)  
*Website:* [www.relevantradio.com](http://www.relevantradio.com)

**Products/Services:** Relevant Radio is talk radio for Catholic life.

## ROHDE & SCHWARZ USA INC.

8661A Robert Fulton Dr.  
Columbia, MD 21046  
Daniel Germain, Marketing  
410-910-7800

*Email:* [customer.support@rsa.rohde-schwarz.com](mailto:customer.support@rsa.rohde-schwarz.com)  
*Website:* [www.rohde-schwarz.com/USA](http://www.rohde-schwarz.com/USA)

**Products/Services:** Rohde & Schwarz is a leading supplier of solutions in the fields of broadcast and media. The company offers products for post production, ingest, storage, playout, encoding and multiplexing. Established over 80 years ago, Rohde & Schwarz has a global presence and a dedicated service network in more than 70 countries.

## RTW GMBH & CO. KG

AM Wassermann 25  
Cologne, 50829 GERMANY  
Andreas Tweitmann, CEO  
+49-221-70-913-85

*Email:* [rtw@rtw.com](mailto:rtw@rtw.com)  
*Website:* [www.rtw.com](http://www.rtw.com)

**Products/Services:** RTW, based in Cologne, Germany, has 50 years of experience designing, producing and marketing advanced recording-studio equipment, leading and innovating the market for high-quality audio metering and monitoring tools. RTW operates a worldwide distribution and service network.

## RUSHWORKS

800 Parker Square, Suite 200  
Flower Mound, TX 75028  
Rush Beesley, President  
888-894-7874

*Email:* [solutions@rushworks.tv](mailto:solutions@rushworks.tv)  
*Website:* [www.rushworks.tv](http://www.rushworks.tv)

**Products/Services:** We provide low-cost, high-performance production, automation and video streaming solutions including VDESK RADIO/TV that transforms a radio station into an Internet TV station. This video streaming and recording system allows broadcasters to generate additional revenue streams by placing their brand on mobile media and Internet TV screens.

## SABRE INDUSTRIES INC.

7101 Southbridge Dr.  
Sioux City, IA 51111  
Terrence Becht, Broadcast Sales Representative  
800-369-6690

*Email:* [towerinfo@sabreindustries.com](mailto:towerinfo@sabreindustries.com)  
*Website:* [www.sabreindustries.com](http://www.sabreindustries.com)

**Products/Services:** Providing towers for nearly all broadcast applications, Sabre Industries manufactures guyed and self-supporting towers with tubular, solid round or angle members. We also offer a variety of tower components, pre-engineered lightweight towers and concrete or lightweight equipment shelters.

## SAGE ALERTING SYSTEMS

800 Westchester Ave., Suite 641 North  
Rye Brook, NY 10573  
Harold Price, President  
914-872-4069

*Email:* [info@sagealertingsystems.com](mailto:info@sagealertingsystems.com)  
*Website:* [www.sagealertingsystems.com](http://www.sagealertingsystems.com)

**Products/Services:** Emergency Alert System (EAS) and Common Alerting System (CAP) hardware and software for the international broadcast industry. Sage's flagship product, the Sage Digital ENDEC, provides combined EAS and CAP support in a fully certified solution. Sage has provided EAS solutions since 1996.

## SANDIES

225 Lincoln Hwy., Suite 167  
Fairless Hills, PA 19030  
215-547-2570

*Email:* [service@sandiesusa.com](mailto:service@sandiesusa.com)  
*Website:* [www.sandiesusa.com](http://www.sandiesusa.com)

**Products/Services:** Your source for studio warning lights, Dynamax consoles and clock systems.

## SAS SIERRA AUTOMATED SYSTEMS & ENGINEERING CORP.

2821 Burton Ave.  
Burbank, CA 91504  
Al Salci, VP Sales  
818-840-6749

*Email:* [al@sasaudio.com](mailto:al@sasaudio.com)  
*Website:* [www.sasaudio.com](http://www.sasaudio.com)

**Products/Services:** Integrated solutions for audio routing, mixing, consoles, intercom/talkback/

IFB, codecs, phone hybrids and automation. SAS manufactures consoles, studio control panels, intercom stations, headphone amplifiers, USB audio interfaces and audio networks. Connect analog, digital, AoIP — they all talk to each other. Extensive remote control, programming and diagnostic software.

## SCMS INC.

10201 Rodney St.  
Pineville, NC 28134  
Bob Cauthen, President  
800-438-6040

*Email:* [bobc@scmsinc.com](mailto:bobc@scmsinc.com)  
*Website:* [www.scmsinc.com](http://www.scmsinc.com)

**Products/Services:** Distributor of radio and TV studio and transmitter products.

## SF CORP.

4901 E State Hwy. 107 Lot 60  
Edinburg, TX 78542  
Paul Westbrook, CEO  
210-401-1987

*Email:* [prw@softfiles.com](mailto:prw@softfiles.com)  
*Website:* [www.softfiles.com/D&R.html](http://www.softfiles.com/D&R.html)

**Products/Services:** D&R Electronica b.v. has been operating for 43 years. The last 15 years D&R has been mainly involved in broadcast-related products such as the Airlite, Axum, Airmate-USB, Airence-USB, Airlab and Lyra mixers. Aircast is D&R's radio play-out software. D&R's hybrids are very popular.

## SHIVELY LABS

P.O. Box 389, 188 Harrison Rd.  
Bridgton, ME 04009  
Dale Ladner, Sales Manager  
207-647-3327

*Email:* [sales@shively.com](mailto:sales@shively.com)  
*Website:* [www.shively.com](http://www.shively.com)

**Products/Services:** FM antennas, filters, combiners, coax components and related transmission products. Shively is the industry leader for supplying FM transmission equipment for HD Radio implementation, including interleaved antennas, dual antennas, dual feed multi-station systems and special filtering and combining techniques.

