New At NAMM:
Studio & Live P. 6 40

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New Bay Media

JANUARY 2009 | VOLUME 15 | ISSUE 1

ProAudio Review

The Review Resource for Sound Professionals

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- *PAR* **RECOMMENDS:** Options In Portable PA
- **SINGLE SLICE:** Brian Tarquin's "Blue Wind"
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CHINESE MIC IMPORTS
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Improved Components, Better Builds

HOUSE-OF-WORSHIP AUDIO
EVERYONE'S A SOUND MAN
Processing Opinions, Ideas, & Criticisms

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with Berliner, Brauner, JZ, Neumann, & Violet

reviews | AKG D 40 • Audio-Technica AT2050 • Fishman SoloAmp • LaChapell 583s & 583e MXL Microphones V88 • RMDigital D4 • Solid State Logic Mynx

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The People Behind The Bylines

Pro Audio Review has been blessed over the years with a host of stellar contributors. Beginning this issue, we'll devote a bit of space to the varied and storied careers of these contributors. First up is one of *PAR*'s most trusted voices, Russ Long; you'll find a snapshot of Russ' career in conjunction with his review of the McDSP Emerald Pack III (see page 24).

And while we're talking contributors, let's further introduce two individuals added to the *PAR* masthead in November. Bringing a keen eye for detail to his new *PAR* role as technical editor is Lynn Fuston, who now peruses each *PAR* review for accuracy and clarity. Lynn is a recording engineer and the owner of 3D Audio, a mixing facility near Nashville, TN. For the past 30 years, he has engineered records for some of the biggest names in Christian music, including Amy Grant, Michael W. Smith, DC Talk, Kathy Trocolli, and many more.

In the past few years, Lynn's name has become synonymous with gear shootouts. He has recorded comparisons of dozens of mic preamps, mics, and A/D converters and offered them on CD and now via download to listeners worldwide. Lynn's obsession with making these shootout discs as even-handed as humanly possible has earned him the respect of manufacturers and end-users alike. His Recording Forums at his 3daudioinc.com website have developed a community of engineers sharing in an open and low-flame environment. He also enjoys recording all over the world and has traveled to Samoa, Brazil, Jamaica, Cuba, Hawaii, and Ghana to record vocal groups.

Lynn Fuston

Rich Tozzoli

Helping extend and improve *PAR*'s coverage of audio software with his passion for the tools of the trade is Rich Tozzoli as software editor. A guitar slinger, Rich set up a personal studio beginning with hardware and evolved his chops alongside available tools into sequencing and DAW-based recording. Working with guitarist Al DiMeola in the studio and on the road (an ongoing relationship) led to work with other notables such as David Bowie, Blue Oyster Cult, Hall & Oates, Ace Frehley, Foghat, and many others. In addition to producing, mixing, and recording, he studies orchestration and composition. His music has been heard on broadcast outlets including Fox NFL, Discovery Channel, Nickelodeon, and Animal Planet, and in major films. He partnered with Gizmo Enterprises in New York to set up one of the first 5.1 post-production rooms for music. He has contributed to *Surround Professional*, *Pro Sound News*, *EQ*, and numerous other industry titles.

We are confident that you will appreciate both Lynn's and Rich's contributions to *PAR* as much as we appreciate working with them.

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The Review Resource for Sound Professionals

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EDITORIAL
Frank Wells, Editorial Director
615-848-1769, fwells@nbmedia.com

Strother Bullins, Reviews And Features Editor
336-703-9932, strotherPAR@earthlink.net

Fred Goodman, Managing Editor
212-378-0423, fgoodman@nbmedia.com

Christopher Walsh, Associate Editor
212-378-0437, cwalsh@nbmedia.com

Lynn Fuston, Technical Editor

Rich Tozzoli, Software Editor

Bruce Bartlett, Dr. Frederick Bashour, Ty Ford, Carlos Garza, Will James, Tom Jung, Bascom H. King, Russ Long, Steve Murphy, Alex Oana, Randy Poole, Mike Rivers, David Rittenhouse, Richard Alan Salz, Alan Silverman, Rob Tavaglione, Dan Wothke, Tom Young
Contributors

ADVERTISING
Tara Preston, Associate Publisher
917-331-8904, tpreston@nbmedia.Com
Karen Godgart, Sales Director, West Coast Office
323-868-5416, kgodgart@nbmedia.Com
Matt Rubenstein, East Coast Sales
914-524-5045, mrubenstein@nbmedia.Com
Zahra Majma, Specialty Sales Manager
212-378-0433, zmajma@nbmedia.Com

ART & PRODUCTION
Annmarie LaScala, Art Director
Fred Vega, Production Manager
212-378-0445, fvega@nbmedia.com

CIRCULATION
Anne Drobish, Associate Circulation Director, Audience Development
Michele Fonville, Circulation Coordinator
Subscriptions: Pro Audio Review, www.MyPARmag.com
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Fax: 978-671-0460
E-Mail: Newbay@Computerfulfillment.Com

NEWBAY MEDIA AUDIO GROUP
John Pledger, Vice President/Group Publishing Director
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Ashley Vermillion, Web Production Specialist
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Administrative, Advertising, & Editorial Offices
810 Seventh Ave., 27th floor
New York, NY 10019
TEL: (212) 378-0400
FAX: (212) 378-0435
E-MAIL: pro@nbmedia.com

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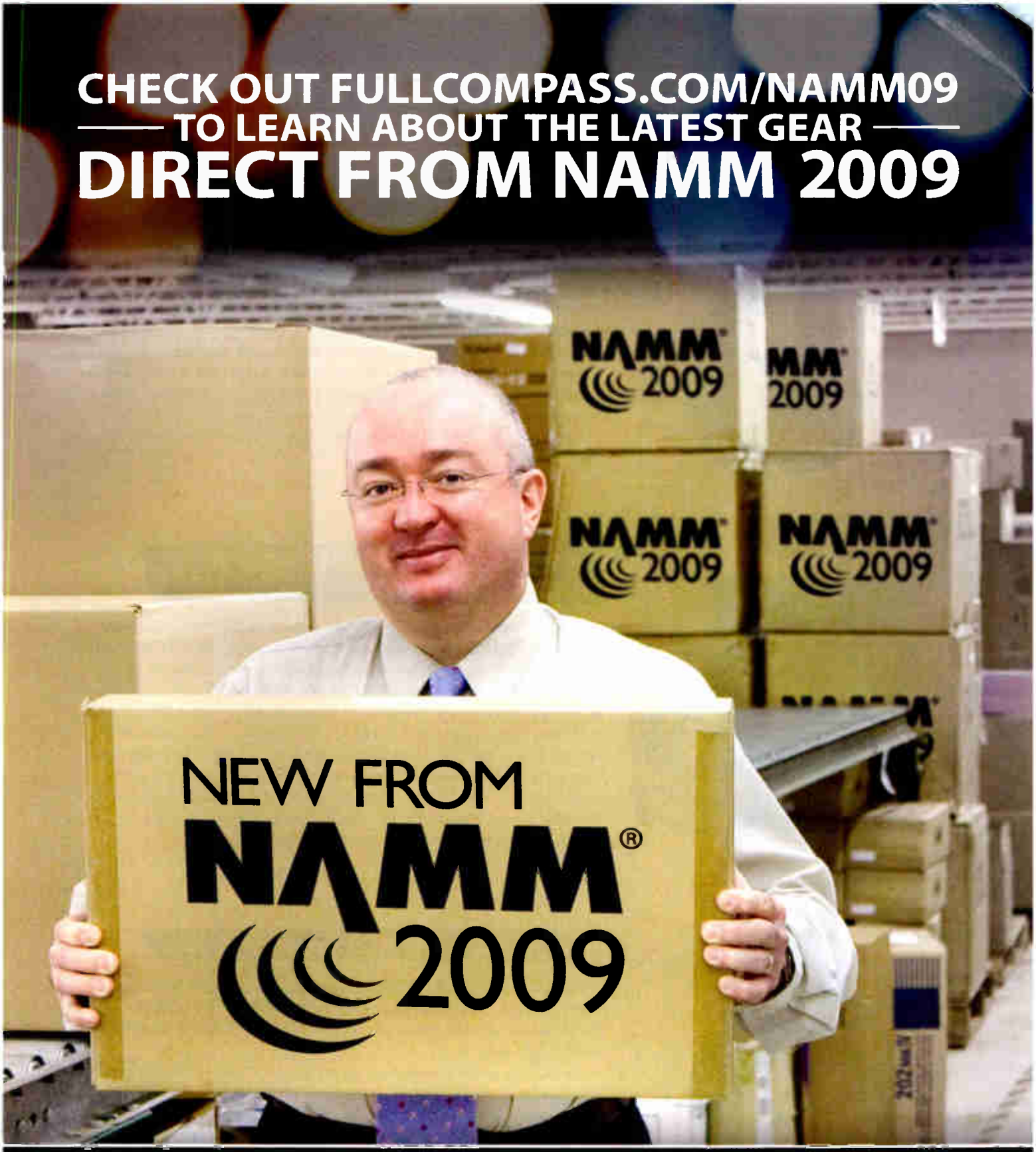

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Audio-Technica ATH-M35 Monitor Headphones

Audio-Technica has introduced its ATH-M35 dynamic stereo monitor headphones. Employing the company's latest transducer technology, the ATH-M35's key features include a foldable design for storage and a storage pouch. The phones are targeted for professional studio and home recording use and more portable situations, such as live sound, broadcast audio-for-video and field recording.

The ATH-M35 employs a low-profile, closed-back design, with a neodymium magnet structure and a frequency response of 20-20,000 Hz. In addition, it features a gold-plated, stereo, 1/8-inch (3.5mm) connector with strain relief and professional screw-on 1/4-inch (6.3mm) adapter, and an 11-foot (3.4m) cable with single-side exit.

Price: $139

Contact: Audio-Technica • www.audio-technica.com

Avantone BV-1 Multi-Pattern Tube Microphone

Debuting at NAMM will be Avantone's new flagship multi-pattern tube microphone, the BV-1. According to the company, the BV-1 is designed and assembled in Southern California as an affordable "boutique" microphone that "rivals any vintage microphone" on the market. Features include: 35mm dual capsule assembly with a 6-micron membrane; a low-noise, hand-selected 6072A tube; premium grade capacitors and resistors; a "retro" butter-cream colored finish with polished nickel trim; a vintage-style power supply with 9 selectable patterns; custom nickel-plated pop filter; custom shock mount; a 15-foot Gotham GAC-7 custom mic cable with premium Switchcraft XLR connectors; and a padded and lined wooden mic box. The BV-1 package comes complete in an attractive tweed/faux alligator leather carrying case.

Price: $999

Contact: Avantone • www.avantelectronics.com

Sennheiser HD 800 Headphones

Sennheiser has debuted its HD 800 headphones. This audiophile model is said to offer "brilliant sound imaging and impressive spatiality" through the use of a 56mm sound transducer and an ear-cup design that directs sound waves to the ear at a slight angle.

The vibrating part of the diaphragm is not a circular surface area but a ring, which is able to set the entire air volume over the transducer into motion. This annular design, patented by Sennheiser, reportedly solves the problems relating to dynamic transducer principles.

Price: $1,399

Contact: Sennheiser • www.sennheiserusa.com

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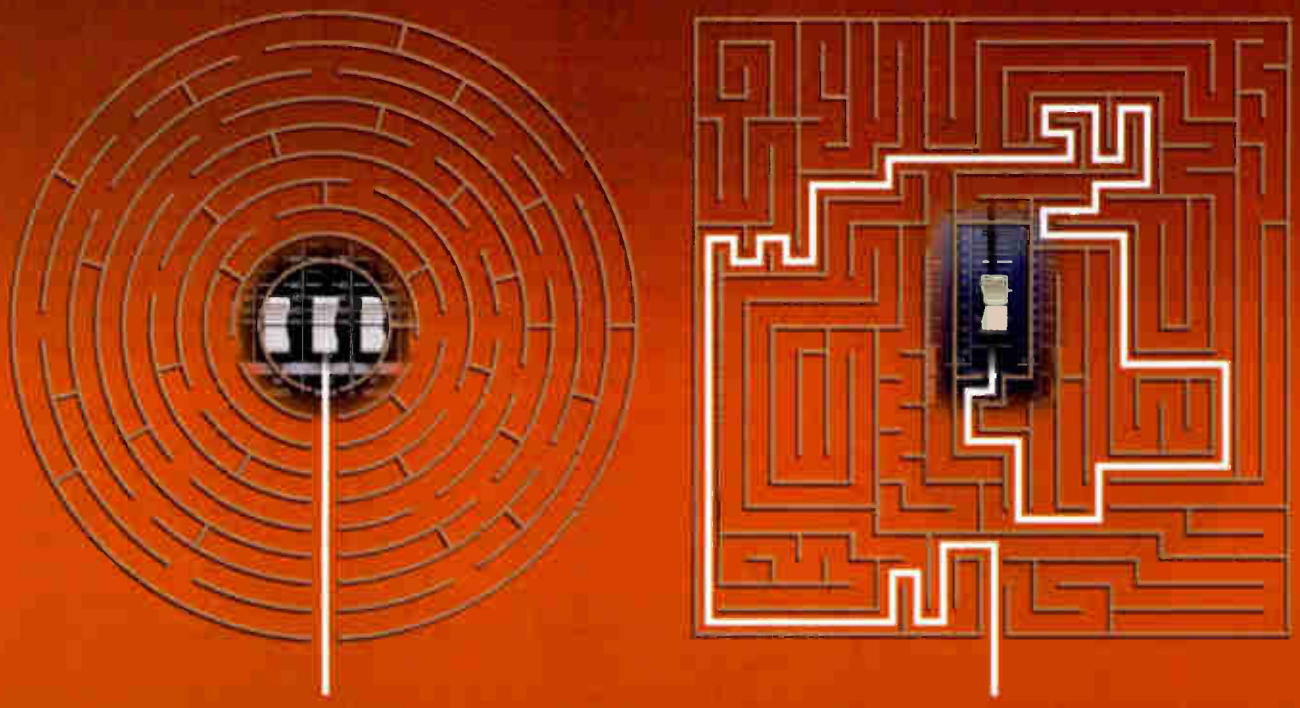

easy meets hard.

Easy to use. Easy to learn. Hard to beat.

No one even comes close. Yamaha's LS9 offers 16 or 32 channels, recallable head amps, a virtual effects rack, an abundance of EQ, 300 scene memories, an MP3 recorder/player and more. All this comes simply in an affordable console that tops the charts in the digital world. So when we say hard, we're not talking about our console, we're talking to our competition.

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Primacoustic Machine Room Computer Silencer

Primacoustic's Machine Room is a compact enclosure designed to quiet down computers for recording studios. It combines natural energy flow with forced air by providing the cool air intake at the bottom and allowing the hot air to rise and exit at the top. This is supplemented with a variable speed fan that "sucks" the warm air out from the top and forces it through a foam-lined manifold to ensure exit fan turbulence noise is subdued.

Both the filtered intake vent and outtake port are positioned at the rear of the enclosure to minimize noise in the front working zone. A full-view front window with an access door allows the user to access the computer quickly. A foam-rubber surround seal and positive latch ensures the door will close tight. To reduce inner reflections, the side walls of the Machine Room are treated with high-density, open-cell foam which is embedded with a fire retardant to meet the C-117 safety specification. The variable-speed fan and optional thermometer provide the user with control over airflow and desired cooling level.

Price: $649

Contact: Primacoustic • www.primacoustic.com

Waves Audio Center Processor

Waves Audio has introduced its Waves Center, a processor that is said to separate phantom center audio from side (L/R panned) content. Targeted for final mixes and mastering, Center lets users zero in on the phantom center and bring out or bring down the vocals without affecting everything else. Center reportedly allows users to reposition, isolate, and eliminate elements of a mix.

Utilizing an engine that considers the amplitude, frequency and time envelope of stereo sources, Center reportedly gives users the power to radically rebalance their spatial imagery. Adjustable punch, high- and low-frequency controls let users enhance detail with maximum impact.

Price: $400 Native, $800 TDM

Contact: Waves Audio • www.waves.com

TC Electronic Level Pilot Monitor Control

TC Electronic has debuted Level Pilot, a high-resolution volume solution that aims to fit into any active speaker setup with a minimum of clutter and wires. It is an analog, stereo volume control that works independently of the computer or audio interface, so users have control over their volume levels in all situations and at all times.

According to the company, Level Pilot features a compact design that fits into any active desktop (or even live setup) without the need for an extra power supply, and employs quad-core cabling to minimize untidy cabling.

Price: $119

Contact: TC Electronic • www.tcelectronic.com

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A5

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www.adam-audio.com

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Furman Prestige Series Power Conditioners, Voltage Regulators

Furman Sound has unveiled its new Prestige Series for AV professionals with the P-1800 PF R power conditioner, P-1800 AR voltage regulator, and P-1400 AR E export voltage regulator.

