

MARCH 2008

ProAudio Review

The Review Resource for Sound Professionals

```

#KONSTIN *****#AUTOM#SCH 3-DIGIT 856
#0189121 7# PARA 0189121 E 0803 PERIODICAL
BARRY NIGHTING ELECTRIC ENGINEER 117/539
OLDPADIO CORP
2033 S AUGUSTA FL
TUCSON AZ 85710-7785
iiibbbbbbiiibbbbbbiiibbbbbbiiibbbbbbiiibbbbbb

```

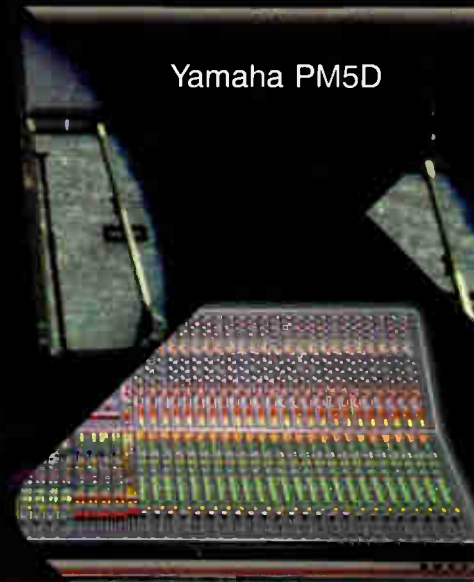


Peavey Versarray 112

TOURING AND PREVIEWS!



Yamaha PM5D



ATI Paragon II

In This Issue!

- ◆ Sennheiser MKH 8040 Microphone
A Must-Have for Serious Recording!
- ◆ Dolby Media Producer
- ◆ Hardware Processor Buyer's Guide
- ◆ Powerful Tools for Blu-Ray Content!
- ◆ 96 kHz Downloads with iTrax

Singer Adam Levine of Maroon 5
Denise Truscello/WireImage.com



www.proaudioreview.com

World Radio History



THE AT2020's **GONE DIGITAL**

Meet the AT2020 USB. The new standard for quality digital recording.

If you're in the market for a USB microphone, don't compromise on audio quality. Experience the AT2020 USB. Plug it in & transform your sound.

- **Crystal-clear sound with studio-quality articulation and intelligibility for podcasting, home studio recording & field recording.**
- **Side-address cardioid condenser with USB digital output.**
(Windows and Mac compatible)
- **Superior transient response, low noise & extended frequency response.**

www.audio-technica.com

 **audio-technica.**
always listening

Mac is a trademark of Apple Inc., registered in the U.S. and other countries.
Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

World Radio History

BETTER

Yamaha LS9-32



NEXO PS Series Loudspeakers
(PS10 shown)



TOGETHER

With Yamaha's LS9 digital mixing console and NEXO's PS Series loudspeakers, things couldn't sound better. The LS9 offers 16 or 32 channels, a virtual effects rack and a USB recorder/player. NEXO's PS Series demonstrates superior sound quality in a passive loudspeaker, reducing your amplifier budget and offers a unique asymmetrical horn pattern. Combined together, the LS9 and PS Series show how easy it is for two of a different name to become one and the same.



P.S. — For a limited time, with the purchase of an LS9-16 or LS9-32, a set of NEXO PS Series loudspeakers (any PS8, PS10 or PS15 model) and the appropriate TD controller (PS8U-TD-V2, PS10U-TD-V2 or PS15U-TD-V2), receive a Yamaha XP5000 (US MSRP – \$1249.00, Canadian MSRP – \$1361.00) or XP7000 (US MSRP – \$1499.00, Canadian MSRP – \$1634.00) power amplifier free-of-charge.

"Yamaha/NEXO Better Together" Giveaway Redemption Instructions

Products must be purchased through an authorized Yamaha Commercial Audio Systems, Inc. dealer. To locate a dealer, please visit www.yamahaca.com and click "Locate a Dealer" at the top of the page.

To redeem your XP power amplifier, please visit www.yamahaca.com and print out the "Yamaha/NEXO Better Together" Promotion Redemption Certificate located on the home page. Fill in the appropriate information and

mail the Certificate along with a copy of your receipt(s) from the authorized dealer to Yamaha Commercial Audio Systems, Inc., 6600 Orangethorpe Avenue, Buena Park CA 90620, Attention: Yamaha/NEXO Better Together Promotion. Upon receipt and if you qualify, Yamaha Commercial Audio Systems, Inc. will send you an XP power amplifier. Please allow 6-8 weeks for delivery. Promotion takes place from December 1st, 2007

to March 31st, 2008. Receipt(s) must be dated between December 1st, 2007 and March 31st, 2008. Customers have until April 30th, 2008 to mail in their Promotion Redemption Certificate and receipt(s). Certificates post-marked after April 30th, 2008 will not be honored. The Promotion Redemption Certificate must be properly submitted in order to qualify for the giveaway.

INSIDE THIS ISSUE

ProAudio Review

The Review Resource for Sound Professionals

March 2008 | Vol. 14 Issue 03

PRO AUDIO REVIEW (ISSN 1083-6241) is published monthly by NewBay Media LLC, 810 Seventh Avenue, 27th Floor, New York, NY 10019. Subscription information can be found at www.proaudioreview.com, by calling 703-852-4600 or writing to the above address. Letters to the editor are welcomed at the above address or par@nbmedia.com.

Phone: 703-852-4600 | Fax: 703-852-4582

Periodicals postage paid at New York, NY 10199 and additional mailing offices. POSTMASTER: Send address changes to Pro Audio Review, P.O. Box 282, Lowell, MA 01853.

©2008 by NewBay Media LLC. All rights reserved.

REPRINTS: Reprints of all articles in this issue are available. Contact Caroline Freehand at cfreehand@nbmedia.com.

Printed in the U.S.A.

STUDIO

- 8 **Studio News and New Products**
- 10 **Sennheiser MKH 8040 Microphone**
by Rob Tavaglione
- 12 **Digidesign Mbox 2 Micro**
by Russ Long
- 16 **| STUDIO SPOTLIGHT**
Studio Bismieux Studios Revels in New Cue System
by Heather Johnson
- 18 **| X/AUDIO**
Great DIY Rock Guitar Tracks
by Strother Bullins

LIVE

- 20 **Live News and New Products**
- 22 **| TOURING GEAR**
On The Road: Gear Preferences in 2008
by Heather Johnson
- 30 **| FROM THE ROAD**
Do Engineers Have Mix Rights?
by Tom Young

BROADCAST

- 32 **Broadcast News and New Products**
- 34 **ION Audio Tape2PC Cassette Archiving System**
by Ty Ford
- 36 **Brauner VMA Large-Diaphragm Microphone**
by Russ Long

POST

- 38 **Post News and New Products**
- 40 **| FIRST LOOK**
Dolby Media Producer
by Mel Lambert
- 44 **Audio Limited RMS 2040 Series**
by Ben Burns

46 NAB SHOWCASE

DEPARTMENTS

- 6 **| PUBLISHER'S PAGE**
Download Your 24/96 Music
by John Gatski
- 16 **| UPSAMPLER**
Talos Ass Bite OD/Sustainer Processor Pedal
- 50 **| BUYERS GUIDE**
Processors
- 58 **| SINGLE SLICE**
Ringo Starr "Fading In and Fading Out"
by Strother Bullins

Front Cover: Singer Adam Levine of Maroon 5 performs at The Pearl at The Palms Casino Resort on November 10, 2007 in Las Vegas, Nevada.



Evaluating audio products for professionals in commercial recording, broadcast production, audio for video/film, project studios, live sound, contracting and multimedia.



XL8
digital goes Midas



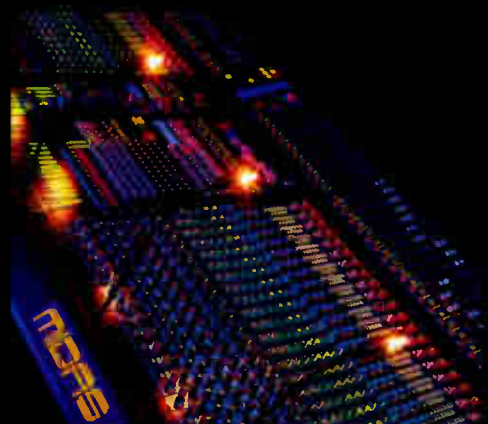
DL431
3-way digital mic splitter



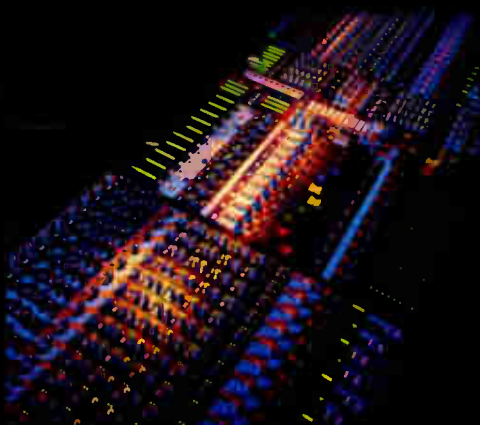
HERITAGE 4000
monitor evolution



HERITAGE 3000
the industry standard



HERITAGE 2000
dedicated front of house



HERITAGE 1000
theatre controlled automation



LEGEND 3000
ultimate flexibility



SIENA
16 Aux Sends - simple, intuitive, effective



VERONA
8 buss excellence



VENICE
the ultra compact midas

industry leading
innovation
design
performance



www.midasconsoles.com
1.800.392.3497

FROM THE PUBLISHER

John Gatski

Download Your 24/96 Music

Everyone who reads this column knows that *PAR* has been a big proponent of high-resolution audio technologies, including the various 1990s and 2000s disc-delivery formats of SACD and DVD-A and its derivative, Dual-Disc.

For various reasons, including major label indifference, the paranoia over digital copying and an unwillingness to settle on a single standard, the formats never achieved critical mass. Blu-Ray could become the new physical media delivery vehicle of choice for high-resolution PCM audio, but it is likely to always have a video element.

The future of high-res music, however, may be read in the tea leaves of the iTunes model — Apple's incredibly successful Internet download store — and the various copy cats that have followed.

If the iTunes model works for MP3 and "near" CD-quality audio, what about high-resolution music? As Internet download speeds increase significantly, so are our computers. Downloading 24-bit/96kHz or higher sampling stereo and surround files should be easy.

I had heard that various high-res audio download sites were popping up on the Internet, so I had to try one for myself. I sampled the iTrax (<http://www.itrax.com>) audio download site, the brainchild of high-res proponent and AIX Records Owner/Engineer Mark Waldrep. Waldrep has been making high-res audio recordings (and videos) for a few years now, with such artists as Lawrence Juber, Robbie Krieger, Albert Lee, and John Gorka on his roster.

Like iTunes, the customer is given a choice of downloading albums or single cuts. Since these are not mainstream pop recordings, the price is a bit higher, as most audiophile recordings are — about \$21 per album, or \$1.99 per cut at 24/96 resolution. If you want lower cost, you can purchase stereo MP3, Dolby Digital, Windows Lossless versions ranging from .79 cents to \$1.29 per cut; if you want surround, you can have Dolby 5.1 and DTS 5.1 and WMA lossless 5.1, but the per cut rate goes as high as \$2.25 bucks.

There is no 24-bit/96 kHz linear surround track download option as of this writing, but Waldrep says that feature is coming (the penalty being much longer download times for linear audio).

I downloaded several 24/96 cuts from Lawrence Juber's "Guitar Noir," an excellent recorded album from a couple of years ago. I own the DVD-A, so a disk vs. download quality shootout was in order.

I logged onto the iTrax site, set up an account and began the download process. It was easy; you check off the cut and the resolution, push download and, presto, it downloaded the linear PCM files in relative short order. Most tracks downloaded to the Mac G5 dual 2.7 GHz via Verizon Fios fiber connection in about 1 minute, 30 seconds per track. Average track length is six minutes or so.

I then burned the linear 24/96 stereo tracks to "Music DVD," a highly useful mode contained in the Roxio Toast Versions 7-8 that allows stereo 24-bit/96 kHz linear music to be burned onto a regular DVD video disc. Almost any player can play these DVDs (except for most Sony players I have tried) and most will play it in full 24-bit/96 kHz resolution. You can also burn the high-res tracks to disc with Minnetonka Bronze DVD-A authoring program. Or you can just play them back from your computer with WMA, QuickTime or the myriad audio programs that support 96 kHz.

In playback on my reference system, the tracks sounded exactly like the DVD-A tracks, clean open and revealing. Judging by iTrax, the future of high resolution is here.

TOURING GEAR

In years past, our March issue would be bustling with preview coverage of the NSCA show, held for years in March. However, NSCA and InfoComm show have combined for a new "super" show that starts its first combo-exhibit this June.

Nonetheless, we have great articles and reviews in this issue, including our 2008 Touring Gear Preview with several profiles of notable tours and live sound engineers as well as a sampling of tour-appropriate equipment.

John Gatski is publisher/founding editor of Pro Audio Review. He can be reached at jgatski@nbmedia.com.

ProAudio Review

Vol. 14 Issue 03 | March 2008

Evaluating audio products for professionals in commercial recording, broadcast production, audio for video/film, project studios, live sound, contracting and multimedia.

Publisher & Executive Editor: John Gatski
e-mail: jgatski@aol.com
Publisher, Pro Sound News: Margaret Sekelsky
Editorial Director: Frank Wells
Managing Editor: Fred Goodman
Reviews/Features Editor: Strother Bullins
e-mail: strotherPAR@earthlink.net
Studio Editor: Steve Murphy
e-mail: smurphy@nbmedia.com
Technical Consultant: Tom Jung

Contributors: Tony Angelini, Bruce Bartlett, Dr. Frederick Bashour, Frank Beacham, Wayne Becker, Carlos Garza, Will James, Bascom H. King, Daniel Kumin, Russ Long, Rich Rarey, David Rittenhouse, Andrew Roberts, Alan Silverman, Rob Tavaglione, Mark Uliano, Roger Williams, Tom Young

Production Director: Davis White
Ad Traffic Manager: Lon Behr
Publication Manager: Michelle Norman
Graphic Designer: Lourdes Lilly
National Sales Manager: Matt Rubenstein
Ad Coordinator: Caroline Freeland

Circulation
Associate Circulation Director:
Audience Development: Anne Drobish
Circulation Manager: Argus Galindo
Circulation Coordinator: Michele Fonville

Subscriptions

Pro Audio Review, P.O. Box 8738,
Lowell, MA 01853
Telephone 888-266-5828
(USA only 8:30 a.m. - 5 p.m. EST)
978-667-0352 (Outside the US)
Fax: 978-671-0460
E-mail: newbay@computerfilment.com
Web: MyPARmag.com

CORPORATE — NewBay Media, LLC

President and CEO: Steve Palm
Chief Financial Officer: Paul Mastronardi
Controller: Michael Ruber
Marketing Director: Nancy Gregson
Group Circulation Director: Denise Robbins
Vice President of Web Development: Joe Ferrick

Market Groups

Executive Vice President, Video/Broadcast Division: Carmel King
Vice President, Group Publishing Director, Pro Audio & Systems Division: Adam Goldstein
Vice President, Group Publishing Director, Music Player Network: John Pledger
Vice President, Group Publishing Director, Video/Broadcast Division: Eric Trabb
Publisher, Technology & Learning: Jo-Ann McDevitt

Pro Audio Review Founded by Stevan B. Dana

NewBayMedia



HEIL EVERYWHERE AT SHELDON CONCERT HALL

I read Strother Bullins' article on the Heil mics for drum applications in *Pro Audio Review* ['X-Audio,' January 2008]. I have heard them in that application and can appreciate your review. We are currently exploring mic stock for our recording studio that we are opening for live concerts. Bob [Heil] has offered to let us test most, if not all, of the mics he is currently building. He lives just across the river, so he will do his sales pitch on us as he is prone to do. But I've known Bob for a while and talked to some friends who have tried/bought his mics; they have given them pretty high reviews, especially for the money.

I bought my first sound system from him back in the hippie days, and I have always considered

him to be at the forefront of tech, most of the time. We will be trying his mics on vocals, acoustic guitars, Steinway pianos, upright basses, drums, amps, horns and even bagpipes ... though don't tell anyone.

We have a wonderful acoustic hall that seats 700 and are producing about 250 events a year, so dynamics are crucial. Strother's article gives me hope that I am heading in the right direction. Yes, there are always the high-end mics that we could never afford, but my philosophy is that if you know how to use the gear you have, most folks will never know the difference.

Dale Benz

Director Of Operations, The Sheldon Concert Hall

St. Louis, MO


www.theshelson.org

Correction

In the 2008 New Gear Guide (PAR 2/2008) certain edits created confusion on an entry from Yamaha Commercial Audio. The full product information is as follows:

The Yamaha DSP5D Expander is a stand-alone unit that expands the capabilities of the PM5DV2 digital console to 96 mono plus 16

stereo input channels and includes 2 additional card slots with more effects and dynamics processing. Unique to Yamaha, the new DCU5D can connect 32-bus cascade ports of a single or even two PM5D digital consoles to the DSP5D using Ethernet audio, and makes possible connection of up to 100 meters between multiple units. DSP5D \$27,000, DCU5D \$3,000.



DIGITAL EDITION OF PRO AUDIO REVIEW NOW AVAILABLE

Pro Audio Review is now available via Internet delivery. To get your free digital subscription (and renew your print subscription), go to: www.proaudioreview.com/subscribe and fill out the form.

To check out an on-line demo of the digital edition of Pro Audio Review, go to: <http://www.proaudioreview.com/digitaldemo>



Antelope
AntelopeAudio.com

OCX
Audio Master Clock

10M
Rubidium Atomic Clock

OCX-V
Audio & Video Master Clock

Realize the importance of a great master clock

Toll Free 877-888-1654

audinMIDI
.com

Your no-nonsense resource for audio gear

WWW.ERGENARY.COM

1 508 543 0069

WIND OVER THE EARTH
www.WindOverTheEarth.com
303.443.9822

Absolute accuracy

The **DPA 4061** miniature microphone is designed to mount directly onto virtually any acoustical instrument and produce a highly articulate, accurate and natural sound. The 4061's versatility is based on a combination of its low noise floor, wide, flat frequency response and ability to handle sound pressure levels up to 144dB before clipping.

The IMK 4061 Instrument Microphone Kit contains the DPA 4061 microphone plus mounting accessories for drums, wind and string instruments. With the DPA 4061, you're guaranteed absolutely accurate sound- whatever instrument you play.



IMK 4061

The microphones for sound professionals with uncompromising demands for musical accuracy

DPA 
MICROPHONES

DPA Microphones, Inc. 2432 North Main Street,
Suite 200, Longmont, CO 80501
Ph: 303 485 1025. Email: info-usa@dpamicrophones.com

www.dpamicrophones.com

by Rob Tavaglione

Sennheiser MKH 8040 Microphone

The 8040 emerges a recommended, standard, small-diaphragm condenser for nearly all applications.

Affordable, small-diaphragm condensers are now as common as mushrooms after a rain, and many models on today's flooded market simply don't sound that great or perform that well. The Sennheiser 8040 elegantly satisfies a number of needs with its focus on sonic accuracy and a simplistic, flexible design. Like its brethren from the new MKH 8000 Series — the omnidirectional 8020 and the supercardioid 8050 — the 8040 is modular with a separate mic head and XLR module, allowing interchangeability, remote mounting and hidden placement. The 8040 has an MSRP of \$1,295 with stereo kits (as reviewed here) coming in at \$2,599 MSRP; this pair is available for about \$2,200 street.

FEATURES

Wine me, dine me, accessorize me.

Yes, the MKH 8040 is part of an enticing stereo microphone kit made up of all high-quality components. The 12- x 7- x 3-inch aluminum carrying case is sturdy and stylish with foam cutouts for two mics, two clips, two wind-screens, and two shock-mounts (and all package components are included here except the shock-mounts). The clips are particularly strong and very snug, holding the little 19mm x 75mm mics so securely that you couldn't shake them out if you tried. They wouldn't even budge if an artist tripped on the cable. The wind-screens are superior to typical ones these days, with a dual-layered, two material design that is amply large, effective and durable. The complete range of accessories includes floor stands, table stands, ceiling mounts, extension tubes, shock mounts, remote cables and various mounting fixtures. In addition, all the MKH 8000 series microphones are covered in black Nextel coating that minimizes visual reflections, making the 8040 an ideal choice for on-camera TV work.

The transformerless MKH 8000 series curiously uses a symmetrical push-pull transducer (the capsule's diaphragm is fitted between two acoustically transparent plates, not just a single backplate). This results in "an unchanging, acoustic impedance, extremely low distortion figures, a higher capsule output with much lower noise, thus a very clear signal," according to Sennheiser.

Frequency response is listed as a wide

30 Hz to 50 kHz, with a max SPL of 142 dB, self-noise of 13 dB (A-weighted) and a low 25-ohm impedance. This extended frequency response and low self-noise makes them suitable for high-res formats, "allowing them to record even the finest details for high sampling rate digital audio formats." OK, let us see ...

IN USE

The audio world is abuzz over these MKH 8000 mics; I found lots of Internet interest from recorders of classical music, sports broadcast, and live concert "tapers," and I eagerly jumped into testing. I didn't have access to any of the older MKH mics from Sennheiser — in which some users report problems with low-mid distortion and smearing — but I have



used them on location shoots and sports broadcasts. I figured that a

comparable baseline would be the similar KM184 from Neumann and the C451 from AKG, both wildly popular and sonically familiar choices.