## SIERRA AUTOMATED SYSTEMS & ENGINEERING CORP.

See SAS

## SINE CONTROL TECHNOLOGY INC.

P.O. Box 3796  
Seal Beach, CA 90740  
Hank Landsberg, CEO  
562-493-3589

*Email:* [hank@sinecontrol.com](mailto:hank@sinecontrol.com)  
*Website:* [www.sinecontrol.com](http://www.sinecontrol.com)

**Products/Services:** PowerClamp TVSS is the industry leader in surge suppression and power protection. PowerClamp TVSS units will help prevent equipment damage by eliminating spikes and surges on the AC power line. PowerClamp's ultra-low clamping level assures your gear will operate

# VENDOR & PRODUCT DIRECTORY

reliably for years without damage caused by AC power line spikes!

## SMARTS BROADCAST SYSTEMS

2508 W. Main St.  
Emmetsburg, IA 50536  
800-747-6278

*Website:* [www.smartsbroadcast.com](http://www.smartsbroadcast.com)

**Products/Services:** Smarts offers world-class support for our Skylla radio automation system for live/satellite/music on hard drive. Radio your way! Smarts Second-Generation traffic works great for small to medium markets. Remote ball games, Skylla Producer, FTP downloads, streaming and more, designed for the end user.

## SONIFEX LTD.

61 Station Rd.  
Irthlingborough, Northamptonshire NN9 5QE  
UNITED KINGDOM  
Richard Butlin, Sales Manager  
+44-1933-650-700

*Email:* [sales@sonifex.co.uk](mailto:sales@sonifex.co.uk)

*Website:* [www.sonifex.co.uk](http://www.sonifex.co.uk)

**Products/Services:** High-quality audio and video equipment for radio and TV studios for 46 years. A reputation for quality and reliability. The constant need to innovate is an integral part of the Sonifex culture, combining outward-looking ideas with sound and efficient practices.

## STIRLITZ MEDIA

Belgijska 11/11  
Warsaw, 02-511 POLAND  
Cesco van Gool, International Sales Director  
+48-22-3897642

*Email:* [cesco@stirlitzmedia.com](mailto:cesco@stirlitzmedia.com)

*Website:* [www.stirlitzmedia.com](http://www.stirlitzmedia.com)

**Products/Services:** TV and radio monitoring; compliance recording; content identification; Native IP audio/video and metadata logging software; timeline-based player for Windows, OSX, iOS and Android. Automated detection of advertisements and songs in audio. Automated and scripted exports based on play-out system metadata. Used by broadcasters and monitoring companies worldwide.

## STREAMGUYS

2212 Jacoby Creek Rd.  
Bayside, CA 95524  
877-287-2938

Jonathan Speaker, COO

*Email:* [info@streamguys.com](mailto:info@streamguys.com)

*Website:* [www.streamguys.com](http://www.streamguys.com)

**Products/Services:** In business since 2000, StreamGuys is a provider of audio and video streaming toolsets and services. The company has a reputation for outstanding customer service, a robust and reliable network, and competitive rates. More than 600 clients worldwide, across many industries, depend on their mission-critical service.

## STUDIO TECHNOLOGY

529 Rosedale Rd., #103

Kennett Square, PA 19348

Vince Fiola, President  
610-925-2785

*Email:* [vfiola@studiotechology.com](mailto:vfiola@studiotechology.com)

*Website:* [www.studiotechology.com](http://www.studiotechology.com)

**Products/Services:** Studio Technology designs, constructs, delivers and installs technical furniture for the broadcast industry nationwide. We provide both custom and standard furniture lines.

## SUPERIOR ELECTRIC

One Cowles Rd.  
Plainville, CT 06062  
Ted Gladis, Broadcast Sales  
860-507-2025

*Email:* [info@superiorelectric.com](mailto:info@superiorelectric.com)

*Website:* [www.superiorelectric.com](http://www.superiorelectric.com)

**Products/Services:** Manufacturer of Stabiline Power Quality Solutions. Products include automatic voltage regulators, surge protective devices, uninterruptible power supplies and power conditioners.

## SURCOM ASSOCIATES INC.

5674 El Camino Real, Suite K  
Carlsbad, CA 92008  
760-438-4420

*Email:* [link@surcom.com](mailto:link@surcom.com)

*Website:* [www.surcom.com](http://www.surcom.com)

**Products/Services:** Distributors of high power RF vacuum variable and vacuum fixed capacitors and vacuum relays manufactured by Jennings Technology Co.; ceramic transmitting capacitors manufactured by High Energy Corp., and mica transmitting capacitors manufactured by Cornell Dubilier. Surcom specializes in the same day shipment of parts.

## TASCAM

1834 Gage Road  
Montebello, CA 90640  
323-726-0303

*Website:* [www.tascam.com](http://www.tascam.com)

**Products/Services:** Studio recording and content production equipment and software.

## TEAMCAST INC.

100 North Main Street, Suite 203  
Elmira, NY 14901  
312-263-0033

*Email:* [salesus@teamcast.com](mailto:salesus@teamcast.com)

*Website:* [www.teamcast.com](http://www.teamcast.com)

**Products/Services:** Renowned and active member of digital radio and TV ecosystems worldwide, with innovative technology offerings based on solid expertise in satellite, digital radio, digital TV and mobile TV transmission. Digital radio products include DAB/DMB modulators, DVB-T2-Lite modulators, repeaters and gap-fillers, DVB-T2 professional receivers.

## TELOS SYSTEMS, A TELOS ALLIANCE CO.

1241 Superior Ave. E  
Cleveland, OH 44114  
216-241-7225

*Website:* [www.telos-systems.com](http://www.telos-systems.com)

**Products/Services:** Telos Systems, part of The Telos Alliance, is headquartered in Cleveland, Ohio, with offices worldwide. Telos is a leading manufacturer of audio codecs for ISDN and IP connections, POTS and VoIP telephone interface products for talk-shows, audio production and remote broadcasts, and encoding/processing hardware and software for webcasters.