A successor to Furman's PF-Pro R, the P-1800 PF R has been engineered specifically for musicians and utilizes the company's Power Factor and Clear Tone technologies. The P-1800 AR (pictured) succeeds Furman's AR-15 II voltage regulator, providing 120 V output (±5 V) from input voltages ranging from 97 V to 137 V AC. The P-1400 AR E provides the same technology of the P-1800 AR to overseas markets, offering voltage output (selectable between 220 V and 240 V), IEC outlets and detachable Shucko power cord.

Prices: $599, $999, and $1,100
(P-1800 PF R, P-1800 AR, and P-1400 AR E, respectively)
Contact: Furman Sound • www.furmansound.com

Novation Plug-in FX Suite

Novation has unveiled its first independent collection of VST/AU plug-ins, the Plug-in Suite. It is said to provide five effects from Novation's synth heritage, including signature effects derived from the SuperNova II. The VST/AU plug-ins include Chorus, Delay, Tremolo, Phaser and the filter featuring overdrive.

The filter also features a "Q-Norm" dial, a resonance normalizer that reportedly reduces the signal level in relation to the resonance level, mimicking filters like those found on Moog and Oberheim synthesisers, or the Roland TB303.

Price: TBA
Contact: Novation •
www.novationmusic.com

Solid State Logic AWS 900+ SE Console

Solid State Logic has revamped its AWS 900+ SE console. The upgraded feature set includes the MIDI over Ethernet system introduced in 2008 with the company's Matrix console. MIDI over

Price: $77,900
Contact: Solid State Logic
www.solid-state-logic.com

AWS 900+ SE also includes SSL's Logictivity browser software, a DAW host computer-based project management browser application, which was originally introduced on Duality.

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Radial H-Amp Headphone Amp

According to the company, Radial Engineering's H-Amp is not really an amplifier, but a headphone device that takes any amplified signal and coverts it so that it can be monitored through headphones. A typical live stage application would be to take a feed from a passive stage wedge monitor to feed headphones for the drummer. In the studio, one could take the output from a power amplifier and feed a host of headphones.

Features include a Neutrik Speakon input connector, headphone impedance range select, lo-cut filter, tone control and headphone volume control. Choice of mono 1/4-inch TRS out for standard headphones and mini 3.5mm jack for ear buds. As with all Radial products, the H-Amp is housed in a 14-gauge welded I-beam steel enclosure for durability. The bookend design reportedly provides a protective zone around the switches and knobs while the full-bottom no-slip pad assures plenty of "stay-put" while providing mechanical and electrical isolation.

Price: $220

Contact: Radial Engineering • www.radialeng.com

McDSP Retro Pack Plug-in Line

McDSP has presented its Retro Pack plug-in line, which includes the 4020 Retro EQ, the 4030 Retro compressor and the 4040 Retro limiter.

The 4020 Retro EQ is a 4-band EQ and complementary filter set. The HF and LF bands are shelving EQ, with two additional parametric EQs at the HMF and LMF bands. The 4030 Retro compressor is a range-control topology coupled with a wet/dry mix control to balance compressed and uncompressed signals. The 4040 Retro limiter combines a look-ahead brick-wall limiter function with several subjective treatments to, according to the company, "make the limiting action subtle, and yet vintage."

Prices: $995 HD, $495 Native

Contact: McDSP • www.mcdsp.com

Alesis ProTrack Digital Recorder

Alesis has introduced ProTrack, a handheld digital stereo recorder for iPod. It provides direct-to-iPod stereo digital recording to iPod in a portable, handheld form factor. ProTrack's design integrates the iPod into the recorder, with included sleds to securely mount supported iPod models to the recorder.

Two high-quality condenser microphones are built-in, fixed in XY stereo configuration for field recording (44.1 kHz/16-bit max resolution). ProTrack also offers users a pair of combination XLR or 1/4-inch inputs 48V phantom power so that it can power condenser microphones.

Price: $199
Contact: Alesis
www.alesis.com

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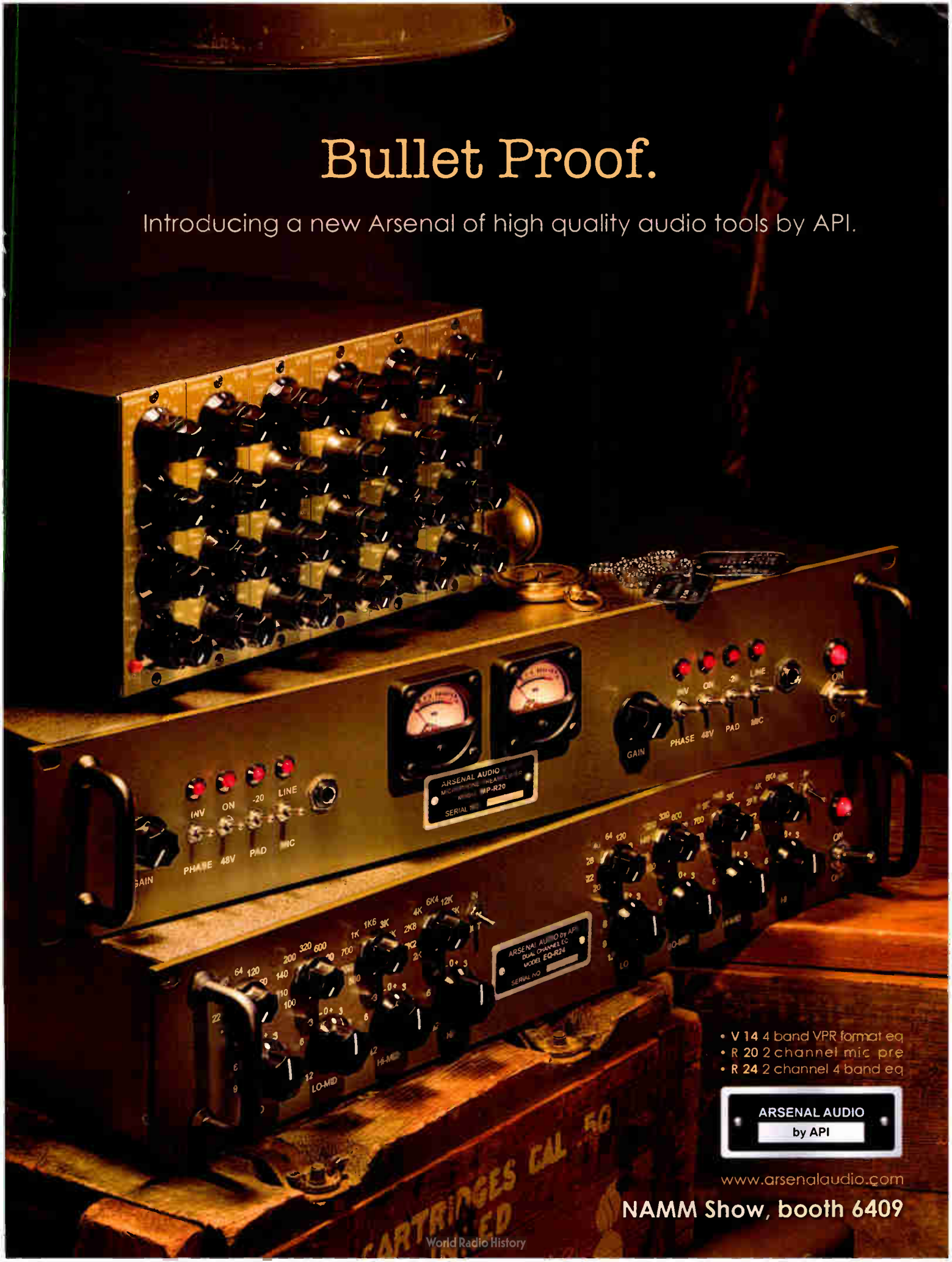

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new at namm: studio

Behringer U-CONTROL UMA25S Keyboard Controller

Behringer's U-CONTROL UMA25S keyboard controller combines a MIDI controller with onboard USB audio interface and complete software package aimed at the personal-production market.

A total of 25 velocity-sensitive keys and continuous controllers offer performance control. The onboard USB audio interface accepts mic or line signals; headphones with boom microphone included. The UMA25S operates on DC, battery or USB power. In addition, it ships with energy/XT2 compact Behringer Edition DAW software plus more than 100 plug-ins. An ultra-low latency ASIO driver compatible with Mac or PC (Windows XP and Vista) is also provided.

Price: $149

Contact: Behringer • www.behringer.com

JBL LSR2300 Series Studio Monitors

JBL Professional has introduced its LSR2300 Series studio monitor system. The series includes the LSR2328P biamplified 8-inch studio monitor; the LSR2315P biamplified 5-inch studio monitor; the LSR2310SP powered, 10-inch studio subwoofer; and the MSC1 monitor system controller with RMC (Room Mode Correction).

In developing the LSR2300 Series, JBL applied the same Linear Spatial Reference criteria used in the design of its LSR6300 and LSR4300 series. Linear Spatial Reference design criteria requires 72 measurements, reportedly yielding more than 1,200 times more data, enabling the company to engineer a system that produces neutral frequency response at the mix position.

Price: TBA

Contact: JBL Professional • www.jblpro.com

Audio Impressions DVZ Strings 2.0

Audio Impressions has released a new version of its virtual-instrument, high-definition, 70-piece DVZ Strings 2.0 sample library. DVZ Strings 2.0 reportedly allows users to produce the real-world balance of live musicians in real time without loading or unloading different samples. It is organized into sections that translate directly to MIDI mockups as well as immediately playable scores with parts that the company points out "don't need exhaustive manual correction and annotation for articulations."

Enhancements in the latest version include re-mastered Strings; microtonal scaling for world music, key-switching options, three Decca Tree room mic selections, individual stereo outputs for each string section and AudioPort — a digital audio over LAN process which links PCs to Mac, eliminating the need for soundcards.

Price: TBA

Contact: Audio Impressions • www.audioimpressions.com

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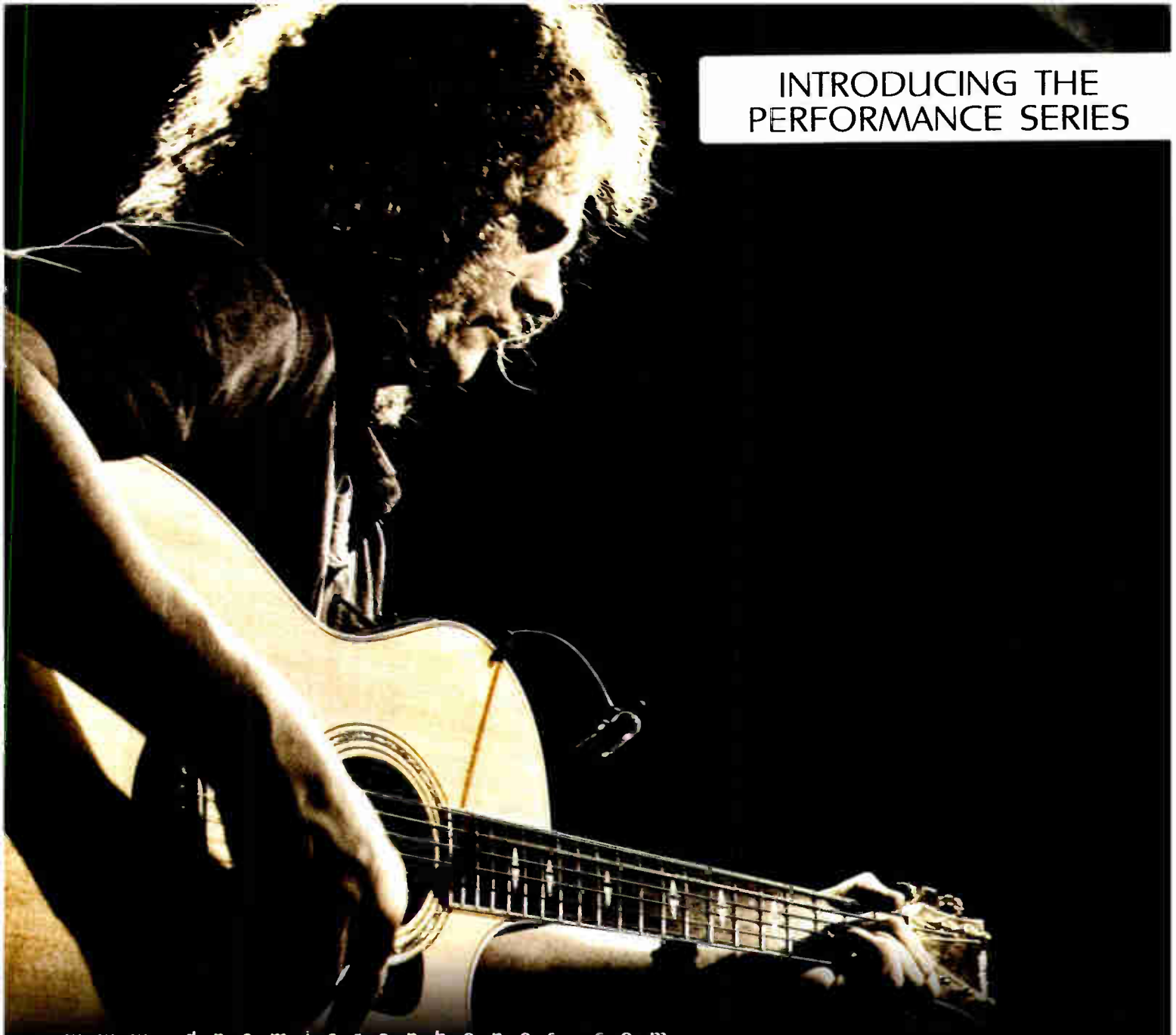

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4099 SERIES

Representing years of research and development, the 4099 series of condenser microphones feature supercardioid polar patterns for superior gain-before-feedback. Fully capable of handling extremely high SPLs, – particularly important for trumpet players – these microphones live up to their pedigree with sound as accurate as DPA's other world-class microphones.

The 4099 Guitar, 4099 Sax, 4099 Trumpet and 4099 Violin are multipurpose microphones. The mounts for the 4099's are meticulously designed and optimized for each of the four instrument families, ensuring that the finest possible audio reinforcement is achieved when performing live.

The microphones for professionals with uncompromising demands for musical accuracy.

DPA MICROPHONES

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On Chinese Microphones — Phase Two

In the late 1990s, phase one of sea change in microphone manufacturing began; an army of Chinese-manufactured models began flooding the American pro audio market. This explosion of imports with overwhelming sales numbers was due largely to a single factor: They were incredibly inexpensive. "I can't believe they're so cheap: a copy of a $10,000 AKG C 12 for $300? Can I buy a dozen?"

Yet unfortunately, the savings euphoria was followed by a disappointing realization for many buyers: "Well, no wonder they're so cheap. They don't sound that great."

Today, we enter phase two of Chinese mic imports, where mic makers from around the world are utilizing the best that China offers while avoiding the problems that became associated with Chinese mics, By using varying percentages of Chinese parts, labor, and design along with other global contributions, some mic makers are offering enhanced products at extremely competitive prices. Below are three examples of companies who are doing that.

Mojave Audio

One early mic manufacturing innovator, David Royer of Royer Labs, founded Mojave Audio back in 1985. In 2000, David recognized the strengths and weaknesses of Chinese designs and began offering kits for modifying purely Chinese mics. The next logical step was making a mic using Chinese diaphragms and metal work with his electronics design.

According to Dusty Wakeman of Mojave Audio, "The problem with the Chinese mics was the electronics." The solution was using many American parts and Chinese assembly. "Our mics use Jensen tranformers, American NOS tubes, custom military-grade FETs, and resistors." When asked about sourcing parts from China, Dusty says, "Occasionally, we will get some parts from China to check out, but we've never seen a decent transformer come out of China — not one that is to David's specs."

Mojave parts are sent from the U.S. to China, where the mics are assembled, then returned to Mojave for final inspection; listening evaluations are conducted by David Royer for every Mojave mic.

What is the advantage to this manufacturing technique? Pricing. The same mic built in the U.S. would probably cost twice as much. What about the lingering stigmas surrounding Chinese mic manufacturing in regard to sound? According to Dusty, "Once people listen to the microphones, that ends that."

Cascade Microphones

Cascade is a U.S. company using Chines.e "bones" to build its products. Cascade's early success with the well-accepted Fat Head ribbon microphone encouraged owner Michael Chiriac to "up the ante" and offer a modified ribbon he calls the Gomez-Michael Joly Edition. This mic uses design improvements specified by Michael Joly, a mic "improver" with a lengthy track record. Arriving as a set of Chinese parts, it is assembled in the U.S. incorporating a Swedish Lundahl transformer and a host of American components: PC board, connectors, wire, and solder. Performance testing and certification is all handled in the U.S. These changes result in a mic that outperforms its Chinese brethren. What's the financial premium? It's 2.5 times the price of the Fat Head. Cascade's newest mic, the RCA-looking C77, is also assembled in the US.

The bargain-priced Cascade Fat Head II ribbon microphone – reviewed in *PAR* June 2008 – is comprised of Chinese components, yet carefully tested, tweaked, and approved at the company's Olympia, WA-based laboratory.