Upon using the 8040s with their solid feel, diminutive size, and modularity, I immediately got the feeling they were Schoeps-like. Upon listening, such a comparison became more valid, as the 8040s were smooth, pleasant, and articulated without being harsh. In general, the 8040 was much flatter than the 451, especially in the top end (the 451 hyped while the 8040 remained accurate) but also in the bottom end (the 8040 had depth where the 451 was too lean). The KM184 proved to be a very close comparison, with similarly "hot" output levels, similar dynamic detail, and similar frequency response, although the KM184 sounds a little brighter.

I recorded some clips with my True Precision 8 preamp, Apogee converters and MOTU's Digital Performer 5.12 DAW at 24-bit/96 kHz to bring out all of the 8040's detail and range. The always revealing, transient-laden test of tambourine

FAST FACTS

APPLICATIONS

Studio, broadcast, field, and audio post recording

KEY FEATURES

Cardioid capsule; 30 Hz to 50 kHz, with a max SPL of 142 dB, self-noise of 13 dB (A-weighted) and a low 25-ohm impedance; 19mm x 75mm dimensions; black Nextel coating; available microphone kit with 12- x 7- x 3-inch aluminum carrying case and many accessories

PRICE

\$1,948 and \$3,897 list; mono and stereo pair, respectively

CONTACT

Sennheiser USA | ☎ 860-434-9190
➤ www.sennheiserusa.com

PRODUCTPOINTS

- Small size and accessories make for easy placement
- Neutral and accurate response, in both dynamics and frequency
- Modular design allows variety of capsules and mountings
- No HPF or attenuation
- No figure-8 heads available (yet)
- Shockmounts not included with stereo kit

SCORE

The MKH 8040 is recommended for all standard professional small-diaphragm condenser applications, especially on percussion, drum overheads, audience miking, and acoustic instruments.

found the KM184 sounding quite nice, but the 8040 captured more inner detail and nuance. I close-miked a snare drum, and the 451 had the most exciting crispness but the 8040 had more attack and punch — even more than the KM184. Djembe will

always reveal a mic's lack of bottom-end response and detail, especially with small-diaphragm models. However, the 8040 did admirably well with djembe; it had more depth and fullness than any of the mics tested, sounding more like a large-diaphragm condenser like I would normally apply here.

I tracked a five-piece drum kit and used the 8040s for overheads; I often use a Neumann KM184 or TLM103 pair here, and I was pleasantly surprised. The imaging was simply fantastic; cymbals avoided any harshness or "pingyness," and the snare sound (when blended with the close mic) was lively, wide and larger than life. The mild presence rise and extended high-end response of the 8040s was just what I needed. (I am going to really miss these mics on my next drum session!)

A modern country session called for some piano overdubs; here, the 8040s clearly excelled. I settled on an ORTF configuration, but the 8040s still gave me a nice, full middle of the soundscape. The sound was neither bright nor dark, but perfectly balanced, especially throughout

the sensitive mids. I wouldn't hesitate to use these on a classical piano session, although I would use many more mics in addition.

Solo vocal tracks with the 8040 yielded mixed results. A husky baritone sounded a bit thick and lacking in sibilance; a mic with more coloration proved to work better. However, a peaky and unpredictable alto who sounded a little harsh on the Violet Amethyst Vintage condenser sounded much better on the 8040, with smoother hard consonants and better dynamics on the higher notes. Some group "gang vocals" had realistic imaging and sounded quite full, especially after some doubling and tripling, but I'm guessing the omni 8020 would have worked better.

Acoustic guitar is another fine test of a condenser's fidelity, whether one is pursuing a tight sound for mixing in with an ensemble or a large sound for solo guitar. I could achieve either sound with the 8040s and some EQ. Some overdubs with the 8040 pair yielded a sound that was fuller and more musical, like large-diaphragm

SENNHEISER continues on page 15 ►



"small board with a big big sound... the EQ is nothing short of magic"

Higher Rhythm Recorders UK



the SERIES 8T-8
TEC Award Winner 2007
PAR Excellence Winner 2007



incredible legendary Trident sonics
 incredibly low noise & xtalk specs
 full meter bridge
 made in england
 by the original Trident designer

TRIDENT™ SERIES 8T
CONSOLES

details from: 88@tridentaudio.co.uk

011 44 147 481 5300

www.tridentaudio.co.uk



by Russ Long

Digidesign Mbox 2 Micro

This USB dongle-based system makes Pro Tools a truly on-the-go, pro-level DAW.

The Mbox 2 Micro is currently the smallest and most portable Pro Tools system available. The USB powered interface provides Pro Tools mixing, editing, and sequencing as well as high-quality audio output — no input — for mobile Pro Tools|HD, Pro Tools|LE, and Pro Tools M-Powered producers, engineers, and musicians. At roughly the size of a USB thumb drive, the Micro includes Pro Tools|LE, Xpand!, and over 45 plug-ins.

GB recommended), DVD-ROM (or equivalent) drive for software installation, minimum 1024 x 768 screen resolution, and an available USB port. Digidesign documentation states that USB hubs are not supported, but during the

sessions to be opened and tweaked as long as they were recorded at 44.1 or 48 kHz.

| IN USE

The Pro Tools|LE v7.4 software was a cakewalk to install. I ran into some problems when I discovered that it doesn't work to have LE v7.4 and M-Powered v7.3 running on the same computer. I made a quick call to Digi's tech support and was incorrectly told that it's not possible to have Pro Tools LE and M-Powered running on the same machine. After some more experimentation, I found that I did need to upgrade my M-Powered to v7.4 to have everything work in tandem, and once I did, switching between |LE and M-Powered has been flawless.

After a month of use, I've found that the best thing about the Micro is that it lets you run Pro

| FEATURES

The Mbox 2 Micro has a \$279



price tag (street price less than \$250) and is built into a small, 3-1/2 inches high, by 1-1/4 inches wide, by 7/16 inches deep and tough anodized aluminum case, weighing only 1.2 oz. In my experience, something this big plugged into a laptop's USB port runs a high chance of getting broken off; thankfully, Digi has thought ahead and includes a short USB extension cable to eliminate this risk.

The Micro has a 1/8-inch stereo output with a maximum output of +3 dBV into 600 Ohms for headphone or speaker monitoring and a thumbwheel volume control. The Micro's frequency response is 20 Hz -20 kHz, +0/-2 dB with a 103 dB A-weighted (THD+N: 0.002%) dynamic range. The device supports 44.1 and 48 kHz sample rates with a maximum 24-bit word length. The Micro is a USB 1.1 device that acts as both a hardware dongle and an output-only audio interface. When coupled with a laptop, the result is a sleek, portable Pro Tools|LE rig.

The Mbox 2 Micro requires a Digidesign-qualified Windows XP or Mac OS X 10.4-based computer equipped with 768 MB of RAM (1

review process I successfully used the Micro with a USB hub without any problems.

In addition to Pro Tools|LE, the Mbox 2 Micro includes Xpand! and over 45 plug-ins. Xpand! is a sample-playback/synthesis workstation that, according to Digi, was designed for songwriters, film composers, DJs, electronic musicians, music producers, and sound designers. (Isn't that everyone?) This plug-in provides quick access and manipulation of thousands of high-quality sounds from within Pro Tools and it includes over 1,000 presets.

The Micro includes a pile of the famous Bomb Factory plug-ins including the BF76 Compressor, the BF Essential Clip Remover, and the Funk Logic Masterizer and a ton of DigiRack Plug-ins including D-Verb, DeEsser, DigiReWire, Dynamics III, EQ III, Flanger, Mod Delay II, Multi-Tap Delay, Ping-Pong Delay, Pitch Shift and Click.

Additionally, the Micro makes it convenient and easy for Digidesign VENUE-based live sound engineers to mix their live multitrack recordings while en route to their next show. Regardless if the show was recorded on a Pro Tools|LE or |HD system, the Micro allows

FAST FACTS

APPLICATIONS

Studio, project studio, broadcast, post production, live/location recording, and houses-of-worship/theatres

KEY FEATURES

1/8-inch stereo output device for Pro Tools|LE in the form of a USB dongle; bundled|LE DAW software, Xpand! MIDI workstation, and 45-plus plug-ins; thumbwheel volume control; supports 24-bit/44.1 kHz and 48 kHz

PRICE

\$279 list

CONTACT

Digidesign | ☎ 650-731-6300
 ☞ www.digidesign.com

Tools (sans audio input) virtually anywhere; yet, in full disclosure, the users of virtually every other DAW — Apple Logic, MOTU Digital Performer, Steinberg Cubase, etc. — have been able to run their software anywhere without an extra device all along. That said, the Micro is an answered prayer to most Pro Tools users I know. The included software/plug-in bundle is

an exceptional value, and I've had great results using my Edirol PCR-30 keyboard to augment various projects with Expand! Micro supports the Music Production Toolkit and DV Toolkit 2 options, making it possible to work on projects up to 48 stereo tracks while on the go.

I was surprised at the sound quality of the headphone amp, which I've used with a wide variety of headphones. It sounds quite good, somewhat better than my MacBook Pro's internal headphone amp, which is leaps and bounds better than most notebooks that I've encountered. The audio engine also works with other applications, making it easy to upgrade your audio playback quality for movie viewing, music listening, or even working within other DAWs.

Although it has made it a challenge to leave my work at the studio, I have absolutely fallen in love with the Mbox 2 Micro over the last month. Could it be better? Yep — it could provide optical digital output on the same 1/8-inch jack that provides analog output. My MacBook Pro has that feature built in, and it allows me to listen to my Logic Pro 8 sessions through my Benchmark DAC1 without any sonic compromise. I wish it supported higher

sample rates as well (high sample rate Pro Tools |HD sessions have to be down-converted before they can be opened with the Mbox 2 Micro). I find myself working at 88.2 and 96 kHz more and more often, and it's disappointing that I can't easily work on these projects with my Micro. All this aside, the Mbox 2 Micro is still one of the best audio innovations to come around in a long time.

PRODUCTPOINTS



- Pro Tools as its most portable and affordable
- Good headphone amplifier
- All the bundled plug-ins and Xpand! Software
- Useful tool for Digi VENUE live console users



- No inputs
- No operation above 48 kHz sampling rate

SCORE

The Mbox 2 Micro is one of the best audio innovations to come around in a long time.

| SUMMARY

The Mbox 2 Micro is a wonderful device that makes it easy to take Pro Tools |HD, Pro Tools |LE, or Pro Tools M-Powered sessions virtually anywhere. Whether you are a producer or engineer that currently uses Pro Tools and needs a way to work outside the studio or you are new to Pro Tools and need an affordable way to get the program and the included plug-ins, the Mbox 2 Micro may be the perfect solution for you since it puts the power of Pro Tools editing, sequencing, and mixing within your grasp — virtually anywhere.

Russ Long, a Nashville-based producer/engineer, owns The Carport recording studio. He is a regular contributor to Pro Audio Review.

BERLINER MICROPHONES
Introducing the Beginning of a Growing Family of Classic Studio Microphones from Berliner USA!

Model U7 Multi-Pattern Tube

Model U7 Cardioid Tube

Model CM 33 Stereo Hand Matched Pair

WWW.BERLINERUSA.COM 1-888-MIC-THIS (642-8447) • 208-545-0446 (FAX) • ©2007 BERLINER USA, INC. Capturing the Sound of the Future!

by Heather Johnson

Bismeaux Studios Revels in New Cue System

Sometimes we hang on to things even when they no longer suit us, much like the well-fitting pair of shoes with holes in the soles. But eventually, we know it is time for a change and immediately replace the old with a new and improved model.

Early last year, Ray Benson, Asleep at the Wheel frontman and owner of Bismeaux Studios in Austin, Texas, knew it was time to replace his six-channel cue system with a new system that offered more channels and greater flexibility. He found both of those things with the Aviom Pro16 Series Personal Monitor System. Bismeaux's engineering staff uses Aviom's A-16II Personal Mixer for each musician's headphone mix, as well as in the vocal booth. The 16-channel stereo mixer allows each musician to create a customized monitor mix and then recall it the next day, which allows for a more efficient session on both sides of the glass.

DIY MONITOR MIXES = SMOOTHER SESSIONS

"The engineer is freed up, which saves us a lot of time," says chief engineer/studio manager Sam Seifert. "From a musician stand-

point, to have up to 16 channels of panning, EQ, and muting, and to be able to just sit with piano, bass, and drums, will possibly help the musicians turn in a better performance." Country music dominates Bismeaux's client roster, and the fiddle and steel guitar parts in those songs can sound a bit jarring in the headphones, especially when they're slightly off-key. "To be able to mute certain instruments without creating any animosity makes for a better environment for everyone," Seifert continues.

Even "old school" musicians, presumably resistant to new technology, adapted to the Aviom system. "Obviously, I've got to explain the unit to first-time users, but it's a very simple system," he says. "Once we label the channels properly, they simply press a button, turn up the volume, and go from there. It does all the basics, and will go as far as a musician wants to take it. Maybe it's coincidence, but sessions have run a lot smoother since we started using the Aviom system. A lot of that has to do with eliminating a step where there has been or can be problems. What Aviom has done for us is given us a great-sounding, easy-to-use, quality product that achieves everything we want from a cue system.

Everyone has control of their monitor mix, so everyone can be a winner."

THE VINTAGE AND THE VIRTUAL

Over the past year, the studio has seen an increase in outside clients, as well as steady work from Benson, which includes a forthcoming Asleep at the Wheel album featuring Willie Nelson on vocals. The bulk of the studio's tracking sessions take place in Studio A, which features a vintage API console, with Nuendo 3.0 (with AMD 64-bit dual processing) and Cubase 4 as the main digital platforms. For the analog fans, an MCI 24-track tape machine stands at the ready.

"Initially, Ray didn't want a hardware system," Seifert says of their digital recording system. "He wanted software, he wanted open architecture." Austin-based AMD chose Bismeaux as a beta-test site for their 64-bit processors, which allowed them to experiment with some early software-only platforms. When Steinberg released Nuendo 1.6, Benson began using the two technologies in tandem and has avidly supported both companies ever since. "We can run huge projects at any sample rate you want, mix 80, 90 tracks with multiple plug-ins, and we're not even at 50 percent CPU," says Seifert. "This is all with no external hardware. Steinberg created a wonderful-sounding platform with a 32-bit floating point and open architecture. That's why we use it."

Even though Bismeaux has readily adopted the Nuendo production system, they certainly aren't lacking in tube and transistor technology. Studios A and B both come stocked with ample tube preamps, including some custom designs featuring vintage RCA schematics, as well as Pultec EQs, RCA, Tube Tech, Universal Audio, and UREI compressors, and a mic closet well stocked with both new and vintage varieties. Both studios offer Genelec, Yamaha, and Event Precision 8 studio monitors, with studio B boasting a 5.1 configuration.

Completed in 2005, Studio B originated as a DAW engineering school operated by ProMedia Training, with workshops in Cubase, Nuendo, and other platforms taught by local engineer Fred Remmert. Now that the classes have concluded, Studio B and its Yamaha O2R stay busy with frequent overdub and mix projects, along with the occasional surround mix. "The B room opened up a lot of flexibility so that we could book other clients and allow our in-house business to continue," says Seifert. "It has a matching DAW with the same converters as Studio A, and offers another price point. It takes a lot of

BISMEAUX continues on page 48 ►

Studio A with its vintage API desk and Yamaha NS-10 nearfields: retro technology at its finest

STUDIO

Review

SENNHEISER Continued From Page 11

condensers, with the top end detail and transient realism of small diaphragms. With either an X/Y, ORTF or spaced setup, the 8040s showed accurate imaging, good frequency balance, and smooth pick attacks.

SUMMARY

Fans of the older MKH mics will surely be pleased with the 8000 series. Both studio and live sound engineers can take advantage of the 8000 series' range of accessories to ideally place the 8040s for classical vocalists (with an extension tube), choirs (with ceiling mount), or any number of stereo apps with various bars and joints. With its remote cable capabilities, muted finish, small size and smooth off-axis response, the 8040 is a natural for many broadcast applications. Its audio purity, realism, and depth of imaging will surely make the 8040 useful for Foley, sound FX, and ADR work.

A high-pass filter or pad would be welcome, but the simplici-

"MKH 8050 SUPERCARDIOID: AN OUT-OF-STUDIO EXPERIENCE"

Although I'm usually in the studio working on audio behind a desk, or on location working a video shoot, I do have a few special clients who simply want a great audio recording of a presentation. Although my go-to mic for presenters is a Countryman E6, a recent assignment for a continuing part of an audio CD series gave me the opportunity to test a pair of the Sennheiser MKH 8050 supercardioids as audience mics.

The venue was a 40 x 100-foot room with 10-foot acoustic tile drop-ceilings and wall-to-wall commercial carpet. The podium is centered on one of the long walls. Sixty to 80 audience members are split into two theater-style sections. Each half of the audience usually fits in a 25 x 30-foot area of closely spaced chairs.

I normally put up a shotgun mic on each side of the presenter's position to cover one half (30-40 members) of the audience. That approach gets me "press conference" coverage. You hear the question "bloom" up with all of the off-axis anomalies a shotgun mic is known for as I turn up one of the two audience mics, and then the answer from the Countryman E6 in a more direct space as I pull the shotgun out of the mix. At the most recent event, I swapped out the shotguns for Sennheiser MKH 8050 pair, my thought being that the 8050s would have fewer off-axis anomalies ... but would they have the reach?

I positioned the 8050s in the same spot I had been using for the shotguns and quickly found that they did just fine. There were fewer off-axis anomalies. The unexpected benefit was that, even at distances of 10-20 feet from the person speaking, the smoothness of the 8050 response sounded more natural than the shotguns. Sensitivity was good. Even on the few occasions in which someone with a soft voice spoke from the rear of the room, the full gain required of my Sound Devices 442 mixer combined with the low self noise of the 8050 resulted in surprisingly little system noise.

My conclusion? The Sennheiser MKH 8050 simply makes for good sound, whether in the studio or in harsher environments.

— Ty Ford

ty of the 8040 surely contributes to its lack of coloration and pleasant neutrality. For high-resolution recording, the 8040 is a natural, especially if 2008 sees the release of the digital module accessory (transmitting 24-bit digital audio, sample rates up to 192 kHz, and adjusts pre-attenuation, HPF and compressor/limiter settings).

I can confidently recommend the 8040 for all the standard small-diaphragm condenser apps — percussion, drum overheads, audience miking, and acoustic instruments. Considering its accurate bass output, lack of character, dynamic range, and extensive accessories, the MKH 8040 could become one of the most versatile mics in your closet.

Rob Tavaglione owns and operates Catalyst Recording in Charlotte, NC, specializing in independent music production. He welcomes your comments and questions at rob@catalystrecording.com.



Sennheiser 8040 capsule

REVIEW SETUP

True Precision 8, Sytek MPX-4A and Manley TNT preamps, Apogee Rosetta A/D converter, Mac Pro computer, Digital Performer 5.12 workstation, monitoring via JBL 4328 nearfields with 4312 subwoofers and Grado SR-125 headphones.

NEW

Anyone who has heard it knows . . .

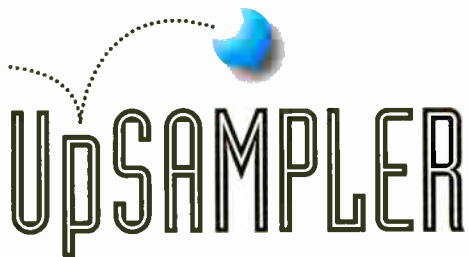
VT-7 Vacuum Tube Compression Amplifier

D.W. FEARN

www.dwfearn.com

610-793-2526

P.O. Box 57 • Pocopson, PA • 19366 • U.S.A.



UPSAMPLER

Capsule Reviews and Product Review Updates

Talos Ass Bite OD/Sustainer Processor Pedal

Talos Instruments | 703-764-7005 | www.talosinstruments.com

Ass Bite (\$230 list) is Talos Instruments' initial foray into the guitar pedal market. So, I was a bit skeptical when I first received the Talos Instruments Ass Bite Overdrive prototype.

Nevertheless, I dug in. I tested the Ass Bite with a Tommy Rodriguez semi-hollow telecaster and a point-to-point handwired Mojotone '57 Twin amplifier loaded with Electro-Voice EVM-12L Classic loudspeakers. All connections from the guitar to the pedal and from the pedal to the amplifier were George L's cable. As this is my main rig in the studio and onstage, I know its characteristics intimately.

When used as a clean boost, the Ass Bite is

incredibly transparent. Its overdrive is nicely uncolored — in other words, it doesn't sound like you're playing the pedal. The Ass Bite keeps the integrity of the guitar and the amplifier's signature tone intact, an important consideration.

In terms of controls, the pedal is user-friendly and intuitively laid out. It simply features a "volume" knob, "gain" knob, "Ass" knob, and a "bite" control. The "Ass" control adds gain to the guitar's low frequencies beyond cutting or boosting other frequencies. This feature alone is worth the price of admission. And its response in the low end — from 80 Hz to a 100 Hz — was tight and defined leaving the actual pitch of whatever is played completely recognizable and intact, unlike other pedals that simply increase the noise floor at those frequencies.

Another one of the Ass Bite's merits — seldom found in other overdrives — is the unique way it creates oodles of sustain, which made dialing in a Robben Ford and Eric Johnson sound possible with just a few tweaks of the controls.

The pedal runs on 18 volts, so as a clean boost it can put out three and a half volts to overdrive the front of your amplifier. The Talos website states that the pedal can run up to 40 hours on a set of batteries;



although I haven't tested their specs, as the pedal was tested with power from the T-Rex Engineering Fueltank, two 9-volt outputs used in tandem to a single plug to make the required 18 volts.

My only gripe is that I wished the company had spent a bit more time on the pedal's looks. Perhaps as they introduce more products to their guitar pedal line they will refine the aesthetic, making their pedals look as good as they sound. At the end of the day, though, it's no big deal. The Ass Bite is still the best-sounding overdrive I've tested in years. For those of you in the market for a combination overdrive/clean boost, this is your pedal.