## TIELINE USA

7202 East 87th Street, Suite #116  
Indianapolis, IN 46256  
John Lackness, VP Sales, Americas  
317-845-8000

*Email:* [sales@tieline.com](mailto:sales@tieline.com)

*Website:* [www.tieline.com](http://www.tieline.com)

**Products/Services:** Digital IP audio codecs for remotes, STLs and multi-point audio distribution. Deliver broadcast-quality 22 kHz FM audio over 3G/4G cellular networks, wired IP, Wi-Fi, Wi-Max, POTS, ISDN, GSM, satellite and X.21/V.35. Codecs include the Genie and Merlin families, Bridge-IT, Bridge-IT XTRA and Report-IT apps, plus the G3 codec range.

See our Profile in Excellence, page 10 and story, page 42

## TITUS TECHNOLOGICAL LABORATORIES

77 Kreiger Ln.  
Glastonbury, CT 06033  
Lawrence Titus, Owner  
800-806-8851

*Email:* [sales2@tituslabs.com](mailto:sales2@tituslabs.com)

*Website:* [www.tituslabs.com](http://www.tituslabs.com)

**Products/Services:** Quality electronic equipment for television, radio, satellite, government, telecommunications and cable broadcast industries.

## TRANSCOM CORPORATION

2655 Philmont Ave., Suite 200  
Huntingdon Valley, PA 19006  
Martin Cooper, President  
215-938-7304

*Email:* [transcom@fmamtv.com](mailto:transcom@fmamtv.com)

*Website:* [www.fmamtv.com](http://www.fmamtv.com)

# Transcom Corporation

Since 1978, the broadcast industry's source for:

- \*used Digital Transmitters
- \*used Analog Transmitters
- \*new RF equipment
- \*new Studio equipment

**Transcom Corporation**  
Martin Cooper  
Suite 200, 2655 Philmont Avenue  
Huntingdon Valley, PA 19006  
Phone: 215-938-7304  
Fax: 215-938-7361  
Email: [transcom@fmamtv.com](mailto:transcom@fmamtv.com)  
Web: [www.fmamtv.com](http://www.fmamtv.com)





# VENDOR & PRODUCT DIRECTORY

**Products/Services:** Since 1978 Transcom has provided used transmitters to the radio and TV industry. In addition we offer new antenna, cable, STL/MW and other RF equipment.

## TRANSMEDIA RADIO NETWORKS

3201 Danville Blvd., Suite 150

Alamo, CA 94507

Dave Adams, President

925-678-1940

*Email:* dave@transmediasf.com

*Website:* www.transmediasf.com

**Products/Services:** Syndicators of "Point Of Law," America's longest-running short-form feature. We also operate the Spotttraffic radio commercial distribution network.

## TRANSRADIO SENDERSYSTEME BERLIN AG

Mertensstr. 63 - 115

Berlin, 13587 GERMANY

+49-30-33978-0

*Email:* sales@tsb-ag.de

*Website:* www.transradio.de

**Products/Services:** Manufacturer of solid-state long- and medium-wave AM, VHF/FM and DRM transmission systems. RF systems, transmitters, excitors, power supply equipment, antennas and tuning units. Specialized in development, design and commissioning of modern digital broadcasting transmitter systems for broadcast and data communication.

## TUNWALL RADIO

Trenton, FL 32693

330-995-9642

*Email:* info@tunwallradio.com

*Website:* www.tunwallradio.com

**Products/Services:** Tunwall Radio manufactures broadcast switch and transmitter control systems.

## UNATTENDEDWEATHER.COM

307 Brown St.

Waxahachie, TX 75165

Dave Scott, CEO

866-500-0500

*Email:* dave@unattendedweather.com

*Website:* www.unattendedweather.com

**Products/Services:** Up-to-the-minute automated weather that doesn't sound automated. Works with any automation. All live recorded voices (no robo voices). Very affordable.

## UNCOMPRESSED MUSIC.COM

307 Brown St

Waxahachie, TX 75165

Dave Scott, CEO

866-500-0500

*Email:* orders@uncompressedmusic.com

*Website:* www.uncompressedmusic.com

**Products/Services:** Music on hard drive for radio stations, true CD-quality WAVE files tailored for your automation with auto-import of artists, titles, intros, segue lengths, endings and years. Delivered with Excel database for music scheduler software via Internet FTP, dropbox.com, USB flash or

hard drive. Less expensive than any other source.

## V-SOFT COMMUNICATIONS

401 Main St., Suite 213

Cedar Falls, IA 50613

Doug Vernier, President

319-266-8402

*Email:* info@v-soft.com

*Website:* www.v-soft.com

**Products/Services:** Provides software products and support for broadcast allocation and propagation predictions analysis. Used for finding new frequencies or mapping comparative transmitter sites for AM, FM, TV and microwave. Our products are in routine use at the FCC, Industry Canada and broadcast engineering consultants and engineers worldwide.

## WHEATSTONE CORP.

600 Industrial Dr.

New Bern, NC 28562

Jay Tyler, Director of Sales

252-638-7000

*Email:* jay@wheatstone.com

*Website:* wheatstone.com

**Products/Services:** Wheatstone Corp. in New Bern, N.C., designs and manufactures professional broadcast audio equipment under the Wheatstone, Audioarts Engineering and VoxPro brand names. Products include digital audio consoles and control surfaces, analog audio consoles, networked digital audio systems, audio-over-IP, audio editors, signal processing for on-air and studio applications, pre-wiring and software.

See stories, pages 39 and 40

## WHISPERROOM INC.

109 S. Northshore Dr., Suite 303

Knoxville, TN 37919

Debbie Sweany, Sales Manager

865-558-5364

*Email:* info@whisperroom.com

*Website:* www.whisperroom.com

**Products/Services:** Portable/modular sound isolation booths. We have 20 sizes and two levels of sound isolation available, a Standard (single-wall) and an Enhanced (double-wall). Sizes range from a modest 3.5-by-2.5-foot one-person unit to a room-size 8.5-by-15.5-foot unit. A range of application-specific optional features are available.