Advanced Audio Microphones

This Canadian company takes a different approach. Owner Dave Thomas uses Chinese parts, but the mics feature major modifications to overcome limitations in some Chinese designs. Changes include different tubes, different transformers, different coupling caps, and, in some models, he specifies different diaphragm thicknesses and modifies the gain structure to provide more headroom. Though all the parts are sourced in China, the basic components are tested and approved by him before they are used in the mics. All these modifications net big improvements to the sound while other insignificant cosmetic changes are avoided to keep costs down. Assembling them in China helps keep costs down, too. "The workers in China are faster and do just as good a job of soldering as me — for a lot less money."

PAR technical editor Lynn Fuston is the founder of 3D Audio, Inc. www.3daudioinc.com

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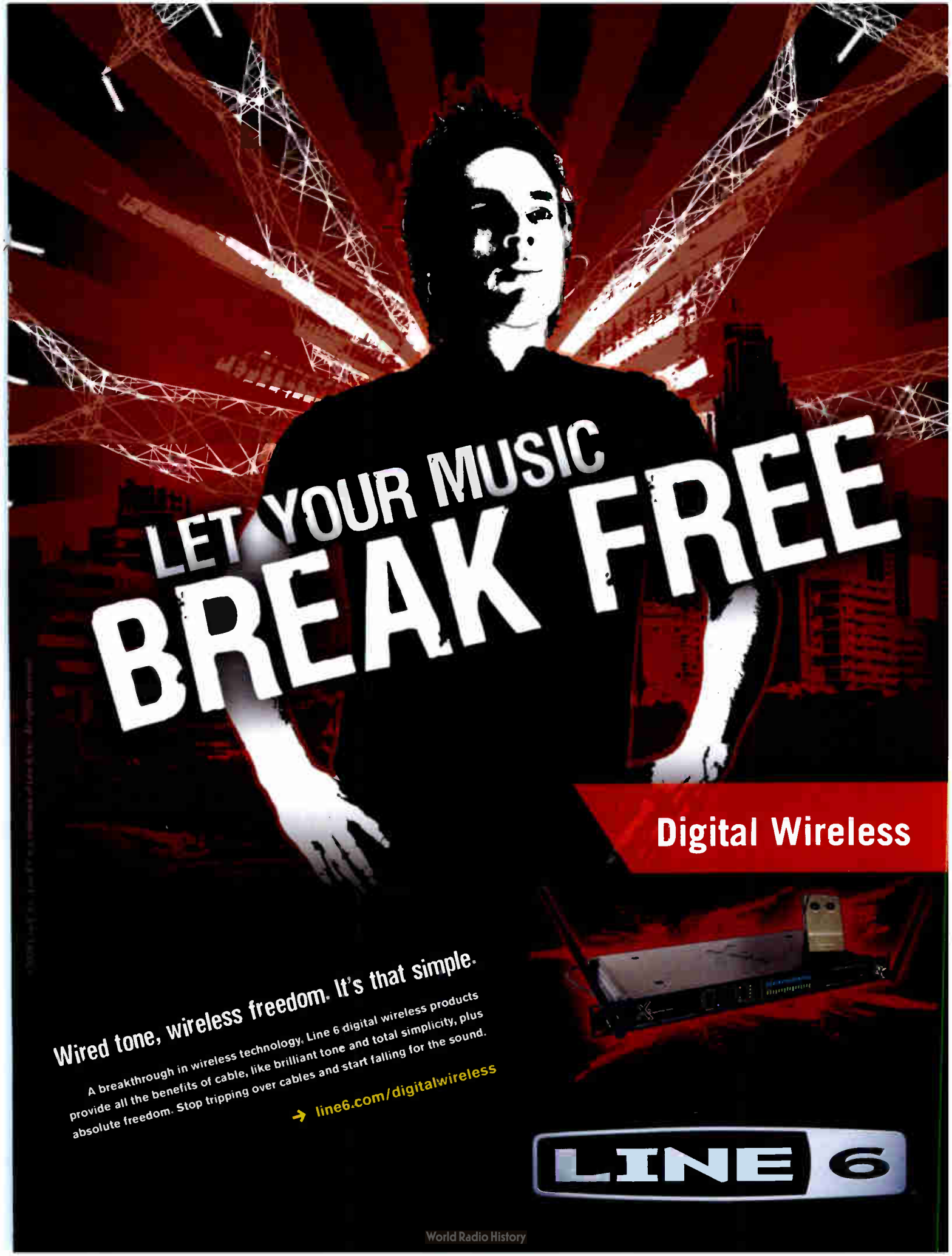

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Singer/Songwriter Neil Jackson in a live solo acoustic session

ROB TAVAGLIONE

A *PAR* SESSION TRIAL:

Large-Diaphragm Condensers

Our first installment in a new review series features five select large-diaphragm condensers — five proven performers for *PAR* reviewers in '08

The "large-diaphragm condenser" class of 2008 was loaded with gorgeous and innovative contenders, and we here at *PAR* would like to revisit the top five "LDCs" we reviewed to compare them in close proximity. Note that this is the first installment of our new Session Review series –not a clinical "shootout," per se, but parallel testing and evaluation to seek the best applications for these proven winners and suggest their comparative strengths in the real world.

by Rob Tavaglione

With the enlistment of some great local clients, The Lights Fluorescent (a talented group with a couple of engineers for members), we configured our usual tracking setup. Then we began adding our test subjects to the setup, finding where each mic improved upon (or detracted from) our "baseline." The results were sometimes sur-

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

World Radio History

prising and hugely informative, providing comparative info that is very hard to find under average (i.e., rushed) studio conditions.

Large-Diaphragm Condensers in a *PAR* Session Trial

MIC PREAMPLIFIERS: Neve 4081, Manley TNT, Earthworks 1024, Sytek MPX and True Precision 8

BASIC RIG: Soundcraft Ghost analog mixing console with Digital Performer 5.12 DAW clocked by Lucid Gen X6-96 and monitoring via JBL LSR4328 with LSR4312 subwoofer

Neumann TLM 67

The TLM 67 ($3,858 list) offers the K67 capsule, three patterns, -10 dB pad, an EA 87 suspension mount, and case. Its big, warm sound screamed U 67, even without a tube present. Ty Ford's original review [*PAR* October 08] proved to be extremely accurate, as we both found the 67 to have an unhyped bottom end, smooth mids and a classic, comparatively understated top end. This top end was extended, but never strident or brittle. There was a bump in the low mid response that proved to define the character of this mic; somewhere around 300 Hz, this bump was sometimes essential and other times detrimental.

The 67 excelled in drum-kit reproduction with a punch in the lows, without tubbiness and with a smoothness of highs that needed no EQ (highly recommended for overheads or room mics). Electric guitar was very nice and smooth, but that low-mid bump often needed subtractive EQ; it is good for jazz or clean tones, not so good for heavy distortion or "carved out mids" type tracks.

This mid bump was interesting on bass guitar, but only for bass lines that required lots of mid definition. Vocals were similarly hit or miss. For these sessions, that low-mid bump made nasal vocal qualities unbearable, but provided some thickness and body to our female vocals — a highly recommended app.

Neumann TLM 67

JZ Black Hole BH-1

The BH-1 multi-pattern condenser ($2,295 list) has some very interesting design qualities, with the rectangular hole in its center being the most obvious. The provided shockmount is attractive, but not as effective as hoped. *PAR* reviewer Russ Long had success with it [*PAR* July 08], but its use perplexed me. I never could get the mic to sit still, as minor movement jarred it out of position and the windscreen made the ensemble top-heavy and unstable.

In our sessions, the Black Hole BH-1 offered a lean bottom end and aggressive top. This frequency response was too crisp for drums, with sizzling highs and insufficient bottom. This tonality worked better for electric guitar amp and was very nice on detailed acoustic guitar work. We were most surprised with the BH-1 on bass guitar amp; its lean bottom allowed the perfect definition of low notes without muddiness or boom with great high string detail — a very modern, aggressive bass sound.

JZ Black Hole BH-1

Vocals with the BH-1 proved to be a matter of taste. Here, its aggressive top was simply overbearing to me (on either men or women), although if you like sibilance and pronounced definition for stylistically engineered vocal sounds, you may justifiably feel otherwise. In omni, the BH-1's qualities all became positive on a group backup vocal track with its great detail and room air.

Violet Flamingo ME

The Flamingo ME ($6,990 list) is eye-catching, yes, but it was the ear-shaped diaphragm and its "vented" gold sputtering that intrigued us. Cardioid only (its sole drawback), the ME has an inviting sound with a full and accurate bottom, smooth velvety top and a touch of low-mid emphasis. This response emphasized snare and toms, while taming cymbals and rounding out transients: It was beautiful.

The ME performed predictably on guitar amp, although you'll probably need some EQ to add top and carve those low mids a

World Radio History

Violet Flamingo ME

bit. Same thing goes for bass guitar, where the 200 Hz emphasis may help or hinder you. In our original review, Russ Long loved the ME on male and female vocals [*PAR* January 08], and I completely agree. It may be too dark for basses or mumblers, but the ME's tube and transformer precisely tamed harsh consonants and aggressive rock yells yet maintained definition — all this without a touch of unwanted sibilance.

Brauner VMA

One of the costliest microphones we have recently reviewed [*PAR* March 08], expectations were understandably high for the Brauner VMA [$9,719 list]. It is gorgeous in its craftsmanship, most notably in the cylindrical windscreen, allowing up-close singing for groups in omni or duos in figure eight. The power supply of the VMA was particularly nice with patterns of cardioid, wide cardioid, hyper-cardioid, figure eight, and omni — all continuously variable. The VMA employs the capsule/electronics of the original VM1 alongside a second capsule [not just filters] for a "classic" mode with conservative top end and vintage tonality. Essentially, it is two microphones sharing a body; as a result, its versatility significantly softens the blow of the price.

Across all tests conducted, the VMA was either our top choice or very close to it. The reason? It offered a palpable sense of realism to its tracks, very accurate and extremely nuanced. This lack of color allowed faithful reproduction of most any source placed before it. Bass response was very extended, but without hype or emphasis bumps; this made the VMA my top choice for bass guitar amp. Drums via VMA were faithful and accurate, with quick transients and no discernible distortion. Vocalists of all varieties should find success with the VMA; its neutral flexibility allows a variety of vocal sounds with some minor EQ. The only app that didn't immediately impress us was on electric guitar, where the VMA exposed some undesirable traits in our guitar setup. Matched with the right rig, I'm sure the VMA could excel.

Brauner VMA

But the VMA "classic" mode, you ask? Yes, it is distinct, and very desirable. With its thicker bottom and sculpted, musical top, I loved this mode for lead vocals and "normal" mode for BGVs.

Berliner U77

Unfortunately, the U77 [$3,495 list] didn't make it into session evaluation in time for initial drum, bass, and guitar tracking. Such a shame, as personal testing revealed an extremely musical mic that was simultaneously very flattering and yet very naturally accurate on most any source. Although its classic "big 3" patterns make it versatile enough for many instrument apps, I'm in love with this mic for vocals. Like the Flamingo ME, original reviewer Dan Wothke [*PAR* June 08] found the U77 very desirable for both men and women vocalists; that's a rare quality, and I strongly support Dan's findings. Lead, BGV, or group, loud or

Berliner U77

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tender: The U77 shines in most vocal situations.

The U77 is also a first pick for acoustic instruments. Its inherent balance, natural transients and ever-so-slight high-frequency emphasis worked nicely on acoustic guitar, piano, or most any natural source where realism is your goal.

On VO Work

I did some commercial spots with male voiceover artist Charles Curcio and found something likable about all five of our mics. Ultimately, we chose the Neumann TLM 67 for its smooth, yet articulate top end, with minimized sibilance problems. Low frequencies were flattering without any undue girth while plosives were never an issue, even at really loud levels.

The Brauner VMA in classic mode was our second choice for this VO session; it was wonderfully detailed and natural, if ever so slightly strident on hard consonants. The Berliner U77 was

L to R: JZ Black Hole BH-1, Berliner U77, Neumann TLM 67, Violet Flamingo ME, Brauner VMA

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"Results were sometimes surprising and hugely informative, providing comparative info that is very hard to find under average (i.e., rushed) studio conditions."

nearly as likable as the TLM 67, except for a little missing "chestiness." I must say, however, that the U77 would be my "best-all-around" choice if I could buy only one mic for all VO work. The Flamingo ME was very warm and supple; I would prefer it with female voice artists. The Black Hole BH-1 had the most top end of any mic tested here — great for definition on deeper voices, but too sensitive to plosives in cardioid. Even with two pop screens employed, we had to switch to omni to get suitable results.

Singer/Songwriter Sessions

With this collection, I also knocked out (live) singer/songwriter sessions and predictably got some great tracks. The performer, Neil Jackson, sings loudly with an edgy quality, and the Flamingo ME was the ideal transducer for its rounding qualities. The original mode from the VMA was our primary choice for acoustic guitar (with its welcomed linearity), coupled with either the U77 or the Black Hole BH-1 for some exciting sizzle. With the TLM 67 picking up room ambience, the result was slightly enhanced reality without a dreadful DI anywhere in sight.

Evaluation's End

Here, the top performer overall was the Brauner VMA for its incredible accuracy, "dual mic" flexibility, and supreme package of accessories. Russ Long gushed about the VMA, calling it "stunning," and I definitively agree. The Violet Flamingo ME was an unexpected favorite with smooth reproduction and a sonic quality geared for the environment of digital recording. The Neumann TLM 67 was very impressive, with its own smooth sonics and a lack of harshness, although its mid bump proved to be problematic in some apps. The Berliner U77 offered the most overall flexibility and was simply stellar on vocals and acoustic instruments. Finally, the JZ Black Hole BH-1 is an extremely desirable transducer hindered only by a questionable shockmount and an overstated top end, which many may find more desirable than I do.

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McDSP TDM Emerald Pack III

McDSP's comprehensive plug-in bundle provides high-quality effects and features at a comparatively low price.

The TDM Emerald Pack III is McDSP's "everything bundle" that includes all of their plug-ins. I've been using McDSP plug-ins almost as long as I've been using Pro Tools, and I use them on every one of my mixes. I was initially attracted to McDSP because of their low system requirements, but I fell in love with them because of their stellar sound.

DE 555 de-esser plug-in

Features

Emerald Pack includes a dozen killer plug-ins, a pre-programmed McDSP green iLok, and a printed manual. Included are Analog Channel, Channel G, Chrome Tone, CompressorBank, DE555, FilterBank, FutzBox, MC2000, ML4000, NF575, Revolver, and Synthesizer One. The bundle supports Mac OS 10.4.x (Tiger), 10.5.x (Leopard), and Windows XP. [According to McDSP, Vista support is confirmed on all but Revolver for Emerald Pack III versions now shipping. Revolver Vista support is on its way — late Q1 2009. — Ed.] Except for Chrome Tone and Synthesizer One, all of the plug-ins support the Digidesign VENUE D-SHOW systems.

Analog Channel consists of two plug-ins, AC1, which emulates analog channel amplifier circuits; and AC2, which emulates analog tape machines. AC1 operates as a digital preamp, allowing even excessive amounts of gain without digital distortion. AC2 emulates recording to an analog tape machine allowing the control of standard tape machine parameters such as bias, playback speed, and IEC1/2 equalization, as well as controls beyond the limits of the real world, including adjustable low-frequency roll-off and head-bump (independent of playback speed).

Channel G is a channel strip plug-in that provides the sound of a classic large-format console. It consists of four plug-ins: G Dynamics (a console-style dynamics section with an Expander/Gate, Compressor/Limiter and a flexible filter section), G Equalizer (a five-band console style EQ with a flexible filter sec-

Russ Long, a Nashville-based producer/engineer, owns the Carport recording studio. He is a regular contributor to *Pro Audio Review*. www.russlong.ws

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"In contrast to the industry norm, McDSP never charges customers for plug-in upgrades. It's always nice to use a product whose manufacturer thinks of its customers first."

tion), G Console (a combination of the G Dynamics and G Equalizer configurations) and G Surround Compressor (a multichannel Compressor/ Limiter configured to work in surround situations).

Chrome Tone is a virtual guitar rig that combines a collection of custom guitar amps, boutique outboard gear and pedal effects. It includes five plug-ins: Amp (guitar amp modeling), Wah (multi-mode filters configured as traditional "wah" effects), Chorus (frequency-modulation effects), Trem (volume-modulation effects), and Stack (a combination of Amp, Wah, Chorus, and Trem effects, plus tape delay).

CompressorBank is a compressor plug-in that emulates the sound of both vintage and modern compressors. It includes four plug-ins: CB1 is a basic compression plug-in, CB2 provides compression with pre-filtering, CB3 includes compression with pre-filtering and static/ dynamic EQ, and CB4 provides emulations of six of the world's most popular compressors including Opto-C (Teletronix LA-2A Compression Mode), Opto-L (Teletronix LA-2A Limiting Mode), S-State (UREI 1176), Tube (Fairchild 670), Tube 2 (Manley Variable-Mu), British (Neve 33609) and Over E-Z (dbx 165).