— Jackson Boudreaux

Heil Sound Handi Mic Pro Plus

Heil Sound | 618-257-3000 | www.heilsound.com

Since being introduced to the pro audio market just a few years ago, Heil Sound microphones and their larger-than-life sonic footprints have become industry staples. While only four inches long, the Heil Handi Mic Pro Plus has that same massive sound as other Heil microphones, yet its size makes it extremely easy to maneuver in the tightest situations.

Originally, the Handi was developed by Bob Heil to be a hand microphone without the typical hollow, cavernous sound characteristic of some other hand microphones. Instead of encasing the Handi's element in a shell, Heil's design places it in an open Sorbothane shock mount, resulting in a clean, eloquent, and outstanding-sounding mic. Between the microphone's cardioid pattern, low handling noise, and convenient size, it is ideal for mobile use.

The Handi has a list price of \$110 and is available in five different variations. The HM-Pro Plus (the model I reviewed) uses a standard 3-pin XLR connector and is directed towards studio, sound reinforcement, and broadcast use. All of the Handi Mics include the Heil dash/wall mount, a mic clip, and a foam windscreen. The optional Heil CH-1 accessory is a shielded coil cord with a 14-inch straight section and a 15-inch coil section.

I've become a regular user of the Handi since I first encountered it a couple of years ago. Its small size makes it extremely easy to position making it the perfect microphone for hard to reach places. It immediately became my staple bottom snare mic, perfectly complementing the Heil PR-20 that I typically use on snare top. I've also had good results using the mic on congas and toms. I used a pair of the Handi's to capture a Leslie and had fantastic results. The mic's small size allowed me to slide the mics well into the Leslie cabinet obtaining an extreme Doppler effect.

Perfectly sized, versatile as hell and affordable beyond belief, the Heil Handi should be a part of every studio's mic vault.

— Russ Long



Professional audio education in 21 countries.

To learn how you can become part of the global audio training network call 877-27-AUDIO or visit www.sae.edu



Unlimited Sound Quality

D5

Dynamic
Vocal
Microphone



D 5 - LESS FEEDBACK

Laminate Varimotion capsule delivers significantly more gain-before feedback than any other mic in its class.

C5

Condenser
Vocal
Microphone



C 5 - STUDIO-LIKE CLARITY

Patented condenser capsule delivers legendary AKG studio quality sound, now on stage.

WIRED & WIRELESS



Aeromsmith's
Steven Tyler
using his customized
AKG WMS 4000
wireless with the
D 5 capsule

ADV 666/1/E

www.ake.com

H A Harman International Company

AKG SOUNDS BETTER



World Radio History

by Strother Bullins

Great DIY Rock Guitar Tracks



Photo credit: Doug Flice/Altura

everything between subtle sheens of delay to Technicolor, hallucinogenic waves of effect, depending on the song at hand. Ah, Eventide. And best of all, like the 6505+, it always sounded great with a bit of enjoyable tweaking and a desire to find the right effect. It also sounded “fin-

ished” — our goal in letting a great rig do all the work on the front side rather than fretting over aural details post-tracking.

When the guitarist wasn't rocking straight-up riffs via 6505+, the TimeFactor's nine distinct delays found a way onto recorded results; yes, we were adventurous to the point that this Eventide should probably be credited as an official instrument next to the guitar if any of this is ever printed up and sold (think of U2's The Edge and his “Infinite Reverb,” because it got crazy at times). The signal became something that “made” the guitar track artistic, something that neither of us wanted to touch again — the last time it was that easy, a seasoned pro engineer was twirling the knobs for him. You have to love great effects!

FIGURE 3: GREAT MIC(S)

If we weren't going to touch it, it was time to shrink-wrap it and send it to Binaryland for safe keeping. We had a good preamp to a good converter into a good DAW at a good conversion rate; in between, we just needed a great transducer, or two. With the cabinet placed in a large, fairly reverberant room, I picked up Heil Sound's proven and affordable PR 30 and PR 40 dynamic cardioid microphones [*“X-Audio,”* *PAR* January 2008], put the PR 30 about an inch from one of the 2 X 12 cab's speaker cones and the PR 40 facing the amp about two feet away, and tapped Record. Depending on the take, we moved the PR-40 as close as a foot away from the cab and as far out as six feet; voila, all the reverb we thought we needed was now on its own track, too. When there was no perceived need for natural reverb, the PR 30 alone was enough to capture the performance. Finally, with a great mic or two in place, we were in business.

“EVERYTHING WORKS IF YOU LET IT”

Yes, Rick Nielsen of Cheap Trick was right (and not just because he has recorded some of the most skillfully raw, effortless-sounding and dead-on guitar performances of his own). As guitarists, your hands, guitar, amp, and effects working together as they should will most often yield the right results with no need to gamble on too much other junk in the chain.

Non-MIDI self-recordists — many of whom are musicians regularly performing at any local live music venue — seem to spend ample time gambling on the simple rock 'n' roll trifecta

of drums, guitars, and vocals. For whatever reason, especially within this subgroup of musicians, rock 'n' roll's perfect simplicity seems to only naturally exist at the beginning stages of the art, where our skills as both performers and critical listeners are not necessarily bringing pleasure to others because our talents are so raw. In other words, the better we technically become as musicians and self-recordists, the more convoluted the recording process seems to become, often to a fault. I'm here to remind you that rock guitar recording can be incredibly simple if you allow it to be.

Together with a fellow musician/guitarist/self-recordist, I recently proved my new favorite (and thankfully time-tested) DIY recording theory to myself by using only the right and necessary ingredients: great hands, a great guitar, a great amp, a great effects unit, and a great mic or two. The hands were attached to a 31-year-old riff master, deft soloist, and all around nice guy; the guitar was a Les Paul Standard. Here's a rundown of how we kept things simple and satisfying.

FIGURE 1: GREAT AMP

The Peavey 6505+ Tube Guitar Amplifier is a 120W RMS (16, 8, or 4 ohms) two-channel head featuring separate EQ, Resonance, and Presence controls per channel, PLUS a footswitch for channel select, effects loop, and adding Crunch for extra easy gain. The 6505+ is a beefed-up version of the standard 6505, which is essentially the same thing as the now-classic 5150, a “specialist amp” originally designed by Peavey engineers for the Atomic Punk himself, Mr. Eddie Van Halen. The 6505+ contains an extra preamp tube, a 12AX7, dedicated to Crunch and the brand new Clean channel; its predecessor, the 5150 II, offered just the Rhythm channel, no clean.

Simply said, the 6505+ has a sonic range unlike any other I or the guitar player has tried to record together or separately — from all the

regular major rock amp players such as Marshall and Mesa-Boogie, etc. Song after song, a uniquely perfect, record-ready tone was easily dialed in thanks to this particular head amp. Feeding a Mesa-Boogie/Celestion-loaded 2 X 12 cabinet at full throttle, chunky riffs ripped our pants legs. It was beautiful; it sounded modern, classic, and old, depending on your needs. But it always rocked. Essentially, any guitarist who would ever play on a relatively loud stage could find the 6505+ incredibly useful: this is, I'd say, the measure of a great rock amp.

FIGURE 2: GREAT EFFECTS

With our enthusiasm for recording at a high, the guitarist and I moved on to the next necessary component in our pre-recording chain: the Great Effects Unit, a.k.a. Eventide TimeFactor. The concept of the TimeFactor is simple — guitarists have long loved Eventide digital effects, but would rather stomp on a box than screw around with rack-mount, menu-deep user inter-



Figure 2, a.k.a. Eventide TimeFactor

faces. The good folks at Eventide recognized this fact and created the new Eventide Stompboxes series, and the first of the lot is the TimeFactor offering nine of Eventide's “best” delay effects, plus Looper. Other key features include two I/Os, twin delays with up to three seconds of delay each, 20 user presets with access to any two simultaneously, bright alphanumeric display, MIDI I/O/Thru, and — most importantly — now-to-infinity software upgrades via USB port. As you would expect from Eventide, the TimeFactor is built like a tank.

Used in conjunction (and in a variety of routing configurations) with the 6505+, the voice of the guitar chain further developed through

Lexicon Reinvents Reverb



PCM96 Reverb/Multi-Effects Processor

28 New and Legendary Lexicon Reverbs, Delays, Models and Effects

FireWire Streaming — DAW Automation and Control

lexicon[®]

To find out more about the PCM96 visit lexiconpro.com

H Harman International Company

©2008 Harman International Industries Incorporated. All Rights Reserved

World Radio History

LIVE

The latest news and products

NEW PRODUCTS

VIOLET DESIGN Pearl Vocal Mic



Think you've got a good voice? Give it extra luster with the Pearl Vocal live condenser handheld mic. The mic covers the full audio spectrum, so no matter your range you'll get articulated vocal presence. And, thanks to its unidirectional polar pattern, ambient noise and acoustic feedback are reduced, which means your highs are more detailed and your low-end gets an extra boost. Plus, its internal shockmount system and rugged construction limit external and handling noise to a minimum. Complete with a

21mm single diaphragm composed of calibrated film, Class 'A' solid state electronics, and a trusty gold-plated XLR output connection, the Pearl Vocal makes the world your oyster.

PRICE: \$740.

CONTACT: Violet Design/FDW-Worldwide | www.violetusa.com ☎ 608-227-2040.

AKG K171 MKII Headphones



Revamped with upgraded aesthetics and ergonomics, AKG headphones are as comfort-driven as they are sonically pure. And soundmen and DJs will be especially happy with the K171 MKII dynamic, closed-back model designed for mixing and stage monitoring. Soft on the ears physically with the leatherette and velvet earpads, these headphones also offer a frequency range of 18Hz - 26kHz for the silkiest blanket of sound. Add in 10-feet of straight cable, 16.5 feet of coiled cable, a maximum input power of 200mW, and a wide dynamic range perfect for mobile use and you've got instant nirvana at the sound booth.

PRICE: \$269.

CONTACT: AKG | www.akg.com ☎ 818-920-3212

ALLEN & HEATH ZED-12FX, ZED-22FX Mixers



Zed may be the last letter of the alphabet, but when you're talking mixers Allen & Heath's ZED range is a frontrunner. And now two new additions offer a comprehensive section of in-house effects. Go for tap tempo delays, short reverbs, long reverbs or modulation – it's practically A to Z. And all under the easy control of three buttons, allowing for precise editing and "dialing-in" of effects. Both mixers (6 mono + 3 dual stereo channels or 16 mono + 3 dual stereo channels) features a responsive 3-band swept-mid EQ on the mono, a 2-band EQ on the stereo, 100mm long throw faders, 4 aux sends, a USB send/return – and even the new high performance DuoPre padless pre-amps for a low noise, clean signal path. You can't go A-list without ZED.

PRICE: \$499 (ZED-12FX), \$799 (ZED-22FX).

CONTACT: Allen & Heath/American Music & Sound | www.allen-heath.com ☎ 866-474-7711

DYNACORD VariLine VL62 Loudspeaker



When you need it big, and you need it strong, you need the VL62 full-range cabinet (150W RMS & 122dB max SPL). This speaker features a neodymium 6.5-inch woofer plus a 1-inch compression driver mounted to a CAD-optimized 90x40 rotatable horn, for high SPL applications where minimal footprint is a maximum concern. VL 62's unique 16-ohm operation allows up to eight cabinets to be connected in parallel to any Dyncord amp, allowing large-distributed systems for high-end entertainment environments to be realized efficiently. Coupled with Dyncord Power-H remote control DSP amplifiers, FIR presets optimize performance, resulting in linear-phase and equal magnitude response over the operating bandwidth of 90Hz - 20kHz. Strike a chord with your audience.

PRICE: \$1,100.

CONTACT: Dyncord | www.dyncord.com ☎ 952-736-3935

This rolling stone gathers no moss: Bob Dylan keeps on touring, this time with Elvis Costello, and for the current leg FOH engineer Pablo Wheeler requested a **Soundcraft Vi6** digital live console, that dynamics that please both ergonomically and aurally.



Now here's a princely idea: Queens of the Stone Age recently performed a one-off gig for 300 fans 2,300 feet underground in a German salt mine, and a **Crest Audio Pro 200** high-power sound system made sure every note was drilled home with maximum depth.

Grammy-nominated R&B/hip-hop artist Chris Brown has been painting multiple cities red, performing a broad sampling of his tracks with a **Pro Tools**-integrated, TDM-and Virtual Soundcheck-enriched **Digidesign VENUE** board at Front-of-House.

LA-based mouth organ master Tetsuya "Weeping Willow" Nakamura, a member of War, among other groups, has found the perfect performance mic for his blues harp: the **Avlex Superlux D112/C**. This high-gain-before-distortion mic handles the harmonica's output without coloring the sound.

Following a performance at the 8th Annual Latin Grammy Awards, Colombian rocker Juanes kicked off his "La Vida World Tour" with a **DiGiCo D5** console feeding d&b J- and Q-Series line array and subs, and **Dolby** Lake drives.

Thanks to the versatility of the **Studer Vista 5 SR** console, Howard Page was album to mix Australia Plays Broadway, a multi-genre show at Jazz at Lincoln Center, without the feeling he was being pulled down under for any but the best reasons.

We worked hard on the PL380.
Now let's go out and play.

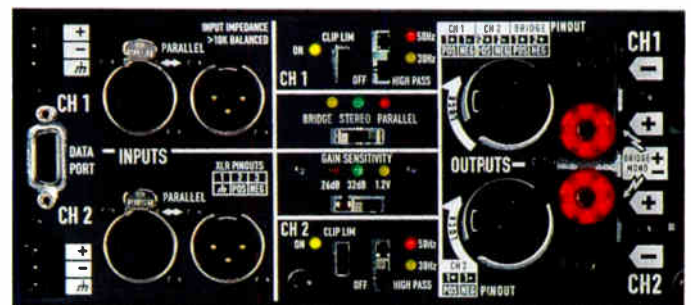
40
1968 2008
QSC
Passionate About Sound



If owning the ultimate 8000 watt, Class D amp is your idea of fun, you're going to love the PL380.

Introducing the efficient, lightweight and well-protected PL380. It's powerful enough to handle even the largest drivers while delivering well balanced high and low frequency performance. The PL380 replaces existing amps without affecting signal delay and converts up to 85% of AC power into audio power—that's half the losses, half the heat of competitive Class D amplifiers.

Most importantly, the PowerLight™ 3 offers something no other Class D can: QSC quality, performance and value.



*A full selection of input and output connectors.
Switched LEDs show your settings at a glance.*

QSC™

Passionate About Sound

For more information call 1-800-854-4079 or visit us at qscaudio.com

© 2008 QSC Audio Products, LLC. The QSC logo and PowerLight are registered trademarks of QSC Audio Products, LLC in the U.S. and other countries.



Fabrizio Lechaze

On The Road: Gear Preferences in 2008

By Heather Johnson

The advents in audio technology over the past two decades have benefited the live sound industry more than any other facet. In the studio, a classic console will win over a new desk in most cases, but very few will argue that the mixing consoles and PA systems of the 1970s sound better than the systems of today. The latest digital consoles rival their analog counterparts in sonic quality while offering greater versatility and flexibility. Engineers can now analyze and tune a room via a laptop or tablet PC — a big time-saver. PA systems have gotten lighter and more transparent, and personal monitor systems ensure that the musicians clearly hear what their bandmates are up to.

That said, the “array” of equipment used on the road runs the gamut from the latest digital ventures to time-tested analog gear. Pro Audio Review surveyed a few sound reinforcement pros to find out how they equip their touring arsenal and whether or not they anticipate or ignore the latest upgrades.

CASE STUDY 1: DON LANIER, PEARL PRODUCTIONS

When Pearl Pro Audio (www.pearlproaudio.com) acquired a Peavey QW Series PA system a few years ago, the business grew exponentially. “We started taking on larger jobs, and our clients and the bands that played through the gear were very happy with their sound,” says co-owner Don Lanier, who also serves as sales and production manager, principal system designer, and front-of-house engineer. In 2007, the company took another leap forward when it purchased Peavey’s VersArray 112 line-array system. “It’s a very high-tech piece,” Lanier says. “It has neodymium magnet woofers, ribbon drivers; to me, that was a statement that Peavey has taken a real stab at professional-level sound reinforcement equipment.”

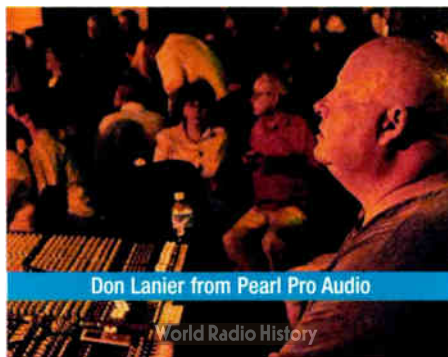
Working alongside Pearl Pro Audio co-owner Earl Parrish, who handles most of the

monitor engineer duties, Lanier has taken their VersArray system — a six-hang system comprised of six mid-high boxes and four subwoofers per side — to regional events such as the Alton Block Party, which draws upwards of 10,000 people in the company’s home base of Alton, Ill. They’ve also used the VersArray at the Route 66 Festival in Edwardsville, Ill., at the Laumeier Art Fair in St. Louis, MO.

In addition to the VersArray, Lanier typically tours with the Architectural Acoustics Digitool processing system. “It allows us to have control of the system and tune the line array via an HP laptop and palm device,” says Lanier. “We’re considering using the Digitool with our monitor system, which would allow us to tune the entire system from the stage.

Crest Audio HP-W and CV-20 consoles occupy the FOH and monitor positions. For effects and outboard processing, the company owns TC Electronic D-Two delays and M-One reverbs, Yamaha SPX Series processors, dbx EQs, and other tried and true pieces. Mics include Heil PR Series (“I consider Bob Heil a mentor,” Lanier says.), Audix OM and D Series, other models from Shure, Avlex, and Superlux, and the newly acquired Lectrosonics UTPR20 handheld wireless mic.

Now that Peavey has released the VersArray 212 line-array system, which is designed for large concert halls and arenas, Lanier and company have their eye on upgrading yet again, surely indicating another business surge. “We enjoy using the Peavey gear,” says Lanier. “It’s cost-effective, road-worthy, and professional. I’m glad more audio professionals are giving it its due.”



Don Lanier from Pearl Pro Audio

World Radio History

CASE STUDY 2: JOHN MCBRIDE AND ROBERT BULL

Sometimes it’s best to stick with what works, especially when it involves mixing live for tens of thousands of people. Engineer John McBride — country chanteuse Martina McBride’s front-of-house engineer, studio engineer, and husband for more than 15 years — found an ideal pairing with the ATI Paragon console and the Clair i4 line-array system. An avid analog console user both on the road and in the studio, McBride remains loyal to the ATI Paragon for its sonic quality and ease of use. “Having a gate and compressor on each input is a nice touch,” he says. “The EQ section of the Paragon sounds musical, which is a big plus, and is highly functional with variable EQ points and Q. For an analog desk, it also has a good number of outputs, which comes in handy on the road.”

Clair Bros. products have been a mainstay of the McBride touring arsenal for many years. His sound reinforcement company MD Systems, established in 1980, merged with Clair Bros. in 1997, but his reasons for sticking with Clair Bros. and the i4 extend beyond any business ties. “The i4s have the smoothest midrange of any speaker system I have ever used, and for female vocals, there is nothing better,” he says. “Martina has great tone to begin with, but listening to her through a big i4 rig is an audio orgasm. She rarely comes in for soundcheck, and if we had a different PA, I would be miserable. The quality, consistency, coverage, and tone of this speaker system is just incredible, and it has made live mixing 10 times as enjoyable as it ever was in the past.”

On Martina McBride’s current tour, John McBride carries API 500-series mic pre’s for all 36 inputs, eight channels of SPL Transient Designer dynamics processor for drums, bass, piano, and acoustic guitar, a BBE Sonic Maximizer for the kick and snare, and an InnerTube Audio Atomic Squeezebox dual analog compressor for Martina’s vocals, which he

ON THE ROAD continues on page 24 ▶

NEW RUMORS CONFIRMED



KUDO LAB SYSTEM

The KUDO system has been integrated with the LA8 amplified controller to deliver a new benchmark of performance. This architecture allows for an innovative enclosure voicing approach (version 3 library) coupled with advanced filter topologies and L-DRIVE power limiting of our new speaker management engine. Further, the incorporation of intuitive remote control and monitoring via LA NETWORK MANAGER, the complete KUDO System delivers the full potential of its DOSC[®] heritage and unique K-LOUVER variable directivity technology. More on www.l-acoustics.com

World Radio History



TOURING GEAR

ON THE ROAD Continued From Page 22

pairs with an API pre and an ATI Pro 6 channel strip. "I occasionally will bring out some GML 8200s or 8900s to play with, but in all honesty, less is more," McBride says. "I have a Chandler Curvebender EQ across the left-right, but generally don't engage any EQ—the rig just sounds better running through the unit, even without doing any EQ."

Longtime monitor engineer Robert Bull echoes McBride's preference for analog technology and "less is more" approach. He's mixed on an ATI Paragon II since their introduction in 1997. "Everything's on the surface, and you can get to it right away," he says. "It has onboard gates and compressors, which gives you unbelievable flexibility. And it just sounds great." Except for one TCM 5000 reverb, Bull uses all analog gear. He uses Clair Bros. 1202 wedges, originally developed by McBride, along with Crown 36x12 amps with built-in crossovers. He flies two Clair Bros. R4s per side for sidefill, which are powered by Crown 5000 amps for the low end, 600s for the mid, and 1200s for the

had spend the last eight years mixing monitors for Christina Aguilera.