## WIDEORBIT

### WIDEORBIT

1160 Battery St.

San Francisco, CA 94111

Mike Zinsmeister

415-675-6700

*Email:* mikez@wideorbit.com

*Website:* www.wideorbit.com

**Products/Services:** WideOrbit is the leading provider of advertising management, station automation, digital audio streaming and on-demand content technology for the radio industry. Broad-

casters and networks leverage our solutions to streamline operations, maximize revenue from traditional, digital and programmatic channels, and extend their business across distribution platforms.

## WINMEDIA CANADA

63, Sauriol

Laval, QC H7N 3B2 CANADA

François Beaumier, CEO

514-984-4912

*Email:* contact@winmedia.ca

*Website:* www.winmedia.ca

**Products/Services:** Founded in 1995, WinMedia is a leading provider in automation and content management solutions. More than 2,500 content producers and broadcasters rely on the power, flexibility and reliability of WinMedia solutions for their mission-critical operations. WinMedia provides a global presence through three offices strategically located in Europe, America and Asia.

## WORLDCAST SYSTEMS

19595 NE 10th Ave., Suite A

Miami, FL 33179

Tony Peterle, US Manager

305-249-3110

*Email:* ussales@worldcastsystems.com

*Website:* www.worldcastsystems.com

**Products/Services:** Professional, reliable and innovative systems for broadcasters worldwide. Encompassing leading brands APT, Ecreso and Audemat, WorldCast offers everything from audio codecs, RDS encoders, audio processors and FM transmitters to a range of tools for telemetry, monitoring, measurement and test as well as turnkey packages and services.

## YELLOWTEC USA

1551 Vaquero Glen

Escondido, CA 92026

Michael Uhl, Director of US Sales

760-294-7314

*Email:* mike@yellowtec.com

*Website:* www.yellowtecusa.com

**Products/Services:** Yellowtec is an award-winning company based in Germany with a think-tank approach to product development. Our team is committed to raising the standards of design and engineering to create innovative products for the media broadcast industry.

### NeoWinners Takes Winners to a Higher Level

*Portland iHeartMedia cluster can now manage contests and promotions with one program*

#### USERREPORT

BY MELISSA IVES

Director of Marketing & Promotions  
iHeartMedia-Portland, Ore.

**PORTLAND, ORE.** — One day last April, our Director of Engineering Chris Weiss asked me to attend an impromptu presentation of some software application used to interface our new Telos VX system. I had been curious to see what this was all about, and what I discovered is something that we

rather than at the reception desk, when it's uncomfortable to deny a prize because of our rules. We were missing that function previously.

Though installing such a system affects quite a number of people (promotions, on-air teams, technical department, reception, likely more than 30 people), integration went well and extensive training helped us getting started in less than a week.

**Not only can the system adequately serve our giveaways organization – the promotions/on-air/reception desk – but it also links to phones for the on-air talent.**

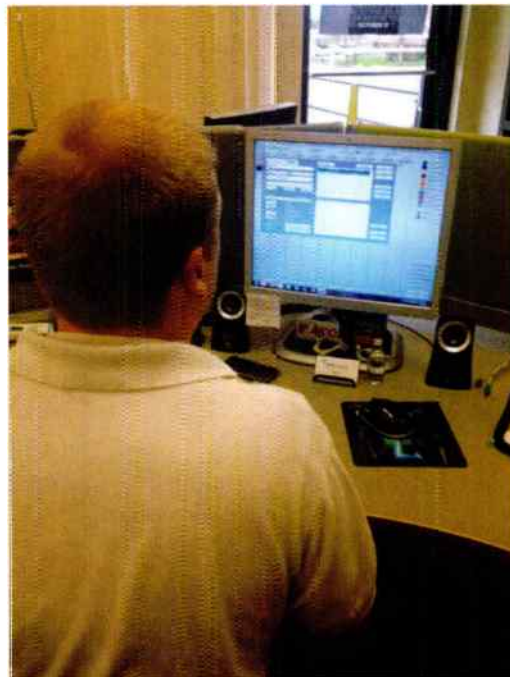
had been lacking for years: A centralized database across our nine stations for our winners, calls and contests that is easy to use and packed with functions to save an enormous amount of time and duplicate efforts by our Promotion Team. It was NeoWinners, from a company called NeoGroupe.

Not only can the system adequately serve our giveaways organization — the promotions/on-air/reception desk — but it also links to phones for the on-air talent. Listeners playing too often are now caught before the jocks even pick up the phone,

To give you an example: Scheduling a contest with “week-day qualifiers” and “weekly grand prize trip winners” was done in two minutes when it would have taken me two hours with our previous system.

NeoGroupe also converted and merged our existing separate databases into NeoWinners (showing our previous separate lists had duplicates) and increased our IRS compliance, as winners have now a unique record across all stations.

The final touch was the link with the phones. Hosts said “Wow! This is so cool,”



when they saw existing winners calling in to their studios and being immediately recognized.

Even the street team and online/Internet giveaways are managed within the same database. It makes things a lot easier than with several different interfaces.

We are looking at integrating with the NeoGroupe Web/SMS solution.

I recommend NeoWinners to anyone involved with prize and winner management on a daily basis.

**For information, contact Philippe Halin at NeoGroupe at (210) 757-4700 or visit [www.neogroupe.com](http://www.neogroupe.com).**



### Nautel GV40 Does More With Less Power

*Northwest broadcaster happy with HD Radio performance and user interface*

#### USERREPORT

BY **BRYAN HUBERT**  
Chief Engineer  
Crista Media

**BELLINGHAM, WASH.** — Located off the northwestern corner of San Juan County, Wash., is Orcas Island, the largest of the San Juan Islands. Most of this beautiful, horseshoe-shaped island's 57 square miles are rural and hilly. In April 2014, KWPZ(FM) installed the first Nautel GV40 transmitter on Mount Constitution, near the island's highest point at 2,409 feet above Puget Sound. Playing a contemporary Christian format at 106.5 MHz, the station serves northwest Washington and Canada's metro Vancouver, Victoria and the Fraser Valley.