DE555 is a de-esser plug-in that provides accurate, flexible and transparent de-essing. Through the use of intelligent signal analysis, successful de-essing is possible at any signal level without using a manual input threshold.

FilterBank is a high-end equalizer capable of emulating practically any EQ. It includes 10 plug-ins: E2, E4 and E6 are parametric, high- and low-shelving EQ, high- and low-pass filters, in 2-, 4-, and 6-band configurations. P2, P4 and P6 are parametric EQ with variable Q modes in 2-, 4-, and 6-band configurations. F1, F2, and F3 are steep high- and low-pass filtering with resonant Q control. And B1 provides extreme notch filtering.

FutzBox is a distortion and noise generator plug-in for creating low-fidelity versions of audio signals. At first glance, it appears to be a distortion plug-in on steroids, but a closer look reveals why it is easily finding itself at home in everything from sound design and remixing to music creation and post production. The plug-in is based around McDSP's SIMs (Synthetic Impulse Models) optimized processing format. Unlike impulse responses, which have significant internal latency, SIMs have none, so they can be adjusted in real time. The plug-in allows the user to select from over 150 simulations of the modeled objects (with corresponding photos). The list includes headphones, walkie-talkies, 8-bit game machines, telephones, transistor radios, megaphones, and tons more. In addition to the SIM library, FutzBox includes filtering and EQ, distortion, a noise generator, and gating.

MC2000 is a multi-band compressor plug-in designed to emulate the sounds of vintage and modern compressors. It includes three plug-ins: MC2 (2-band compression), MC3 (3-band compression), and MC4 (4-band compression). The MC2000 gives the user complete control of multi-band dynamic compression. In addition to output, threshold, compression (ratio), attack, and release, it includes non-standard Knee and BITE controls.

ML4000 is a high-resolution limiter and multi-band dynamics processor. It includes the ML1 mastering limiter and the ML4, which is a multi-band Gate, Expander, and Compressor fed into the ML1. The ML1 uses a flexible brick wall look-ahead design, combined with multiple stages of limiting for improved peak detection. The ML4 includes a 4-band Gate, Expander, and Compressor fed into the same limiter algorithm found in the ML1. Each band's

Fast Facts

Applications
Studio, project studio, broadcast, post production, sound reinforcement (with the Digidesign Venue)

Key Features
Analog Channel, Channel G, Chrome Tone, CompressorBank, DE555, FilterBank, FutzBox, MC2000, ML4000, NF575, Revolver, and Synthesizer One; a pre-programmed McDSP green iLok; printed manual; supports Mac OS 10.4.x (Tiger), 10.5.x (Leopard), and Windows XP

Price
$2,795 (HD pack-TDM, RTAS, and AudioSuite for Mac OS X and Windows XP), $1,495 (Native pack-RTAS, AudioSuite for Mac OS X & Windows XP)

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Product Points

- The most powerful bundle in the world
- Printed manual

- Revolver plug-in currently doesn't support sample rates above 48 kHz (88.2 kHz and 96 kHz sample rate support for Revolver is coming soon-Q1 2009).

Score Few bundles can compete with the "bang for the buck" value that McDSP offers with its Emerald Pack.

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linked together.

NF575 Noise Filter is a high-resolution filter set designed to remove a wide variety of noise types from audio. It provides HP and LP filtering and five bands of notch filtering with linkable frequency control. Selectable slopes of 6, 12, 18, 24, 30 and 36 dB/oct and frequency control range covering the entire audible spectrum make the plug-in extremely flexible.

Revolver is a high-powered convolution reverb that provides total impulse response control, dedicated and routable EQ, two sync-able delay lines, a reverb decay crossover network, and specialized stereo imaging. It incorporates a diverse collection of impulse responses (IRs) from all over the world, including hundreds of sounds ranging from typical to classic acoustic spaces. It includes everything from the wonderful sound of several halls, plates, and churches to a locker room, the inside of a vacuum cleaner tube and even the McOSP office lobby. Additional acoustic spaces and outboard gear can easily be modeled with the Revolver impulse response tools.

Synthesizer One is a soft-synth with a fat analog sound and endless programmability via its simple interface. It combines wave table and analog oscillators, a completely modular design, flexible filtering, and a dedicated effects section to produce inspiring leads, fat basses, and evolving synthetic textures. The Synthesizer One wavetable editor allows users to create unique waveforms for oscillators and LFOs. Waveforms may be drawn, generated from a suite of tools or imported from an audio track.

In Use

I love the design philosophy of McOSP. Instead of spending their time trying to create a digital model and a visual representation of an analog piece of equipment, the programmers at McOSP simulate the sound of analog processors by analyzing their output and writing algorithms to mimic what they're hearing, rather than trying to create a digital model of the unit's analog components. And I must say, they do this quite well. Additionally, in contrast to the industry norm, McOSP never charges customers for plug-in upgrades. It's always nice to use a product whose manufacturer thinks of its customers first.

The Emerald Pack III installation was quick and easy, and I found the bundle to be diverse, complete, and very usable. Over the last several months, I've been able to use every one of these plug-ins in the real world, not just in my review testing, and they never cease to provide excellent results.

I've found that Analog Channel works wonders on poorly recorded tracks or tracks that have been tracked through low-quality converters. It also excels on drums, percussion, or any sound source that naturally has sharp transients. I love being able to select from several playback head types, tape formulations, and even control the tape saturation recovery time. The plug-in includes a library of analog mixing system emulations and real-time display of saturation curves and calibrations.

I was already a longtime fan of Filter Bank and Compressor Bank before I used Channel G, and they were initially my go-to plug-ins for EQ and compression. Now I find that I'm reaching more for Channel G; I love being able to do so much within a single plug-in.

I have yet to encounter a guitar processing plug-in that can shake my addiction to real pedals and real amps, but Chrome Tone

PAR Contributor of the Month:

Russ Long

Engineer/Producer/ Studio Owner

Nashville

Russ Long has been producing and engineering a wide variety of music and film projects since the late 1980s. His credits include the hits "Kiss Me" and "There She Goes" by Sixpence None The Richer and albums by Wilco, Newsboys, Over the Rhine, Relient K, Dolly Parton, Tanya Tucker, and Jim Brickman. His film credits encompass the soundtracks to the Girl Interrupted, Here On Earth, Jonah, How To Lose A Guy In 10 Days, The Second Chance, The Pirates Who Don't Do Anything: A VeggieTales Movie and She's All That motion pictures. Russ has done 5.1 mixes for Allison Moorer, David Crowder, and Mercy Me and is in demand as an engineer for live sound recordings, having multitracked live performances for Switchfoot, Chris Tomlin, and Nichole Nordeman. Russ' studio — Nashville-based The Carport — opened in 1994 and has played a key role in the majority of these projects.

In addition to producing and engineering, Russ has also authored over 100 articles and equipment reviews here at Pro Audio Review, and elsewhere. He has also been involved in the development of a series of educational DVDs that currently includes Russ Long's Guide to Nashville Recording and Shane Wilson's Guide to Mixing. They are available at www.audioinstruction.com.

Russ Long's website: www.russlong.ws

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Second Opinion:

Do It with One Box: McDSP FutzBox

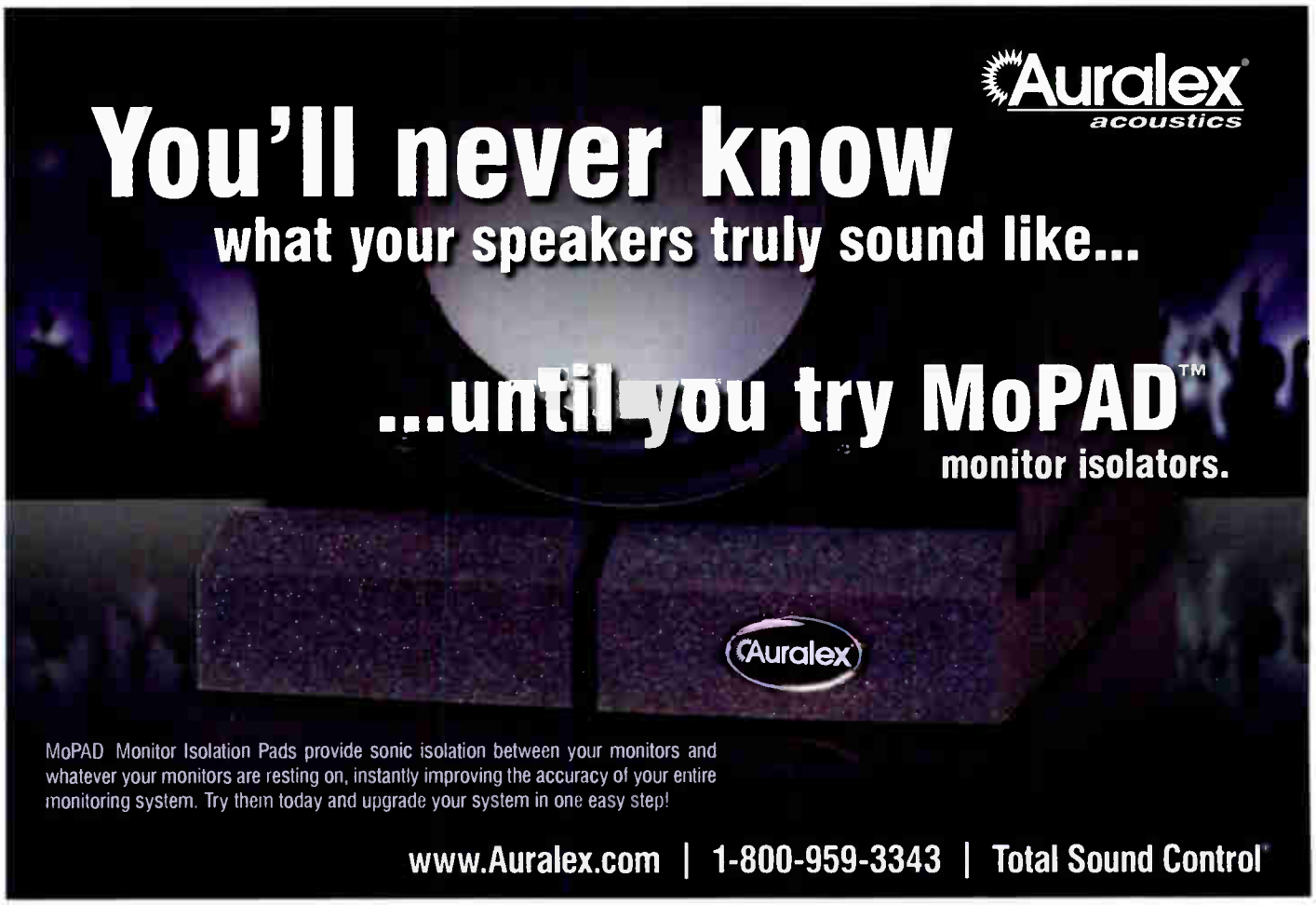
by Alex Oana

It's that moment in the song for the telephone voice. It's the camera perspective of the dialogue coming out of the intercom. Instead of hooking up filters, distortion, EQ, and gating to simulate speakers and electronics, do it with one box: the McDSP FutzBox.

I've chatted with McDSP chief rocket scientist Colin McDowell at tradeshows, and I've found that he thinks on a different level than most of us. McDowell said, "Futz you!" to typical convolution, instead creating SIMS (Synthetic Impulse Models), a format claimed to be more flexible and DSP-lite. FutzBox SIMs include cellphones, radios, TVs, walkie-talkies, speakers, headphones, and electronic toys. I often found inspiring presets then tweaked the filters, distortion, lo-fi, noise generator, and gating to suit.

"Dial 9 to Get Out" by the Minneapolis hip-hop outfit, the Spectaculars, provided a perfect specimen to illustrate FutzBox's phone SIMs. I placed each instance of the vocal line, "XO XO," a lyric reference to texting, on a dedicated FutzBox track and called up a cell phone preset. The low bit rate, distortion, and narrow bandwidth smacked of cell phone, but I had to turn off the distortion to retain intelligibility. As a result, insertion of a limiter was required. FutzBox should have a limiter built into its output stage, but it does include a convenient wet/dry mix control. Futz-a-doodle-do.

I gave the guitar solo a unique texture by flying it on to the FutzBox track. Wow. Next, I simulated an answering machine. FutzBox allows one to audition the SIMs only, with no added filters, distortion, or noise.



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"As far as unique plug-ins go, the FutzBox is absolutely the coolest thing ever. Its creative potential is unlimited."

"Business Speaker Phone" followed by an L1 nailed the sound. I certainly hope McDSP continues to add more cool SIMS to its library.

One of the most powerful controls made possible exclusively by the SIM approach as opposed to if impulse response samples were used is the "Tune" control. In the case of the "metal washtub" SIM, for example, one can change the resonant frequency of the tub. I used the "Tune" control to adjust the business phone's resonant peak to work more favorably with the tone of the singer.

The ability to alter the tone of a track to make something distinct is a quality I prize in a plug-in. FutzBox is a shortcut to real-world electronic and object effect simulations. So, go Futz yourself.

has come as close as any. Chrome Tone provides ultra-flexible distortion, compressor, and sustain circuits, gating, 3-band EQ, a preamp simulator, several guitar cabinet models, and amazingly convincing spring reverb and tape delay. When I record a guitarist with a limited guitar rig, I'll record a direct guitar signal with no processing in addition to miking his amp so if the amp sound can't hack it in the mix, I can save the part with Chrome Tone. It provides a surplus of believable amp sounds, from sparkling clean to deathly distorted.

The CompressorBank and FilterBank plugs are simply wonderful, and I use them constantly. Both plug-ins have excellent visual representation of what is being done to the signal, and the controls allow extremely quick and accurate adjustments. They are both very flexible, and I honestly haven't found a sound source they don't complement well.

Since its release a few months ago, the DE555 has become my favorite de-esser plug-in. The EQ and compression graphs make it easy to visualize the process and the included presets, along with the real-time displays of de-essing amounts and key filter response, enable quick and easy setup.

As far as unique plug-ins go, the FutzBox is absolutely the coolest thing ever. Its creative potential is unlimited. I've used it to turn massive drum kits into beat boxes, a beautiful acoustic guitar into a mid-20th century AM radio performance a 9-foot Steinway into a trashy tack piano and a pop vocal into a voice emitting from a kid's toy. It's a blast to use, and it finds its way into almost every one of my mixes these days.

I love the flexibility of the MC2000. Being able to create a multi-band compressor

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The **PRE420** is a 4-channel mic-preamp with a plethora of features, including built-in, independent stereo mix and solo busses. The sonic performance of the **PRE420** has been described as making the instrument "sound like it's being played right in front of me!" It delivers the audio with such clarity that no textures are lost or obscured by distortion or noise. The remarkably low noise floor spans a wide range of gain setting, making the **PRE420** the perfect pre-amp for ribbon microphones. For room and ambient recordings, the ultra-low distortion performance puts the listener in the live-room. Also, the **PRE420** circumvents "Murphy's Law" with its bullet-proof "phantom-hot-plug" protection circuitry and incredible RF immunity.

The **ADC1 USB** is a reference-quality, 2-channel, 24-bit, 192-kHz A-to-D converter. The UltraLock™ clocking system delivers unvarying mastering-quality performance - regardless of clock source. The **ADC1 USB** offers variable input gain from -6 to +39 dB to interface directly with a wide range of devices. Precise levels are easily achieved with the 9-segment, dual-range LED meter.

The **DAC1 PRE** is a reference-quality, stereo monitor system controller with the DAC1's award-winning, 24-bit, 192-kHz D-to-A conversion system. The **DAC1 PRE** continues the legacy of the **DAC1**, which has become a staple of control rooms around the world. The analog inputs provide a simple and direct path to the monitors for mixing consoles, iPods, etc. The AdvancedUSB™ input supports native 96 kHz, 24-bit operation without cumbersome or invasive driver software. The built-in, 0-ohm HPA2™ headphone amplifier provides ultra-low distortion headphone monitoring.

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"I've found the ML4000 perfect for putting the final touch on my mixes ... it flawlessly replaces the Waves L1 and L2, which I used for years."

with each band modeling a different vintage compressor is amazing. I've found the ML4000 perfect for putting the final touch on my mixes. The unique Knee and Mode controls allow the ML1 to handle any kind of material with a variety of responses, ranging from transparent to aggressive. It flawlessly replaces the Waves L1 and L2, which I used for years before switching to the ML4000.

The NF575 works great for solving noise problems. It makes removing rumble, hiss, 60-cycle hum, and other audio problems quick and easy with minimal effect on the program material. The notch filters can be set to an extremely sharp Q, and the filters can be linked together and automatically set to harmonic intervals of each other, so upper partials of harmonic noise can be removed along with the fundamental.