For the Maroon 5 tour, both engineers work on Yamaha PM5D digital mixing consoles. "For a digital console, it feels kind of analog to me," says Shreiner. "With most digital boards, I feel like I'm mixing on a computer, but with the Yamaha, everything is right in the center where you need it. It's very user-friendly to me."

"Yamaha is a workhorse of the industry," adds Chrysler. "I've used Midas and Soundcraft consoles for years. When digital came in, I started using the Yamaha desk by default. But man, with the amount of shows I've done on the PM5D with no failures, I'm pretty pleased with their performance." Aside from an Avalon 737 compressor that Chrysler uses on Adam Levine's lead vocals, all processing is taken care of by the PM5D.

For the first leg of the Maroon 5 tour, production opted for a Clair Bros./Showco PRISM system, which has proved itself more than adequate for the job. "The Prism system is an excep-



John McBride with the API Paragon Console



Kirk Shreiner (Front) and Bill Chrysler

highs. Most of the band monitors through Shure wireless ear systems with Shure E5 earphones.

Although McBride and Bull have no plans to reinvent the audio wheel, McBride does have a few ideas to toy around with. "I am going to bring out a Cyclosonic Panner to try on a song. Also, I am a mic pre freak — I like to bring out some Telefunken V76s now and then. The Shadow Hill mic pre with the switchable transformers is really sexy — I may have to bring that out also. Or maybe some old Neumann KM54s or 67s. And a Cooper Time Cube is one of the coolest things I have ever heard..."

CASE STUDY 3: KIRK SHREINER AND BILL CHRYSLER

When Grammy-winning pop/rock band Maroon 5 began their lengthy world tour, they called upon front-of-house engineer Kirk Shreiner and monitor engineer Bill Chrysler to ensure first-rate sound quality. Shreiner, a Clair Bros. staffer for nearly 20 years, had just finished a stint with Motley Crue; and Chrysler, whose credits include dates with Paul McCartney, Madonna, and John Mayer,

tional conventional PA," says Chrysler. "I like how much air it moves and the way it fills a big room. And you can hang a lot of it with just a few points." Coupled with the Prism system, the band uses a combination of Showco SRM wedges, Shure PSM 700 personal monitor systems, and both Ultimate Ears and Futuresonics in-ear monitors (depending on personal preference). Chrysler additionally cites the Shure UHF-R wireless microphone system as a component he has used with much success. Speaking of Shure, Maroon 5 relies upon a complete Shure microphone package, featuring a UR24D/Beta 58 dual handheld wireless system for Levine.

As a team, Shreiner and Chrysler take a musical approach to sound reinforcement. As Shreiner states, "Really it all comes down to the room and the musicians on stage, and no piece of gear is going to fix that."

Heather Johnson is a San Francisco-based journalist and author whose books include "If These Halls Could Talk: A Historical Tour Through San Francisco Recording Studios."

Insight From FOH Engineer Tom Young

With the upcoming touring season upon us, I thought I would offer some personal insight on how I approach sound systems currently available, and what trends are new to touring engineers. When touring with a national act, sound companies design a system for the specific needs of the show. Regional companies that have systems in venues for the summer touring season design the system for the needs of that specific venue.

I will have the opportunity in the summer to work at some of my favorite outdoor venues: the Hollywood Bowl, Greek Theater, Ravina Festival, Chastain Park, just to name a few. Years ago, I used to carry PA into many of these summer venues in order to select the speakers to reflect the style of show I would be doing. It is more apparent today that several manufacturers deliver excellent products that handle all types of music (Meyer Sound, d&b, V-dosc, JBL Vertec, NEXO). Also, the local companies and technicians that service these venues are so in tune to the needs of the venue that you would be hard pressed to drastically improve on what they are accomplishing on a one-day show by putting in a different system.

All of my shows with Tony Bennett have become fly dates due to management's routing of shows. Carrying a sound system would be impossible, so I've been fortunate that the sound products and crew experience at regional levels has never been better, in my opinion. To maintain consistency from night to night, I specify Meyer MSL-4's flown sidefills for the summer and install them every day in the venue. The use of Dolby Lake processing in sound systems is becoming as common as seeing a Klark Teknik equalizer on a sound system in the early years. The ability to equalize and walk the venue with a tablet has raised the bar on overall sound system performance.

The availability of digital consoles on tours maintains a level of consistency and has changed my rider considerably from five years ago. When I used to specify only analog consoles, I had to specify equalizers, compressors, outboard reverbs, delays, etc. On an almost daily basis, it seemed that some or all of the equipment for front of house would be different. The flexibility of digital consoles and the ability to recall what you did last night makes their use hard to deny.

One of the changes in expectations of live touring sound engineers is the recording of the show. I have been recording live shows for quite a while direct to cassette, then to DAT, and now to my laptop, CD or via several types of multi-track formats. The ease and portability of digital recording gear has never been easier to record on the road. The benefits to the artist and the ability to disseminate those recordings quickly on the

TOM YOUNG continues on page 29 ►

“The Serato Rane Series Dynamic EQ
is fantastic. This is one tool I want to
take with me **everywhere.**”



:: GREG NELSON, FOH: Pearl Jam and Incubus

AVAILABLE IN YOUR CHOICE OF FLAVORS - **SOFTWARE OR HARDWARE**



serato™ **RANE**
SERIES
COMPRESSOR
TDM Plug-In

www.serato.com



RANE C4
QUAD COMPRESSOR
with Dynamic EQ

www.rane.com

IN THE CONSOLE OR IN THE RACK

TOURING GEAR

Gearing Up For Linkin Park:

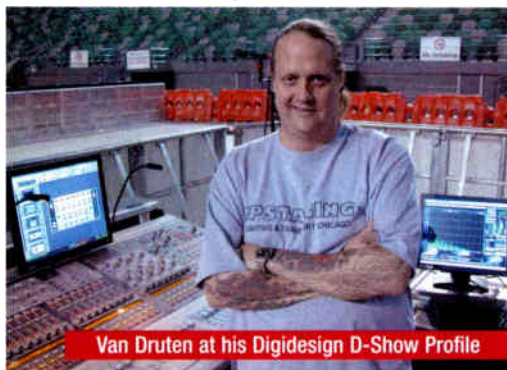
Front-Of-House Engineer Ken 'Pooch' Van Druten

By Strother Bullins

Ken 'Pooch' Van Druten is what you could most accurately call a world-class live sound engineer. He has bounced around the globe with the biggest names in the touring business, acting as front-of-house engineer with Beastie Boys, Guns 'N Roses, Kid Rock, Korn, Seal, and Earth, Wind & Fire, just to name a few. Currently, Van Druten is in Australia running FOH with KISS, and has just wrapped up a string of dates with Linkin Park.

Here, Van Druten details his intricate FOH work with Linkin Park on a highly successful tour supporting their latest platinum-selling release, *Minutes To Midnight*, and is sure to note his choices in gear for the gig.

PAR: What would you call the biggest acoustic and/or logistic challenges for this Linkin Park tour? Are any of these challenges specifically linked to the new material on *Minutes to Midnight*? If so, how?



Van Druten at his Digidesign D-Show Profile

Van Druten: "Minutes to Midnight is a whole new sound and direction for Linkin Park. Some of the things that I normally do for their older material just doesn't work with some of the new sounds that are flying at me. Luckily, we are embracing a bunch of newer technology on this tour. I am using a Digidesign D-Show Profile, which allows me to create snapshots and different plug-ins for each song and immediate and drastic sound palette changes. I feel like I have the tools to do anything that the band or I can imagine ... more so than ever before. It is an exciting time for live sound technology. We can achieve the goal of making it sound like the record every night, and with the tools of digital technology and newer line array systems like the Adamson system, you can really achieve that goal.

"Audio-wise, I think the biggest challenge on this tour is that for about half of the shows we completely sold out the venues. Every

single seat in the house has a person in it, so the pressure is on to make it sound good everywhere. The stage was not in the center for these shows (end stage 360), so it means that some of the backline arrays were very close to where the seats are. There is always a challenge shooting enough energy up into the high seats and not creaming the people that are close to the boxes in the middle. Also, there is a whole set of challenges when you are shooting sound energy 360 degrees; you have to spend a bunch of time making sure that each array sounds the same and that where the two arrays meet, there is no smearing or canceling. It presents all kinds of issues on the stage itself as well. Luckily, Linkin Park wears in-ears, but when you are exciting the entire room, it makes the monitor engineer's job very difficult. I spend a great deal of time every day working with the monitor engineer Kevin 'Tater' McCarthy to ensure that it is a pleasurable experience for the fans and the band.

"There is a total of ten hangs of boxes when we are doing 360 degree shows. The main L and R are 12 Adamson Y18 per side, plus four Adamson Y10; Flown Sub L and R — six Adamson T21 per side; Side Array L and R — 16 Adamson Y10 per side; Far Side Array L and R — eight Adamson Spektrix per side; Back Array L and R — eight Adamson Y10 per side;

And four Adamson T21 ground subs to fill the center on the floor. So, as you can see, there are many zones that all must be aligned and EQ'd on a daily basis."

PAR: Please name the top five bits of gear — anything from input to output — that are crucial links in the overall sound quality of the tour. Why are you using those particular things?

Van Druten: "As I said before, we are embracing all kinds of digital technology. In fact, when the signals get converted at the stage just after the microphones, it remains a digital signal all the way until the amps just prior to the speakers. There is only one analog-to-digital and digital-to-analog conversion that happens. It remains in the digital realm all throughout processing, etc., and travels via AES all the way out to the control surface at FOH and back to the stage. It really sounds fantastic and am excited that it is working out so well.

"I use a 96 input/48 out Digidesign D-Show Profile with various plug-ins — most notably the Waves Live bundle and Digidesign All access pack; and a Mac-based Pro Tools|HD3

system for virtual playback and recording of the show, linked via DigiLink cable to the console — no conversion there, either. There is no outboard gear except for playback and a CD recorder. Finally, I use Lake Dolby processing for outboard EQ and a digital matrix: AES In and Out.

"In addition to the HD3 system at FOH, we have two other complete HD3 systems that we use to edit and remix the show. We are doing something really unique on this tour that I am really proud of: at each show, the merchandise booths are selling a 'recording of the show.' What they are actually selling is a blank CDR with liner notes relating to the shows and inside is a web link that promises that you can download the show that you were just at in ten days. We record every single show and remix it to create a record-quality recording of the show for the fans. We have been doing this for about six months now and the fans are really loving it; it has created a huge buzz amongst the fans that trade shows, who actually have discussions about what performance is better than others, etc. It's pretty interesting stuff; we really work hard to make sure that we keep the integrity of the shows intact and do not fix things with Auto-Tune, or whatever. If it was a complete train wreck, we try to improve it by doing some editing here and there, but for the most part it is a true representation of the show. This is something that people will be listening to for years to come, so we really wanted to make sure that it sounded great.

"If you want more examples, just check out the iTunes EP that we just did; it was recorded at a super-secret Apple Store show in NYC a few weeks ago, and it is being promoted pretty heavily on iTunes right now.

"But anyway, what does this mean to me? A lot of listening to Linkin Park. Dylan Ely is the Pro Tools Editor; he and I spend about 12 hours a day mixing and editing in the dressing room at the venue, working on nearfield monitors. Then I go and mix the live show after that. So, on the average, I listen to Linkin Park about 14 hours a day on show days. At first it was really difficult. Not so much about the ear fatigue — as I listen to nearfields at very low volumes — but more about the brain usage of sitting in front of a Pro Tools rig for 12 hours a day and then having to mix a live show. It has gotten easier now that I am used to it, but it still requires a great amount of dedication."

"**POOCH**" continues on page 29 ►

2008 Touring Gear Manufacturer News

By PAR Editorial Staff

If the following stories are any firm predicate, 2008 should be a great year for good gear amongst tour audio professionals:

Aphex Systems (www.aphex.com) is building an ever-increasing presence in the digital-for-live-sound realm, and 2008 promises to be a great year for the firm. Its Model 828 Anaconda 64-channel bidirectional snake is a point-to-point snake built to cost-effectively connect the lauded Aphex 1788A remote controlled preamplifier system to industry standard consoles, DAWs, and recorders.

New in 2008 from Audio-Technica (www.audio-technica.com) are M3 and M2 Wireless In-Ear Monitor Systems, perfect for low- to mid-level touring acts who've had it with wedges — and, after the show, ringing ears. Both the M3 and M2 feature A-T's Personal Mix Control, offering independent control of volume and mix at the receiver, thrilling both house guys and frequently ignored musicians always requesting "more me." Both feature a small, lightweight body pack receiver, a stereo transmitter with two 1/4" / XLR combo input connectors, and A-T EP3 earphones.

The Slowdown is a new 470-capacity bar and club in downtown Omaha that hosts live performances by regional and touring artists of all genres. Saddle Creek Records — co-founded by Bright Eyes' Conor Oberst — owns the club. A/V installer SoundCom installed three sound systems at the venue, including main and small club systems featuring the Electro-Voice (www.electro-voice.com) XLD line array. The main club system is comprised of 14 XLD281 enclosures and 4x QRx218S dual 18" subs; the monitor system features eight Xw15A stage monitors and a FRi181S single 18" sub; and the small club offers four FRi+152/64 enclosures.

DiGiCo (www.digico.org) has introduced the CS-D5, a specially packaged digital mixing system featuring a streamlined version of the D5 live/install digital mixer. The CS-D5 comes with an effects package of reverbs, graphic EQs, and multi-effects processing along with a 328-foot digital snake, DiGiCo's DiGiRack with 56 inputs and eight outputs, and a local mini-DiGiRack with eight analog and eight digital I/O. CS-D5 is plug-in and recording ready via third-party recording products such as the relatively new ADK Pro Audio (www.lyvetracker.com) LYVETracker DAW (reviewed in the May 2007 issue of PAR).

For those who love their loud wedges, but just wish they weren't so darn big, EAW (www.eaw.com) and the legendary Dave Rat of Rat Sound (www.ratsound.com) have teamed up to offer the MicroWedge Series with switchable passive and active modes. Three coaxial models offer choices of 8-, 12-, and 15-inch LFs.

Once again, Harman (www.harmanpro.com) cohorts Crown International (www.crownaudio.com)

and JBL Professional (www.jblpro.com) have joined forces on 44 new JBL loudspeaker presets specifically tailored for use with Crown's XTi Series of power amps. These System Architect device files are available as free downloads from both Crown and JBL websites; they comprise six presets for JBL JRX Series loudspeakers, six for MRX, 19 for SRX, and 13 for VRX.

Together, dual Sy48 consoles from INNOVASON (www.innovason.com) and a LX6464EX card from Digigram (www.digigram.com) captured the hip sounds of the Warped Tour on the Union Label Stage in Montreal. The dual Sy48s handled FOH and monitors while feeding — for live recording purposes — a Samplitude-running PC loaded with the LX6464EX card.

Distributed by TC Electronic (www.tcelectronic.com) in the United States, sound reinforcement innovator Lab.gruppen (www.labgruppen.com) now offers its PLM 10000Q model from its Powered Loudspeaker Management Series as a four-channel amplifier with dual Dolby Lake Processor modules, Dante low-latency networking, and notable features for load verification and per-



formance monitoring. L-Acoustics (www.l-acoustics.com) offers the new LA8 4-channel amplified controller DSP unit for its KUDO high-performance multi-mode line source system. The LA8 brings processing, control, and monitoring within one network system; new features include linear phase filters, dual action limiter, and L-Net network topology via standard 100T networks. KUDOs are three-way line-source enclosures incorporating two high-power 12" woofers, four 6" mids, and two 1.5" compression drivers. For more on these products, Network Manager software, and the SOUNDVISION 3D predictive environment, visit the L-Acoustics website.

Teaming up to develop new, innovative products for demanding professionals, two giants in high-quality pro audio manufacturing — Lectrosonics (www.lectrosonics.com) and Heil Sound (www.heilsound.com) — have rolled out their first collaborative effort, the Lectrosonics UTPR20. It combines the capsule from Heil Sound's acclaimed PR20 dynamic microphone

with Lectrosonics acclaimed UT Series Digital Hybrid Wireless transmitters.

At locales across the country, a LightViper audio transport system (www.lightviper.com) by Fiberplex, Inc. (www.fiberplex.com) has been delivering the message and music of superstar Contemporary Christian act, Third Day. Two standard Model 1832 "plug 'n play" LightViper fiber optic audio systems provide a total of 64 channels of transport (32 sends by eight returns each). Martin Audio (www.martin-audio.com) has launched its new Blackline+ Series of installed loudspeakers, surely to the joy of club owners (and club FOH engineers) nationwide. Martin Audio, well known for quality, ups the ante with this upgraded Blackline Series; its plusses now include redesigned and improved drivers and crossover networks; all Blackline+ LF drivers in its two-way systems now feature "aluminum demodulating rings to minimize variation in voice coil inductance as the coil moves in the gap. The result is improved midrange clarity and reduced intermodulation distortion at high excursions."

Midas (www.midasconsoles.com) and Klark Teknik (www.klarkteknik.com) recently accompanied The Verve through venues across the UK; both FOH engineer Ian Laughton and Monitor engineer Tristan Farrow used Midas XL8 digital mixers. After starting with a Midas H3000, Farrow's great comfort level with the XL8 became apparent; at that point, the switch to digital Midas was a no-brainer for him.

Sister companies Neumann and Sennheiser (www.neumannusa.com, www.sennheiserusa.com) are not only on tour with a large share of world class artists, their products are on the mic stands and in the ears of the biggest artists in the business — often on the most watched stage in the world. Case in point: in February, Tom Petty's voice was captured and transmitted to the world while singing his hits at the Super Bowl XLII half-time event. Petty crooned into his favorite live microphone, the Neumann KMS 150, while hearing via a Sennheiser G2 wireless personal monitoring system.

Peavey (www.peavey.com) now offers its biggest line array system ever, the VersArray 212. This year it will hit the road courtesy of the Jagermeister Mobile Stage, supporting the Rockstar Mayhem Tour to feature such hot, heavy and musically intricate acts as Slipknot, Disturbed, DragonForce, Mastodon, and Trivium.

QSC (www.qscaudio.com) not only supports acts on tour, in 2008, the company itself is on tour: the QSC Wideline Systems Tour hits the road this month to offer hands-on demos of complete multi-channel WideLine8 and WideLine 10 line array systems. See more information about the tour at QSC's website, then catch a show at a scheduled stop in Atlanta, Las Vegas, New Orleans, or Chicago.

TOURING GEAR

"POOCH" Continued From Page 26

PAR: What sort of new products truly enhance your job?

Van Druten: "The newer line arrays, like the Adamson line array system, give us the tools to make every seat in the house sound the same. I think about this a lot — why shouldn't the kid that paid for the cheaper seat get the same show as being downstage center in the pit? Is he or she any less of a fan? I say no.

"The Adamson is the best-sounding system out there right now. The horizontal coverage is unmatched in any other line array. Walking left to right, the box sounds the same everywhere. What more could I ask for? And with the addition of the T21 subs in the last two years, the system is unstoppable. You would think that a 21-inch sub speaker would be really flabby and woofy, but the T21

is made of Kevlar material rather than paper cone, and is punchy as hell. And because it is a 21-inch speaker, it moves a crapload of air. It is perfect for this type of dynamic band that has a lot of low-end impact. I fire up the system every single day and smile, knowing that it is going to be a good show."

Strother Bullins is a North Carolina-based freelance writer specializing in the professional audio, music and entertainment industries.

TOM YOUNG Continued From Page 24

Web benefits both customer and artist involved in the concert process.

Of the consoles that I have listed on my technical rider, the Yamaha PM5D console uses the company's proprietary MY cards to transport audio in formats including analog, AES, ADAT, TDI, MADI, EtherSound, and CobraNet. For recording live, Yamaha Commercial Audio Systems has made available a recording device by ADK Computer called LYVE Tracker. LYVE Tracker runs Cubase or Nuendo software and has optional interfaces for MADI, AES, ADAT, or EtherSound and is capable of recording up to 192 simultaneous tracks.

Digidesign's VENUE allows you to record or play back up to 128 channels of audio using the console as the interface via two optional HDx cards interfaced to a Pro Tools | HD system. You can also record using Pro Tools | LE directly from the console to a laptop up to 18 tracks.

DiGiCo consoles use RME's MADI card to make 160-channel recordings compatible with Pro Tools, Nuendo, Cubase, Logic and Pyramix. To get MADI into Pro Tools, the company recommends the Soundscape iBox MADI2-HD2 converter that takes the place of the HD interface.

Years ago, recording on tour was expensive and larger tours still hire at least one engineer to maintain the archive. But now that rigs are portable and integrated directly into the front-of-house position across a range of live sound mixing products, it makes recording every night essential to the live sound engineer's touring routine. The value to the artist has become too apparent, if not for immediate remuneration after the show. Capturing a good performance will ultimately be part of their musical catalog. I am not quite sure how this daily responsibility will ultimately add up to increased wages for engineers or sound companies on tour, but I am hopeful it will add to the ever-decreasing numbers seen in the audio share of the touring business. Either way, I am looking forward to hearing and recording in some of the great summer venues this year.

— Tom Young

The Mixer That Does It All!



4 Speakon™ & 1/4" connectors



FREE PRO KIT
ONLY \$5 SHIPPING
C1644P-LM15 SYSTEM

4 Power Amps Amps
6 sends (4 monitor/2 effects)
2 effects processors

Tired of lugging cases of rack gear to your gigs? Leave the racks at home. The **C1644P** packs 4 high powered amps to power your mains and monitor mixes. Housed in a durable **Road Warrior™** tour case, this board is made for gigging. Forget about outboard gear, all you need is the **C1644P**.