Because the transmitter was the first GV40 built (serial number H0101), it was shipped to Orcas Island direct from the exhibition floor of the 2014 NAB Show. Station colleague Tim Vik and I spent a couple of 15-hour days unpacking and installing the transmitter. A lot of that time was spent getting to and from the transmitter site aboard a Washington State Ferry, part of the United States' largest ferry system.

The transmitter certainly was packed with love; we could feel it as we tore the walls off the crate. The three-phase wiring that powered the previous transmitter was the correct size for powering the new GV40 and luckily turned out to be just long enough to reach the new transmitter.

Tim was impressed with the GV40 Advanced User Interface. Even though it was his first time playing with the AUI, he quickly figured out how to review alarms and set up presets. After wiring up the control and metering, connecting the 3-inch coax output, setting the IP numbers, and feeding AC to the UPS option that feeds the controller and exciter, the transmitter was ready to go.

Mount Constitution sites engineer Erling Manley commented on the improved layout changes of the GV40 compared to the NV20 (KAFE) and NV30 (KISM), located in a different facility on Mount Constitution. He said: "One thing we underestimated with the installation was the power needed to run the controller/exciter. When we first tried to turn on the transmitter it tripped the 1 kVa UPS unit that also powered an adjacent equipment rack, knocking the station off the

three-phase amps feeding the transmitter running at 25.5 kW and it looked like the GV40 was drawing a good 20 amps less per phase at -14 dB than the previous transmitter running at -20 dB. It's nice to put in a new transmitter, increase the HD Radio level, and actually see a reduction in power consumption. And we still have headroom if we should ever want to raise the HD level again.

We also found that the lowest power level

we could set to minimize tower worker exposure was 4 kW FM+HD. We normally try to reduce power to 10 percent, 2.5 kW. Nautel is looking at a way for us to reduce power to a lower level.

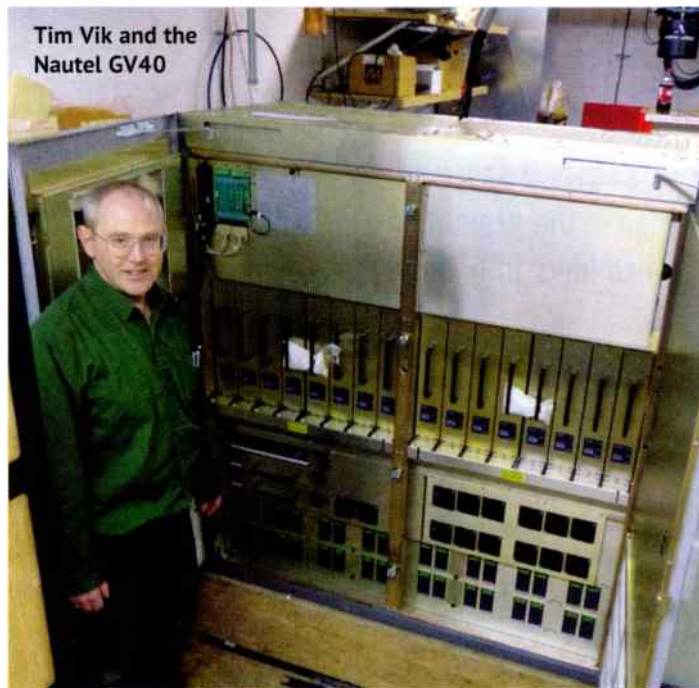
We are still playing with AUI settings for "Power Boost" and "Optimizer" to see what trade-offs in reception we observe. So far, it looks like going with the "high efficiency" mode has little impact on my car radio when listening 65 miles from the transmitter site. I think we will be experimenting with this for a while longer.

There are a number of cool features in the AUI which we haven't implemented, but are contemplating, like the ability to control

other equipment with the extra GPIOs. Our present remote control is not set up for logging, and we're considering using the "Call Home" feature that uses servers at Nautel to do the logging.

All in all, this transmitter is really cool. It's a big step forward for KWPZ, and we're confident, given Nautel's reputation and experience with solid-state technology, that it will be more reliable than the previous transmitter. This GV40 transmitter is the seventh Nautel transmitter Crista Media has on the air with its four stations. We love these boxes.

For information, contact Wendell Lonergan at Nautel in Nova Scotia at (902) 823-5131 or visit [www.nautel.com](http://www.nautel.com).



air for a couple of minutes."

He continued, "That's when we discovered that the UPS option not only feeds the controller, but also the power supplies that power the two exciters (we ordered the standby exciter option), which can draw up to 14 amps when powering up the transmitter and 9 amps when running normally. Putting the transmitter on the air was delayed until we acquired a new Staco 2 kVa UPS, dedicated to the GV40. The exciter output can actually put out 500 watts of RF, feeding the output modules directly, eliminating the IPA normally found in transmitters. This accounted for the extra power needed to run it."

I was surprised when I measured the

### M4-IP Brings a Smile to Crawford in Detroit

*Four great sound sources to be had from this IP-routable Wheatstone mic processor*

#### USERREPORT

**BY BRIAN KERKAN**  
Engineer  
Crawford Broadcasting

**DETROIT** — The Wheatstone M4-IP four-channel mic processor Blade has become a problem-solver for us at Crawford Broadcasting in Detroit.

One standout feature is that it allows you to set up the EQ before or after the dynamics section, which features a compressor, expander, de-esser, phase rotator, phase invert and phantom power. The four-band parametric equalizer shares the same type of controls found on other Wheatstone processors. The frequency response plot shows the settings as you work on them through the computer interface. There is a high- and low-pass filter that can help

front panel.

It's professionally engineered. The M4-IP has 32 dB of input headroom, which is comparable to the best recording studios. Like other Wheatstone mic processors, the M4-IP has a fairly high input impedance and high available gain. All of this comes out in the sound.