Revolver is an excellent-sounding and easy-to-use convolution reverb. All of the parameter adjustments are heard immediately, and the outputs are not muted during any control updates. The user does not need to wait while the reverb is re-rendered. The only negative is that it doesn't support sample rates over 48 kHz, so it can't be used in a high-resolution session. [According to McDSP, 88.2 kHz and 96 kHz sample rate support for Revolver is coming within the next three months. — Ed.]

Synthesizer One has a high degree of flexibility and programmability, and can mimic many vintage analog synths. It has tons of presets that are logically stored in nine different categories, including Atmospheres, Basses, Brass, Comps, Leads, Pads, Sequences, Drums, and FX. While I'm not a keyboard player, I find that Synthesizer One gets used on a regular basis.

Review Setup

- Apple 2 GHz Dual Processor G5 w/2 GB RAM
- Digidesign Pro Tools 7.4, Lucid Gen-X-96 Clock
- PMC AML-1 monitors
- Focal Twin6 Be monitors

Summary

The McDSP TDM Emerald Pack is a comprehensive collection of very usable and wonderful-sounding plug-ins offered at a reasonable price. It includes great-sounding reverb, a huge variety of EQ and compression, guitar-amp and effects simulations, de-essing, noise filtering, a synthesizer, and analog tape and console simulations. I don't think there is another bundle available from any manufacturer that can compete with the "bang for the buck" value that McDSP offers in the Emerald Pack.

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World Radio History

Audio-Technica AT2050 Multipattern Condenser Microphone

The multipattern, large-diaphragm A-T AT2050 is a good and trustworthy multi-tasker that won't break the bank.

I am always ready to listen to any new microphone models from the folks at Audio-Technica. The company has always stood for high quality and the willingness to be affordable when many of their competitors were not. Since their 1962 launch in Tokyo, Japan, A-T has been, and continues to be, an innovator and leader in the world of microphone and wireless audio system design.

Features

The AT2050 is a dual capsule, large-diaphragm condenser microphone that offers three switchable polar patterns: omni, cardioid, and figure-of-eight. The AT2050's features include a switchable 80 Hz high-pass filter and 10 dB pad; it can handle high SPL, too (149 dB, 159 dB with pad). Capsules are "gold-vaporized and aged," according to A-T promotional material, and the AT2050 is built with surface-mount electronics. The package includes a shock mount and a padded vinyl pouch.

In Use

I have had a lot of experience with the Audio-Technica AT4050 microphone over the years, so for this evaluation, I immediately reached for one along with the ever-trustworthy Neumann U 87 to compare them with the A-T AT2050. I used Otari Concept One console preamps for this evaluation; those amps are what I have used for the majority of my time with the 4050 over the years (most notably with King Diamond and Mercyful Fate). This gave me a good, familiar point of reference.

I expected that the AT2050 would be similar to the 4050, but it is, in fact, quite a different animal. With just a simple vocal test using identical gain on all three pres, the AT2050 as compared to the 4050 is about 5 to 7 dB lower in gain; this helped me get just a bit more granularity from the pre-amp with the AT2050. Also, the AT2050 has quite a bit tighter cardioid pattern; a vocalist can be closer to the AT2050 than what might be considered normal without proximity effect going crazy on you. As compared to the Neumann, the AT2050 was an apple; the U 87 was an orange, as you might expect.

Audio-Technica AT205C

I quickly found another desirable quality of the AT2050 when putting it in an overhead position on a drum kit. This mic can definitely take a punch. Even without the -10 dB pad engaged, it can handle around 150 dB before it starts to break. The high-pass filter was also effective on the overheads as well. At this point I tried opening the pattern to the omni setting; in came a lot of pleasant space and room. There also seems to be quite a bit more "midrange punch" present in the AT2050 compared to the 4050 and U 87, which I found to be helpful when putting the mic on a guitar cabinet. Those punchy qualities really helped me not need to reach for a midrange EQ boost in that

Sterling Winfield is a Texas-based producer/engineer/mixer with gold and platinum credits for artists such as Pantera, Damageplan, and HELLYEAH.

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Product Points

- Good midrange punch; high SPL handling; tight polar pattern; user-friendly shock mount; affordable pricing
- Slower than normal transient response; more gain needed from preamps than other microphones

Score Considering the price, sturdiness and midrange frequency performance, I would recommend the AT2050 to anyone from the novice to the professional for their mic stash.

Fast Facts

Applications
Studio, project studio, live

Key Features
Three switchable patterns — cardioid, omni, figure-of-eight; roll-off switch; -10 dB pad; user-friendly shock mount and carrying pouch.

Price
$369 list

Contact
Audio-Technica U.S., Inc. | 330-686-2600 | www.audio-technica.com

upper-mid 3 kHz area.

I also liked how the mic responded when switched to figure-of-eight. Both diaphragms seemed to respond similarly on a Washburn twelve-string guitar, a gift from the late, great "Dimebag" Darrell Abbott. The one thing that didn't agree with me was the AT2050's transient response; it was a little sluggish when it came to placing it directly on a ride cymbal or a floor tom.

> "I quickly found another desirable quality of the AT2050 when putting it in an overhead position on a drum kit. This mic can definitely take a punch."

Finally, I abundantly thank the people at A-T for the new shock mount (the AT8458) included with the AT2050. It is a heck of a lot more user friendly than the original AT4050 mount (the now-discontinued AT8441).

Summary

Overall, the AT2050 is a good quality, low-cost microphone built for a variety of tasks in the home studio, professional studio, or live settings. It's a perfect mic for the home recording enthusiast on a budget, or the professional looking for a mic with a bit more midrange punch with flavor. It is a good multi-tasker that won't break the bank.

Acknowledgement: Special thanks to Gary Long at Nomad Recording in Carrolton, Texas for providing me with the tracking facility for this review.

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www.radiohistory

LaChapell Model 583s Microphone Preamplifier

The Model 583s' true-tube design and massive sound easily land it on the short list of the best mic preamps ever.

The boutique audio company LaChapell Audio came into light with the release of its Model 992 mic preamp a few years back. The company's handmade gear is meticulously designed and hand-built with the utmost precision.

The Model 583s and its 12AX7 tube

The recently released LaChapell Model 583s preamp is a single-ended, vacuum-tube microphone preamplifier. This preamp is designed for use in 500 Series power supplies, offering the latter's devotees a true vacuum-tube preamplifier option for the first time.

Features

The microphone input configuration of the 4-pound 583s is based on its big brother, the LaChapell Model 992EG, while the Hi-Z input is transformerless. The output stage utilizes premium Burr-Brown and THAT Corporation line drivers with a transformer balanced output. It features continuously variable potentiometer-controlled input and output gain via fully variable 100K-ohm pots.

A column of four plastic toggle switches provides the means to activate phantom power, insert the -20 dB pad, reverse the polarity and alternate between the microphone and the Hi-Z inputs. The novel switches illuminate red when their associated function is active, providing a quick visual reference of the preamp's status. The input stage has a 30 dB range, and the output stage provides up to 40 dB of gain for a total of up to 70 dB of internal gain.

LaChapell created a unique DC-to-DC converter to power the 583s' tube circuit. The process uses the VPR-standard 16 volts from the power supply but delivers a true 250 volts to the tube while consuming a maximum of 210mA with all LEDs lit. This falls comfortably into the 130ma/bay requirement per VPR/API alliance rules [the 583S is now a VPR Alliance approved module — Ed].

In Use

I've been using the 583s for nearly a year, and it sounds fantastic. Although vocals and acoustic instruments seem to be the preamp's forte, I have yet to find something that doesn't record well through the pre.

While recording lead vocals on Tanya Tucker's latest album, I used the 583s along with a Brauner VM-1KHE, an Empirical Labs Lil FrEQ and a Tube-Tech CL-1B, and ended up with a fantastic sound. Tanya's voice is extremely dynamic, and the 583s did a wonderful job of capturing every nuance of her performance without requiring any adjustment from song to song.

Seeming faster in terms of transient response than most tube preamps, the 583s is perfect for recording percussive instruments. I used a 583s pair on kick (AKG D112) and snare (Heil PR20) and achieved great results. On another tracking session, I used the 583s pair on overheads (Royer SF-12), again with good results. I love being able to independently adjust the input

Russ Long, a Nashville-based producer/engineer, owns the Carport recording studio. He is a regular contributor to *Pro Audio Review*. www.russlong.ws

World Radio History

and output to control the internal distortion. While maintaining the exact same output level, distortion can be varied from as clean as .025 percent THD+N to as high as 15 percent THD+N.

Recording a grand piano with a pair of Mojave MA-201 mics through the 583s pres yielded a fantastic sound, as did acoustic guitar with an AKG C-24 and electric guitar with a Royer R-122.

I recorded bass guitar through the Hi-Z input and ended up with a raw, aggressive tone that still maintained its extended bottom and top-end presence. The Hi-Z inputs also worked well for recording keyboards, though, at times, I found myself wishing I had a built-in high-pass filter. Otherwise, I was always pleased with the sound.

Product Points

- Great sound; flexible; handmade; true 250-volt tube mic pre
- Expensive; no high-pass filter

Score The 583s handles transients better than any tube mic pre I've encountered, while retaining warmth unequaled in the world of solid-state pres.

The 583s tube socket is easily accessible, providing the user with the ability to swap in premium vintage tubes such as Mullard, Telefunken, Philips, RFT, or any other 12AX7/ECC83 variant. The tubes are quick and easy to switch out (although

(continued on page 55)

Fast Facts

Applications
Commercial Studio, Project Studio, Location Recording, Post Production

Key Features
Durable construction; independently variable input and output controls; true 250v vacuum-tube amplifier; transformerless Hi-Z input; first-rate components; high-quality, 80 percent nickel output transformer

Price
$1,349 list

Contact
LaChapell Audio | 209-383-3486 | www.lachapellaudio.com

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RNDigital D4 Plug-In

This graphic dynamics processing plug offers plenty of useful features at a good price.

The RNDigital D4 dynamics processor GUI in a Pro Tools session

When was the last time you opened up a brand new piece of software and said to yourself, "Hmm, now just how do I work this thing?" With the recently released D4 Plug-In from RNDigital, I would bet that I'm not alone in saying just that. One quick glance at it made me realize: "We've clearly got something different here."

After using it for just a few minutes, then over the course of just about every session since, I was damn glad to have it in my arsenal. This Mac OSX (10.2+), Windows XP- and Vista-compatible mono/stereo dynamic compression tool will run with VST, AU, or RTAS hosts up to 192 kHz. Built on the foundation of RND's Dynamizer but with a bevy of new features, it packs a lot of options into a small interface. While, deep down, it is a compressor, don't think of this as "multiband" — it breaks the audio up into compression zones (up to four), each with independently configurable attack, release, and ratio settings.

Installation and iLok authorization was a breeze, and RNDigital wisely provides an 84-page PDF manual. It not only features some interesting discussion on compression, but also thoroughly examines what the D4 is and isn't — a must-read to get the most out of this tool.

Interface

The multicolored main section of the plug-in is called the I/O Map. The four zones are broken up with I/O lines, each with a small, colored, input flag on the left and output flag on the right, along with a small drag circle in the middle. Each flag setting determines the max I/O levels for compression, and each zone has a moveable upper and lower threshold.

Running along the left and right side of the I/O Map is a scale that runs by default from 0 up top to -48 dB at the bottom. The setting will change (-24, -48, -80)

Rich Tozzoli is a producer, composer, sound designer, and the software editor for *Pro Audio Review*. www.richtozzoli.com

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"While, deep down, it is a compressor, don't think of this as 'multiband'—it breaks the audio up into compression zones (up tc four), each with independently configurable attack, release, and ratio settings."

depending on the adjustment of a Scale Control. This scale helps you make input and output level choices.

The D4 features three types of meters: peak, cloud, and attenuation. Peak and attenuation work on Input and Output as expected. Cloud meters, however, visually display the concentrated amount of "energy" at a given level and have to be seen to be appreciated and understood.

Many other small but important options lie within the nooks and crannies of D4's GUI. There's an Auto Limiter to prevent levels from exceeding 0 dB, I/O Trim Controls, Automatic Gain Compensation and a Zone Gain Control (ZGC). With ZGC on, audio outside of those thresholds responds the same way as audio in the zone. With ZGC off, audio outside those thresholds pass through unaffected, or 1:1 with no gain or cut applied. It's a very creative control feature.

The Key to Success

By selecting the Key button, a whole new GUI appears in place of the I/O Map. Featuring a selectable Key Input (Left and Right, Left Channel, Right Channel, Side Chain), a variable Look-Ahead slider (up to 10.0ms), and a full Key Filter graphic interface with selectable frequency, gain and Q, it further expands the capabilities of the D4.

At the bottom of the plug-in sits a full Attack, Ratio, and Release section (from which all four bands can be grouped or independently controlled). D4 has the ability to operate with one to four bands, chosen with a small 1-4 selector located on top. There's also the usual Load, Save, Copy, and Clear, as well as useful A and B "workspaces," which let you quickly switch between two different settings for comparison's sake. Also, by hitting the Help button atop the plug-in, the manual document automatically opens up — love that touch!

Jump In

The best way to get used to the D4 is to just jump in and start dragging around the Zones. My first experience was to launch it within Peak Pro 6 on a short TV spot. Within a few minutes of not knowing what I was doing, it sounded far better. I was able to punch up the level and top/mid end clarity while leaving the bottom alone. A quick A/B even gave me a "wow, this thing rocks" feeling. I then printed the spot and shipped it to the client.

After a good manual read, I was able to make more effective use of the D4's abilities. Using it within Logic, I created some great original sounds on drum loops with 1- and 2-band applications; almost like EQ meets multi-band compression with limiting. It's also good to explore presets like "Mastering Lifter," "RN Snare Anti Gate" and "Vocal 1 LNF." This preset exploration also help you understand how the plug-in operates.

Fast Facts

Applications
Studio, project studio, sound design, post production, broadcast

Key Features
Up to four separate, independently configurable dynamic processing zones; stereo and mono operation; built-in limiter; auto output gain; good metering

Price
$249 list [academic pricing is available — *Ed.*]

Contact
RNDigital, Inc. | 727-230-1603 | www.rndigital.org

Product Points

- Far more than a multi-band compressor
- Able to shape audio with up to four separate zones; good metering;
- A/B Workspaces offer instant comparisons
- Can truly improve your mix

- Cluttered GUI can be hard tc read

Score A useful graphic dynamic processor plug-in for RTAS, VST, and AU Mac/PC users that's far more than just a compressor.

Final Thoughts

Overall, D4 is a flexible, powerful sonic tool that, like multi-band compressors, can be overused if not careful. Aside of its obvious use on 2-track masters, it's also great for sound design, looping, and mixing. For me, it's quickly become a go-to plug-in across various instruments, and also to help punch up final tracks.

While the interface is a bit small and cluttered, it packs in a lot of useful features at a good price, making it a fair tradeoff. Also, RNDigital informed us that it is working on a video tutorial, which will be posted on its website soon, and — even better — any registered owners of the Dynamizer can upgrade to the D4 for free.

World Radio History

studio mini-reviews

by Strother Bullins

MXL V88 Large-Diaphragm Condenser Microphone

Other than hearing the sonic results of its transduction, it's arguable that nothing enamors a passionate tracking engineer more than holding an attractive and well-built large-diaphragm condenser microphone. By ear and by touch, the MXL V88 ($199) is as alluring as many of its pricier peers in its product category.

The cardioid V88 is a pressure-gradient condenser featuring a 32mm capsule and gold-sputtered six-micron diaphragm, internally wired with Mogami cable. It is compact and flexible — less than 6 inches long with a great shock mount — and comes in a durable aluminum "flight-lite" case.

Two V88s came into my world and sat in place of microphones that I didn't think could, or really should, be replaced. In testing them, I tried the V88s on vocals, stringed acoustic instruments, drums and percussion of all types, amplifiers, room/ambient applications, etc. — most every source I acoustically record on a regular basis.

Capable of handling 138 dB maximum SPL with a relatively flat frequency response, they worked well nearly everywhere I placed them. They often sounded much better than costlier mics that I have used for years on particular sound sources. Used singularly or as a pair, these V88s never sounded uncomfortably "forward" or brittle (as some in the new generation of affordable large-diaphragm condenser microphones can and do), and, most often, they effectively revealed the rich sweetness of those sound sources possessing such qualities. My favorite application was a spaced stereo pair on drum kit. Talk about a big, classic rock sound!

I recommend the V88 for anyone who wants a very good, very flexible, large-diaphragm cardioid condenser with a limited budget. As a matter of fact, considering the low advertised street price I've seen for the V88, the best move would be to bite the bullet and buy two. You'll want to use them as a pair.

Contact: MXL Microphones
www.mxlmics.com

Solid State Logic Mynx

Solid State Logic's Mynx is the desktop box that can satisfy the last of us pro audio types with the longstanding belief that an SSL work surface is effectively the holy grail but also lack the financial ability to afford one. It is a mini SSL XLogic SuperAnalogue X-Rack system chassis (without Total Recall) with a list price of $400. [The X-Rack system was originally reviewed by Steve Murphy for a two-part *PAR* series in our December 2007 and January 2008 issues — Ed.]