- **C1644P:** 16 CH, 1200w RMS (four 300w amps @ 4 ohms for L-R & 2 monitor mixes)
- **LM15:** 15" 475w 2-way, lightweight, high performance Neodymium loudspeakers



12 MONTHS
ZERO INTEREST

CARVIN
Pro Sound • Equalizers • Amps



CARVIN.COM • DIRECT SALES 800-854-2235 • CATALOG • FACTORY TOUR DVD

by Tom Young

Do Engineers Have Mix Rights?

Considering the increasingly common use of digital consoles on major tours, a question comes to my mind about the intellectual property of an engineer's mix once they either leave the tour after its completion or

involuntarily during the tour. I have entertained some conversations over the past couple of months on the topic of sound companies maintaining a database of tour engineers' console mix settings after a tour ends. So again, a question arises: when the tour is scheduled to resume with another front-of-house or monitor engineer, does a sound company ethically have a right to offer previous shows' settings to other engineers?

Looking on Wikipedia.com under "digital consoles," the following paragraph appears: "A digital mixer can offset the lack of sound operator expertise because it remembers what a person who knew what they were doing, told it to do. For example: A knowledgeable person can adjust all of the microphone settings, monitors, etc., for a given event. After everything is properly adjusted, that setup is assigned a name and stored in the memory. Afterwards, a less knowledgeable operator can simply look on the computer screen or touch screen to recall that setting. Then, like some invisible man was operating the system, all of the controls move to their proper positions. Likewise, setups for any other events can be stored and instantly recalled."

As we know, almost all digital consoles incorporate a means of storing data, using either a memory card or directly connecting to a computer to run manufacturer-provided software to create a show file. Engineers like me — those who use mostly regional sound companies — can specify his console

with the same act and recall your show. The work put forth in equalizing the sound system and setting your show mix is back to a great starting point at the touch of a button. I have done some shows where a local sound company or venue will ask me if it is okay for them to keep my settings for the room equalization or they are having a similar jazz-type show in the venue next week and would like to use my settings on the piano. My answer is always unequivocally "yes" if it helps them out. If my settings help a show they are mixing, I am glad to lend my efforts.

As more and more companies bid on shows in the competitive live sound market, is it ethical for them to offer a show or tour with engineers included and supply an



Young has all the digital console information he needs ... right the palm of his hand

of choice, have it supplied locally, and greatly reduce the cost of traveling with a console on the tour. I personally have my show stored on Yamaha PM1D, PM5D-RH, DiGiCo D5, and Digidesign D-show consoles. Also, when storing my show I have notes to denote the type of speaker system used during that show file, i.e. Meyer Sound, d&b, JBL, NEXO, etc., with the date and location.

The advantages are obvious in that if you use the same type of microphones every night and have stored settings of the room equalization, you can return to that venue

independent engineer's settings from the show or previous tour? I would hope that this does not become a viable option for the future of live sound mixing. I would like to believe that sound companies will always try to generate their business by relationships with live independent sound engineers and production managers first and not try to entice the business by cutting out the independent engineer role for tour accountants to win the show bid.

Tom Young is the live sound engineer for Tony Bennett.



VERSARRAY™

Innovations for the Most Challenging Live Music Productions



Patent-Pending Ram Air Cooling™
Our Ram Air Cooling design utilizes a patent-pending cooling system with a large aluminum heat sink and cooling ducts to focus the airflow through the voice coils, minimizing heat buildup and power compression.

Planar Ribbon Drivers

Four planar ribbon neodymium drivers on a manifold line source, combined with ten midrange neodymium drivers in a compound line array, create a cohesive and focused sound field from a high-energy magnetic system with superior transient response.



Full System Reliability

12" Neo Black Widow™ woofers with dual 4" voice coils in a push-pull arrangement provide high power handling and efficiency that help preserve the entire system—including power amplifiers—by not overloading the components.

Sound engineers behind live music's most challenging productions choose the Peavey Versarray line array. Now introducing the new Versarray 212, a three-way line-array module featuring 16 neodymium drivers and 4,000 watts of peak power handling per cabinet to set a new benchmark for high-fidelity sound reinforcement.

Hear the Versarray 212 on the Rockstar® Mayhem Tour 2008!



Ozzfest 2007



Union Square Block Party, NYC

Rockstar® Mayhem Tour 2008 · Union Square Street Sessions Action Sports Block Party, NYC · Jägermeister® Mobile Stage · New Orleans Jazz & Heritage Festival · Ground Zero Blues Club, Clarksdale & Memphis · Chicago Blues Festival · B.B. King's, Orlando · AthFest, GA · Ozzfest 2007

BROADCAST

The latest news and products

NEW PRODUCTS

MSR Dimension4 Acoustic Treatment Systems



"If these walls could talk" is a phrase likely said after many a late-night studio session. But then there are many other times when a main goal is to have the walls themselves speak as little as possible! Acoustics can be unwieldy beasts at times, which is where the pre-engineered acoustical systems from MSR come in. MSR (who did 24-hour treatments to establish the mobile 5.1 mixing trailer at the 50th Annual Grammy Awards) has developed portable, full-frequency solutions providing absorption/diffusion for any given room size. Soon people will be talking about the lack of distracting tones emanating

from your control room, live suite or pre-prepped location broadcast.

PRICE: \$799 - \$3,199.

CONTACT: MSR, Inc. | ☎ 800-497-2087 ↻ www.msr-inc.com.

SONIFEX Redbox RB-PD2 Profanity Delay



Sometimes it's so frustrating the kind of BLEEP that accidentally gets broadcast on the BLEEPing air. And that's where this 19-inch 1RU stereo delay unit comes in, offering an automatic stretch algorithm allowing between two and 64 seconds of delay to build up while things stay "live" and in the correct pitch. Delay can also be acquired while playing a pre-selected audio file from Compact Flash. The unit has both balanced analog and AES/EBU digital I/O on 3-pin XLR connectors, and provides sample rates up to 48kHz/24bit. Build, Delay, Cough and Dump features are activated by dedicated front panel button, and a dedicated record mode transfer inputs to linear WAV on Compact Flash.

PRICE: \$2,822.

CONTACT: Sonifex/Independent Audio | ☎ 202-773-2424 ↻ www.independentaudio.com.

ZAXCOM Deva 16 Hard Disk Recorder/Mixer



Keep your field recording on track – any one or all of 16 tracks, actually – with this new upgrade to the Deva line of location recorders. Featuring eight hardware faders plus an integrated hard drive, DVD-RAM and Compact Flash memory card slot, the Deva 16 offers fault-tolerant, multi-disk recording with automatic file recovery in the event

of unexpected power failure. Eight analog mic/line inputs with 48V Phantom Power, four additional line inputs, eight digital direct outputs, a 16-channel/24-bus digital mixer and channel FX (EQ, notch filter, compressor, delay) are just a few of the additional features. Direct Avid and Pro Tools compatibility, as well as direct-entry metadata and Deva Sound Report Excel output of said data aid in post-production. The over-the-shoulder unit can capture the entire world of sound, literally.

PRICE: \$14,995.

CONTACT: Zaxcom | ☎ 973-835-5000 ↻ www.zaxcom.com.

CEDAR DNS3000 Dialogue Noise Suppressor



Combining the tactile control of the original DNS1000 with the cross-platform Pro Tools integration of the DNS2000, this latest generation of CEDAR's extremely effective noise suppressor has the Academy Award-winning DNS algorithm at its core for the near-zero latency quality control of live transmissions. Additional features include on-board scenes with simple, intuitive recall, automation to timecode, flying faders, sample rates to 96kHz, and all the I/O you have grown to know and love, with no loss of lip sync. And that's not just lip service!

PRICE: \$10,620.

CONTACT: CEDAR | ↻ www.cedaraudio.com.

So much is going on in the world of audio for broadcasting that we're almost going to have to go through it seven-second sound bite style to get it all in this month!

At the 50th Grammy Awards in February, Alicia Keys performed "with" Frank Sinatra using **Shure KSM9/UHF-R** wireless, while Carrie Underwood was seen using a "blinged out" **SM58/UHF-R** mic.



The Beijing Olympics aren't happening till August, but for audio manufacturers it's already game on! **ATI Digital Audio** recently send over 58 DSA 06-XLR and 15 ADAC-2 units to be used for non-reclocking digital audio distribution amplification and simultaneous A/D, D/A and sample rate conversion of **Dolby E**-encoded audio. CCTV, China's National Broadcaster, has selected a Clear-Com intercom network of hundreds of ports and user panels to span its entire broadcast operation of the Games.

In terms of major sports broadcasts, the Super Bowl is always a biggie, and during this past XLII game show **Sennheiser G2 IEM** wireless and **Future Sonics Ear Monitors** assured that performers Alicia Keys (man, she works hard this month), Jordin Sparks and Tom Petty and the Heartbreakers didn't miss a cue. Keys and Sparks also used **Shure UHF-R** wireless for their performances. And the whole thing was broadcast globally in HD Neural-THX Surround.

In a late Feb. episode of ABC's Extreme Makeover: Home Edition, **Auralex Acoustics** provided StudioFoam Pyramids for a trumpet practice room, marking the third time Auralex treatments were used on the broadcast.

TOOLS FOR CREATION

- MICROPHONES
- INTERFACES
- MIXERS
- RECORDERS



Visit Our SuperStore

420 Ninth Ave, New York, NY 10001

Drop by our SuperStore where you can handle the gear of your dreams. You'll find an oasis of competitively-priced stock, and unrivaled customer service with the most knowledgeable sales staff anywhere.

800-947-1182

Speak to a Sales Associate

With more than 30 years of renowned service, we continue to be your "Pro Source." Our sales staff is made up of industry professionals with years of experience. Simply call, and a sales associate will assist you with all your individual needs.

bhproaudio.com

Shop conveniently online

180,000 products at the tip of your fingers. Quick searches and live support help you get everything you want and exactly what you need. Create an account, make a wish list, and sign up for our newsletter, all in our secure environment.



by Ty Ford

ION Audio Tape2PC Cassette Archiving System

This inexpensive cassette to digital file hardware conversion system is simple, easy to use, and universally welcoming to users of all stripes.

Audiocassette tapes: Nearly everyone over a certain age has more than plenty of them. My wife had so many that I bought a big, sealable plastic tub to put them in so they would be stable and contained until something could be done with them. We seldom spoke about them afterwards ... until now.

The cassette was always about portability, not fidelity. However, times have changed while listening habits and consumer audio technology have changed even more.

For most folks, a cassette deck with a

FAST FACTS

APPLICATIONS

Cassette and other consumer audio to CD archiving.

Key Features: Audiocassette transport recording to a Mac or PC host computer; USB and analog RCA I/O; EZ Audio Converter software

KEY FEATURES

Audiocassette transport recording to a Mac or PC host computer; USB and analog RCA I/O; EZ Audio Converter software

PRICE

\$199

CONTACT

ION Audio | ☎ 401-658-3743
☞ www.ion-audio.com



USB out and a simple PC recording program such as Audacity is a great way to reclaim the soundtrack of your life: old radio broadcasts, mix tapes, live music or old studio dubs, speeches, lectures, and even messages on hold. There are memories on some cassettes you probably don't want to remember, but I guarantee there are some you do. For these reasons, a product such as the ION Audio Tape2PC cassette archiving system exists.

The Tape2PC consists of a cassette deck with analog and USB output, USB cable, stereo RCA cable, software CD and quick Start Manual, all for only \$199. Once you get the audio into the computer, you can burn CDs or squirt it to your iPod or cell phone. Is it a plausible professional tool or cheap audio Ginsu knife? Let's find out.

FEATURES

Just because the name Tape2PC seems to ignore Mac users, don't fret. The box and software speak "Mac" just fine. In fact, it brings up the files in iTunes and you can burn your CD right from there. I did my

tests using a 500 MHz Mac G4 Sawtooth running OS X 10.4.11, but Tape2PC works with any Mac at OS 9+ as well as PCs running Windows XP and Vista as long as you have a free USB 1.1 port or higher — that's about as universal as it gets.

The dual-well cassette tape drive is not elegant, but its utilitarian metal cabinet feels solid and the controls are easy to operate, albeit slightly stiff. I'm not sure why you'd want to make cassette dubs at real time or high speed, but you can do that with the Tape2PC transport even when it's not connected to a computer. There are switches for noise reduction and Chromium Dioxide tape. The stereo RCA I/O jacks on the back allows integration into the standard record/tape monitor loop system you've known for years. If you have other consumer audio gear, you

can use the RCA jacks to throughput to the USB output and go right to the host computer. There's a small tape counter meter on the front panel. There is no tweak for balance adjustment and no fast-speed audible cueing.

IN USE

The EZ Audio Converter software that comes with the kit is very easy. Make sure you take a trip to your computer's audio preferences panel before recording; although I could plainly hear Spirit's "12 Dreams Of Doctor Sardonicus" cassette coming out of the Mac, nothing was recorded the first time because I hadn't chosen the USB codec from the input selector of the Mac sound preferences panel. There's a handy sheet for Windows XP and Vista users that explains how to set the correct configurations.

Concept albums present a problem when the cuts crossfade because you have to decide when to click the button to drop the next CD track flag. Don't get too caught up in precision ID dropping and

editing. If you do and put dead space between your cuts on the CD, you'll hear the cassette tape hiss stop rather abruptly. Drop flags as you can and set your CD burner for no spaces between cuts.

After you record, EZ Audio Converter presents you with a naming screen for the cassette title, artist, and individual cuts. Fill this out as best as you can and, on Macs, the info will be transferred to iTunes. If you entered incorrectly (as I did) you can change the info in iTunes. Before burning your CDs, don't forget to visit the iTunes preferences burn screen to choose how many seconds you want between each cut. If you want as close to the original experience as possible, choose "none."

You can use the Audacity software included in the package to record both sides without dropping CD IDs and then go back and select each song manually and export it. Audacity uses a proprietary audio file format that's reminiscent of the AKG DSE-7000 workstation. Audio is recorded in chunks of 1 MB or less. They end up in the project folder for that particular transfer if you set each cassette up as

a new folder. As a result, one cassette can have a huge collection of strangely numbered files representing what you have recorded. There are many tweak effects plug-ins. Audacity is a free program.

My three-speed Audio-Technica ATPL-120 turntable has a little built in preamp

There are memories on some cassettes you probably don't want to remember, but I guarantee there are some you do. For these reasons, a product such as the ION Audio Tape2PC cassette archiving system exists.

that allowed me to plug the turntable right into the RCA jacks on the rear of the cassette deck. I grabbed an album off the shelf and effortlessly made a CD from a 1973 live Mickey Newbury LP (something I'm sure a record label won't be releasing dig-

itally anytime soon). If your turntable isn't turning anymore, ION also sells a turntable with a USB output and one with an iPod socket.

In my tests, one quirky thing happened with my G4 Mac; after plugging in Tape2PC's USB cable, I could not shut down the Mac. I'd turn it off and 20 seconds later it would start up again. Apparently, even when the Tape2PC is turned off, it still communicates with host computer. Part of this communication is a signal the Mac interprets as a start-up command.

| SUMMARY

Whether you're doing this for yourself or professionally as a service to your clients, ION Audio's Tape2PC system offers a pretty painless way of recapturing the sounds of bygone days. Even my wife wants a lesson in how to make it work, which means the Tape2PC may not be leaving here as soon as expected.

Ty Ford has been writing for PAR since the first issue. Reach him at www.tyford.com.

JZ Microphones

Rob Chiarelli
(Christina Aguilera, Will Smith, Madonna, Janet Jackson)

"A beautiful microphone for vocals and acoustic instruments. It sounds like the C800g for one-third the price. I love the sound of this mic!"

Bryan Carlstrom
(Alice in Chains, Rob Zombie, The Offspring)

"The clarity and smoothness was amazing, reminding me of a really good sounding vintage u87. The BH is also my favorite mic for strings."

Characteristics of MASTER:

- Multi-pattern condenser: cardioid, omni, figure-8.
- Class A discrete amplifier circuit.
- Two (1) opposite placed, independent, large, true electrostatic capsules inside the compact head.
- New special capsule with single, less centre tap diaphragm and adjustable backplate.
- Patented variable sputtering of diaphragm, using specially mixed alloy for coating.
- Integrated capsule shockmount.

microphone black hole

MADE IN CANADA
5 YEARS WARRANTY
Design registered: 000529375-0001
www.jzmic.com

by Russ Long

Brauner VMA Large-Diaphragm Microphone

With the flip of a switch, the VMA becomes one of two distinctive and truly high-end Brauner Microphones.

The now legendary VM1 was not designed and built for mass production but rather as a single unit for Brauner Microphone's founder Dirk Brauner himself. As is the case when exceptional gear is built, people hear it, use it and then they'll do whatever's necessary to get their own. That's what happened with the VM1. Dirk handmade the first 20 VM1s himself and then, as the demand continued to increase, it became a full production mic (though it is still handmade).

I first used the VM1 in the late '90s after its endorsement by top-notch engineer Steve Bishir, and I was immediately a fan. I found that the fantastic-sounding mic had an amazing sensitivity and, not to mention, it was the quietest tube micro-

phone I had ever heard. (It turns out that it was the quietest tube mic ever built). In less than 10 years, Brauner grew into one of the most renowned and respected microphone manufacturers in the world, and their product line grew to include several top-notch models.

A few years later I reviewed, and then purchased, a limited edition Brauner VM1-KHE, the Klaus Heyne tweaked version of the VM1. It remains one of my prized audio possessions. The Brauner VMA combines the performance of the original VM1 and Dirk's version of a tweaked VM1, giving the user the option of switching between the two totally different sonic characteristics. Users can switch between the original VM1 and a tweaked/vintage sound with the flip of a switch.

multi-purpose VM1 sound, perfectly suited for precision and detail. The second position sets the microphone to operate with a sweet and mellow tube sound, reminiscent of vintage mics. This setting yields rich and full-bodied vocals and instruments.

The VMA achieves each of its individual sounds through unique circuitry and biasing, not with filter networks. Switching from one position to the other introduces parameter changes, re-biasing the microphone and introducing different sets of components, crucial in achieving the two distinct sounds, into the circuit.

| IN USE

The beautifully crafted Brauner VMA



FAST FACTS

APPLICATIONS

Studio, project studio, broadcast, post-production

KEY FEATURES

A single set of dually used electronics, switchable via toggle; PSA power supply with mode switch and pattern control; FC1 robust aluminum carrying case; SM shock mount, pop filter; C1-7.5 Brauner low-capacitance cable (for VMA to PSA connections)

PRICE

\$9,719.00

CONTACT

Brauner | ☎ 49 2852 509019
 ↪ www.braunerusa.com

| FEATURES

The \$9,719 large-diaphragm Brauner VMA measures 2-inches x 8.75-inches and it ships in the FC1 robust aluminum carrying case. It includes a Brauner SM shock mount, pop filter, PSA power supply with mode switch and pattern control, and C1-7.5 Brauner low-capacitance cable (for VMA to PSA connections). The pressure gradient transducer mic has an equivalent Noise of 11 dBA and an 83 dB (1 Pa/1 kHz/Cardioid) signal to noise. Its sensitivity is >28mV/Pa and its polar pattern is continuously variable in both modes. The microphone has a frequency response of 18 Hz-24 kHz and its maximum SPL is 142 dB SPL @ 0.3 percent THD. It operates on either 115 or 230 volts.

The VMA utilizes a single set of dually used electronics, essentially making it two microphones in one. A toggle switch on the microphone's power supply allows the user to determine the mic's operational mode. One position represents the

not only looks fantastic, it sounds fantastic as well. I had incredible results using the mic to capture acoustic guitar, mandolin, dobro, electric guitar and percussion. In each instance, the microphone sounded rich and full with a warm, smooth, well-defined bottom end. On vocals, the microphone is brilliant. The wraparound pop filter (identical to the filter on the VM1) works extremely well and it simplifies the mic's placement. In the VM1 mode, the extremely transparent mic delivers clarity and detail that rivals any microphone I've encountered. In the tweaked/vintage mode, the mic's smooth and warm sound is gigantic.

In almost every instance I found that when recording instruments and backing vocals, I preferred the sound of the VMA in the VM1 mode and when recording lead vocals I preferred the sound of the mic in the tweaked/vintage mode. The only exception was there were a couple of instances where I preferred the sound of a female vocal in the VM1 position.

The VMA is completely revolutionary in how it uses a single set of tube electronics to achieve two totally different sounds. I really don't have any complaints about the VMA. At \$9,719 it is expensive. However, when compared to the price of a vintage C12 or 451, it's a bargain and it truly can be considered two distinct microphones in one.

Using the VMA has been a complete delight. The two different sounds are completely distinctive from each other. While doing a shootout between several different microphones, we treated the two modes of the VMA as two separate microphones. When I explained the mic's two independent modes to the artist and producer, they listened back and couldn't believe that the two VMA modes were the same mic. There is sonically as much difference between the VM1 and the tweaked/vintage modes as there was between the VM1 and the C12 that was included in the shootout.

A microphone with a \$9,719 price tag better sound good. And, believe it or not, the VMA is worth every penny, in my opinion. There are a lot of pretty good microphones out there today but there aren't very many outstanding mics. The Brauner VMA is the latter;

In almost every instance I found that when recording instruments and backing vocals, I preferred the sound of the VMA in the VM1 mode and when recording lead vocals I preferred the sound of the mic in the tweaked/vintage mode.

its sounds are simply stunning.

| SUMMARY

The VMA is on the short list of the finest microphones ever made. Its true German craftsmanship coupled with an outstanding sonic character should give it top consideration to anyone with deep pockets who simply must have the best.

Russ Long, a Nashville-based producer/engineer, owns The Carport recording studio. He is a regular contributor to Pro Audio Review.

| REVIEW SETUP

Apple Macintosh 2 GHz Dual Processor G5 w/2 GB RAM; Digidesign ProTools 7.4; Lynx Aurora Converters; Lucid Gen-X-96 Clock; PMC AML-1 monitors



by Ben Burns

Audio Ltd. RMS 2040 Series

Versatile enough for stage and studio applications.