I was able to develop a nice-sounding preset, with pleasing resonant bass, and smooth details in the high frequencies



We produce a syndicated talk show for four hours daily; I wanted microphone processing that could provide a warm sound, one that would mute or gate the other microphones that were not in use (I'll discuss another cool gating feature a bit later on).

In this four-channel mic processor I found a unit that would integrate with our Wheatstone Bridge system, and connect to new WheatNet IP Blades as we upgrade our plant. Having four microphone processors in a single rack space was helpful; I didn't have to make room for it.

Most important, though, is that the M4-IP helped me take the hollow sound out of the room. It has a wide range of tools to tweak the processor, and includes presets as a good starting point.

eliminate rumble or limit excessive highs if needed. Its de-esser can be fine-tuned to help with sibilance issues.

Oh, and about that gating feature, the M4-IP gate's sidechain is filtered to voice frequencies, which reduces false triggering when you accidentally bump the table the mic's sitting on, for example.

There's a full set of metering tools available, on the front for each channel, and through the Wheatstone M4-IP GUI. The M4-IP has analog, AES or WheatNet IP inputs and outputs, providing flexibility in how it's installed.

I would recommend the M4-IP for anyone looking to upgrade their analog microphone processing. No more dirty, noisy pots, no more bad switches, everything is selected via an easy-to-use menu from the

using the M4-IP GUI. As needed, my presets can be selected and changed by talent using the software interface on the control room computer. The M4-IP also can be set up remotely, allowing evaluation and setup without having to be in the air studio.

I found the M4-IP to be quiet, smooth and clean. Since the M4-IP is part of the WheatNet-IP Blade network, it can provide processing for any available input or output on the WheatNet-IP network.

In a few months, we will be able to take full advantage of the WheatNet-IP connectivity when we bring our new Blades online.

For information contact Jay Tyler at Wheatstone in North Carolina at (252) 638-7000 or visit [www.wheatstone.com](http://www.wheatstone.com).



### Leighton Loves WheatNet-IP

*The days of running a large amount of wire through a facility are gone*

#### USERREPORT

BY TONY ABFALTER  
Director of Engineering  
Leighton Broadcasting

**GRAND FORKS, N.D.** — Out with the old and in with the new. Two years ago our company decided to start replacing the old analog audio systems with current audio over IP digital platforms in all of our markets. With the many great choices for AoIP systems out there, we standardized on the WheatNet-IP system for our company. The WheatNet-IP system from Wheatstone has all the great features you would expect from a current AoIP system.

Our most current build has been taking place in Grand Forks, N.D., at our new studio building. The plan for the audio side was to be as completely digital-in and -out, as it sits at a 5 kW AM site. The WheatNet-IP system for this build consists of 31 “blades” and nine consoles. The blades are rackmounted input/output, control or processing modules that work with the WheatNet-IP network.

Some of the WheatNet-IP blades allow you to add eight audio sources and destinations along with 12 I/Os. We managed to get all but a few sources and destinations onto our digital network.

We preconfigured the whole system in a conference room in St. Cloud, Minn. To most of the staff, it was quite a shock that five on-air studios, two production rooms, newsroom and tech center could fit into such a small amount of space. The days of running a large amount of wire for all these rooms and equipment are gone. At the end of two days, the system was ready to be installed with all sources and destinations labeled and system IP address set up. This saved us a lot of time when we placed it for the first time in the new building.

For this market we are using direct wiring to each blade so the only punch blocks will be for tallies and relays. With the standard use of Cat-5e, Cat-6, etc., in AoIP



systems, the wiring was easy. All the connectors are RJ-45 on the back of the blades. This allowed us to make use of our networking staff in wiring the new building for audio, which made for a quick install.

The Grand Forks market has a lot of satellite programming, so we used two LIO-48 logic blades to handle the relay inputs into the system in combination with the IP88D digital blades that add the satellite sources (AES) into the system. The LIO-48 logic blade is designed for logic and control functions. It has 48 I/Os (no audio) and has a front-panel display that shows which relay is active and makes troubleshooting easy when satellite problems arise. This also allows the system layout to stay clean and organized for integration with the RCS NexGen automation system.

We utilize NexGen to control WheatNet-IP through the utility mixers, source and destinations switches and control of fader on/off. One of the features of the WheatNet-IP network that we found helpful was control. WheatNet-IP talks to the automation system with ease. We have our

lobby/building speakers on WheatNet-IP and have a NexGen node automatically change the station each hour so the stations all get time. We also use the same approach in controlling our phone system's on-hold audio. We have programmed soft keys on the consoles to unlock doors for early morning guests through the I/Os on the blades.

All this sounds like a lot to keep track of, but we have found the use of Navigator to be an easy way to manage and control the system and keep things simple and easy. With one program you can get a layout of the total system and control sources and destinations with no problems. This also allows you to manage labels and do updates along with many other management items.

AoIP has been a great investment for us. It saves time in troubleshooting and installation, not to mention the audio quality improvement over analog makes it worth the money.

For information, contact Jay Tyler at Wheatstone in North Carolina at (252) 638-7000 or visit [www.wheatstone.com](http://www.wheatstone.com).

### Impact Influences Investors With Comrex

*BRIC-Link package makes it easy for clients to get on the air*

#### USERREPORT

BY E.C. HAMILTON  
Studio Engineer  
Impact Partnership

**KENNESAW, GA.** — Impact Partnership is the fastest-growing company in the investment insurance and annuities industry. We're a key distribution partner for 14 leading U.S. insurance and investment annuity companies — we inform advisors and agents about financial products, and through comprehensive marketing, we help them reach and educate people who are looking to retire.

Radio is one of our primary offerings. We give our clients — financial advisors with little to no media experience — the ability to host a radio show. This means we do the legwork for them. We'll script



want their audience to feel like everybody they're hearing on the show is in the same room. Of the codecs and hybrids we tried, Comrex was the only one that gave us the true, dynamic sound we wanted. We outfitted our studios with Comrex Access, and developed a BRIC-Link kit for the field.