Physically, Mynx is an industrial-strength enclosure of 4mm extruded aluminum with 4" X 7.5" X 7.2" dimensions and a two X-Rack Module capacity. Mynx is built by the same blokes that build all the other SuperAnalogue gear, and at that same standard of quality. Any two standard X-Rack modules — VHD Input, Mic Amp, SuperAnalogue EQ, SuperAnalogue Dynamics, Four Channel Input, Eight Channel Input, Master Bus, the new E Series EQ, or the new E Series Dynamics — or one G Series Stereo Bus Compressor will fill the Mynx. Mynx I/O resides on the back of your selected modules, and an external power supply provides the juice. Loading the Mynx with a card or two is as simple as using a small hex wrench and as many as eight

Strother Bullins is the Reviews & Features Editor for Pro Audio Review and a regular contributor to Audio Media.

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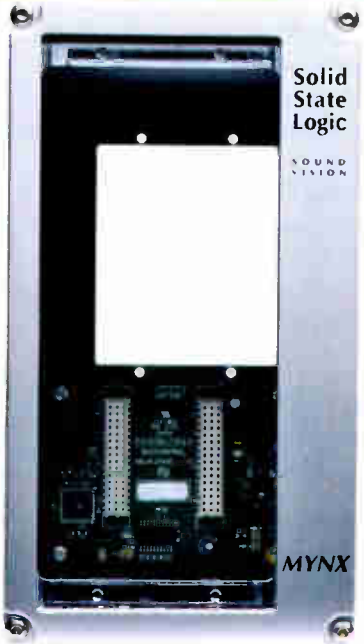
"Not only does [Mynx] make you sound better, it generates positive vibes and comments from those that grace your workspace. I've heard "Ooh, SSL!" or some variant when people see the Mynx on my desk. Sometimes I reveal its price, but they're more impressed when I don't."



An empty Mynx awaits any two of nearly a dozen choices in SSL XLogic modules.

screws — four on front, four on back.

If you've ever been so lucky to have heard your own mixes through an SSL G Bus Compressor, had an SSL mic pre/compressor signal path for something as simple as tracking snare drum, etc., then you can understand the enjoyment I found in reviewing the Mynx and seven XRack cards in my home studio over the past couple of months. After all, it *is* an SSL. Not only does it make you sound better, it generates positive vibes and comments from those that grace your workspace. I've heard "Ooh, SSL!" or some variant when people see the Mynx on my desk. Sometimes I reveal its price, but they're more impressed when I don't.

Mynx is a perfect example of how a company doesn't gain a reputation like SSL without knowing what they are doing. Like Lays potato chips, it's likely you can't stop with just one or two X-Rack Modules. Soon you'll need a full-size X-Rack, because you have three Modules. And the beat goes on, if you will.

Today, with the availability of the SSL Mynx, E-, G-, J-, and/or K-envy is an outdated emotion. The SSL experience is finally available for nearly everyone who wants it.

Contact: Solid State Logic
www.solid-state-logic.com

World Radio History

new at namm: live

Heil Sound Drum Mic Kits

Heil Sound will show its drum microphone kit series, already having garnered a PAR Excellence Award from their mention at AES 2008 — the HDK-8 Primo, the HDK-7 and the HDK-5. All of the HDK drum kits feature microphones from the Heil Sound product line as well as several new mics designed specifically for drummers.

The HDK-8 Primo kit consists of two PR 22s, three PR 28s for toms, two PR 38s for overheads and one PR 48 for kick. In addition, a new tom mount called the HH-1 is included.

Prices: $695, $1,390, $1,495 (HDK-5, HDK-7, and HDK-8 Primo, respectively)
Contact: Heil Sound • www.heilsound.com

Radial Forest F15 Roundback Instrument Preamp

Radial Engineering has launched Forest Audio, a range of audio products designed primarily for the professional recording market. The first of these new products is the Forest F15 Roundback instrument preamp. The unit is a combination 2-channel instrument preamp, direct box, and re-amper. It features Class-A feed-forward topology for signal purity. There are no op-amps in the main audio circuit or signal-degrading negative feedback loops.

This is further enhanced with Drag Control load correction. For acoustic instruments, the F15 has a built-in piezo signal booster for gain and a 10 mg-ohm input impedance. This is augmented with switchable 6V and 12V phantom powering for miniature electret instrument microphones. Outputs include a complement of dual mono or mixed balanced outputs with choice of 1/4-inch and XLRs.

Price: TBA
Contact: Radial Engineering • www.radialeng.com

Community MX41E Monitor

Community Professional Loudspeakers has introduced its MX41E, a compact, two-way bass reflex floor monitor series. Available in black or white in 90 x 40 (MX41E-94) or 60 x 40 (MX41E-64) degree coverage patterns, both MX41E models offer rotatable horns for narrower horizontal coverage. Angled backs allow the MX41E to be positioned at 30- or 45-degree angles.

The MX41E features Community's Ferrofluid-cooled LF driver technology, birch plywood construction, 16-gauge perforated, powder-coated steel grille, heavy-duty steel handles, solid-steel input panel with Passive/Bi-amp switch, and Neutrik input connectors. Further, the monitors are protected by Community's PowerSense driver protection circuitry and covered by Community's exclusive five-year warranty.

Price: $1,098
Contact: Community Professional Loudspeakers • www.communitypro.com

World Radio History

RapcoHorizon Silverflex Cable Line

RapcoHorizon will show its high-end Dominator cable line at Winter NAMM 2009, featuring the new SilverFlex instrument and mic models. This line features instrument and microphone cables in two different configurations and is jacketed with a TechFlex outer skin and clear inner conductor.

SilverFlex speaker cables are available in 12- and 10-gauge sizes with bare annealed copper conductors, all of which are silver-plated and "mega-stranded" for enhanced performance and lower capacitance.

Price: TBA

Contact: RapcoHorizon • www.rapcohorizon.com

PreSonus StudioLive 16.4.2

A 2008 *PAR* Excellence winner, the PreSonus StudioLive 16.4.2 Digital Performance and Recording Mixer will make its Winter NAMM debut in Anaheim. As apparent by its name, StudioLive is a flexible multipurpose mixer with 16 XMAX microphone preamplifiers, built-in 22 x 18 FireWire recording and playback engine, Fat Channel processing with 4-band EQ, compressors, limiters, gates, DSP effects, six aux busses, four sub groups, extensive LED metering, mixer save/recall, channel-strip save/recall/copy/paste, talkback and more.

StudioLive also includes Capture, a fully integrated live recording software for recording all 16 inputs, subgroups, and main mix.

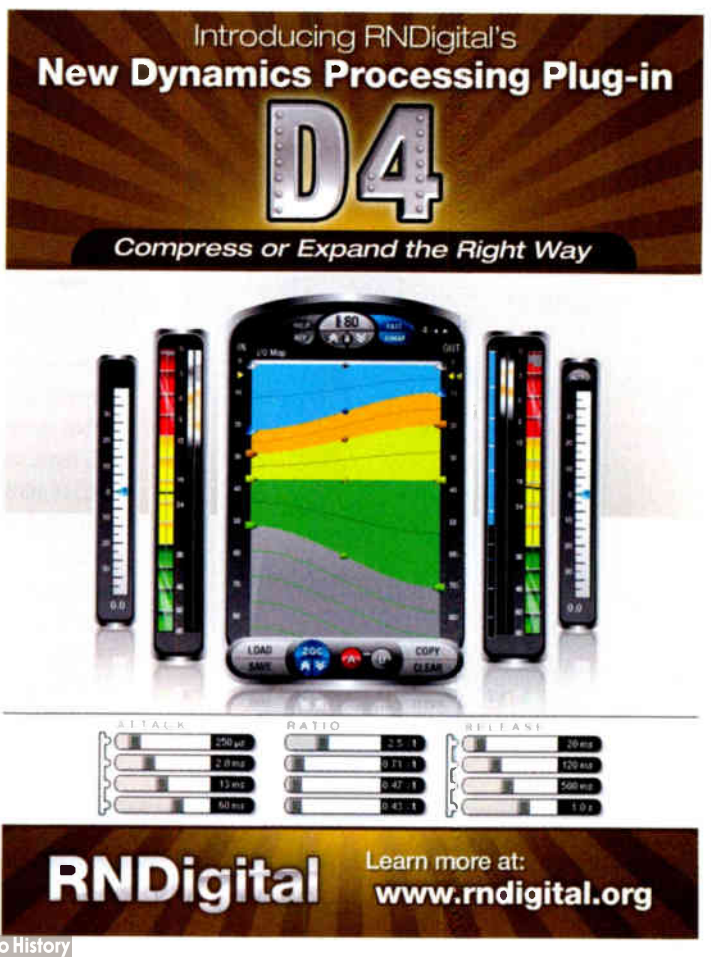
Price: $2,499

Contact: PreSonus • www.presonus.com

Avlex Superlux S125 Handheld Condenser Microphone

Avlex Corporation has introduced the new Superlux S125 True Condenser microphone featuring a pressure gradient, 0.5-inch shock mounted condenser capsule, high SPL characteristics, a -10 dB pad, a low-cut switch, and conductive shielding to minimize RF (radio frequency) and handling noise. The S125 is a half-inch diaphragm cardioid condenser mic with a foam-less triple pop filter. Both its -10 dB attenuator and 150 Hz low cut filter switches are under a rubber cover to protect them from moisture and accidental change. The S125's maximum level is 148 dB SPL and the noise floor is 18 dB SPL A-weighted. This translates to a 130 dB dynamic range. Another noteworthy feature of the new Superlux S125 True Condenser microphone is its gold plated connectors between the microphone's capsule and electronics.

Price: $133
Contact: Avlex, www.avlex.com



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Adamson's M215 Stage Monitor

The Adamson M215 monitor's trapezoid cabinet features symmetrical driver placement with a 50 x 50-degree conical waveguide for directivity control. It is meant for use as a stage monitor, but can also be used as a drum- or stage-fill enclosure, specifically aimed for performers wanting extra-high SPL without losing intelligibility.

The M215 exhibits low distortion due to its multilayer Kevlar cone driver. The two, long-excursion, lightweight Neodymium ND-15 drivers supply power handling with a low-frequency response. Adamson's Advanced Cone Architecture makes the ND-15 a 15-inch driver with zero axial modes in its entire passband, increasing the linearized mid-band response. The cone design also reportedly enforces durability in wet conditions, making the M215 a solution for outdoor events. In addition, the M215 features an internal crossover.

Price: TBA

Contact: Adamson Systems Engineering

Harman HiQnet System Architect V1.9

Harman Professional has debuted HiQnet System Architect Version 1.9, which delivers many new features including network troubleshooting tools, file compression and management, and advanced control panel customization. According to a Harman spokesperson, this announcement comes just as the community of registered HiQnet System Architect users exceeds 20,000.

Control of the three models of the new Crown I-Tech HD Series will be possible with the device plug-ins included with System Architect 1.9, which support the configuration of the FIR filters and LevelMAX limiters included in the new flagship touring amplifier, the algorithms for both of which were co-developed with BSS Audio. Currently, there are a total of 93 shipping HiQnet devices and a total of 66 System Architect-controlled devices.

Price: Free

Contact: Harman HiQnet • hiqnet.harmanpro.com

Tapco's Thump TH-18s Active Subwoofer

Tapco has unveiled its Thump TH-18s active subwoofer, which delivers Mackie active technology at a Tapco price. Housed in a ported, bass-reflex enclosure and featuring a 1,000-watt Class-D amplifier design, the TH-18s provides low-end response from 35 Hz-125 Hz.

The TH-18s can be used as a complement to the company's TH-15A loudspeaker. That portable, plug-and-play, active system is targeted for a band, small club or DJ setup. The TH-18s includes stereo I/O and pass through for connectivity as well as stereo high-pass output (120 Hz). The sub also features a polarity switch, rear-clip LED and comes with a standard pole mount for the TH-15A.

Price: $699

Contact: Tapco • www.tapcoworld.com

World Radio History

AKG WMS 450 Rebate Offer

AKG has announced a trade-in program for customers of any brand of wireless system that operates in the over-698 MHz range on its WMS 450 system. This rebate program gives customers a $100 instant rebate when they trade in their 700-MHz wireless system against the purchase of a WMS 450 from a participating contractor or retail dealer.

A $100 mail-in rebate is available via a downloadable PDF form for new customers when purchasing the system from a participating online or catalog retailer. Many wireless users that have systems operating in the 698-806 MHz range are worried that their systems will become unreliable or unusable after the transition to DTV broadcasting occurs on February 18, 2009.

Price: $529 list ($100 instant rebate with approved trade-in)
Contact: AKG USA • www.akg.com/us

WorxAudio M80X3-P Line Array

WorxAudio Technologies has introduced the M80X3-P Line Array, a two-way, high efficiency, ultra compact, line array loudspeaker system designed for a wide variety of sound reinforcement applications, including performance venues and clubs, houses of worship, and theaters. The M80X3-P incorporates three modules, each with a medium format, 1-inch exit compression driver coupled to a stabilized proprietary FlatWave Former (wave shaping device) that delivers high frequencies over a predictable and controlled coverage area. These compression drivers are paired with dual eight-inch cone transducers coupled to the Acoustic Intergrading Module (A.I.M.), reportedly minimizing cone filtering throughout the entire operating spectrum. Frequency range of the M80X3-P spans from 45 Hz to 20 kHz (-10 dB). The upper two modules of the M80X3-P provide 10-degree vertical dispersion while the lower module delivers a 25-degree vertical pattern. When combined, the three modules create a 36-degree vertical system with an unusually broad horizontal dispersion of 150 degrees.

Price: $8,317
Contact: WorxAudio Technologies, www.worxaudio.com

STUDIO IN A BAG

Zaxcom's Fusion is the perfect location sound solution for multi-track high resolution recording, mixing and effects processing of sound for picture.

FEATURES

- Intuitive touch screen interface
- 10–track dual Compact Flash recording capability
- Lightweight design
- 8 mic/line inputs with 48V power
- 4 AES input pairs with sample rate conversion
- 16 x 16 digital mixer with prefader/post fader assign
- Effects include: EQ, notch filters, compressor and delay

TESTIMONIALS

"The specific demands of our show require in bag solutions. 8 iso tracks with in-line (signal) processing provides more flexibility. All Compact Flash recording means no moving parts. The Fusion is perfect for us.
Steve Jones, Sound Supervisor
"Extreme Makeover: Home Edition"

"Easy, logical, powerful, solid state - no more hard drives! 8 discreet channels of beautiful digital audio in my mixing bag!
Tomm Dauenhauer, Audio Supervisor
"Snoop Dogg's Father Hood"
E! Entertainment TV Productions

"Fusion is the solid state way ahead – it offers me the vast inputs, and extensive outputs, of the existing Deva recorders, plus the incredible ability to record without moving parts. I can make primary and back up recordings in real time, whilst enjoying the known and trusted touch sensitive user interface that I am used to from being a Deva user. This is more than a recorder, and much more than a mixer. It is a mixer/recorder par excellence.
Simon Bishop, Production Sound Mixer

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World Radio History

Everyone's A Sound Man

An effective house-of-worship audio engineer must regularly process the opinions, ideas, and criticisms of his congregation. In doing so, it's helpful to have an extra dose of humility and an open mind.

Front-of-house engineers always have somewhat of a target on them. Regardless of the circumstances and the justifiable reasons for any problems during a live show, the responsibility to make it work ultimately comes down to their "performance" as an engineer. This is the same for touring acts, performing arts theaters, and houses of worship.

Randi Anglin

The choir and band's 2008 Christmas Celebration performance in the main sanctuary at Nashville's Belmont Church.

The unique aspect of the house-of-worship "audience" is that most of the same people return week after week, year after year. Some of those people are our superiors, some are in leadership roles, some have sat in the same spot for the past 20 years, and some are brand new. A friend of mine who used to run sound at our church has a great quote: "Everyone has two jobs: their own and the sound man's." His quote was birthed from the neck turns of people in the congregation anytime something went awry and the many-voiced opinions about how things should sound — because everyone can run sound, right?

Line of Authority

One weekend when I was mixing, a guy came up and told me it was 8 dB too loud. In my best cynical tone, I replied, "8 dB?" to which he replied "Well, 8 or 9." I couldn't help but to laugh for the simple fact that, number one, if it were 8 dB too loud. I would have been over 100 dB, which I know is a no-no; and, number two, if at that level you can tell the difference of 1 dB, then please, take over the mix.

Later, I was convicted about the tone of my response. Was the mix too loud? Probably. Not 8 dB, but probably too loud at that time. The response I wish I had used would be something like, "Oh, sorry, man. I'll turn it down a bit." It is easy to take on offense when someone comes to point out his/her perception of what is wrong or right with your mix. The engineer's response and tone of response can either immediately remove any opportunity to escalate the situation, or the opposite.