UK-based Audio Ltd. has been involved with audio for film and TV production since the 1960s. It's one of the industry's leading brands when it comes to wireless audio for film and TV. You can find products like the 2020 radio system adorning the shelves of the UK's biggest production and rental companies.

can be powered from any DC source between 10v and 18v, even a car battery will work. Once you get a power source connected, simply fumble with the very well protected power switch till it clicks, and the unit will initialize each screen in order. There is no hanging about for the system to boot up, it's ready from cold

are used for the computer bit, which uses RS485 to communicate with a PC up to 1000m away over twisted pair cable. By connecting adjacent racks in a daisy chain, up to 48 receivers can be controlled by the PC.

Audio Ltd.'s audio quality, delivered by the 2040 system, does not disappoint. With a 24Mhz switching band, enough information is squeezed down each channel to ensure a high fidelity signal with increased reliability and consistency. By using high quality components throughout the design, like the Sowter transformers on each output, Audio Ltd. has managed to deliver a fantastic sounding system.

Of course, the antenna you choose to use and the way in which you set up any radio system will affect performance and range, but with a little advice from the user manual (supplied on a CD) even the novice should have a rock solid system in no time.

The review system was delivered with two



The new RMS 2040 range, design for both the studio and theater markets, includes a rack-mounted receiver for two to four channels, and a selection of transmitters for specific applications.

FEATURES

The heart of the 2040 system, containing two to four receivers in a 1U space, the RK2040

in about six seconds.

Each rack includes active antenna distribution with two BNC inputs and outputs, allowing two antennas to be shared between two racks (eight channels in 2U of space). The whole design and concept is optimized for minimum size, the result is a feature rich package at least half the size of just about anything similar on the market.

Using the system could not be any easier. A screen is dedicated to each receiver displaying the state of audio and RF levels and also the name, frequency, battery level, and audio output level of each transmitter. The necessary information is displayed clearly in dark conditions thanks to the backlit LCD screens, with adjustable brightness and contrast settings to suit.

When you need to change a receiver setting, the four push switches adjacent to each screen provide a quick way to navigate a simple menu system. All the settings for the receiver can be changed from here, and information from a currently tuned transmitter may be monitored here, like the battery level. The RF level and audio level are also displayed.

The connection panel on the back includes two antenna inputs and two antenna outputs on 50 ohms BNC posts. The power input is a 4-pin XLR connector, for use with the supplied mains transformer or sources like a camera battery pack – anything DC between 10 and 18 volts will work. Two 9-pin D-Sub connectors

dipole antennas fixed to a clamp, and two of the standard 'whip' varieties. The audio outputs are provided on gold plated XLR connectors, each one being transformer balanced and adjustable from line level down to mic level.

This very compact MiniTX Beltpack Transmitter is about the size of a credit card, with enough thickness for two 1.5v AAA cells. The belt-clip can be removed by sliding it off the pack, leaving a smooth oval rectangle that sits in the provided cloth pouch and is very comfortable to wear. This box of tricks is very light, and much easier to conceal than previous systems. The best thing about it has to be the talent-friendly remote control, which means you don't have to handle the unit until a change of batteries is required.

At the top of the pack, you find a smooth 'dome' with recessed connectors for the antenna (SMA connector) and microphone (LEMO connector). The dome conceals some LEDs and infra-red ports for the remote control, which is the only way to adjust pack settings. There are really two different types of remote control; the infra-red version is like a car alarm key fob with four buttons to navigate through each menu, while Control-X uses magnetic induction (like a hearing aid) to transmit through clothing and switch transmitters on or off, and display other information like frequency.

The battery compartment is hidden under the end of the pack, which pivots in the middle like a swinging bridge to reveal the two AAA

FAST FACTS

APPLICATIONS

Audio for film and television studio; theater audio

KEY FEATURES

Based on two to four receivers in a 1U space; powered by any DC source from 10 to 18V; includes active antenna distribution with two BNC inputs and outputs; industry leading small size

PRICE

Priced upon application/configuration

CONTACT

Audio Limited | ☎ 44 1494 511711
 ☞ www.audioltd.com

cells. On the 'body' side of the pack, the clear graphics tell you not only how to insert the power cells, but also sports a proud "Made in the UK" statement.

All the tools are here for a great way to deal with wireless mics on set. The transmitter pack can be fitted with fresh cells, programmed with the controller and given out to the talent. If further tinkering is required, there is no need to remove the pack and start poking about with a ball point pen, simply zap it with a remote – after all, we've been doing it to our televisions for years. It's a great idea, eliminating bulk, cost, and lots of buttons for people to fiddle with. There is no need to lock the pack, as the only way to turn it off locally is to remove the microphone plug.

Setting the frequency took a little time to get used to, the remote tended to work from one angle only, and a distance of about 20-30cm in a 'line of sight' arrangement. The IR beam is very narrow, I found you must aim the remote exactly at the pack you wish to adjust, pointing down the antenna towards the IR sensor. After a while you can be quite precise with the remote and you get used to where it needs to be.

The supplied software, 'Racktop', can monitor the system with clear understated graphics, edit settings, and provides some well designed tools to get the job done without fuss.

Opening up the racktop software is easy, but you do have to connect to active units before they will appear on the screen. Connecting to the unit(s) is a little bit involved, as you need to have a Windows computer and various adaptors to end up with RS485 on a 9-pin D-sub connector. It would seem the reason for this is the long range. You can communicate with a rack (or racks) up to 1,000m away, and that's a big film set. I would still like to see a USB socket on the rack though, as not everyone needs to be so far away, and the extra cables and adaptors are bulky enough to be awkward.

| IN USE

Once you are able to see the rack(s) in the software, you are in business. I first tried using a Powerbook G4 and virtual Windows – no joy, but the desktop PC worked first time. I needed a USB-RS232 adaptor followed by a RS232-RS485 adaptor to make it all work.

The dynamic display is the default, and provides information about each receiver name, RF, and audio levels. Once you have connected a rack it is a snitch to see all the levels and details like a name for each user.

Advanced features include a 'scan channels' graph with the 32 frequencies of the system along the horizontal, while signal strength is indicated vertically. If a transmitter is detected a bar will indicate the currently tuned frequency, and if the transmitter power is on or off. Using a matrix like grid of checkboxes, you can choose any receiver and log the audio level and RF level into a time stamped CSV file, viewable in spreadsheet software like Excel.

Being able to scan the radio spectrum for 'gaps' is used extensively in the live sound industry, with the help of a computer this is now easy on location too – by using the infrastructure of the 2040 system a compatible frequency set can be constructed from the installed frequencies.

To ensure stable reception from the transmitters, the receivers employ true diversity reception. The RF is constantly monitored in each receiver and the audio is switched noiselessly to eliminate drop-outs.

There are 32 pre-programmed frequencies to choose from; the supplied kit operated between 838.100 and 861.750, but just about anything can be ordered in line with local regulations.

Next, the HX2040 is a handheld transmitter. Through a very classy relationship with Schoeps microphones, the microphone can accept any of the 20 capsules from the 'Colette' range, regarded for their transparent audio response and fine detail by many engineers. Slick features include an infrared control interface, integrated pop shield, shock-mount, and just one button labeled 'on'. The single 1.5V AA power cell is enclosed

inside the tailpiece, once you close this up it also acts as the antenna. The review kit did not include the HX2040 but if the build quality of the other units is anything to go by then it should be good with solid features.

The TX2040 is a more standard sized transmitter already used for wireless audio. The design incorporates the latest advanced technology to enhance multi-channel operation with a switching bandwidth of up to 24MHz and 32 pre-programmed frequencies.

The DX2040 portable true diversity receiver has Audio's unique infra-red interface allowing the user to set all parameters via the SwitchiR, a keyfob-sized remote control unit.

The receiver can be internally powered from two 1.5V, AA (LR6) type batteries giving up to five hours use on good quality alkaline batteries (longer using lithium type), and externally powered (with a supply range of 6-18V DC) using cables available from Audio and mounted on a camera easily.

A standard six pin Lemo connector interface means existing cables can be used, and the receiver is fully backwards compatible with Audio's older RMS2020 and RMS2000 ranges.

| SUMMARY

The whole RMS 2040 Series by Audio Ltd. is ultra compact and uses very modern lightweight materials with great strength. By integrating features usually obtained by using extra equipment, such as antenna splitters, you can be sure that the components of the system are correctly aligned and operating efficiently.

Ben Burns is a UK-based audio professional and contributor to Pro Audio Review's sister publication, Audio Media.

1nV Low Noise JFET

Noise - E_n (nV/√Hz)

Frequency

LSK170 Series

LINEAR SYSTEMS

LSK170

LSK170

LSK170

LSK170

Low Noise <math><1nV</math>
Low Capacitance, 20pf
High Input Impedance
Selected Idss Grades
Available in SOT23 Package
Pin for Pin Replacement for 2SK170
www.linearsystems.com 800-359-4023

POST

The latest news and products

NEW PRODUCTS

YAMAHA DM1000, 01V96, 02R96 Digital Consoles



Bored with your board? Then look no further than these newly upgraded 96kHz digital production consoles, which add VCM (Virtual Circuitry Modeling) Technology, Surround Post Effects and the latest in Yamaha Reverb. The VCM simulates analog circuitry characteristics such as resistors and capacitors, as well as the sounds of various 1970s vintage gear (compression, EQ, phasers, etc. – different options are applicable to different units). Additionally, room acoustics modeling combines to offer a warm, natural response from all arcs and angles, offering a means to assure every mix is creatively different even while using the same board.

PRICE: \$5,699 (DM1000), \$2,499 (01V96), \$10,299 (02R96).

CONTACT: Yamaha Commercial Audio Systems | ☎ 714-522-9011 ⇨ www.yamahaca.com.

ADAM AUDIO A5, Sub7 Powered Monitors



There's no science for the perfect mix, but there is an ART – the renowned Accelerated Ribbon Technology folded tweeter in these compact monitors. Based on the A7, the A5 project studio monitors can be used in stereo or to fill a 5.1 surround system, and they exhibit the renowned ADAM accuracy down to 55Hz from just a 5-inch carbon fiber and Rohacell sandwich woofer powered by onboard 2x25W amplification. Connectors include balanced XLR, unbalanced RCA and Stereolink, which connects speakers' input/output jacks to allow overall volume control from one speaker's gain. Accompanying the set is the Sub7, which extends the response down to 30Hz, includes similar inputs but comes with a wireless remote for volume/crossover adjustment.

PRICE: \$699 - \$769 a pair (A5), \$479 - \$529 (Sub7).

CONTACT: ADAM Audio | ⇨ www.adam-audio.com.

MOTU DIGITAL Performer 6



If a perfectly arranged performance is key, then this upcoming program is the gatekeeper that will let forth the creative ectoplasmic energy of flawless audio sequencing! With Version 6, Digital Performer's new features include a complete user interface redesign, XML file interchange with Final Cut Pro, other industry-leading film scoring enhancements, track comping, support for interleaved broadcast WAVE audio files, enhanced Pro Tools|HD support, and better third-party Audio

Unit plug-in support. That's a lot of improvements! And you'll notice the improvements in your own compositions immediately. You know the score, so get to scoring!

Price: \$795.

Contact: MOTU | ☎ 617-576-2760 ⇨ www.motu.com.

DRAWMER M-Clock Plus



What time is it, mixers and engineers? That's right, it's time for a high-stability AES Grade 1 master clock generator, a unit supporting rates from 44.1 – 192kHz, and additionally

incorporating dual sample rate converters. This item – with an internal or external clock (via AES11), accurate to 2ppm – has 10 clock outputs, as well as the ability to re-sample and synchronize material to its high-precision mechanism via AES, S/PDIF or TOSLINK. Automatic dither generation with user selectable 16- or 24-bit word length is just icing on the cake when it comes to low signal levels.

PRICE: \$1,975.

CONTACT: Drawmer/TransAudio Group | ☎ 702-365-5155 ⇨ www.transaudiogroup.com.

Thanks in part to the authenticity of a pair of Neumann Solution-D digital microphones, and a Neumann Anniversary Edition M 149 tube condenser, mixer John Kurlander helmed a minimalist recording of Marco Beltrami's wiry Oscar-nominated score for 3:10 to Yuma.



The owner/operator of an Italian post-production facility that specializes in early music, Stefano Albarello uses a Lucid 88192 AD/DA converter, a Lucid GENx192 ultra-low jitter studio master clock, and a Lucid DA9624 DA converter – among other gear from **AKG**, **Alesis**, **RME** and more – for faithful, unhyped captures or early instrumentation.

Were Pete Townshend writing this blurb, he might ask, "Who are Eu, Eu, Eu, Eu, Euphonix users." And the answer would include award-winning film composers such as Chris Beck, James Newton Howard and Hans Zimmer, who have all installed Euphonix System 5 digital mixing studios, featuring DSP Supercore.

Senior sound editor for Gemstar TV Guide network, Justin Rice juggles audio post-production, copious voiceover work and in-house composing/Foley. And helping bridge many different timbres is the very musical sounding, multi-hued **A-Designs** Pacifica dual-channel, solid-state mic preamp.

Using a hybrid **Pro Tools/Tonelux** analog system, engineer Ted White mixed an entire HD performance from Colorado-based five-piece OneRepublic to take advantage of modular dynamics processing and warmth.

The **Zaxcom** Deva 24-bit multidisc multiformat location recorder, recently upgraded, was used on three out of five films (3:10 to Yuma, No Country for Old Men, Transformers) nominated for sound mixing at the Academy Awards.

Earthworks PIANOMIC™ SYSTEM



Designed, Manufactured,
and Distributed by
Earthworks Audio



For Audio Engineers
The Professional Choice

- ▶ HIGH DEFINITION PIANO MICROPHONES
- ▶ INVISIBLE FROM OUTSIDE THE PIANO
- ▶ SUPERB SOUND WITH PIANO LID UP OR DOWN
- ▶ INCREDIBLE GAIN BEFORE FEEDBACK
- ▶ INSIGNIFICANT LEAKAGE FROM SURROUNDING INSTRUMENTS

Introducing
THE ULTIMATE PIANO
MICROPHONE SYSTEM
THAT WILL CHANGE
PIANO MIKING FOREVER

*You can now record acoustic
piano with other instruments in
the same room, with virtually no
leakage, pristine sound quality,
and no stands or booms!*

Incredible for live performance!

Earthworks
HIGH DEFINITION MICROPHONES™

Made in the U.S.A. • Patent Pending

To locate your nearest Earthworks dealer call
(800) 654-6427, ext. 445 or email earthworks.audio.com
or on the web at www.earthworks.audio.com

Contact us for a FREE demonstration at your facility

by Mel Lambert

Dolby Media Producer

W

ith optical media finding wider application in not only consumer but also business markets (after all, when did you last see a corporate or sales presentation on slides or a VHS-format VCR?), preparing audio tracks prior to DVD authoring is becoming increasingly important. Dolby Media Producer/DMP is a user-friendly software suite that supports all Dolby formats used for mastering DVD-Video, DVD-Audio, HD DVD, Blu-ray Disc formats and other optical media. DMP's component applications support multichannel, non-real-time encoding and real-time file decoding of Dolby Digital Plus, Dolby Digital, Dolby TrueHD (bit-for-bit lossless) and MLP Lossless formats via an intuitive user interface. As such, Dolby Media Producer comprises a truly flexible, one-stop solution for encoding standalone and video soundtracks.

multiple operators to set up and submit jobs locally or over a network to a centralized server. An intuitive Mac OSX interface simplifies preparation of encoding jobs through the local clients. Complete administrative control includes job status displays, accessible system and error logs for all encoder activity, plus flexible scheduling. To check on processing progress, the encoder can be accessed via a standard browser from any networked computer within a facility. Additional Media Encoder Clients can be purchased to allow additional operators within a facility to set up and submit jobs.

The software supports standard audio source files for encoding into any or all of the Dolby formats used in current disc-based media; it accepts existing timecode or can embed newly generated, user-definable code. The Media Encoder can also generate metadata for all the selected formats. Usefully, source and encoded files can be auditioned using a preview playback feature, while previously encoded content can also be updated using the punch-in overdub feature - a major timesaver if only one small section of a bitstream needs to be modified or otherwise updated.

... AND VICE VERSA

Unlike Media Encoder, which for maximum efficiency is really intended to run in a networked topology, with users delivering files to be encoded on a central server, Media Decoder is configured to run on a single computer to provide playback and decoding for an individual audio room. The application decodes Dolby Pro Logic II, Dolby Pro Logic and Dolby Digital Surround EX formats, and processes Dolby Headphone technology. Media Decoder supports monitoring of various consumer-listening modes, including down-mixing and dynamic range control, and enables decoding and monitoring of Dolby Digital Plus, Dolby Digital, Dolby TrueHD and MLP Lossless formats.

To streamline A/V sync during quality-

control checks of source or encoded files, Media Decoder controls video transports via standard 9-pin protocol; it also supports synchronization with Apple QuickTime files. The decoder's audio output supports Core Audio and ASIO formats for use with FireWire I/O devices, or with other external/internal hardware, including Digidesign Pro Tools, M-Audio or MOTU I/O. A variety of loudspeaker layouts can also be created to match physical outputs with targeted locations, ranging



To the left, a Dolby Media Encoder GUI



from two-speaker stereo to eight-speaker/7.1-channel sessions.

TOOLS OF THE TRADE

As the name suggests, Dolby Media Tools is a utility program that allows users to repair and update previously encoded files without having to re-encode, including metadata editing, file trimming, timecode stripping, and file concatenation. Using file trim and concatenation, files can be divided, shortened and/or appended to add, for example, a revised trailer to a movie DVD project. SMPTE-format timecode can also be added to a file that lacks



Dolby Media Tools GUI

it, or be re-stripped to replace bad or non-continuous code. Like the decoder, DMT is designed to run locally on a single Apple computer.

DOLBY continues on page 44 ►

A TRIO OF MAC-BASED SOLUTIONS

Designed for use on Apple Mac OSX-based systems (there are no current plans for Microsoft Windows or Vista platforms) the DMP software suite comprises three complementary products: Dolby Media Encoder (MAPP \$8,000 for a network-configurable version and includes the seats; additional client seats cost \$500 each); Dolby Media Decoder (MAPP \$1,900); and Dolby Media Tools (MAPP \$1,800); a package of all three modules sells for \$11,000. (A single-user SE Standalone Encoder sells for \$2,900.) These prices should be compared, of course, with the hardware DP569 Multichannel Audio Encoder and DP564 Decoder, which offer only real-time processing of formats up to Dolby Digital, and sell for \$9k.

MEDIA ENCODER

Media Encoder's key feature is its Encoder Queue - users can develop file parameters, pass them to a server that ingests the audio data and metadata components; the program does its magic via comprehensive project and file management functions. Dolby Media Encoder includes three Media Encoder Clients, enabling

Great Audio begins with Audix.



AUDIX
D4

AUDIX
VX5

AUDIX
DX5

AUDIX
5

AUDIX
D6

Ask anyone who owns one.

AUDIX
MICROPHONES

For a dealer near you call Toll Free 800-966-8261
Ph 503-682-6933 Fax 503-682-7114 www.audixusa.com
Also check out www.MySpace.com/AudixMicrophones

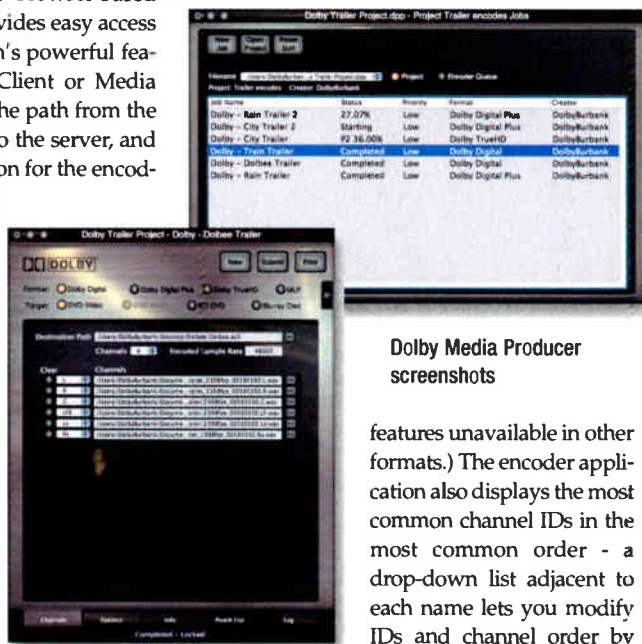
IN DETAIL: DOLBY MEDIA ENCODER

This application combines powerful bit-stream mastering features with comprehensive project- and file-management capabilities, and works in faster than real-time on a local computer or via a network; unauthorized installations are prohibited via Pace iLok USB smart-key verification. The familiar browser-based Apple Mac OS X interface provides easy access to target files and the program's powerful feature set for Media Encoder Client or Media Encoder Server. Workflows - the path from the stored input file to the client to the server, and thence to the desired destination for the encoded file - are simple to set up and are logically organized. (Usefully, Media Encoder also supports a small-format Web server, enabling users to view and manage server activity on pages optimized for handheld devices.)

Opening a new Project Window prompts the user for Project Name and optional Sub Project Name (useful for subdividing large projects), Creator (automatically filled in with the current user's computer name), and optional Facility (which lets users designate the encoding site); optional Job Template Path; and optional Comments for adding project information. Other project parameters include Format Types - Dolby Digital, Dolby Digital Plus, Dolby TrueHD and MLP Lossless; the default being Dolby Digital - and Target Media, with DVD Video as the default.