Our clients have no technical background, and often have no engineering assistance available. We needed to engineer a plug-and-play solution that they could set up themselves, with little intervention and limited possibility for error. BRIC-Link is simple and reliable enough to form the basis of our remote kit.

The kit we've built is about 9 inches tall, 11 inches wide and 10 inches deep. The kit is shipped in a custom Pelican case, the interior of which is molded to fit the equipment. Inside of the rack, we've got the BRIC-Link, which is hooked up to a Mackie 402 mixer. All of the custom cabling between the two pieces is wired

together; when one of our clients receives their kit, all they need to do is take it out of the Pelican, plug in the two Electro-Voice RE 320 microphones and two Sony 7506 headphones that we supply, plug the BRIC-Link into the Internet and to a power source, and they're finished. It's simple, it's easy and it requires no savvy — all together, it has saved days' worth of time, both for our customers and for our engineers.

When we introduced radio as an option, approximately 20 percent of our business came from that segment of our business. In under a year, with the help of our custom BRIC-Link kits and our talented staff, radio now makes up closer to 50 percent of our business, and we've gone from doing 15 shows to more than 100 shows a week in 50 or more markets. It's ramped up very quickly. The portability of the BRIC-Link contributes a gigantic portion of that.

**For information, contact Chris Crump at Comrex in Massachusetts at (978) 784-1776 or visit [www.comrex.com](http://www.comrex.com).**

the show, we'll work the clocks out, we'll record the show and edit it, and we'll do all the media buying.

In the past, our advisors would need to go to a radio station to record and produce the show. This would take hours — not only of the advisor's time, but of ours as well.

To streamline the process, we needed some sort of codec that we could send in the field — something that could connect to our partners that we already worked with and that we could engineer in such a way to cut out the facility. After trying multiple options, we found Comrex.

Audio quality is of the utmost importance to us. Even though our advisors are often halfway across the country, we



### Tieline Genie STL Unites Communities

*Solid connections keep signals alive in remote North Dakota reservations*

#### USERREPORT

BY ALEX LOOKINGELK  
Lookingelk Broadcast Engineering

**SOLEN, N.D.** — During my U.S. military service I trained and worked extensively in RF and then supplemented that with IT education. I established Lookingelk Broadcast Engineering, a contract engineering firm, in 1990.

These days I contract independent RF engineering services to several rural and remote Native American Indian FM radio stations in North Dakota, South Dakota, Wyoming and Montana. My primary role is to upgrade and transition aging infrastructure into IP technologies. These states each have Indian reservations that range in size from 0.5 to 2 million acres and target audiences of approximately 5,000 to 40,000 listeners respectively.

I recently upgraded the aging studio-transmitter link for KLND(FM) in Little Eagle, S.D., mainly because of the deteriorating state of the infrastructure and wiring at the FM transmitter facility. In particular, the weather had taken its toll on the physical wires between the studio and FM transmitter site.

I spoke to Tieline America's representative, John Lackness, and he introduced me to the Genie STL codecs. These seemed fit for purpose and he informed me that Tieline offered a trial period during which I could install a pair of codecs at our station, to demonstrate how they performed.

John shipped two Genie STL units, which we installed, configured and tested between the studio and transmitter sites. I found the front panel controls allow for easy setup and/or access while on-air, and a Web-GUI browser interface is available for control and configuration via a LAN.

The codecs were used to establish a 128 kbps stereo STL link using Tieline's



MusicPlus algorithm. John also strongly suggested and made arrangements to ship a Ubiquiti airMax fixed wireless STL setup. To avoid any cabling I installed the Ubiquiti airMax M series links. These act as a carrier between the studio and transmitter sites with the Genie codecs interfacing via the Ubiquiti PoE units. The codec output at the transmitter is fed into an Orban Optimod audio processor and this is then fed into a 100 kW transmitter.

Testing proved successful and we subsequently purchased the two Genie STL units that had been sent to us. They have performed flawlessly over many months and the best part about broadcasting over IP is the sound quality; it's always noise-free.

Reliability and robustness of the equipment are paramount because I face numerous challenges on a daily basis. Broadcast facilities are often in extremely remote locations and utility service troubles can wreak havoc at times, e.g. electric power, telecommunications and tech support may

be delayed for hours if not days. At this site a UPS battery backup is installed, so only major electrical power-outages have contributed to rare broadcast interruptions.

Everyone is happy with the Tieline Genie STL codecs and we still do POTS remotes from cultural and sporting events using Tieline Commander G3 codecs. In fact our listeners describe how we stand out from other regional stations because of our remote broadcast quality. "It's like being in the crowd" onsite. That says it all.

I have also recently designed a new FM radio facility incorporating Wheatstone products for each studio. The on-air control room has a Wheatstone LX-24 control surface and associated WheatNet-IP Blades. A Tieline Merlin Plus will be used for remote broadcasts from up to six nodes and was selected as it is "WheatNet-ready" out of the box.

For information, contact Tieline USA in Indiana at (317) 845-8000 or visit [www.tieline.com](http://www.tieline.com).

### Omnirax Pleases Westwood One

*Internet collaboration aids design process*

#### USERREPORT

BY CONRAD TRAUTMANN  
Chief Technology Officer  
Westwood One

**DALLAS** — David Holland and his team at Omnirax in Sausalito, Calif., are experts at building furniture for the radio industry. They have many off-the-shelf designs and specialize in custom design work, too.

Recently, Omnirax did a custom design project for Westwood One for studios we built at our TM Studios facility in Dallas. TM Studios is the home of Westwood One's jingle business and has many production studios. We needed to add three control rooms and two talk studios at TM to support four live talk shows for the network, including Red Eye Radio and Michael Savage's "The Savage Nation." We had the rooms, but the furniture and equipment in them was not able to support the talk programs we planned to run from there. They had been previously outfitted as Pro Tools production rooms.