Granted, this opens a can of worms: If we have to adapt to everyone with opinions, it will be a constant game of jumping through hoops to meet everyone's expectations, which will ultimately end in our frustration. I have made this mistake both as an engineer and as the media director, overseeing multiple engineers.

So, how do we navigate these sometimes troubled and sensitive waters? Ultimately, I have found that someone has to be in charge, preferably someone with a basic understanding of the dynamics involved in our job and some of the technical limitations that we work within. This is no different in any other audio area: theater, touring, or even producing a record.

Dan Wothke is media director at Belmont Church in Nashville, and he welcomes your comments at dwothke@yahoo.com.

World Radio History

If this is a constant issue at your church, I strongly encourage you to take this to your leadership and find that one person who is ultimately accountable for the sound.

Get By with a Little Help from My Friends

Many times, we are approached with valid suggestions or constructive criticism, where experience and credentials validate a person's ability to voice such suggestions to us. There are also times when Joe the Plumber has a thought because he feels worship should sound like it does on his Bose system at home. In their own minds, both have legitimate points. However, we should view their concerns with different lenses.

For instance, I'll often ask Joe the Plumber if he wants me to explain the differences between our system and his Bose. Not in a cynical way, but with sincerity, because if I put myself in his shoes, I would want a logical explanation. If they start to glaze over or aren't interested in any technical jargon, I'll simply thank them for sharing and agree that I, too, would love for it to sound like a Bose system, share a laugh and move on.

Then comes the guy or gal with the technical know-how to talk a bit of shop. And you know what I have found? Most, if not all, of these people would love to be called on to help out at their church. They get great value from helping out and being asked for their counsel without prompting. They are incredible resources for us to tap into and can ultimately make us better engineers.

Case in point: We recently had a children's choir sing with our worship band. In itself, a choir presents unique challenges from an audio perspective; make it a children's choir and those challenges are magnified. Basically, our setup is a couple of large boom microphones behind risers with two small pencil-style microphones hanging over top and one wedge for monitoring. The two mics did an admirable job on their own, but when you factor in our whole band playing, the choir was lost in the mix.

A few days later, a longtime member of the church who is also a very knowledgeable engineer approached me about the miking for that choir. He kindly offered up a Sennheiser MKH416 pair with wind screens for loan the next time we had a choir, and you know what? My defense mechanism crept up from the archives for a brief moment. But then my — ahem — mature humility kicked in, and I graciously accepted his offer. What could it hurt? Was I going to lose something by having a couple of additional microphones up there for a choir? Worse case scenario, I'll bury or cut them.

Jump ahead to our Christmas Celebration service, and we had an adult choir. I paired these microphones 2-3 feet in front of the front row of the choir and about 6 feet high and 3 feet apart to capture the sopranos and altos. They joined our small overhead microphones hanging over the bass and tenors. The end result was absolutely the best choir sound I have ever achieved. Was it solely on those two microphones? Probably not solely, but they played a large part in capturing the fullness of the choir, even with the band at full strength. I even had an elder seek me out to compliment the sound of the entire service. Edification is always a welcomed conversation.

> "A friend of mine who used to run sound at our church has a greatquote: "Everyone has two jobs: their own and the sound man's." His quote was birthed from the neck turns of people in the congregation anytime something went awry and the many-voiced opinions about how things should sound—because everyone can run sound, right?"

A church member's Sennheiser MKH416 pair: A key element in "the best choir sound" Dan has ever achieved.

The Point?

My point is this: I have learned that the majority of the people want to be heard and their concerns or observations validated. It doesn't mean I am a bad engineer or I don't hear things well enough; it's just that they have ideas and opinions, too.

As we enter a new year and get wrapped up in all the technicalities of the job, I wanted to hit the pause button briefly and lend a bit of encouragement for working with those in our congregations that are not designed solely to be thorns in our side, regardless of what it may seem. If we take the time to embrace these people and gain from their strengths, ultimately our worship experience will improve. As iron sharpens iron, we are to sharpen each other. Now, back to loving the art of mixing.

World Radio History

Portable PA Options for 2009

Even elite studio pros will admit it: It's tough out there. Engineers who routinely enjoyed high incomes in the past are scuffling today, thanks to file sharing and the music industry's meltdown. Further down the pyramid, things are no different; not only are label budgets far smaller than they used to be, but there just aren't as many of them.

As a result, audio engineers of all stripes are searching for new revenue, and one obvious place to look is live sound. Though recording may have migrated from commercial studios to project rooms and bedrooms, musicians still perform live to reach, and solidify a connection with, their audience. There is no apt analog to the DAW revolution in live sound — honestly, how much fun is a webcast, compared to being there?

In addition to finding a gig as a club's FOH engineer, making a small, up-front investment in a portable PA is another way to add a marketable service to your resumé. Manufacturers are constantly improving their offerings, with auspicious trends of smaller, lighter and less expensive making it easier than ever to offer sound reinforcement for outdoor concerts and festivals, DJs, and the ever-lucrative corporate gig.

Check out this sampling and go get 'em!

Alto Orient Express Series OEX-400

The Alto Orient Express Series OEX-400 is a mobile rig featuring I/O and effects, all cabling and a pair of microphones and XLR cables.

The system is comprised of an amplified mixer with effects and two passive speakers with a 10-inch woofer and a 1-inch concentrically mounted neodymium tweeter.

Two speaker cables and two Alto AM6 dynamic microphones are included. Mounted on either end of the mixer, two black metal hinges secure the speakers for easy transport.

The OEX-400 offers 350 watts RMS. The

mixer features seven line inputs and four mic preamps. Three Neutrik XLR/1/4-inch combo jacks and one standard XLR are utilized; channels 4/5 and 6/7 include stereo TRS line in and stereo RCA line in and out, respectively. Other TRS in/out includes effects send/return, headphone jack and footswitch. The mixer also includes a 7-band graphic EQ.

Each channel offers 2-band high and low-shelving EQ, a level pot, and a DSP effects pot. A rotary knob adjusts a 24-bit digital effects unit with 16 presets; its on/off switch can be used with the footswitch jack, and a "DSP RET" knob adjusts effects return level. List price: $499.

Yorkville Audio Group, www.altopa.com

Cerwin-Vega! Professional Active Series: CVA-28 and CVA-118

The Cerwin-Vega! CVA-28 is a three-way, dual 8-inch active full-range speaker packing 400 watts continuous/800 watts peak; 70 Hz - 20 kHz frequency response; and a maximum 128 dB SPL.

Its cabinet is 11 inches wide by 20.5 inches tall across the front panel, and 12 inches deep. The cabinet tapers to an 8.5-inch width at the rear panel, where XLR female and 1/4-inch TRS inputs, balanced XLR male and 1/4-inch TRS outputs, and rotary level knob are found.

The CVA-118 is an 18-inch active subwoofer offering 700 watts continuous, 1,400 watts peak; its internal amp is the CVA600. Frequency response is 41 Hz - 135 Hz; maximum SPL is 131 dB at 1200 watts. The sub is 21 by 25 inches tall by 23.5 inches deep. Its rear panel includes two balanced XLR female and two 1/4-inch TRS inputs; two balanced XLR male and 1/4-inch TRS outputs; one male XLR and 1/4-inch Link Out outputs with Master or Slave toggle; polarity reversal toggle, and power switch. List prices: $849 (CVA-28); $1,320 (CVA-118)

Cerwin-Vega!, www.cerwin-vega.com

Fender Passport Deluxe PD-250 PLUS

The doyen of guitars and amps offers PAs as well. The portable, compact, and simple to set up and operate Passport Deluxe PD-250 PLUS is suitable for a wide variety of settings. Fifty-three lbs. and contained in a 24.2- x 33.7- x 11.8-inch molded case, the 250-watt system offers four mic inputs, one stereo line-in and a built-in CD player.

Color-coded Mic channels and the stereo line channel feature a 2-band EQ, Reverb/Aux, and Pan controls; the CD channel includes playback, 2-band EQ, reverb/aux and balance controls. Speaker cables and a pair of P-51 cardioid, dynamic mics, clips and cables

Christopher Walsh is the recording editor for Pro Sound Newsand the associate editor of Pro Audio Review.

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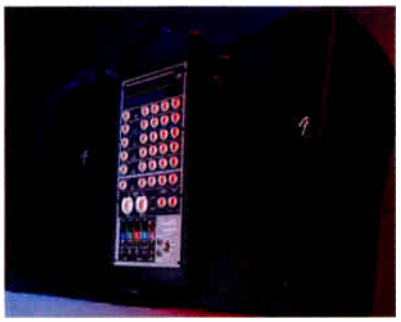

are also included. The 35mm speaker stand adapters are built into the cabinets. List price: $1,150.

Fender Musical Instrument Company, www.fender.com

JBL Next-Generation EON500 Series

The next-generation EON loudspeakers are lightweight and feature balanced weight distribution, full-size handles and flexible mounting capability.

The EON500 is comprised of the EON515 and EON510 2-way powered speakers, and the EON518S subwoofer. Each includes an onboard mini-mixer with loop-thru or mix-out capability. The series also features selectable system EQ, multiple suspension points, soft-grip handle and a full screened backed grille.

The EON515 and EON510 offer mic and line level inputs. Both feature one XLR/1/4-inch combo connector and additional 1/4-inch inputs. Each features one XLR output where the output signal is selectable; the whole mix may be looped to another speaker (or sent to a mixing console), or simply the primary input for daisy-chaining.

The EON518S features an 18-inch differential drive woofer powered by a 500/1,000 watts (continuous/burst) amplifier. It includes a pole mount cup for sub/satellite applications, level control, dual inputs, a stereo crossover network, peak limiter and polarity reverse switch.

List price: $799 (EON515); $749 (EON510); $1,129 (EON518S).

Harman International Industries, www.harman.com

Mackie SRM150 Compact Active PA System

Geared more to performing solo musicians, Mackie's SRM150 takes portability to another level. The self-contained 3-channel mixer, 5.25-inch, EAW-developed neodymium speaker and 150-watt Class D amplifier delivers up to 116 dB SPL at one meter, and is adaptable to mount on a mic stand with included boom arm adapter.

Two mic channels feature Neutrik combo XLR/1/4-inch TRS inputs and phantom power; the first has an instrument switch for use as a DI. The third channel's stereo RCA input allows MP3/CD playback or an additional instrument such as a keyboard or drum machine. The mixer also includes a 3-band and built-in limiter. Frequency Response is 100 Hz to 17.5 kHz.

Using the back panel's XLR "Thru" connector allows connectivity to an additional, powered monitor, or to send the mix to a front-of-house system at mic level (by activating its mic/line switch). The main input can receive monitor signals or can be used to link more SRMs. The SRM150 is also popular as a personal monitor: with

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the boom arm adapter it can be positioned in traditional "wedge" position. The SRM150's Polypropylene plastic case has a carry handle for ease of transport. List Price: $389.99

Mackie Designs, www.mackie.com

Yamaha STAGEPAS 250M

The combination mixer/amplifier/speaker STAGEPAS 250M is another lightweight/high-output system for compact and convenient operation and transport.

The built-in detachable mixer includes 10 input channels: two mono mic/line inputs with phantom power and four stereo line-ins. It also houses the system's built-in EQ, digital reverb, auto limiter and LED output level meter.

The two-way, full-range speaker houses a 10-inch woofer and a 1-inch titanium tweeter. The speaker output jack is joined by a Stereo Link Out jack for connectivity to external amplifiers or powered loudspeakers; the balanced stereo sub output links to a main mixer or recorder. A headphone jack and speaker cable are also included.

The speaker features a pole mount receptacle for speaker stand mounting. The 250-watt STAGEPAS 250M can also serve

as a monitor system or keyboard amplifier; the system features Click Assign switches for listening to a click track through headphones or a monitor. List price: $799

Yamaha, www.yamaha.com/proaudio

Peavey Escort 3000

The Peavey Escort 3000 is another ultra-portable system featuring an integrated design for compactness and ease of transport and operation. The 5-channel, 300-watt Escort 3000 includes a powered mixer and two-way speakers with 10-inch woofer and piezoelectric horn. The mixer features four XLR mic inputs

with phantom power, two stereo line inputs, a 5-band graphic EQ and digital reverb. Also included are a PVi cardioid dynamic mic, folding speaker stands and two 25-foot speaker cables. Frequency response is 40 Hz - 20 kHz. List price: $849.99

Peavey, www.peavey.com

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live mini-review

by Strother Bullins

Fishman SoloAmp portable PA system

Weighing less than 25 lbs., the SoloAmp comes in a very nice padded nylon soft case with casters, stand, and room for all the cables you would need while gigging with it. Based on a compact line-array speaker design, SoloAmp ($1,539 list) features a Class D amp producing 220 watts for its six 4-inch woofers and one 1-inch tweeter. It measures 6.7" X 5.6" X 41.5" in size. In other words, it's incredibly portable.

I/O includes two mic/instrument input channels with three-band EQ, phantom power and preamps accepting a wide variety of input sources; Monitor Input/Output; aux stereo input with level control; balanced XLR DI outputs for both channels; and main mix out. Each channel also offers four digital reverb effects, an effects loop, and phase and anti-feedback controls. A "set break" mute is also included.

In standard singer/songwriter applications, the SoloAmp doesn't disappoint. I've used it on a variety of acoustic guitar-toting artists for rehearsal applications to small live clubs. It's plenty powerful, and its low-end handling capabilities raise eyebrows — those 4-inch woofers can deliver full, undistorted lows, even when pushed surprisingly hard. On a singer/songwriter whose live instrument is an electric piano, the sound became comparatively muddy in instrumentally dynamic passages; however, this was the only instance of any weakness I heard in hours of discriminating use.

Further, the four reverbs available per SoloAmp channel are very usable and pleasing. Based on a variety of vocalists' tastes in reverb, I was always able to get something that sounded very good and perfectly appropriate. Having used many PAs with built-in effects, let me emphasize that this is a big compliment.

For under a $999 street, the SoloAmp is an ideal solution for singer/songwriters and those that gig with them on a regular basis. I can't think of a better PA solution for those that would like to leave a gig with their instrument in one hand and their PA in the other.

Contact: Fishman
www.fishman.com

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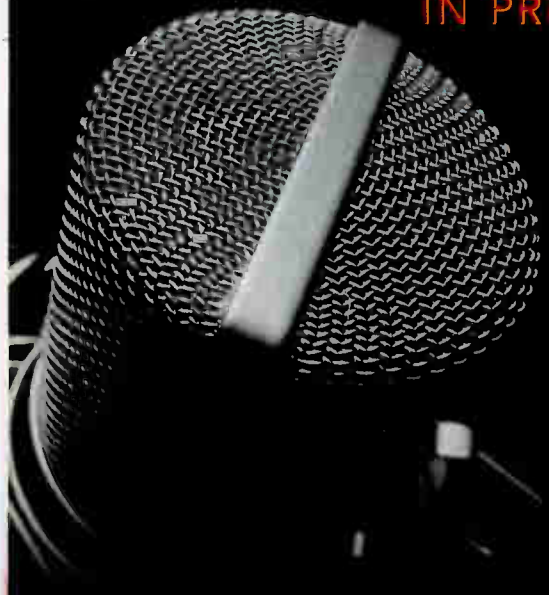

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AKG D 40 Instrument Microphone

Specially designed for the stage, the D 40 dynamic cardioid gracefully delivers the sound of most live instruments and can take a beating (and we'll prove it!)

The AKG D 40 is a unidirectional dynamic cardioid microphone designed for drums, guitars, and wind instruments. The mic element, which utilizes the patented AKG Varimotion Laminate Diaphragm technology as used on the D5 vocal mic, is protected by a shock mount and steel-mesh grille to prevent damage to the element itself.

According to AKG, it has a relative flat frequency response down to 125 Hz, where it drops off with a high pass. It also has a boost of approximately 6 dB in the 3 to 4 kHz range. Similar in size and shape to the Shure Beta 56, the D 40 comes with an H 440 drum rim clamp and a zippered nylon pouch.

Features

Upon opening the D 40 package, the mic impressed me with its "bulletproof" look. I first thought it might have a weak point at the two screws that hold it onto its mount (and, admittedly, I am a bit weary of the rim clamp concept). The rim clamp appeared to be flimsy; I was concerned about whether it would be able to hold the substantial weight of the mic, which is heavy for its size. I also noticed a cool feature about the D 40 stand mount; AKG integrated both thread sizes, so there is no need to find an adapter in order to screw the mic onto a rim clamp.

In Use

I used the D 40 in a large array of applications. On its first show, it was used as a second mic on a lead electric guitar cabinet. The first microphone was a Sennheiser 421 (series one) microphone. The engineer on the show said the D 40 was "the perfect complement" — he ended up using both microphones, adding a high pass on the D 40 channel and a low pass on the 421 channel to create a "bi-miked" situation and was very happy with it. The engineer said the D 40 had properties that made it great for the guitar, particularly in the high mids, which accentuated the instrument and naturally brought it out in the mix.