Multiple Targets are also available for some formats; usefully, when the user chooses two or more targets, the system produces a single encoded file that is compatible with all the selected targets, rather than a separate file for each target. Attributes of these multiple-target files are restricted to the lowest applicable limit - Blu-ray Disc, for example, allows the Dolby Digital data rate to go as high as 640 kbps. If you choose both Blu-ray Disc and HD DVD, however, you are restricted to 448 kbps, which is the maximum data rate for HD DVD. Job names can also be specified, and complete descriptions of data relevant to a mastering and authoring project can stay with the files as they move through the process - very useful. The number of channels in a mix can be specified, along with channel labels, plus source files to be encoded and their destination.

Usefully, a Channels tab displays any options available in the selected format, to ensure that you make the correct decisions; for all formats, the software displays the most common number of channels, enabling the user to add or subtract them from a drop-down list. (Recall that Dolby TrueHD, for example, offers



Dolby Media Producer screenshots

features unavailable in other formats.) The encoder application also displays the most common channel IDs in the most common order - a drop-down list adjacent to each name lets you modify IDs and channel order by choosing alternative values.

It's interesting to note that the file selector is intelligent and provides automatic file selection; double-clicking a source file causes the software to automatically select an entire whole set if a complete set of files is encountered with standard file-name conventions. Having selected a file, the Encoder displays its encoded sample rate. Dolby Digital and Dolby Digital Plus are always encoded as 48 kHz; the software automatically down-samples source files with sample rates of 96 or 192 kHz for encoding as Dolby Digital and Dolby Digital Plus.

Dolby TrueHD is a flexible format with three presentation types - eight-, six-, and two-channel - that define how the consumer system replays the audio data. Various user-definable options provided by DMP let the user select the appropriate program settings. (Default is six-channel independent presentations, with eight-channel being a copy of the six-channel one, plus the two-channel presentation carrying a down-mix with appropriate metadata.)

USEFUL OPERATIONAL FEATURES

Each job can be submitted to the Encoder Queue on any of the available network servers, or the local Apple workstation when multiple

Dolby encoder servers are used, with higher priority jobs being processed first. As will be obvious, a TrueHD Job for Blu-ray - referred to as Dolby Lossless - requires an accompanying Dolby Digital soundtrack (up to 640 kbps), the two encoded bitstreams being multiplexed during authoring.

During encoding, the Apple host system usefully tracks and reports the progress of each session; if the project requires Dolby TrueHD material, which involves time-consuming multi-pass processing, Dolby Media Encoder displays which of the four pass states have been reached. Even more usefully, because DMP is HTML-savvy, users can review and amend via most Internet browsers the password-protected status of projects running on remote systems - even via a Blackberry - or iPhone-type of handheld device with network access.

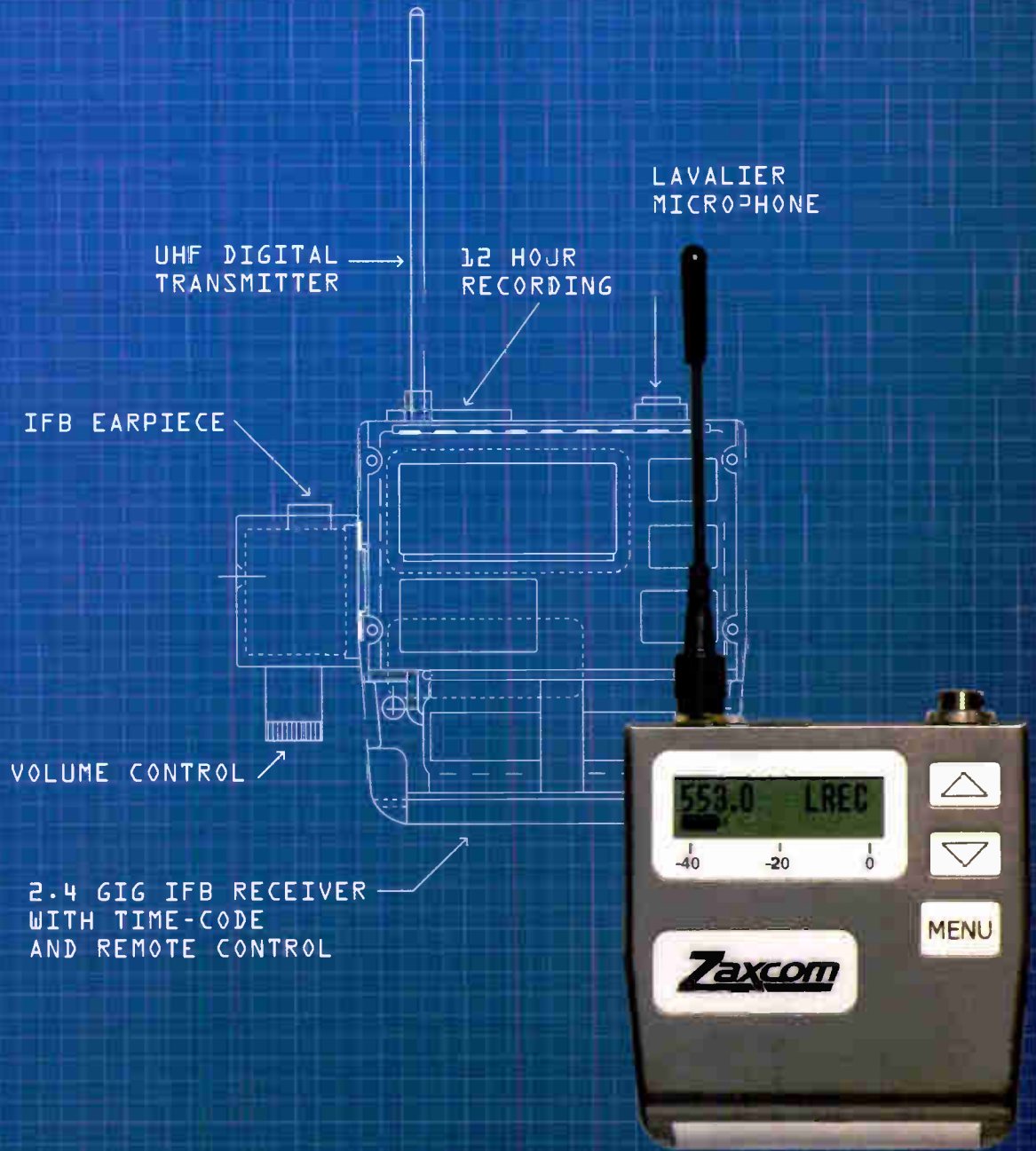
Common encode settings can be saved as templates and used during subsequent sessions. Usefully, Encoded Files can be updated with a Punch List that allows a section of a previously encoded file to be modified without having to re-encode the entire file. Imagine, for example, that you just need to fix a short audio glitch or dropout that went unnoticed during the encoding stage; this way it's possible to fix a short section, rather than re-encode the entire project - a magnificent time-saver.

As might be imagined, a variety of Dolby Metadata options are available that can be used to describe the encoded audio and convey information to control downstream encoders and decoders, including loudspeaker configuration, down-mixing dynamic-range control, and normalize listening levels using Dialnorm (Dialog normalization). Within the Media Decoder section a number of playback environments can be mimicked, including the subwoofer outputs and Pro Logic Delay values. (Usefully, channel locations and labels correspond to SMPTE 428M, Digital Cinema Distribution Master Channel Mapping and Channel Labeling.)

To follow and/or check audio-video sync, file position is displayed for both audio and QuickTime files against most commonly encountered species of timecode (while noting that .BWF files do not contain frame-rate information, but this can be set manually). Output levels of each channel of the file being decoded also are displayed on a separate meter. To allow multiple users to develop their own settings, a Decoder Configuration File (DCF) can also be saved as snapshots of the decoder setup. (Usefully, when a DCF is reloaded, the application verifies the presence of any external I/O devices - like a speaker channel - that were present when the configuration was last saved,

DOLBY continues on page 48 ►

It's not just on paper anymore.



Zaxcom's TRX900 is a quantum leap in wireless microphone functionality and quality featuring high resolution audio recording with time code (Pat pending), diversity IFB receiver, remote control and compander free 100% digital transmission.

Now in use by 100s of broadcasters and television / film productions, the TRX900 dramatically improves wireless audio quality and transmission reliability.

Zaxcom

To learn more visit www.zaxcom.com

This is a select sampling of products to be displayed at the 2008 NAB Show, April 14-17, Las Vegas Convention Center

AKG

AKG is showcasing the D 40 microphone, providing outstanding sound quality and durability for drums, percussion, wind instruments and guitar amplifiers.



Visit NAB Booth N8229 or www.akg.com

JBL Professional

JBL Professional brings its LSR4300 Series studio monitors to broadcast applications with two 5.1 surround sound systems featuring networking functionality and JBL's groundbreaking RMC™ Room Mode Correction technology.



Visit NAB Booth N8229 or www.jblpro.com

Aphex

The Anaconda is a 64-channel bidirectional digital snake with an open interfacing architecture, extraordinary reliability, absolute electrical isolation, and long distance operation capabilities, while remaining the most cost-effective fiber snake available.



Visit NAB Booth N5617 or www.aphex.com

Lectrosonics

The SR dual-channel ENG receiver can be configured for camera slots or external mounting and features Digital Hybrid Wireless™, two diversity modes and a channel mixer.



Visit NAB Booth N5223 or www.lectrosonics.com

Audio-Technica

The new AT2020 USB cardioid condenser mic plugs right into your computer's USB port, offers studio-quality articulation, intelligibility, and functions seamlessly with your favorite recording/podcasting software.



Visit NAB Booth N4529 or www.audio-technica.com

Minnetonka

SurCode for Dolby Digital is a software only Dolby Digital encoder allowing access to the full compliment of professional encoding features. AWE customers can utilize this encoder to Dolby Digital encode a single or thousands of files off-line by simply dropping them into AWE's special "Hot Folder."



Visit NAB Booth N3215 or www.minnetonkaaudio.com

DPA Microphones

The DPA 4017 offers outstanding clarity and linearity in dialog applications and when used for miking acoustic instruments on a live stage. The 4017's wide dynamic range and high SPL handling capability allow this mic to excel in virtually any recording or reinforcement application.



Visit NAB Booth N3537 or www.dpamicrophones.com

THAT Corporation

THAT's 2162 Dual VCA amplifier IC is a low-cost, space-saving solution for multi-channel VCA applications. Packaged in a 16-pin QSOP package.



Visit NAB Booth N4933 or www.apiaudio.com

Electro-Voice

Variable-D® N/DYM® dynamic cardioid microphone. Reduces proximity effect to maintain uniform LF response at any distance. N/DYM® technology provides wider frequency-response and higher output. Three switchable filters: one high frequency, two low frequencies, and an internal blast/wind filter cover. Internal blast/wind filter cover reduces P-popping, breath sounds and excessive sibilance.



Visit NAB Booth N9325 or www.electrovoice.com

Zaxcom

Fusion is a high-resolution audio mixer/recorder for television, surround recording, ENG. Records to two CompactFlash cards simultaneously, for redundancy, flexibility.



Visit NAB Booth N4533 or www.zaxcom.com



GOMEZ
Michael Joly Edition
Fitted w/ Lundahl LL2913



FAT HEAD II: \$199.00
Single Element Ribbon



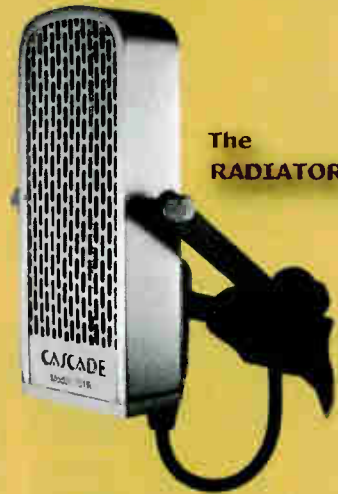
ELROY: \$299.00
Tube Multi-Pattern LC



FAT HEAD: \$159.00
Single Element Ribbon



X-15: \$499.00
Stereo Single Element Ribbons



731R: \$299.00
Dual Element Ribbon



VIN-JET: \$199.00
Long Element Ribbon



DR2-S: \$599.00
Stereo Dual Element Ribbons



L2: \$399.00
Stereo Multi-Pattern LC

CASCADE MICROPHONES
Olympia WA
cascademicrophones.com
360.867.1799

STUDIO SPOTLIGHT

BISMAEUX Continued From Page 14

the overflow so that the A room can keep operating, even if Ray needs an hour to work on a vocal."



The decidedly modern Studio B features a Yamaha O2R mixer and an Event Precision 5.1 monitoring system

SOLIDLY INDEPENDENT

For 2008, Bismaeux intends to operate "business as usual," with no major upgrades planned, save for a software boost to Nuendo 4.0 and some TLC for the API. Their client roster remains, in addition to Benson's projects, solidly independent, with the occasional major label project filtering through. In a town rich with high-level musicians

working on the fringe of commercial rock and country, Bismaeux stays steadily booked while many studios struggle. "We're just concerned with making great-sounding records," says Seifert. "So far, we've been under the radar; in the year to come, we expect things to only get better."

Heather Johnson is a San Francisco-based journalist and author whose books include "If These Halls Could Talk: A Historical Tour Through San Francisco Recording Studios."

POST | First Look

DOLBY Continued From Page 44

displaying a warning if it's missing.)

The number of user options offered by the DMP software suite can only be described as extensive. For example, while encoding Dolby TrueHD audio tracks for an HD DVD or Blu-ray Disc, the user can implement an apodization filter. (If, like me, you are unaware of the former, an apodization filter helps minimize ringing effects that can occur in some A-to-D and D-to-A filters; it is only applicable to source files sampled at 88.2 kHz or higher.)

In addition to supporting data rates up to 6 Mbps - 3 Mbps for HD DVD and 1.6 Mbps for Blu-ray Disc - Dolby Digital Plus delivers up to 7.1 channels. The process is also described as maintaining high quality at more efficient broadcast bit rates - typically, 320 kbps for 5.1-channel audio. (It is the mandatory audio format for HD DVD and as an optional audio format for the Blu-ray Disc.) And where higher bit rates can be accommodated, Dolby TrueHD is described as bit-for-bit identical to a studio master, for 100 percent lossless coding at data rates up to 18 Mbps with more than eight, full-range 24/96 channels.

A REMARKABLE A/V SPECIALIST'S SOLUTION

All in all, Dolby Media Producer is a remarkable development. In one, easy-to-implement-and-use package, DMP offers the type of power and convenience we expect from this well-experienced manufacturer. It has a reasonably steep learning curve, if only because the operations are specialist and possibly being encountered for the first time. The in-context help menus are outstanding and a lot of the dialog boxes feature assistance in completing what is often a set-once/use-again operation. Using either the three-in-one DMP or standalone SE Encoder, a facility can set up a DVD Production Suite that can turn out audio media files quickly and efficiently. What more could you ask?

Acknowledgements: My sincere thanks to Steve Venezia, Manager, DVD/DTV Broadcast Support, and Gary Epstein DVD/DTV Broadcast Support Engineer, for their invaluable assistance during this hands-on assessment at Dolby Laboratories' Burbank office.

Mel Lambert, principal of Media&Marketing, a Los Angeles-based consulting service for the professional audio industry, can be reached at mel.lambert@MEDIAndMARKETING.com.

For almost 20 years, THAT Corporation has produced the highest quality analog integrated circuits to improve the sound of pro audio equipment. To make sure your gear has the best sound available, look for the products with THAT On Board. **T** You'll be glad you did.

THAT Corporation
Analog ICs for Pro Audio®

www.thatcorp.com
email: sales@thatcorp.com

YOUR LOCATION FOR CREATION

70,000 square feet of gear



Subscribe to the
B&H Pro Audio Catalog
www.bhphotovideo.com/catalog

Visit Our SuperStore
420 Ninth Ave, New York, NY 10001

bhproaudio.com
Shop conveniently online

800-947-1182
Speak to a Sales Associate



MILLENNIA NSEQ-2 Twin Topology Parametric Equalizer

FEATURES: Two-channel Class A vacuum tube, two-channel Class A discrete solid state parametric EQ; selectable via button; four EQ bands per channel; mastering control, balanced input options.
PRICE: \$3,850.
CONTACT: Millennia at 530-647-0750 www.mil-media.com.



XTA DP 448 Audio Management System

FEATURES: 4-input/8-output programmable processor; gain control; delay; crossover settings; input EQ, 28-band graphic; output EQ; Phase control; 2-stage limiter; AES and analog as standard; LED metering; RS485 control via AudioCore S/W.
PRICE: \$5,795.
CONTACT: XTA at 516-249-1399, www.xta.co.uk.



AUDIENT BB4 Voice Channel

FEATURES: Complete Black Series voice channel with ADC, up to 192kHz; Discrete class A transformer balanced inputs; Mic Pre featuring HMX harmonic sculpting; 4-band EQ with Overtone, Glo on the LF, plus tilt; optical compressor includes Overcomp, smooth.
PRICE: \$2,900.
CONTACT: Audient at www.audient.com.



RANE C4 Quad Compressor/Limiter/Dynamic EQ

FEATURES: Four channels fully tweak-able DSP Compression, Dynamic EQ; total control over Attack & Release times, Ratio, Knee and a full time PEQ in the side-chain along with full metering.
PRICE: \$999.
CONTACT: Rane Corporation at 425-355-6000, www.rane.com.



ASHLY AUDIO Protea 3.24CL Digital Speaker Processor

FEATURES: 3-In, 6-Out; programmable; assignable ins to outs; high-, low-pass filters;



gain trim, compressor/limiter; 6-band parametric EQ per input; 4-band parametric EQ per output; low, high shelf filters; input/output delay; reverse polarity; XLR ins/outs; jumping thresholds; input/output LED meters.
PRICE: \$1,035.
CONTACT: Ashly Audio at 800-828-6308, www.ashly.com.

YAMAHA SPX2000 Multi-Effect Processor

FEATURES: 96kHz Audio DSP with 32-bit internal processing (58-bit accumulator); 24-bit, 128-times oversampling AD/DA converters; 106dB dynamic range; REV-X reverb; five assignable LCD colors, operation lock mode, computer-based editor program; three memory banks.
PRICE: \$1,249.
CONTACT: Yamaha Commercial Sound at 714-522-9011, www.yamaha.com/livesound or www.yamahaca.com.



LECTROSONICS DM1624 DSP Matrix Mixer

FEATURES: 16 mic/line inputs, 24 outputs digital matrix; controllable via RS232, USB; auto-mixing with proportional gain algorithm; six filters, compressor, delay per input; nine filters, limiters, delay per output; digital I/O for expansion on DANI buss; AMX, Crestron compatible.
PRICE: \$4,550.
CONTACT: Lectrosonics at 505-892-4501, www.lectrosonics.com.



LEGENDARY AUDIO Masterpiece 2 Analog Mastering System

FEATURES: Lower priced version of Rupert Neve design; Precision Peak, Shelf EQ; Compressors; Tape Texture; Classic; Auxiliary interface; Image, Ambience control; Variable Phase; Multiband Processing.
PRICE: \$14,500.
CONTACT: Legendary Audio at 512-289-3428, www.legendaryaudio.com.



SABINE NAV4802-MR Navigator System Processor

FEATURES: 4-in, 8-out 96kHz system Processor; Ethernet; Mic Preamp; Wall Panel Remote Ready; no limit on DSP power; EQ;

crossovers; FBX Feedback Exterminator; gain management; routing; delay; presets; security; front panel or software control.
PRICE: \$2,259.89.
CONTACT: Sabine at 386-418-2000, www.sabine.com.



SUMMIT AUDIO 2BA-221 Microphone Preamp and Line Module

FEATURES: Variable mic input impedance from 100 ohms to 10K ohms; Variable Highpass Filter with bypass; Separate Hi-Z Instrument, Line, Mic Level Inputs; Hi-Z input, Mic input available simultaneously with separate gain controls; Solid State input with high voltage tube output; Insert Jack; Stackable with more 2BA-221s; 1/2 Rack Size; XLR, 1/4-inch outputs and inputs; Phantom power; LED metering.
PRICE: \$695.
CONTACT: Summit Audio, Inc. at 775-782-8838, www.summitaudio.com.



ART VoiceChannel

FEATURES: Single-channel Tube Preamp, Compressor, De-esser, noise gate, expander and parametric EQ; analogue and digital outputs: USB, AES/EBU, S/PDIF, ADAT Optical; selectable Plate Voltage and Variable input impedance; multiple VU, LED meters.
PRICE: \$539.
CONTACT: ART at 716-297-2920, www.artproaudio.com.



WEISS DS1-MK2 Compressor/De-Esser

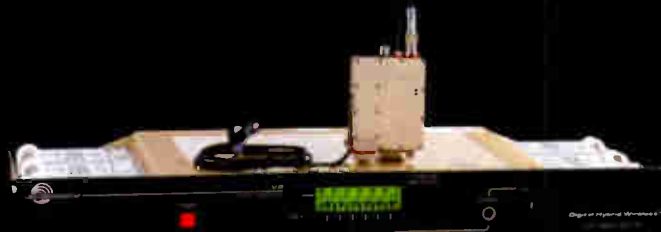
FEATURES: Two channels; 24-bit; AES/EBU I/O; 44.1k - 96k sampling rates; M/S mode; auto release; linear phase bandsplit filter; upward expansion; parallel compression; soft knee; additional peak limiter; POW-R dithering.
PRICE: \$8,000.
CONTACT: Weiss at +41 44 940 20 06, www.weiss.ch.



BUYER'S GUIDE continues on page 52 ►

LOVE. DEATH. WATER?

Photo by Michal Daniel



The modular Venue Receiver with the remarkable MM400C water-tight transmitter, used for this 2007 production of *Romeo and Juliet*.



Made in the USA by a Bunch of Fanatics.

USUALLY, WATER MEANS DEATH FOR WIRELESS MICROPHONES.