#### ENTER OMNIRAX

We supplied David with the dimensions of the rooms and a floor plan, which he imported into his AutoCAD software. We also supplied a list of needs by room. That included what type of equipment we were buying (manufacturer and model) along with the number of rack units for each, the number of seats and microphone positions we needed for the staff running the shows and hosts and the number of computers and flat screen monitors we planned to put in the rooms. That information gave us the starting point to begin working.

Here's where working with Omnirax saves you time. First, they have the dimensions of virtually every mixing console and piece of broadcast equipment on the market in their CAD library. Having done many projects, they've collected quite a knowledgebase of console models and ancillary gear.

Second, since they have done many prior projects, they have a database of rooms they've done along with photos from all angles that can be referenced while you



work on designing yours. This is valuable in quickly demonstrating a concept to see if it fits with your ideas and needs or not. Finally, using the powers of the "cloud" (aka: GoToMeeting), David can extend his desktop to anywhere there's an Internet connection and a computer, which speeds up the design and approval process.

For Dallas, we had two or three GoToMeeting sessions where we worked up and tweaked the design, answered questions from both sides and narrowed down the project to something actionable. Once we got close, David turned the top-down view into a three-dimensional rendering that he saved as a PDF making it easy to share. We sent that PDF to the decision makers in programming and engineering for comments and a final signoff. The 3D drawings make it easy for everyone to know what to expect before furniture and equipment are built, shipped and installed. David makes sure that everyone who needs to have a say can sign off before beginning the actual manufacturing of the furniture. That minimizes errors and misunderstandings.

Since the design process takes place in AutoCad from the beginning, it speeds up the ability for Omnirax to port those plans into their manufacturing process and build the furniture to the exact dimensions for a good fit in the room and also

for the furniture to fit well together as it is being assembled. In the case of our Dallas project, racks were shipped assembled along with flat-packed countertops; once delivered, these were easy to maneuver to their final home. Assembly is simple, good instructions are provided and the rooms go together quickly. With a crew of four or five people it took just a few days to get all five of our rooms assembled.

A very valuable service Omnirax provided was a GoToMeeting session specifically to help us design where mic and monitor arms would go. We had about 40 computers in five rooms, which presented challenges on the number of monitors needed, where there would get mounted and to position them in places that wouldn't block important sightlines between call screeners, producers, board operators and the hosts. We used an integrated mic and monitor arm system, so once we had the monitor stands placed, we were able to figure out what mic arms to use in order to support all necessary positions.

After working with David on our Culver City, Calif., studios, our Westwood One News studios in Washington, and now the Dallas talk studios, it's safe to say Omnirax is up for any studio design challenge.

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



## GPB Automates Workflow With ENCO

*Public broadcaster links studios and stations under one umbrella*

### USERREPORT

**BY TOM BARCLAY**  
Radio Operations Manager  
Georgia Public Broadcasting

**ATLANTA** — As the radio operations manager for Georgia Public Broadcasting, my responsibilities center on managing programming, traffic and scheduling across a statewide network. It encompasses a hybrid news and music format for 15 stations, and a separate all-news feed for our Atlanta and

er this year. This coincided with a hardware and Windows operating system upgrade, all programmed with DAD gateway software to ensure seamless content management between our Atlanta headquarters; our Savannah, Macon and Augusta bureaus, all of which originate additional content; and our remaining network locations for local payout.

The upgrade comes at an interesting time for our division. Georgia Public Broadcasting is in the midst of a comprehensive workflow transition that, in addi-

and bureaus. However, we still receive a fair amount of content on other sources not connected to satellite. We can simply download these programs and convert them through simple drag-and-drop functionality. On average, we shave off five hours of labor a week through this program alone.

Version 15 of DAD also adds some intriguing mobile capability. Our reporters in Atlanta, Savannah and Macon will no longer need to return to the studio, edit files and upload reports to FTP or email for delivery. Instead, using the iDAD remote app, reporters can file stories in the field, which production staff can access immediately. The takeaway is that we can bring timely news to air quickly, and eliminate the more traditionally labor-intensive processes for news production and payout.

The reliability and user-friendliness of DAD are important everyday benefits. DAD is rock-solid from an operational standpoint. We have external silence detectors to make us aware of outages. There have been very few over the years, none since upgrading to version 15. When I do need to troubleshoot, I can connect via VPN to any machine on the network, eliminating the need to visit locations physically.

The DAD platform also ensures that our operators can work anywhere on the network with ease. Occasionally, we will bring in a local host from Savannah or Macon to host a statewide show from our Atlanta headquarters. There is no learning curve; that host can easily play news cuts and promos, and have everything at their fingertips to put together a program.

I worked in commercial radio for 30-some years before coming here and have used several automation systems. I have been very happy with the capabilities that DAD provides over the years, from general playlist creation to the more advanced capabilities of version 15. They offer quality software and excellent customer support. Most important, they have accommodated everything we have needed in an automation system to make our lives easier across the network.

**For information, contact Ken Frommert at ENCO Systems in Michigan at (248) 827-4440 or visit [www.enco.com](http://www.enco.com).**



GPB-Atlanta afternoon host Rickey Bevington uses ENCO DAD 15 in the control room.

Carrollton, Ga., stations. An 18th station out of Milledgeville, Ga., carries select programming from the main feed.

The need to manage two completely different program streams, fire up to 18 different IDs per hour and handle local content insertion for unmanned stations demands an automation system that is reliable, feature-rich and easy to use. ENCO and its DAD platform fill the role across these requirements.

### MIGRATION

We had been running an older-generation version of DAD since my arrival nine years ago, and decided to upgrade to version 15 upon receiving some state funding earli-

er to automation, includes a traffic system upgrade and a new newsroom system. The transition to ENCO DAD version 15 has been seamless through the disruption and is already bearing fruits.

Network-wide content management has always been fairly easy with DAD, but the integration of ENCO's new Dropbox utility has been an enormous time-saver. Prior to upgrading, we needed to convert audio manually on a file-by-file basis to import news reports, promos and more into the automation system. That has been reduced to a simple one-step import process that automatically ingests audio files into the system.

For example, much of our programming is delivered via satellite to our headquarters

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