The next application for the D 40 was as a tom mic. This gig had three toms: the D 40 was used on the first and floor toms, while the second tom was miked using a Sennheiser e604 cardioid drum microphone. I liked the sound of the D 40 on the first tom; it had a nice frequency response with the drum, and its high-mid boost accentuated the character of the tonal qualities of the drum. In comparison, the e604 offered more low end, a flatter overall response, and sounded slightly smoother throughout the spectrum. On the floor tom I was neither happy nor unhappy with the sound of the D 40. On one hand, I was pleased with the sound; the mid-high boost accentuated the sound of the stick, rim, and head, but I wish it picked up the sub-low qualities that the drum's tuning offered. On that note, the D 40 would definitely work well for drum kits where you don't want a lot of low end from the toms. With this in mind, I wish I had tried the D 40 on snare, as I have a feeling this would have been the perfect place for it.

My final test with the D 40 was on saxophone and trumpet via a band with a small horn section. I double-miked the sax for an

Fast Facts

Applications
Live horns, guitars, toms, snare drums

Key Features
Dynamic pressure gradient cardioid microphone; shock-mounted element; comes with rim clamp; indestructible build quality

Price
$160 list

Contact
Contact:AKG USA | 818-920-3212 | www.akg.com/us

Karl Bader is a lead audio engineer for Entertainment Sound Production and can be reached at karlbader@espsound.com

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accurate A-B test; the other mic was a Sennheiser 421. In this instance, I much preferred the Sennheiser to the D 40; in comparison, the 421 had nicer lows and a smoother, much clearer quality to it. The D 40 sounded not as "full-bodied" as the 421. For trumpet, I double-miked using the D 40 and a Shure SM57. Here, the D 40 won hands down; its high mid boost and natural roll-off simply made the trumpet sound better. With the D 40, this trumpet cut through the mix without much labor.

After all field-testing was complete, I felt that it was time to settle my doubts about the durability of the microphone's mount. The mount looked suspiciously like the D 40's Achilles Heel; the rim clamp looked even weaker. So I did what any live sound guy with too much curiosity would do: I smacked it with a hammer in a few different ways to simulate a just bit of typical road abuse. In doing so, there were two things I found out: one, the mic still works like it did out of the box, and two, the mic is still attached to its plastic mount and rim clamp. I then clipped the rim clamp to the rim of an old beat-up snare drum. I took a drumstick and smacked the mic several different ways, managing to break a stick over it, yet the D 40 held on while working like a charm. Note that the rim clamp is very low-profile, which keeps the mic close to the drum, forcing it to be at a set angle to the head.

Product Points

- Indestructible; affordable; mic stand adapter contains both thread sizes
- Limited positioning with rim clamp on snare; reduced low-end pickup

Score The AKG D 40 is a sturdy live instrument microphone that performs well in a variety of useful live applications.

Summary

The AKG D 40 proved to be a great utility microphone for many uses. Its high-mid boost and low cutoff make it a good choice for drums, horns, and lead guitars — places where you want that "cut through the mix" sound. Finally, the D 40's test-proven durability make it ideal for a truly roadworthy microphone collection.

LaChapell

(continued from page 35)

they need a five-minute cool down before being removed). Scott LaChapell sent me several tubes to experiment with. While their differences aren't drastic, they are noticeable. It's nice to have the sonic variety offered by exchanging tubes.

The durability of the plastic switches was my only initial concern regarding the 583s. Yet it turns out that the switches, which are made by NKK, feature an impact rating equal to metal toggles, so no worries there.

Summary

The LaChapell 583s handles transients better than any tube mic pre I've encountered while retaining warmth unequaled in the world of solid-state pres. Its original, true-tube design and massive sound easily land it on my short list of the best mic preamps ever.

The LaChapell Pre: Now With EQ! Model 583e

Scott LaChapell's Model 583e ($2,025 list) offers the same high-gain tube based mic pre as the 583s, but adds three-band EQ on the right side of the module, making it the 583e. Its three-band transformerless EQ has fully sweeping frequency controls with cut/boost settings of +/- 8 dB, which can be used inline or independently with the second slot in/outs.

Because I was in 500 Series-land for this review, I located some other 500 Series mic pres for comparison such as the Shadow Hills Mono Gama (nickel transformer setting) and the Biz from Purple. Testing these pres on floor tom, snare drum, vocals and voiceover, each pre's character became clear. The LaChapell exhibited the silkiest high end of the three and a similar low end and midrange to the Mono Gama. The Biz was the most midrange-forward of the three, like the op amp design it emulates. The transient responses of the 583e and the Mono Gama were both stellar, with the Biz slightly more "FET-sounding."

Next, I engaged the 583e's three-band EQ on the snare. Although I prefer four-band EQ on snare drums, I had no problem dialing in a great snare sound with this unit. The final test was Mike Payne on acoustic guitar using a tube mic through the 583e and a tube compressor. "Surely this combo could suffer from too many tube harmonics, causing the sound to be rounded off, or somewhat fuzzy." I thought wrong; it sounded absolutely stunning, and the best the mic has ever sounded on acoustic. It should be noted that the 583s doesn't possess as much tube color as its big brother, the Model 992, but more color can be dialed in by turning up the input gain while turning down the output gain-nice.

The Model 583e tube pre/EQ excels with drums, voice, and harmonically rich stringed instruments. With the three-band EQ within the same two-module width as the 583s, you have a powerful combination for adding character to your recordings. Now, how many can I afford? *—Randy Poole*

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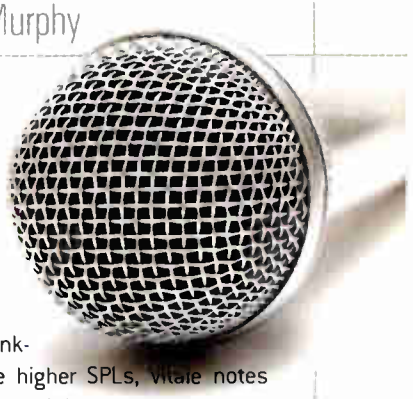

The 9:30 Club Washington, DC

The 9:30 Club, Washington DC's premier music showcase nightclub, recently completed a comprehensive upgrade to its sound system. Clearly not resting on its laurels after winning the trifecta of nightclub awards in 2008 — *Pollstar*'s Nightclub of the Year and Most Attended Club in the Nation awards plus *Billboard*'s Top Club in the World citation — the 9:30 Club's new system ensures its top-club status well into the future.

The groundbreaking installation — the first of its kind in a club — is designed around the fully integrated J-Series line-array speaker system from touring system designer/manufacturer, d&b Audiotechnik.

The 9:30 Club production team consists of (l-r): Jeff Kane (audio), Amber Ree Soesbe (production), Mike Geske (lighting), Sean "Gus" Vitale (audio crew chief and head engineer), Gradon Koch (audio) and Ed Stack (production/general manager.

Sean "Gus" Vitale, the 9:30 Club's longtime chief audio engineer, specified the J-Series after hearing it in action at the 2007 Virgin Festival (which featured Smashing Pumpkins, Beastie Boys and headliners The Police). The club entered into planning discussions with 8th Day Sound, who had provided reinforcement for the V-Festival, to adapt and install the J-Series at the club. Given the unique challenges involved, experts from both the Installation and Touring departments of 8th Day Sound worked with the club's engineering staff to design and install the system, which made its debut in September.

The club's J-Series system features dual flying columns, each comprised of two J12 cabinets at the top and six J8s following, plus a complement of three B2 subwoofers stacked at each side of the stage. Also mounted on the club's movable speaker truss are two Q1 loudspeakers that provide nearfield fill for the stage-front floor, plus two Q7 cabinets mounted outside of each column for nearfield balcony fills.

"By configuring the arrays 'upside down' (with the 120-degree cabs at the top and the 80-degrees underneath), we are able to provide both the wider balcony areas and the main floor with excellent, controlled horizontal coverage," explains Vitale, "which we can now achieve at lower SPLs." Of course, the high-headroom J-Series is more than capable of cranking out those higher SPLs, Vitale notes with a nod and a wink.

Also new to the 9:30 Club's system, a Digidesign D-Show Profile digital console now sits alongside the club's Audient Aztec 48-channel analog console at front of house. Stage inputs are split to the club's Yamaha PM5D-RH monitor console and to the FOH position. In a unique twist, the stage-to-FOH run is then split to the Profile's Mix Rack (48-channel microphone preamp unit) and the Audient, so inputs are continuously mirrored to both consoles.

"The small footprint of the two consoles allows us to offer touring engineers the flexibility to choose between a traditional analog console and the Digidesign, at the flick of a switch, literally!" says Vitale.

By all accounts, reviews of the new system have been overwhelmingly positive.

"It's probably one of the best, if not the best, installed club system in the U.S. I don't think any engineer is going to have a bad day on that rig," contributes Evan Kirkendall, front-of-house engineer for All Time Low.

"Beyond sound quality, we chose d&b and Digidesign for their universal acceptance in the industry," adds Vitale. "By having best-in-class systems, our venue intends to remain that 'sigh of relief' for engineers when they spot us on the tour schedule. The 9:30 club owners and management have been fantastic in providing its technical and production staff with the tools required to continually demonstrate the club's commitment to excellence, a commitment that extends to audience members and touring acts alike."

For more information on the 9:30 Club, visit www.930.com

PAR contributor Steve Murphy has over 25 years production and engineering experience, including Grammy and Gold/Platinum credits. www.smurphco.com

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single slice

by Christopher Walsh

"Blue Wind" — Brian Tarquin, Billy Sheehan, Doug Doppler, Greg Morrow, Chris Ingram

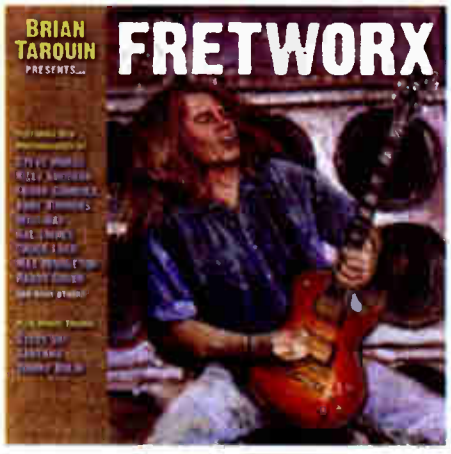
Brian Tarquin

Engineer's Diary:

If you like your rock 'n' roll loud and your guitarists heroic, you will get on famously with Brian Tarquin and relish every release from his label, Bohemian Productions, a.k.a. BHP Music. An Emmy Award-winning musician heard on numerous television and film soundtracks, Tarquin's real passion, it seems, is assembling the hottest players in rock and fusion to create unique releases such as the new *Fretworx*.

While some BHP releases are in tribute to the guitar gods (see *El Becko*, *Get the Led Out* and upcoming tributes to Eric Clapton and Stevie Ray Vaughan), others, such as *Fretworx*, are subtly thematic. A portion of profits from *Fretworx* will benefit Friends of Firefighters (www.friendsoffirefighters.org), which benefits families of September 11 victims.

"I grew up in Manhattan," Tarquin explains. "There was a connection for me, to try to give something toward the rebuilding of the city after what went down. The whole record was in tune with that, in the names of the songs: 'Triumphant We Stand,' 'Towers.' I sought it out for each track, and had a specific guy in mind to record it. For 'Towers' I had Steve Morse in mind; for 'Spanish Harlem,' Frank Gambale. I thought his style and the way he expressed himself on the guitar fit perfectly. I always had Billy Sheehan in mind for 'Blue Wind,' which is off *Wired* from Jeff Beck, a song I thought we needed to do."



For his blistering "Blue Wind" solo, Tarquin played a '69 Les Paul Goldtop Deluxe through a Marshall JTM-45 head and 4 x 12 slanted cabinet. The cabinet was close-miked with a beyerdynamic M160, which went directly into the Trident Trimix console and Ampex MM-1200 2-inch, 24-track tape machine at Tarquin's Jungle Room Studios. Six feet from the amp, he also positioned a Neumann M 149, fed to a Universal Audio 610 and directly to tape.

"When I mixed it," Tarquin explains, "I put [guitars] through UREI LA-4s, and used the Eventide Eclipse for a slight ambient delay. I put Billy Sheehan's track through this great old Trident parametric EQ, model CB-9066. It has a wonderful band sweep on it, and you can really dial in a terrific tone. I put him through that, and then compressed him through a [Universal Audio] 1176. I compressed him pretty hard, and then basically directly to tape."

Song Facts

Single: "Blue Wind"

Album: *Fretworx*

Date Recorded: February 2008

Producer: Brian Tarquin

Engineer: Brian Tarquin

Assistant Engineer: Chris Ingram

Mixer: Brian Tarquin

Mastering Engineer: Chris Landon

Other Projects: *El Becko: A Jeff Beck Salute*, *Get The Led Out! Led Zeppelin Salute* and *Guitar Masters, Vol. 1* (various artists); *Bob Marley Remixed* and *Junglization* (Asphalt Jungle). Tarquin has also won two Emmy Awards for Outstanding Achievement in Music Direction and Composition for a Drama Series.

Single Songwriter: Jan Hammer

Mix Monitors: Event ASP 8 Studio Precision 8, Yamaha NS-10, Auratone

Recorder: Ampex MM-1200

Christopher Walsh is the recording editor for *Pro Sound News* and the associate editor of *Pro Audio Review*.

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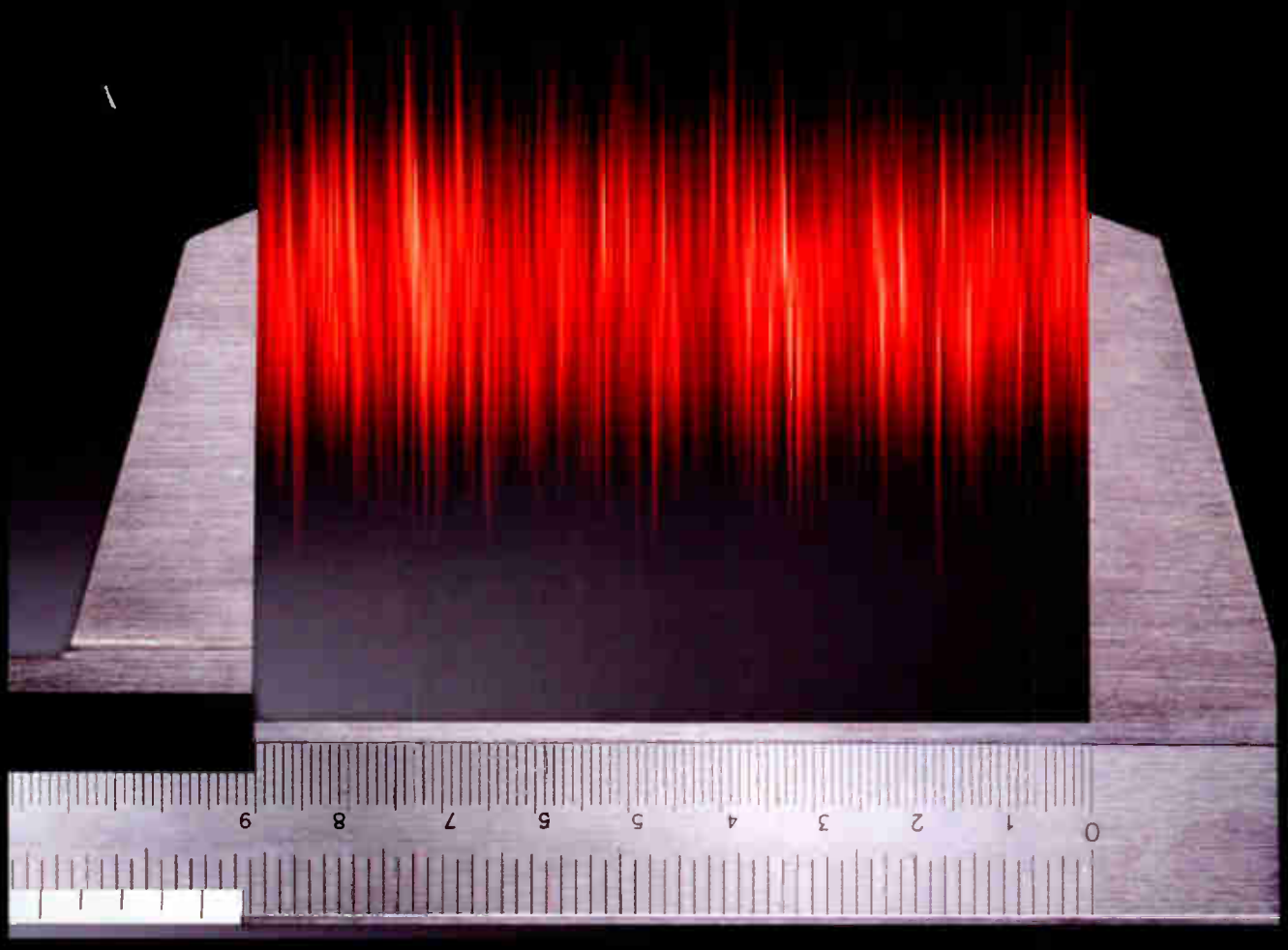

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