Not so for the Lectrosonics MM400C transmitter. Just ask Tom Clark of Acme Sound Partners, Sound Designer for New York's very wet Shakespeare in the Park:

"Throughout the entire month *Romeo and Juliet* ran, not once did we encounter a single hiccup from any of the Lectrosonics equipment. These transmitters were literally the only devices available anywhere enabling the director's vision of this production to be realized."

Choose Lectrosonics and raise *your* wireless standards.

Call 1-800-821-1121 or visit www.lectrosonics.com

Continued From Page 50

DAKING FET Compressor II

FEATURES: All discrete transistor circuitry, transformer-balanced inputs/outputs, Class A amplifiers; internal switch facilitates active use of the gain makeup pot for console applications, to fully bypass in line level rig application.

PRICE: \$2,175.

CONTACT: Daking/TransAmerica Audio Group at 702-365-5155, www.transaudiogroup.com.



DRAWMER S3 Three-Band Stereo Ten-Tube-Compressor

FEATURES: Mastering-level tube compressor; "No technical compromise" circuit; control and tonality over each of three bands; gain control at each stage offers precise spectral balancing. Call for pricing.

CONTACT: Drawmer/TransAmerica Audio Group at 702-365-5155, www.transaudiogroup.com.



API 525 Compressor/Limiter Module

FEATURES: Exact reissue of discrete, ultra-fast feedback-type circuit; "Ceiling" fine-tune function simultaneously modifies threshold, make-up gain for precise changes in compression without changes in output level; built-in De-esser.

PRICE: \$1,195.

CONTACT: API Audio at 301-776-7879, www.apiaudio.com.



CARVIN XD88 Loudspeaker Management System

FEATURES: 30-band graphic EQ for each of eight input channels; 4 parametric EQs, with selectable desired frequency, gain adjustment (± 12 dB cut or boost), slope adjustment over a range of 3 octaves; limiting; delay; ability to define high, low crossover settings with slope selection (Butterworth, Bessel, Linkwitz-Riley) up to 48 dB per octave; Phase In/Out; Gain cut; 30-band RTA (real time analyzer); RS232 input to computers; additional parameters.

PRICE: \$699.99.

CONTACT: Carvin at 858-487-1600, www.carvin.com.



KLARK TEKNIK DN98948E Loudspeaker Management System

FEATURES: 4-input, 8-output E-Series system; 1RU; 12 delay lines/16 all-pass filters/16 hi & lo pass; 4 comps/8 look-ahead limiters/96 bands PEQ; grouping facility; full matrix mixing between inputs/outputs; ganging of inputs, outputs; I/O parameters copy between one another; all facilities available all the time; Flash memory locations; dual Ethernet ports; AES/EBU digital inputs; full remote control, wired or wireless, via PC and ELGAR and System Controller.

PRICE: \$5,380.

CONTACT: Klark Teknik at 952-884-4051, www.klarkteknik.com.



ELECTRO-VOICE DC-One Digital Loudspeaker Processor

FEATURES: 2-input, 6-output with crossover, EQ, delay, compressor/limiter, professional metering, and full front-panel display. 24-bit sigma-delta AD/DA converters, 32-bit floating-point signal processor; 111dB dynamic range; operation via free PC-Editor software or front panel direct access buttons; user-editable, lockable parameters; 1RU 19-inch chassis; front panel USB connector for PC-Editor; AES-EBU input; 6dB input pad; RS232 for preset changes, or two units to be linked.

PRICE: \$980.

CONTACT: Electro-Voice at 952-884-4051, www.electrovoice.com.



DYNACORD DSP 260 Digital Loudspeaker Processor

FEATURES: 2-input, 6-output with crossover, EQ, delay, compressor/limiter, professional metering, and full front-panel display. 24-bit sigma-delta AD/DA converters, 32-bit floating-point signal processor; 111dB dynamic range; operation via free PC-Editor software or front panel direct access buttons; user-editable, lockable parameters; 1U 19-inch chassis; front panel USB connector for PC-Editor; AES-EBU input; 6dB input pad; RS232 for preset changes, or two units to be linked.

PRICE: \$980.

CONTACT: Dynacord at 952-884-4051, www.dynacord.com.



FDW-Worldwide, the exclusive distributor of Violet Design and Neaton microphones in the Americas and the exclusive international distributor of Cable Up pro-line cables and accessories is seeking to establish new strategic partnerships with manufacturers exploring the outsourcing of their sales and marketing operations. We operate out of a 75,000 square foot facility in Wisconsin and provide a wide range of services including sales, marketing, customer service, credit, service, warehousing, and shipping. We have sales representatives positioned throughout the USA and Canada and can react immediately to expand your current distribution.

Contact Garry Templin, Brand Manager, at 615-308-7808 or visit www.fdw-w.com for more information.

BUYER'S GUIDE continues on page 54 ►

It's all in the details.

Many companies make audio interfaces.
Few make great ones.



Compatible with
Pro Tools M-Powered 7.4
via downloadable update.

Check m-audio.com for details.

ProFire 2626

**High-Definition 26-in/26-out FireWire Audio Interface
with Octane Preamp Technology**

In creating the ProFire 2626, our engineers pored over the details that add up to an exceptional recording experience. The eight mic preamps feature award-winning Octane™ preamp technology designed for optimal headroom—resulting in extremely low distortion through the entire gain range. The preamps have also been tweaked to offer a generous 75dB gain range and an extremely high signal-to-noise ratio, allowing you to accurately capture performances across a tremendous dynamic range. Careful selection of components—including high-end converters with low band-pass ripple and linear phase response—results in cohesive, detailed audio with a wide frequency response. Complete with low THD+N and preamp circuitry that follows the shortest possible signal paths, ProFire 2626 remains uncolored and true to any input source. We labored over these details so you can concentrate what's most important: making a great recording. Read all the details at m-audio.com.

- 26 x 26 simultaneous analog/digital I/O
- eight preamps with award-winning Octane technology
- flexible on-board DSP mixer for multiple unique cue mixes
- user-assignable master volume knob
- doubles as 8-channel mic pre/ 8-channel A/D-D/A converter
- up to 24-bit/192kHz for pristine high-definition digital audio
- critically acclaimed JetPLL jitter elimination technology



© 2008 Avid Technology, Inc. All rights reserved. Product features, specifications, system requirements and availability are subject to change without notice. Use of enclosed software may be subject to a limited license agreement. Avid, M-Audio, the > logo and ProFire are either trademarks or registered trademarks of Avid Technology, Inc. in the U.S. and in other countries. All other trademarks contained herein are the property of their respective owners.

> GET M-POWERED

M-AUDIO

www.m-audio.com



World Radio History

Continued From Page 52

A-DESIGNS AUDIO HM2EQ HAMMER

FEATURES: Analog equalizer; dual mono channels; three sweepable EQ bands per side; even harmonics flow through 12AT Philips vacuum tubes filtering out unwanted noise; bypass, high- and low-cut switches; 2U metal chassis; balanced Neutrik XLR ins; balanced XLR outs.

PRICE: \$2,695.

CONTACT: A-Designs Audio at 818-716-4153, www.adesignsaudio.com.



DACS FREQUEII

FEATURES: Pronounced FREAK, this unit has two ring modulators, two oscillators with external CV inputs working concurrently with the internal variable FM; Frequency

Shifting adds and subtracts the oscillator frequency to the frequency of each harmonic component of the music inputs, and outputs them separately; Balanced inputs and outputs.

PRICE: \$1,776.



CONTACT: DACS/Independent Audio at 207-773-2424, www.independentaudio.com.

SOLID STATE LOGIC XLogic X-Rack

FEATURES: SSL Mic Amp, VHD Mic Amp, EQ, Dynamics, Four or Eight Channel Input Module, Mix Bus and Total Recall technology in a modular rack; SuperAnalogue circuit; classic Compression; MIDI IN/OUT; Mix Bus Link port; 4U 19-inch rack space.

PRICE: From \$1,685.

CONTACT: SSL at www.solid-state-logic.com.



YAMAHA Q2031B Graphic Equalizer

FEATURES: 31 EQ bands at 1/3 octave intervals from 20Hz to 20kHz; 2-channel versatility, variable high pass filters for each channel; active filters provide minimum phase shift, smooth response at any boost/cut setting; switchable EQ gain of +/- 6dB of +/-12dB; includes balanced 1/4-inch phone



jacks and balanced XLR jacks, all rated at +4dB.

PRICE: \$769.

CONTACT: Yamaha at 714-522-9011, www.yamaha.com/livesound or www.yamahaca.com.

PRISM SOUND MEA-2 Mastering Equalizer

FEATURES: Stereo or 2-channel, four-band precision analogue EQ; stepped Q/peaking/shelving; frequency, cut/boost (8dB max) controls on each band; per-channel bypass.

PRICE: \$8,255.

CONTACT: Prism Sound at 973-983-9577, www.prismsound.com.



D.W. FEARN VT-5 Vacuum Tube Stereo Equalizer

FEATURES: One set of controls works dual EQ channels simultaneously; Low/Mid/High Cuts, Low/High Boosts, High Bandwidth Q; uses passive LC circuitry with Class A triode vacuum tube stages for I/O; inputs are line-level, transformer balanced-bridging, with adjustable +/-9dB gain; output uses custom Jensen transformers; all rotary controls stepped; 3RU.

PRICE: Contact manufacturer.

CONTACT: D.W. Fearn at 610-793-2526, www.dwfearn.com.



UAD Xpander ExpressCard & DSP Chassis

FEATURES: Noiseless, Fanless, Alumi-coinl chassis design; 2.5Gbps ExpressCard34 interface; 44.1 - 192kHz DSP Audio Accelerator for laptops, same DSP as UAD-1 & UAD-1e, compatible with all Powered Plug-ins; 1 meter cable; carrying case included; optional adapter kits.

PRICE: \$1,199 - \$2,599.

CONTACT: Universal Audio at 877-MY-UAUDIO, www.uaudio.com.



LEXICON PCM96 Stereo Reverb/Processor

FEATURES: 1RU 44.1 - 96kHz digital processor; 28 complex reverb, modulation, delay algorithms; AES/EBU, MIDI, Word Clock, Ethernet, FireWire connectivity; HiQ Net compatibility.

PRICE: \$3,499.

CONTACT: Lexicon at 801-568-7567, www.lexiconpro.com.





Acoustics First[®]

Materials to Control Sound and Eliminate Noise[™]





Art Diffusor Model C



Geometrix[™]



Sonora[™]

Acoustical materials that Look as good as they Sound[™]

Toll Free

1-888-765-2900

Web: <http://www.acousticsfirst.com>

ADK

"THINK WITH YOUR EARS!"



2008 ADK "What's Hot" Catalog



www.ADKMIC.com • MySpace.com/ADKMIC

World Radio History

AUDIO EQUIPMENT EXCHANGE

ProAudio Review

ACOUSTICS

 **AcousticsFirst™**
Toll-Free Number: **888-765-2900**
Full product line for sound control and noise elimination.
Web: <http://www.acousticsfirst.com>

 **RPG**
RPG DIFFUSOR SYSTEMS, INC.
**Listen To The Music,
Not The Room...**
Absorption, Diffusion & Total Room Solution Packages.
Find an Authorized Dealer @
www.rpginc.com/proaudio

CASES

Case Specialists
www.NewYorkcasecompany.com
We Will Beat ANY Price!
1-877-692-2738

CONTROL PANELS

CUSTOMPANELS & METALWORK

Custom panels in Aluminum, Steel, Stainless & Brass. Wide choice of finishes. Silk screened or engraved graphics. Custom wood mounting systems & desktop consoles.

 **PANELAUTHORITY INC.**

PHONE 815.838.0488 | FAX 815.838.7852 | www.panelauthority.com

EQUIPMENT

ALAN SMART COMPRESSORS



- C1, C2 & Multi-Channel Versions
- Smart 2 Tools - SSL to Pro Tools Interfaces
- Smart D.I. Boxes

All Exclusively Distributed by:
323-469-1186 • SunsetSound.com

ProAudio Review
The Review Resource for Sound Professionals

We've MOVED!!

NEW address
5285 Shawnee Road, Suite 100
Alexandria, VA 22312

NEW phone #
Main: 703-352-4600 • Fax: 703-852-4563

email
tinatharp1@aol.com

 **NewBay Media**

NOW HEAR THIS!

ProAudio Review
Gear & Software Reviews For The End-User

PRO AUDIO REVIEW'S Product Showcase is a cost efficient and effective method to sell your products and services.

For more information, call
Tina Tharp at
970-728-8376 • Fax 970-728-8356
Email: Tinatharp1@aol.com

ProAudio Review

ADVERTISER INDEX

*This listing is provided for the convenience of our readers.
Pro Audio Review assumes no liability for inaccuracy.*

Page No.	Advertiser	Website
54	AcousticsFirst Corp	www.acousticsfirst.com
55	ADK Microphones Inc.	www.adkmic.com
7	Antelope Audio	www.antelopeaudio.com
27	Aphex Systems	www.aphex.com
2	Audio-Technica U.S. Inc	www.audio-technica.com
43	Audix Corp	www.audixusa.com
60	Auralex Acoustics	www.auralex.com
33	B&H Pro Audio	www.bhproaudio.com
49	B&H Pro Audio	www.bhproaudio.com
47	Bayview Pro Audio, Inc.	www.bayviewproaudio.com
13	Berliner Microphones USA	www.berlinerusa.com
5	Bosch Communications	www.boschcommunications.com
29	Carvin Corporation	www.carvin.com
15	D.W. Fearn	www.dwfearn.com
9	DPA Microphones, Inc.	www.dpamicrophones.com
41	Earthworks	www.earthworksaudio.com
37	Equi=Tech Corp	www.equitech.com
52	Full Compass	www.fullcompass.com
17	JBL/Harman	www.akg.com
19	JBL/Harman	www.lexiconpro.com
35	JZ Microphone Ltd	www.jzmic.com
23	L-Acoustics US	www.l-acoustics-us.com
51	Lectrosonics	www.lectrosonics.com
39	Linear Systems	www.linearsystems.com
53	M-Audio	www.m-audio.com
59	Minnetonka Audio Software, Inc.	www.minnetonkaaudio.com
11	Oram Professional Audio	www.oram.co.uk
31	Peavey Electronic Corp	www.peavey.com
21	QSC Audio Products, LLC	www.qscaudio.com
25	Rane Corporation	www.rane.com
16	SAE	www.sae.edu
48	THAT Corporation	www.thatcorp.com
3	Yamaha Commercial Audio Systems, Inc	www.yamaha.com
45	Zaxcom, Inc.	www.zaxcom.com

Custom Reprints

ProAudio Review
Sound & Software Review for the Creative

Reprints are highly effective when you use them to:

- Develop direct-mail campaigns
- Provide product/service literature
- Create trade show materials
- Present information at conferences and seminars
- Train and educate key personnel, new employees
- Enhance media kits

For more information, contact Caroline Freehand at 703-852-4610 or fax 703-852-4583 • Email: cfreehand@nbmedia.com

Advertising Sales Representatives

Sales Manager/Eastern U.S.
Matt Rubenstein
mrubenstein@nbmedia.com
P/ 914-524-5045

Group Publisher
Margaret Sekelsky
msekelsky@nbmedia.com
P/ 516-641-0259

Western U.S.
Karen Godgart
kgodgart@nbmedia.com
P/ 323-868-5416

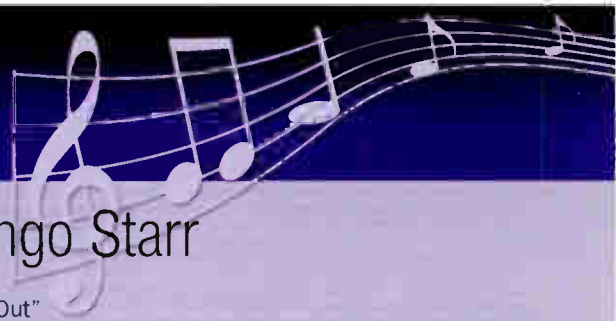
Midwestern U.S.
Tara Preston
tpreston@nbmedia.com
P/ 212-378-0456

Publisher/Global Sales
John Gatski
jgatski@nbmedia.com
P/ 703-852-4637

Japan
Eiji Yoshikawa
callems@world.odn.ne.jp
P/ +81-3-3327-5756

China, Hong Kong & Southern Asia/Pacific
Wengong Wang
wwg@imaschina.com
P/ +86-755-578-5161

Product Showcases & Classifieds
Tina Tharp
tinatharp1@aol.com
P/ 970-728-8376



“Fading In and Fading Out” | Ringo Starr



SINGLE: “Fading In And Fading Out”

ALBUM: 5.1: The Surround Sound Collection (Koch)

DATES: Recorded mid-2004 to early 2005 at Ringo Starr’s private studio in England; mixed 2007 at Bruce Sugar’s private studio in Hollywood, California

PRODUCERS: Ringo Starr and Mark Hudson

ENGINEER AND MIXER: Bruce Sugar

MASTERING: Chris Bellman at Bernie Grundman Mastering in Hollywood, California

SURROUND ENCODING: Steve Clarke and Dan Bir

Other Projects: Sugar has worked with artists such as Ozzy Osbourne, Buckcherry, Barry Manilow, Dave Koz, the Royal Philharmonic Orchestra, and many others.

SINGLE SONGWRITERS: Richard Starkey, Gary Burr, Mark Hudson

MIX CONSOLE/WORKSURFACE: Digidesign Control|24

RECORDER: Digidesign Pro Tools|HD

MIX MONITORS: JBL LSR 4328P mains and LSR4312SP subwoofer (5.1 configuration)

SELECT MICROPHONES: Sennheiser MD 421 (toms) and Neumann U87 pair (drum room)

SELECT TRACKING HARDWARE: Neve 1073 preamps, UREI 1176 compressors. Drawmer DS201 gates, Empirical Labs Distressors

SELECT SOFTWARE: WAVES surround plug-ins and Universal Audio UAD-1’s classic Neve emulations (mixing); Minnetonka AudioTools AWE, Minnetonka discWelder Chrome II, Minnetonka SurCode MLP SurCode DTS (encoding)

ENGINEER’S DIARY

The existence of Ringo Starr’s latest release — 5.1: The Surround Sound Collection — could be literally credited to engineer Bruce Sugar’s fairly recent, and very significant, equipment upgrade. “I had just purchased a JBL LSR 5.1 system for my Pro Tools|HD studio,” he recalls. “I had previously recorded Ringo’s last three albums, and I tried to apply one of those songs as test material. It came out very well, so I sent it to the record label with my idea to mix it in 5.1, and they went for it.”

5.1: The Surround Sound Collection is comprised of two albums’ worth of material — Ringorama and Choose Love — mixed for release on DVD-A. Its first song, “Fading In And Fading Out,” was tracked by Sugar at Starr’s private studio. “Tracking was done sort of old fashioned: no click,” he recalls. “For basic tracks, he’s playing with a bass player and two guitar players live, so it’s not a piece-meal thing, though there are a lot of overdubs. For Ringo’s drums, we used a lot of old Neve 1073 preamps with the same drum kit that he used on Abbey Road and Let It Be, his walnut kit with the original calfskin heads on the toms. They sounded great.”

According to Sugar, a key component of the “Fading In And Fading Out” surround mix was the vintage Neumann U87 pair used for drum room mics. “They are from the studio he had with John (Lennon),” notes Sugar. “On the 5.1 mix, I stuck them right in the back, which really balanced the drum kit. When Ringo first heard it, I think he was a little taken aback; he said, ‘I’m not used to hearing the hi-hat in the back!’”

In using his new JBL 5.1 monitoring system, Sugar treated each speaker democratically. “I’ve listened in a lot of home theaters, and a lot of material doesn’t treat the rear speakers as equals. I do. I figure that people have good surround systems to listen to the album with, and I had faith in my mastering engineer. I just went for it; I handed a mastered discrete 5.1 mix to the record label, who sent it off to Broadness, a New York-based DVD authoring company. This authoring technology is amazing; if more [record companies] offered packages like this, there might be less downloading.”



Bruce Sugar and Ringo Starr

Audio Tools™ AWE

Add AWE to your DAW.



Complete your workflow picture with AWE—Audio Workflow Engine.



DAW



AWE Hot Folder
Auto Processing



External
Processor



VST Plugin
Support



WAVE
AIFF



DAW



AWE Hot Folder
Auto Processing



mp3 Encoding



mp3



DAW



AWE Hot Folder
Auto Processing



SurCode
Encoders

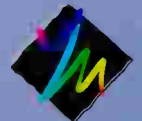


AC3
PLII
DTS

**SURCODE
FOR DOLBY E
COMING SOON!**

A background manager for us all.

"From high resolution sample rate conversion to simply cutting mp3's, AWE's unique ability to drop a file in a hot folder saves me lots of setup time. I can focus on my work while having the confidence that the files are being processed in the background exactly as I want them to be." *Bob Boyd
Ambient Digital, Houston*



**Minnetonka
Audio Software**

17113 Minnetonka Blvd., Suite 300
Minnetonka, MN 55345 U.S.A.
Phone: 1-952-449-6481
Fax: 1-952-449-0318
www.MinnetonkaAudio.com
MASI-Sales@MinnetonkaAudio.com



World Radio History



PERFECTING SOUND FOR OVER 30 YEARS.

Let the experts at Auralex design a FREE, customized treatment solution for you today!

Call us toll-free at 1-800-959-3343.

- Control Rooms
- Project Studios
- Radio & Television Studios
- Live Rooms
- Houses of Worship
- Stages/Live Performance
- Home Theater
- Vocal Booths

Auralex Acoustics is the industry leader in acoustical treatment products, including absorbers, diffusers, sound barriers, construction materials, isolation platforms and complete room treatment kits.



1-800-959-3343 | www.auralex.com | auralexinfo@auralex.com